

MINFILE NUMBER: **082ENE001**

NATIONAL MINERAL INVENTORY:

NAME(S): **MCKINLEY**, MCKINLEY (L.140S), FRANKLIN CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 32 27 N
LONGITUDE: 118 23 15 W
ELEVATION: 1190 Metres

NORTHING: 5488505
EASTING: 399620

LOCATION ACCURACY: Within 500M

COMMENTS: Mine site, located about 2.7 kilometres south-southwest of Mount Franklin (Geological Survey of Canada Map 97A).

COMMODITIES: Copper Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Chalcopyrite Galena Sphalerite Pyrite Magnetite
ASSOCIATED: Pyrite Magnetite Quartz Calcite
ALTERATION: Garnet Epidote Tremolite Diopside Chlorite
Malachite Azurite Limonite

ALTERATION TYPE: Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	
Eocene	Penticton	Marron	
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Skarn
Marble
Altered Tuff
Granodiorite
Rhyolite Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Plutonic Rocks
GRADE:

CAPSULE GEOLOGY

The MCKINLEY mine is located on Crown granted Lot 140s, located approximately 2.7 kilometres south-southwest of Mount Franklin. The mine occurs in skarn along the contact between 2 marble lenses and an altered tuff of the Devonian-Triassic Harper Ranch Group. Granodiorite of an unnamed Middle Jurassic intrusion is found in the vicinity of the ore zones and forms a large mass about 500 metres to the northwest. A rhyolite porphyry caps Mount McKinley and overlies the Harper Ranch Group to the southeast. Mineralization consists of chalcopyrite, galena and sphalerite, with pyrite and magnetite, in a gangue of garnet, epidote, tremolite, diopside, quartz, chlorite and calcite. Three types of sulphide mineralization have been recognized: pyrite-chalcopyrite, galena-sphalerite, and magnetite-pyrite. Massive pyrite-chalcopyrite ore is found in the skarn zones, although disseminated pyrite is also found in the altered tuff. Galena and sphalerite are found as disseminations and small masses associated with the carbonate-rich areas. Magnetite with pyrite forms a massive band along the east border of the lower marble lens, and is also found disseminated in garnet-rich skarn. Azurite, malachite and limonite are found in surface exposures. The MCKINLEY claim was located by J. Wilcher in 1896 and Crown granted as Lot 140s to McKinley Mines in 1906. Work during the early 1900s consisted of extensive stripping, the excavation of numerous trenches and open cuts, diamond drilling and the underground development of at least 4 adits. In 1904, a glory hole, measuring approximately 25 metres long by 12 metres wide by 9 metres deep, had been blasted in ore which averaged 3.5 per cent copper and \$2.50 in gold and silver (Minister of Mines Annual Report 1904, page 223).

CAPSULE GEOLOGY

About 75 metres to the southeast, an open cut, measuring 9 metres long by 6 metres wide and 7.6 metres deep, was made in ore which averaged 4.5 per cent copper and \$2.00 in gold and silver (Minister of Mines Annual Report 1904, page 223). A shaft was sunk from the open cut and a cross-cut driven for 16 metres from the bottom of the shaft. Approximately 50 trenches were also noted on the property in 1904. By 1905, the tunnel had been extended to 66 metres, 34 metres of which were in ore. In 1906, 2 diamond drills on the property were "testing and sampling the ore deposits in every direction" (Minister of Mines Annual Report 1906, page 163). In 1915, it was noted that a total of 121 metres of tunnels existed on the MCKINLEY property.

In 1948, the mine was rehabilitated by W.E. McArthur. Some stripping was carried out on the property and about 36 tonnes of ore were hand-sorted for shipping in 1949.

In 1949, approximately 96 tonnes of ore were mined and shipped to Trail for smelting. A total of 132 tonnes of ore were shipped, yielding 28,397 grams of silver, 14,737 kilograms of lead and 22,523 kilograms of zinc (Minister of Mines Annual Report Index 3, page 204). It is also reported that the shipment contained 62 grams of gold and averaged 3 per cent copper (Minister of Mines Annual Report 1949, page 155). Diamond drilling in 1949 failed to find any more ore.

BIBLIOGRAPHY

EMPR AR 1901-1066; *1904-222,223; 1905-186; 1906-163,253, 1911-177, 1913-169, 1914-343,353, 1948-128, *1949-155
EMPR ASS RPT 9584
EMPR BC METAL MM00894
EMPR INDEX 1-327; 3-100,*204
EMPR OF 1994-8
EMPR PF (See General PF - Franklin Mining Camp File; McMillan, W.J. (1968): Examination Report, Lisa Group, Cominco Ltd., (4 pages); Lisa Property Map (1 inch = 500 feet), Cominco Ltd., Aug. 23, 1968; Diamond Drilling - Lisa Property, Cominco Ltd. (1 inch = 20 feet), Sept. 1, 1968; Claim Location Map - Lisa Property, Cominco Ltd. (1 inch = 1 mile), Aug. 26, 1968))
EMPR RGS 29
GSC MAP *97A; 133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.154,155,159-164
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/29

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE002**

NATIONAL MINERAL INVENTORY:

NAME(S): **BANNER**, BANNER (L.1199), PLATINUM BLONDE,
 FRANKLIN CAMP

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082E09W
 BC MAP:
 LATITUDE: 49 33 34 N
 LONGITUDE: 118 22 50 W
 ELEVATION: 1220 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: Adit, about 800 metres southwest of Mount Franklin (Assessment Report 17273).

Underground
 MINING DIVISION: Greenwood
 UTM ZONE: 11 (NAD 83)
 NORTHING: 5490565
 EASTING: 400160

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Chalcopyrite
 ASSOCIATED: Quartz
 ALTERATION: Silica
 ALTERATION TYPE: Silicific'n
 MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Vein Breccia
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au 101 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	

LITHOLOGY: Andesite
 Dacite
 Siliceous Tuff
 Quartzite
 Calcareous Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Overlap Assemblage Harper Ranch
 PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1988
 SAMPLE TYPE: Grab
 COMMODITY

COMMODITY	GRADE	
Silver	45.0000	Grams per tonne
Gold	9.2700	Grams per tonne
Copper	0.2700	Per cent
Lead	2.1200	Per cent
Zinc	6.0000	Per cent

COMMENTS: Sample number 16794 was collected from a pit 240 metres north-northeast of the adit.

REFERENCE: Assessment Report 17273.

CAPSULE GEOLOGY

The BANNER showing is located on reverted Crown grant Lot 1199, approximately 800 metres southwest of Mount Franklin.
 The showing consists of gold and silver bearing quartz veins which are hosted by andesite and dacite flows and tuffs of the Eocene Marron Formation, Penticton Group. Quartz veins are also hosted by the underlying siliceous tuff, quartzite and calcareous conglomerate of the Devonian-Triassic Harper Ranch Group. Mineralization, consisting of up to several per cent pyrite, galena, sphalerite and chalcopyrite, is found in a quartz gangue. Breccia fragments are common in the veins. Anomalous gold and silver assays have come from 2 areas: the adit area, and an area about 250 metres north of the adit. This latter area is referred to as the north BANNER and is included in the BANNER occurrence. Mineralization is similar at both locations.

CAPSULE GEOLOGY

The BANNER claim was staked in 1896 by Frank McFarlane and was one of the first claims in the Franklin area. In 1900, the property consisted of a 3-metre wide quartz vein with 2 small shafts and a 55-metre long crosscut. Samples from the vein contained values in gold, silver, copper and zinc. In 1901, the crosscut was extended to 61 metres and sample shipments were sent to a smelter. By 1905 the adit had been extended to 70 metres, intersecting a 9.75-metre wide quartz vein, which was reported to contain "heavy showings of chalcopyrite" (Minister of Mines Annual Report 1905, page 187). Lead and zinc sulphides were also noted. Some drilling was carried out in late 1905 or 1906, with negative results. Another report refers to a 4-hole drill program in 1908, although it is not clear whether more than one program was ever carried out. In 1911, the BANNER claim was Crown granted to F.W. Russell and associates.

In 1968, Franklin Mines Ltd. carried out an exploration program in the Franklin camp; however, the only work in the vicinity of the BANNER Crown grant appears to be some road construction. Line cutting was also carried out in 1968.

In 1974, D.W. Tully carried out a property examination for Dallas Explorations Ltd. and recommended a program of geophysical surveys and diamond-drilling.

In 1986, Longreach Resources Ltd. staked and optioned much of the Franklin camp area, including the BANNER Crown grant. It is probable that Longreach prospected this area, although no reports were filed that are specific to this area.

In 1987, Longreach's property, now known as the PLATINUM BLONDE property, was optioned to Placer Dome Inc. who proceeded to carry out a major exploration program. In the BANNER area, Placer sampled some of the many pits and cat trenches. Grab sample number 16783, collected 50 metres southeast of the BANNER adit, assayed 1.13 grams per tonne gold, 48 grams per tonne silver, 0.97 per cent copper, 3.08 per cent zinc and 4.48 per cent lead (Assessment Report 17273). Sample number 16794, which was collected from a pit 240 metres north-northeast of the adit, assayed 9.27 grams per tonne gold, 45 grams per tonne silver, 0.27 per cent copper, 6.00 per cent zinc and 2.12 per cent lead (Assessment Report 17273).

In 1993, Sway Resources Inc. optioned a large number of Crown grants and claims in this area, including the BANNER Crown grant. They proceeded to carry out prospecting, sampling, geological mapping and a 16-hole rotary and diamond-drill program on the BANNER and HOMESTAKE (082ENE051) Crown grants. A 3.05-metre intersection in the north BANNER area assayed 8.55 grams per tonne gold (Property File - Sway Resources Inc., Statement of Material Facts, dated February 14, 1994). The exact location of this drillhole is not on record.

BIBLIOGRAPHY

EMPR AR 1900-871,872,874,989; 1901-1066; *1905-187; 1906-164;
1911-290; 1913-169; 1914-344; 1964-112; 1965-172; 1968-273
EMPR ASS RPT 637, 1688, 15172, 15746, 15964, 15981, *17273
EMPR EXPL 1987-C32; 1988-C22
EMPR INDEX 1-28
EMPR OF 1994-8
EMPR PF (In General File - Franklin Mining Camp; *Sway Resources
Inc., Statement of Material Facts, dated February 14, 1994; Tully,
D.W. (1974): Report on the Arnold Miller Claim Group, Dallas
Explorations Ltd. Prospectus, November 29, 1974; Sketch Maps
showing Banner Group, circa 1914)
EMPR RGS 29
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 56, p.155,167,168
GSC OF 409; 736; 1969
GCNL #64, 1984; #143,#166,#179, 1986; #11,#51,#71, 1987; *#203, 1993;
#82, 1995
N MINER May 18, 1986; Feb. 16, 1987
WIN Jan. 1987
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/09

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

INVENTORY

ORE ZONE: DUMPS

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 16000 Tonnes

YEAR: 1984

COMMODITY: _____
Silver
Gold

GRADE
65.0000 Grams per tonne
2.2000 Grams per tonne

REFERENCE: Assessment Report 13710.

CAPSULE GEOLOGY

The UNION mine is located on the east side of Mount Franklin, approximately 1.2 kilometres east-southeast of the summit. Mine buildings are located in the valley bottom on the PAPER DOLLAR Crown grant Lot 1677s, which is on the west side of a western tributary of Glouster Creek.

The UNION mine has been developed in greenstone, tuff, argillite, siltstone and conglomerate of the Devonian-Triassic Harper Ranch Group. Several hundred metres to the west there is a cover of andesite and dacite flows and tuffs of the Eocene Marron Formation, Penticton Group. Syenite of the Eocene Coryell Intrusions is found about 500 metres to the north.

The underground workings are on 4 levels over a vertical range of about 129 metres. A glory hole is located about 200 metres above the valley floor.

The mine development followed a large, segmented quartz vein which is collectively known as the Union vein. Underground individual fault segments have also been named. Subsidiary quartz veins may also exist. The vein is mineralized with pyrite, sphalerite, galena, argentite and chalcopyrite. Pyrargyrite has also been noted. The vein strikes approximately 080 degrees and dips vertically. The mine area is structurally complex and is dominated by steeply angled faults, the most significant of which are the Union and the Number 1 faults. The Union fault strikes northwesterly and dips 80 to 85 degrees to the southwest. It appears to cut off the ore-bearing vein at all levels in the mine. On the No. 1 and No. 4 levels the vein appears to change direction and follow the Union fault, suggesting that the fault may be contemporaneous with the vein. The fault persists beyond the end of the vein. Brecciated, sheared and silicified country rock along the vein indicates movement during formation.

The UNION claim was located by L. Johnson and associates in 1906 and Crown granted as Lot 1022s in 1914. Adjacent Crown grants include the PAPER DOLLAR (L. 1677s) and the IDAHO (L. 1679s). Initial assessment work focused on a vein containing galena with silver value; however, in 1913, a siliceous zone with high gold and silver values was discovered. This zone, measuring about 2.4 metres in width, contains a small amount of pyrite, limonite and garnet and is believed to be a siliceous replacement of a limestone. Five cars of ore were shipped to the smelter in Grand Forks that year (Minister of Mines Annual Report 1913, page 168). A 2.4-metre wide sample taken from the open cut assayed 34.2 grams per tonne gold and 2018 grams per tonne silver (Minister of Mines Annual Report 1913, page 168).

Initial ore production was from a large open cut, but 2 adits, located 25 and 150 metres below the open cut, were started in 1913. The upper adit exposed both the galena-rich vein and the siliceous replacement zone, which at this point had narrowed to 90 centimetres in width. A sample assayed 80 grams per tonne gold and 441 grams per tonne silver (Minister of Mines Annual Report 1913, page 168). The lower adit also encountered the siliceous zone but precious metal assays were much lower. Recorded production during the period 1913-20 was 3206 tonnes which yielded 77850 grams of gold and 3.62 million grams of silver. Underground development during this period was on 3 levels.

In 1918, the platinum potential of the UNION mine was investigated. Three samples collected from oxidized material from vein outcrops and ore pulps assayed a trace of platinum (Thomlinson, 1920).

In 1927, the UNION mine and surrounding Crown grants were bonded to J.F. McCarthy of the Hecla Mining Company, based in Wallace, Idaho. Development in 1928 consisted of 975 metres of drifting and crosscuts, and the No. 4 adit was begun 60 metres below level No. 3. In 1929, raises were driven between levels 2,3 and 4, and a 145-tonne per day mill constructed. Production commenced in 1930, with 33,462 tonnes mined and milled to produce 1001 tonnes of concentrate (Minister of Mines Annual Report 1930, page 226). The total length of underground workings, at the end of 1930, was 990 metres over a vertical range of 129 metres, not including the glory hole above

CAPSULE GEOLOGY

level No. 1. Most of the ore was mined from between levels No. 1 and 2; very little ore was found on level No. 4. The width of the ore zone varied from 1.5 to 7.6 metres and its boundaries could only be identified through assays. Diamond drilling in 1931 identified a new, although small, ore body north of the level No. 1 tunnel. The new ore body contained free-milling gold necessitating the installation of 2 Wilfley tables to the mill circuit. In 1931, 51,465 tonnes were mined, of which 59 tonnes was of such high-grade that it was shipped directly to smelters at Trail and Bradley, Idaho (Minister of Mines Annual Report 1931, page 118).

In 1932, 24,020 tonnes were mined, of which 24,000 tonnes were milled, producing 4.7 million grams of silver and 597,737 grams of gold. The mill closed in October, 1932 because of insufficient ore.

In 1933, the mine closed because of a lack of ore, despite extensive underground exploration and development work that year. A total of 2861 tonnes of ore was mined and 3342 tonnes milled in 1933 (Minister of Mines Annual Report 1933, page 148). Some of the tonnage milled may have been supplied from the adjacent HOMESTAKE (082ENE051) property, which was owned by the same J.F. McCarthy interests. The HOMESTAKE had been the focus of an extensive underground program of drifting and cross cutting in 1933, and the ore was noted to be similar to that of the UNION. However, if production took place on the HOMESTAKE in 1933, it was not recorded.

In late 1933, a cyanide plant was constructed to treat an estimated reserve of approximately 90,000 tonnes of tailings grading 1.7 grams per tonne gold, and 68.4 grams per tonne silver (Minister of Mines Annual Report 1933, page 148). During the period 1934-36, Hecla mined and milled unstoped ore-remnants from the mine, and treated old mill tailings. A total of 48,129 tonnes of ore and tailings were treated during this period, of which the tailings represent a substantial portion of the total. Approximately 2.28 million grams of silver, 68,085 grams of gold, 5419 kilograms of lead and 14,326 kilograms of zinc were produced.

In 1937, the UNION mine was leased by W.E. McArthur from J.F. McCarthy. Over the next 6 years, 838 metres of diamond drilling, surface stripping and some limited underground development work was carried out, with most of this work being performed during 1940-42. Production during the period 1937-42 was 7536 tonnes of ore which yielded 2.84 million grams of silver, 64,787 grams of gold, 1140 kilograms of lead and 1483 kilograms of zinc.

In 1947, C.E. and J.E. Small shipped 5 tonnes of ore from the UNION mine to the Trail smelter. This produced 31 grams of gold and 1337 grams of silver (Minister of Mines Annual Report 1947, page 157).

In 1971, Mustang Resources Ltd., who had optioned the UNION property from Hecla, erected a batch process cyanide plant and began a leaching process using a closed-circuit method. Gold and silver were recovered in a precipitator using zinc dust, but the operation proved uneconomic and closed after operating for several months. No production was recorded.

In 1979, Pearl Resources Ltd. acquired much of the area around the UNION mine, and in 1980, optioned the UNION property from Hecla Mining Company. In late 1980, Pearl Resources carried out a 5-hole, 675-metre diamond drill program to test the westerly trend of the UNION structure. The program was not able to trace the structure and assays results were poor.

In 1984, Pearl Resources embarked on a major program of diamond drilling following the rehabilitation of the No. 4 level and its northwest extension. A total of 34 percussion drillholes (397 metres) and 19 diamond drillholes (1076 metres) were drilled underground. The results of the drill program were mixed. The extension of the Gold Stope Vein was encountered but assay results were poor. One hole drilled below the Schulz Vein failed to intersect its extension. The Main Vein below level No. 3 was barren of gold, except at the western end of the vein structure, where drillhole DDH PU-8 intersected 1.65 metres grading 37.25 grams per tonne gold and 2150 grams per tonne silver (Assessment Report 13710).

Four areas with potential reserves were identified by Pearl Resources in 1984. The Main Union Vein, between the No. 3 and No. 4 levels contains a possible reserve of about 7000 tonnes grading 32.5 grams per tonne gold and 1858 grams per tonne silver over a width of 1.5 metres (Assessment Report 13710). The Union South Zone, between the No. 2 level and the surface, contains a possible reserve of about 7000 tonnes grading 8.7 grams per tonne gold and 294 grams per tonne silver over 1.5 metres width (Assessment Report 13710). Surface ore dumps contained a possible reserve of about 16,000 tonnes of ore grading 2.2 grams per tonne gold and 65 grams per tonne silver (Assessment Report 13710). Preliminary leach-tests on minus 1.58 centimetre high-grade dump material suggest poor recovery; only 10

CAPSULE GEOLOGY

per cent of the gold and 29 per cent of the silver was recovered in a 35 day column leaching test of material with an initial head grade of 8.28 grams per tonne gold and 118 grams per tonne silver (Assessment Report 13710). Tailings from earlier production contained a possible reserve of 70,000 tonnes grading 1.5 grams per tonne gold and 48.9 grams per tonne silver (Assessment Report 13710). Cold bottle roll tests of the tailings yielded 65 per cent gold and 48 per cent silver recovery; a 35-day column leach test indicated recoveries of 74 per cent gold and 71 per cent silver (Assessment Report 13710).

In 1985, 24K Mining Inc. optioned the UNION property from Pearl Resources Ltd.; and in 1986, 24K Mining merged with Summit Ventures Inc. to form Sumac Ventures Inc. Work in 1986, and continuing into 1987, consisted of diamond drilling, rehabilitation of the No. 3 and No. 4 levels, and sub-level drifting and raising preparatory to developing the Main Union Vein reserve. Assays confirmed previous results (Northern Miner, April 7, 1986; Northern Miner, February 23, 1987); however, no underground production is recorded.

In October 1987, Sumac Ventures began heap leaching material from the dumps and tailings. A total of 5000 grams of gold and 150,000 grams of silver were produced from 13,600 tonnes of tailings and dump material (Exploration in British Columbia 1987, page A63). Small amounts of platinum and palladium were recovered in testing (Exploration in British Columbia 1987, page A63).

Sumac Venture's heap leach continued in 1988 with production of 8000 grams of gold and 243,000 grams of silver being produced from 10,900 tonnes of ore (Exploration in British Columbia 1988, page A5). It was estimated in 1988 that about 70,000 tonnes of tailings and old dump material were available for treatment (Exploration in British Columbia 1988, page A5). No grades were given in the estimate.

In 1989, 18,000 tonnes of ore were heap leached which produced 300 grams of gold (Mineral Statistics 1990, page 29).

BIBLIOGRAPHY

EM GEOFILE 2000-2, 2000-5
EMPR AR 1911-177; *1913-168,170,420; 1914-338,341,349,350,351,511,514;
1915-201,446; 1916-254,517; 1917-20,22,198,214; 1918-207; 1919-163;
1920-152,153; 1922-169; 1925-193; 1926-205; 1927-225; 1928-241;
1929-254; *1930-226,384; *1931-118,212; 1932-121; *1933-148,319;
1934-A24,29,D3; 1935-D11,G52; 1936-D56; 1937-A36,D32; 1938-A33;
1939-36; 1940-24,63; 1941-25; 1942-26,59; 1947-157
EMPR ASS RPT 8126, 9115, *13710
EMPR BC METAL *MM00145
EMPR BULL 1932-1, p. 82
EMPR EXPL 1980-39; 1985-C28; *1987-A22,A63; *1988-A4,A5
EMPR GEM 1971-398
EMPR INDEX 1-475; 3-170,216
EMPR MIN STATS 1990, pp. 25,29
EMPR OF 1986-7; 1989-22; 1994-8; 1998-10
EMPR PF (See General PF - Franklin Mining Camp File; Sketch of Union
Group claims, circa 1914?)
EMPR RGS 29
EMR CMI Feb, 1990
GSC MAP *97A; 133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56 p.155,168
GSC OF 409; 736; 1969
GCNL #48, #194 1986; #203, 1987; #86, 1989
N MINER *April 7, 1986; *Feb 23, 1987
USGS P 630, p.98
V STOCKWATCH June 8, 1987; Oct 23, 1987
W MINER April, 1984
Thomlinson, W. (1920): Sampling of Some Platinum Bearing Lodes in
British Columbia; Munitions Resources Commission, Canada; Final
Report; pp. 161-166
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/10/28

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE004**

NATIONAL MINERAL INVENTORY:

NAME(S): **LITTLE** FRANKLIN CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 32 43 N
LONGITUDE: 118 20 09 W
ELEVATION: 1130 Metres

NORTHING: 5488932
EASTING: 403366

LOCATION ACCURACY: Within 500M

COMMENTS: Adit, located about 3.1 kilometres southeast of Mount Franklin
(Geological Survey of Canada Map 133A).

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
COMMENTS: Galena and sphalerite are assumed.
ASSOCIATED: Quartz Calcite Siderite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres
COMMENTS: Attitude of quartz carbonate vein.

STRIKE/DIP: 090/90

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Paleozoic-Mesozoic
Middle Jurassic

GROUP

Harper Ranch

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Pyritic Tuff
Calcareous Conglomerate
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch

Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The LITTLE showing is located on the east side of Burnell Creek valley, approximately 3.1 kilometres southeast of Mount Franklin.

The showing occurs in pyritic tuff and calcareous conglomerate of the Devonian-Triassic Harper Ranch Group which is hosted by granodiorite of an unnamed Middle Jurassic intrusion.

The LITTLE showing consists of a quartz-calcite-siderite vein which contains a small amount of sulphides. The vein strikes east-west and has a vertical dip. Details about the sulphide mineralization are lacking; but vein hosted galena and sphalerite is common in the area and are assumed to be present. An adit is shown in this area on Geological Survey of Canada Map 133A, published in 1914; but information about the adit is not given.

BIBLIOGRAPHY

EMPR OF 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File)
GSC MAP 97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.155,169
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

mineralization is best developed in a zone on the Harper Ranch side of the shear; little mineralization is noted in the granodiorite.

The GLOUCESTER was one of the earliest properties to be developed in the Franklin camp. By 1901, a 15-metre shaft had been sunk in "solid ore" and mineralization had been traced for about 120 metres on the surface. The GLOUCESTER claim was Crown granted as Lot 2809 to T.L. Merson and associates in 1902. In 1904, an adit was started about 35 metres lower in elevation than the shaft and by 1905 had been driven 60 metres toward the shaft. The shaft was reported to be 16.7 metres deep, although a later report suggests that the shaft may only be 10 metres deep.

In 1906, the GLOUCESTER was bonded to the Dominion Copper Co. Ltd. who extended the adit to 65 metres and then raised 28 metres from the end of the tunnel without striking any ore.

In 1920, the property was diamond-drilled by the Provincial Government under the Mineral Survey and Development Act. Eight holes, for an aggregate total of 880 metres, were drilled. The only mineralization encountered was small veinlets of pyrite with occasional segregations of hematite and specks of chalcopyrite. Drillholes drilled under the shaft and tunnel were barren of mineralization.

In 1964, Franklin Mines Ltd. acquired much of the Franklin camp, including the GLOUCESTER showing. The average of 2 samples from pits, representing 9 metres of chip sampling, assayed 0.05 grams per tonne platinum (Assessment Report 637). A magnetometer survey found anomalous readings only in the vicinity of the old workings.

In 1977, the GLOUCESTER showing was prospected by T.E. Lisle of the Hecla Mining Company. Nothing new of interest was found.

In 1982, Guy Allen prospected the GLOUCESTER and adjacent GH (082ENE006) showing. An inclined shaft, striking 242 degrees and dipping 62 degrees, was found on the property. A vein-filled shear, exposed in the wall of the shaft, strikes 257 degrees and dips 77 degrees to the north. The uppermost adit, 33 metres to the southwest of the shaft, was driven on a bearing of 290 degrees. A grab sample collected from the portal assayed 0.3 gram per tonne gold, 5.47 grams per tonne silver, 0.28 per cent copper, 0.038 per cent zinc and 0.023 per cent lead (Assessment Report 10953). Another adit is located 17 metres to the southeast of the shaft; it was driven into the steep hillside at 296 degrees intersecting the adit. The lowermost or main adit, located 42 metres to the east of the shaft, was driven at 290 degrees. No mineralization was noted near the portal or in the dump of the main adit.

In 1987, the GLOUCESTER showing was acquired by R. MacKillop and was examined by M.L. Malott. Observations of the workings confirm earlier reports. The mineralized contact between the granodiorite and the Harper Ranch quartzite strikes 240 degrees and dips 70 degrees to the southeast. Numerous pits and trenches were found on the mountainside above the upper adit. A sample from a pit 16 metres above the upper adit assayed 0.072 gram per tonne gold, 1.38 grams per tonne silver, 0.02 gram per tonne platinum and 0.108 per cent copper (Assessment Report 15467).

BIBLIOGRAPHY

EM GEOFIL 2000-2, 2000-5
EMPR AR 1900-871,872,874; 1901-1066; 1902-304; 1904-222; 1905-187;
1906-164; 1913-169; 1914-346,347; 1915-201; 1918-206; 1920-154;
1929-253; 1964-112; 1965-172
EMPR INDEX 1-177; 3-62
EMPR ASS RPT *637, *6228, *10953, *15467, 17273
EMPR BULL 1(1932), p.83
EMPR EXPL 1977-E28; 1987-C32; 1982-35; 1987-C32
EMPR OF 1994-8
EMPR PF (See General PF - *Franklin Mining Camp File; Sketch of
Glouster Group in Franklin Camp, circa 1914?; Report by T.E.
Lisle, 1977; Prospecting Report on the Glouster and G.H. claims,
1982)
EMPR RGS 29
GSC MAP *97A; 133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.154,155,170
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/10

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE006**

NATIONAL MINERAL INVENTORY:

NAME(S): **G.H.**, G.H. (L.2810), GLOUCESTER GROUP,
GLOUSTER GROUP, FRANKLIN CAMP, OPHER (L.2811)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:
LATITUDE: 49 34 35 N
LONGITUDE: 118 22 03 W
ELEVATION: 1230 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Shaft, located about 1.5 kilometres north of Mount Franklin (Property File - Sketch of Gloucester Group in Franklin Camp).

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5492432
EASTING: 401138

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Magnetite
COMMENTS: Trace of gold and silver.
ASSOCIATED: Magnetite
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn
DIMENSION: 100 x 12 Metres
COMMENTS: Dimensions of GH mineralization.

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Limy Quartzite
Granodiorite
Cherty Quartzite
Argillite
Altered Tuff
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The G.H. showing occurs on the reverted Crown grant Lot 2810, located approximately 1.5 kilometres north of the summit of Mount Franklin.

Mineralization consists of massive magnetite with pyrite and minor amounts of chalcopyrite. The skarn(?) is developed near the contact between a limy quartzite of the Devonian-Triassic Harper Ranch Group and granodiorite of an unnamed Middle Jurassic intrusion to the north. Nearby, cherty quartzite, argillite, altered tuff and greenstone are part of the Harper Ranch Group.

In the early 1900s, the GH property was part of the Gloucester Group of claims, which included the adjacent GLOUCESTER (082ENE005) showing. In 1901, a 7.3-metre deep shaft existed on the GH property. In 1902, the GH was Crown granted as Lot 2810 to L.M. Thewby and associates. In 1905, the GH "skarn" was described as being up to 12 metres in width and traceable for about 100 metres on the surface.

In 1920, the GH showing was drilled by the Provincial Government under the Mineral Survey and Development Act. A 12-metre diamond drillhole was bored through the magnetite. Specks of chalcopyrite, along with hematite, were intersected. Traces of gold and silver were reported, but no assays were given. A second hole was started, but not finished.

In 1964, Franklin Mines Ltd. optioned the GH property from Huestis Mining Corporation Ltd. along with the surrounding area. The results of sampling on the adjacent GLOUCESTER property were filed for assessment work, but no work is recorded on the GH property.

In 1977, the GH showing was prospected by T.E. Lisle of the Hecla

MINFILE NUMBER: **082ENE006**

CAPSULE GEOLOGY

Mining Company. No new mineralization was discovered.
In 1982, Guy Allen prospected the GH and GLOUCESTER showings. Details of the workings and assays for the GLOUCESTER property were filed for assessment work; no work on the GH property was recorded.
In 1987, the GLOUCESTER and GH reverted Crown grants were acquired by R. MacKillop and examined by M.L. Malott. Investigations on the GLOUCESTER showing confirm earlier reports; however, no references were made to the GH showing.

BIBLIOGRAPHY

EMPR AR 1901-164,1066; 1902-304; 1905-187; 1906-164; 1914-347;
*1920-154; 1964-112; 1965-172
EMPR ASS RPT 637, 6228, 10953, 15467
EMPR EXPL 1977-E28; 1987-C32; 1982-35; 1987-C32
EMPR INDEX 1-174
EMPR OF 1994-8
EMPR PF (See General PF - *Franklin Mining Camp File; *Sketch of
Glouster Group in Franklin Camp, circa 1914?; In 082ENE005 -
Prospecting Report on the Glouster and G.H. claims, 1982)
EMPR RGS 29
GSC MAP *97A; 133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.155,170,172
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/16

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE007**

NATIONAL MINERAL INVENTORY:

NAME(S): **AVERILL**, PLATINUM BLONDE, FRANKLIN CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 34 33 N
LONGITUDE: 118 23 00 W

NORTHING: 5492391
EASTING: 399993

ELEVATION: 1260 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Adit, located on the northwest flank of Mount Franklin (Assessment Report 17273).

COMMODITIES: Copper

Silver

Platinum

Palladium

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Magnetite Pyrite
ALTERATION: Biotite
ALTERATION TYPE: Biotite
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: * Unknown
COMMENTS: Marginal zones of alkalic plutons (PGE, Au, Ag, Cu, Ni) defined by Hulbert et al. 1988 as marginal subclass.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene			Coryell Intrusions

LITHOLOGY: Syenite
Pyroxenite
Monzonite
Monzodiorite
Pegmatite

HOSTROCK COMMENTS: Pyroxenite segregations within the Coryell Intrusions are locally known as "Black Lead" ores.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1987

COMMODITY	GRADE	
Silver	8.0000	Grams per tonne
Copper	0.4200	Per cent
Palladium	0.2500	Grams per tonne
Platinum	0.3600	Grams per tonne

COMMENTS: Diamond drillhole DDH-18 from 39.17 metres to 39.47 metres.
REFERENCE: Assessment Report 15964.

CAPSULE GEOLOGY

The AVERILL showing is located on the northwest flank of Mount Franklin, approximately 1.75 kilometres north-northwest of the summit. The showing consists of several outcrops, trenches and an old adit which expose a pyroxenite disrupted and invaded by syenite of the Eocene Coryell Intrusions. Two intrusive phases are recognized in the informally named Averill alkali complex. The first phase consists of a gradational package of monzonitic rocks which grade from pyroxenite to monzodiorite to monzonite. The late phase is a coarse-grained to locally pegmatitic syenite. The pyroxenite has been biotitized and, in places along fractures, sulphide enriched. Blebs of chalcopyrite occur in small veinlets of syenitic composition and as coatings on, or as disseminations within, envelopes or fractures cutting the pyroxenite. Bornite is also noted.

The AVERILL group was located by B.J. Averill in 1910 and 1911.

CAPSULE GEOLOGY

No work is recorded on the showing during the early 1900s when the Franklin camp was very active. However, an old adit, a shaft and several pits are believed to date from that period.

In 1918 the AVERILL showing was investigated for its platinum potential. A sample of pyroxenite containing pyrite and chalcopyrite, was collected from the adit dump. It assayed 3.06 grams per tonne platinum (Thomlinson, W. (1920): Mineral Investigations - Platinum, Munitions Resources Commission, Canada, Final Report, page 164).

In 1964, Franklin Mines Ltd. acquired much of the Franklin camp and carried out detailed geological mapping and geophysical surveys in a number of locations, including the AVERILL area. The weighted average of a total of 39 metres of channel sampling assayed 0.136 per cent copper and 0.04 gram per tonne platinum (Assessment Report 637). Several magnetic anomalies, discovered by Franklin Mines, were found to be due to disseminated magnetite within the pyroxenite body and along the margins of the syenite.

In 1985-86, Longreach Resources Ltd. acquired much of the Franklin camp area, including the AVERILL showing. Longreach carried out geophysical surveys in this area in late 1985 and 1986. Several magnetic highs and VLF-EM conductors were identified in the AVERILL area. In late 1986, Longreach carried out an 8-hole diamond-drill program near the AVERILL adit. Drillhole DDH-18 intersected 0.30 metre of mineralization between 39.17 metres and 39.47 metres which assayed 0.42 per cent copper, 8.0 grams per tonne silver, 0.36 gram per tonne platinum and 0.25 gram per tonne palladium (Assessment Report 15964).

In 1987, Longreach's property, now known as the PLATINUM BLONDE property, was optioned to Placer Dome Inc. who proceeded to carry out a major exploration program over the area. A high-grade, surface grab sample assayed 6.7 per cent copper, 53.6 grams per tonne silver, 0.9 gram per tonne platinum and 3.5 grams per tonne palladium (Assessment Report 17273). One diamond drillhole, PDI 87-32, was drilled under the AVERILL adit; however only traces of chalcopyrite were intersected and no further work was carried out near the AVERILL showing.

BIBLIOGRAPHY

EM GEOFILE 2000-5
EMPR AR 1918-207; 1964-112; 1965-172
EMPR ASS RPT *637, 15172, 15746, *15964, 15981, *17273
EMPR EXPL 1987-C32; 1988-C22
EMPR INDEX 1-24
EMPR OF *1986-7; 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File; See
PF 082ENE002 - Platinum Blonde Property, News Clippings, 1986-87)
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.155,173
GSC OF 409; 736; 1969
GCNL #51, 1987
Thomlinson, W. (1920): *Mineral Investigations - Platinum, Munitions
Resource Commission, Canada, Final Report, pp. 161-166.
Keep, Myra (1988): *The Averill Plutonic Complex, UBC thesis
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/22

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE008**

NATIONAL MINERAL INVENTORY:

NAME(S): **BUFFALO, BUFFALO (L.920S), PLATINUM BLONDE,
FRANKLIN CAMP**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:
LATITUDE: 49 34 58 N
LONGITUDE: 118 23 27 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit, located about 2.7 kilometres northwest of Mount Franklin
(Assessment Report 17273).

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5493173
EASTING: 399465

COMMODITIES: Copper Platinum Palladium

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite Magnetite
ALTERATION: Biotite Chlorite Calcite
ALTERATION TYPE: Biotite Chloritic
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: * Unknown
COMMENTS: Marginal zones of alkalic plutons (PGE, Au, Ag, Cu, Ni) defined by
Hulbert et al. 1988 as marginal subclass.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Eocene Coryell Intrusions

LITHOLOGY: Pyroxenite
Shonkinite
Monzonite
Syenite

HOSTROCK COMMENTS: Pyroxenite segregations within the Coryell Intrusions are locally
known as "Black Lead" ores.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Copper 0.0550 Per cent
Palladium 0.1210 Grams per tonne
Platinum 0.0810 Grams per tonne
COMMENTS: Diamond drillhole DDH-29 from 15.24 metres to 18.29 metres.
REFERENCE: Assessment Report 15964.

CAPSULE GEOLOGY

The BUFFALO showing is located on Lot 920s, approximately 2.7 kilometres northwest of Mount Franklin.
The showing consists of several outcrops of mineralized shonkinite-pyroxenite, a minor phase of the alkalic Eocene Coryell Intrusions. It is suggested that the pyroxenite is a basal cumulate which differentiated from an early monzonite intrusion. This early intrusion was then intruded and engulfed by a pyroxene-syenite intrusion which cooled to form a coarse-grained syenitic core. Calcite veining, and biotite and chlorite alteration of the pyroxenite is noted. Chalcopyrite is sparsely distributed in small syenite veins within the pyroxenite. Pyrite is disseminated near the outer margin of the pyroxenite.
The BUFFALO claim was recorded in 1904, and Crown granted in 1910 to James McDonald. No work is recorded on the showing during the early 1900s when the Franklin camp was very active. However,

CAPSULE GEOLOGY

a shaft and several pits are believed to date from that period.

In 1918, the BUFFALO showing was investigated for its platinum potential. A sample of pyroxenite containing pyrite and chalcopyrite, was collected from the shaft dump. This sample assayed 6.51 grams per tonne platinum (Thomlinson, 1920).

In 1964, Franklin Mines Ltd. acquired much of the Franklin camp and their subsequent exploration program included channel sampling of the BUFFALO showing. The weighted average of 47.8 metres of channel sampling of the pyroxenite assayed 0.157 per cent copper, and 76.8 metres of sampling assayed 0.1 gram per tonne platinum (Assessment Report 637). Several magnetic anomalies detected in this area were found to be disseminated magnetite in the pyroxenite and along the margins of the syenite.

In 1985-86, Longreach Resources Ltd. staked and optioned much of the Franklin camp area, including the BUFFALO showing. Longreach carried out an extensive program in 1986, which in the BUFFALO area included geological mapping and geophysical surveys. Several magnetic highs and VLF-EM conductors were identified. A diamond-drill program in 1986 included 5 holes, for a total of 364 metres, in the BUFFALO area. Drillhole DDH-29 included 3.05 metres, between 15.24 metres and 18.29 metres, which assayed 0.055 per cent copper, 0.081 gram per tonne platinum and 0.121 gram per tonne palladium (Assessment Report 15964).

In 1987, Longreach's property, now known as the PLATINUM BLONDE property, was optioned to Placer Dome Inc. who proceeded to carry out a major exploration program. The focus of most of this work was the MAPLE LEAF (082ENE009) and the AVERILL (082ENE007) occurrences to the southeast; little attention was paid to the BUFFALO showing.

BIBLIOGRAPHY

EM GEOFILE 2000-5
EMPR AR 1910-248; 1914-353; 1918-207; 1964-112; 1965-172
EMPR ASS RPT *637, 15172, 15746, *15964, 15981, *17273
EMPR EXPL 1987-C32; 1988-C22
EMPR INDEX 1-64
EMPR OF *1986-7; 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File; See
PF 082ENE002 - Platinum Blonde Property, News Clippings, 1986-87)
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.154,155,173
GSC OF 409; 736; 1969
GCNL #51, 1987
Thomlinson, W. (1920): *Mineral Investigations - Platinum, Munitions
Resource Commission, Canada, Final Report, pp. 161-166.
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/22

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE009**

NATIONAL MINERAL INVENTORY: 082E9 Cu1

NAME(S): **MAPLE LEAF**, PLATINUM BLONDE, KINGFISHER,
 PAR, MAPLE LEAF (L.1609S), MAPLE LEAF(GENIE),
 TWILIGHT, CLIMAX, FRANKLIN CAMP

STATUS: Past Producer
 REGIONS: British Columbia
 NTS MAP: 082E09W
 BC MAP:
 LATITUDE: 49 33 49 N
 LONGITUDE: 118 21 27 W
 ELEVATION: 1120 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: The MAPLE LEAF adit/trench, located about 1 kilometre east of Mount Franklin (Assessment Report 17273).

Underground
 MINING DIVISION: Greenwood
 UTM ZONE: 11 (NAD 83)
 NORTHING: 5490998
 EASTING: 401836

COMMODITIES: Gold Silver Copper Platinum Palladium

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Mertietite
 ASSOCIATED: Pyrite Quartz
 ALTERATION: Silica
 ALTERATION TYPE: Oxidation Silicific'n
 MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Vein
 CLASSIFICATION: Unknown Hydrothermal
 TYPE: * Unknown I VEIN, BRECCIA AND STOCKWORK
 COMMENTS: Marginal zones of alkalic plutons (PGE, Au, Ag, Cu, Ni) defined by Hulbert et al. 1988 as marginal subclass.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	
Eocene	Penticton	Marron	
Eocene			Coryell Intrusions

LITHOLOGY: Syenite
 Trachytic Syenite
 Andesite Dike
 Pegmatitic Syenite
 Hornfels
 Meta Sediment/Sedimentary
 Meta Volcanic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Plutonic Rocks Harper Ranch
 PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 2002
 SAMPLE TYPE: Grab
 COMMODITY GRADE
 Copper 4.7000 Per cent
 Silver 65.0000 Grams per tonne
 Platinum 1.5800 Grams per tonne
 Palladium 7.5280 Grams per tonne
 Gold 1.4600 Grams per tonne
 COMMENTS: Precious metals by fire assay.
 REFERENCE: GeoFile 2002-2.

ORE ZONE: UPPER REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1987
 SAMPLE TYPE: Drill Core
 COMMODITY GRADE
 Gold 0.1660 Grams per tonne
 COMMENTS: Diamond drillhole PDI 87-38 from 120.69 metres to 157.27 metres.
 REFERENCE: Assessment Report 17273.

CAPSULE GEOLOGY

J.J. (1985): Report). Details of this drill program are not on record.

In 1966, Geofax Surveys Ltd. carried out an induced polarization survey for J.A. McDougall over the PAR claim, which had been staked over the MAPLE LEAF adit. Adjacent parts of the DODGE and KINGFISHER claims were also covered. High chargeability readings were found several hundred metres to the north and east of the upper workings.

In 1970, La Mota Mt. Industries Ltd. carried out an exploration program over the KINGFISHER claim group, which included the PAR claim. Some geological mapping, soil sampling and trenching were carried out in the MAPLE LEAF adit area, but most of the work was carried out to the north and east of the adit. Additional mapping, sampling and a magnetometer survey were carried out by La Mota Mt. Industries in 1971-72. Only a few soil sample lines were filed for assessment work and no anomalies are indicated.

In 1984, Pearl Resources Ltd. optioned the PAR and KINGFISHER claims as part of a large property position they had assembled around the UNION (082ENE003) mine. Most of the work was directed at the UNION mine and no work was recorded for the PAR and KINGFISHER claims.

In 1985-86, Longreach Resources Ltd. staked and optioned much of the Franklin camp area, including the MAPLE LEAF showing. Longreach carried out an extensive program in 1986 which, in the MAPLE LEAF area, included geological mapping and geophysical surveys. Several magnetic highs were found in the area but not over the adit. A weak VLF-EM conductor was found to cut through the MAPLE LEAF adit. A 16-hole diamond-drill program was carried out on the MAPLE LEAF property in 1986; 7 holes were drilled in the adit area. Drillhole DDH-12 intersected 0.61 metre, between 1.82 metres and 2.43 metres, which assayed 3.52 per cent copper, 1.52 grams per tonne platinum and 2.84 grams per tonne palladium (Assessment Report 15746). The MAPLE LEAF adit was blown-up by Longreach while trenching at this site.

In 1987, Longreach's property, now known as the PLATINUM BLONDE property, was optioned to Placer Dome Inc. who proceeded to carry out a major exploration program in this area. A grab sample (No. 22026) collected by Placer assayed 2.6 per cent copper, 1.02 grams per tonne platinum and 2.55 grams per tonne palladium (Assessment Report 17273). Placer drilled hole number PDI 87-40 (90.22 metres) a short distance south of the MAPLE LEAF adit. The hole encountered a thick package of unmineralized hornfelsed sedimentary and volcanic strata.

Placer drilled 2 holes near the upper workings, known as the MAPLE LEAF crush zone. Earlier drilling in 1986, by Longreach, had intersected a thick section of crushed, oxidized and weakly mineralized trachytic syenite. The fault zone consists of a thick section of crushed trachytic syenite which is cut by andesite dikes. The zone is locally silicified and/or cut by quartz veins. The more highly deformed sections contain disseminated pyrite and are auriferous where accompanied by intense silicification. Hole number PDI 87-38 intersected a 36.58 metre section from 120.69 to 157.27 metres which assayed 0.166 gram per tonne gold (Assessment Report 17273).

Sample with elevated PGE noted above is from chalcopyrite bearing syenite at the maple leaf adit in the Averill Plutonic complex. The samples are said to represent Early Mesozoic mineralization at Maple Leaf (> 150 Ma)(Geofile 2002-2). This age assignment is at odds with the Coryell assignment usually given.

Detailed mineralogical work indicates that mertietite (Pd11(Sb,As)4 is present (Geofile 2002-2).

BIBLIOGRAPHY

- EM GEOFILE 2000-2, 2002-2
EMPR AR 1906-164; 1913-169; 1914-342; 1915-201,446; 1916-518;
1917-201; *1918-206; 1919-165; 1920-153; 1921-181; 1922-169;
1925-193; 1927-225; 1932-121; 1933-149; 1964-112; *1965-172;
1966-244
EMPR ASS RPT *637, 812, 3717, 13710, 15172, *15746, *17273
EMPR BULL 1932-1, p. 83
EMPR FIELDWORK 1987, p. 49-53; 1988, p. 27-32
EMPR BC METAL MM00866 (production for wrong deposit)
EMPR EXPL 1987-C32; 1988-C22
EMPR GEM 1970-434; 1971-399; 1972-44
EMPR INDEX 1-289; *3-103,204
EMPR OF *1986-7; 1992-16; 1994-8
EMPR PF (See General PF - Franklin Mining Camp File; Friesen, P.S.
(1972): Map of Geochemical Work, Kingfisher Group of Claims;
*McDougall, J.J. (1985): Preliminary Report on Platinum Group
Metal Values, Longreach Resources Ltd., Statement of Material
Facts July 10, 1986; See PF 082ENE002 - Platinum Blonde Property,
News Clippings, 1986-87)

BIBLIOGRAPHY

EMPR RGS 29
GSC EC GEOL 13, p.104
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.154,173
GSC OF 409; 736; 196
GSC SUM RPT 1911, p.137
GCNL #66, #143, #179, #194, 1986; #11, #71, #51, 1987
N MINER May 18, 1986; Feb 2, Feb 16, 1987
USGS P 630, p.29
*Thomlinson, W. (1920): Sampling of Some Platinum Bearing Lodes in
British Columbia; Munitions Resources Commission, Canada; Final
Report; pp. 161-166.
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/26

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE010**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROYAL TINTO**, FRANKLIN CAMP

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 35 00 N
LONGITUDE: 118 23 04 W
ELEVATION: 1200 Metres

NORTHING: 5493226
EASTING: 399928

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralization located about 2.5 kilometres north-northwest of Mount Franklin (Geological Survey of Canada Map 97A).

COMMODITIES: Iron

MINERALS

SIGNIFICANT: Magnetite

ASSOCIATED: Pyrite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear

CLASSIFICATION: Replacement Hydrothermal

TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Eocene

Coryell Intrusions

LITHOLOGY: Monzonite
Syenite
Pyroxenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The ROYAL TINTO showing is located approximately 2.5 kilometres north-northwest of Mount Franklin.

The showing consists of magnetite and pyrite as replacements along a shear zone in monzonite of the Eocene Coryell Intrusions. The shear trends to the northwest, parallel to a syenite contact about 150 metres to the southwest. This syenite, and also a pyroxenite nearby, are part of the Eocene Coryell Intrusions.

In 1911, the ROYAL TINTO claim was owned by J. Holmes. In 1914, the recorded owner was H. Eyre.

In 1964, Franklin Mines Ltd. acquired much of the Franklin camp, including the ROYAL TINTO area; however no work on the ROYAL TINTO showing was recorded.

In 1986-87, Longreach Resources Ltd. and Placer Dome Inc. carried out a major exploration program for platinum in the Franklin camp. In 1986, they drilled 5 diamond drillholes on the adjacent BUFFALO (082ENE008) showing. There is no record of any work being carried out on the ROYAL TINTO showing.

BIBLIOGRAPHY

EMPR AR 1914-353; 1964-112; 1965-172
EMPR ASS RPT 637, 15172, 15746, 15964, 15981, 17273
EMPR EXPL 1987-C32; 1988-C22
EMPR INDEX 1-401
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File)
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.155,175
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE011**

NATIONAL MINERAL INVENTORY:

NAME(S): **COPKET**, COPKET #3 FR., LOTTIE F (L.2949),
 MESSINA (L.2951), STERLINGHAM FR. (L.1901), COPKET 1-8,
 DAVID, DAVID 1-6, CUP,
 SAND

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082E10W
 BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 09 N
 LONGITUDE: 118 48 48 W
 ELEVATION: 910 Metres

NORTHING: 5499721
 EASTING: 369068

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of area with shaft and 2 adits on LOTTIE F (L.2949) reverted
 Crown grant, located about 9.5 kilometres north of Christian
 Valley (Assessment Report 21534).

COMMODITIES: Copper Tungsten Gold Silver Zinc Molybdenum

MINERALS

SIGNIFICANT: Bornite Chalcopyrite Pyrite Sphalerite Molybdenite

COMMENTS: Scheelite is inferred from tungsten assay.

ASSOCIATED: Garnet Epidote Magnetite Pyrite Quartz

ALTERATION: Garnet Epidote Malachite Hematite

ALTERATION TYPE: Skarn Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
 CLASSIFICATION: Skarn Hydrothermal
 TYPE: K01 Cu skarn I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Eocene	Penticton	Marron	
Cretaceous-Tertiary			Okanagan Batholith
Eocene			Coryell Intrusions

LITHOLOGY: Skarn
 Limestone
 Siltstone
 Granite
 Andesite
 Syenite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

Plutonic Rocks

METAMORPHIC TYPE: Contact

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1991

SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	4.4500	Grams per tonne
Gold	1.2000	Grams per tonne
Copper	0.4800	Per cent

COMMENTS: Sample number 72091, from trench exposing skarn on the COPKET #3 FRAC.
 REFERENCE: Assessment Report 21534.

CAPSULE GEOLOGY

The COPKET showing is comprised of a number of adits, shafts, pits and mineralized outcrops located in the vicinity of the LOTTIE F (L.2949) and STERLINGHAM FR. (L.1901) reverted Crown grants. This MINFILE occurrence was originally referred to as the LOTTIE F. Crown grant (L.2949) but is presently known as the COPKET showing. It is located on the west side of Copperkettle Creek, approximately 9.5 kilometres north of Christian Valley.

CAPSULE GEOLOGY

The showing is underlain by small pods of Carboniferous-Permian Anarchist Group limestone and siltstone which are hosted by granite of the Cretaceous-Tertiary Okanagan Batholith. The Okanagan Batholith, as shown by Open File 1994-8, includes the Tertiary Ladybird and Valhalla Intrusions. Syenite dikes of the Eocene Coryell Intrusions are common in this area. To the east of the showing there is a cover of Eocene Marron Formation (Penticton Group) andesite.

The old pits, shafts, and adits on the LOTTIE F and STERLINGHAM FR. reverted Crown grants, date from the early 1900s. The claims were Crown granted in 1904 and 1915, respectively. The Lottie F and Messina (Lot 2951) were owned and worked by G. Rumberger and associates in 1913.

Mineralization on the COPKET showing is of 2 different types; garnet-epidote skarn occurs in pods of Anarchist Group limestone, and quartz vein-breccias are associated with regional scale faults.

Mineralization on the LOTTIE F reverted Crown grant consists of a heavy bornite mineralization in marble associated with brown granetite skarn. A high-grade grab sample, containing malachite and bornite, was collected from a waste dump near the old workings. It assayed 5.58 grams per tonne gold, 76.4 grams per tonne silver, 9.6 per cent copper and 0.02 per cent tungsten (Assessment Report 13795). Skarn mineralogy includes brown garnet and epidote. A later (Tertiary?) chalcopyrite-sphalerite mineralization is superimposed on parts of the skarn.

To the south, approximately 300 metres from the LOTTIE F skarn is a group of adits, pits and a drillhole on the STERLINGHAM FR. (L.1901) reverted Crown grant. Details of the mineralogy at this location is lacking; however, it is referred to as the "Bornite Zone" (Assessment Report 21534, Figure 6). A grab sample assayed 7.77 grams per tonne gold, 91 grams per tonne silver, 12.86 per cent copper and 0.05 per cent zinc (Assessment Report 21534). Details about the trenches or the drillhole are lacking.

A trench, approximately 350 metres northeast of the LOTTIE F skarn, on the COPKET #3 FR., exposes skarn in contact with granite. Mineralization consists of pyrite, bornite and chalcopyrite with magnetite and epidote. A gossan (hematite?) is also noted about 50 metres to the south of this trench. A grab sample from the trench assayed 1.2 grams per tonne gold, 4.45 grams per tonne silver, 0.48 per cent copper (Assessment Report 21534).

Nearby, exposures of swirly-textured quartz and breccia, which carry sphalerite, chalcopyrite, and pyrite with minor gold and silver values, are found associated with north-northeast trending faults. The faults are believed to be low-angle faults related to Eocene extensional tectonics. The breccias are found in both granites and in limestones. All of the above sites are included in the COPKET showing.

In 1970, G.V. Lloyd Exploration Ltd. carried out a ground magnetometer survey of the general area. They identified a magnetic low, which forms a narrow linear feature across the LOTTIE F and STERLINGHAM FR. reverted Crown grants. This feature is in the vicinity of outcrops which expose copper and molybdenum mineralization. Also in 1970, Pinnacle Petroleum Ltd. carried out a small stripping, trenching and road building program. Other work in this area includes a 1970 drill program by Mitsui Mining Co. Ltd. on the SAND (082ENE040) showing, 1.5 kilometres to the south.

In 1984, F.B. Whiting and Orion Resources Ltd. carried out a prospecting program and sampled most of the old workings in the area. In 1988, they carried out a soil geochemical survey which identified copper and zinc anomalies in the vicinity of the old workings. Additional sampling and mapping was done in 1991, which helped to define the presence of pyrite-chalcopyrite mineralized breccias associated with a fault along the Copperkettle Creek.

BIBLIOGRAPHY

EMPR AR 1901-1135; 1904-300; 1905-181,255; *1913-32,159;
1915-450; 1925-449
EMPR ASS RPT 3005, 13795, 17675, *21534
EMPR EXPL 1985-C29; 1988-C22
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 79, p. 137
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/03/26

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE012**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELLSWORTH, BEV, TUFF,
MAL, JOHN, MOSH**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E10W 082E07W
BC MAP:
LATITUDE: 49 30 27 N
LONGITUDE: 118 59 10 W
ELEVATION: 1360 Metres

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5485770
EASTING: 356217

LOCATION ACCURACY: Within 1 KM
COMMENTS: Centre of area with several trenches and pits (Assessment Report 12005). The showing is located on St. John Ridge, about 13.5 kilometres west-southwest of Christian Valley.

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite Arsenopyrite
COMMENTS: Arsenopyrite is inferred.
ASSOCIATED: Quartz Epidote Calcite
ALTERATION: Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I VEIN, BRECCIA AND STOCKWORK
COMMENTS: Gold-silver-copper quartz carbonate vein.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Anarchist Undefined Formation

LITHOLOGY: Limestone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1901
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 102.0000 Grams per tonne
Gold 0.7500 Grams per tonne

COMMENTS: Average sample values.
REFERENCE: Minister of Mines Annual Report 1901, page 1142.

CAPSULE GEOLOGY

The ELLSWORTH showing is located on St. John Ridge, approximately 13.5 kilometres to the west-southwest of Christian Valley.

The showing consists of a quartz vein hosted by limestone and quartzite of the Carboniferous-Permian Anarchist Group.

Mineralization includes pyrite, pyrrhotite and chalcopyrite in a gangue of quartz-epidote-calcite. The vein is reported to be wide; no dimensions are given. It strikes 190 degrees and dips to the west; no dip angle is given. Early reports refer to a massive body of arsenical iron pyrite containing gold and silver values and underlain by iron-stained barren quartz. An average sample in 1901 assayed 50 cents (about 0.75 gram) gold and 102 grams per tonne silver (Minister of Mines Annual Report 1901, page 1142). Presumably, the massive sulphide body was exhausted because later reports do not mention it.

In 1970, DeKalb Mining Corporation carried out an exploration program over a large number of claims in this general area. This work included a soil geochemical survey over the BEV claims, which covered the ELLSWORTH showing. They identified several copper-zinc anomalies in soils. No reference is made to old workings in the report on their program.

In 1984, Talisman Silver Mines Ltd. carried out a soil survey

CAPSULE GEOLOGY

over the ELLSWORTH showing. They located several old pits and trenches, and weak anomalies were identified for copper, lead, zinc, and silver.

BIBLIOGRAPHY

EMPR AR *1901-1142
EMPR ASS RPT 3021, 3022, *12005
EMPR GEM 1970-409; 1971-396-397
EMPR OF 1994-8
EMPR PF (Airphoto composite, Scale 1:12,000, Sept. 1970)
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 79, p. 130, 133
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/03/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE013**

NATIONAL MINERAL INVENTORY:

NAME(S): **BULLION**, BULLION (L.1200), PLATINUM BLONDE,
FRANKLIN CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

MINING DIVISION: Greenwood

LATITUDE: 49 33 29 N
LONGITUDE: 118 22 45 W
ELEVATION: 1290 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5490409
EASTING: 400258

LOCATION ACCURACY: Within 500M

COMMENTS: Location of sampled trenches, southwest of Mount Franklin (Assessment Report 17273).

COMMODITIES: Silver Gold Copper Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene
Paleozoic-Mesozoic

GROUP

Penticton
Harper Ranch

FORMATION

Marron
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone
Cherty Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage

Harper Ranch

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver	18.0000	Grams per tonne
Gold	0.6400	Grams per tonne
Copper	0.0720	Per cent
Lead	0.1650	Per cent
Zinc	0.5300	Per cent

COMMENTS: Sample number 22069 from trench.

REFERENCE: Assessment Report 17273.

CAPSULE GEOLOGY

The BULLION prospect is located on reverted Crown grant Lot 1200, in the historic Franklin mining camp. The showing is southwest of Mount Franklin and about 200 metres southwest of the BANNER prospect (082ENE002).

The showing consists of polymetallic quartz veins, which are hosted by greenstone and cherty quartzites of the Devonian-Triassic Harper Ranch Group. A quartz shear zone contains oxidized pyrite and "occasional segregations" of chalcopyrite. The host rocks strike northwest and southeast.

In 1932, the claim was owned by J.F. McCarthy and associates. They uncovered the shear zone by trenching.

In 1968, Franklin Mines Ltd. carried out an exploration program in the Franklin camp; however, the only work in the vicinity of the BULLION Crown grant appears to be some road construction.

In 1974, D.W. Tully carried out a property examination for Dallas Explorations Ltd. and recommended a program of geophysical surveys and diamond-drilling.

In 1986, Longreach Resources Ltd. staked and optioned much of the Franklin camp area, including the BULLION Crown grant. It is probable that Longreach prospected this area, although no reports

CAPSULE GEOLOGY

were filed.

In 1987, Longreach's property, now known as the PLATINUM BLONDE property, was optioned to Placer Dome Inc. who proceeded to carry out a major exploration program. In the BULLION area, Placer sampled the trenches. Four chip samples were taken but no description of the mineralization in the BULLION trenches was given. Sample 22069 contained the highest values; 0.072 per cent copper, 0.53 per cent zinc, 0.165 per cent lead, 18 grams per tonne silver and 0.64 gram per tonne gold (Assessment Report 17273).

In 1993, Sway Resources Inc. optioned a large number of Crown grants and claims in this area, including the BULLION Crown grant. They proceeded to carry out prospecting, sampling, geological mapping and a 16-hole rotary and diamond-drill program on the BANNER (082ENW002) and HOMESTAKE (082ENE051) Crown grants (Property File - Sway Resources Inc., Statement of Material Facts, dated February 14, 1994).

BIBLIOGRAPHY

EMPR AR *1932-122
EMPR ASS RPT 637, 1668, 15172, 15746, 15964, 15981, *17273
EMPR EXPL 1987-C32; 1988-C22
EMPR INDEX 1-28
EMPR OF 1994-8
EMPR PF (In 082ENE002 - Sway Resources Inc., Statement of Material Facts, February 14, 1994)
EMPR RGS 29
GSC MAP 97A; 133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 56
GSC OF 409; 736; 1969
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/12/13

CODED BY: GSB
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

northeast and dip to the north. Sericitic alteration is well developed in the better mineralized areas. Propylitic (chlorite and epidote) alteration is pervasive but generally weak. Where the stockwork cuts through limestone pendants, small lenses and stringers of pyrite, chalcopyrite and bornite have been found.

The earliest record of work on the ALCO showing is a 1906 Minister of Mines Annual Report which describes 2 shafts, each 3.6 metres deep, and a 30-metre long open cut. The property, known as the COPPER GROUP, was owned by J. Gelinas, D. Morrison and A. Omon. In 1912, the B.C. Copper Company held a lease on the COPPER and RIVERSIDE claims. By 1923, an adit on COPPER NO. 2, located 320 metres east-northeast of one of the shafts, had been driven 27 metres. A 9-metre adit is also reported on the LEAH claim 730 metres south-southwest of the shaft. In 1928, the COPPER NO. 2 adit had been extended to 30 metres. Pyrite, carrying low gold and silver values, is noted. Only one shaft, 24 metres deep is mentioned in reports from the 1920s. In 1932, high-grade gold values are reported from the COPPER NO. 2 adit (Minister of Mines Annual Report 1932, page 122). No assay values are given. The ore consists of pyrite in a quartz gangue, which was found near the contact between the granodiorite and the limestone.

In 1968, the showing was staked as the DOE 1-2 and BEAR 1-8 claims by Boundary Exploration Ltd. A geological mapping program was carried out by Newmont Mining Corporation of Canada Ltd.

In 1975-76, Rio Tinto Canadian Exploration Limited carried out a major program on the ALCO, ALCO 2 and ALCO 3 claims. In 1975, the property was mapped and a small soil sampling program was carried out. In 1976, they carried out a 7-hole, 640-metre percussion drill program, additional mapping and soil sampling, and magnetometer, induced polarization, and radiometric surveys. The geophysical surveys produced complex, although inconclusive, patterns of anomalies. The results of the drilling are unknown.

In 1980, Brenda Mines Ltd. carried out a program of mapping, line cutting and soil geochemical surveys. Copper and molybdenum anomalies were associated with the areas of granodiorite.

In 1981, Brenda Mines Ltd. carried out a 4-hole, 313-metre diamond-drill program. One drillhole (A-81-1) was collared about 60 metres southwest of the shaft. This drillhole intersected a sericitic and propylitically altered granodiorite containing a weakly developed porphyry copper-molybdenum stockwork. The best intersection was 0.268 per cent copper and 0.028 per cent molybdenum over 2 metres; lead, zinc, silver and gold values were very low (Assessment Report 9682). The other drillholes were poorly mineralized.

BIBLIOGRAPHY

EMPR AR *1906-H164; 1911-K176; 1914-K347; 1923-A179; 1924-B164;
1925-A194; 1927-C225; 1928-C239; 1929-C254; 1930-A227; 1932-A122
EMPR ASS RPT 1845, *6018, *8610, *9682
EMPR GEM 1969-310,350
EMPR EXPL 1975-E25; 1976-E28; 1980-40; 1981-89
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File)
GSC MAP 97A; 133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 56, p.172
GSC OF 409; 736; 1969
GCNL #146, 1976

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE015**

NATIONAL MINERAL INVENTORY: 082E10 U1

NAME(S): **FUKI**, DONEN

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082E10W
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 32 23 N
LONGITUDE: 118 53 00 W
ELEVATION: 1180 Metres

NORTHING: 5489161
EASTING: 363747

LOCATION ACCURACY: Within 500M

COMMENTS: Fuki outcrop, 60 metres west of Dear Creek (Assessment Report 2013). The north part of the deposit extends 600 metres to the northeast and is 150 metres wide and 3 metres thick. The south part of the deposit is located 1.5 kilometres to the south; drilling tested a 400 by 150 metre area. The Collier occurrence (082ENE030), located 2.0 kilometres to the south, shows minor radioactivity.

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Autunite
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Epigenetic
TYPE: D04 Basal U
SHAPE: Regular
MODIFIER: Fractured
DIMENSION: 1000 x 150 x 3 Metres STRIKE/DIP: 045/
COMMENTS: Structure-controlled paleochannel. Mineralization age is Miocene-Pliocene.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary	Chilcotin	Unnamed/Unknown Formation	
	ISOTOPIC AGE: 5.0 +/- 0.5 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Basalt		
Eocene	Penticton	Marron	
Cretaceous-Tertiary			Okanagan Batholith
Eocene			Coryell Intrusions

LITHOLOGY: Conglomerate
Arkosic Sandstone
Siltstone
Carbonaceous Mudstone
Biotite Andesite
Trachyte
Basalt
Olivine Basalt
Granite
Quartz Monzonite

HOSTROCK COMMENTS: Deposit occurs in paleochannel fluvial sediments. The Chilcotin Group is Miocene-Pliocene in age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: FUKI

REPORT ON: Y

CATEGORY: Indicated YEAR: 1980

QUANTITY: 477500 Tonnes

COMMODITY: Uranium GRADE: 0.0330 Per cent

COMMENTS: Deposit contains an estimated 186.21 tonnes of U3O8. Average grade is quoted as 0.039 per cent U3O8. Conversion used for U3O8 to uranium is 0.848.

REFERENCE: Assessment Report 8105.

CAPSULE GEOLOGY

The Fuki deposits, 1.5 kilometres apart, are located on the west side of Dear Creek, approximately 5.6 kilometres west of the Kettle Valley community of Christian Valley. There are several areas of mineralization which straddle the Beaver Creek Road and extend 2.5 kilometres to the south.

The area is underlain by granite and quartz monzonite of the Cretaceous-Tertiary Okanagan Batholith. Unconformably overlying the plutonic rocks are tuffs and flows and related volcanoclastic sediments of the Eocene Marron Formation, Penticton Group. The volcanics are cut by Eocene Coryell syenite and monzonite intrusives and dikes, and younger dacite feeder dikes, correlative with the Marron Formation.

The Miocene-Pliocene Chilcotin Group occurs as isolated, flat-lying cap rocks consisting of vesicular and massive columnar olivine basalt flows with occasional interformational sediments. A potassium/argon age of 5.0 plus or minus 0.50 Ma was determined for the basalt (Map 29). Miocene fluvial sediments underlying the basalts are unconsolidated, interbedded arkosic sandstones, siltstones, carbonaceous mudstones, and basal conglomerates. These sediments occur as structurally controlled 'paleochannels', which are host to uranium deposits.

The Fuki deposits occur within a northeast trending paleochannel overlying biotite andesites and trachytes of the Eocene Penticton Group. Mineralization in the north part of the deposit is traced for about 1000 metres in length, 150 metres in width and up to 3 metres in thickness. Depth of the deposit is from 0 to 50 metres below surface except for the surface discovery outcrop, which measured 10 by 3 metres and assayed 0.10 per cent uranium across 1.5 metres (Geology, Exploration and Mining 1969). The south part of the deposit is located 1.5 kilometres to the south; the mineralized area measured 400 by 150 metres according to drilling. The Collier occurrence (082ENE030), located 2.0 kilometres to the south shows minor radioactivity.

Massive basalt and basaltic tuff breccia up to 45 metres thick, overlie the fluvial sediments. Extensive areas of Coryell and Okanagan Batholith intrusive rocks, considered to be the main sources of uranium mineralization, occur topographically above and to the north of the deposit.

Secondary uranium mineralization is largely concentrated in the basal conglomerate and occurs as films on pebbles and in the matrix of loosely consolidated conglomerates and carbonaceous sediments. Autunite is the only uranium mineral identified.

The FUKI outcrop was discovered during a vehicle-borne scintillometer survey in 1968. The property was staked for Nissho-Iwai Canada Ltd. and exploration was carried out by the Power Reactor and Nuclear Fuel Development Corporation, of Japan. Work on the property, during the decade prior to the uranium moratorium in 1980, consisted of geological mapping, radiometric surveys, trenching, property surveys and at least 2616 metres of diamond drilling in 49 holes. The FUKI deposits are estimated to contain 477,500 tonnes grading 0.033 per cent uranium and have an average thickness of 1.36 metres (Assessment Report 8105).

BIBLIOGRAPHY

- EMPR ASS RPT *2013, *2484, *3135, *8105
EMPR EXPL 1978-29, 30; 1979-34
EMPR FIELDWORK 1975, p. 31; 1977, p. 12
EMPR GEM *1969-302, 303; 1970-409; 1971-396
EMPR GEOLOGY *1975-34-36; 1977-1981-12-16
EMPR MAP 22; *29
EMPR P *1979-6, pp. 29-30, 34, 47
EMPR OF 1990-32
EMPR PF (Addie, N. (1976): Excerpt from May 1976 Monthly Report;
Day, S.J. (circa 1990): Basal-type Gold-Uranium Deposits, Okanagan
Region, British Columbia, 11 pages)
GSC MAP 6-1957
GSC OF 551; 1969
GSC P 70-48, pp. 91-92; 79-1A, pp. 349-356; 80-1B, pp. 17-28; 81-23,
pp. 37-47
EMR MIN BULL MR 223 B.C. 17
CIM BULL Dec. 1978, pp. 64-65; Aug. 1980, Vol. 73, No. 820, pp. 89-108
CIM SPECIAL VOL. 33, 1986, (Uranium Deposits of Canada), pp. 309-320
CSPG BULL VOL. 25, No. 6 (Dec 1977) p. 1245
ECON GEOL VOL. 77, No. 5, 1982, pp. 1176-1209
W MINER April 1977, p. 78
Bates, D.V.; Murray, J.W.; and Raudsepp, V. (1980): *Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, October 30, 1980, Vol. 1, p. 34
Sawyer, D.A.; Turner, A.T.; Christopher, P.A.; and Boyle, D.R.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 33
REPORT: RGEN0100

BIBLIOGRAPHY

(1981): *Basal Type Uranium Deposits, Okanagan Region, South
Central British Columbia; Field Guides to Geology and Mineral
Deposits, Calgary, GAC/MAC, CGU, pp. 69-77

DATE CODED: 1985/07/24
DATE REVISED: 1996/04/10

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE016**

NATIONAL MINERAL INVENTORY:

NAME(S): **BS**, PANE, FERN

MINING DIVISION: Vernon

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 56 24 N
LONGITUDE: 118 49 16 W
ELEVATION: 2010 Metres

NORTHING: 5533549
EASTING: 369328

LOCATION ACCURACY: Within 1 KM

COMMENTS: Showing, located about 24 kilometres north-northeast of Big White Mountain (Geological Survey of Canada Open File 637).

COMMODITIES: Copper Molybdenum Tungsten Nickel

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Scheelite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated

CLASSIFICATION: Hydrothermal

TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Quartz Monzonite

HOSTROCK COMMENTS: Unnamed intrusion was previously mapped as Middle Jurassic Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The BS showing is located on the south side of Jubilee Mountain approximately 24 kilometres north-northeast of Big White Mountain.

The showing consists of chalcopyrite, molybdenite and scheelite as disseminations and in quartz veins which are hosted by an unnamed Middle Jurassic quartz monzonite intrusion. This intrusion was previously mapped as the Middle Jurassic Nelson Intrusions (Geological Survey of Canada Map 1736A). Nickel is also reported but details about the mineralogy are lacking.

The property was held as the BS 1 to 36, PANE 1 to 27 and FERN 1 to 8 claims by Copper Hill Mining and Exploration Co. Ltd. in the late 1960s. In 1968, they carried out geological mapping, magnetometer and geochemical surveys, and built 19 kilometres of access road. In 1969, Copper Hill carried out additional soil and stream geochemical surveys, dug 2 small pits, built 3.2 kilometres of road, and drilled 4 diamond-drill holes for a total of 61 metres of drilling. No reports were filed by Copper Hill on their program.

BIBLIOGRAPHY

EMPR AR 1968-223
EMPR GEM *1969-300
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; *1736A
GSC OF 409; *637; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/03/26

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE017**

NATIONAL MINERAL INVENTORY: 082E15 Ag1

NAME(S): **WATERLOO**, WATERLOO NO.3 (L.4815), LIGHTNING PEAK CAMP

STATUS: Past Producer
 REGIONS: British Columbia
 NTS MAP: 082E15E
 BC MAP:

Underground

MINING DIVISION: Vernon

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 54 03 N
 LONGITUDE: 118 33 30 W
 ELEVATION: 1680 Metres

NORTHING: 5528769
 EASTING: 388092

LOCATION ACCURACY: Within 500M

COMMENTS: Portal of adit no. 2, about 3.1 kilometres northwest of Lightning Peak (Property File - Falconer, 1988). See also the MORNING (082ENE022) deposit.

COMMODITIES: Silver Lead Zinc Gold Cadmium
 Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Silver Acanthite Pyrrargyrite
 Proustite Stephanite Chalcopyrite Tetrahedrite
 ASSOCIATED: Quartz Calcite Pyrite Pyrrhotite
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein Breccia
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
 COMMENTS: The vein is hosted by an east striking, steeply north dipping shear zone.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Tertiary	Chilcotin	Undefined Formation	
Paleozoic-Mesozoic	Harper Ranch	Undefined Formation	
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Limestone
 Hornfels
 Greenstone
 Quartz Porphyry Dike
 Diorite
 Granodiorite
 Basalt

HOSTROCK COMMENTS: Quartz porphyry dikes commonly intrude the Harper Ranch Group in the Lightning Peak area. The Chilcotin Group is Miocene-Pliocene in age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
 TERRANE: Harper Ranch Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1988
SAMPLE TYPE: Chip	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	106.0000 Grams per tonne
Lead	4.1900 Per cent
Zinc	3.6700 Per cent

COMMENTS: Sample 93166 is a 76-centimetre chip sample from adit no. 2.
 REFERENCE: Property File - Falconer, J.S. (1988): Geological Report.

CAPSULE GEOLOGY

The WATERLOO mine is located on Crown-granted lot 4815, which is approximately 3.1 kilometres northwest of Lightning Peak and 33 kilometres west-northwest of the Arrow Lake community of Edgewood. The Lightning Peak area is underlain by limestone and greenstone of the Devonian-Triassic Harper Ranch Group. These are underlain and intruded by granodiorite and diorite of an unnamed Middle Jurassic Intrusion. Quartz porphyry dikes are common in the Harper Ranch Group, pegmatitic variations are sometimes associated with mineralization in the Lightning Peak camp. Several remnants of Miocene-Pliocene Chilcotin Group plateau basalts are found in the

CAPSULE GEOLOGY

area, including the summit of Lightning Peak.

The WATERLOO mine occurs in an easterly striking shear zone which dips steeply to the north. The shear zone, which averages about 1.3 metres in width, is hosted by Harper Ranch limestone. The WATERLOO vein follows the shear zone and is sporadically mineralized with streaks and disseminations of sphalerite and galena along much of its length. A limestone-calcite breccia in the shear is well mineralized with sphalerite. A high grade ore shoot, offset by a southeast dipping fault, contained massive lenses of sphalerite, galena, native silver, acanthite, ruby silver (both pyrargyrite and proustite) and stephanite. Quartz and calcite are associated with the lenses. Tetrahedrite was noted in adit No. 3. Elsewhere, a hornfels zone near a granodiorite intrusion contains minor amounts of chalcopyrite, pyrite and pyrrhotite.

The Lightning Peak mining camp saw considerable activity around the end of the 19th century. The earliest recorded work on the WATERLOO dates from 1904 when 2 small shipments of ore were made. In 1918, G. Borg and C. Hammarstadt carried out exploration work. In 1922, the WATERLOO NO. 3 claim was Crown granted to F.E. Rendell and C.M. Kingston. Over the next 7 years some exploration work was carried out, resulting in several open cuts and 4 short adits. Additional development work was carried out by Waterloo Consolidated Mines Limited in 1930. In 1931, Waterloo Gold Mines Limited acquired the property and minor development and production was carried out over the next 6 years. By 1939, a total of 211 tonnes of ore had been produced from the WATERLOO mine, and the underground workings totalled 680 metres of drifting in 4 adits over a vertical range of 45 metres. The upper 3 adits total about 138 metres in length, and the lowest, the No. 4 adit, is 542 metres long.

In 1948, the Paycheck Mining and Development Company Limited acquired the WATERLOO property. A chip sample, collected by Paycheck Mining, from adit No. 2 assayed 106 grams per tonne silver, 4.19 per cent lead and 3.67 per cent zinc (Property File - Falconer, 1988). In 1948-49, 12 tonnes was mined, this possibly came from the DIRECTOR 5 (082ENE022) dump.

In 1954, Paycheck Mining rehabilitated adit No. 4 and stoped the vein to the surface. At least 5 holes were diamond drilled on the property at this time. A 68 tonne-per-day mill operated in 1954, milling 1011 tonnes, of which 263 tonnes came from existing dumps. A total of 11.8 tonnes of lead concentrates were shipped to the Trail smelter in 1954. Concentrates left on the site, estimated to be 2.7 tonnes and 42 tonnes of lead and zinc concentrates, were cleaned up in 1967 by the Great Horn Mining Syndicate Inc.

Bralorne Pioneer Mines Limited briefly held an option on the property in 1966. They carried out a geochemical survey of the property and surrounding area and were able to identify the WATERLOO vein where it was covered by overburden.

In 1968-69, International Mine Services Ltd. carried out geochemical and geological surveys and a diamond drill program for the Great Horn Mining Syndicate. The drill program consisted of 16 holes totalling 1793 metres on the surface and 16 holes totalling 529 metres underground. The drilling, together with underground sampling of the WATERLOO vein, indicated variable, and overall, low grade silver mineralization. No further work was recommended.

In 1978, W.G. Botel carried out a 16.9 kilometre VLF-EM survey over the area. Known shear zones and their projections were identified. Underground development work began in 1980 and by 1984, Botel had driven adit No. 5 a total of 228 metres, and in addition, roads were up-graded and track installed in the adits. In 1983, Cous Creek Copper Mines is reported to have removed 11 tonnes of crude ore from the property.

In 1984, Mohawk Oil Co. Ltd. carried out a program of trenching, geological mapping, and IP on the adjacent JON (082ENE024) claim. They found quartz veins and mineralization similar to that on the WATERLOO property. In late 1987 to early 1988 Eros Resources Ltd. upgraded access to the workings.

The WATERLOO mine has produced, since 1918, a total of 1,723,791 grams of silver, 2644 grams of gold, 123 kilograms of cadmium, 5 kilograms of copper, 22,128 kilograms of lead and 41,060 kilograms of zinc. This production includes ore from the MORNING (082ENE022), AU (082ENE027) and associated occurrences.

BIBLIOGRAPHY

EMPR AR 1904-G224; 1917-F199; 1918-K203,K221; 1919-N167,174; 1920-N156; 1921-G187; 1922-N355; 1925-A197; 1927-C227; 1930-A224; 1931-A122; 1932-A125; 1933-A149; 1934-A25, A29, D3; 1935-A25,D15; 1936-D57; 1937-A36, D35; 1939-37; 1948-A150; 1949-A138; 1950-A118; 1951-A133,A331; 1952-A140; 1953-A109,A270; 1954-A49,A119; 1955-45; 1966-191; 1967-223; 1968-224

BIBLIOGRAPHY

EMPR ASS RPT 817, 1812, 2330, 5200, 7221, 13319
EMPR BC METAL MM00444
EMPR IR 1984-5, p. 116
EMPR BULL 1932-1, p.81
EMPR EXPL 1979-26; 1980-46; 1983-49; 1984-31
EMPR GEM 1969-300; 1974-65
EMPR INDEX 3-175,218; 4-112
EMPR OF 1994-8
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933
and unknown; Lee, H. (1934): Waterloo Gold Mine Property Exam
Report; International Mine Services Ltd., Location Map, 1968;
*Falconer, J.S. (1988): Geological report on the Waterloo Mine
Property, Eros Resources Ltd., Prospectus, August 24, 1988)
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT 1930A, p.99A
GCNL #151,#161,#230,#235,#236, 1983
INT PROS & DEV MAG NOV/DEC 1983

DATE CODED: 1985/07/24
DATE REVISED: 1996/04/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE018**

NATIONAL MINERAL INVENTORY:

NAME(S): **LIGHTNING PEAK PERIDOTE**

MINING DIVISION: Vernon

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 52 42 N
LONGITUDE: 118 31 36 W
ELEVATION: 2100 Metres

NORTHING: 5526221
EASTING: 390315

LOCATION ACCURACY: Within 500M

COMMENTS: Lherzolite xenoliths in basalt outcrop at the summit of Lightning Peak (Exploration 1995, page 129).

COMMODITIES: Olivine Gemstones

MINERALS

SIGNIFICANT: Olivine
COMMENTS: Peridotite in lherzolite xenoliths.
ASSOCIATED: Orthopyroxene Clinopyroxene Spinel Magnetite
MINERALIZATION AGE: Pliocene

DEPOSIT

CHARACTER: Podiform
CLASSIFICATION: Volcanogenic
TYPE: Q GEMS AND SEMI-PRECIOUS STONES (diamonds under N)

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Tertiary	Chilcotin	Unnamed/Unknown Formation	
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	
ISOTOPIC AGE:	2.5 +/- 0.1 Ma		
DATING METHOD:	Potassium/Argon		
MATERIAL DATED:	Basalt		

LITHOLOGY: Basalt
Meta Volcanic
Meta Sediment/Sedimentary

HOSTROCK COMMENTS: The Chilcotin Group is Miocene-Pliocene in age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The LIGHTNING PEAK PERIDOTE showing forms the summit of Lightning Peak.

The showing consists of olivine crystals in lherzolite xenoliths within the plateau basalts of the Miocene-Pliocene Chilcotin Group. A remnant cap of the Chilcotin Group forms the summit of Lightning Peak, overlying metavolcanics and metasediments of the Devonian-Triassic Harper Ranch Group.

The host basalt at Lightning Peak has been dated at 2.5 plus or minus 0.1 Ma by K/Ar analysis (Exploration 1995, page 129). The xenoliths are subrounded and range in size up to 15 centimetres. They are composed of a granular to porphyritic mixture of green olivine (70-85 per cent), dark brown orthopyroxene (5-10 per cent) accompanied by accessory bright green clinopyroxene (chrome diopside), and black spinel/magnetite. Porphyritic olivine crystals (clear peridotite) are up to 1 centimetre in size. There is no record of exploration for peridotite at this showing.

BIBLIOGRAPHY

EM EXPL *1995-129
EMPR OF 1994-8
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown; *Church, B.N.(1996): The Geological Setting of Industrial Minerals, Precious Stones and Au-Ag veins in Tertiary outliers of the Okanagan-Boundary District)
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT 1930A

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 39
REPORT: RGEN0100

BIBLIOGRAPHY

Cordilleran Roundup Abstracts, 1996, page 10

DATE CODED: 1996/06/26
DATE REVISED: 1996/06/26

CODED BY: JWP
REVISED BY: BNC

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082ENE019**

NATIONAL MINERAL INVENTORY:

NAME(S): **PINTO, PINTO (L.3240), CAG 1-6,
 PT1-3, SANDY, LOIN,
 FRANKLIN CAMP**

STATUS: Showing	Underground	MINING DIVISION: Greenwood
REGIONS: British Columbia		UTM ZONE: 11 (NAD 83)
NTS MAP: 082E09W		NORTHING: 5494025
BC MAP:		EASTING: 401870
LATITUDE: 49 35 27 N		
LONGITUDE: 118 21 28 W		
ELEVATION: 1140 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: Location of rock sample with anomalous gold assay, about 1.7 kilometres southwest of the summit of Tenderloin Mountain (Assessment Report 19385).		

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrite	Chalcopyrite
ASSOCIATED: Pyrite	Quartz
ALTERATION: Chlorite	Sericite
ALTERATION TYPE: Chloritic	Sericitic
MINERALIZATION AGE: Unknown	

DEPOSIT

CHARACTER: Shear	Vein	Stockwork
CLASSIFICATION: Porphyry		
TYPE: L02 Porphyry-related Au	L04	Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Granodiorite
 Volcanic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks	

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1989
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Silver	6.9000 Grams per tonne
Gold	6.8290 Grams per tonne
Copper	0.0451 Per cent
COMMENTS: Sample number RX 41326.	
REFERENCE: Assessment Report 19385.	

CAPSULE GEOLOGY

The PINTO showing is located on the west side of Tenderloin Mountain, approximately 1.7 kilometres southwest of the summit. The showing occurs in an unnamed Middle Jurassic granodiorite intrusion. A cover of Eocene Marron Formation (Penticton Group) volcanic rocks outcrop several hundred metres to the east. Mineralization on the property consists of pyrite and chalcopyrite in fractures and in weakly developed quartz stockworks. In several places chlorite and sericite alteration, forming vein envelopes, is noted. The earliest record of the PINTO is a 1901 Minister of Mines Annual Report which describes a 6-metre deep shaft on the property. In 1907, the property was Crown granted, as Lot 3240, to Thomas Newby. There are no records of exploration on the property during the early 1900s, but old trenches on the property are believed to date from that era. The PINTO property was staked in 1970 after a copper anomaly was discovered in the stream sediments of Pinto Creek. A soil sampling survey, consisting of 1200 samples, and an electromagnetic survey

CAPSULE GEOLOGY

over 40 line-kilometres was carried out by West Coast Mining & Exploration in 1970. Some copper anomalies were found in soils near old workings close to the head of Pinto creek. The electromagnetic survey was unsuccessful in locating any significant conductors.

In 1976, John May prospected the SANDY claim, which covered the PINTO showing. He found fracture controlled chalcopyrite and pyrite mineralization exposed in 14 of 18 old trenches.

In 1983, Noranda Exploration Company Limited carried out geological mapping and geochemical surveys on the PI 1-3 claims. Three silt samples containing anomalous copper values were collected from the headwaters of Pinto Creek. Several soil samples near Gloucester Creek also contained anomalous copper, although no contiguous trend was apparent. The geological mapping located a silicified shear zone, measuring 0.5 metre by 4 metres long and containing less than 1 per cent pyrite and chalcopyrite (Assessment Report 12254).

In 1989, INCO Limited carried out a program of reconnaissance geological mapping, and soil, silt and rock sampling. Near the head of Pinto Creek, an area of weakly anomalous gold geochemistry in soils was found that measured approximately 200 metres by 75 metres. Old workings in the vicinity include a shallow adit and several open cuts. To the west of Pinto Creek, a small stockwork of quartz-pyrite-chalcopyrite mineralization is exposed. A grab sample assayed 6.829 grams per tonne gold, 6.9 grams per tonne silver and 0.0451 per cent copper, and a chip sample across the 1-metre width of the stockwork assayed 4.6 grams per tonne gold (Assessment Report 19385).

BIBLIOGRAPHY

EMPR AR 1901-1066; 1907-219; 1914-353
EMPR ASS RPT 2952, 6221, *12254, *19385
EMPR EXPL 1977-E29; 1983-47
EMPR GEM 1970-434
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 56, p.155
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/10

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE020**

NATIONAL MINERAL INVENTORY:

NAME(S): **VERDE (L.1011S)**, UNITED VERDE, VIOLET FR. (L.588S),
 HENNEKIN (L.439S), PLATINUM BLONDE, SPRING 1-6,
 FRANKLIN CAMP

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082E09W
 BC MAP:
 LATITUDE: 49 34 03 N
 LONGITUDE: 118 22 50 W
 ELEVATION: 1160 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: Location of "prospect" on VERDE (L.1011s) Crown grant, about 72 kilometres north of Grand Forks (Geological Survey of Canada Map 133A).

MINING DIVISION: Greenwood
 UTM ZONE: 11 (NAD 83)
 NORTHING: 5491461
 EASTING: 400176

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Chalcopyrite
 COMMENTS: Pyrite, galena, sphalerite and chalcopyrite are assumed.
 ASSOCIATED: Quartz
 ALTERATION: Silica
 ALTERATION TYPE: Silicific'n
 MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Shear
 CLASSIFICATION: Epithermal Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	

LITHOLOGY: Andesite
 Dacite
 Meta Sediment/Sedimentary Rock
 Volcanic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Overlap Assemblage Harper Ranch
 PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1988
SAMPLE TYPE:	Grab		
COMMODITY	GRADE		
Silver	11.0000	Grams per tonne	
Gold	2.5300	Grams per tonne	
Copper	0.9300	Per cent	
Lead	0.3390	Per cent	
Zinc	1.2500	Per cent	

COMMENTS: Sample number 16883.
 REFERENCE: Assessment Report 17273.

CAPSULE GEOLOGY

The VERDE showing is located on reverted Crown grant Lot 1011S, 72 kilometres north of Grand Forks in the historic Franklin mining camp. This showing includes showings on the VIOLET FR. (L.588s), 400 metres to the southwest and the HENNEKIN (L.439s), 500 metres to the west.

The VERDE and VIOLET FR. were Crown granted in 1910 to W.H. Otter and B.W. Garrison, respectively. These claims were possibly also known as the UNITED VERDE. The UNITED VERDE was sampled in 1914. One sample, taken from the bottom of a 4.6-metre shaft, assayed 6.86 grams per tonne silver with traces of gold, copper and lead. Another sample, taken 60-centimetres deeper in the same shaft, assayed \$3.20 in gold with traces of copper and silver (Minister of Mines Annual Report 1914, page 352). The showings on the HENNEKIN

CAPSULE GEOLOGY

are not described.

In 1968, Franklin Mines Ltd. carried out a general exploration program in the Franklin camp.

In 1979, Pearl Resources staked the area as the Spring 1-6 claims and conducting preliminary geological mapping in the area south of the Union mine (082ENE003).

In 1986, Longreach Resources Ltd. staked and optioned much of the Franklin camp area including the VIOLET FR. It is probable that Longreach prospected this area, although no reports were filed.

In 1987, Longreach's property, now known as the PLATINUM BLONDE property, was optioned to Placer Dome Inc. who proceeded to carry out a major exploration program. In the VIOLET FR. area, Placer sampled the trenches. No specific description of the mineralization in the trenches was given. Two samples assayed 1.10 and 1.80 grams per tonne gold (Assessment Report 17273, figure 10). No other information is available.

In 1993, Sway Resources Inc. optioned a large number of Crown grants and claims in this area, including the VERDE, VIOLET FR. and HENNEKIN Crown grants. They proceeded to carry out a program of prospecting, sampling, geological mapping and a 16-hole rotary and diamond-drill program, directed at quartz veins on the BANNER (082ENE002) Crown grant Lot 1199 to the south.

BIBLIOGRAPHY

EMPR AR 1910-248; *1914-352,353
EMPR ASS RPT 637, 8126, 8149, *17273
EMPR OF 1994-8
EMPR PF (In 082ENE051 - Sway Resources Inc., Statement of Material Facts, February 14, 1994)
EMPR RGS 29
GSC MAP 97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 56
GSC OF 409; 736; 1969
Placer Dome File

DATE CODED: 1996/08/08
DATE REVISED: 1996/12/13

CODED BY: JWP
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE021**

NATIONAL MINERAL INVENTORY:

NAME(S): **YELLOW JACKET**, YELLOW JACKET (L.924S)

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 33 00 N
LONGITUDE: 118 23 02 W
ELEVATION: 1000 Metres

NORTHING: 5489520
EASTING: 399900

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization about 1.7 kilometres southeast of Mount Franklin (Geological Survey of Canada Map 133A).

COMMODITIES: Copper Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Galena
ASSOCIATED: Pyrite Magnetite
ALTERATION: Calcite Epidote Garnet Tremolite Chlorite
Quartz

ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Vein Podiform
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	

LITHOLOGY: Marble
Limestone
Quartzite
Argillite
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The YELLOW JACKET showing is located on reverted Crown grant Lot 924S, which is approximately 1.7 kilometres southeast of the summit of Mount Franklin.

The showing is hosted by marble and limestone of the Devonian-Triassic Harper Ranch Group. Nearby, the Harper Ranch Group also includes quartzite, argillite and greenstone. Mineralization consists of small pods and siliceous veins of chalcopyrite, galena, sphalerite, pyrite and magnetite. Alteration minerals include calcite, epidote, garnet, tremolite, chlorite and quartz.

The YELLOW JACKET claim was Crown granted as Lot 924s to M.K. Forbes and B. Leguime in 1912. No work is recorded on the property during the early 1900s when the Franklin camp was active.

In 1964, Franklin Mines Ltd. optioned the YELLOW JACKET from Northwest Ventures Ltd. and carried out some preliminary surveys of the area. The precious metal potential of the BUFFALO (082ENE008), GLOUCESTER (082ENE005), AVERILL (082ENE007), and MAPLE LEAF (082ENE009) adits was the main focus of their work; no work was filed on the YELLOW JACKET.

In 1977, Dallas Explorations Ltd. acquired the YELLOW JACKET reverted Crown grant and surrounding area. They carried out a small soil sample survey in the vicinity of the YELLOW JACKET, analyzing the samples for gold, silver and copper. Anomalous results were indicated, but the actual values and locations were not given.

In 1980, Pearl Resources Ltd. acquired the YELLOW JACKET reverted Crown Grant, along with much of the surrounding area, including the UNION mine (082ENE003). Most of their work was directed at developing the UNION mine, no work was filed on the YELLOW JACKET showing.

In 1986-87, Longreach Resources Ltd. and Placer Dome Inc. carried out a major platinum exploration program in the Franklin camp. There is no evidence that they carried out any work on the YELLOW JACKET showing.

BIBLIOGRAPHY

EMPR AR 1912-326; 1964-112; 1965-172
EMPR INDEX 1-507
EMPR ASS RPT 637, *6340, 8126, 9115, 13710, 15172, 15467, 15964,
15746, 15981, 17273
EMPR EXPL 1977-E29; 1980-39; 1987-C32; 1988-C22
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.155,167
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/18

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

galena.

A 1930 report describes the workings on the MORNING property, which, at that time, consisted of 2 pits, 30 metres apart, and a trench. The pits exposed a quartz vein, approximately 50 centimetres wide, which strikes north-south and dips 75 degrees west. The vein contains about 2 per cent sulphides, which are, in relative order of abundance; pyrite, sphalerite and galena. Local concentrations of sulphides range up to about 10 per cent. The wallrock is heavily pyritized, extending about 1 metre in the footwall and somewhat less in the hangingwall. A trench, 16 metres north of the pits, exposes a 1.2-metre wide vein. It is sparsely mineralized, but a narrow vein in the hangingwall is described as heavily mineralized. The main vein is reported to have been traced for about 200 metres south of the trench.

In 1933, the MORNING property was optioned to Dictator Gold Mines Limited and the shear zone traced for about 43 metres by a series of shallow pits, shafts and trenches. The shear zone, up to 2.4 metres wide, includes an 83 to 106 centimetre wide quartz vein. Chip samples over the vein width assayed from 5.4 to 6.8 grams per tonne gold and from 68 to 239 grams per tonne silver, with variable, but unassayed, amounts of lead and zinc (Minister of Mines Annual Report 1933, page A152). Pyrite, arsenopyrite, galena and sphalerite were noted, as was the association between quartz veining and quartz porphyry dikes.

To the south and east of the MORNING showing quartz float and boulders mineralized with pyrite, galena and sphalerite were found, suggesting an extension of the shear zone. This area was referred to as the CORDOVA showing. To the north of the MORNING showing, quartz float was found which returned high gold, silver and lead assays. This area was referred to as the ONTARIO showing. Both the ONTARIO and CORDOVA showings are now included in the MORNING showing. A 1933 sketch map of the Lightning Peak area indicates that the CORDOVA showing is located to the west of the DICTATOR (082ENE023) Crown grant, and that the MORNING showing is north of the CORDOVA showing (Minister of Mines Annual Report 1933, page A152).

In 1934, Dictator Gold Mines Limited sunk a 35-metre shaft on the Dictator property, which included the DICTATOR Crown grant, MORNING NO. 2, CORDOVA, ONTARIO and 21 other contiguous claims. The shaft was sunk on the MORNING shear zone and is located approximately where the 1933 sketch map plotted the CORDOVA showing. It is referred to in later reports as the MORNING shaft. Underground development in the MORNING shaft began on the 30 metre level. A 5.4-metre crosscut was driven eastward and 2 workings were driven on the shear zone, one to the north for 15.8 metres and the other to the south for 18.2 metres. It is recorded that the quartz found in the shaft was of low (gold and silver?) grade, but that a gradual improvement took place in both the north and south drifts. High gold and silver assays are noted; including 226 grams per tonne gold and 1444 grams per tonne silver over 10 centimetres, and 8.5 grams per tonne gold and 25.7 grams per tonne silver over 61 centimetres (Minister of Mines Annual Report 1934, page D4).

In 1948, Paycheck Mining and Development Company Limited held the WATERLOO mine (082ENE017), and the DICTATOR, DIRECTOR and PAYCHECK claims. No work is recorded on the claims, but 2 trial shipments were made from the DIRECTOR dump. The shipments are attributed to the DIRECTOR 5 claim; however, it is probable that the DIRECTOR dump, is actually the old dump from the MORNING shaft. The amount of the shipments is unknown. It may have been part or all of the production recorded for the WATERLOO mine in 1948, which amounted to 8.6 tonnes of ore with a gross metal content of 1.86 grams of gold, 7309 grams of silver, 735 kilograms of lead and 2094 kilograms of zinc (Minister of Mines Annual Report 1948, page A150). In 1949, another small shipment of dump ore was made and it is recorded as production from the WATERLOO mine, although the location of the dump is not identified. A total of 2.26 tonnes of dump ore was shipped with a gross metal content of 622 grams of silver, 1183 kilograms of lead and 171 kilograms of zinc (Minister of Mines Annual Report 1949, page A138).

In 1966, Bralorne Pioneer Mines Limited held an option on the DICTATOR, MORNING and WATERLOO properties. No work was done on the MORNING showing at that time. In 1974, K.L. Daughtry carried out a magnetometer survey over the MORNING 1 & 2 claims. The survey identified a north-south structure believed to be the MORNING shear zone. In 1979, W.G. Botel carried out a ground electromagnetic survey of the same area, which was staked as the ROB 1 claim. A northwest-southeast trending anomaly was identified to the north of the MORNING shaft. It was concluded that the area was structurally too tight to host an east-west shear zone like that of the WATERLOO mine.

In 1983-84, L.A. Bayrock carried out two small geochemical surveys over the KEN (082ENE073) claim, which surrounded the MORNING

CAPSULE GEOLOGY

showing. These surveys identified weak gold and silver anomalies in soils from lineaments. In 1986, Amulet Resources Corporation staked the area surrounding the DICTATOR (082ENE023) Crown grant and ROB 1 claim. They trenched a number of lineaments to the south and southeast of the MORNING showing. The lineaments were identified from aerial photographs. Anomalous gold and silver assays were obtained from quartz veins. An induced polarization and resistivity survey was also carried out in 1986. Resistivity anomalies were associated with lineaments. In 1987, Amulet Resources undertook a program of prospecting, geological mapping, geophysical surveys (induced polarization, VLF-EM and magnetometer surveys) soil geochemistry, trenching, and 576 metres of diamond drilling in 5 holes. This work was carried out on the AZZA and the AZZA 2 (082ENE072) claims which surround, but do not cover, the MORNING showing.

The ROB 1 claim, covering the MORNING showing, expired in 1989 and the showing was re-staked as the XEN 1 claim for Annax Ventures Inc. In 1989, a small program of rock and soil sampling was carried out around the MORNING showing. Rock grab samples collected from the MORNING dump returned high gold and silver assays. A 60-centimetre chip sample of a 1.5-metre wide quartz vein, exposed in a pit 40 metres south of the MORNING shaft, assayed 20.8 grams per tonne silver, 0.385 per cent zinc and 0.331 per cent lead (Assessment Report 19010).

BIBLIOGRAPHY

EMPR AR 1919-N167; *1933-A150,A152; *1934-D4; 1948-A150; *1949-A138; 1950-A118; 1951-A133; 1953-A109; 1966-191
EMPR ASS RPT 5200, 7220, 13528, 15217, 16216, 18009, *19010
EMPR EXPL 1979-51; 1985-C31; 1986-C39; 1987-C36; 1988-C25
EMPR GEM 1974-65
EMPR INDEX 3-194
EMPR OF 1994-8
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown; *Ven Huizen, G.L. (1986): Report on the AZZA and AZZA 2 Mining Claims, Amulet Resources Corporation, Prospectus, June 30, 1987; Ven Huizen, G.L. (1989): Compilation Report on the Winnifred Creek Property, Prospectus, Annax Ventures Inc., December 11, 1959)
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.80A,96A

DATE CODED: 1985/07/24
DATE REVISED: 1996/10/02

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

the DICTATOR. In 1979, W.G. Botel carried out a ground electromagnetic survey of the same area, which was staked as the ROB 1 claim.

Two small geochemical surveys were carried out in 1983 and 1984 by L.A. Bayrock. The area covered by these surveys was limited to the MORNING shear zone. In 1986, Amulet Resources Corporation staked the area surrounding the DICTATOR crown grant and trenched a number of lineaments to the south and southwest. Anomalous gold and silver assays were obtained from veins exposed in the trenches. The DICTATOR Crown grant (Lot 4636) forfeited on February 11, 1987.

BIBLIOGRAPHY

EMPR AR 1919-N167; *1933-A150,A152; *1934-D4; *1948-A150; 1949-A138;
1950-A118; 1951-A133; 1953-A109; 1966-191
EMPR ASS RPT 5200, 7220, 13528, 15217, 16216, 18009, 19010
EMPR EXPL 1979-51; 1985-C31; 1986-C39; 1987-C36; 1988-C25
EMPR GEM 1974-65
EMPR OF 1994-8
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933
and unknown; In 082ENE022 - *Ven Huizen, G.L. (1986): Report on the
AZZA and AZZA 2 Mining Claims, Amulet Resources Corporation,
Prospectus, June 30, 1987)
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.97A,98A

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/02

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE024**

NATIONAL MINERAL INVENTORY: 082E15 Ag6

NAME(S): **POTOSI**, POTOSI 1-4, POTOSI LOC. 4-6,
 PEAK 23-25, PEAK 41, JON,
 LIGHTNING PEAK CAMP

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082E15E
 BC MAP:
 LATITUDE: 49 54 26 N
 LONGITUDE: 118 33 43 W
 ELEVATION: 1680 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: Trench 84-1, about 3.65 kilometres northwest of Lightning Peak
 (Assessment Report 13319).

MINING DIVISION: Greenwood
 UTM ZONE: 11 (NAD 83)
 NORTHING: 5529485
 EASTING: 387847

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Galena Tetrahedrite Sphalerite Pyrite
 ASSOCIATED: Quartz Pyrite Calcite Chalcedony
 ALTERATION: Kaolinite Sericite Hematite Limonite
 ALTERATION TYPE: Argillic Sericitic Oxidation
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein Disseminated
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins
 DIMENSION: 85 x 6 Metres STRIKE/DIP: TREND/PLUNGE:
 COMMENTS: Dimensions of vein exposed in trench near POTOSI LOC. 6.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Undefined Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Limestone
 Schist
 Quartz Porphyry Dike
 Granodiorite
 Diorite
 Meta Volcanic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Harper Ranch Plutonic Rocks
 PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1984
 SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	197.0000	Grams per tonne
Gold	2.0500	Grams per tonne
Lead	0.1500	Per cent
Zinc	0.0500	Per cent

 COMMENTS: A 38-centimetre channel sample from trench near POTOSI LOC. 6.
 REFERENCE: Assessment Report 13319.

CAPSULE GEOLOGY

The POTOSI showing is located on a low ridge between Rendell and Waterloo creeks, approximately 3.65 kilometres northwest of Lightning Peak.
 The showing is hosted by limestone and schist of the Devonian-Triassic Harper Ranch Group. Metavolcanic rock forms a large part of the Harper Ranch Group to the north of the showing. A large mass of granodiorite and diorite, which outcrops to the north and west, is part of an unnamed Middle Jurassic intrusion. Quartz porphyry dikes intrude the Harper Ranch Group and are associated with quartz veining.
 The POTOSI showing consists of quartz veins exposed at several locations on a broad-topped ridge, informally referred to in the 1920s as the Baby Range. The POTOSI 1-4 claims were located by J. Graham,

CAPSULE GEOLOGY

of Greenwood, in 1921. Intermittent stripping and trenching was carried out through the 1920s and 1930s. Most work focused on shear zones parallel to that of the WATERLOO mine (082ENE017), 600 metres to the south.

The POTOSI LOC. 6 occurrence, included in this showing, consists of 2 parallel quartz veins, which strike a few degrees east of north and lie about 50 metres apart. The westernmost of the two veins has been exposed by a number of open-cuts for about 90 metres. The vein width varies from 60 to 90 centimetres, and it is mineralized with disseminated pyrite and minor galena. Another exposure, 250 metres to the north, reveals a 1.2-metre wide, barren quartz vein.

Approximately 660 metres to the west-southwest, a trench has exposed a small vein containing minor pyrite and calcite. The vein is associated with a quartz porphyry dike. Several trenches, 720 metres to the north-northwest of POTOSI LOC. 6 occurrence, expose a shear zone containing some quartz veining, pyrite, and iron and manganese oxides. The shear is thought to trend to the northeast. A grab sample from one of the trenches assayed 1.36 grams per tonne gold and 1197 grams per tonne silver (Minister of Mines Annual Report 1927, page C227). Another report refers to a 2.4-metre wide vein that carried silver, galena, and tetrahedrite in a gangue of calcite. All of these occurrences are now collectively known as the POTOSI showing.

In 1968-69, International Mine Services Ltd. carried out geochemical and geological surveys over the area around the WATERLOO mine. Anomalies associated with shear zones were identified. In 1977, the POTOSI area was staked as the JON claim; and in 1979, a program of soil geochemistry and a magnetometer survey was carried out by Lightning Minerals Inc. Several spot anomalies were found; however, a review of the data by Sawyer Consultants Inc. concluded that no significant geochemistry-magnetic coincidence was encountered.

The JON claim was optioned by Mohawk Oil Co. Ltd. and during the period 1981-1984, they carried out a several programs of mapping, prospecting, trenching and induced polarization. Their prospecting and mapping identified over 60 hand-dug trenches dating from the 1920s and 1930s. In 1984, Mohawk Oil excavated 15 trenches, for a total length of approximately 500 metres. Trench 84-1, located in the vicinity of the POTOSI LOC. 6, exposed a 60-centimetre wide quartz vein over a strike length of 85 metres. Mineralization consists of pyrite, hematite, limonite, minor galena and a trace of sphalerite. A 38-centimetre channel sample assayed 2.05 grams per tonne gold, 197 grams per tonne silver, 0.15 per cent lead and 0.05 per cent zinc (Assessment Report 13319).

Approximately 500 metres to the southwest, trench 84-9 exposed a 3-metre wide zone of kaolinite and sericite alteration on the hangingwall of an east-west shear zone. This trench is located in a small body of intensely limonite altered granodiorite. The alteration zone hosts small lenses of chalcedony containing minor galena and sphalerite mineralization. Analysis of the lenses returned only traces of precious metals. The induced polarization survey, carried out in 1984, was inconclusive.

BIBLIOGRAPHY

EMPR AR 1921-G186,G187; 1922-N178; *1927-C227; 1930-A226; 1933-A152;
1935-D15
EMPR ASS RPT 7735, 11220, *13319, 13356
EMPR EXPL 1979-50; 1982-38; 1983-49; 1984-31
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933
and unknown)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.98A,99A
GCNL #187, 1984

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/16

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE025**

NATIONAL MINERAL INVENTORY: 082E15 Ag1

NAME(S): **SILVER SPOT LOC. 8**, SILVER SPOT, PEAK 38,
GRIZZ 3, LIGHTNING PEAK CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:
LATITUDE: 49 53 57 N
LONGITUDE: 118 33 12 W
ELEVATION: 1700 Metres

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5528576
EASTING: 388447

LOCATION ACCURACY: Within 500M
COMMENTS: Quartz vein about 2.75 kilometres northwest of Lightning Peak
(Geological Survey of Canada Summary Report 1930A, page 80A).

COMMODITIES: Lead Copper Silver

MINERALS

SIGNIFICANT: Galena Tetrahedrite
COMMENTS: "Grey copper" is noted.
ASSOCIATED: Quartz Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 90 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Dimensions of vein which strikes north and dips steeply west.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Limestone
Schist
Greenstone
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Harper Ranch Plutonic Rocks

CAPSULE GEOLOGY

The SILVER SPOT LOC. 8 showing is located on the north side of the informally named Silver Spot Creek, approximately 2.75 kilometres northwest of Lightning Peak.

The showing occurs in limestone, schist and meta-volcanic rock of the Devonian-Triassic Harper Ranch Group which is hosted by granodiorite and diorite of an unnamed Middle Jurassic intrusion.

The SILVER SPOT LOC. 8 showing consists of a north-trending shear zone with quartz veins that contain minor amounts of grey copper (tetrahedrite), galena and pyrite. A 1930 report describes the SILVER SPOT vein as having been exposed for 90 metres by 3 trenches and an adit. The adit, which is located 45 metres north of the creek, is 20 metres long and it intersected the vein 10 metres from the portal. The vein strikes north and dips steeply to the west. Little mineralization was observed in the adit vein; but where the vein is exposed in the creek bed, it contains grey copper, galena and pyrite. The shear has formed in Harper Ranch metasedimentary rocks which are well-bedded and dip about 60 degrees to the northeast.

The Lightning Peak area has seen extensive exploration since the early 1900s, with most of the exploration effort directed at the numerous polymetallic, shear zone hosted quartz veins in this camp. The close proximity of the SILVER SPOT LOC. 8 to the WATERLOO mine (082ENE017) 400 metres to the northwest, has resulted in it being included in many of the programs covering the WATERLOO mine property. In 1966, Bralorne Pioneer Mines Limited carried out a geochemical survey of the WATERLOO mine and surrounding area. They were able to identify the known veins on the mine property where they are covered by overburden.

In 1968-69, International Mine Services Ltd. carried out

CAPSULE GEOLOGY

geochemical and geological surveys and a diamond drill program on the adjacent WATERLOO mine property. No work on the SILVER SPOT LOC. 8 was recorded.

In 1974, K.L. Daughtry carried out a magnetometer survey over the RHONDDA claim, which covered the AU (082ENE027) and SILVER SPOT LOC. 9 (082ENE026) showings, approximately 500 metres to the north and 250 metres to the northeast, respectively. The survey identified lithological contacts but provided little information about shear zones.

In 1978, W.G. Botel carried out a 16.9 kilometre VLF-EM survey over the area. Known shear zones and some possible projections were identified.

BIBLIOGRAPHY

EMPR AR 1931-A122; 1933-A150,A152; 1966-191; 1967-223; 1968-224
EMPR ASS RPT 817, 1812, 2330, 5200, 7221
EMPR EXPL 1979-26
EMPR GEM 1969-300, 1974-65
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.80A,105A

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/22

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE026**

NATIONAL MINERAL INVENTORY: 082E15 Ag1

NAME(S): **SILVER SPOT LOC. 9**, SILVER SPOT, PEAK 40,
RHONDDA, GRIZZ 3, LIGHTNING PEAK CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:

MINING DIVISION: Greenwood

LATITUDE: 49 54 01 N
LONGITUDE: 118 33 03 W
ELEVATION: 1740 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5528696
EASTING: 388629

LOCATION ACCURACY: Within 500M

COMMENTS: Quartz vein about 2.75 kilometres northwest of Lightning Peak
(Geological Survey of Canada Summary Report 1930A, page 80A).

COMMODITIES: Lead Zinc Gold Silver

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite
ASSOCIATED: Quartz Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 150 x 1 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: The 30-90 centimetre wide vein has been traced for 150 metres.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Greenstone
Quartz Porphyry Dike
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Harper Ranch Plutonic Rocks

CAPSULE GEOLOGY

The SILVER SPOT LOC. 9 showing is located on the north side of the informally named Silver Spot Creek, approximately 2.75 kilometres northwest of Lightning Peak.

The showing occurs in greenstone of the Devonian-Triassic Harper Ranch Group which is hosted by granodiorite and diorite of an unnamed Middle Jurassic intrusion.

The SILVER SPOT LOC. 9 showing consists of several north-trending quartz veins that contain pyrite and minor amounts of galena and sphalerite. A 1930 report describes the vein as having been traced for 150 metres and it is speculated that the vein is a southern extension of the AU (082ENE027) vein. It is hosted by greenstone and associated with a quartz porphyry dike. The dike is about 3 metres thick and dips 40 degrees to the west. The vein commonly contains pyrite and, locally, minor amounts of galena and sphalerite. Gold and silver are also reported to have been obtained from the veins but assays are lacking. The vein width varies from approximately 30 to 90 centimetres. To the east, about 30 metres, is another quartz porphyry dike with an associated pyritic quartz vein. A few metres east of it is a north-trending shear with a quartz vein containing a little sulphide mineralization.

The Lightning Peak area has seen extensive exploration since the early 1900s, with most of the exploration effort directed at the numerous polymetallic, shear zone hosted quartz veins in this camp. The close proximity of the SILVER SPOT LOC. 9 to the WATERLOO mine (082ENE017) 550 metres to the west, has resulted in it being included in many of the programs covering the WATERLOO mine property.

In 1966, Bralorne Pioneer Mines Limited carried out a geochemical survey of the WATERLOO mine and surrounding area. They were able to identify the known veins on the mine property where they are covered by overburden.

In 1968-69, International Mine Services Ltd. carried out

CAPSULE GEOLOGY

geochemical and geological surveys and a diamond drill program on the adjacent WATERLOO mine property. No work was recorded on the SILVER SPOT LOC. 9 showing.

In 1974, K.L. Daughtry carried out a magnetometer survey over the RHONDDA claim, which covered the AU (082ENE027) and SILVER SPOT LOC. 9 showings. The survey identified lithological contacts but provided little information about shear zones.

In 1978, W.G. Botel carried out a 16.9 kilometre VLF-EM survey over the area. Known shear zones and some possible projections were identified.

BIBLIOGRAPHY

EMPR AR 1931-A122; 1933-A150,A152; 1966-191; 1967-223; 1968-224
EMPR ASS RPT 817, 1812, 2330, 5200, 7221
EMPR EXPL 1979-26
EMPR GEM 1969-300, 1974-65
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637, 736; 1969
GSC SUM RPT 1930A, p.80A,105A

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/24

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE027**

NATIONAL MINERAL INVENTORY: 082E15 Ag1

NAME(S): **AU PEAK 40, RHONDDA,
GRIZZ 1, LIGHTNING PEAK CAMP**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 54 13 N
LONGITUDE: 118 33 09 W
ELEVATION: 1710 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5529069
EASTING: 388517

LOCATION ACCURACY: Within 500M

COMMENTS: Shaft located about 3 kilometres northwest of Lightning Peak
(Geological Survey of Canada Summary Report 1930A, page 80A).

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Argentite Galena Sphalerite Chalcopyrite
Copper
ASSOCIATED: Quartz Pyrite
ALTERATION: Wad
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic-Mesozoic Middle Jurassic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Meta Volcanic Rock
Quartz Porphyry Dike
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch
Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1930
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 838.0000 Grams per tonne
Gold 4.1000 Grams per tonne
Lead 13.0000 Per cent
Zinc 4.5000 Per cent

COMMENTS: Grab sample of 25-centimetre wide vein exposed at 3 metres depth in shaft.

REFERENCE: Geological Survey of Canada Summary Report 1930A, page 104A.

CAPSULE GEOLOGY

The AU showing is located about 250 metres south of Waterloo Creek and approximately 3 kilometres northwest of Lightning Peak. The showing occurs in a pendant of metavolcanic rock of the Devonian-Triassic Harper Ranch Group which is hosted by granodiorite and diorite of an unnamed Middle Jurassic intrusion. The AU showing consists of several north-trending quartz veins that contain pyrite and minor amounts of galena and sphalerite. Argentite has been noted in a polished section. Films of native copper have been observed on quartz fracture surfaces. The veins contain vugs, and sooty decomposition products (wad?) are common. Vein widths vary from 5 to 60 centimetres. A 1930 report describes approximately 6 veins, all of which strike approximately north-south and dip at high angles to the east or west. A shaft exposes a 25-centimetre wide vein with a 10-centimetre thick lens of massive pyrite, galena, sphalerite and

CAPSULE GEOLOGY

chalcopyrite. Elsewhere, the vein contains streaks and bunches of pyrite. The vein has been traced for about 120 metres. It is terminated by a east-west trending shear zone approximately 25 metres north of the shaft. A grab sample collected in 1930 assayed 4.1 grams per tonne gold, 838 grams per tonne silver, 13 per cent lead, 4.5 per cent zinc (Geological Survey of Canada Summary Report 1930A, page 80A). Approximately 50 metres southwest of the shaft, a 90-centimetre wide, rusty-weathering shear zone contains quartz veining and pyrite. Another vein, lying 10 metres west of the shaft vein, occurs on the footwall of a quartz porphyry dike which dips steeply to the west. This vein is approximately 15 centimetres wide and is sparsely mineralized with pyrite and galena, as are most of the other veins on the property.

The Lightning Peak area has seen extensive exploration since the early 1900s, with most of the exploration effort directed at the numerous polymetallic, shear zone hosted quartz veins in this camp. The AU showing is near the WATERLOO mine (082ENE017), 550 metres to the southwest, and has been included in many of the programs covering the WATERLOO property.

In 1931, the AU shaft, which had been started in 1930, was deepened to 21 metres with a 22-metre crosscut and a 12-metre drift. The vein, exposed in the drift, varied in width up to 60 centimetres, but averaged 20 centimetres. A quartz porphyry dike is in close proximity to the vein. In 1931, 17.69 tonnes of gold ore was shipped from the AU property (Minister of Mines Annual Report 1931, page A122). This shipment was recorded as production from the WATERLOO mine.

In 1966, Bralorne Pioneer Mines Limited carried out a geochemical survey of the WATERLOO mine and surrounding area. They were able to trace some quartz veins through areas of overburden on the mine property.

In 1968-69, International Mine Services Ltd. carried out geochemical and geological surveys and a diamond drill program on the adjacent WATERLOO mine property. No work was recorded on the AU showing.

In 1974, K.L. Daughtry carried out a magnetometer survey over the RHONDDA claim, which covered the AU and SILVER SPOT LOC. 9 (082ENE026) showings. The survey identified lithological contacts but provided little information about shear zones.

In 1978, W.G. Botel carried out a 16.9 kilometre VLF-EM survey over the area. Known shear zones and some possible projections were identified.

BIBLIOGRAPHY

EMPR AR 1931-A122; 1933-A150,A152; 1966-191; 1967-223; 1968-224
EMPR ASS RPT 817, 1812, 2330, 5200, 7221
EMPR BULL 1932-1,p.81
EMPR EXPL 1979-26
EMPR GEM 1969-300, 1974-65
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.80A,103A,104A

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/24

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE028**

NATIONAL MINERAL INVENTORY: 082E15 Ag1

NAME(S): **SILVER SPOT NO. 3**, SILVER SPOT LOC. 11, PEAK 58,
GRIZZ 2, REN 1, LIGHTNING PEAK CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:
LATITUDE: 49 53 48 N
LONGITUDE: 118 32 16 W
ELEVATION: 1760 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5528275
EASTING: 389558

COMMENTS: Shear zone exposed at junction of 2 creeks about 2 kilometres
north-northwest of Lightning Peak (Geological Survey of Canada
Summary Report 1930A, page 80A).

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
ASSOCIATED: Quartz Pyrite
COMMENTS: Pyrite may be present.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 2 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Polymetallic shear-hosted quartz veins. The 2.4 metre wide shear zone
strikes east-west.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Harper Ranch	Undefined Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Greenstone
Diorite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Harper Ranch Plutonic Rocks

CAPSULE GEOLOGY

The SILVER SPOT NO. 3 showing is located on an unnamed tributary of Waterloo Creek, approximately 2 kilometres north-northwest of Lightning Peak.

The showing occurs in greenstone of the Devonian-Triassic Harper Ranch Group which is hosted by granodiorite and diorite of an unnamed Middle Jurassic intrusion.

The SILVER SPOT NO. 3 showing consists of a 2.4-metre wide shear zone, which strikes east-west and carries 2 narrow bands of quartz veining. Fine-grained galena and sphalerite occur as narrow streaks within the veins. A 1930 report refers to high-grade silver values, but assays are lacking. Pyrite was not noted, however it is common in the Lightning Peak camp. It has been speculated that the SILVER SPOT NO. 3 shear is an extension of the WATERLOO (082ENE017) mine shear zone, although this has not been demonstrated by subsequent work.

The Lightning Peak area has seen extensive exploration since the early 1900s, with most of the exploration effort directed at the numerous polymetallic, shear zone hosted quartz veins in this camp. The SILVER SPOT NO. 3 is near the WATERLOO mine, 1.5 kilometres to the west, and has been included in many of the programs covering the WATERLOO property.

In 1966, Bralorne Pioneer Mines Limited carried out a geochemical survey of the WATERLOO mine and surrounding area. They were able to trace some quartz veins through areas of overburden on the mine property.

In 1968-69, International Mine Services Ltd. carried out geochemical and geological surveys and a diamond drill program on the nearby WATERLOO mine property. No work was recorded on the SILVER SPOT NO. 3 showing.

In 1974, K.L. Daughtry carried out a magnetometer survey over

CAPSULE GEOLOGY

the RHONDDA claim, 500 metres to the northwest. The survey identified lithological contacts but provided little information about shear zones.

In 1978, W.G. Botel carried out a 16.9 kilometre VLF-EM survey over the WATERLOO mine area. Known shear zones were identified but a linkage to the SILVER SPOT NO. 3 shear was not demonstrated.

In 1979, Kelvin Energy Ltd. staked the REN 1 claim over the SILVER SPOT NO. 3 area and carried out a small program of prospecting, mapping and soil sampling. The results were not encouraging and the property was eventually dropped.

BIBLIOGRAPHY

EMPR AR 1931-A122; 1933-A150,A152; 1966-191; 1967-223; 1968-224
EMPR ASS RPT 817, 1812, 2330, 5200, 7221, 7852, 22875
EMPR EXPL 1979-26
EMPR GEM 1969-300, 1974-65
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.80A,105A

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/24

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

In 1968-69, International Mine Services Ltd. carried out geochemical and geological surveys and a diamond drill program on the nearby WATERLOO mine property. The SILVER SPOT NO. 4 showing was covered by the PEAK 78 claim during this period. The International Mine Services work program focused on the WATERLOO mine, and little attention was paid to the SILVER SPOT showings.

In 1974, K.L. Daughtry carried out a magnetometer survey over the RHONDDA claim, which covered the AU (082ENE027) and SILVER SPOT LOC. 9 (082ENE026) showings, approximately 1.5 kilometres to the west. The survey identified lithological contacts but provided little information about shear zones.

In 1978, W.G. Botel carried out a 16.9 kilometre VLF-EM survey over the WATERLOO Crown grant and the GRIZZ 25-28 claims to the west. Known shear zones and some possible projections were identified.

During the period 1978 to 1980 the SILVER SPOT NO.4 was covered by the GEO 1 claim, held by Amore Minerals Inc. They carried out several programs of soil sampling, VLF-EM and Max-Min electromagnetic surveys to the east. There was no work on the GEO 1 claim recorded.

In 1979, Kelvin Energy Ltd. staked the REN 1 claim over the SILVER SPOT NO. 3 (082ENE028) area and carried out a small program of prospecting, mapping and soil sampling. The results were not encouraging and the property was eventually dropped.

BIBLIOGRAPHY

EMPR AR 1931-A122; 1966-191; 1967-223; 1968-224
EMPR ASS RPT 817, 1812, 2330, 5200, 6825, 7852, 8268, 8389, 17526,
22875
EMPR EXPL 1978-E45; 1979-26; 1980-46
EMPR GEM 1969-300, 1974-65
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933
and unknown)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.80A,105A,106A

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/30

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE030**

NATIONAL MINERAL INVENTORY:

NAME(S): **COLLIER**, DONEN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E10W
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 31 20 N
LONGITUDE: 118 53 26 W
ELEVATION: 1260 Metres

NORTHING: 5487229
EASTING: 363175

LOCATION ACCURACY: Within 500M

COMMENTS: Diamond-drill hole C204 located about 6.5 kilometres southwest of Christian Valley (Assessment Report 8105, Figure 3).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Epigenetic
TYPE: D04 Basal U
COMMENTS: Mineralization age is Miocene-Pliocene.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	
Tertiary	Chilcotin	Unnamed/Unknown Formation	
	ISOTOPIC AGE: 5.0 +/- 0.5 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Basalt		
Cretaceous-Tertiary			Okanagan Batholith
Eocene			Coryell Intrusions

LITHOLOGY: Conglomerate
Arkosic Sandstone
Siltstone
Carbonaceous Mudstone
Tuff
Flow
Volcaniclastic Sediment/Sedimentary
Olivine Basalt
Granite
Quartz Monzonite

HOSTROCK COMMENTS: The Chilcotin Group is Miocene-Pliocene in age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1979

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Uranium

0.0170

Per cent

COMMENTS: Sample length of 0.35 metre in drillhole C204.

REFERENCE: Assessment Report 8105.

CAPSULE GEOLOGY

The COLLIER showing is located on the west side of Dear Creek, approximately 6.5 kilometres southwest of the Kettle Valley community of Christian Valley.

The area is underlain by granite and quartz monzonite of the Cretaceous-Tertiary Okanagan Batholith. Unconformably overlying the plutonic rocks are tuffs, flows and related volcaniclastic sediments of the Eocene Marron Formation, Penticton Group. The volcanics are cut by Eocene Coryell syenite and monzonite intrusives and dikes, and younger dacite feeder dikes, correlative with the Marron Formation.

The Miocene-Pliocene Chilcotin Group occurs as isolated, flat-lying rocks consisting of vesicular and massive columnar olivine

CAPSULE GEOLOGY

basalt flows with occasional interformational sediments. A potassium/argon age of 5.0 plus or minus 0.50 Ma was determined for the basalt (Map 29). Miocene fluvial sediments underlying the basalts are unconsolidated, interbedded arkosic sandstones, siltstones, carbonaceous mudstones, and basal conglomerates. These sediments occur as structurally controlled 'paleochannels', which are host to uranium deposits.

The Collier showing is a radioactive drillhole intersection, approximately 400 metres southwest of the southern end of the FUKI deposit (082ENE015). In 1979, Nissho-Iwai Canada Ltd. carried out a 5 hole diamond-drill program on the COLLIER property for Power Reactor and Nuclear Fuel Development Corporation, of Japan. The westernmost hole C204, intersected 0.017 per cent uranium over 0.35 metre within the sediments (Assessment Report 8105). The other 4 holes were barren. Results of 6 holes drilled in 1971, 500 metres to the northeast, returned low levels of radioactivity except for one hole (BCF 39) with up to 1800 counts per minute (0.06 equivalent uranium) over 1.2 metres (Assessment Report 3135). This drilling represents a portion of the south part of the Fuki deposits.

BIBLIOGRAPHY

EMPR ASS RPT 2484, 3135, *8105
EMPR EXPL 1979-34
EMPR GEM 1970-409; 1971-396
EMPR MAP *29
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 551; 736; 1969

DATE CODED: 1987/02/23
DATE REVISED: 1996/04/12

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE031**

NATIONAL MINERAL INVENTORY: 082E15 Ag5

NAME(S): **LUMPY**, LUMPY LOC. 14, BIG P2,
PEAK 91, LIGHTNING PEAK CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 53 12 N
LONGITUDE: 118 31 34 W
ELEVATION: 2000 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5527147
EASTING: 390373

LOCATION ACCURACY: Within 500M

COMMENTS: Location of 2 adit portals about 900 metres north-northeast of
Lightning Peak (Property File - International Mine Services Ltd.,
Location Map, 1968).

COMMODITIES: Silver Zinc Lead Gold Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Ruby Silver Silver Gold

ASSOCIATED: Chalcopyrite Pyrite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Limestone
Greenstone
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Harper Ranch Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	162.8000	Grams per tonne
Lead	1.3700	Per cent
Zinc	1.0700	Per cent

COMMENTS: Grab sample from Trench #14.
REFERENCE: Assessment Report 9984.

CAPSULE GEOLOGY

The LUMPY showing is a polymetallic quartz vein system located on the north slope of Lightning Peak, approximately 900 metres north-northeast of the summit.

The showing occurs in a bed of coarsely crystalline, grey limestone of the Devonian-Triassic Harper Ranch Group which is hosted by granodiorite and diorite of an unnamed Middle Jurassic intrusion.

The limestone bed is approximately 30 metres wide, strikes northwesterly and dips 60 degrees to the southwest. It is associated with greenstone and granitic intrusives.

Trenches and 2 short adits at the showing expose prominent jointing in the limestone at 60 degrees. This fracture set is filled with thin quartz veinlets containing minor amounts of sphalerite, galena, ruby silver, and traces of native silver and gold. Disseminated pyrite in the limestone has also been noted.

The LUMPY claim was staked in 1918 by J. Prough and W.A. Johnson. Initial development work included a short adit, but the property was eventually abandoned because of poor results. In 1927, the property was re-staked by G. Boug and R. Lee. A 1930 report describes 2 adits,

CAPSULE GEOLOGY

one of which was 9 metres long, the other 21 metres. To the south, on the hillside above the adits, there are a number of open-cuts and trenches.

In 1968-69, International Mine Services Ltd. staked much of the Lightning Peak area and carried out a variety of exploration programs for the Great Horn Mining Syndicate Inc. Most of this work was focused on the WATERLOO (082ENE017) mine, 2.75 kilometres to the northwest. The LUMPY showing was covered by the PEAK 91 claim at this time, however no work in this area was recorded.

In 1980, Zalmac Mines Limited staked the LUMPY showing and in the following year they carried out a geological survey of the old workings. A grab sample of limestone containing specks of galena and sphalerite assayed 162.8 grams per tonne silver, 1.37 per cent lead and 1.07 per cent zinc (Assessment Report 9984). Several of the 21 trenches mapped expose minor shear zones striking 60 degrees. The limestone weathers rusty, suggesting the presence of pyrite, especially near intrusive contacts.

In 1984-85, Zalmac Mines Limited carried out VLF-EM and IP surveys over portions of the BIG P 1, 2 & 3 claims, which include the LUMPY showing. The surveys identified 3 polarizable anomalies coincident with east-west VLF-EM conductors. It was speculated that these anomalies may represent mineralized shear zones. A sinuous, east-west trending conductor passing through the LUMPY area was detected by a 1985 VLF-EM survey. Trenching on this conductor, to the west of the LUMPY showing, was unable to reach bedrock.

In 1988, additional trenching was carried out by Zalmac Mines on their BIG P claim group. Two trenches near the LUMPY showing exposed a pyritic limestone, and minor chalcopyrite was noted on fracture surfaces in trench TR88-1. Several grab samples collected from the adits in 1992 failed to provide encouragement for further work.

BIBLIOGRAPHY

EMPR AR 1918-K221; 1919-N167; 1921-G187; 1925-A196; 1927-C227;
1931-A122; 1968-224
EMPR ASS RPT 1812, 2330, *9984, 12906, 13861, 17984, 22875
EMPR GEM 1969-300
EMPR EXPL 1981-173; 1984-30; 1985-C31; 1988-C25
EMPR OF 1994-8
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933
and unknown; Bayrock, L.A. (1981): Geological Report on the Big P
Claim Group, Zalmac Mines Ltd.; In 082ENE017 - *International Mine
Services Ltd., Location Map, 1968)
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.80A,106A,107A

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/04

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE032**

NATIONAL MINERAL INVENTORY: 082E15 Ag3

NAME(S): **RAMPALO**, RAMPALO L. 2408, RAMPALO LOC. 16,
RAMPALO LOC. 17, SILVER LUMP, SILVER LUMP L. 2409,
RAMPALO FRACTION, PEAK 96, LIGHTNING PEAK CAMP

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:
LATITUDE: 49 53 35 N
LONGITUDE: 118 30 58 W
ELEVATION: 1890 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Upper adit portal located about 2 kilometres northwest of Lightning Peak (Assessment Report 22875).

Underground
MINING DIVISION: Vernon
UTM ZONE: 11 (NAD 83)
NORTHING: 5527842
EASTING: 391106

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Silver Tetrahedrite Sphalerite
ASSOCIATED: Pyrite Quartz Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres
COMMENTS: Attitude of vein in the uppermost adit.

STRIKE/DIP: 037/62S
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic Harper Ranch Unnamed/Unknown Formation Unnamed/Unknown Informal
Middle Jurassic

LITHOLOGY: Greenstone
Limestone
Quartz Porphyry Dike
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1992
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 1193.0000 Grams per tonne
Gold 12.0000 Grams per tonne
COMMENTS: A 60-centimetre chip sample from the quartz vein in the uppermost RAMPALO adit.
REFERENCE: Assessment Report 22875.

CAPSULE GEOLOGY

The RAMPALO showing is a polymetallic quartz vein system located on the northern slope of Lightning Peak, approximately 2 kilometres northwest of the summit. This showing includes the SILVER LUMP adit, 135 metres to the east of the upper RAMPALO adit, which was previously considered a separate MINFILE occurrence (082ENE033).

The showing occurs in greenstone and limestone of the Devonian-Triassic Harper Ranch Group which is hosted by granodiorite and diorite of an unnamed Middle Jurassic intrusion. In the vicinity of the showing granodiorite intrudes the Harper Ranch Group and quartz porphyry dikes are commonly associated with quartz veining.

The RAMPALO claim, staked in 1897, was the first claim located in the Lightning Peak area. It and the adjacent claim, were Crown granted in 1902 as the RAMPALO Lot 2408 and SILVER LUMP Lot 2409.

The RAMPALO showing has been explored by 3 adits which expose quartz veins and shear zones. A 1930 report describes the adits which vary in length from 18 to 118 metres. Initial development consisted

CAPSULE GEOLOGY

of drifting in 2 adits, followed by a 118-metre cross-cut to explore the vein below and to the east of the other adits. This development work was carried out during the period 1919-21 by T. Cortiana.

The uppermost, 18-metre adit follows a vein that strikes 37 degrees and dips 62 degrees to the southeast. The vein varies in width up to 60 centimetres wide, and is associated with a quartz porphyry dike. Near the portal, the vein is offset about a metre, by a fault striking north and dipping 45 degrees to the west. Disseminated pyrite and, locally, minor amounts of galena and silver-rich sulphides are found in the vein. Silver assays are reported to be highest near the fault. Native silver has also been found in high-grade samples.

Another adit, located 50 metres to the northeast, reportedly intersected the down-dip extension of this vein about 15 metres below and 60 metres north of the upper adit.

The portal of the lowest adit, 135 metres east of the upper adit, is located on the SILVER LUMP Crown grant. Although known as the SILVER LUMP adit, it is the cross-cut driven by T. Cortiana, and approximately 100 metres of its 135-metre length is on the RAMPALO Crown grant. The adit terminates roughly under the upper adit's open cut. Exposed in the adit is a 7-centimetre wide vein which appears to be repeated by a series of parallel fractures striking north and dipping 40 degrees west. About 5 metres from the portal, a 30-centimetre wide quartz vein cuts across the adit in a shear zone. The vein dips steeply to the east and underlies a 3-metre wide quartz porphyry dike.

In 1968-69, International Mine Services Ltd. carried out a number of geochemical and geological surveys of the Lightning Peak area for the Great Horn Mining Syndicate. The area around the RAMPALO showing was covered by the PEAK claim group during this period; however, little attention appears to have been paid to the RAMPALO showing.

In 1984-85, Zalmac Mines Limited carried out VLF-EM and IP surveys over portions of the BIG P 1, 2 & 3 claims, which surrounded but did not include the RAMPALO showing. The surveys identified 3 polarizable anomalies coincident with east-west VLF-EM conductors. It was speculated that these anomalies may represent mineralized shear zones. Several northeast trending conductors were detected by a 1985 VLF-EM survey. It was suggested that they could be extensions of the RAMPALO, VICTORIA (082ENE076) and LUMPY (082ENE031) structures.

During the period 1987-89, Grazina Resources Ltd. carried out several exploration programs on their SILVER LUMP property, which included the SILVER LUMP Crown Grant (by this time reverted) and several claims around the Lightning Peak area. Geological mapping, soil sampling, VLF-EM and magnetometer surveys were carried out, mostly in an area to the north of the RAMPALO and SILVER LUMP adits. Coincidental soil, VLF-EM and magnetometer anomalies were found.

The RAMPALO Crown grant forfeited in 1992, and was staked as the RAMPALO FRACTION by Zalmac Mines Limited in June, 1992. Zalmac Mines proceeded to carry out a program of geological mapping, soil and rock sampling, surveying and aerial photograph studies of the general area around, and including, the RAMPALO showing. A chip sample from a 60-centimetre wide quartz vein in the upper RAMPALO adit assayed 12 grams per tonne gold and 1193 grams per tonne silver (Assessment Report 22875). The sample contained minor calcite stringers and was mineralized with pyrite, tetrahedrite and minor galena and sphalerite. A sample of quartz and pyrite from the upper adit dump assayed 15.5 grams per tonne gold and 314 grams per tonne silver (Assessment Report 22875). Many other samples collected in the RAMPALO and SILVER LUMP adits returned anomalous silver values. Lineations identified by the aerial photograph study coincide with anomalous gold, silver and base metal soil geochemistry.

BIBLIOGRAPHY

- EMPR AR 1902-H305, 1904-G224, 1919-N163, 1920-N155, 1921-G181;
1925-A196; 1931-A122; 1933-A150; 1934-D4; 1968-224
- EMPR ASS RPT 1812, 2330, 12906, 13861, 17526, 19011, *22875
- EMPR GEM 1969-300
- EMPR EXPL 1984-30; 1985-C31; 1988-C25
- EMPR OF 1994-8
- EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown; In 082ENE017 - International Mine Services Ltd., Location Map, 1968; Yorke-Hardy, R.W. (1993); Property Synopsis, Zalmac Property, P and Z Claims, Zalmac Mines Ltd.)
- EMPR RGS 29
- GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
- GSC OF 409; 637; 736; 1969

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 69
REPORT: RGEN0100

BIBLIOGRAPHY

GSC SUM RPT *1930A, p.80A,107A,108A

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/06

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE033**

NATIONAL MINERAL INVENTORY:

NAME(S): **IXL**, IXL (L.1030S), BURRELL,
JUMBO (L.143), WALLACE (L.142S), FRANKLIN CAMP

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 32 41 N
LONGITUDE: 118 24 36 W
ELEVATION: 1200 Metres

NORTHING: 5488968
EASTING: 398000

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of trench #7, 57 kilometres north of Grand Forks on Mount
McKinley (Assessment Report 21768).

COMMODITIES: Copper Gold Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Galena Sphalerite Pyrite
ASSOCIATED: Pyrite
ALTERATION: Pyrite Silica Garnet Epidote Pyroxene
ALTERATION TYPE: Pyrite Silicific'n Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Porphyry Skarn Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	
Eocene	Penticton	Marron	
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Feldspar Porphyry
Skarn
Limestone
Granodiorite
Conglomerate
Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Plutonic Rocks
GRADE:

INVENTORY

ORE ZONE: PORPHYRY REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Channel
COMMODITY GRADE
Gold 0.1600 Grams per tonne
Copper 0.1200 Per cent
COMMENTS: Average of samples. Samples assayed up to 1 per cent copper and
1.6 grams per tonne gold.
REFERENCE: Assessment Report 21768.

ORE ZONE: SKARN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Channel
COMMODITY GRADE
Gold 0.0880 Grams per tonne
Copper 0.2400 Per cent
Zinc 0.3600 Per cent
COMMENTS: Average grade from 14 samples.
REFERENCE: Assessment Report 21768.

CAPSULE GEOLOGY

The IXL showing is located 57 kilometres north of Grand Forks on the slopes of Mount McKinley.

CAPSULE GEOLOGY

The IXL claim (Lot 1030s) was located in 1904 and Crown granted in 1910. Trenching was apparently conducted somewhere in this vicinity in the late 1920s. In 1969, geological and IP surveys, trenching and 3 diamond drillholes were completed on the IXL claims by Canamax Resources Inc. These IXL claims are located to the south of Lot 1030s and cover, primarily, the Wallace Crown grant Lot 142s. In 1980, the trenches were sampled and mapped for Richcore Exploration Ltd. In 1991, Canamax completed a program of geological mapping, sampling, soil sampling and airborne geophysics.

The area of the IXL showing is underlain by crystalline limestone of the Devonian-Triassic Harper Ranch Group, which is intruded by granodiorite of an unnamed Middle Jurassic Intrusion. Younger volcanics of the Eocene Marron Formation (Penticton Group) are exposed on either side of the limestone and conglomerates are exposed to the southeast. Strong northwest trending cross-faulting or shearing occurs on the property.

At the IXL showing a minor amount of garnet-epidote-pyroxene skarn contains small amounts of sphalerite, galena and chalcopyrite. In 14 samples the average grade of the skarn was 0.24 per cent copper, 0.36 per cent zinc, 0.088 gram per tonne gold (Assessment Report 21768).

Siliceous pyritic feldspar porphyry contains trace to 5 per cent pyrite and smaller amounts of chalcopyrite and malachite as disseminations and fracture fillings. The mineralized area is 600 by 200 metres in size. Samples assayed up to 1 per cent copper and 1.6 gram per tonne gold, averaging 0.12 per cent copper and 0.16 grams per tonne gold (Assessment Report 21768).

BIBLIOGRAPHY

EMPR AR 1910-248
EMPR ASS RPT 637, 9584, 21195, *21768
EMPR RGS 29
GSC MAP 97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.154,155
GSC OF 409; 736; 1969
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/06

CODED BY: GSB
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE034**

NATIONAL MINERAL INVENTORY: 082E15 Ag4

NAME(S): **KILLARNEY**, KILARNEY, KILLARNEY (L.4637),
KILLARNEY GROUP LOC. 18, THUNDER HILL FRACTION (L.4638), LUCKY JIM FRACTION (L.4639),
LIGHTNING PEAK CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:
LATITUDE: 49 53 15 N
LONGITUDE: 118 30 20 W
ELEVATION: 1770 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Approximate location of several adits about 2 kilometres northeast of Lightning Peak (Property File - International Mine Services Ltd., Location Map, 1968).

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5527209
EASTING: 391852

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Veins generally strike west to northwest and dip north to northeast.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic-Mesozoic Middle Jurassic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Greenstone
Andesite
Quartz Porphyry Dike
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch
Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Grab
COMMODITY
Silver 335.0000 Grams per tonne
Lead 0.0800 Per cent
Zinc 0.0400 Per cent
COMMENTS: Sample number 4457 is from a 12-centimetre wide quartz vein.
REFERENCE: Assessment Report 13356.

CAPSULE GEOLOGY

The KILLARNEY past producer is located on Lot 4637, which is approximately 2 kilometres northeast of Lightning Peak. The KILLARNEY occurs in greenstone of the Devonian-Triassic Harper Ranch Group which is hosted by granodiorite and diorite of an unnamed Middle Jurassic intrusion. Late quartz porphyry dikes cut through metavolcanic and intrusive rocks in this area. The occurrence consists of mineralized quartz veins exposed in several short adits and trenches. The veins have a general west to northwesterly strike and a north to northeasterly dip. Mineralization in the veins consists of streaks and small lenses of argentiferous galena with minor amounts of sphalerite, pyrite and chalcopyrite. The veins vary in width from several centimetres up to about 30 centimetres. Faulting of the veins is extensive, with each successive segment thrown northward. The vein, or veins, exposed on the KILLARNEY property are similar to those of the WATERLOO (082ENE017) mine 4 kilometres to the northwest and to the LIGHTNING

CAPSULE GEOLOGY

PEAK (082ENE035) occurrence 300 metres to the southeast.

The KILLARNEY claim was staked in 1918 and Crown granted in 1925, as Lot 4637, to W.J. Banting of Edgewood.

In 1919, a trial shipment of 1 tonne of hand-picked, mineralized talus was shipped to the Trail smelter. It produced 2177 grams of silver and 360 kilograms of lead. Work, prior to 1922, consisted of 2 adits, 8 and 15 metres long, respectively, which did not locate the vein. A sample of massive sulphide from the property assayed 0.68 gram per tonne gold, 2121 grams per tonne silver, 60 per cent lead and 4 per cent zinc (Minister of Mines Annual Report 1922, page N172).

During the 1920s and early 1930s, numerous programs were carried out on the property, with little success. A 35-metre crosscut failed to intersect the vein; a drift in another adit lost the vein after 14 metres. At least 5 adits and several trenches were completed in an effort to follow the faulted vein segments. The lack of continuity of the vein structure appears to have been the main obstacle. This period of exploration and development on the KILLARNEY ended about 1935.

In 1959, H.O. Cooper produced 4 tonnes of crude ore from the KILLARNEY property, presumably from the old dumps and talus. The ore yielded 14090 grams of silver, 1133 kilograms of lead and 38 kilograms of zinc. No further details about this operation are available.

In 1983, Mohawk Oil Company Ltd. optioned the KILLARNEY property and carried out a program of Geological mapping, trenching and geophysical surveys (magnetometer, VLF-EM and self-potential). A total of 12 trenches were excavated, the most significant of which was trench L-11.

A mineralized structure exposed for about 30 metres in trench L-11 strikes 309 degrees and dips 74 degrees to the northeast. It is thought to be an extension of the mineralized zone that was mined in the old underground workings a short distance to the east. A grab sample from a 12-centimetre wide quartz vein in andesite containing galena and sphalerite assayed 335 grams per tonne silver, 0.08 per cent lead and 0.04 per cent zinc (Assessment Report 13356).

A grab sample of a pyritic quartz porphyry dike exposed in trench L-8, a short distance to the south of the adits, assayed 1.7 grams per tonne gold (Assessment Report 13356). The geophysical program identified a number of anomalies, including some associated with mineralized structures.

BIBLIOGRAPHY

EMPR AR 1919-N174; *1922-N171; 1923-N182; 1924-B164; 1925-A196;
1927-C227; 1929-C256; 1930-A226; 1931-A122; 1932-A125; 1933-A151;
1934-D4; 1935-D15
EMPR ASS RPT *13356
EMPR BC METAL MM00878
EMPR OF 1994-8
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933
and unknown; In 082ENE017 - *International Mine Services Ltd.,
Location Map, 1968)
EMPR INDEX 3-202; 4-122
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.108,109,110

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/10

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE035**

NATIONAL MINERAL INVENTORY: 082E15,16 Ag1

NAME(S): **LIGHTNING PEAK**, THUNDER HILL (L.3413), FIRST CHANCE (L.3414),
 WEST FORK (L.3413), JIM HILL (L.3416), EQUINOX,
 LIGHTNING PEAK GROUP LOC.19-20, M22

STATUS: Past Producer	Underground	MINING DIVISION: Greenwood
REGIONS: British Columbia		
NTS MAP: 082E16W		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 49 53 04 N		NORTHING: 5526860
LONGITUDE: 118 29 55 W		EASTING: 392344
ELEVATION: 1800 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: Approximate location of several adits about 3.5 kilometres northeast of Lightning Peak (Geological Survey of Canada Summary Report 1930A, page 80A).		

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Galena	Sphalerite	Ruby Silver	Argentite	Silver
ASSOCIATED: Chalcopyrite	Pyrite			
ALTERATION: Quartz	Calcite			
ALTERATION: Malachite				
COMMENTS: Malachite is inferred from the presence of copper carbonate.				
ALTERATION TYPE: Oxidation				
MINERALIZATION AGE: Unknown				

DEPOSIT

CHARACTER: Vein	Shear	Disseminated
CLASSIFICATION: Hydrothermal	Epigenetic	
TYPE: I05	Polymetallic veins Ag-Pb-Zn±Au	
COMMENTS: Shear-hosted polymetallic quartz veins.		

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Greenstone
 Quartz Porphyry Dike
 Pegmatitic Granodiorite Dike
 Granodiorite
 Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	Plutonic Rocks	PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Harper Ranch		

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1969
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Silver	77.6000 Grams per tonne
Lead	6.7700 Per cent
COMMENTS: Sample of whole vein from back in adit no. 4.	
REFERENCE: Assessment Report 2330.	

CAPSULE GEOLOGY

The LIGHTNING PEAK past producer is located on the FIRST CHANCE Crown grant, (Lot 3414), approximately 3.5 kilometres to the northeast of the summit of Lightning Peak.

The occurrence is found in greenstone and schist of the Devonian-Triassic Harper Ranch Group which is hosted by granodiorite and diorite of an unnamed Middle Jurassic intrusion. Quartz porphyry dikes and pegmatitic granodiorite dikes are commonly associated with quartz veining at the LIGHTNING PEAK occurrence. The quartz forms narrow veins and lenses, or partly replaces the wallrocks within and adjacent to shear zones. Calcite is sometimes associated with the quartz. Galena and sphalerite form streaks, disseminations, and lenses within the shear zones. Minor amounts of pyrite, chalcopyrite, ruby silver, argentite, and native silver are also

CAPSULE GEOLOGY

present. Copper carbonate (malachite?) has been noted on surface exposures. The shear zones are of variable thickness up to about 1 metre thick. The main vein strikes east-west, has a near vertical dip and is cut by north striking faults.

The LIGHTNING PEAK occurrence was staked around 1901 by F. Fritz and C. Harrigan, and Crown granted in 1905 as the THUNDER HILL (Lot 3413), FIRST CHANCE (Lot 3414), WEST FORK (Lot 3415) and JIM HILL (Lot 3416). In 1904, a 4.5-tonne sample was shipped to the smelter at Nelson. It assayed 5611 grams per tonne silver and 26 percent lead (Minister of Mines Annual Report 1904, page G224). In 1906, the property was leased by W.A. Calder & Associates and 38 tonnes of ore was shipped in 1907 and 1908.

In 1917, the mine was re-opened by W.A. Calder, who made several shipments, totaling 17 tonnes, during the period 1918-1920. In 1921, the property was leased by W. Williams who shipped 5 tonnes in 1922 and 9 tonnes in 1923. In 1925, W.A. Calder leased the property again and formed the Lightning Peak Mining Company Limited in 1927. Production during the next 3 years amounted to 54 tonnes. Lightning Peak Mining Company ceased operation in 1932, although W.A. Calder continued to operate the mine intermittently until 1936. Mine development, as of 1930, consisted of a 29-metre shaft, 4 adits and extensive surface work. The underground workings explored the main vein for a total length of approximately 300 metres and over a vertical range of approximately 60 metres.

Total recorded production for the period 1904-36 is 139 tonnes which yielded 434,943 grams of silver, 93 grams of gold, 35,961 kilograms of lead and 3362 kilograms of zinc.

In 1969, International Mine Services Ltd. mapped the two lower levels of the LIGHTNING PEAK workings for the Great Horn Mining Syndicate. The No. 3 adit was found to be about 23 metres long and was connected to the fourth level by a 15-metre chute. Adit No. 4 was found to be a crooked and low-backed drift on a vein which averaged 10 centimetres in width. The 210-metre long drift ends with a raise and two 25-metre crosscuts. Mineralization in the drift, consisting of fine-grained galena with minor quartz in a gangue of altered greenstone, follows a tight fracture in fine-grained greenish volcanics. A sample of the mineralization assayed 77.6 grams per tonne silver and 6.77 per cent lead (Assessment Report 2330). In 1968 and in 1969 Mining Lease No. M22, covering 18 hectares of the WEST FORK (L.3413) and JIM HILL (L.3416) Crown grants, was issued to the Great Horn Mining Syndicate Inc. No production is recorded.

BIBLIOGRAPHY

EMPR AR 1904-G224; 1905-J255; 1917-F199; 1918-K203; 1922-N351; 1925-A196; 1927-C227; 1929-C256; 1933-A151; 1934-D4; 1935-D15; 1936-D57; 1968-224
EMPR ASS RPT 1812, *2330
EMPR BC METAL MM00889
EMPR GEM 1969-300
EMPR INDEX 3-203
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.80A,110A-114A

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/12

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE036**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUE**, RT 9

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E10W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 37 28 N
LONGITUDE: 118 47 24 W
ELEVATION: 820 Metres

NORTHING: 5498415
EASTING: 370723

LOCATION ACCURACY: Within 500M

COMMENTS: Diamond-drill hole #1 located about 8.25 kilometres north of Christian Valley (Assessment Report 14746).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite
ALTERATION: Limonite Goethite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: * Unknown
COMMENTS: Fracture fillings.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	
Cretaceous-Tertiary			Okanagan Batholith

LITHOLOGY: Porphyritic Andesite
Porphyritic Trachyte
Granite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage

Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The BLUE showing is located on the west side of the Kettle Valley approximately 8.25 kilometres north of the community of Christian Valley.

The showing occurs in porphyritic andesite and trachyte of the Eocene Marron Formation, Penticton Group. These are underlain by granite of the Cretaceous-Tertiary Okanagan Batholith.

The area has been explored since the early 1900s, with much of the work directed at the COPKET (082ENE011) skarn and vein mineralization 2 kilometres to the west. In 1985, G.V. Lloyd carried out a 2-hole, 100-metre diamond-drill program on the BLUE property for L.C. Card. In drillhole #1, occasional blebs of pyrite and chalcopyrite are noted between 10.7 and 49.9 metres depth. Fractures are coated with limonite and goethite. Similarly in drillhole #2, located approximately 1 kilometre to the south, minor pyrite and chalcopyrite blebs are noted between 6.7 and 29.3 metres depth. The drill core from drillhole #1 was not analysed; samples from drillhole #2 assayed trace amounts of gold and silver.

BIBLIOGRAPHY

EMPR ASS RPT *14746
EMPR EXPL 1986-C37
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 736; 1969

DATE CODED: 1996/04/16
DATE REVISED: 1996/04/16

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE037**

NATIONAL MINERAL INVENTORY: 082E16 Ag2

NAME(S): **PAY DAY**, PAYCHECK, PAY DAY GROUP LOC. 21,
PEAK 171, DAY 1-4, PAY DAY 1-2,
LIGHTNING PEAK CAMP

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E16W
BC MAP:
LATITUDE: 49 53 39 N
LONGITUDE: 118 29 08 W
ELEVATION: 1880 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit located about 3.6 kilometres northeast of Lightning Peak
(Assessment Reports 19418, 22682).

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5527922
EASTING: 393303

COMMODITIES: Silver Zinc Copper Lead

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Galena Jamesonite
ASSOCIATED: Pyrite Magnetite Pyrrhotite Quartz Calcite
Ankerite
ALTERATION: Limonite Silica
ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Layered Disseminated Stratabound
CLASSIFICATION: Volcanogenic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres STRIKE/DIP: 135/60S TREND/PLUNGE:
COMMENTS: Attitude of volcanic sequence. Polymetallic quartz-carbonate zone.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic Harper Ranch Unnamed/Unknown Formation Unnamed/Unknown Informal
Middle Jurassic

LITHOLOGY: Greenstone
Crystal Lithic Tuff
Dacite
Rhyolite
Rhyodacite
Andesite
Limestone
Granodiorite Dike
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1973
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 195.0000 Grams per tonne
Copper 0.5800 Per cent
Zinc 5.2000 Per cent

COMMENTS: The chip sample, from a pod of massive pyrite-chalcopyrite-sphalerite-galena mineralization, is 91 centimetres long.
REFERENCE: Assessment Report 4857.

CAPSULE GEOLOGY

The PAY DAY prospect is located on the west side of the north branch of Rampalo Creek, approximately 3.6 kilometres northeast of Lightning Peak.
The PAY DAY occurs in a metavolcanic sequence within a pendant of Devonian-Triassic Harper Ranch Group which is hosted by diorite and granodiorite of an unnamed Middle Jurassic intrusion. The predominant rock type, in the vicinity of the occurrence, is a dark

CAPSULE GEOLOGY

greenish-grey, fine-grained crystalline rock of intermediate composition. The rock has a high mafic mineral content, approximately 30 per cent biotite and 15 per cent hornblende, and several per cent magnetite and pyrite. Individual layers within the sequence vary in composition from andesite to rhyodacite, but on average, is dacite. Crystal-lithic tuff, interbedded with the flow rocks, forms horizons up to 15 metres thick. Several outcrops of rusty-weathering rhyolite, containing up to 10 per cent pyrite, sphalerite and magnetite, are found near the workings. Limestone is exposed in a trench south of the adit. Granodiorite dikes are common in the area, aplite is also noted. The volcanic sequence strikes approximately 135 degrees and dips about 60 degrees southwest. Numerous north-striking, steeply-dipping faults cut through the area.

Sulphide mineralization is found in a zone of fractured and siliceous rock, which measures up to 2 metres wide and is exposed for about 50 metres by hand trenching. Fragmental textures are common in the mineralized zone; fragments of quartz, feldspar, lithic clasts and sulphide minerals range up to 1 centimetre in diameter. Pyrite, sphalerite, magnetite, galena and chalcopyrite occur as individual disseminated grains and fragments, and as agglomerates and layers up to 15 centimetres wide. Pyrrhotite has been noted in an adit. The sulphides are associated with quartz and lesser amounts of calcite and ankerite. On the surface, the zone is strongly oxidized.

The PAY DAY GROUP of 10 claims was located in 1929 by W.B. Johnstone, A. Williams, and associates. By 1930, development work on the property included numerous trenches and an 18-metre adit. The mineralized zone was reported to have been traced on surface for about 180 metres. The adit crosscuts the zone about 9 metres below the surface; drifting on the zone was limited to a few metres because of faulting. Exploration work continued into the mid 1930s, with most of the work focused on the PAYCHECK claim about 500 metres to the east of the PAY DAY claim. There, a 9-metre adit and numerous open cuts defined a mineralized zone, about 60 metres long, containing galena, sphalerite, pyrite and jamesonite. The PAYCHECK area is included in the PAY DAY occurrence.

In 1948, the Paycheck Mining and Development Company Limited acquired a number of properties in the Lightning Peak area, including the PAYCHECK, the DICTATOR (082ENE023) showing and the WATERLOO (082ENE017) mine. No work was recorded on the PAYCHECK property until 1955 when a 365-metre drill program was carried out. The results of the drilling were not filed for assessment.

In 1966, Bralorne Pioneer Mines Ltd. optioned the Lightning Peak property from Paycheck Mining and carried out a geochemical survey of the WATERLOO mine area. No work was carried out on the PAYCHECK at that time.

In 1968-69, International Mine Services Ltd. carried out a major work program over the Lightning Peak area for the Great Horn Mining Syndicate. The PAY DAY prospect was covered by the PEAK 171 claim and later re-staked as the DAY 1-4 claims. The geology of the PAY DAY area was mapped and a self-potential survey was carried out in the vicinity of the PAY DAY adit. A soil sample grid, 120 metres by 22 metres, was established over the adit area, and 161 soil samples were analysed for copper, lead, zinc and silver. The results suggested that the sulphide zone extended for about 30 metres to the north and south of the adit.

In 1973, K.L. Daughtry staked the PAY DAY prospect, and mapped and sampled the adit. A grab sample of banded sulphides from the adit assayed 403 grams per tonne silver, 0.64 per cent copper, 3.26 per cent lead and 12 per cent zinc (Assessment Report 4857). A 91-centimetre chip sample from a pod of massive pyrite-chalcopyrite-sphalerite-galena, with a gangue of quartz stringers and carbonate, assayed 195 grams per tonne silver, 0.58 per cent copper and 5.2 per cent zinc (Assessment Report 4857). In 1974, the property was optioned by A.D. and K. Ross. They proceeded to carry out a 2-hole, 107-metre diamond-drill program; however, the holes were collared in the footwall and no mineralization was intersected.

Magnetic and electromagnetic surveys were also carried out in 1974. The results were not recorded.

In 1978, Amore Minerals Incorporated contracted Glen E. White Geophysical Consulting Services Ltd. to carry out a soil sampling program on the GEO 2 (082ENE038) claim to the northwest. Coincident lead, zinc and silver anomalies were found in soils approximately 900 metres to the northwest of the PAY DAY prospect. Subsequent geophysical programs and drilling in 1980 failed to find economic mineralization.

In 1980, the PAY DAY area was mapped by K.L. Daughtry at 1:600 scale. In 1984, Daughtry carried out a detailed magnetometer survey of the PAY DAY adit and trenches. A magnetic high occurs above the adit and extends about 50 metres to the southwest. Another magnetic

CAPSULE GEOLOGY

high was found about 130 metres to the southwest. In 1989, the grid was extended to the southwest and magnetometer and VLF-EM surveys carried out. A northeasterly-trending alignment of magnetic anomalies was indicated. A VLF-EM conductor was found to coincide with the magnetic trend. In 1991-92, a flagged grid was established over the PAY DAY claim, and in 1992, another magnetometer survey was carried out. Several positive magnetic anomalies were identified, the most important extends for about 500 metres to the south-southwest of the adit.

BIBLIOGRAPHY

EMPR AR *1929-C256; 1930-A226; 1933-A151; 1935-D15; 1948-A150;
1949-A138; 1951-A133; 1952-A140; 1955-45; 1966-191; 1968-224
EMPR ASS RPT 801, 817, 1812, 2330, *4857, 5528, 6825, 8565, 12831,
*19418, *22682
EMPR EXPL 1978-E45; 1980-47; 1984-32
EMPR GEM 1969-300; 1973-53; 1974-66
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933
and unknown)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.114A,115A

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/18

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE038**

NATIONAL MINERAL INVENTORY: 082E16 Ag2

NAME(S): **BIG HILL, GEO 2, PEAK 152,
LIGHTNING PEAK CAMP**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E16W
BC MAP:

MINING DIVISION: Greenwood

LATITUDE: 49 54 18 N
LONGITUDE: 118 29 43 W
ELEVATION: 1800 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5529140
EASTING: 392629

LOCATION ACCURACY: Within 1 KM

COMMENTS: Fault zone on the east bank of Big Hill Creek about 150 metres north of Horseshoe Lake (Property File - International Mine Services Ltd., Location Map, 1968).

COMMODITIES: Silver

MINERALS

SIGNIFICANT: Argentite
ASSOCIATED: Pyrite
COMMENTS: Pyrite is assumed.
ALTERATION: Limonite
COMMENTS: Limonite is assumed.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres STRIKE/DIP: /60W
COMMENTS: Fault zone which hosts showing strikes north and dips about 60 degrees west. Fracture controlled sulphide deposit.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Greenstone
Granite
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch
Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The BIG HILL, a fracture controlled sulphide showing, is located on the east bank of Big Hill Creek about 150 metres north of Horseshoe Lake.

The BIG HILL occurs in a narrow fault zone which forms the contact between greenstone of the Devonian-Triassic Harper Ranch Group and a granitic intrusive. The Harper Ranch Group is hosted by diorite and granodiorite of an unnamed Middle Jurassic Intrusion.

The fault zone, in which the BIG HILL showing is found, strikes north and dips about 60 degrees to the west. The zone is narrow, about 10 centimetres in places. It weathers rusty (limonite?), suggesting that pyrite is present. Argentite has been found coating fractures within the fracture zone. Additional information on this showing is lacking.

In 1968-69, International Mine Services Ltd. carried out geochemical and geological surveys over the PAY DAY (082ENE037) prospect 1.5 kilometres to the southeast. The BIG HILL was covered by the PEAK 152 claim at this time but no work was recorded.

In 1978, Amore Minerals Incorporated contracted Glen E. White Geophysical Consulting Services Ltd. to carry out a soil sampling program on the GEO 2 (082ENE038) claim which covered the BIG HILL showing. No anomalies were found near the showing.

BIBLIOGRAPHY

EMPR AR 1968-224

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 81
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 6825
EMPR EXPL 1978-E45
EMPR GEM 1969-300
EMPR OF 1994-8
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933
and unknown; In 082ENE017 - *International Mine Services Ltd.
(1968): Location Map)
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.115A

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/20

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE039**

NATIONAL MINERAL INVENTORY: 082E15 Cu1

NAME(S): **PILOT**, UTA, PEAK 157,
LP 3, LP 3, LIGHTNING PEAK CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E16W 082E15E
BC MAP:
LATITUDE: 49 54 58 N
LONGITUDE: 118 30 01 W
ELEVATION: 1750 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of several trenches about 4.75 kilometres northeast of
Lightning Peak (Assessment Report 11247).

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5530383
EASTING: 392295

COMMODITIES: Silver Copper Lead Zinc Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
COMMENTS: Molybdenite is rare.
ASSOCIATED: Pyrite Pyrrhotite
ALTERATION: Chlorite Clay Sericite K-Feldspar
COMMENTS: Chlorite, clay, sericite and K-feldspar are inferred.
ALTERATION TYPE: Propylitic Argillic Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Greenstone
Meta Andesite
Quartz Porphyry Dike
Basaltic Dike
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch Plutonic Rocks PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1983
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Silver	5.1000 Grams per tonne
Copper	0.0100 Per cent
Lead	0.0400 Per cent
Zinc	0.0100 Per cent

COMMENTS: Sample number 4913.
REFERENCE: Assessment Report 11247.

CAPSULE GEOLOGY

The PILOT showing is located approximately 4.75 kilometres northeast of Lightning Peak.
The PILOT occurs in greenstone of the Devonian-Triassic Harper Ranch Group which is intruded and hosted by granodiorite and diorite of an unnamed Middle Jurassic intrusion. The showing is located near the contact between the Harper Ranch Group and the intrusive. Quartz porphyry dikes cut through the area. A basaltic dike, measuring about 1 metre wide, strikes northeast. The showing consists of disseminated and thin fracture fillings of pyrite, pyrrhotite, and minor chalcopyrite in greenstone. Molybdenite is reported at one location.
The PILOT showing was originally staked as the PILOT and UTA claims by N. Melstrom and A. Scaia in 1930. Trenches on the property

CAPSULE GEOLOGY

are believed to date from the 1930s; however, no records of this work exist.

In 1968-69, International Mine Services Ltd. carried out some geological mapping and soil sampling for the Great Horn Mining Syndicate. The PILOT showing was covered by the PEAK 157 claim during this period, although no work was recorded in the PILOT area.

In 1981, Mohawk Oil Co. Ltd. staked the general area as the L.P. claim group, the PILOT showing was covered by the L.P. 3 claim. Mohawk carried out regional prospecting and stream sediment sampling in 1981, followed by more detailed work in 1982. The L.P. 3 claim was covered by a program of geological mapping, soil sampling (646 samples) and geophysics (VLF-EM and magnetometer). Prospecting of the old trenches, in the vicinity of the PILOT showing, failed to locate any significant mineralization. A grab sample assayed 5.1 grams per tonne silver, 0.01 per cent copper, 0.04 per cent lead and 0.01 per cent zinc (Assessment Report 11247).

The soil sampling program found that most anomalies were related to the intrusive rocks and that a crude zonation of anomalies was suggested. Copper anomalies form a core zone surrounded by a molybdenum anomaly on the northwest, north and east. The molybdenum anomaly is overlain and surrounded by anomalous lead, zinc and silver soil geochemistry. Areas of propylitic, argillic and potassic alteration have also been mapped. The geophysics program identified many anomalies, some of which coincide with the geochemical anomalies, but no clear pattern emerged.

BIBLIOGRAPHY

EMPR AR 1931-123; 1968-224
EMPR ASS RPT 1812, 2330, 10201, *11247
EMPR EXPL 1981-232; 1982-38
EMPR GEM 1969-300
EMPR OF 1994-8
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown; In 082ENE017 - International Mine Services Ltd. (1968): Location Map)
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT 1930A, p.115A

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/20

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE040**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAND**, SAND 26, BIG FOOT

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E10W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 37 06 N
LONGITUDE: 118 49 04 W
ELEVATION: 880 Metres

NORTHING: 5497783
EASTING: 368700

LOCATION ACCURACY: Within 500M

COMMENTS: Diamond-drill hole "A", located about 8 kilometres north of Christian Valley (Assessment Report 2482).

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena
ASSOCIATED: Pyrite Calcite
ALTERATION: Clay
ALTERATION TYPE: Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal Epithermal
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene

GROUP

Penticton

FORMATION

Marron

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Andesite
Welded Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The SAND showing is located beside Copperkettle Creek, approximately 8 kilometres north of Christian Valley.

The showing occurs in Eocene Marron Formation (Penticton Group) andesite and minor welded tuff.

In 1970, Mitsui Mining Co. Ltd. carried out a 3-hole diamond-drill program to test for basal uranium mineralization under the Marron Formation volcanics. They were unable to penetrate the volcanic cover, despite drilling to a 214 metre depth in hole "C", and subsequently abandoned the program. They did, however, intersect minor clay and sulphide mineralization in diamond-drill hole "A". This mineralization consisted of calcite veinlets, and narrow clay-alteration zones containing disseminated pyrite, chalcopyrite and, in one spot, galena. All sulphide mineralization was intersected within 60 metres of the surface. No assays were made of the mineralization.

In 1979, Veronex Resources Ltd. carried out geological mapping and 110 metres of trenching in 6 trenches near the junction of Copperkettle and Sandrift Creeks, approximately 450 metres north of the showing. The results of this program were not recorded.

BIBLIOGRAPHY

EMPR ASS RPT *2482
EMPR GEM 1970-410
EMPR EXPL 1979-35
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/03/28

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE041**

NATIONAL MINERAL INVENTORY: 082E10 U2

NAME(S): **CUP LAKE**, DONEN, CAROL

STATUS: Developed Prospect

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E10W

BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 35 57 N

LONGITUDE: 118 54 05 W

ELEVATION: 1345 Metres

NORTHING: 5495802

EASTING: 362607

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of the northern part of the deposit, 8.7 kilometres northwest of Christian Valley (Assessment Report 8105, Figure 9). The southern part lies 2000 metres to the southeast.

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Saleeite Autunite
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Epigenetic
TYPE: D04 Basal U
SHAPE: Regular
DIMENSION: 1500 x 500 x 2 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Northern mineralized zone. Mineralization age is Miocene-Pliocene.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary	Chilcotin	Unnamed/Unknown Formation	
	ISOTOPIC AGE: 5.0 +/- 0.5 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Basalt		
Cretaceous-Tertiary Eocene			Okanagan Batholith Coryell Intrusions

LITHOLOGY: Conglomerate
Ash Tuff
Basalt
Arkosic Sandstone
Siltstone
Carbonaceous Mudstone
Granite
Porphyritic Quartz Monzonite
Syenite
Monzonite

HOSTROCK COMMENTS: Deposit occurs in paleochannel fluvial sediments. The Chilcotin Group is Miocene-Pliocene in age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: CUP LAKE REPORT ON: Y
CATEGORY: Indicated YEAR: 1980
QUANTITY: 2250000 Tonnes
COMMODITY Uranium GRADE 0.0370 Per cent
COMMENTS: Deposit contains an estimated 990.12 tonnes of U3O8. Average grade is quoted as 0.044 per cent U3O8. Conversion used for U3O8 to uranium is 0.848.
REFERENCE: Assessment Report 8105.

CAPSULE GEOLOGY

The Cup Lake uranium deposit is located approximately 1 kilometre east of Lassie Lake and 8.7 kilometres northwest of the Kettle Valley community of Christian Valley. The deposit consists of 2 mineralized areas; the northern part contains higher grade reserves than the southern part, 2000 metres to the southeast. Granite and porphyritic quartz monzonite of the

CAPSULE GEOLOGY

Cretaceous-Tertiary Okanagan Batholith, and syenite and monzonite of the Eocene Coryell Intrusions underlie the deposit.

The Miocene-Pliocene Chilcotin Group occurs as isolated, flat-lying, cap rocks consisting of vesicular and massive columnar olivine basalt flows with occasional interformational sediments. A potassium/argon age of 5.0 plus or minus 0.50 Ma was determined for the basalt (Map 29). Miocene fluvial sediments underlying the basalts are unconsolidated, interbedded arkosic sandstones, siltstones, carbonaceous mudstones, and basal conglomerates. These sediments occur as structurally controlled 'paleochannels', which are host to uranium deposits.

The property was staked in 1971 for Nissho-Iwai Canada Ltd. following radiometric and water geochemical surveys. Work prior to the uranium moratorium in 1980 consisted of 1045 metres of diamond drilling in 16 holes in 1972, 1292 metres of diamond drilling in 1973, and geological mapping and 3149 metres of diamond drilling in 40 holes in 1979. This work was carried out for the Power Reactor and Nuclear Fuel Development Corporation of Japan.

The CUP LAKE deposit occurs within a northwest trending paleochannel overlying Valhalla, Nelson, and Coryell intrusives. The fluvial sediments, up to 20 metres thick, include ash fall tuff with occasional lacustrine-type sediments overlying conglomerates. These are capped by a 5000 by 800 metre area of basalt, up to 60 metres thick.

The northern part of the mineralized zone measures about 1500 by 500 metres with an average grade of 0.042 per cent uranium over an average thickness of 1.8 metres; the southern part measures about 1500 by 150 metres with an average grade of 0.024 per cent over a 0.7 metre thickness (Assessment Report 8105). Total drill indicated reserves are estimated to be 2.25 million tonnes grading 0.037 per cent uranium to yield 839,620 kilograms of uranium (Assessment Report 8105).

Secondary uranium mineralization, which is probably saleeite and autunite, occurs as films on pebbles and in the matrix of unconsolidated or loosely consolidated conglomerate, carbonaceous mudstone, and sandstone. Mineralization is also in the base of the overlying basalt and in the regolith of the basement rocks.

BIBLIOGRAPHY

- EMPR ASS RPT 3775, 4630, *8105
- EMPR EXPL 1978-31; 1979-35
- EMPR FIELDWORK 1977, p. 12
- EMPR GEM 1972-43; 1973-49,50
- EMPR GEOLOGY 1975, pp. 34-36; 1977-1981, pp. 12-16
- EMPR MAP 22; *29
- EMPR OF 1994-8
- EMPR P *1979-6, pp. 29-30, 33, 47
- EMPR PF (Day, S.J. (circa 1990): Basal-type Gold-Uranium Deposits, Okanagan Region, British Columbia, 11 pages)
- EMPR RGS 29
- GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
- GSC OF 409; 551; 736; 1969
- GSC P 79-1A, pp. 349-356; 80-1B, pp. 17-28; 81-23, pp. 37-47
- EMR MIN BULL MR 223 B.C. 16
- EMR MP CORPFILE (Power Reactor and Nuclear Fuel Dev. Corp.; DIAD Report, Dovan 281-320, Feb. 1974, AECB Report)
- CIM BULL Aug. 1980, Vol. 73, No. 820, pp. 89-108
- CIM SPECIAL VOLUME 33, 1986, (Uranium Deposits of Canada), pp. 309-320
- ECON GEOL Vol. 77, 1982, p. 1193
- Bates, D.V., Murray, J.W., and Raudsepp, V. (1980): *Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, p. 34
- Sawyer, D.A., Turner, A.T., Christopher, P.A., and Boyle, D.R. (1981); *Basal Type Uranium Deposits, Okanagan Region, South Central British Columbia; Field Guides to Geology and Mineral Deposits, Calgary, GAC/MAC, CGU, pp. 69-77

DATE CODED: 1985/07/24
DATE REVISED: 1996/04/10

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE042**

NATIONAL MINERAL INVENTORY:

NAME(S): **JIMMY, JIMMY FR., PLATINUM BLONDE, FRANKLIN (L.438S), FRANKLIN CAMP**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:
LATITUDE: 49 33 44 N
LONGITUDE: 118 23 17 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit, located about 1.35 kilometres west of Mount Franklin (Assessment Report 17273).

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5490884
EASTING: 399623

COMMODITIES: Silver Zinc Lead Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite
COMMENTS: Galena, sphalerite and chalcopyrite are inferred from lead, zinc and copper assays.
ASSOCIATED: Pyrite Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Podiform Stockwork
CLASSIFICATION: Hydrothermal Replacement Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Middle Jurassic			Coryell Intrusions
Eocene			

LITHOLOGY: Limestone
Clastic Sediment/Sedimentary
Argillite
Siltstone
Chert
Granodiorite
Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1988
SAMPLE TYPE:	Grab		
COMMODITY		GRADE	
Silver		20.0000	Grams per tonne
Copper		0.0270	Per cent
Lead		1.9400	Per cent
Zinc		3.4000	Per cent

COMMENTS: Sample number 16771 is from the JIMMY adit.
REFERENCE: Assessment Report 17273.

CAPSULE GEOLOGY

The JIMMY showing is located on the east side of Franklin Creek, approximately 1.35 kilometres west of Mount Franklin.

The showing consists of silver-lead-zinc-copper mineralization in quartz veins and as replacements in limestone lenses. The limestone lenses, of the Devonian-Triassic Harper Ranch Group, are north-trending and steeply dipping. Nearby, rusty-weathering, siliceous, fine-grained clastic sediments contain abundant fracture controlled pyrite. The Harper Ranch Group also includes argillite, siltstone and chert. About a kilometre to the south and to the west is an unnamed Middle Jurassic granodiorite intrusion. Syenite of the Eocene Coryell Intrusions is found approximately 1 kilometre to the north.

The JIMMY showing is located approximately where the FRANKLIN

CAPSULE GEOLOGY

Crown grant, Lot 438s, was located. The FRANKLIN claim was at one time owned by Frank McFarlane but in 1914 the recorded owner was Mrs. Lindholm. Early records of work on the property are lacking, but an adit is thought to date from the early 1900s.

In 1964, Franklin Mines Ltd. acquired much of the Franklin camp and carried out geological mapping, sampling and magnetometer surveys over several mineral occurrences in the camp. Work was filed on the JIMMY and JIMMY FR. claims but no details are recorded.

In 1974, Falconbridge Nickel Mines Ltd. carried out a soil geochemical survey over the area around the adit and shaft. Two areas with anomalous silver-lead geochemistry were identified.

In 1984, Pearl Resources Ltd. held the JIMMY showing as part of a large property position they had assembled around the UNION (082ENE003) mine. No work was recorded on the JIMMY showing.

In 1986, Longreach Resources Ltd. staked and optioned much of the Franklin camp area, including the JIMMY showing. It is probable that Longreach prospected this area, although no reports specific to the showing were filed.

In 1987, Placer Dome Inc. optioned the PLATINUM BLONDE property from Longreach Resources Ltd., which included the JIMMY showing. Placer drilled 2 diamond drillholes (87-36 and 87-37) to test a northwesterly trending, mineralized quartz vein, which measured 1 - 2 metres in width. Both drillholes intersected a deformed package of fine clastic sediments. No significant quartz veins were intersected. The pyrite stockwork was found to be weakly anomalous in arsenic. A grab sample collected from the adit assayed 20 grams per tonne silver, 3.4 per cent zinc, 1.94 per cent lead and 0.027 per cent copper (Assessment Report 17273).

BIBLIOGRAPHY

EMPR AR 1914-345,353; 1964-112; 1965-172
EMPR ASS RPT 637, *5080, 13710, 15172, 15746, 15964, 15981, *17273
EMPR EXPL 1985-C28; 1987-C32; 1988-C22
EMPR GEM 1974-60
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File; See
PF 082ENE002 - Platinum Blonde Property, News Clippings, 1986-87)
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 56, p.155
GSC OF 409; 736; 1969
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/18

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE043**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOUMARK**, EAST LOUMARK, WEST LOUMARK,
TACK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:

MINING DIVISION: Vernon

LATITUDE: 49 57 59 N
LONGITUDE: 118 40 22 W
ELEVATION: 1110 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5536235
EASTING: 380036

LOCATION ACCURACY: Within 1 KM

COMMENTS: Approximate centre of mineralized area, about 31 kilometres northeast of Big White Mountain (Geology, Exploration and Mining in British Columbia 1974, page 66; Geological Survey of Canada Open File 637).

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Arsenopyrite Galena Chalcopyrite
ASSOCIATED: Pyrite Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Quartz Diorite

HOSTROCK COMMENTS: Unnamed intrusion was previously mapped as Middle Jurassic Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The LOUMARK showing is located between the Kettle River and Bruer Creek about 1 kilometre north of their confluence. This area is located approximately 31 kilometres northeast of Big White Mountain. All mineralization lying between the Kettle River and Bruer Creek, and within 2 kilometres to the north of their confluence are grouped under this showing.

The area is underlain by quartz diorite of an unnamed Middle Jurassic intrusion.

The number of mineral showings included in this showing is unclear. Geological Survey of Canada Open File describes 2 occurrences; EAST LOUMARK is a gold-silver-lead occurrence in quartz veins on the west side of the Kettle River. The WEST LOUMARK, approximately 1.2 kilometres to the west, is a gold-silver-lead-zinc occurrence in quartz veins on the east side of Bruer Creek. Both are hosted by a quartz diorite intrusion. Another description of the site, which is simply referred to as LOUMARK, describes gold and silver mineralization occurring in disseminated and streaky sulphides (pyrite, galena, chalcopyrite, and arsenopyrite) in quartz veins (Geology, Exploration and Mining in British Columbia 1974, page 66). The coordinates of this site plot approximately 1 kilometre to the south of the EAST LOUMARK.

In 1974, Woodman Enterprises Ltd. carried out 15 metres of underground work including underground geological mapping, 76 metres of trenching and 52 metres of diamond drilling in 3 holes. None of this work was filed for assessment and the results are unknown.

BIBLIOGRAPHY

EMPR GEM *1974-66
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; *1736A

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 90
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 409; *637; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/03/26

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE044**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAB, SAB 5, BS 1-12,
 STOCKWORK, H.G., LEAD,
 SOUTH**

MINING DIVISION: Vernon
 UTM ZONE: 11 (NAD 83)
 NORTHING: 5533150
 EASTING: 378432

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082E15E
 BC MAP:
 LATITUDE: 49 56 18 N
 LONGITUDE: 118 41 39 W
 ELEVATION: 1060 Metres
 LOCATION ACCURACY: Within 1 KM
 COMMENTS: Diamond-drill hole SAB 80-13 located about 13.5 kilometres northwest of Lightning Peak (Assessment Report 9576).

COMMODITIES: Gold Silver Copper Lead Zinc
 Tungsten

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Chalcopyrite Scheelite
 ASSOCIATED: Quartz
 ALTERATION: Epidote Chlorite Sericite Kaolinite K-Feldspar
 Hematite
 COMMENTS: Epidote, chlorite and hematite are assumed.
 ALTERATION TYPE: Propylitic Argillic Sericitic
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
 CLASSIFICATION: Porphyry Epithermal Breccia
 TYPE: L04 Porphyry Cu ± Mo ± Au Hydrothermal I05 Polymetallic veins Ag-Pb-Zn±Au
 COMMENTS: Polymetallic quartz veins.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Porphyritic Granite

HOSTROCK COMMENTS: Unnamed intrusion was previously mapped as Middle Jurassic Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
 TERRANE: Plutonic Rocks

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1980
 SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	227.5000	Grams per tonne
Gold	7.8700	Grams per tonne
Copper	0.0700	Per cent
Lead	0.0300	Per cent

 COMMENTS: Intersection from 13.1 metres to 13.25 metres in diamond-drill hole SAB 80-13.
 REFERENCE: Assessment Report 9576.

CAPSULE GEOLOGY

The SAB showing is located on the west side of the Kettle River approximately 13.5 kilometres northwest of Lightning Peak. The showing includes a number of mineralized exposures, trenches and diamond-drill holes in the area west of the Kettle River and extending south of Stove Creek for about 2.5 kilometres.

The SAB prospect contains features of both porphyry copper-gold-silver and epithermal gold-silver deposit models. Minor amounts of pyrite, galena, sphalerite and scheelite are found in vein and stockwork breccias. The quartz veining and breccias are hosted by an unnamed Middle Jurassic porphyritic granite. This intrusion was previously mapped as the Middle Jurassic Nelson intrusions (Geological Survey of Canada Map 1736A).

The property was staked as the BS 1-12 claims in 1972 by S.E.

CAPSULE GEOLOGY

Arnold, who had found mineralized quartz veins exposed in roadcuts. In 1973-74, S.E. Arnold and R.W. Yorke-Hardy prospected, mapped and sampled the BS claim group. They located numerous quartz veins, many of which contain pyrite, galena, sphalerite and minor chalcopyrite. Also noted were a number of gossans. A 1.2-metre chip sample of a quartz vein on BS 12 assayed 0.72 gram per tonne gold and 45.5 grams per tonne silver (Assessment Report 4979). High-grade grab samples assayed much higher.

In 1976, trenching and 30 square metres of stripping identified galena, sphalerite and pyrite with minor chalcopyrite and scheelite in quartz veins and stringers which form a large stockwork or breccia zone. In 1977, Yorke-Hardy carried out geochemical and electromagnetic surveys. Anomalies identified in 1977, were followed in 1978 by road construction, mapping, trenching (6 trenches totalling 300 metres) and percussion drilling (3 holes totalling 350 metres). In 1979, a 3.5-kilometre induced polarization survey, and additional trenching (4 trenches totalling 170 metres), mapping and sampling was carried out on the property, now known as the SAB claims. No reports were filed as assessment on the 1976-79 programs.

In 1980, Mohawk Oil Co. Ltd. carried out a 25-hole, 3114 metre diamond-drill program on the SAB claim group. One of the best intersections was from 13.1 metres to 13.25 metres in diamond-drill hole SAB 80-13. This assayed 7.87 grams per tonne gold, 227.5 grams per tonne silver, 0.07 per cent copper and 0.03 per cent lead (Assessment Report 9576).

The 1980 program was followed by an induced polarization survey in 1981; VLF-EM surveys in 1981 and 1982; geochemical surveys for silver and gold in 1981, 1982 and 1984; a magnetometer survey in 1982; induced polarization and resistivity surveys in 1984; prospecting in 1985; and additional diamond-drill programs in 1981, 1982, 1983, and 1984.

In 1982, a pilot mill was constructed on the property and in 1983, concentrates were sold to the Cominco smelter in trail. Very little of this work, with the exception of the 1980 drill program, the 1981 induced polarization survey and the 1985 prospecting program, was filed for assessment. A 1989 compilation report re-interpreted the prospect as an epithermal deposit and includes some of the results of Mohawk Oil's diamond-drill and geophysical programs. A number of drill intersections, which assayed in the range of 3 to 6 grams per tonne gold and greater than 50 grams per tonne silver, are identified in the compilation report (Assessment Report 18533). Another report refers to a 22-tonne bulk sample, grading 3.76 grams per tonne gold and 143.7 grams per tonne silver, which was shipped to Slocan City for metallurgical testing (Assessment Report 15639). The results of this testing are not on record.

Mohawk Oil found 4 zones of mineralization on the SAB property; named (from north to south) the Stockwork Zone, the H.G. Zone, the Lead Zone and the South Zone. Mineralization on the property is characterized by numerous randomly oriented quartz veins and lenses, moderate to extreme brecciation, and minor to moderate K-feldspar, sericite and kaolinite alteration. Variable amounts of pyrite in a quartz stockwork carry silver and gold values. Mineralization is structurally controlled and is associated with northeasterly and northwesterly trending faults. Alteration zones of propylitic, argillic and sericitic alteration have been mapped.

BIBLIOGRAPHY

EMPR ASS RPT *4979, 7259, *9576, 14100, *15639, *18533
EMPR GEM 1974-65
EMPR EXPL 1976-E33; 1977-E40; 1978-E46; 1979-52; 1980-47; 1985-C32
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/04/02

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE045**

NATIONAL MINERAL INVENTORY:

NAME(S): **NOVE 1**, FRANKLIN CAMP

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 37 35 N
LONGITUDE: 118 18 01 W
ELEVATION: 1235 Metres

NORTHING: 5497904
EASTING: 406094

LOCATION ACCURACY: Within 500M

COMMENTS: Diamond drillhole, located about 8.75 kilometres north-northeast of Mount Franklin (Assessment Report 6256).

COMMODITIES: Silver Copper Lead Gold

MINERALS

SIGNIFICANT: Chalcopyrite Galena Pyrite

ASSOCIATED: Quartz

ALTERATION: Feldspar Silica Chlorite Epidote Pyrite

Hematite

ALTERATION TYPE: Potassic Propylitic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein

CLASSIFICATION: Porphyry

TYPE: L04 Porphyry Cu ± Mo ± Au I05 Polymetallic veins Ag-Pb-Zn±Au

COMMENTS: Possibly contact metasomatic gold-silver-copper.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Paleozoic-Mesozoic
Cretaceous-Tertiary
Eocene

GROUP

Harper Ranch

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Okanagan Batholith
Coryell Intrusions

LITHOLOGY: Monzonite
Syenite
Meta Volcanic Rock
Meta Sediment/Sedimentary Rock
Andesite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1976

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver	54.0000	Grams per tonne
Gold	0.4780	Grams per tonne
Copper	0.4300	Per cent

COMMENTS: Grab sample from trench.

REFERENCE: Property File - Summary Report.

CAPSULE GEOLOGY

The NOVE 1 showing is located on the east side of Burrell Creek valley, approximately 8.75 kilometres north-northeast of Mount Franklin.

The showing occurs in a small monzonite intrusion of the Cretaceous-Tertiary Okanagan Batholith which hosts syenite and monzonite of the Eocene Coryell intrusions. A bleached and feldspathized-silicified contact zone occurs between these intrusions. A small pendant of metavolcanic and metasedimentary rocks of the Devonian-Triassic Harper Ranch Group is found 1 kilometre to the west.

The showing consists of disseminated chalcopyrite and a few narrow veinlets of galena in a chlorite-epidote-pyrite-hematite alteration zone measuring about 300 metres by 50 metres wide. Minor quartz veining, feldspar alteration and andesite dikes are noted in drill-logs. A grab sample collected from a trench, 5 metres long,

CAPSULE GEOLOGY

assayed 54 grams per tonne silver, 0.478 gram per tonne gold and 0.43 per cent copper (Property File - Summary Report).

In 1966, an induced polarization survey was carried out over the property by Geofax Surveys Ltd. The survey identified a prime zone measuring approximately 300 metres by 50 metres, and a secondary zone measuring approximately 900 metres by 335 metres.

In 1976, Hesca Resources Corporation Ltd. carried out a 116-metre 2-hole diamond-drill program on the NOVE 1 property. Pyrite, hematite and traces of chalcopyrite were intersected near the bottom of drillhole #2.

BIBLIOGRAPHY

EMPR ASS RPT *6256
EMPR GEM 1976-E29
EMPR OF 1994-8
EMPR PF (See General PF - Franklin Mining Camp File; *Summary Report, Anonymous)
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/10

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

The area is underlain by granite and granodiorite of the Cretaceous-Tertiary Okanagan Batholith, and by quartz monzonite of an unnamed Middle Jurassic intrusion to the southeast. Metasediments of the Carboniferous-Permian Anarchist Group outcrop several kilometres to the southwest. The Miocene-Pliocene Chilcotin Group occurs as isolated, flat-lying, cap rocks consisting of vesicular and massive columnar olivine basalt flows with occasional interformational sediments. A potassium/argon age of 5.1 plus or minus 0.50 Ma was determined for the basalt (Geological Survey of Canada Open File 1969). Miocene fluvial sediments underlying the basalts are unconsolidated, interbedded arkosic sandstones, siltstones, carbonaceous mudstones, and basal conglomerates. These sediments occur as structurally controlled 'paleochannels', which are host to uranium deposits.

The Blizzard deposit occurs along a sinuous southeast trending paleochannel, with a plunge of 1.5 degrees. Mineralization has been traced over a 1600 metre length, with widths from 60 to 265 metres and true thickness from 1 to 24 metres. The deposit is from 2 to 90 metres below surface. The deposit is covered by plateau basalt, except at the southern end, which has a maximum thickness of 74 metres. The largest proportion of the uranium is concentrated in two ore zones, one in mudstone-sandstone beds and the other in sandstones immediately overlying basal conglomerate. At the northern end of the deposit uranium occurs within basal conglomerates and along the basalt-sandstone contact. The basement rocks to the fluvial sediments are mainly Okanagan Batholith rocks.

Uranium mineralogy is represented by the uranyl and uranous phosphate minerals, saleeite, ningyoite, and autunite. Minor concentrations of pitchblende apparently replaces ningyoite pseudomorphically. Saleeite and ningyoite commonly cement carbonaceous rich quartzose-feldspathic sediment, whereas, ningyoite is the only ore mineral present in mudstone or at limonitized sandstone-mudstone interfaces. Autunite is confined to the basal sedimentary members and the northern part of the basement complex, occurring within fractures. Other minerals include pyrite, which increases to the south of the deposit, marcasite, gypsum, rozenite, jarosite and trace sphalerite and carnotite.

At the north end of the deposit, a 30 by 80 metre breccia pipe intrudes the sediments and was likely the vent for an early flow, which was then weathered and partly eroded by a later flow. This breccia has a fine-grained basalt and minor sand matrix containing abundant fragments and larger blocks of sedimentary material and intrusive basement rocks. The oxidation nature of the breccia pipe decreases with depth until, in the deepest part, there is only green basalt/diabase fragments in a pale green aphanite. Radioactivity also decreases with depth. The top of the peperite shows intense argillic and chloritic alteration. Ningyoite is the main uranium mineral present.

The Blizzard deposit is a hydrogenic paleochannel deposit. Uranium was leached from surrounding felsic intrusive and extrusive rocks and transported by deep-seated, ground waters into a structurally controlled paleochannel. The ground waters were rapidly acidified and uranium minerals were precipitated within the Miocene sandstones and carbonaceous mudstones. The deposit was preserved by the overlying basalts and glacio-lacustrine sediments.

The property was staked by Lacana Mining Corporation in 1976. It was then optioned to a joint venture group comprised of Norcen Energy Resources Limited (Operator), Campbell Chibougamau Mines Ltd. E & B Explorations Ltd. and Ontario Hydro. In 1977, the joint venture drilled 52 rotary and diamond-drill holes; and in 1978, an additional 341 holes were drilled. A total of 21,184 metres of drilling in 478 holes was completed prior to the uranium moratorium in 1980. The drill core was subsequently buried on the site in 1980.

The ore reserves of the Blizzard deposit are estimated to be 2,200,000 tonnes grading 0.815 per cent uranium (0.214 per cent U308) at a cutoff grade of 0.021 per cent uranium (0.025 per cent U308) over a 1-metre interval. Conversion used for U308 to uranium is 0.848 (Canadian Mining Journal, April 1979). Assessment Report 7822 reports a total of 4736 tonnes U308 is in the deposit.

BIBLIOGRAPHY

- EMPR ASS RPT 6167, 6168, *6640, 7131, *7822
- EMPR EXPL 1976-29, 30; 1977-31, 32; 1978-31; 1979-35
- EMPR FIELDWORK 1977, p. 12
- EMPR MAP *29
- EMPR OF 1994-8
- EMPR P *1979-6, pp. 27-29,33,47
- EMPR PF (Norcen Energy Resources Limited, Environmental Introduction and Possible Project Progression, 1978; Press Release, Norcen

BIBLIOGRAPHY

- Energy Resources Limited, Dec. 20, 1978; Norcen Energy Resources Limited, Deactivation Project (Core Burial) Blizzard Property, 1980; Day, S.J. (circa 1990): Basal-type Gold-Uranium Deposits, Okanagan Region, British Columbia, 11 pages)
- EMPR RGS 29
EMR MIN BULL MR 223 B.C. 15
EMR MP CORPFILE (Lacana Mining Corporation; Norcen Energy Resources Limited; Campbell Chibougamau Mines Ltd.; E & B Explorations Ltd.)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 551; 736; *1969
GSC P 79-1A, pp. 349-356; 81-23, pp. 37-47
Canadian Mineralogist, 1981, Vol. 19, pp. 325-331
CIM BULL Dec. 1978, p.64; Mar. 1979, Vol.72, No.803, p.96;
Aug. 1980, Vol.73, No.820, pp. 89-108
CIM Special Vol. 33, 1986, (Uranium Deposits of Canada), pp. 309-320
CMJ *Apr. 1979, Vol.100, No.4, pp. 44-47
ECON GEOL *Vol.77, 1982, pp. 1176-1209
GCNL #157,#192, 1977; #92,#103,#108,#142,#174,#218 1978; #110, 1979; #63,#203, 1983
N MINER Dec.29, 1977; Apr.27, May 11,18, June 1,8, July 19,27, Sept.28, Nov.16, Dec.28, 1978; May 10, June 14, Aug.23, 1979; Oct.27, Dec.8, 1983; Jan.5, 1987
W MINER Feb. 1979, p.17; Apr. 1979, p.108; Nov. 1983
*Bates, D.V., Murray, J.W. and Raudsepp, V. (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol.1, pp. 32-34,181-182
Bell, R.T. (1985): Overview of Uranium in Volcanic Rocks of the Canadian Cordillera in IAEA, 1985, Vol. STI/PUB/690-Uranium in Volcanic Rocks, p. 331
*Sawyer, D.A., Turner, A.T., Christopher, P.A. and Boyle, D.R. (1981): Basal Type Uranium Deposits, Okanagan Region, South Central British Columbia; Field Guides to Geology and Mineral Deposits, Calgary, GAC/MAC, CGU, pp. 69-77

DATE CODED: 1985/07/24
DATE REVISED: 1996/04/12

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE047**

NATIONAL MINERAL INVENTORY:

NAME(S): **LASSIE**, DONEN 361

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E10W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 35 55 N
LONGITUDE: 118 55 34 W
ELEVATION: 1400 Metres

NORTHING: 5495786
EASTING: 360820

LOCATION ACCURACY: Within 500M

COMMENTS: Diamond-drill hole BCF 78, located about 10.2 kilometres northwest of Christian Valley (Assessment Report 5982, Figure 8).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Stratabound

CLASSIFICATION: Epigenetic

TYPE: D04 Basal U

COMMENTS: Mineralization is Miocene-Pliocene.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Tertiary

ISOTOPIIC AGE: 4.7 +/- 0.17 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Basalt whole rock

Upper Paleozoic

Middle Jurassic

Chilcotin

Unnamed/Unknown Formation

Anarchist

Undefined Formation

Unnamed/Unknown Informal

LITHOLOGY: Olivine Basalt
Tuff Breccia
Conglomerate
Diorite
Meta Sediment/Sedimentary
Granodiorite
Diorite

HOSTROCK COMMENTS: The Chilcotin Group is Miocene-Pliocene in age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Overlap Assemblage

Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The LASSIE uranium showing is located 500 metres to the west of Lassie Lake and approximately 10.2 kilometres northwest of the Kettle Valley community of Christian Valley.

The showing is underlain by metasedimentary rocks of the Carboniferous-Permian Anarchist Group and granodiorite and diorite of an unnamed Middle Jurassic intrusion. These are overlain by the Miocene-Pliocene Chilcotin Group, which consists of an olivine basalt and tuff breccia, up to 100 metres thick, and minor basal conglomerate. The basalts and conglomerate were deposited along a northeast trending paleovalley.

The property was staked in 1975 for Nissho-Iwai Canada Ltd. who carried out a 5-hole, 738 metre diamond-drill program in 1976. Anomalous radioactivity was identified in hole BCF-78. It measured 1000 counts per minute (background 50 counts per minute) on a GP-27 down-hole probe. The radioactivity is mainly associated with the basalt and tuff breccia. Uranium equivalent is 0.028 per cent uranium (Assessment Report 5982).

BIBLIOGRAPHY

EMPR ASS RPT *5982, 8105
EMPR EXPL 1976-29
EMPR MAP *29
EMPR OF 1994-8
EMPR P 1979-6, p. 33
EMPR RGS 29

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 99
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 551; 736; 1969
GSC P 79-1A, pp 349-356
CIM BULL Aug. 1980, Vol. 73, No. 820, pp. 89-108
ECON GEOL Vol. 77, 1982, p. 1180
GCNL #80, 1978

DATE CODED: 1985/07/24
DATE REVISED: 1996/10/11

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE048**

NATIONAL MINERAL INVENTORY:

NAME(S): **ML**, SILVER SPOT NO. 4, SILVER SPOT LOC. 13

MINING DIVISION: Greenwood

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082E10W
 BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 31 25 N
 LONGITUDE: 118 53 48 W
 ELEVATION: 1310 Metres

NORTHING: 5487394
 EASTING: 362737

LOCATION ACCURACY: Within 500M

COMMENTS: Pit no. 1, located about 6.75 kilometres southwest of Christian Valley (Assessment Report 6310).

COMMODITIES: Copper Gold Silver Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Molybdenite
 ASSOCIATED: Quartz Magnetite Specularite
 ALTERATION: Malachite Azurite
 ALTERATION TYPE: Oxidation
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I VEIN, BRECCIA AND STOCKWORK

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Eocene			Coryell Intrusions

LITHOLOGY: Skarn
 Greenstone
 Syenite
 Granite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Okanagan
 METAMORPHIC TYPE: Contact

Plutonic Rocks PHYSIOGRAPHIC AREA: Okanagan Highland
 RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1977
 SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	4.1000	Grams per tonne
Gold	0.2000	Grams per tonne
Copper	1.2000	Per cent
Molybdenum	0.6000	Per cent

COMMENTS: Sample from pit no. 1.
 REFERENCE: Assessment Report 6310.

CAPSULE GEOLOGY

The ML showing is located 900 metres northeast of Collier Lake and approximately 6.75 kilometres southwest of Christian Valley. The showing consists of copper and molybdenum mineralization exposed in 4 old pits, and in quartz veinlets in greenstone of the Carboniferous-Permian Anarchist Group. Eocene Coryell Intrusions of syenite and granite are found in the area.

In 1977, R.G. Turner prospected the old workings on the property and carried out an unsuccessful scintillometer survey. The old workings consist of four pits. Three are closely grouped together, and they expose chalcopyrite, bornite, molybdenite, malachite, azurite and magnetite mineralization in quartz veinlets. A grab sample collected from pit no. 1 assayed 0.2 gram per tonne gold, 4.1 grams per tonne silver, 1.2 per cent copper and 0.6 per cent molybdenum (Assessment Report 6310). The highest copper and molybdenum values were found where magnetite was abundant. A sample collected from the fourth pit, which lies 500 metres south of the main grouping of three pits, assayed 0.1 per cent copper (Assessment

CAPSULE GEOLOGY

Report 6310).

Also included in the ML showing is an occurrence of quartz veins on the east side of Martin Lake approximately 1.5 kilometres to the northwest of pit no. 1. Minor amounts of chalcopyrite are found with magnetite and specularite at that location.

BIBLIOGRAPHY

EMPR ASS RPT *6310
EMPR GEM 1977-E30
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/04/01

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE049**

NATIONAL MINERAL INVENTORY:

NAME(S): **TP, TEEPEE 1-2, TP 1-6,
LIGHTNING PEAK CAMP**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E16W
BC MAP:

MINING DIVISION: Vernon

LATITUDE: 49 55 09 N
LONGITUDE: 118 27 55 W
ELEVATION: 1830 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5530673
EASTING: 394814

LOCATION ACCURACY: Within 1 KM

COMMENTS: Centre of grid on TEEPEE 2 claim, about 6.5 kilometres northeast of Lightning Peak (Assessment Report 7862).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Pyrite
ALTERATION: Quartz Sericite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The TP showing is located beside the south branch of Teepee Creek approximately 6.5 kilometres northeast of Lightning Peak.

The TP showing is hosted by an unnamed Middle Jurassic, quartz monzonite intrusion. Mineralization consists of molybdenite, associated with pyrite, which occur as fine disseminations and fracture fillings in a quartz-sericite altered pink quartz monzonite.

The TP was staked in 1977 by Exploram Minerals Ltd. who carried out a program of geological mapping, a soil geochemical survey, 23 line kilometres of induced polarization, 28 line kilometres of magnetometer survey and 5 diamond-drill holes totalling 395 metres. This work was focused on the TP 1 and TP 6 claims. The geophysical program, carried out by Glen White, identified chargeability and magnetic anomalies. The results of the drilling are unknown, but given that the core was not sampled and that the claims were subsequently dropped, the results must have been discouraging.

In 1979, Noranda Exploration Company Limited staked the area as the Teepee 1 & 2 claims and carried out a soil sampling program. The Noranda grid covers some of the area surveyed by Exploram Minerals in 1977. A total of 217 soil samples were collected and analysed for copper, molybdenum, lead and zinc. Anomalous values for each element were obtained from the central part of the grid.

BIBLIOGRAPHY

EMPR ASS RPT 6430, *7862
EMPR EXPL 1980-47
EMPR GEM 1977-E41
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 103
REPORT: RGEN0100

BIBLIOGRAPHY

GSC SUM RPT 1930A

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/26

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE050**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALDIE, ALDIE (L.3239), PLATINUM BLONDE, FRANKLIN CAMP**

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082E09W
 BC MAP:
 LATITUDE: 49 33 43 N
 LONGITUDE: 118 23 12 W
 ELEVATION: 1125 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: Adit, located about 1.2 kilometres west of Mount Franklin (Assessment Report 17273).

Underground
 MINING DIVISION: Greenwood
 UTM ZONE: 11 (NAD 83)
 NORTHING: 5490851
 EASTING: 399723

COMMODITIES: Gold Silver Zinc Lead Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite
 COMMENTS: Galena, sphalerite and chalcopyrite are inferred from silver, lead, zinc and copper assays.
 ASSOCIATED: Pyrite Quartz
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Hydrothermal Epigenetic Replacement
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Middle Jurassic			Coryell Intrusions
Eocene			

LITHOLOGY: Limestone
 Argillite
 Siltstone
 Chert
 Granodiorite
 Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Harper Ranch
 Plutonic Rocks
 PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1988
 SAMPLE TYPE: Grab
 COMMODITY GRADE
 Silver 8.0000 Grams per tonne
 Gold 0.4700 Grams per tonne
 Copper 0.0295 Per cent
 Lead 0.4200 Per cent
 Zinc 0.9500 Per cent

COMMENTS: Sample number 17096 is from outcrop 40 metres north of adit.
 REFERENCE: Assessment Report 17273.

CAPSULE GEOLOGY

The ALDIE polymetallic showing is located on the east side of Franklin Creek, approximately 1.2 kilometres west of Mount Franklin. The showing consists of sulphide mineralization in quartz veins and as replacements in north-trending, steeply dipping limestone lenses of the Devonian-Triassic Harper Ranch Group. Galena, sphalerite and chalcopyrite are inferred from silver, lead, zinc and copper assays (Assessment Report 17273). Nearby, rusty-weathering, siliceous, fine-grained clastic sediments contain abundant fracture controlled pyrite. The Harper Ranch Group includes argillite, siltstone and chert in this area. About a kilometre to the south and to the west is an unnamed Middle Jurassic granodiorite intrusion. Syenite of the Eocene Coryell Intrusions is found approximately 1 kilometre to the north.

CAPSULE GEOLOGY

The ALDIE claim was Crown granted as Lot 3239 to Leonard Vaughan in 1905. Early records of work on the property are lacking, but an adit on the property existed prior to 1915.

In 1974, Falconbridge Nickel Mines limited carried out a soil geochemical survey over the area around an adit on the adjacent JIMMY (082ENE042) showing. Two areas of anomalous silver-lead geochemistry were identified.

In 1986, Longreach Resources Ltd. staked and optioned much of the Franklin camp area, including the ALDIE showing. It is probable that Longreach prospected this area, although no reports specific to the showing were filed.

In 1987, Placer Dome Inc. optioned the PLATINUM BLONDE property from Longreach Resources Ltd., which included the ALDIE and JIMMY (082ENE042) showings. Placer drilled 2 diamond drillholes (87-36 and 87-37) on the JIMMY showing, about 75 metres to the northwest. Both drillholes intersected a deformed package of fine clastic sediments. No quartz veins or mineralization was intersected. Samples from the ALDIE showing contained several anomalous lead-zinc-silver assays; sample number 17096 assayed 0.47 gram per tonne gold, 8 grams per tonne silver, 0.95 per cent zinc, 0.42 per cent lead and 0.0295 per cent copper (Assessment Report 17273).

BIBLIOGRAPHY

EMPR AR 1905-254, 1914-344
EMPR ASS RPT 5080, 15172, 15746, 15964, 15981, *17273
EMPR EXPL 1985-C28; 1987-C32; 1988-C22
EMPR GEM 1974-60
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File; See
PF 082ENE002 - Platinum Blonde Property, News Clippings, 1986-87)
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 56, p.155
GSC OF 409; 736; 1969
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/24

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE051**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOMESTAKE**, HOMESTAKE (L.589S), PLATINUM BLONDE,
 FRANKLIN CAMP

STATUS: Past Producer	Underground	MINING DIVISION: Greenwood
REGIONS: British Columbia		UTM ZONE: 11 (NAD 83)
NTS MAP: 082E09W		NORTHING: 5490656
BC MAP:		EASTING: 400282
LATITUDE: 49 33 37 N		
LONGITUDE: 118 22 44 W		
ELEVATION: 1300 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: The HOMESTAKE adit, located about 650 metres southwest of Mount Franklin (Assessment Report 17273).		

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite	Galena	Sphalerite	Tetrahedrite	Chalcopyrite
ASSOCIATED: Quartz				
ALTERATION: Silica	Kaolinite	Pyrite		
ALTERATION TYPE: Silicific'n		Argillic	Pyrite	
MINERALIZATION AGE: Eocene				

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Hydrothermal Epithermal
 TYPE: H05 Epithermal Au-Ag: low sulphidation I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Eocene	Penticton	Marron	
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	

LITHOLOGY: Andesite
 Dacite
 Tuff
 Meta Sediment/Sedimentary Rock
 Volcanic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Overlap Assemblage Harper Ranch
 PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1988
 SAMPLE TYPE: Grab

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	30.0000	Grams per tonne
Gold	12.6000	Grams per tonne
Copper	0.0660	Per cent
Lead	0.4400	Per cent
Zinc	0.0470	Per cent

 COMMENTS: Sample number 16761, from vein exposed in a trench 160 metres northwest of the HOMESTAKE adit.
 REFERENCE: Assessment Report 17273.

CAPSULE GEOLOGY

The HOMESTAKE deposit is located on Crown grant Lot 589S, approximately 650 metres southwest of the summit of Mount Franklin. Numerous trenches and pits occur in the general area of the Crown grant north of the HOMESTAKE adit. These are included in this occurrence.
 The deposit consists of silver-rich, and locally gold-rich, quartz veins hosted by andesite and dacite flows and tuffs of the Eocene Marron Formation, Penticton Group. In places the veins project under the Kettle River unconformity into volcanic and metasedimentary rock of the underlying Devonian-Triassic Harper Ranch Group. Mineralization in the quartz veins, which are 1 to 3 metres wide, consists of minor amounts of pyrite and local concentrations of galena, chalcopyrite, sphalerite and tetrahedrite. The veins pinch and swell, displaying sharp contacts in some areas, while in others,

CAPSULE GEOLOGY

grading into diffuse zones of silicification, kaolinization and pyritization.

The HOMESTAKE property dates from the early 1900s. The earliest report refers to 3 quartz veins which carry values in gold and silver (Minister of Mines Annual Report 1900, page 871). The HOMESTAKE claim was Crown granted to Alex McDonald, Peter Wolf and Frank Coryell in 1907.

In 1931, development on the HOMESTAKE property consisted of 6 open-cuts and shallow shafts, the deepest of which was 3 metres deep. A 12-metre crosscut was driven to intersect a vein below one of the shafts. A 1.2-metre sample across the vein assayed 20.5 grams per tonne gold (Minister of Mines Annual Report 1931, page A120). The sulphide mineralogy consists of pyrite, galena, sphalerite, and to a lesser extent, chalcopyrite in a gangue of quartz.

In 1932, the Crown grant was bonded to J.F. McCarthy who carried out diamond-drilling and sunk a 30-metre shaft on the vein. Drifts were driven to the northwest and southeast along the vein from the bottom of the shaft. The drilling indicated continuous mineralization over about 90 metres.

In 1933, the shaft was sunk to 47 metres and the vein was explored by about 120 metres of crosscuts and drifting, and 282 metres of diamond-drilling. Ore produced by the underground development work may have been milled at the adjacent UNION mine (082ENE003). The structure was found to be badly displaced by faults and none of the ore shoots were more than 4.5 metres long.

In 1940, the property was operated by H. Brunner and V. Tishouser of Greenwood, and by the Homestake Syndicate of Grand Forks in 1941. Production during 1940-41 amounted to 453 tonnes which yielded 6936 grams of gold, 13592 grams of silver, 259 kilograms of lead and 553 kilograms of zinc (Minister of Mines Index No. 3, page 200). Trenching and hand-stripping was carried out by W.E. McArthur in 1942; however, he was unsuccessful in finding more ore.

In 1984, Pearl Resources Ltd. optioned the HOMESTAKE Crown grant from Hecla Mining Co. as part of a large property position they had assembled around the UNION (082ENE003) mine. Most of their work was directed at the UNION mine, none of the work recorded included the HOMESTAKE property.

In 1986, Longreach Resources Ltd. staked and optioned much of the Franklin camp area, including the HOMESTAKE Crown grant. It is probable that Longreach prospected this area, although no reports were filed which included the HOMESTAKE area.

In 1987, the property, now known as the PLATINUM BLONDE property, was optioned to Placer Dome Inc. who proceeded to carry out a major exploration program. In the HOMESTAKE area, Placer sampled the numerous trenches and the adit. Many of the veins assayed over 1 gram per tonne gold and some were as high as 35 grams per tonne gold (Assessment Report 17273). A vein, exposed in a trench 160 metres northwest of the HOMESTAKE adit, assayed 30 grams per tonne silver, 12.6 grams per tonne gold, 0.066 per cent copper, 0.047 per cent zinc and 0.44 per cent lead (Assessment Report 17273). Placer focused much of their attention in this area on the LAURA (082ENE066) showing, located several hundred metres to the southeast.

In 1993, Sway Resources Inc. optioned a large number of Crown grants and claims in this area, including the HOMESTAKE Crown grant. In late 1993 they carried out a program of prospecting, sampling, geological mapping and a 16-hole rotary and diamond-drill program on the BANNER and HOMESTAKE Crown grants. A 1.2-metre drill intersection in the north HOMESTAKE area assayed 7.5 grams per tonne gold (Property File - Sway Resources Inc., Statement of Material Facts, February 14, 1994). A 1995 press release refers to a 1.82-metre intersection which assayed 34.5 grams per tonne gold with a 0.3-metre section of 110.7 grams per tonne gold (George Cross News Letter, No. 82, April 28, 1995). The location of these drillholes is not recorded.

BIBLIOGRAPHY

- EMPR AR 1900-871,872; 1901-1066; 1907-219; 1914-344,353; *1931-120; 1932-122; 1933-149; 1940-24,63; 1941-25,62; 1942-60
EMPR ASS RPT 13710, 15172, 15746, 15964, 15981, *17273
EMPR BC METAL MM00869
EMPR BULL 1932-1, p.82
EMPR EXPL 1985-C28; 1987-C32; 1988-C22
EMPR INDEX 1-218; *3-200
EMPR OF 1994-8; 1998-8-L, pp. 1-49
EMPR PF (See General PF - Franklin Mining Camp File; In
082ENE002 - Platinum Blonde Property, News Clippings, 1986-87; In
082ENE002 - Sway Resources Inc., Statement of Material Facts,
February 14, 1994)

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 108
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR RGS 29
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 56, p.155
GSC OF 409; 736; 1969
GCNL *#203, 1993; *#82, 1995
www <http://www.infomine.com>
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/06

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE052**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALPHA**, ALPHA (L.1204), PLATINUM BLONDE,
FRANKLIN CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:
LATITUDE: 49 34 03 N
LONGITUDE: 118 22 26 W
ELEVATION: 1310 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit, located about 600 metres northwest of Mount Franklin
(Geological Survey of Canada Map 133A).

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5491452
EASTING: 400658

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
COMMENTS: Pyrite and chalcopyrite are assumed.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	
Eocene	Penticton	Marron	
Eocene			Coryell Intrusions

LITHOLOGY: Argillite
Siltstone
Chert
Syenite
Andesite
Dacite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1965
SAMPLE TYPE: Channel
COMMODITY GRADE
Silver 3.4200 Grams per tonne
Gold 0.6840 Grams per tonne
Copper 0.8000 Per cent
COMMENTS: The best assay was from Sample number 9835; a 1.5-metre channel
sample from the old adit.
REFERENCE: Assessment Report 637.

CAPSULE GEOLOGY

The ALPHA showing is located on reverted Crown grant Lot 1204, approximately 600 metres north-northwest of the summit of Mount Franklin.

The showing consists of an adit exposing quartz veins in argillite, siltstone, and chert of the Devonian-Triassic Harper Ranch Group. A short distance to the north and west, syenite of the Eocene Coryell Intrusions outcrops. To the east there is a cover of andesite and dacite flows and tuffs of the Eocene Marron Formation, Penticton Group.

The ALPHA claim was Crown granted in 1905 to H.A. McLaren. In 1914, the property was owned by F.H. McLaren and others. Few details about the property, during the early part of the 1900s, are on record. The adit is believed to date from this period.

In 1964, Franklin Mines Ltd. held the ALPHA property and carried out a program of systematic channel sampling in the old adit. Sample

CAPSULE GEOLOGY

number 9835 returned the best results, assaying 0.684 gram per tonne gold, 3.42 grams per tonne silver and 0.8 per cent copper over 1.5 metres (Assessment Report 637). The average copper assay over 18 metres of channel sampling in the adit was 0.119 per cent copper (Assessment Report 637).

In 1986, Longreach Resources Ltd. staked and optioned much of the Franklin camp area. It is probable that Longreach prospected this area, although no reports specific to the ALPHA showing were filed.

In 1987, the property, now known as the PLATINUM BLONDE property, was optioned to Placer Dome Inc. In the ALPHA area, Placer carried out some prospecting and sampling. Sample number 17079, collected in the general area south of the adit, assayed 16.8 grams per tonne gold (Assessment Report 17273). Details about the sample are lacking.

BIBLIOGRAPHY

EMPR AR 1905-254; 1914-353; 1964-112; 1965-172
EMPR ASS RPT *637, 15172, 15746, 15964, 15981, *17273
EMPR EXPL 1987-C32; 1988-C22
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File; See
PF 082ENE002 - Platinum Blonde Property, News Clippings, 1986-87)
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.155
GSC OF 409; 736; 1969
GCNL #20, 1984
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/22

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE053**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN**, GOLDEN AGE (L.987S), PLATINUM BLONDE,
FRANKLIN CAMP, ALERT (L.930S)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 34 13 N
LONGITUDE: 118 22 15 W
ELEVATION: 1370 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5491757
EASTING: 400885

LOCATION ACCURACY: Within 1 KM

COMMENTS: Approximate shaft location, about 900 metres north of Mount Franklin
(Geological Survey of Canada Map 97A).

COMMODITIES: Platinum

Copper

MINERALS

SIGNIFICANT: Chalcopyrite

ASSOCIATED: Pyrite

COMMENTS: Pyrite is commonly found near the outer contacts of pyroxenitic rocks
in the Franklin camp and its presence is assumed.

ALTERATION: Malachite

COMMENTS: Malachite is inferred from the presence of copper carbonates.

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Disseminated

CLASSIFICATION: Unknown

TYPE: * Unknown

COMMENTS: Marginal zones of alkalic plutons (PGE, Au, Ag, Cu, Ni) defined by
Hulbert et al 1988 as marginal subclass.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Paleozoic-Mesozoic

Eocene

Eocene

GROUP

Harper Ranch

Penticton

FORMATION

Unnamed/Unknown Formation

Marron

IGNEOUS/METAMORPHIC/OTHER

Coryell Intrusions

LITHOLOGY: Pyroxenite
Shonkinite
Monzonite
Augite Syenite
Andesite
Dacite

HOSTROCK COMMENTS: Pyroxenite segregations within the Coryell Intrusions are locally
known as "Black Lead" ores.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1920

SAMPLE TYPE: Grab

COMMODITY

GRADE

Platinum

2.0600

Grams per tonne

COMMENTS: Sample of rusty weathering pyroxenite, containing disseminated
chalcopyrite, from shaft.

REFERENCE: Thomlinson, W. (1920): Mineral Investigations - Platinum, page 164.

CAPSULE GEOLOGY

The GOLDEN showing is located on the GOLDEN AGE Crown grant
(Lot 987S), approximately 900 metres north of the summit of Mount
Franklin.

The showing consists of several outcrops of disseminated
chalcopyrite in a shonkinite-pyroxenite, a minor phase of the alkalic
Eocene Coryell Intrusions. It has been suggested that the pyroxenite
is a basal cumulate of an early monzonitic intrusion, which was later
intruded and engulfed by an augite-syenite intrusion. In the
Franklin camp, pyrite is commonly found disseminated near the outer

CAPSULE GEOLOGY

contacts of pyroxenite bodies. To the north and south there are pendants of the Devonian-Triassic Harper Ranch Group. Several hundred metres to the east are andesite and dacite flows and tuffs of the Eocene Marron Formation, Penticton Group.

The GOLDEN AGE claim was Crown granted in 1910 as Lot 987s. No work was recorded on the showing during the early 1900s when the Franklin camp was very active; however, a shaft is believed to date from that period.

In 1918 the GOLDEN showing was investigated for its platinum potential. A sample of rusty-weathering pyroxenite, containing disseminated chalcopyrite, was collected from the shaft. It assayed 2.06 grams per tonne platinum (Thomlinson, W. (1920): Mineral Investigations - Platinum, Munitions Resources Commission, Canada, Final Report, page 164). Copper carbonate stains were noted on the sample.

In 1964, Franklin Mines Ltd. acquired much of the Franklin camp and carried out detailed geological mapping and geophysical surveys in a number of locations. The GOLDEN showing was not covered by any of the detailed surveys.

In 1986-87, Longreach Resources Ltd. and Placer Dome Inc. carried out a major exploration program in the Franklin camp area. It is probable that the GOLDEN showing was prospected during this time, but no work was recorded.

Similar platinum occurrences nearby are the OTTAWA (082ENE061), COLUMBIA (082ENE060), BUFFALO (082ENE008) and MOUNTAIN LION (082ENE055) showings.

BIBLIOGRAPHY

EM GEOFILE 2000-5
EMPR AR 1910-248, 1914-352,353; *1918-297; 1964-112
EMPR ASS RPT 637, 15172, 15746, 15964, 15981, 17273
EMPR EXPL 1987-C32; 1988-C22
EMPR OF *1986-7; 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File; See
PF 082ENE002 - Platinum Blonde Property, News Clippings, 1986-87)
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.155
GSC OF 409; 736; 1969
Thomlinson, W. (1920): *Mineral Investigations - Platinum, Munitions
Resource Commission, Canada, Final Report, pp. 161-166.
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/14

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE054**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUE JAY**, PLATINUM BLONDE, FRANKLIN CAMP

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 34 55 N
LONGITUDE: 118 23 07 W
ELEVATION: 1160 Metres

NORTHING: 5493073
EASTING: 399865

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralized outcrops located about 2.5 kilometres northwest of Mount Franklin (Geological Survey of Canada Map 97A).

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Pyrite Orthoclase
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene			Coryell Intrusions

LITHOLOGY: Pyroxenite
Shonkinite
Monzonite
Syenite

HOSTROCK COMMENTS: Pyroxenite segregations within the Coryell Intrusions are locally known as "Black Lead" ores.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1988
SAMPLE TYPE:	Grab		
COMMODITY		GRADE	
Silver		2.7000	Grams per tonne
Copper		0.2400	Per cent

COMMENTS: Sample number 22106. Gold, platinum and palladium values were near detection levels.

REFERENCE: Assessment Report 17273.

CAPSULE GEOLOGY

The BLUE JAY showing is located on McDonald Creek, approximately 2.5 kilometres north-northwest of Mount Franklin.

The showing consists of several outcrops of disseminated pyrite and chalcopyrite in a shonkinite-pyroxenite, a minor part of the alkalic Eocene Coryell Intrusions. It is suggested that the pyroxenite is a basal cumulate of an early monzonite intrusion. This early intrusion was then intruded and engulfed by a pyroxene-syenite intrusion which cooled to form a coarse-grained syenitic core. The sulphide mineralization is irregularly distributed and is usually found near the outer margins of the pyroxenite. Chalcopyrite and minor bornite is often surrounded by orthoclase feldspar or in small masses closely associated with it. The pyrite is disseminated as small grains through the ferromagnesian constituents.

A 1914 report lists the owners of the BLUE JAY showing as J. Holm and C.E. Anderson. No work is recorded on the showing during the early 1900s when the Franklin camp was very active.

In 1964, Franklin Mines Ltd. carried out a major exploration program over several occurrences in the Franklin camp. No work on the BLUE JAY showing was recorded.

In 1985-86, Longreach Resources Ltd. staked and optioned much of

CAPSULE GEOLOGY

the Franklin camp area, including the BLUE JAY showing. In 1987, it was optioned to Placer Dome Inc. who proceeded to carry out a major exploration program on the property, now known as PLATINUM BLONDE. The BLUE JAY showing was prospected and several samples collected. Sample number 22106 assayed 0.24 per cent copper and 2.7 grams per tonne silver; gold, platinum and palladium values were near detection levels (Assessment Report 17273).

BIBLIOGRAPHY

EMPR AR 1914-353; 1964-112; 1965-172
EMPR ASS RPT 637, 15172, 15746, 15964, 15981, *17273
EMPR EXPL 1987-C32; 1988-C22
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File; See
PF 082ENE002 - Platinum Blonde Property, News Clippings, 1986-87)
GSC MAP *97A; 133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.173
GSC OF 409; 736; 1969
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/18

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE055**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNTAIN LION**, MOUNTAIN LION (L.144S), PLATINUM BLONDE,
FRANKLIN CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 34 29 N
LONGITUDE: 118 22 30 W
ELEVATION: 1340 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5492256
EASTING: 400593

LOCATION ACCURACY: Within 1 KM

COMMENTS: Centre of mineralized area located about 1.4 kilometres north of
Mount Franklin (Geological Survey of Canada Map 97A).

COMMODITIES: Platinum

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
COMMENTS: Pyrite and chalcopyrite inferred.
ALTERATION: Hematite
COMMENTS: Hematite is inferred from the presence of reddish-brown iron oxides.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: * Unknown
COMMENTS: Marginal zones of alkalic plutons (PGE, Au, Ag, Cu, Ni) defined by
Hulbert et al. 1988 as marginal subclass.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	
Eocene	Penticton	Marron	
Eocene			Coryell Intrusions

LITHOLOGY: Pyroxenite
Shonkinite
Monzonite
Augite Syenite
Andesite
Dacite

HOSTROCK COMMENTS: Pyroxenite segregations within the Coryell Intrusions are locally
known as "Black Lead" ores.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY: Platinum
GRADE: 3.0900 Grams per tonne

YEAR: 1920

COMMENTS: Sample of rusty weathering pyroxenite with iron sulphides from shaft.
REFERENCE: Thomlinson, W. (1920): Mineral Investigations - Platinum, page 164.

CAPSULE GEOLOGY

The MOUNTAIN LION showing is located on reverted Crown grant Lot 144S, approximately 1.4 kilometres north of the summit of Mount Franklin.

The showing consists of several mineralized outcrops of shonkinite-pyroxenite, which is a minor phase of the alkalic Eocene Coryell Intrusions. It has been suggested that the pyroxenite is a basal cumulate of an early monzonitic intrusion, which was later intruded and engulfed by a augite-syenite intrusion. In the Franklin camp, pyrite is commonly found disseminated near the outer contacts of pyroxenitic rocks and it is inferred from the presence of iron sulphides. Chalcopyrite is present in all of the other platinumiferous showings in this area; however its presence has not been noted at the

CAPSULE GEOLOGY

MOUNTAIN LION showing. To the east lies a pendant of Devonian-Triassic Harper Ranch Group rocks. A kilometre to the south, there are andesite and dacite flows and tuffs of the Eocene Marron Formation, Penticton Group.

The MOUNTAIN LION claim was Crown granted prior to 1915. No work was recorded on the showing during the early 1900s when the Franklin camp was active; however, a shallow shaft and an open cut are believed to date from that period.

In 1918 the MOUNTAIN LION showing was investigated for its platinum potential. A sample of rusty-weathering pyroxenite with iron sulphides was collected from a small shaft and open cut. It assayed 3.09 grams per tonne platinum (Thomlinson, W. (1920): Mineral Investigations - Platinum, Munitions Resources Commission, Canada, Final Report, page 164).

In 1964, Franklin Mines Ltd. acquired much of the Franklin camp and carried out detailed geological mapping and geophysical surveys in a number of locations. The MOUNTAIN LION showing was not covered by any of the detailed surveys.

In 1986-87, Longreach Resources Ltd. and Placer Dome Inc. carried out a major exploration program in the Franklin camp area. It is probable that the MOUNTAIN LION showing was prospected during this time, but no work was recorded.

Similar platinum occurrences nearby are the OTTAWA (082ENE061), COLUMBIA (082ENE060), BUFFALO (082ENE008) and GOLDEN (082ENE053) showings.

BIBLIOGRAPHY

EM GEOFILE 2000-5
EMPR AR 1900-872; 1914-353; *1918-207; 1964-112; 1965-172
EMPR ASS RPT 637, 6228, 15172, 15746, 15964, 15981, 17273
EMPR EXPL 1977-E28; 1987-C32; 1988-C22
EMPR OF *1986-7; 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File; See
PF 082ENE002 - Platinum Blonde Property, News Clippings, 1986-87)
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.155,173
GSC OF 409; 736; 1969
Thomlinson, W. (1920): *Mineral Investigations - Platinum, Munitions
Resource Commission, Canada, Final Report, pp. 161-166.
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE056**

NATIONAL MINERAL INVENTORY:

NAME(S): **LUCKY JACK (L.1026S)**, WHITE BEAR GROUP, DAJG 5,
PLATINUM BLONDE, FRANKLIN CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:
LATITUDE: 49 34 19 N
LONGITUDE: 118 20 32 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Adit, located about 2.5 kilometres northeast of Mount Franklin
(Geological Survey of Canada Memoir 56, Map 133A).

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5491905
EASTING: 402957

COMMODITIES: Copper Platinum Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Arsenopyrite
COMMENTS: Arsenopyrite is assumed from reported "white iron".
ASSOCIATED: Pyrite Magnetite
COMMENTS: Copper carbonate staining.
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal
TYPE: * Unknown
COMMENTS: Marginal zones of alkalic plutons (PGE, Au, Ag, Cu, Ni) defined by
Hulbert et al. 1988 as marginal subclass.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene			Coryell Intrusions

LITHOLOGY: Pyroxenite
Shonkinite
Monzonite
Augite Syenite

HOSTROCK COMMENTS: Pyroxenite segregations within the Coryell Intrusions are locally known as "Black Lead" ores.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: OPENCUT

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY _____ GRADE _____
Platinum 2.0600 Grams per tonne

COMMENTS: Sample from an opencut of medium-grained pyroxenite with
chalcopyrite, pyrite and copper carbonate staining.

REFERENCE: Open File 1986-7.

CAPSULE GEOLOGY

The LUCKY JACK showing is located on Lot 1026s approximately 2.5 kilometres northeast of Mount Franklin.

In 1906 the LUCKY JACK claim was part of the White Bear Group. The work in that year exposed "a large body of white iron" (arsenopyrite?) carrying gold and copper and "running from one to ten dollars" (this mineralization may occur only on the WHITE BEAR showing (082ENE057)). Ore chutes of high grade chalcopyrite were also reported to occur (Minister of Mines Annual Report 1906, p. 164). The LUCKY JACK claim was Crown granted in 1910 to Herbert and Maggie Kerman, Henry Watkin and David Shannon.

The showing occurs in Eocene augite-syenite which contains discontinuous dikes or sill-like segregations of pyroxenite (locally known as the "Black Lead"). The shonkinite-pyroxenite is a minor phase of the alkalic Eocene Coryell Intrusions. It has been suggested that the pyroxenite is a basal cumulate of an early monzonitic intrusion, which was later intruded and engulfed by an

CAPSULE GEOLOGY

augite-syenite intrusion.

It is along the contact area of the pyroxenites that copper and platinum values are known to occur. The shonkinite-pyroxenite bodies appear to occupy a general east-west trending fault or fracture system complicated by local folding. In the Franklin camp, pyrite is commonly found disseminated near the outer contacts of pyroxenitic rocks and is inferred from the reported presence of iron sulphides. Mineralization consists of chalcopyrite, pyrite and a little bornite.

The showing consists of an old adit near the contact between shonkinite-pyroxenite and monzonite of the Eocene Coryell Intrusions.

Thomlinson (1920) reports on 3 samples from the LUCKY JACK claim, these were possibly taken in 1918 (Minister of Mines Annual Report 1918). One sample came from a dump at the mouth of a short drift. This sample, containing selected pieces of dark coloured close-grained rock with chalcopyrite and small crystals of a whitish metallic mineral, assayed 2.74 grams per tonne platinum (Open File 1986-7). A sample from a small shaft, 60 metres east of the short drift, contained chalcopyrite and pyrite in a lens of dark, close-grained rock and assayed 1.37 grams per tonne platinum (Open File 1986-7). A sample, from an open-cut, of medium-grained pyroxenite stained by copper carbonates, containing chalcopyrite and pyrite assayed 2.06 grams per tonne platinum (Open File 1986-7).

In 1964, Franklin Mines Ltd. acquired much of the Franklin camp and carried out detailed geological mapping and geophysical surveys in a number of locations. Several magnetic anomalies, discovered by Franklin Mines, were found to be due to disseminated magnetite within the pyroxenite body and along the margins of the syenite.

In 1985-86, Longreach Resources Ltd. acquired much of the Franklin camp area, Longreach carried out geophysical surveys in this area in late 1985 and 1986. Several magnetic, potentially platiniferous, contacts or pyroxenite bands were identified on the DAJG claims. The LUCKY JACK claim was covered by the DAJG 5 claim at this time.

In 1987, Longreach's property, now known as the PLATINUM BLONDE property, was optioned to Placer Dome Inc. who proceeded to carry out a major exploration program over the area. Two drillholes were drilled in the vicinity of the adit and shaft of the LUCKY JACK showing. The results were poor and confusing.

Similar platinum occurrences are the OTTAWA (082ENE061), AVERILL (082ENE007), BLUE JAY (082ENE054), MOUNTAIN LION (082ENE055) COLUMBIA (082ENE060), BUFFALO (082ENE008) and GOLDEN (082ENE053) showings.

BIBLIOGRAPHY

EM GEOFILE 2000-5
EMPR AR *1906-164; 1910-248; 1914-353; *1918-207
EMPR ASS RPT 637, 15172, 15746, 15981, 17273
EMPR OF *1986-7
EMPR RGS 29
GSC MAP 97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.173
GSC OF 409; 736; 1969
Thomlinson, W. (1920): *Mineral Investigations - Platinum, Munitions
Resource Commission, Canada, Final Report, pp. 161-166.
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/05

CODED BY: GSB
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE057**

NATIONAL MINERAL INVENTORY:

NAME(S): **WHITE BEAR**, WHITE BEAR (L.1025S), WHITE BEAR GROUP,
TENDERLOIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)

LATITUDE: 49 34 32 N
LONGITUDE: 118 20 33 W
ELEVATION: 950 Metres

NORTHING: 5492306
EASTING: 402944

LOCATION ACCURACY: Within 500M
COMMENTS: Mineralization located about 2.5 kilometres northeast of Mount Franklin (Geological Survey of Canada Map 133A).

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Arsenopyrite
COMMENTS: Arsenopyrite is inferred from reference to "white iron".
ASSOCIATED: Pyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I VEIN, BRECCIA AND STOCKWORK

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	
Eocene	Penticton	Marron	
Eocene			Coryell Intrusions

LITHOLOGY: Quartz Breccia
Pebble Conglomerate
Arkosic Sandstone
Pyritic Greenstone
Quartz Porphyry Dike
Syenite
Andesite
Dacite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch
Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 0.7000 Grams per tonne
Gold 0.9000 Grams per tonne

COMMENTS: Sample number 0409T is of quartz breccia.
REFERENCE: Assessment Report 12508.

CAPSULE GEOLOGY

The WHITE BEAR is located on reverted Crown grant Lot 1025S, which is approximately 2.5 kilometres northeast of Mount Franklin. The showing consists of a silicified quartz breccia hosted by a pebble conglomerate and arkosic sandstone of the Devonian-Triassic Harper Ranch Group. Nearby a pyritic greenstone is noted. A quartz porphyry dike cuts through the showing and is thought to be related to the Eocene syenitic Coryell Intrusions. A cover of andesite and dacite flows and tuffs of the Eocene Marron Formation (Penticton Group) is found a short distance to the north. The WHITE BEAR and adjacent LUCKY JACK (082ENE056) showings were described in 1906 as a "large body of white iron" (arsenopyrite?) carrying gold and copper values (Minister of Mines Annual Report 1906, page 164). Several "chutes" of high-grade chalcopyrite were

CAPSULE GEOLOGY

noted. This mineralization may occur only on the WHITE BEAR claim. An old shaft on the showing is thought to date from this period.

In 1910, the WHITE BEAR was Crown granted as lot 1025S to H.C. Kerman and associates. In 1914, the owner of the WHITE BEAR Crown grant was listed as W.K. White.

In 1964, the WHITE BEAR Crown grant was optioned by Northwest Ventures Ltd. to Franklin Mines Ltd.; however, no work was recorded on the showing.

In 1979, J.C. Stephen Explorations Limited carried out geological and geochemical surveys of the WHITE BEAR GROUP, which included the WHITE BEAR reverted Crown grant and adjacent area. Slightly anomalous gold assays were returned from a quartz breccia near an old shaft, soil sampling produced little of interest (Assessment Report 7918).

In 1984, Newmont Exploration funded a program of geological mapping and geochemical sampling on the WHITE BEAR reverted Crown grant and the adjacent Tenderloin claims. The main area of interest was the quartz breccia zone sampled in 1979. A sample of the quartz breccia assayed 0.9 gram per tonne gold and 0.7 gram per tonne silver (Assessment Report 12508). A sample of a pyritic greenstone assayed 5.2 grams per tonne silver (Assessment Report 12508).

BIBLIOGRAPHY

EMPR AR *1906-164; 1910-248; 1914-353; 1964-112; 1965-172
EMPR INDEX 1-495
EMPR ASS RPT 637, *7918, *12508
EMPR EXPL 1979-31,32; 1984-29
EMPR OF 1994-8
EMPR RGS 29
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.116,154,155
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/19

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE058**

NATIONAL MINERAL INVENTORY:

NAME(S): **IRON CAP**, IRON CAP (L.929S)

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 34 38 N
LONGITUDE: 118 21 27 W
ELEVATION: 975 Metres

NORTHING: 5492511
EASTING: 401863

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralization located about 2 kilometres northeast of Mount Franklin (Geological Survey of Canada Map 133A).

COMMODITIES: Iron Copper

MINERALS

SIGNIFICANT: Magnetite
ASSOCIATED: Pyrite
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic-Mesozoic Eocene	Harper Ranch	Unnamed/Unknown Formation	Coryell Intrusions

LITHOLOGY: Meta Sediment/Sedimentary
Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The IRON CAP showing is located approximately 2 kilometres northeast of Mount Franklin.

The showing consists of magnetite and pyrite in metasedimentary rocks of the Devonian-Triassic Harper Ranch Group. The mineralization occurs near a contact with syenite of the Eocene Coryell Intrusions.

The IRON CAP was Crown granted in 1909 to M.M. Kerman, and in 1914 it was owned by G.A. McLeod.

BIBLIOGRAPHY

EMPR AR 1909-277; 1914-353
EMPR INDEX 1-232
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.155,170,172
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/23

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE059**

NATIONAL MINERAL INVENTORY:

NAME(S): **NELLIE**, NELLIE (L.1017S)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 32 49 N
LONGITUDE: 118 22 11 W
ELEVATION: 1000 Metres

NORTHING: 5489161
EASTING: 400918

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralization exposed in opencut located about 1.7 kilometres south of Mount Franklin (Geological Survey of Canada Map 133A).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite
ALTERATION: Malachite Azurite
COMMENTS: Malachite and azurite are inferred from the presence of copper carbonates.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: * Unknown
COMMENTS: Carbonate-filled fissures.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Tuff
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The NELLIE showing is located on reverted Crown grant Lot 1017S, which is approximately 1.7 kilometres south of the summit of Mount Franklin.

The showing consists of pyrite, chalcopyrite and copper carbonates which fill numerous fractures in a volcanic tuff of the Eocene Marron Formation, Penticton Group. Approximately 1 kilometre to the southeast there is granodiorite of an unnamed Middle Jurassic intrusion.

In 1913, the NELLIE claim was Crown granted as Lot 1017S to W.J. Prendergast and C.H. Reeves. A 1932 report of the showing includes a description of a 4-metre by 6-metre opencut.

BIBLIOGRAPHY

EMPR AR 1913-424; 1914-353; *1932-122
EMPR INDEX 1-334
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 56, p.155
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/23

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE060**

NATIONAL MINERAL INVENTORY:

NAME(S): **COLUMBIA**, COLUMBIA (L.958S), PLATINUM BLONDE,
FRANKLIN CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 35 25 N
LONGITUDE: 118 24 05 W
ELEVATION: 1370 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5494021
EASTING: 398717

LOCATION ACCURACY: Within 1 KM

COMMENTS: Approximate location of northern adit, about 3.75 kilometres north of Mount Franklin (Geological Survey of Canada Map 97A).

COMMODITIES: Platinum

Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: * Unknown
COMMENTS: Marginal zones of alkalic plutons (PGE, Au, Ag, Cu, Ni) defined by Hulbert et al. 1988 as marginal subclass.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Paleozoic-Mesozoic
Eocene
Eocene

GROUP

Harper Ranch
Penticton

FORMATION

Unnamed/Unknown Formation
Marron

IGNEOUS/METAMORPHIC/OTHER

Coryell Intrusions

LITHOLOGY: Pyroxenite
Shonkinite
Monzonite
Augite Syenite
Andesite
Dacite

HOSTROCK COMMENTS: Pyroxenite segregations within the Coryell Intrusions are locally known as "Black Lead" ores.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1920

COMMODITY

Platinum

GRADE

1.3700

Grams per tonne

COMMENTS: Sample from adit dump.

REFERENCE: Thomlinson, W. (1920): Mineral Investigations - Platinum, page 165.

CAPSULE GEOLOGY

The COLUMBIA showing is located on Lot 958s on the northwest flank of Mount Franklin, approximately 3.75 kilometres north of the summit.

The showing consists of pyrite and chalcopyrite in a shonkinite-pyroxenite, a minor phase of the alkalic Eocene Coryell Intrusions. It has been suggested that the pyroxenite is a basal cumulate of an early monzonitic intrusion, which was later intruded and engulfed by an augite-syenite intrusion. To the south there is a pendant of Devonian-Triassic Harper Ranch Group rocks. Several kilometres to the east are andesite and dacite flows and tuffs of the Eocene Marron Formation, Penticton Group.

The COLUMBIA claim was Crown granted in 1910 as Lot 958s. No work was recorded on the showing during the early 1900s when the Franklin camp was very active. Two adits, one 175 metres south of the northern one, are believed to date from that period. Both adits

CAPSULE GEOLOGY

are included in the COLUMBIA showing.

In 1918, the showing was investigated for its platinum potential. A sample of pyroxenite containing pyrite and chalcopyrite, was collected from the adit dumps. It assayed 1.37 grams per tonne platinum (Thomlinson, 1920).

In 1964, Franklin Mines Ltd. acquired much of the Franklin camp and carried out detailed geological mapping and geophysical surveys in a number of locations. The COLUMBIA showing was not covered by any of the detailed surveys.

In 1986-87, Longreach Resources Ltd. and Placer Dome Inc. carried out a major exploration program in the Franklin camp area. It is probable that the COLUMBIA showing was prospected during this time, but no work was recorded.

Similar platinum occurrences nearby are the OTTAWA (082ENE061), BUFFALO (082ENE008), GOLDEN (082ENE053) and MOUNTAIN LION (082ENE055) showings.

BIBLIOGRAPHY

- EMPR AR 1910-248, 1914-353; *1918-207; 1964-112; 1965-172
EMPR ASS RPT 637, 15172, 15746, 15964, 15981, 17273
EMPR EXPL 1987-C32; 1988-C22
EMPR OF *1986-7; 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File; See
PF 082ENE002 - Platinum Blonde Property, News Clippings, 1986-87)
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.155,172
GSC OF 409; 736; 1969
Thomlinson, W. (1920): *Mineral Investigations - Platinum, Munitions
Resource Commission, Canada, Final Report, pp. 161-166.
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE061**

NATIONAL MINERAL INVENTORY:

NAME(S): **OTTAWA**, OTTAWA (L.957S), PLATINUM BLONDE,
FRANKLIN CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

LATITUDE: 49 35 16 N
LONGITUDE: 118 24 02 W
ELEVATION: 1120 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: Mineralized outcrop located about 3.5 kilometres northwest of
Mount Franklin (Geological Survey of Canada Map 97A).

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5493742
EASTING: 398772

COMMODITIES: Platinum Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite Magnetite
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: * Unknown
COMMENTS: Marginal zones of alkalic plutons (PGE, Au, Ag, Cu, Ni) defined by
Hulbert et al. 1988 as marginal subclass.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	
Eocene	Penticton	Marron	
Eocene			Coryell Intrusions

LITHOLOGY: Pyroxenite
Shonkinite
Monzonite
Augite Syenite
Andesite
Dacite

HOSTROCK COMMENTS: Pyroxenite segregations within the Coryell Intrusions are locally
known as "Black Lead" ores.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1920
SAMPLE TYPE: Grab
COMMODITY GRADE
Platinum 2.0600 Grams per tonne
COMMENTS: Pyroxenite containing chalcopyrite, pyrite and magnetite from an open
cut.
REFERENCE: Thomlinson, W. (1920): Mineral Investigations - Platinum, page 165.

CAPSULE GEOLOGY

The OTTAWA showing is located on the east side of Franklin Creek, approximately 3.5 kilometres northwest of Mount Franklin. The showing consists of several outcrops of disseminated chalcopyrite in a shonkinite-pyroxenite, a minor phase of the alkalic Eocene Coryell Intrusions. It has been suggested that the pyroxenite is a basal cumulate of an early monzonitic intrusion, which was later intruded and engulfed by an augite-syenite intrusion. To the east and south there are pendants of the Devonian-Triassic Harper Ranch Group. Several kilometres to the southeast are andesite and dacite flows and tuffs of the Eocene Marron Formation, Penticton Group. The OTTAWA claim was Crown granted in 1910 as Lot 957s. No work was recorded on the showing during the early 1900s when the Franklin camp was very active. In 1918 the OTTAWA showing was investigated for its platinum potential. A sample of pyroxenite containing

CAPSULE GEOLOGY

magnetite, pyrite and chalcopyrite was collected from an open cut. It assayed 2.06 grams per tonne platinum (Thomlinson, 1920).

In 1964, Franklin Mines Ltd. acquired much of the Franklin camp and carried out detailed geological mapping and geophysical surveys in a number of locations. The OTTAWA showing was not covered by any of the detailed surveys.

In 1986-87, Longreach Resources Ltd. and Placer Dome Inc. carried out a major exploration program in the Franklin camp area. It is probable that the OTTAWA showing was prospected during this time, but no work was recorded.

Similar platinum occurrences nearby are the COLUMBIA (082ENE060), BUFFALO (082ENE008), GOLDEN (082ENE053) and the MOUNTAIN LION (082ENE055) showings.

BIBLIOGRAPHY

EM GEOFILE 2000-5
EMPR AR 1910-248, 1914-353; *1918-207; 1964-112; 1965-172
EMPR ASS RPT 637, 15172, 15746, 15964, 15981, 17273
EMPR EXPL 1987-C32; 1988-C22
EMPR OF *1986-7; 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File; See
PF 082ENE002 - Platinum Blonde Property, News Clippings, 1986-87)
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, p.155,173
GSC OF 409; 736; 1969
Thomlinson, W. (1920): *Mineral Investigations - Platinum, Munitions
Resource Commission, Canada, Final Report, pp. 161-166.
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/14

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE062**

NATIONAL MINERAL INVENTORY:

NAME(S): **FRANKLIN CAMP LIMESTONE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:
LATITUDE: 49 33 23 N
LONGITUDE: 118 23 01 W
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location centred on the largest limestone outcrop on the west slope of Franklin Mountain (Geological Survey of Canada Map 97A).

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5490229
EASTING: 399933

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Paleozoic

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.
 TYPE: R09 Limestone
DIMENSION: 1200 x 90 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: The limestone strikes north and dips steeply east.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic Harper Ranch Undefined Formation

LITHOLOGY: Limestone
Greenstone
Quartzite
Tuff
Breccia
Calc-silicate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Harper Ranch
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE:

CAPSULE GEOLOGY

A series of lenticular limestone masses form a discontinuous belt that extends southward from Twin Creek up McKinley Creek to the MCKINLEY mine (082ENE001) for 2.9 kilometres, along the west slope of Franklin Mountain.

The FRANKLIN CAMP LIMESTONE lenses are hosted in greenstone, quartzite, tuff and breccia of the Devonian-Triassic Harper Ranch Group. The carbonate horizon strikes north and dips steeply east. Individual masses outcrop over lengths of up to 1200 metres and vary up to 90 metres in thickness.

The limestone is generally light to dark bluish grey and fine grained. In thin section the rock displays larger calcite grains in a fine grained calcite matrix. Thin sections also reveal crinoid stems and possible fusilinid remains. The limestone is sometimes veined with calcium silicates. Skarn zones containing such minerals are occasionally formed along the margins of some of the limestone bodies.

There is no record of exploration or development of this limestone resource.

BIBLIOGRAPHY

EMPR OF 1992-18; 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File)
GSC MAP *97A; 133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM *56, pp. 51-55, 97, 98
GSC OF 409; 481; 736; 1969
Placer Dome File

DATE CODED: 1989/09/12
DATE REVISED: 1996/09/25

CODED BY: PSF
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE062**

MINFILE NUMBER: **082ENE063**

NATIONAL MINERAL INVENTORY:

NAME(S): **DEADWOOD**, DEADWOOD (L.590S), PLATINUM BLONDE,
HOMESTAKE, FRANKLIN CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:
LATITUDE: 49 33 47 N
LONGITUDE: 118 22 42 W
ELEVATION: 1250 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit, located about 600 metres west of Mount Franklin (Assessment Report 17273).

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5490964
EASTING: 400328

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Chalcopyrite
COMMENTS: Pyrite, galena, sphalerite and chalcopyrite are assumed.
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	

LITHOLOGY: Andesite
Dacite
Meta Sediment/Sedimentary Rock
Volcanic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage Harper Ranch
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Grab
COMMODITY

COMMODITY	GRADE	
Silver	11.0000	Grams per tonne
Gold	2.5300	Grams per tonne
Copper	0.9300	Per cent
Lead	0.3390	Per cent
Zinc	1.2500	Per cent

COMMENTS: Sample number 16883.
REFERENCE: Assessment Report 17273.

CAPSULE GEOLOGY

The DEADWOOD showing is located on Crown grant Lot 590S, approximately 600 metres west of the summit of Mount Franklin. The showing consists of quartz veins, containing gold, silver and base metal mineralization, hosted by andesite and dacite flows and tuffs of the Eocene Marron Formation, Penticton Group. The Eocene volcanics are underlain by volcanic and metasedimentary rocks of the Devonian-Triassic Harper Ranch Group. Mineralization in the quartz veins is not described. Veins on the adjacent HOMESTAKE (082ENE051) and BANNER (082ENE002) Crown grants contain pyrite, galena, sphalerite and chalcopyrite, in trace amounts up to several per cent. It is assumed that these veins project onto the DEADWOOD prospect and are therefore similar. Early references to the DEADWOOD claim are brief and is mentioned because of its proximity to the HOMESTAKE and BANNER properties. The DEADWOOD claim was Crown granted in 1907 to Frank

CAPSULE GEOLOGY

Coryell, Alex McDonald, James H. Hodson and Peter Wolf. In 1932, quartz veins in a shear zone were noted; it was observed that assays were not spectacular. Two adits in the southwest corner of the DEADWOOD Crown grant are not specifically described in the literature.

Several major exploration programs have been carried out in the general area by companies such as Franklin Mines Ltd. in 1964, Pearl Resources Ltd. in 1984, and Longreach Resources Ltd. in 1986. However, there is no work recorded by these companies specifically on the DEADWOOD showing.

Sampling in 1987 by Placer Dome Inc. identified 2 locations with anomalous gold-silver rock geochemistry. A grab sample collected near the adits assayed 1.6 grams per tonne gold, 4.3 grams per tonne silver, 0.0122 per cent copper, 0.0139 per cent zinc and 0.0109 per cent lead (Assessment Report 17273). Another site, approximately 200 metres north of the adits, assayed 2.53 grams per tonne gold, 11.0 grams per tonne silver, 0.93 per cent copper, 1.25 per cent zinc and 0.339 per cent lead (Assessment Report 17273). Both samples are believed to be of quartz veins.

In 1993, Sway Resources Inc. optioned a large number of Crown grants and claims in this area, including the DEADWOOD Crown grant. They proceeded to carry out a program of prospecting, sampling, geological mapping and a 16-hole rotary and diamond-drill program. The program was directed at quartz veins on the adjacent BANNER (082ENE002) Crown grant Lot 1199 to the south. A sample collected from a large quartz vein, in a heavily silicified area near the DEADWOOD adits, assayed 5.8 grams per tonne gold (Property File - Sway Resources Inc., Statement of Material Facts, dated February 14, 1994). A 1995 press release refers to a high-grade sample collected from the northern part of the DEADWOOD Crown grant. It assayed 21.5 grams per tonne gold, 488.9 grams per tonne silver, 0.499 per cent copper, 37.86 per cent lead and 1.43 per cent zinc (George Cross News Letter, No. 82, April 28, 1995).

BIBLIOGRAPHY

EMPR AR 1900-871,872; 1907-219; 1914-345,353; 1932-122; 1964-112;
1965-172
EMPR ASS RPT 637, 13710, 15172, 15746, 15964, 15981, *17273
EMPR EXPL 1985-C28; 1987-C32; 1988-C22
EMPR GEM 1974-60
EMPR OF 1994-8
EMPR PF (See General PF - Franklin Mining Camp File; See
PF 082ENE002 - Platinum Blonde Property, News Clippings, 1986-87
and Sway Resources Inc., Statement of Material Facts, February 14,
1994)
EMPR RGS 29
GSC MAP *97A; *133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 56
GSC OF 409; 736; 1969
GCNL *#203, 1993; *#82, 1995
Placer Dome File

DATE CODED: 1996/08/08
DATE REVISED: 1996/08/24

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE064**

NATIONAL MINERAL INVENTORY:

NAME(S): **CANE 7**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E10E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 36 10 N
LONGITUDE: 118 31 05 W
ELEVATION: 1220 Metres

NORTHING: 5495574
EASTING: 390314

LOCATION ACCURACY: Within 500M

COMMENTS: Location of 6000 counts-per-second scintillometer reading, about 5.5 kilometres north of Bluejoint Mountain (Assessment Report 8215, Figure 7).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Pegmatite
TYPE: O PEGMATITE

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Eocene
Proterozoic

Coryell Intrusions
Monashee Complex

LITHOLOGY: Granite Pegmatite
Gneiss
Syenite
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Monashee

Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1980

SAMPLE TYPE: Grab

COMMODITY

GRADE

Uranium

0.0741

Per cent

COMMENTS: Granite pegmatite with 6000 counts-per-second scintillometer reading.

REFERENCE: Assessment Report 8215.

CAPSULE GEOLOGY

The CANE 7 showing is located on the west side of the Granby River, approximately 5.5 kilometres north of Bluejoint Mountain.

The area is underlain by gneiss of the Proterozoic Monashee Complex. Syenite of the Eocene Coryell Intrusions outcrops to the southwest. Quartz monzonite of unknown origin is found near the showing.

The CANE 7 showing is a uranium occurrence in a granite pegmatite. The pegmatite is poorly exposed, but where visible it contains large, 8 to 10 centimetre, smoky-coloured, anhedral quartz crystals. A maximum scintillometer reading of 6000 counts-per-second was obtained on the pegmatite, and the surrounding area contained numerous readings of greater than 1000 counts-per-second (Assessment Report 8215). Analysis of the pegmatite indicated a uranium content of 0.0741 per cent (Assessment Report 8215).

In 1978-79, the area was evaluated by a number of uranium exploration programs funded by E & B Explorations Ltd. The claims were staked in 1978 by Kelvin Energy Ltd. Can-Lake Explorations Ltd. carried out stream sediment sampling and geological mapping that summer. Follow-up detailed sampling of stream sediment anomalies was done by Barringer Magenta Ltd. Later in 1978, Scintrex Ltd. was contracted to carry out an airborne radiometric, magnetic and electromagnetic survey over the property. Conductive and radiometric

CAPSULE GEOLOGY

anomalies were identified. This was followed by an aerial photograph interpretation of the central part of the property by Bayrock Surficial Geology Ltd. Lineaments along the Kettle River and Rendell Creek valleys were interpreted as a graben structure.

In 1979, Kelvin Energy Ltd. carried out detailed property work on anomalous areas identified by the 1978 programs. The CANE 7 pegmatite was discovered during a follow-up program of detailed soil sampling, geological mapping, and radiometric prospecting. No work is recorded on the CANE 7 showing after the uranium moratorium was declared in 1980.

BIBLIOGRAPHY

EMPR ASS RPT 7246, 7583, 7669, 7858, *8215
EMPR EXPL 1979-32
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 551; 736; 1969

DATE CODED: 1996/04/16
DATE REVISED: 1996/04/24

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE065**

NATIONAL MINERAL INVENTORY:

NAME(S): **COMPLETER (L.7309)**, COMPLETER, ARROW LAKE,
DAVE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E16E
BC MAP:

Underground

MINING DIVISION: Slocan

LATITUDE: 49 49 39 N
LONGITUDE: 118 03 44 W
ELEVATION: 1060 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5519993
EASTING: 423602

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of several quartz veins exposed in road cut, about 5 kilometres south of Fauquier (Assessment Report 12408).

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
COMMENTS: Sphalerite is inferred.
ASSOCIATED: Quartz Pyrite Marcasite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic Unnamed/Unknown Informal

LITHOLOGY: Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Selkirk Mountains

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Channel
COMMODITY GRADE
Silver 28.0000 Grams per tonne
Lead 0.3750 Per cent
Zinc 0.2680 Per cent

COMMENTS: Sample no. R17 is a 90-centimetre channel sample of a quartz vein.
REFERENCE: Assessment Report 12408.

CAPSULE GEOLOGY

The COMPLETER (L.7309) showing is located on Lot 7309, approximately 5 kilometres south of Fauquier.
The area is underlain by monzonite of a Middle Jurassic unnamed intrusion. The showing consists of several quartz veins sparsely mineralized with pyrite, marcasite, galena and possibly sphalerite.
The COMPLETER was Crown granted in 1908 to P. Kelleher. A 1984 assessment report makes reference to a 134 metre adit and two 4.5 metre deep shafts which date from 1907-1914. There are no records of the work done during this period.
In 1980-81, J.C. Snell carried out a property examination and soil sampling for Northern Deep Level Mines Ltd. He notes the presence of an old adit, and of 6 substantial quartz veins exposed by recent stripping. The soil survey indicated anomalous lead, arsenic and silver geochemistry. In 1984, Golden Porphyrite Ltd. carried out a program of prospecting, heavy sediment geochemistry, and channel sampling of exposed quartz veins. A 90-centimetre channel sample across a quartz vein assayed 28 grams per tonne silver, 0.375 per cent lead and 0.268 per cent zinc. The sample contained 4 per cent combined pyrite and galena (Assessment Report 12408). The prospecting and stream geochemistry programs failed to find extensions of known quartz veins.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 133
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1908-250; 1949-A193
EMPR ASS RPT 11000, *12408
EMPR EXPL 1984-32
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 736; 1969

DATE CODED: 1996/04/16
DATE REVISED: 1996/10/09

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE066**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAURA**, PLATINUM BLONDE, FRANKLIN CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 33 32 N
LONGITUDE: 118 22 36 W
ELEVATION: 1320 Metres

NORTHING: 5490498
EASTING: 400440

LOCATION ACCURACY: Within 500M

COMMENTS: Trench, located about 550 metres southwest of Mount Franklin
(Assessment report 17273).

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Galena Pyrite
ASSOCIATED: Quartz Calcite Pyrite
ALTERATION: Clay Chlorite Silica
ALTERATION TYPE: Argillic Chloritic Silicific'n
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Dacite
Volcanic Breccia
Meta Sediment/Sedimentary
Chert
Shale
Sandstone
Pebble Conglomerate
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage Harper Ranch
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 56.0000 Grams per tonne
Gold 0.1400 Grams per tonne
Lead 0.0170 Per cent
Zinc 0.0267 Per cent
COMMENTS: Sample number 22007.
REFERENCE: Assessment Report 17273.

CAPSULE GEOLOGY

The LAURA showing is located on Mount Franklin, approximately 550 metres southwest of the summit. The showing consists of silver-rich mineralization exposed in several trenches located several hundred metres south of the HOMESTAKE (082ENE051) showing. The mineralization is carried by quartz veins which cut andesite and dacite of the Eocene Marron Formation, Penticton Group. These volcanic rocks unconformably overlay metasedimentary rocks of the Devonian-Triassic Harper Ranch Group. Granodiorite of an unnamed Middle Jurassic intrusion is found several kilometres to the south. The origin of the trenches at the LAURA showing is unknown, but they were likely prospected by Longreach Resources Ltd. who carried

CAPSULE GEOLOGY

out an extensive exploration program over this area in 1987. In 1988, Placer Dome Inc. optioned this property, known as the PLATINUM BLONDE, from Longreach Resources. Placer carried out surface sampling of the LAURA trench and diamond drilled 3 holes under the mineralized exposures. A grab sample assayed 56 grams per tonne silver, 0.14 gram per tonne gold, 0.0267 per cent zinc and 0.017 per cent lead; some grab samples assayed as high as 141 grams per tonne silver (Assessment Report 17273).

The drillholes, collared in Marron Group andesite, intersected andesitic and dacitic volcanic breccia and then an intermixed succession of cherts, shales, sandstones and pebble conglomerates. The sediments are deformed and contain zones of brecciation of variable intensity. The breccias are best developed in sections of cherty sediment. The intense silicification observed in the overlying trenches was not seen in drill core. Fractures are filled with calcite. Drillhole PDI 87-34 intersected a dacitic breccia, with some tuffaceous content, cemented by calcite. A 1.65-metre section (33.07 to 34.72 metres), which contained 5 per cent pyrite and a minor amount of galena, assayed 25 grams per tonne silver, 0.1 gram per tonne gold and 0.139 per cent arsenic (Assessment Report 17273). Chlorite is noted as vein selvages and 1 per cent clay alteration is present.

BIBLIOGRAPHY

EMPR ASS RPT 15172, 15746, 15964, 15981, *17273
EMPR EXPL 1987-C32; 1988-C22
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File; See PF 082ENE002 - Platinum Blonde Property, News Clippings, 1986-87)
GSC MAP 97A; 133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 56
GSC OF 409; 736; 1969
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/06

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE067**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLIFF**, OUTBACK

MINING DIVISION: Greenwood

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 41 43 N
LONGITUDE: 118 28 20 W
ELEVATION: 1370 Metres

NORTHING: 5505792
EASTING: 393827

LOCATION ACCURACY: Within 500M

COMMENTS: Diamond-drill site on the Cliff zone, about 25.5 kilometres west-southwest of Edgewood (Assessment Report 21916).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Electrum Acanthite
ASSOCIATED: Pyrite Quartz Magnetite
ALTERATION: Quartz Calcite Kaolinite Epidote Chlorite
Pyrite Sericite Magnetite
ALTERATION TYPE: Propylitic Argillic
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Vein Stockwork Disseminated
CLASSIFICATION: Epithermal Porphyry Hydrothermal
TYPE: H05 Epithermal Au-Ag: low sulphidation L02 Porphyry-related Au
COMMENTS: Some studies have concluded that this deposit is a porphyry gold type.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	Coryell Intrusions
Eocene			Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Quartz Monzonite
Quartz Feldspar Porphyry
Andesite
Gneiss
Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Monashee
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Drill Core
COMMODITY: Gold GRADE: 0.8300 Grams per tonne
COMMENTS: Diamond-drill hole BH 87004, intersection from 55.80 to 68.00 metres.
REFERENCE: Assessment Report 21916.

CAPSULE GEOLOGY

The CLIFF prospect is located on the OUTBACK property in the Granby River valley, approximately 25.5 kilometres west-southwest of the village of Edgewood.

The general area is underlain by gneiss of the Proterozoic Monashee Complex. Within the Granby River valley there is a north trending, easterly dipping normal fault. Along this fault andesite of the Eocene Marron Formation (Penticton Group) is preserved. Co-magmatic with the Marron Formation are Eocene Coryell Intrusions which form small isolated intrusions throughout the area. The Coryell Intrusions are largely syenitic in composition, although a quartz-feldspar porphyry found on the prospect may be a calc-alkaline variation. A quartz monzonite intrusion, which hosts mineralization at the CLIFF prospect, may be an unnamed Middle Jurassic intrusion.

Mineralization in the CLIFF prospect consists of a stockwork of hairline to centimetre sized, milky-white, drusy, chalcedonic quartz veining which occurs over an area measuring approximately 500 metres by 150 metres. Both disseminated and thin stringers of pyrite are

CAPSULE GEOLOGY

found in the veins. Gold-silver mineralization, which is associated with pyrite, is especially pronounced near the contact between a quartz-feldspar porphyry and the host quartz monzonite. Magnetite is also noted. A prominent north-northwest trending fault cuts through the mineralized area and is terminated by the quartz-feldspar porphyry. A cataclasite unit is described as varying from densely foliated to weakly mylonitic. Propylitic (epidote, chlorite, pyrite and calcite) alteration is pervasive in the quartz monzonite. Weak to intermediate argillic (kaolinite) alteration is common within 25 metres of the contact between the quartz-feldspar-porphry and the quartz monzonite. Fine-grained sericite is noted in vein envelopes.

The OUTBACK property, which contains the CLIFF prospect, was staked in 1988-89 by the Canadian Nickel Company Limited (INCO). INCO carried out several field programs of stream sediment sampling, follow-up prospecting, soil sampling and geological mapping in 1989. The gold potential of this area was identified through the use of heavy mineral stream sediment techniques.

In 1990, INCO carried out detailed soil sampling, prospecting, geological mapping and extensive rock sampling on a number of gold-silver occurrences in this area. These include the nearby BETH (082ENE068), LEAH (082ENE069), JANE (082ENE070), and TARA (082ENE071) occurrences. On the CLIFF prospect, INCO carried out detailed grid soil sampling, prospecting, mapping at 1:5000 scale and extensive rock sampling. Chip samples assayed up to 14.5 grams per tonne gold over 2.6 metres, 1.2 grams per tonne gold over 5.5 metres and 6.42 grams per tonne gold over 4 metres, including 1 metre of 18.1 grams per tonne gold (Assessment Report 21916).

In 1991, a 6-hole, 807.1-metre diamond-drill program was carried out on the CLIFF prospect by INCO. All holes were drilled from the same set-up. A number of intersections assayed greater than 0.5 gram per tonne gold, including a 12.2-metre intersection in drillhole BH 87004 which assayed 0.83 gram per tonne gold, and contained a 0.45-metre intersection of 5.2 grams per tonne gold and 61.0 grams per tonne silver (Assessment Report 21916). High-grade intersections contained fine-grained pyrite with electrum and acanthite replacements. The drill program resulted in a re-interpretation of the prospect as a porphyry-gold deposit type, from the original epithermal interpretation.

BIBLIOGRAPHY

EMPR ASS RPT 19441, *21032, *21916
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 736; 1969

DATE CODED: 1996/04/18
DATE REVISED: 1996/10/10

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE068**

NATIONAL MINERAL INVENTORY:

NAME(S): **BETH**, OUTBACK

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 41 35 N
LONGITUDE: 118 27 57 W
ELEVATION: 1340 Metres

NORTHING: 5505535
EASTING: 394283

LOCATION ACCURACY: Within 500M

COMMENTS: Channel sample (number 47326), located about 25.5 kilometres west-southwest of Edgewood (Assessment Report 21032).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Chalcedony Clay Chlorite Adularia Sericite
Pyrite K-Feldspar

ALTERATION TYPE: Propylitic Argillic Silicific'n Potassic
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Epithermal Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	Unnamed/Unknown Informal
Middle Jurassic			Monashee Complex
Proterozoic			

LITHOLOGY: Quartz Monzonite
Andesite
Gneiss
Syenite
Quartz Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Monashee
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Channel
COMMODITY GRADE
Silver 13.8000 Grams per tonne
Gold 0.5150 Grams per tonne

COMMENTS: Channel sample number 47326 is 0.4 metre long.
REFERENCE: Assessment Report 21032.

CAPSULE GEOLOGY

The BETH showing is located on the OUTBACK property in the Granby River valley, approximately 25.5 kilometres west-southwest of the village of Edgewood.

The general area is underlain by gneiss of the Proterozoic Monashee Complex. Within the Granby River valley there is a north trending, easterly dipping normal fault, along which andesite of the Eocene Marron Formation (Penticton Group) is preserved. Co-magmatic with the Marron Formation are Eocene Coryell Intrusions which form small isolated intrusions throughout the area. The Coryell Intrusions are largely syenitic in composition, although a quartz-feldspar porphyry found 500 metres to the northwest may be a calc-alkaline variation. A quartz monzonite intrusion, which hosts the BETH showing, may be an unnamed Middle Jurassic intrusion.

Mineralization in the BETH showing consists of a stockwork of hairline to centimetre sized, milky-white, sugary chalcedonic quartz veinlets in a propylitic and argillically altered quartz monzonite. Silica deposition has most commonly occurred as open-space fracture

CAPSULE GEOLOGY

fillings leaving vuggy, drusy quartz veins. Vein centres often display narrow cavities with fine aggregates of hexagonal quartz and bladed calcite. Epithermal-style colloform, crustiform, vuggy cavities and finely banded textures suggest multiple phases of veining. Vein selvages are distinctly banded and composed of fine sericite, chlorite, minor pyrite and pinkish, grey, potassic feldspar.

The OUTBACK property, which includes the BETH showing, was staked in 1988-89 by the Canadian Nickel Company Limited (INCO). INCO carried out several field programs of stream sediment sampling, follow-up prospecting, soil sampling and geological mapping in 1989. The gold potential of this area was identified through the use of heavy mineral stream sediment techniques.

In 1990, INCO carried out detailed soil sampling, prospecting, geological mapping and extensive rock sampling on a number of gold-silver occurrences in this area, including the nearby CLIFF (082ENE067), LEAH (082ENE069), JANE (082ENE070), and TARA (082ENE071) occurrences. A 0.4-metre channel sample of a quartz-adularia stockwork from the BETH showing assayed 0.515 gram per tonne gold and 13.8 grams per tonne silver (Assessment Report 21032).

In 1991, INCO carried out a 6-hole, 807.1-metre diamond-drill program on the CLIFF (082ENE067) prospect 500 metres to the northwest. A number of drill intersections assayed greater than 0.5 grams per tonne gold (Assessment Report 21916). The drill program resulted in the re-interpretation of the CLIFF prospect as a porphyry-gold deposit type, partly because of the association between gold-silver bearing quartz stockworks and a quartz-feldspar porphyry intrusion. It is not recorded if this intrusion has been identified at the BETH showing.

BIBLIOGRAPHY

EMPR ASS RPT 19441, *21032, *21916
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 736; 1969

DATE CODED: 1996/04/18
DATE REVISED: 1996/10/10

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE069**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEAH**, OUTBACK

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 42 23 N
LONGITUDE: 118 28 31 W
ELEVATION: 1160 Metres

NORTHING: 5507031
EASTING: 393631

LOCATION ACCURACY: Within 500M

COMMENTS: Chip sample (number 49705) located about 25 kilometres west-southwest of Edgewood (Assessment Report 21032).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Unknown

ASSOCIATED: Quartz

ALTERATION: Kaolinite Pyrite Chalcedony Carbonate Alunite Chlorite

Epidote

ALTERATION TYPE: Propylitic Argillic

MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Vein Breccia

CLASSIFICATION: Epithermal

TYPE: H05 Epithermal Au-Ag: low sulphidation

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Eocene
Middle Jurassic
Proterozoic

GROUP

Penticton

FORMATION

Marron

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal
Monashee Complex

LITHOLOGY: Quartz Monzonite
Andesite
Gneiss
Syenite
Quartz Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Monashee

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1990

SAMPLE TYPE: Chip

COMMODITY

COMMODITY	GRADE	UNIT
Silver	2.5000	Grams per tonne
Gold	0.8370	Grams per tonne

COMMENTS: Sample number 49705 is a 0.7 metre chip sample of banded chalcedony.

REFERENCE: Assessment Report 21032.

CAPSULE GEOLOGY

The LEAH showing is located on the OUTBACK property in the Granby River valley, approximately 25 kilometres west-southwest of the village of Edgewood.

The general area is underlain by gneiss of the Proterozoic Monashee Complex. Within the Granby River valley there is a north trending, easterly dipping normal fault, along which andesite of the Eocene Marron Formation (Penticton Group) is preserved. Co-magmatic with the Marron Formation are Eocene Coryell Intrusions which form small isolated intrusions throughout the area. The Coryell Intrusions are largely syenitic in composition, although a quartz-feldspar porphyry, 1.25 kilometres to the south-southwest, may be a calc-alkaline variation. The propylitically altered quartz monzonite hosting the LEAH showing may be an unnamed Middle Jurassic intrusion.

Mineralization at the LEAH showing consists of en-echelon anastomosing sets of weakly banded, sugary textured, chalcedony veins which are hosted by a north-northwest trending fault zone. The fault

CAPSULE GEOLOGY

zone has an estimated true width of 25 metres and is believed to be an extension of the same fault hosting the CLIFF (082ENE067) prospect, 1.25 kilometres to the south-southeast. Veins typically show coarse radial quartz along the outside of the veins with fine chalcedony infilling towards the vein centre. Wallrocks are strongly bleached and kaolinized with traces of pyrite, carbonate replacement and possible alunite alteration.

The OUTBACK property was staked in 1988-89 by the Canadian Nickel Company Limited (INCO). INCO carried out several field programs of stream sediment sampling, follow-up prospecting, soil sampling and geological mapping in 1989. The gold potential of this area was identified through the use of heavy mineral stream sediment techniques.

In 1990, INCO carried out detailed soil sampling, prospecting, geological mapping and extensive rock sampling on a number of gold-silver occurrences in this area, including the nearby CLIFF (082ENE067), BETH (082ENE068), JANE (082ENE070), and TARA (082ENE071) occurrences. At the LEAH showing, a 0.7-metre chip sample of grey and white banded chalcedony with breccia fragments of wallrock assayed 0.837 gram per tonne gold and 2.5 grams per tonne silver (Assessment Report 21032).

In 1991, INCO carried out a 6-hole, 807.1-metre diamond-drill program on the CLIFF (082ENE067) prospect 1.25 kilometres to the south-southeast. A number of drill intersections assayed greater than 0.5 gram per tonne gold (Assessment Report 21916). It is not recorded if additional work was done on the LEAH showing at that time.

BIBLIOGRAPHY

EMPR ASS RPT 19441, *21032, *21916
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 736; 1969

DATE CODED: 1996/04/18
DATE REVISED: 1996/10/10

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE070**

NATIONAL MINERAL INVENTORY:

NAME(S): **JANE**, OUTBACK

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 41 31 N
LONGITUDE: 118 27 25 W
ELEVATION: 1500 Metres

NORTHING: 5505399
EASTING: 394921

LOCATION ACCURACY: Within 500M

COMMENTS: Grab sample (number 46227), located about 25.5 kilometres west-southwest of Edgewood (Assessment Report 21032).

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Quartz Magnetite
ALTERATION: Chlorite Epidote Malachite Azurite
ALTERATION TYPE: Propylitic Oxidation
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I VEIN, BRECCIA AND STOCKWORK

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	Unnamed/Unknown Informal
Middle Jurassic			Monashee Complex
Proterozoic			

LITHOLOGY: Quartz Monzonite
Andesite
Gneiss
Syenite
Quartz Feldspar Porphyry

HOSTROCK COMMENTS: Eocene Coryell Intrusions occur throughout the area.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Monashee
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 30.6000 Grams per tonne
Gold 1.0600 Grams per tonne
Copper 1.0800 Per cent

COMMENTS: Sample (number 46227) of a rusty felsic rock containing magnetite and chalcopyrite.

REFERENCE: Assessment Report 21032.

CAPSULE GEOLOGY

The JANE showing is located on the OUTBACK property in the Granby River valley, approximately 25.5 kilometres west-southwest of the village of Edgewood.

The general area is underlain by gneiss of the Proterozoic Monashee Complex. Within the Granby River valley there is a north trending, easterly dipping normal fault, along which andesite of the Eocene Marron Formation (Penticton Group) is preserved. Co-magmatic with the Marron Formation are Eocene Coryell Intrusions which form small isolated intrusions throughout the area. The Coryell Intrusions are largely syenitic in composition, although a quartz-feldspar porphyry, 1.1 kilometres to the southeast, may be a calc-alkaline variation. The propylitically altered quartz monzonite, which hosts the JANE showing, may be an unnamed Middle Jurassic intrusion.

The JANE showing consists of a northwest trending,

CAPSULE GEOLOGY

steeply-dipping fault hosting fine quartz stringers and breccia clasts of sulphide-rich vein material. Rusty breccia pods, which rarely exceed 30 centimetres in length, are composed of magnetite with lesser amounts of chalcopyrite and pyrite. A grab sample of a rusty-coloured felsic rock containing magnetite and chalcopyrite with azurite and malachite staining assayed 1.06 grams per tonne gold, 30.6 grams per tonne silver and 1.08 per cent copper (Assessment Report 21032).

The OUTBACK property, which includes the JANE showing, was staked in 1988-89 by the Canadian Nickel Company Limited (INCO). INCO carried out several field programs of stream sediment sampling, follow-up prospecting, soil sampling and geological mapping in 1989. The gold potential of this area was identified through the use of heavy mineral stream sediment techniques.

In 1990, INCO carried out detailed soil sampling, prospecting, geological mapping and extensive rock sampling on a number of gold-silver occurrences in this area, including the nearby CLIFF (082ENE067), BETH (082ENE068), LEAH (082ENE069), and TARA (082ENE071).

In 1991, INCO carried out a 6-hole, 807.1-metre diamond-drill program on the CLIFF (082ENE067) prospect 1.1 kilometres to the southeast. A number of drill intersections assayed greater than 0.5 gram per tonne gold (Assessment Report 21916). It is not recorded if additional work was done on the JANE showing at that time.

BIBLIOGRAPHY

EMPR ASS RPT 19441, *21032, *21916
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 736; 1969

DATE CODED: 1996/04/18
DATE REVISED: 1996/10/10

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE071**

NATIONAL MINERAL INVENTORY:

NAME(S): **TARA**, OUTBACK

MINING DIVISION: Greenwood

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E09W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 41 58 N
LONGITUDE: 118 28 59 W
ELEVATION: 1340 Metres

NORTHING: 5506270
EASTING: 393055

LOCATION ACCURACY: Within 500M

COMMENTS: Chip sample (number 47298), located about 25.5 kilometres west-southwest of Edgewood (Assessment Report 21032).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Chalcedony
ALTERATION: Kaolinite Sericite Chlorite Epidote
ALTERATION TYPE: Argillic Sericitic Propylitic
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epithermal
TYPE: H05 Epithermal Au-Ag: low sulphidation

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	Unnamed/Unknown Informal
Middle Jurassic			Monashee Complex
Proterozoic			

LITHOLOGY: Quartz Monzonite
Andesite
Gneiss
Syenite
Quartz Feldspar Porphyry

HOSTROCK COMMENTS: Eocene Coryell Intrusions occur throughout the area.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Monashee
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 5.7000 Grams per tonne
Gold 6.9500 Grams per tonne

COMMENTS: A 2.0-metre chip sample (number 47298) of intensely bleached intrusive with sericite alteration and chalcedony veinlets.

REFERENCE: Assessment Report 21032.

CAPSULE GEOLOGY

The TARA showing is located on the OUTBACK property in the Granby River valley, approximately 25.5 kilometres west-southwest of the village of Edgewood.

The general area is underlain by gneiss of the Proterozoic Monashee Complex. Within the Granby River valley there is a north trending, easterly dipping normal fault, along which andesite of the Eocene Marron Formation (Penticton Group) is preserved. Co-magmatic with the Marron Formation are Eocene Coryell Intrusions which form small isolated intrusions throughout the area. The Coryell Intrusions are largely syenitic in composition, although a quartz-feldspar porphyry, 900 metres to the southeast, may be a calc-alkaline variation. A quartz monzonite intrusion, which outcrops just north of the TARA showing, may be an unnamed Middle Jurassic intrusion.

The TARA showing consists of several widely spaced, beige-coloured and sparsely mineralized chalcedony veins. The veins, which

CAPSULE GEOLOGY

are up to 25 centimetres wide, trend perpendicular to an inferred northwest trending fault. The fault forms the contact between a highly kaolinized intrusive on the southwest, and a propylitized quartz monzonite to the northeast. A 2-metre chip sample of an intensely bleached intrusive, with friable sericite alteration and chalcedony veinlets measuring 3 to 5 centimetres wide, assayed 6.95 grams per tonne gold and 5.7 grams per tonne silver (Assessment Report 21032). It contained a minor amount of pyrite.

The OUTBACK property was staked in 1988-89 by the Canadian Nickel Company Limited (INCO). INCO carried out several field programs of stream sediment sampling, follow-up prospecting, soil sampling and geological mapping in 1989. The gold potential of this area was identified through the use of heavy mineral stream sediment techniques.

In 1990, INCO carried out detailed soil sampling, prospecting, geological mapping and extensive rock sampling on a number of gold-silver occurrences in this area, including the nearby CLIFF (082ENE067), BETH (082ENE068), LEAH (082ENE069), and JANE (082ENE070) occurrences.

In 1991, INCO carried out a 6-hole, 807.1-metre diamond-drill program on the CLIFF (082ENE067) prospect 900 metres to the southeast. A number of drill intersections assayed greater than 0.5 gram per tonne gold (Assessment Report 21916). It is not recorded if additional work was done on the TARA showing at that time.

BIBLIOGRAPHY

EMPR ASS RPT 19441, *21032, *21916
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 736; 1969

DATE CODED: 1996/04/18
DATE REVISED: 1996/10/10

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE072**

NATIONAL MINERAL INVENTORY:

NAME(S): **AZZA 1, AZZA, DIRECTOR,
LIGHTNING PEAK CAMP**

MINING DIVISION: Vernon

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 55 41 N
LONGITUDE: 118 34 08 W
ELEVATION: 1700 Metres

NORTHING: 5531812
EASTING: 387397

LOCATION ACCURACY: Within 500M

COMMENTS: Trench No. 1, located about 6 kilometres northwest of Lightning Peak (Assessment Report 16216).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
ALTERATION: Kaolinite
ALTERATION TYPE: Argillic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Shear Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation
DIMENSION: 950 Metres
COMMENTS: The shear zone trends 350 degrees and has been traced for 950 metres along strike.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 43.5000 Grams per tonne
Gold 16.3000 Grams per tonne
COMMENTS: Chip sample (number T1-10.7) of a 5-centimetre wide quartz vein in trench no. 1.
REFERENCE: Assessment Report 16216.

CAPSULE GEOLOGY

The AZZA 1 showing is located in the upper watershed of Rendell Creek, approximately 350 metres south of the informally named Azza Lake and 6 kilometres northwest of Lightning Peak.

The showing is hosted by granodiorite of an unnamed Middle Jurassic intrusion. The AZZA 1 showing consists of a shear zone which trends 350 degrees and has been traced for about 950 metres along strike. Quartz veins exposed in 3 trenches along this shear zone contain pyrite, and anomalous gold and silver assays. Argillic alteration of the host granodiorite is pervasive and locally intense. The shear-alteration zone forms a linear depression up to 25 metres wide.

The Lightning Peak area has been an active exploration camp since the late 1890s, with most of the exploration focused on vein-hosted silver-lead-zinc deposits. The DICTATOR (082ENE023) and the MORNING (082ENE022) showings are approximately 1 kilometre to the north-northwest and northwest respectively. The WATERLOO (082ENE017) mine is located approximately 3 kilometres to the south. During the 1930s, Dictator Gold Mines Ltd. sunk a 35-metre shaft on the MORNING shear zone and developed approximately 40 metres of underground

CAPSULE GEOLOGY

workings. Later in 1948, Paycheck Mining and Development Company Limited held claims covering the MORNING showing and surrounding area. The AZZA 1 shear zone is believed to have been covered by the DIRECTOR claim group during this time; however, it is not recorded whether the gold-silver mineralization had been discovered.

In 1983-84, L.A. Bayrock carried out two small geochemical surveys over the KEN claim. This included the southern extension of the MORNING shear zone, to the west of the AZZA 1 shear zone. These surveys identified weak gold and silver anomalies in lineament soils.

In 1985, L.A. Bayrock staked the AZZA claim over the area around the DICTATOR (082ENE023) Crown grant and the ROB 1 claim. The AZZA claim was optioned to Amulet Resources Corporation, who in 1986, trenched a number of lineaments identified from aerial photographs. Anomalous gold and silver assays were obtained from quartz veins exposed in several trenches. Trench No. 1, the AZZA 1 showing, exposes a 6-metre wide zone of intense argillic alteration; kaolinite being the only identifiable mineral. The contact with the host granodiorite is gradual. Alteration decreases in intensity to the east and west, forming marginal alteration zones 13.6 metres and 8 metres wide, respectively. These alteration zones contain pyritic quartz veins up to 10 centimetres wide. Anomalous gold assays came from samples taken across the entire 13.6 metre width of the eastern margin, including 0.37 gram per tonne gold over 3 metres (Assessment Report 16216). A sample (number T1-10.7) of a 5-centimetre wide quartz vein with pyrite, assayed 16.3 grams per tonne gold, 43.5 grams per tonne silver and low base metal values (Assessment Report 16216). Trench numbers 3 and 5, located 275 and 475 metres to the north respectively, also expose argillic alteration zones with quartz veins, and both returned anomalous silver assays. Trench No. 3 and No. 5 are included in the AZZA 1 showing. An induced polarization and resistivity survey was also carried out in 1986. Resistivity anomalies were associated with the lineaments.

In 1987, Amulet Resources undertook a program of prospecting, geological mapping, geophysical surveys (induced polarization, VLF-EM and magnetometer surveys) soil geochemistry, trenching, and 576 metres of diamond drilling in 5 holes. This work was carried out on the AZZA claim which includes the AZZA 1 showing. Only the geological mapping was filed as assessment work.

BIBLIOGRAPHY

EMPR AR 1933-A150,A152; 1934-D4; 1948-A150; 1949-A138;
EMPR ASS RPT 5200, 7220, 13528, 15217, *16216, *18009, *19010
EMPR EXPL 1979-51; 1985-C31; 1986-C39; 1987-C36; 1988-C25
EMPR GEM 1974-65
EMPR OF 1994-8
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown; In 082ENE022 - *Ven Huizen, G.L. (1986): Report on the AZZA and AZZA 2 Mining Claims, Amulet Resources Corporation, Prospectus dated June 30, 1987)
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT 1930A

DATE CODED: 1996/05/08
DATE REVISED: 1996/05/12

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE073**

NATIONAL MINERAL INVENTORY:

NAME(S): **AZZA 7, AZZA, MORNING 1,
KEN, LIGHTNING PEAK CAMP**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:
LATITUDE: 49 56 04 N
LONGITUDE: 118 34 35 W
ELEVATION: 1740 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Trench No. 7, located about 7 kilometres northwest of Lightning Peak (Assessment Report 16216).

MINING DIVISION: Vernon
UTM ZONE: 11 (NAD 83)
NORTHING: 5532533
EASTING: 386874

COMMODITIES: Silver Gold Lead

MINERALS

SIGNIFICANT: Pyrite Galena
ASSOCIATED: Quartz
ALTERATION: Kaolinite
ALTERATION TYPE: Argillic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Shear Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Shear-hosted.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic Unnamed/Unknown Informal

LITHOLOGY: Granodiorite
Diabase Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 54.0000 Grams per tonne
Gold 0.4500 Grams per tonne
COMMENTS: Sample T7-1.10-1.20 is a chip sample of a 1-metre wide quartz vein in trench No. 7.
REFERENCE: Assessment Report 16216.

CAPSULE GEOLOGY

The AZZA 7 showing is located in the upper watershed of Rendell Creek, approximately 7 kilometres northwest of Lightning Peak. The showing is hosted by granodiorite of an unnamed Middle Jurassic intrusion. The AZZA 7 showing consists of a north-south trending shear zone which contains a 1-metre wide quartz vein and a diabase dike. The shear zone is believed to be the southern continuation of the MORNING (082ENE022) shear zone. The MORNING shaft is located approximately 350 metres to the north. The vein, as exposed in a trench at the AZZA 7 showing, contains local concentrations of up to 20 per cent coarse-grained, anhedral pyrite with minor galena. A zone of intense argillic alteration, measuring approximately 3 metres wide, occurs in the hangingwall between the vein and a diabase dike. The Lightning Peak area has seen intensive exploration for vein-hosted silver-lead-zinc deposits since the late 1890s. During the 1930s, Dictator Gold Mines Limited sunk a 35-metre shaft on the MORNING shear zone and developed approximately 40 metres of underground workings. Later in 1948, Paycheck Mining and Development Company Limited held claims covering the MORNING showing and surrounding area. It is probable that 2 small trial shipments of

CAPSULE GEOLOGY

silver-lead-zinc ore in 1948 came from the MORNING dump.

In 1974, K.L. Daughtry carried out a magnetometer survey over the MORNING 1 & 2 claims, which covered the MORNING shear zone. The survey identified a north-south structure, later identified as a diabase dike in the MORNING shear zone. In 1979, W.G. Botel carried out a ground electromagnetic survey of the MORNING area, which was staked as the ROB 1 claim. A northwest-southeast trending anomaly was identified to the north of the MORNING shaft. It was concluded that the area was structurally too tight to host an east-west shear zone like that of the WATERLOO (082ENE017) mine.

In 1983-84, L.A. Bayrock carried out two small geochemical surveys over the KEN claim, which included the southern extension of the MORNING shear zone. These surveys identified weak gold and silver anomalies in lineament soils.

In 1985, L.A. Bayrock staked the AZZA claim over the area around the DICTATOR (082ENE023) Crown grant and the ROB 1 claim. The AZZA claim was optioned to Amulet Resources Corporation, who in 1986, trenched a number of lineaments to the south and southeast of the MORNING shaft. These lineaments were identified from aerial photographs. Anomalous gold and silver assays were obtained from quartz veins exposed in the trenches. A chip sample collected from a 1-metre wide vein in trench No. 7, the AZZA 7 showing, assayed 0.45 gram per tonne gold and 54 grams per tonne silver; base metal values were low (Assessment Report 16216). An induced polarization and resistivity survey was also carried out in 1986. Resistivity anomalies were associated with the lineaments.

In 1987, Amulet Resources undertook a program of prospecting, geological mapping, geophysical surveys (induced polarization, VLF-EM and magnetometer surveys) soil geochemistry, trenching, and 576 metres of diamond drilling in 5 holes. This work was carried out on the AZZA claim which includes the AZZA 7 showing. Only the geological mapping was filed as assessment work.

The ROB 1 claim, covering the MORNING showing, expired in 1989 and the showing was re-staked as the XEN 1 claim for Annax Ventures Inc. In 1989, a small program of rock and soil sampling was carried out around the MORNING showing. Rock grab samples collected from the MORNING dump returned high gold and silver assays. A 60-centimetre chip sample of a 1.5-metre wide quartz vein, exposed in a pit 300 metres north of the AZZA 7 showing, assayed 20.8 grams per tonne silver, 0.385 per cent zinc and 0.331 per cent lead (Assessment Report 19010). This vein, although included in the MORNING showing, is hosted by the same shear zone as the AZZA 7 showing to the south.

BIBLIOGRAPHY

EMPR AR 1933-A150,A152; 1934-D4; 1948-A150; 1949-A138;
EMPR ASS RPT 5200, 7220, 13528, 15217, *16216, *18009, *19010
EMPR EXPL 1979-51; 1985-C31; 1986-C39; 1987-C36; 1988-C25
EMPR GEM 1974-65
EMPR OF 1994-8
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933
and unknown; In 082ENE022 - *Ven Huizen, G.L. (1986): Report on
the AZZA and AZZA 2 Mining Claims, Amulet Resources Corporation,
Prospectus, June 30, 1987)
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT 1930A, p.96A

DATE CODED: 1996/05/08
DATE REVISED: 1996/05/12

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE074**

NATIONAL MINERAL INVENTORY:

NAME(S): **KET**, KET 2, DONEN 126,
BARTH

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E10W
BC MAP:
LATITUDE: 49 33 16 N
LONGITUDE: 118 50 09 W
ELEVATION: 1140 Metres

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5490713
EASTING: 367223

LOCATION ACCURACY: Within 500M
COMMENTS: Diamond drillhole KET #1, located about 2.1 kilometres northwest of Christian Valley (Assessment Report 7262).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Epigenetic
TYPE: D04 Basal U
COMMENTS: Mineralization age is Miocene-Pliocene.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Eocene	Penticton	Marron	
Tertiary	Chilcotin	Undefined Formation	
Cretaceous-Tertiary			Okanagan Batholith

LITHOLOGY: Conglomerate
Basalt
Andesite
Trachyte Tuff
Granite
Diorite
Granodiorite

HOSTROCK COMMENTS: The Chilcotin Group is Miocene-Pliocene in age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1978
SAMPLE TYPE: Drill Core
COMMODITY _____ GRADE _____
Uranium 0.0198 Per cent
COMMENTS: Intersection from 62.4 to 63.4 metres in diamond drillhole KET #1.
Analysis recorded as 234 ppm U3O8; conversion from U3O8 to uranium is 0.848.
REFERENCE: Assessment Report 7262.

CAPSULE GEOLOGY

The KET showing is located approximately 2.1 kilometres northwest of the Kettle Valley community of Christian Valley. The KET uranium occurrence is hosted in conglomerate of the Eocene Marron Formation, Penticton Group. Andesite flows and trachyte tuffs of the Marron Formation form the west side of the Kettle Valley and underlie the Miocene-Pliocene Chilcotin Group plateau basalt. Granite, diorite and granodiorite of the Cretaceous-Tertiary Okanagan Batholith form the basement west of the Kettle Valley. This general area was staked by Nissho-Iwai Canada Ltd. in 1969. The DONEN 126 claim covered the area of the showing and was part of the extensive BARTH claim group. In 1970, Power Reactor and Nuclear Fuel Development Corporation (PNC) drilled 2 diamond drillholes on DONEN 126. Drillholes BCF-11 and BCF-12 both intersected the basal conglomerate of the Chilcotin Group plateau basalt, but downhole

CAPSULE GEOLOGY

logging failed to detect anomalous radioactivity. PNC received more encouraging results from the FUKI (082ENE015) and CUP LAKE (082ENE041) areas, located 3.75 kilometres to the southwest and 6.5 kilometres to the northwest respectively, and subsequent work focused on those discoveries.

In 1978, Silver Acorn Developments Ltd. located the KET 1 & 2 claims over this area. Can-Lake Explorations Ltd. was contracted to carry out a radiometric survey and a 3-hole, 292.9-metre diamond-drill program. Drillhole KET #1 intersected a uraniferous conglomerate in the Eocene Marron Formation. A 1-metre section from 62.4 to 63.4 metres analysed 234 parts per million U308, which is equivalent to 0.0198 per cent uranium (Assessment Report 7262). A conversion rate of 0.848 U308 to uranium is used.

The conglomerate was described as being composed of 70 per cent granite, diorite and minor granodiorite, and 30 per cent volcanic clasts. Pebbles, cobbles and boulders are rounded to subrounded with a sandy matrix composed of quartz and feldspar grains.

Drillhole KET #1 is located approximately 70 metres east of Nissho-Iwai's drillhole BCF-12. The surface radiometric survey located a radioactive outcrop about 580 metres to the east of drillhole KET #1. A trachyte tuff, exposed in an old pit at this location, produced a 15,000 counts-per-second reading on a McFhar TV-1A spectrometer; background for the Marron Formation is approximately 3000 counts-per-second. Samples of the tuff analyzed 1.95 parts per million U308 (Assessment Report 7262).

BIBLIOGRAPHY

EMPR ASS RPT 2013, 2484, 3135, *7262
EMPR GEM 1969-302; 1970-409; 1971-396
EMPR EXPL 1979-34
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 736; 1969
Chevron File

DATE CODED: 1996/05/14
DATE REVISED: 1996/05/14

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE075**

NATIONAL MINERAL INVENTORY:

NAME(S): **RICH**, RICH 1, LIGHTNING PEAK CAMP

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 54 51 N
LONGITUDE: 118 34 12 W
ELEVATION: 1630 Metres

NORTHING: 5530269
EASTING: 387285

LOCATION ACCURACY: Within 500M

COMMENTS: Trench 84-R3, located about 4.8 kilometres northwest of Lightning Peak (Assessment Report 13319).

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
ASSOCIATED: Quartz Calcite Pyrite
ALTERATION: Kaolinite Sericite
ALTERATION TYPE: Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Shear-hosted.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Granodiorite
Diorite
Meta Volcanic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1984
SAMPLE TYPE:	Channel		
COMMODITY	GRADE		
Silver	22.0000	Grams per tonne	
Lead	0.2200	Per cent	
Zinc	0.2200	Per cent	

COMMENTS: Sample number 0841 is a 122-centimetre channel sample from trench 84-R3.
REFERENCE: Assessment Report 13319.

CAPSULE GEOLOGY

The RICH shear-hosted polymetallic quartz vein showing is located on the north side of the east fork of Rendell Creek, approximately 4.8 kilometres northwest of Lightning Peak. The showing is hosted by granodiorite and diorite of an unnamed Middle Jurassic intrusion. A short distance to the south there is a pendant of metavolcanic rock of the Devonian-Triassic Harper Ranch Group. This area, northwest of Lightning Peak has seen extensive exploration since the early 1900s. To the north approximately 2.5 kilometres, the MORNING (082ENE022) and DICTATOR (0823ENE023) occurrences were active in the 1920s and 1930s. To the south, the POTOSI (082ENE024) showing and the WATERLOO (082ENE017) mine, located 1 kilometre and 1.6 kilometres away respectively, were active during the same period. Exploration in the Lightning Peak camp has focused on silver-rich polymetallic, shear zone hosted quartz veins. The RICH showing was staked as the RICH 1 claim by Lightning Peak Mining Ltd. in 1981 and optioned to Mohawk Oil Co. Ltd. A 1982 program of soil sampling, and VLF-EM and magnetometer surveys

CAPSULE GEOLOGY

identified anomalies coincident with northerly and northeasterly structures. This was followed-up by geological mapping, soil sampling, and VLF-EM and magnetometer surveys. Minor galena mineralization was found at the south edge of the RICH 1 claim. This location was trenched (trench number 84-R3) in 1984 as part of a major trenching program carried out over the adjoining JON (082ENE024) claim to the south. A total of 15 trenches, with a combined length of approximately 500 metres, were excavated on the JON claim.

The RICH showing consists of a 1.5-metre wide argillic alteration zone in a northeasterly trending shear zone. The shear contains a 90-centimetre wide competent zone of calcite and quartz with minor galena, sphalerite and pyrite. Alteration minerals include kaolinite and sericite. A grab sample of quartz veinlets containing galena, sphalerite and pyrite assayed 375 grams per tonne silver, 6.19 per cent lead and 7.04 per cent zinc (Assessment Report 13319). A 122-centimetre channel sample across the shear zone assayed 22 grams per tonne silver, 0.22 per cent lead and 0.22 per cent zinc (Assessment Report 13319). Similar mineralization was found on the JON property to the south.

BIBLIOGRAPHY

EMPR ASS RPT 7735, 11109, 11220, *13319, 13356, *13422
EMPR EXPL 1979-50; 1982-39; 1983-49; 1984-31
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT 1930A, p.98A,99A

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/22

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE076**

NATIONAL MINERAL INVENTORY: 082E15 Ag3

NAME(S): **VICTORIA EAST**, VICTORIA, VICTORIA LOC. 15,
PEAK 96, BIG P2, LIGHTNING PEAK CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:

MINING DIVISION: Vernon
UTM ZONE: 11 (NAD 83)

LATITUDE: 49 53 39 N
LONGITUDE: 118 31 07 W
ELEVATION: 1890 Metres

NORTHING: 5527969
EASTING: 390929

LOCATION ACCURACY: Within 500M

COMMENTS: Quartz vein exposed in trench, located about 1.9 kilometres
northwest of Lightning Peak (Assessment Report 22875).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
DIMENSION: Metres
COMMENTS: Attitude of quartz vein.

STRIKE/DIP: 325/60E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Greenstone
Quartz Porphyry Dike
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch
Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
YEAR: 1993
CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 471.5000 Grams per tonne
Gold 18.0000 Grams per tonne

COMMENTS: Sample 9216 is of a pyritic, vuggy quartz vein.
REFERENCE: Assessment Report 22875.

CAPSULE GEOLOGY

The VICTORIA EAST showing is located on the northern slope of Lightning Peak, approximately 1.9 kilometres northwest of the summit. This occurrence is 220 metres northwest of the RAMPALO (082ENE032) adits.

The showing occurs in greenstone of the Devonian-Triassic Harper Ranch Group which is hosted by granodiorite and diorite of an unnamed Middle Jurassic intrusion. Near the showing, granodiorite intrudes the Harper Ranch Group and quartz porphyry dikes are commonly associated with quartz veining.

The first recorded work on the VICTORIA EAST showing is a 1930 description of surface work by the claim owner A. Scaia. The report describes a 15-centimetre wide quartz vein which strikes 325 degrees, dips 60 degrees northeast and is associated with a quartz porphyry dike. Pyrite is noted in the vuggy quartz vein.

In 1968-69, International Mine Services Ltd. carried out geochemical and geological surveys and a diamond drill program for the Great Horn Mining Syndicate. The VICTORIA EAST showing was covered by the PEAK 96 claim during this period. The International Mine Services program focused on the WATERLOO (082ENE017) mine, and

CAPSULE GEOLOGY

little attention appears to have been paid to the VICTORIA EAST area.

In 1984-85, Zalmac Mines Limited carried out VLF-EM and IP surveys over portions of the BIG P 1, 2 & 3 claims, which include the VICTORIA EAST area. The surveys identified 3 polarizable anomalies coincident with east-west VLF-EM conductors. It was speculated that these anomalies may represent mineralized shear zones. Several northeast trending conductors were detected by a 1985 VLF-EM survey. It was suggested that they could be extensions of the RAMPALO (082ENE032), VICTORIA and LUMPY (082ENE031) structures.

In 1991-92, Zalmac Mines Limited carried out a program of geological mapping, soil and rock sampling, surveying and aerial photograph studies of the general area around, and including, the VICTORIA EAST showing. Lineations identified by the aerial photograph study coincide with anomalous gold, silver and base metal soil geochemistry.

A grab sample from the VICTORIA EAST showing assayed 18 grams per tonne gold and 471.5 grams per tonne silver (Assessment Report 22875).

BIBLIOGRAPHY

EMPR AR 1933-A150; 1968-224
EMPR ASS RPT 1812, 2330, 12906, 13861, 17526, 19011, *22875
EMPR GEM 1969-300
EMPR EXPL 1984-30; 1985-C31; 1988-C25
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown; In 082ENE017 - International Mine Services Ltd., Location Map, 1968; In 082ENE032 - R.W. Yorke-Hardy (1993); Property Synopsis, Zalmac Property, P and Z Claims, Zalmac Mines Ltd.)
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.80A,108A

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/07

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE077**

NATIONAL MINERAL INVENTORY: 082E15 Ag3

NAME(S): **VICTORIA WEST**, VICTORIA, VICTORIA LOC. 15,
PEAK 96, BIG P2, LIGHTNING PEAK CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:
LATITUDE: 49 53 39 N
LONGITUDE: 118 31 17 W
ELEVATION: 1880 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Quartz vein exposed in trench, located about 1.75 kilometres
northwest of Lightning Peak (Assessment Report 22875).

MINING DIVISION: Vernon
UTM ZONE: 11 (NAD 83)
NORTHING: 5527974
EASTING: 390730

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite
COMMENTS: Galena and sphalerite are assumed from assay values.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Greenstone
Quartz Porphyry Dike
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1993
SAMPLE TYPE: Grab

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	54.7000	Grams per tonne
Gold	2.1000	Grams per tonne
Lead	0.3830	Per cent
Zinc	0.0950	Per cent

COMMENTS: Sample 9210 is of a pyritic, vuggy quartz vein.
REFERENCE: Assessment Report 22875.

CAPSULE GEOLOGY

The VICTORIA WEST showing is located on the northern slope of Lightning Peak, approximately 1.75 kilometres northwest of the summit. The showing is 260 metres west of a similar occurrence, the VICTORIA EAST (082ENE076) showing.

The showing occurs in greenstone of the Devonian-Triassic Harper Ranch Group which is hosted by granodiorite and diorite of an unnamed Middle Jurassic intrusion. In the vicinity of the showing granodiorite intrudes the Harper Ranch Group and quartz porphyry dikes are commonly associated with quartz veining.

The first recorded work on the VICTORIA WEST showing is a 1930 description of surface work by the claim owner A. Scaia. The report describes a 15-centimetre wide quartz vein striking 35 degrees and dipping steeply to the southeast. Mineralization consists of pyrite, and probably galena and sphalerite in a vuggy quartz vein.

In 1968-69, International Mine Services Ltd. carried out geochemical and geological surveys for the Great Horn Mining Syndicate. The VICTORIA WEST showing was covered by the PEAK 96 claim; however, little attention appears to have been paid to the

CAPSULE GEOLOGY

VICTORIA WEST area.

In 1984-85, Zalmac Mines Limited carried out VLF-EM and IP surveys over portions of the BIG P 1, 2 & 3 claims, which include the VICTORIA WEST showing. The surveys identified 3 polarizable anomalies coincident with east-west VLF-EM conductors. It was speculated that these anomalies may represent mineralized shear zones. Several northeast trending conductors were detected by a 1985 VLF-EM survey. It was suggested that they could be extensions of the RAMPALO (082ENE032), VICTORIA WEST and LUMPY (082ENE031) structures.

In 1991-92, Zalmac Mines Limited carried out a program of geological mapping, soil and rock sampling, surveying and aerial photograph studies of the general area around, and including, the VICTORIA WEST showing. Lineations identified by the aerial photograph study coincide with anomalous gold, silver and base metal soil geochemistry. Further work was recommended.

A grab sample from the VICTORIA WEST showing assayed 2.1 grams per tonne gold, 54.7 grams per tonne silver, 0.383 per cent lead and 0.095 per cent zinc (Assessment Report 22875). Another sample from a trench, 75 metres to the south, assayed 4.14 grams per tonne gold, 219 grams per tonne silver and 0.63 per cent lead (Assessment Report 22875).

BIBLIOGRAPHY

EMPR AR 1933-A150; 1968-224
EMPR ASS RPT 1812, 2330, 12906, 13861, 17526, 19011, *22875
EMPR GEM 1969-300
EMPR EXPL 1984-30; 1985-C31; 1988-C25
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown; In 082ENE017 - International Mine Services Ltd., Location Map, 1968; In 082ENE032 - *R.W. Yorke-Hardy (1993); Property Synopsis, Zalmac Property, P and Z Claims, Zalmac Mines Ltd.)
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT *1930A, p.80A,108A

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/07

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE078**

NATIONAL MINERAL INVENTORY:

NAME(S): **RICH ROCK**, TEE 4, BIG P GROUP,
LIGHTNING PEAK CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:
LATITUDE: 49 53 04 N
LONGITUDE: 118 33 16 W
ELEVATION: 1800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Trench 88TR-4A, located about 1.7 kilometres northwest of Lightning Peak (Assessment Report 17984).

MINING DIVISION: Vernon
UTM ZONE: 11 (NAD 83)
NORTHING: 5526941
EASTING: 388333

COMMODITIES: Silver Copper Tungsten

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite Arsenopyrite
COMMENTS: Possibly arsenopyrite.
ALTERATION: Limonite Siderite Wollastonite Garnet Silica
ALTERATION TYPE: Oxidation Skarn Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Massive Disseminated
CLASSIFICATION: Hydrothermal Skarn
TYPE: K01 Cu skarn K05 W skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic-Mesozoic Middle Jurassic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Limestone
Siliceous Limy Tuff
Volcanic Tuff
Hornfels
Garnet Wollastonite Skarn
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Harper Ranch

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 6.6000 Grams per tonne
Copper 0.1100 Per cent
COMMENTS: Grab sample from trench 88TR-4A.
REFERENCE: Assessment Report 17984.

CAPSULE GEOLOGY

The RICH ROCK showing is located in the upper watershed of Rendell Creek, approximately 1.7 kilometres northwest of Lightning Peak. The showing occurs in a pendant of limestone and volcanic tuff of the Devonian-Triassic Harper Ranch Group which is hosted by diorite and granodiorite of an unnamed Middle Jurassic intrusion. Mineralization at the RICH ROCK showing consists of pyrite, chalcopyrite and possibly arsenopyrite as streaks on fracture faces in a shear zone. A pyritic and siliceous limy tuff forms the hangingwall of the shear; grey-blue coloured limestone forms the footwall. At the south end of this exposure, the limestone has been partly altered to long-fibre wollastonite and garnet. Limonite is common in the shear zone, as are lenses and fracture-coatings of siderite. The limestone bedding dips steeply to the east. The Lightning Peak area has seen extensive exploration since the

CAPSULE GEOLOGY

early 1900s, with most of the effort directed at the silver-rich, polymetallic veins common in this camp. Trenches exist at the RICH ROCK showing which probably date from the 1930s, however no records of their origin exist.

In 1968-69, International Mines Services Ltd. carried out geochemical surveys in the general area north of the RICH ROCK showing.

In 1984-85, Zalmac Mines Limited carried out VLF-EM and IP surveys over portions of the BIG P 1, 2 & 3 claims to the north and northeast of the RICH ROCK showing. The 1984 surveys identified 3 polarizable anomalies coincident with east-west VLF-EM conductors. It was speculated that these anomalies may represent mineralized shear zones. In 1985, several east to northeasterly trending VLF-EM conductors were identified in the RICH ROCK area. No trenches were dug in this area during the 1985 trenching program, but an old trench was noted to expose a pyritic shear zone, hornfels and skarn.

In 1988, Zalmac Mines Ltd. carried out a trenching program on the RICH ROCK showing. Trench 88TR-4A exposed a steeply dipping bed of oxidized sulphides, 25 to 40 centimetres thick. The bed was followed for about 40 metres until soft ground prevented further excavation. A semi-massive to massive zone of sulphides occurs along the contact between the limestone and the meta-volcanics. Sulphides are disseminated in both the hangingwall and footwall of the zone.

A grab sample assayed 6.6 grams per tonne silver and 0.11 per cent copper (Assessment Report 17984). A sample of the semi-massive sulphide zone, collected during a 1991 re-examination of the showing, assayed 0.105 per cent copper and 0.284 per cent tungsten (Assessment Report 22875).

BIBLIOGRAPHY

EMPR AR 1968-224
EMPR ASS RPT 1812, 2330, *17984, *22875
EMPR GEM 1969-300
EMPR EXPL 1988-C25
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT 1930A

DATE CODED: 1996/06/28
DATE REVISED: 1996/06/30

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE079**

NATIONAL MINERAL INVENTORY:

NAME(S): **RICH ROCK WEST**, TEE 5, BIG P GROUP,
LIGHTNING PEAK CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E15E
BC MAP:
LATITUDE: 49 53 13 N
LONGITUDE: 118 33 21 W
ELEVATION: 1740 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Trench TR85-9, located about 2 kilometres northwest of Lightning Peak (Assessment Report 22875).

MINING DIVISION: Vernon
UTM ZONE: 11 (NAD 83)
NORTHING: 5527221
EASTING: 388239

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
COMMENTS: Galena is inferred from lead assay.
ASSOCIATED: Pyrite Quartz Carbonate
ALTERATION: Pyrite Silica Limonite
ALTERATION TYPE: Pyrite Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Disseminated
CLASSIFICATION: Hydrothermal
TYPE: * Unknown
COMMENTS: Shear-hosted.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Harper Ranch	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Greenstone
Schist
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Harper Ranch

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1985
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Silver	7.2000 Grams per tonne
Lead	0.2800 Per cent

COMMENTS: Grab sample from trench TR85-9.
REFERENCE: Assessment Report 13861.

CAPSULE GEOLOGY

The RICH ROCK WEST showing is located in the upper watershed of Rendell Creek, approximately 2 kilometres northwest of Lightning Peak. The showing occurs in a pendant of greenstone and schist of the Devonian-Triassic Harper Ranch Group which is hosted by diorite and granodiorite of an unnamed Middle Jurassic intrusion. Mineralization in the RICH ROCK WEST showing consists of a pyritic gouge with quartz and carbonate lenses in a shear zone within pyritic and siliceous meta-volcanics. The zone and host rocks are rusty weathering. Schist is also exposed in a trench at the showing. In 1968-69, International Mines Services Ltd. carried out a soil geochemical survey in the general area to the north and east of the RICH ROCK WEST showing. In 1984-85, Zalmac Mines Limited carried out VLF-EM and IP surveys over portions of the BIG P 1, 2 & 3 claims in the general area to the northeast of the RICH ROCK WEST showing. The 1984 surveys identified 3 polarizable anomalies coincident with east-west VLF-EM conductors. It was speculated that these anomalies may represent

CAPSULE GEOLOGY

mineralized shear zones. In 1985, several east to northeasterly trending VLF-EM conductors were identified in the RICH ROCK WEST area. Trench number TR85-8 was dug in this area, exposing a pyritic shear zone in meta-volcanics and schist. A grab sample from the trench assayed 7.2 grams per tonne silver and 0.28 per cent lead (Assessment Report 13861).

In 1991, the showing was examined by Placer Dome Inc. Three grab samples assayed 11.8, 17.6 and 18.2 grams per tonne silver (Assessment Report 22875).

BIBLIOGRAPHY

EMPR AR 1968-224
EMPR ASS RPT 1812, 2330, *13861, 17984, *22875
EMPR GEM 1969-300
EMPR EXPL 1985-C31; 1988-C25
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown)
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC OF 409; 637; 736; 1969
GSC SUM RPT 1930A

DATE CODED: 1996/06/28
DATE REVISED: 1996/06/30

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

In 1919, the adit, described as the lower tunnel, was driven westward into barren rock for about 50 metres. A 30-metre crosscut is also reported. In the following year, the tunnel was extended by another 30 metres. In 1921, a stock market promotion of Maple Leaf Mines collapsed, leaving a 104-metre tunnel, 96 metres of which was in barren rock, and a partly constructed 45-tonne smelter.

In 1964, Franklin Mines Ltd. sampled the mineralization exposed in the BEAVER tunnel. The average assay from 10.6 metres of channel sampling was 0.34 gram per tonne gold and 0.188 per cent copper (Assessment Report 637).

In the mid-1980s Longreach Resources Ltd. and Placer Dome Inc. carried out several exploration programs over the MAPLE LEAF (082ENE009) property, located several hundred metres to the northwest. However, there is no record that these programs included work on the BEAVER showing.

BIBLIOGRAPHY

EMPR AR 1914-353; 1917-201; 1918-206; *1919-165; 1920-153; 1921-181;
1964-112; 1965-172
EMPR ASS RPT *637, *17273
EMPR EXPL 1988-C22
EMPR OF 1994-8
EMPR RGS 29
EMPR PF (See General PF - Franklin Mining Camp File; See
PF 082ENE002 - Platinum Blonde Property, News Clippings, 1986-87)
GSC MAP 97A; 133A; 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A
GSC MEM 56
GSC OF 409; 736; 1969
Thomlinson, W. (1920): *Mineral Investigations - Platinum, Munitions
Resource Commission, Canada, Final Report, pp. 161-166.
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/01

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENE081**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRANO CREEK**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E10W
BC MAP:

Open Pit

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 33 00 N
LONGITUDE: 118 47 04 W
ELEVATION: Metres

NORTHING: 5490129
EASTING: 370928

LOCATION ACCURACY: Within 1 KM

COMMENTS: Quarry located at the confluence of Grano Creek and the Kettle River about 57 kilometres north of Rock Creek (Fieldwork 1996, pages 301-306).

COMMODITIES: Granite Dimension Stone Building Stone

MINERALS

SIGNIFICANT: Orthoclase Quartz Plagioclase Biotite Magnetite
ALTERATION: Chlorite Sericite
ALTERATION TYPE: Chloritic Sericitic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Magmatic Industrial Min.
TYPE: R03 Dimension stone - granite

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary Okanagan Batholith

LITHOLOGY: Porphyritic Granite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The GRANO CREEK quarry is located at the confluence of Grano Creek and the Kettle River on the east side of the valley, 57 kilometres north of Rock Creek. The quarry was opened by Quadra Stone Co. Ltd. in 1994 to sample the stone. No production has been recorded to date.

The quarry is located at the base of a large rock outcrop, almost free of joints, about 50 meters high and 150 metres long in steep cliffs on the Kettle River. It is comprised of porphyritic, pink granite of the Cretaceous-Tertiary Okanagan Batholith.

The stone is sound, with a smooth surface and no exfoliation features. The orthoclase megacrysts, mostly 1 by 2 centimetres in size, exhibit preferential orientation, probably reflecting flow during emplacement. The stone is uniform in texture with no inclusions or agglomerations of mafic minerals.

The stone is a classic porphyritic, pink granite. The matrix is grey and medium to coarse-grained with pink orthoclase megacrysts, mostly 1 to 2 centimetres long. The matrix comprises quartz, plagioclase and orthoclase with minor biotite, magnetite, chlorite and sericite. The orthoclase megacrysts show some perthitic texture and are frequently cracked. Alteration is minor with some chlorite and iron staining after mafic minerals (much less than 1/2 per cent). The rock has a moderately developed linear(?) fabric defined by a general preferred orientation of the orthoclase megacrysts. The polish of the rock is fair (7/10) with narrow (0.25 millimetre) cracks up to 40 millimetres long and some pitting. This is largely from preferred cracking parallel to cleavage in orthoclase megacrysts that persists into the matrix. Pitting is generally due to small fragments of matrix that have fallen out of the cracks.

BIBLIOGRAPHY

EI FIELDWORK *1996, pp.301-306
EMPR INFO CIRC 1994-19, p.17; 1995-1, p.17
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 165
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 409; 736; 1969

DATE CODED: 1997/01/14
DATE REVISED: 1997/01/14

CODED BY: ZDH
REVISED BY: DEJ

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082ENE082**

NATIONAL MINERAL INVENTORY:

NAME(S): **KAMI 5**

MINING DIVISION: Slocan

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E16W 082L01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 59 46 N
LONGITUDE: 118 27 25 W
ELEVATION: 1800 Metres

NORTHING: 5539215
EASTING: 395579

LOCATION ACCURACY: Within 1 KM
COMMENTS: Centre of Kami 5.

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic Nelson Intrusions

LITHOLOGY: Sericitic Foliated Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Trenching on the Kami 5 by Arnold Savjord, under a grant from the Prospector's Assistance Program, uncovered a series of narrow, gently dipping, gold and silver-rich quartz-pyrite-galena-sphalerite veins. These cut sericite-altered, foliated granodiorite of the middle Jurassic Nelson Plutonic suite. A 25-centimetre chip sample assayed 39.6 grams per tonne gold and 1000 grams per tonne silver (Exploration in BC 1997, page 41).

BIBLIOGRAPHY

EM EXPL *1997-40-41

DATE CODED: 1998/08/26
DATE REVISED: 1998/09/23

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW001**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAC**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W 092H16E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 49 52 03 N
LONGITUDE: 120 00 02 W
ELEVATION: 1500 Metres

NORTHING: 5528214
EASTING: 715535

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of area containing drillholes (Property file - Anuk River Mines Ltd. (1966): Surface Plan). See also 092HNE057 (Mac) and 092HNE047 (Brenda mine).

COMMODITIES: Molybdenum Copper

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite
ASSOCIATED: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic			Pennask Batholith

LITHOLOGY: Porphyritic Quartz Diorite
Granodiorite
Lamprophyre Dike
Trachyte Porphyry Dike

HOSTROCK COMMENTS: Brenda stock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: DRILLHOLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1966
SAMPLE TYPE: Drill Core	
<u>COMMODITY</u>	<u>GRADE</u>
Copper	0.1900 Per cent
Molybdenum	0.1520 Per cent

COMMENTS: Copper value is less than 0.2 per cent.
REFERENCE: Property File - Anuk River Mines Ltd. (1966): Surface Plan.

CAPSULE GEOLOGY

The MAC showing is located approximately 500 metres southwest of the Brenda mine mill site and approximately 21.5 kilometres northwest of Peachland. The area covered by the MAC claims adjoins the Brenda mine property (092HNE047).

This area is underlain by granodiorite and porphyritic quartz diorite of the Early Jurassic Pennask Batholith, which is locally known as the Brenda stock.

Fractured granodiorite contains small amounts of chalcopyrite and pyrite on or near veins and stockworks similar to those on the Brenda mine property (Minister of Mines Annual Report 1966, page 185). Lamprophyre and trachyte porphyry dikes trend easterly and are approximately 1 metre wide.

The MAC claims were held by Anuk River Mines Ltd. during the exploration boom around the Brenda mine in the late 1960s. In 1966, they carried out a major program which included 23 percussion drillholes and 1207 metres of diamond drilling in 15 holes. No assessment reports were filed on this program; however, other sources (Minister of Mines Annual Report 1966, page 185) state that all of the drillholes were collared in granodiorite, and that small amounts of copper and sub-economic molybdenum were encountered. Notations on a surface plan of the property indicate that drill cores assayed as

CAPSULE GEOLOGY

high as 0.152 per cent molybdenum; copper values were less than 0.2 per cent (Property File - Anuk River Mines Ltd.(1966): Surface Plan). The plan does not indicate if these are average or best assays.

BIBLIOGRAPHY

EMPR AR *1966-185; 1967-205
EMPR OF 1994-8
EMPR PF (*Anuk River Mines Ltd.(1966): Surface Plan)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969
CIM Special Volume 15, pp. 186-194

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW002**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUE HAWK**, BLUEHAWK, SPIKE,
KURTIS, DAWN, BEAR,
OK, TOWER, HILL,
RJ

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E13E
BC MAP:

Underground

MINING DIVISION: Vernon

LATITUDE: 49 59 02 N
LONGITUDE: 119 31 10 W
ELEVATION: 990 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5539882
EASTING: 319388

LOCATION ACCURACY: Within 500M

COMMENTS: Adit portal (Assessment Report 9074, Figure 1).

COMMODITIES: Gold Silver Lead Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Chalcopyrite Sphalerite Arsenopyrite

Pyrrhotite

ASSOCIATED: Quartz

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I01 Au-quartz veins

I05

Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: 180 x 1 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: The BLUE HAWK vein system has been exposed for 180 metres and veins are up to 1.2 metres thick.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Paleozoic-Mesozoic
Jurassic

GROUP

Harper Ranch

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Okanagan Intrusions

LITHOLOGY: Hornblende Diorite
Quartz Diorite
Andesite
Meta Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Harper Ranch

Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Channel

COMMODITY

GRADE

Silver

67.9800

Grams per tonne

Gold

19.3900

Grams per tonne

COMMENTS: Average gold and silver values from 10 channel samples from trench #1 which assayed greater than 3.4 grams per tonne gold.

REFERENCE: Property File - Dasler P.G. (1989): Report on the Kurtis Property.

CAPSULE GEOLOGY

The BLUE HAWK past producer is located approximately 2.3 kilometres southwest of Wilson Landing and 12.5 kilometres north of Westbank.

The BLUE HAWK deposit occurs in a large pendant of metasedimentary rocks of the Devonian-Triassic Harper Ranch Group. These are intruded by hornblende diorite and quartz diorite of the Jurassic Okanagan Intrusions.

The BLUE HAWK property was explored and operated by the Blue Hawk Syndicate during the 1930s. Development work consisted of shallow pits, trenches, an opencut and an adit driven to the northeast from the bottom of a short shaft. In 1934, 4.5 tonnes of ore were mined which yielded 156 grams of gold and 560 grams of silver (Minister of Mines Annual Report Index No. 3, page 190). Production was entirely from the adit. By 1938 a crosscut had been

CAPSULE GEOLOGY

driven approximately 150 metres to a vein. Drifting was reported to be in progress along the vein.

The veins, from narrow fractures to 1.2 metres thick, trend westerly to north-westerly along fractures and shears in the hornblende diorite. The veins seldom persist for more than 6 metres on strike without displacement and dissipation into the country-rocks. Many of the veins are en-echelon and are separated by shears, which also run parallel to the veins. Later bulldozer trenching exposed the BLUE HAWK vein system for a distance of approximately 180 metres. Mineralization consists of pyrite, minor galena and dark oxidation products. Traces of chalcopyrite, sphalerite and arsenopyrite are also noted in the veins, and disseminated chalcopyrite has been found in the diorite.

In 1967, Dawood Mines Ltd. of Kelowna acquired the property and over the next 7 years proceeded to carry out 400 metres of trenching, 1400 square metres of extensive stripping, geological mapping, line cutting and 18 kilometres of grid preparation, magnetometer surveys, and rock and soil geochemical surveys. Silver, copper and mercury soil geochemical anomalies were found in the vicinity of the BLUE HAWK veins and the diorite intrusions. Magnetometer anomalies were not coincident with soil geochemical anomalies. In 1980, N.C. Lenard re-sampled and evaluated the property for its similarity to the gold-bearing quartz veins of the Bralorne camp. Additional studies were carried out in 1984 by Tillicum Gold Mines Ltd. Their work confirmed the presence of auriferous pyrite in the BLUE HAWK quartz veins, but they concluded that gold values are erratic and mineralized zones lack continuity.

In 1987-88, Pinewood Resources Ltd. excavated and mapped 600 metres in trenches. They identified four directions of shearing and quartz vein mineralization. The best gold assays were associated with the north and north-west shear systems, and 3 areas were identified which produced gold assays in excess of 34 grams per tonne (Property File - Dasler P.G., 1989). These were the old original BLUE HAWK adit, Old Trench #5 located approximately 150 metres to the west of the adit, and Trench #1 approximately 75 metres north of the adit. The average assay of 10 channel samples from Trench #1, all of which assayed greater than 3.4 grams per tonne gold, was 19.39 grams per tonne gold and 67.98 grams per tonne silver (Property File - Dasler P.G., 1989). Gold assays correlated well with sulphides, especially pyrite.

In late 1988 Parkwood Resources Ltd. funded an induced polarization and resistivity survey over 7.1-line kilometres in the BLUE HAWK area. Anomalous zones were identified, including one subparallel to Jennie Creek with a minimum strike length of 1 kilometre. In 1989, Parkwood carried out trenching and a 3-hole diamond-drill program (244.8 metres) to explore the 1988 geophysical anomaly. The drill program found that the geophysical anomaly was caused by the presence of graphitic sediments and, locally, andesite, with weak disseminated pyrite and pyrrhotite mineralization. In 1991, Pinewood extended a soil sample grid to the north of known mineralization; however, it was unsuccessful in identifying new exploration targets. Drilling (5 holes, 610 metres) in 1993 attempted to intersect down dip extension to surface veins; results were poor (Assessment Report 23811).

BIBLIOGRAPHY

- EMPR AR 1933-A196; 1934-A24,D34; 1935-D13; 1938-D36; 1967-223
EMPR INDEX *3-190
EMPR ASS RPT 1894, 3934, 5303, *9074, 9414, 9969, 12519, 12732, 17501,
20003, 22110, 23811
EMPR BC METAL MM00425
EMPR EXPL 1983-48; 1984-29; 1988-C23
EMPR GEM 1969-299; 1972-46; 1974-62
EMPR OF 1989-5; 1994-8
EMPR PF (Asano, S.E. (1967): Blue Hawk Geological Report, Dawood
Mines Ltd.; Asano, S.E. (1968): Dawood Mines Ltd. Report on the
Vernon Mining Division, Wilson's Landing; Fox, P.E. (1972):
Geological Report on the Blue Hawk Prospect, Lambly Creek Area,
British Columbia, Dawood Mines Ltd.; Fox, P.E. (1974): Dawood
Mines Ltd. Blue Hawk Gold Prospect, includes maps; Dasler, P.G.
(1989): Report on Kurtis Property, Pinewood Resources Ltd.,
Prospectus dated January 11, 1989)
EMPR RGS 29
GSC MAP 538A; 539A; 15-1962; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969
GSC P 1937-23
GCNL #33, 1984

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 171
REPORT: RGEN0100

BIBLIOGRAPHY

IPDM Mar/Apr, 1984

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW003**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH BRENDA-CENTRAL**, TRE 6, 15, ANN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:
LATITUDE: 49 55 39 N
LONGITUDE: 119 59 52 W
ELEVATION: 1580 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of several mineralized outcrops (Assessment Report 5685).

MINING DIVISION: Osoyoos
Nicola
UTM ZONE: 11 (NAD 83)
NORTHING: 5534879
EASTING: 284852

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Malachite Biotite
ALTERATION: Pyrite Chlorite Epidote K-Feldspar Biotite
Hematite Quartz Malachite
ALTERATION TYPE: Propylitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic			Pennask Batholith

LITHOLOGY: Porphyritic Quartz Diorite

HOSTROCK COMMENTS: Brenda stock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The NORTH BRENDA-CENTRAL showing is located approximately 5 kilometres north of the Brenda mine open pit (092HNE047), and 25 kilometres northwest of Peachland.

The property is underlain by porphyritic quartz diorite of the Early Jurassic Pennask Batholith, locally known as the Brenda stock. Alteration of the quartz diorite is generally confined to fractures and to narrow alteration envelopes around those fractures. Four main alteration assemblages have been noted; quartz-hematite-pyrite, chlorite-epidote-potassium feldspar, biotite-chalcopyrite, and chlorite. The dominant trend of these fractures is northwest, in contrast to the northeast trend at the Brenda mine. Chalcopyrite mineralization is present as very thin fracture fillings with biotite. Cross-cutting relationships indicate that the chalcopyrite fracture fillings are the oldest. Malachite is found on weathered surfaces.

The showing was part of the extensive property holdings of Noranda Exploration Company Ltd in the 1960s. Numerous trenches, roads, and drillholes were left in this general area by Noranda; however, the results of this work was not filed as assessment work.

BIBLIOGRAPHY

EMPR AR 1965-163; 1966-184; 1967-205,211; 1968-215
EMPR ASS RPT *5685, 5691, 6062
EMPR EXPL 1975-E28; 1976-E31
EMPR GEM 1970-391; 1971-288; 1974-64
EMPR OF 1994-8
EMPR PF (Henrick, M.P. (1975): Diamond Drill Program on the TRE Claim Group (Preliminary Report), Canadian Occidental Petroleum)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 173
REPORT: RGEN0100

BIBLIOGRAPHY

CIM Special Volume 15, pp.186-194

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW004**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELK 7**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 36 20 N
LONGITUDE: 119 05 01 W
ELEVATION: 1060 Metres

NORTHING: 5496861
EASTING: 349461

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of shoreline exposures (Assessment Report 2804, Figure 1).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Magmatic Porphyry
TYPE: M ULTRAMAFIC/MAFIC ASSOCIATION L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	

LITHOLOGY: Hornblendite
Pyroxenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan
PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The ELK 7 showing is located on the east shore of the southernmost of the Arlington Lakes, across from Lakevale. This area was intensively explored in the early part of this century, especially during the period 1910-13 when the Kettle Valley Railway was built. In 1970, Durocop Mines Ltd. prospected the general area around the ELK 7 showing. In 1971, Hudson's Bay Oil and Gas Ltd. carried out a magnetometer survey of the area to the south. And in 1973, K.F. Brunning funded a soil geochemical survey and geological mapping of the area. The showing consists of several lake-shore outcrops of hornblendite and pyroxenite which contain disseminated chalcopyrite and pyrite. Magnetite is evident throughout the rock, in finely disseminated grains and bunches, in fracture fillings and in thin bands. The rocks appear to be a mafic intrusion within the Carboniferous-Permian Anarchist Group rocks, which are in contact with the Cretaceous Okanagan Batholith to the north. The LAKEVALE (082ENW040) past producer is located on the west side of Arlington Lakes, roughly across from the ELK 7 showing.

BIBLIOGRAPHY

EMPR ASS RPT *2804, 3352, 4461
EMPR GEM 1970-407; 1971-399; 1973-51
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8510G
GSC MEM 79
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW005**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELK 2**, DKD, BRU

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 35 52 N
LONGITUDE: 119 05 21 W
ELEVATION: 1060 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5496008
EASTING: 349035

LOCATION ACCURACY: Within 500M

COMMENTS: Eastern adit (Assessment Report 2804).

COMMODITIES: Molybdenum Copper Zinc

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite Sphalerite
COMMENTS: Chalcopyrite and sphalerite are assumed.
ASSOCIATED: Pyrite Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Porphyry Hydrothermal
TYPE: I VEIN, BRECCIA AND STOCKWORK L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Granodiorite
Hornblendite

HOSTROCK COMMENTS: Unnamed Middle Jurassic intrusion was previously mapped as Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Okanagan

CAPSULE GEOLOGY

The ELK 2 showing is located 500 metres south of Arlington Lakes and approximately 160 metres west of the railway tracks.

The Arlington Lakes area was extensively prospected in the early part of this century, especially during the period 1910-13 when the Kettle Valley Railway was built. In 1970, Durocop Mines Ltd. prospected the general area around the ELK 2 showing. In 1971, Hudson's Bay Oil and Gas Ltd. carried out a magnetometer survey of the area. In 1973, K.F. Brunning funded a soil geochemical survey and geological mapping of the area.

The ELK 2 showing is hosted by granodiorite of an unnamed Middle Jurassic intrusion near a contact with hornblendite of the Carboniferous-Permian Anarchist Group. This intrusion was previously mapped as the Middle Jurassic Nelson Intrusions (Geological Survey of Canada Map 1736A).

The showing consists of several mineralized quartz veins, adits trenches and a short shaft, all north of a small pond and west of the railway. The eastern adit has been driven on a 1.2 to 1.8-metre wide quartz vein. Another quartz vein, approximately 15 metres to the south, is noted to contain copper (chalcopyrite?). Approximately 20 metres to the northwest an adit has been driven on a 60-centimetre wide quartz vein containing copper (chalcopyrite?) and zinc (sphalerite?). A shaft, 120 metres to the west, has been sunk near a quartz vein, which is 1.2 metres wide on the surface. None of the old workings were accessible to exploration parties in the 1970s but it was noted that quartz on the shaft dump contained molybdenite. The strongest mineralization was noted in quartz which contained stringers or inclusions of granitic material. The molybdenite ranges from small specks to rosettes up to one inch in diameter. Minor amounts of copper (chalcopyrite?) were noted in the quartz veins. The granodiorite host is foliated and disseminated pyrite is evident in places. Overburden is heavy and the extent of the showing is not evident. Also included in the ELK 2 showing is a quartz vein 750 metres west of the adit. It was noted to contain molybdenite.

A similar mineral occurrence nearby is the ELK 4 (082ENW006)

CAPSULE GEOLOGY

showing, 220 metres south-southwest of the adit.

BIBLIOGRAPHY

EMPR ASS RPT *2804, 3352, *4461
EMPR GEM 1970-407; 1971-399; 1973-51
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8510G
GSC MEM 79
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW006**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELK 4**, DKD, BRU

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 35 46 N
LONGITUDE: 119 05 22 W
ELEVATION: 1060 Metres

NORTHING: 5495823
EASTING: 349010

LOCATION ACCURACY: Within 500M
COMMENTS: Pit (Assessment Report 2804).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Porphyry Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au
DIMENSION: Metres
COMMENTS: Attitude of vein exposed in pit.
STRIKE/DIP: 035/75N

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Granodiorite

HOSTROCK COMMENTS: Unnamed Middle Jurassic Intrusion has been previously mapped as Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The ELK 4 showing is exposed on the east side of a small pond about 750 metres south of Arlington Lakes. The Arlington Lakes area was extensively prospected in the early part of this century, especially during the period 1910-13 when the Kettle Valley Railway was built. In 1970, Durocop Mines Ltd. prospected the general area around the ELK 4 showing. In 1971, Hudson's Bay Oil and Gas Ltd. carried out a magnetometer survey of the area. And in 1973, K.F. Brunning funded a soil geochemical survey and geological mapping of the area. The showing is hosted by granodiorite of an unnamed Middle Jurassic intrusion. This intrusion has been previously mapped as the Nelson Intrusions (Geological Survey of Canada Map 1736A). The showing consists of a 2.5-metre deep pit which exposes a quartz vein containing pyrite and chalcopyrite. The vein strikes north 35 degrees east and dips 75 degrees northwest. A similar mineral occurrence, the ELK 2 (082ENW005) showing, is located 220 metres to the north.

BIBLIOGRAPHY

EMPR ASS RPT *2804, 3352, *4461
EMPR GEM 1970-407; 1971-399; 1973-51
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8510G
GSC MEM 79
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW007**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAURICE**, JACKPINE

MINING DIVISION: Vernon

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 55 05 N
LONGITUDE: 119 49 00 W
ELEVATION: 1350 Metres

NORTHING: 5533324
EASTING: 297809

LOCATION ACCURACY: Within 1 KM

COMMENTS: Centre of outcrops (Assessment Report 7363).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Pyrite Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic Jurassic			Pennask Batholith Okanagan Intrusions

LITHOLOGY: Quartz Monzonite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The MAURICE showing is located approximately 17 kilometres northwest of Westbank. The area was explored for a molybdenum porphyry target in the 1970s.

In 1975, M.R. Chaplin carried out 2,000 square metres of stripping on the MAURICE property. This was followed by additional stripping and trenching in 1976 and 1977. In 1978, Brenda Mines Ltd. carried out a program of road building, surveying, linecutting, soil sample surveys, geological mapping, and diamond drilling. Further diamond drilling was carried out in 1979.

The showing occurs in a coarse-grained quartz monzonite at the contact between the Early Jurassic Pennask Batholith to the south and granodiorite of the Jurassic Okanagan Intrusions to the north.

Mineralization consists of small blebs and occasional coarse rosettes of molybdenite in a series of parallel, east-west striking, subvertical quartz veins. The quartz veins are exposed in an area measuring approximately 1,000 metres along strike and 200 metres wide. Vein width varies from 2 to 8 centimetres. Minor disseminated pyrite and molybdenite are present in both the veins and for several metres distance in the host quartz monzonite.

BIBLIOGRAPHY

EMPR ASS RPT *7363, 7986
EMPR EXPL 1975-E28; 1976-E31; 1977-E35; 1978-E39; 1979-47
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW008**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH BRENDA-JEFF 43**, JEF NO. 43, JEFF 43,
TRE 19

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 56 33 N
LONGITUDE: 119 59 43 W
ELEVATION: 1550 Metres

NORTHING: 5536539
EASTING: 285098

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of a group of drillholes (Assessment Report 5691).

COMMODITIES: Copper

Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Malachite Biotite Quartz Epidote Microcline
Calcite

ALTERATION: Pyrite Chlorite Epidote K-Feldspar Biotite
Calcite Quartz Hematite

COMMENTS: Also Malachite.

ALTERATION TYPE: Propylitic Sericitic Argillic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia Disseminated Vein
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic Pennask Batholith

LITHOLOGY: Porphyritic Quartz Diorite

HOSTROCK COMMENTS: Brenda stock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The NORTH BRENDA-JEFF 43 showing is located approximately 6.5 kilometres north of the Brenda mine open pit (092HNE047), and 25.5 kilometres northwest of Peachland.

The property is underlain by porphyritic quartz diorite of the Early Jurassic Pennask Batholith, locally known as the Brenda stock. Alteration of quartz diorite is generally confined to fractures and to narrow alteration envelopes around those fractures. Four main alteration assemblages have been noted; quartz-hematite-pyrite, chlorite-epidote-potassium feldspar, biotite-chalcopyrite, and chlorite.

The showing was part of the extensive property holdings of Noranda Exploration Company Ltd. in the 1960s. Numerous trenches, roads, and drillholes were left in this general area by Noranda, including a trench where chalcopyrite, malachite and molybdenite mineralization is exposed.

The results of Noranda's exploration was not filed as assessment work, but other sources (Minister of Mines Annual Report 1967, page 205-206) report that the drilling located a mineralized breccia zone. The zone was thought to be arcuate in plan, concave to the west and narrowing to the north. It measured approximately 140 by 25 metres. The breccia is an explosive type developed in porphyritic quartz diorite with a biotite-rich matrix. The rock is cut by veins of quartz-microcline and quartz with epidote and calcite. Intense chlorite alteration occurs in and near the breccia, partly on numerous faults and shears which also show sericitic and argillic alteration in places. Specular hematite, pyrite, chalcopyrite and molybdenite occur partly in the veins and fractures, and partly disseminated in strongly altered rock.

In 1987, Brenda Mines Ltd. drilled 9 holes in the NORTH BRENDA-JEFF 43 area. No results were filed on this program.

BIBLIOGRAPHY

EMPR AR 1965-163; 1966-184; *1967-205,211; 1968-215
EMPR ASS RPT 1187, 1970, *5685, *5691, 6062
EMPR EXPL 1975-E28; 1976-E31
EMPR GEM 1970-391; 1971-288; 1974-64
EMPR OF 1994-8
EMPR PF (Notice of Completion of Work, Brenda Mines Ltd. dated
November 11, 1987)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969
CIM Special Volume 15, pp. 186-194

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW009**

NATIONAL MINERAL INVENTORY:

NAME(S): **WP-CATI**, BILL, BRUCE

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 51 30 N
LONGITUDE: 119 58 34 W
ELEVATION: 1360 Metres

NORTHING: 5527128
EASTING: 286101

LOCATION ACCURACY: Within 500M

COMMENTS: Outcrop with copper occurrence noted on map (Minister of Mines Annual Report 1967, Figure 22).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
COMMENTS: Chalcopyrite is assumed.

ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Porphyry
TYPE: L PORPHYRY

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic			Pennask Batholith

LITHOLOGY: Porphyritic Quartz Diorite
Trachyte Dike
Lamprophyre

HOSTROCK COMMENTS: Brenda stock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The WP-CATI showing is located 1 kilometre west of the Brenda mine (092HNE047) tailings pond, approximately 19 kilometres northwest of Peachland.

The showing consists of copper (chalcopyrite?) mineralization exposed in outcrops of a porphyritic quartz diorite of the Early Jurassic Pennask Batholith, locally known as the Brenda stock. The mineralization is believed to be hosted by quartz veins. Trachyte dikes and post-mineralization lamprophyre cut across the property.

During the exploration boom of the late 1960s this showing was held by Buttle Lake Mining Ltd. and Trojan Consolidated Mines Ltd. In 1967 they carried out a limited induced polarization survey on an area about 1 kilometre to the north of the WP-CATI showing. Weak anomalies were identified, which were subsequently drilled later that year. The results of the drilling are not on record.

BIBLIOGRAPHY

EMPR AR 1966-180; *1967-Fig. 22
EMPR ASS RPT 932
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969
CIM Special Volume 15, pp. 186-194

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW010**

NATIONAL MINERAL INVENTORY:

NAME(S): **COLLEX**, SUGNA

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 47 09 N
LONGITUDE: 119 46 33 W
ELEVATION: 1000 Metres

NORTHING: 5518516
EASTING: 300195

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralized outcrop (Assessment Report 9077).

COMMODITIES: Copper

Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic-Jurassic
Lower Jurassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Pennask Batholith

LITHOLOGY: Granodiorite
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The COLLEX showing is located 500 metres southeast of McCall Lake, approximately 3 kilometres northwest of Peachland.

The showing consists of chalcopyrite and molybdenite disseminated in propylitically altered granodiorite of the Early Jurassic Pennask Batholith. The mineralization occurs near a contact with Triassic-Jurassic Nicola Group andesite.

The showing was explored by Cambri Mining and Development Ltd. in 1966, who carried out a soil sampling and an induced polarization survey. Copper and molybdenum soil anomalies and a chargeability anomaly were identified in the vicinity of the COLLEX showing. In 1979-80, Brenda Mines Ltd. carried out a soil geochemical survey which identified a lead-zinc anomaly near the COLLEX showing; copper and molybdenum soil geochemistry did not appear to be a useful exploration technique.

BIBLIOGRAPHY

EMPR AR 1967-277
EMPR ASS RPT 928, 8148, *9077
EMPR EXPL 1980-43
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW011**

NATIONAL MINERAL INVENTORY:

NAME(S): **SID**, SID 2, SID 3,
KC

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 46 00 N
LONGITUDE: 119 49 36 W
ELEVATION: 750 Metres

NORTHING: 5516523
EASTING: 296456

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of diamond-drill holes (Geology, Exploration and Mining 1972,
page 45).

COMMODITIES: Copper

Molybdenum

MINERALS

SIGNIFICANT: Bornite Copper Chalcopyrite Molybdenite
ASSOCIATED: Pyrite Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Lower Jurassic

Pennask Batholith

LITHOLOGY: Quartz Diorite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The SID showing is located on the west side of Greata Creek, approximately 6 kilometres west of Peachland.

The showing consists of several mineralized occurrences identified by trenching and drilling on the former SID claim group. Granodiorite and quartz diorite of the Early Jurassic Pennask Batholith is sheared and cut by quartz veins. The shear zone is heavily iron stained.

In 1969, Brendako Mines Ltd. dug a 24-metre trench exposing chalcopyrite and pyrite in quartz veins in quartz diorite. In 1970, they drilled 2 diamond-drill holes totaling 55 metres on the SID 3 claim. A short distance to the north, on an adjacent property, Index Mines Ltd. drilled 3 holes on the SID 2 claim for a total of 82 metres. At both sites blebs of bornite, native copper and molybdenite were noted in drill core. In 1972, Index Mines Ltd. and Huntsman Resources Ltd. drilled 4 diamond-drill holes on SID 2 and SID 3 for a total of 72.5 metres. As above, blebs of bornite, native copper and molybdenite were noted in the drill core, but the assay results were not reported.

Other vein hosted mineral occurrences nearby are LITTLE DUNCAN (082ENW034) and PANORAMA (082ENW035).

BIBLIOGRAPHY

EMPR GEM *1969-293; 1970-392; *1972-45
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 185
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A; 7636G;
8521G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW013**

NATIONAL MINERAL INVENTORY:

NAME(S): **GLAD**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 41 42 N
LONGITUDE: 119 53 16 W
ELEVATION: 1400 Metres

NORTHING: 5508724
EASTING: 291749

LOCATION ACCURACY: Within 1 KM

COMMENTS: Centre of GLAD claims (Geology, Exploration & Mining 1969, page 293).

COMMODITIES: Copper Lead Silver

MINERALS

SIGNIFICANT: Tetrahedrite Galena
ASSOCIATED: Quartz
ALTERATION: Malachite Sericite
ALTERATION TYPE: Oxidation Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic Osprey Lake Intrusions

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The GLAD showing is located approximately 18 kilometres northwest of Summerland. It includes several mineral occurrences that were previously covered by the Glad claim group.

The area is underlain by granodiorite of the Middle Jurassic Osprey Lake Intrusions. This area was the subject of several copper exploration programs during the late 1960s. In 1967, a trenching and blasting program was carried out on the showing by Koporok Mines Ltd. This was followed by an aerial magnetometer survey in 1969. In the late 1970s the exploration focus changed to uranium, with several regional programs being carried out by Canadian Occidental Petroleum Ltd. These programs included prospecting, geological mapping, and collection of stream and lake sediment and water samples, line-cutting and soil sampling.

The trenches expose rare, thin veins of tetrahedrite, galena, and quartz emplaced along and near a minor east dipping shear zone in granodiorite. A short distance to the east, abundant quartz veins carry small amounts of malachite. To the north, approximately 500 metres, quartz veins occur in a stockwork of shattered veins in sericitized granodiorite and accompanied by masses of creamy potash feldspar, muscovite and rare nests of limonite. Approximately 500 metres south of the trenches, a silver-bearing galena vein was found by Koporok Mines Ltd. No additional information exists on this vein.

BIBLIOGRAPHY

EMPR AR *1967-214
EMPR ASS RPT 1843, 7310
EMPR EXPL 1978-E37; 1979-44
EMPR GEM *1969-227, 293, 351
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A; 7686G;
8521G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW013**

MINFILE NUMBER: **082ENW014**

NATIONAL MINERAL INVENTORY:

NAME(S): **ARNIE, X, WENDY,**
COL, JOHN

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 00 N
LONGITUDE: 119 57 52 W
ELEVATION: 1220 Metres

NORTHING: 5503938
EASTING: 286024

LOCATION ACCURACY: Within 500M
COMMENTS: Diamond-drill hole 75-2 (Assessment Report 5811).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Pyrite Biotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Osprey Lake Intrusions

LITHOLOGY: Granodiorite
Diorite
Aplite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1975
SAMPLE TYPE: Drill Core
COMMODITY: Copper GRADE 0.7200 Per cent
COMMENTS: Best intersection was in diamond-drill hole 75-2 from 7.6 to 9.1 metres.
REFERENCE: Assessment Report 5811.

CAPSULE GEOLOGY

The ARNIE showing is located on the south side of the Trout Creek valley, approximately 21 kilometres west-northwest of Summerland.

The showing consists of disseminated pyrite and chalcopyrite in granodiorite of the Middle Jurassic Osprey Lake Intrusions. Traces of molybdenite are also reported.

In 1966, Lodestar Mines Ltd. carried out a program of soil sampling and trenching (7 trenches/275 metres), followed by additional soil sampling in 1967. In 1975, Canadian Occidental Petroleum Ltd. optioned the ARNIE property. They embarked on a program of property work which included line-cutting, a 24 line-kilometre induced polarization survey, and diamond drilling (3 holes, 300 metres) on geochemical and geophysical anomalies. Work continued in 1975 with geological mapping; rock, soil and stream geochemical surveys; road construction; and diamond drilling (3 holes, 275 metres).

Sulphide mineralization is restricted to an early mafic (biotite-rich) phase of the granodiorite and the diorite, which is intruded by the granodiorite, is barren. The mineralization usually occurs as anhedral disseminations, but a concentration of chalcopyrite was found associated with a leucocratic quartz-rich xenolith in one drillhole. Aplite dikes and orthoclase-epidote filled fractures are common.

The best drill intersection was in hole 75-2 and consisted of

CAPSULE GEOLOGY

0.72 per cent copper between 7.6 to 9.1 metres, and 0.54 per cent copper between 48.7 to 50.2 metres depth (Assessment Report 5811). The surface area of the granodiorite intrusion was thought to be approximately 360 metres by 360 metres. Canadian Occidental concluded that the mineralization was sub-economic and no further work was carried out.

BIBLIOGRAPHY

EMPR AR 1966-187; 1967-277
EMPR ASS RPT 984, 1567, 5571, 5572, 5686, *5811
EMPR GEM 1974-61; 1975-E27
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A; 7686G;
8521G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW015**

NATIONAL MINERAL INVENTORY:

NAME(S): **ARLINGTON**, CU, CAPTAIN GORDON

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 35 11 N
LONGITUDE: 119 04 23 W

NORTHING: 5494709
EASTING: 350165

ELEVATION: 1220 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location of sample containing high copper-silver values (Assessment Report 4720).

COMMODITIES: Copper

Silver

MINERALS

SIGNIFICANT: Chalcopyrite

ASSOCIATED: Pyrite

Quartz

Calcite

ALTERATION: Silica

Chlorite

Epidote

ALTERATION TYPE: Silicific'n

Chloritic

Epidote

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

Breccia

CLASSIFICATION: Hydrothermal

Epigenetic

TYPE: I06 Cu±Ag quartz veins

I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE

Upper Paleozoic

Middle Jurassic

GROUP

Anarchist

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY:

Granite Gneiss
Siliceous Chlorite Hornblende Schist
Quartz Diorite
Skarn

HOSTROCK COMMENTS:

Unnamed intrusion was previously mapped as Middle Jurassic Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

Okanagan

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1973

SAMPLE TYPE: Channel

COMMODITY

GRADE

Silver

63.0000

Grams per tonne

Copper

0.9200

Per cent

COMMENTS: Channel sample over 0.6 metres.

REFERENCE: Assessment Report 4720.

CAPSULE GEOLOGY

The ARLINGTON showing is located on the southeast slope of Arlington Mountain, approximately 13 kilometres north-northeast of Carmi.

The Arlington Mountain area has numerous old workings, pits, and adits which date from the early 1900s. More recent work includes a prospecting program in 1970 by Durocop Mines Ltd.; a magnetometer survey for Hudson's Bay Oil and Gas Ltd. in 1971; and a prospecting and geological mapping program in 1973 for K.F. Brunning. Additional prospecting was carried out in 1987 by James McLeod for Edward Carson & Associates.

The showing occurs near a contact between an unnamed Middle Jurassic quartz diorite intrusion, which has been mapped in the past as Middle Jurassic Nelson Intrusions (Geological Survey of Canada Map 1736A), and a chlorite hornblende schist which may be part of the Carboniferous-Permian Anarchist Group.

The showing has been trenched and a shaft/pit dug. A 1936 description describes the showing as a brecciated zone partly cemented with quartz and calcite and mineralized with chalcopyrite

CAPSULE GEOLOGY

and pyrite, and said to carry values in silver and copper (Geological Survey of Canada Map 539A). The 1987 work suggested that the dominant lithology at this location is granite gneiss. A channel sample in 1973 assayed 0.92 per cent copper and 63 grams per tonne silver over 60 centimetres (Assessment Report 4720). High-grade grab samples in 1987 assayed up to 1.61 per cent copper, 0.08 per cent lead, 0.02 per cent zinc and 85.3 grams per tonne silver (Assessment Report 17030).

The 1971 magnetometer survey identified a magnetic anomaly along the geological contact between a gneissic diorite and a mafic diorite. It was noted that copper mineralization is coincident with this magnetic anomaly.

BIBLIOGRAPHY

EMPR ASS RPT 3352, 4461, *4720, *17030
EMPR EXPL 1988-C22
EMPR GEM 1971-399; 1973-51
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 539A; 15-1961; 1701A; 1712A; 1713A; 1714A; *1736A;
7686G; 8510G
GSC MEM 79 p. 129
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW016**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEACHLAND LIMESTONE**, CAMP HEWITT 1, DEEP

STATUS: Past Producer Open Pit

MINING DIVISION: Osoyoos

REGIONS: British Columbia

NTS MAP: 082E13E

BC MAP:

LATITUDE: 49 46 47 N

LONGITUDE: 119 44 36 W

ELEVATION: 500 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Limestone quarry (Assessment Report 673, Map 3).

UTM ZONE: 11 (NAD 83)

NORTHING: 5517751

EASTING: 302509

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite

ASSOCIATED: Pyrite Graphite

MINERALIZATION AGE: Triassic-Jurassic

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.

TYPE: R09 Limestone

DIMENSION: 800 x 200 Metres

COMMENTS: Dimensions of limestone band. Bedding strikes north-northeast, dips moderately west. STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic-Jurassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The PEACHLAND LIMESTONE deposit is located within the Peachland District Municipality approximately 750 metres west of Pincushion Bay on Okanagan Lake.

Limestone was quarried at this site for the production of lime sometime in the 1920s and 1930s. The amount of limestone quarried is not recorded. The quarry is approximately 55 metres long by 28 metres wide, and is excavated in a north trending limestone outcrop of the Triassic-Jurassic Nicola Group. The limestone outcrops to the northeast, suggesting that it forms a 200 metre wide band which trends northeast for about 800 metres in greenstone. Thin bedded limestone in the quarry strikes north-northeast and dips moderately to the west. The limestone is very fine to medium-grained and has a colour index of 4, indicating that it is grey to bluish grey in colour (Open File 1992-18, page 137). Graphitic seams and traces of pyrite are present.

BIBLIOGRAPHY

EMPR ASS RPT *673, 12272
EMPR OF *1992-18, 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 481; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW017**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALMA MATER**, RAT 22, GREATA,
OKA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:
LATITUDE: 49 47 39 N
LONGITUDE: 119 57 18 W
ELEVATION: 1240 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Eastern adit (Assessment Report 15834, Plate 1).

Underground
MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5519936
EASTING: 287337

COMMODITIES: Silver Lead Molybdenum Zinc

MINERALS

SIGNIFICANT: Galena Molybdenite Sphalerite
COMMENTS: Sphalerite is rare. Gold was reported in 1899, but recent work indicated yielded low assays.
ASSOCIATED: Quartz Pyrite
ALTERATION: Epidote
ALTERATION TYPE: Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein Breccia Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Nicola	Undefined Formation	Pennask Batholith
Lower Jurassic			

LITHOLOGY: Feldspar Porphyry
Greenstone
Granodiorite
Meta Diorite

HOSTROCK COMMENTS: Lithologies suggest a copper-porphyry environment which is common in this area.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
YEAR: 1979
COMMODITY GRADE
Molybdenum 0.0030 Per cent
Lead 0.0040 Per cent
COMMENTS: Average values over 135.1 metres in diamond-drill hole GR-3-79.
REFERENCE: Assessment Report 7872.

CAPSULE GEOLOGY

The ALMA MATER showing is located approximately 15 kilometres north-northwest of Peachland.

The area is underlain by the Early Jurassic Pennask Batholith. Triassic-Jurassic Nicola Group rocks are exposed in the underground workings of the ALMA MATER and also outcrop about 500 metres to the northeast.

The first work recorded on the ALMA MATER was in 1898 when the Canadian-American Mining and Development Company of Peachland drove 3 adits, 66 metres, 22 metres, and 35 metres long, respectively. Three shafts, 3 metres, 4 metres, and 4.25 metres deep, are also recorded as having been sunk about this time. It was noted that the ore "runs well" in gold and silver (Minister of Mines Annual Report 1899, page 748). The almost complete absence of gold in the assays of more recent exploration programs does not support that observation.

In 1963, molybdenite is reported to have been discovered in old waste dumps in the area by R.S. Taylor and J.E. Nott. The area,

CAPSULE GEOLOGY

including the ALMA MATER and the SILVER KING (082ENW018) occurrences, was subsequently staked as the Rat No. 1-26 and the Big Daddy No. 13 mineral claims for Orville Burkinshaw. Trenching and test-pitting was carried out in the vicinity of the old workings in 1964. The results of this program were not recorded.

In 1965, Dr. M.C. Robinson, in a report for King Resources Ltd. notes that the old tunnels contain a number of quartz veins with pyrite and in places galena and possibly molybdenite. He recorded that the lower tunnel was driven along a zone of east-northeast striking and south dipping shearing which defines a contact between a feldspar porphyry and a greenstone. The upper tunnel was collared in feldspar porphyry but passed through into the granodiorite. The intermediate tunnel was caved but was collared in feldspar porphyry. Mineralization exposed in the upper and lower adits consisted of irregular thin stringers and lenses of quartz containing small amounts of pyrite and very minor galena. Very finely disseminated sulphides, consisting of pyrite, galena and possibly molybdenite were noted in the granitic rocks exposed in the adits.

In 1978, Brenda Mines Ltd. restaked the area, including both the ALMA MATER and the SILVER KING (082ENW018) showings, as the Greata III to V and Greata IX and X claim blocks. Geological and geochemical surveys done in 1978 were followed up by an I.P. survey and a drill program in 1979. Two diamond-drill holes, for a total of 200 metres, were drilled in the vicinity of the ALMA MATER. Quartz veins mineralized with molybdenite were intersected and some continuity was established between the holes; however, the mineralization was well below economic concentrations. A 1-metre zone of brecciated granodiorite containing several phase I and phase II quartz veins was intersected at 17 metres depth in hole GR-3-79. It contained tiny rosettes of molybdenite and fine grained pyrite. Assays did not identify anomalous molybdenum for the 2 metre sample interval which included the brecciated granodiorite. The average molybdenum content of the drill core for the best hole (GR-3-79) was 0.003 per cent over 135.1 metres, lead assays averaged 0.004 per cent for the same interval (Assessment Report 7872). An intersection of meta-diorite contained small amounts of disseminated sphalerite and randomly oriented epidote veins.

In 1986, Cordilleran Engineering staked the OKA 1 - 11 claim block, which included the ALMA MATER showing, for Fairfield Minerals Ltd. Their exploration program in 1986 included prospecting and sampling of the ALMA MATER showing. Grab sample assays returned silver values as high as 254 grams per tonne (Assessment Report 15834). Gold assays were uniformly low. Details of sample mineralogy are lacking, as are base metal assays, but the highest silver values were from samples collected approximately 60 metres south of the eastern adit. The work for Fairfield Minerals was mainly focused on gold occurrences to the east, including: BOLIVAR WEST (082ENW098), BOLIVAR EAST (082ENW099), BOLIVAR ROAD (082ENW100), BOLIVAR CREEK (082ENW101), IRON HORSE (082ENW025), and CAP (082ENW026).

BIBLIOGRAPHY

EMPR AR 1898-1130; 1899-748; *1964-103; 1967-212
EMPR ASS RPT *718, 1110, *7872, *15834, 16761, 16788, 21923
EMPR EXPL 1978-E38; 1979-46
EMPR PF (Fairfield Minerals Ltd., Property summary dated May 14, 1987; Fairfield Minerals Ltd., Statement of Material Facts, June 30, 1987; See 092HNE096)
EMPR OF 1989-5; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A; 7686G; 8522G
GSC OF 409; 736; 1969
N MINER Dec. 15, 1986

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW018**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER KING**, RAT 1, OKA,
GREATA, BIG DADDY

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:
LATITUDE: 49 47 49 N
LONGITUDE: 119 58 08 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit portal (Assessment Report 15834).

Underground
MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5520284
EASTING: 286349

COMMODITIES: Silver Gold Lead Molybdenum Copper
Zinc

MINERALS

SIGNIFICANT: Gold Galena Molybdenite Chalcopyrite Sphalerite
ASSOCIATED: Pyrite Quartz
ALTERATION: Silica Sericite Epidote Chlorite Calcite
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Nicola	Undefined Formation	Pennask Batholith
Lower Jurassic			

LITHOLOGY: Quartz Diorite
Diorite
Granodiorite
Sediment/Sedimentary Rock
Volcanic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 68.0000 Grams per tonne
COMMENTS: Highest value from samples taken near the shaft.
REFERENCE: Assessment Report 15834.

CAPSULE GEOLOGY

The SILVER KING mine is located approximately 16 kilometres north-northwest of Peachland. The area is underlain by granodiorite of the Early Jurassic Pennask Batholith. Outcrops of Triassic-Jurassic Nicola Group sedimentary and volcanic rocks occur approximately 500 metres to the northeast.

Work on the property dates back to the late 1890's when underground development work was commenced by the Canadian-American Mining and Development Company. As of 1898 the workings consisted of a 4.5-metre shaft, a 33-metre tunnel and a 6-metre crosscut on the shear zone. Also constructed on this shear was an 8-metre winze with a 12-metre crosscut. Gold in quartz veins, in a shear zone, was reported to be free milling (Minister of Mines Annual report 1898, page 1130). Limited production is recorded during the period 1939 to 1941, when a total of 244 tonnes of ore were mined which yielded 15,116 grams of silver and 1,618 grams of gold (Minister of Mines Annual Report Index No. 3, page 213).

In 1963, molybdenite is reported to have been discovered in old waste dumps in the area by R. S. Taylor and J. E. Nott. The area, including the ALMA MATER (082ENW017) and the SILVER KING occurrences,

CAPSULE GEOLOGY

was subsequently staked as the Rat No. 1-26 and the Big Daddy No. 13 mineral claims for Orville Burkinshaw. Trenching and test-pitting was carried out in the vicinity of the old workings in 1964. The results of this program were not recorded; however, it was observed that mineralization consists of threads and stringers of molybdenite with sparse coarse pyrite and rare chalcopyrite. All of the mineralization was associated with a white, siliceous, fine-grained but unevenly textured rock locally termed "white rock". In thin section, the rock was seen to be comprised chiefly of quartz with much altered plagioclase, carbonate, and phlogopite mica with lesser apatite and cordierite.

In 1965, Dr. M.C. Robinson, in a report for King Resources Ltd. notes that there was little evidence of work since the 1890's and that the lack of stoping in the workings suggest that the shipped tonnages, if any, cannot have been significant. In 1965, the workings consisted of an adit collared in granodiorite and in a zone of northerly trending and southerly dipping shearing. Quartz with pyrite and minor very fine-grained grey sulphides including galena are present along the slips and disseminated in the shear and wallrock. A crosscut driven northeasterly from a point 21 metres from the portal follows a shear containing small veins, lenses, and masses of quartz, quartz-pyrite and solid pyrite. The innermost 27 metres of the tunnel explores a strong zone of shearing 0.3 to 1.2 metres thick. The zone strikes northerly and dips to the east at 50 to 65 degrees. It is composed largely of gouge and crushed rock. The zone is poorly to non-mineralized, except for quartz and minor amounts of pyrite.

In 1967 Anuk River Mines Ltd. carried out geological and geochemical surveying, trenching and 305 metres of diamond drilling in 3 holes. The geochemical survey did not produce anomalies. Mineralization in the drill core was sparse and consisted of black sphalerite with minor amounts of chalcopyrite and pyrite. The hostrock in all three holes was sheared quartz diorite, or granodiorite, with few or no quartz veins but containing epidote, calcite and chlorite seams and veinlets.

In 1978, Brenda Mines Ltd. restaked the area, including both the ALMA MATER (082ENW017) and the SILVER KING showings, as the Greata III to V and Greata IX and X claim blocks. Geological and geochemical surveys done in 1978 were followed up by an I.P. survey and exploration drill program in 1979. Two diamond-drill holes, for a total of 79 metres, were drilled in the vicinity of the SILVER KING to test the extent of a sericitized diorite. The results were discouraging, only traces of molybdenum were encountered and the sericite alteration zone was found to be only 9 metres thick (Assessment Report 7872).

In 1986, Cordilleran Engineering staked the OKA 1 - 11 claim block, which included the SILVER KING and ALMA MATER showings, for Fairfield Minerals Ltd. Their exploration program in 1986 included prospecting and sampling of the SILVER KING showing. Grab sample assays returned silver values as high as 68 grams per tonne (Assessment Report 15834). Gold assays were uniformly low. Details of sample mineralogy are lacking, as are base metal assays, but the highest silver values were from samples collected in the vicinity of the shaft. The work for Fairfield Minerals was mainly focused on gold occurrences to the east, including: BOLIVAR WEST (082ENW098), BOLIVAR EAST (082ENW099), BOLIVAR ROAD (082ENW100), BOLIVAR CREEK (082ENW101), IRON HORSE (082ENW025), and CAP (082ENW026).

BIBLIOGRAPHY

EMPR AR *1898-1130; 1899-748; 1940-A24; 1941-A25; *1964-103; 1967-212
EMPR INDEX 3-213
EMPR ASS RPT 718, 1110, *7872, *15834, 16761, 16788, 21923
EMPR BC METAL MM00361
EMPR EXPL 1978-E38; 1979-46
EMPR OF 1989-5; 1994-8
EMPR RGS 29
EMPR PF (Summary of Exploration and Development Work Performed in 1967, Dept. of Mines, Victoria; See 082ENW017)
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969
N MINER Dec. 15, 1986

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW019**

NATIONAL MINERAL INVENTORY:

NAME(S): **CAMP HEWITT 2**, DEEP, SMITH FARM

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13E
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 46 44 N
LONGITUDE: 119 44 25 W
ELEVATION: 500 Metres

NORTHING: 5517650
EASTING: 302726

LOCATION ACCURACY: Within 500M

COMMENTS: Winze (Assessment Report 673).

COMMODITIES: Lead Zinc Copper

MINERALS

SIGNIFICANT:	Galena	Sphalerite	Malachite	Azurite
ASSOCIATED:	Quartz	Pyrite		
ALTERATION:	Limonite	Malachite	Azurite	
ALTERATION TYPE:	Oxidation			
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic-Jurassic	Nicola	Undefined Formation	Pennask Batholith
Lower Jurassic			

LITHOLOGY: Granodiorite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Quesnel Plutonic Rocks

CAPSULE GEOLOGY

The CAMP HEWITT 2 showing is located within the Peachland District Municipality, approximately 500 metres west of Pincushion Bay.

The showing consists of quartz veins exposed by a short winze and adit. The veins are hosted by granodiorite of the Early Jurassic Pennask Batholith. A pendant of Triassic-Jurassic Nicola Group limestone is also exposed at this location.

The old workings are attributed to the Camp Hewitt Mining and Development Company which was active in this area during the period 1896-99. The winze exposes several small, near-vertical shears striking 40 degrees, and irregular quartz veining in and adjacent to the slips. The veining contains some pyrite and a trace of galena and sphalerite, as well as limonite, malachite and azurite staining. The adit exposes an irregular, thin, lenticular quartz vein striking easterly and dipping at 70-75 degrees to the north. No sulphides were seen in this vein but limonite and malachite stains were noted.

In 1965, Quinalta Petroleum Ltd. drilled two 30-metre diamond-drill holes at this location, one beside each of the old workings. In 1966, King Resources Company continued the 1965 program by drilling a 26-metre diamond-drill hole near the adit. All 3 holes were drilled in Nicola Group limestone and all contained minor amounts of pyrite.

In 1972, Vega Mines Ltd. carried out a soil geochemical survey centred over the CAMP HEWITT 3 (082ENW022) area 600 metres to the northwest; copper and zinc anomalies were found. In 1984, Charles Brett funded a VLF-EM survey over the same general area to the northwest. The survey was able to help identify lithological features in areas covered by overburden, but was not useful in defining shear zones.

BIBLIOGRAPHY

EMPR AR 1896-579; 1887-609; 1898-1130; 1899-748; 1966-244
EMPR ASS RPT *673, 766, 3641, 3913, 12272
EMPR EXPL 1984-30

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 197
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM 1972-45
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW020**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAKEVIEW**, LAKEVIEW (L.1001), SILVER BELL,
SILVER CUP, SUE, LYLA NO. 2

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:
LATITUDE: 49 46 06 N
LONGITUDE: 119 46 33 W
ELEVATION: 760 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Centre of area containing several trenches and a shaft (Assessment Report 9077).

Underground
MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5516571
EASTING: 300123

COMMODITIES: Zinc Copper Lead Molybdenum

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Galena Molybdenite Chalcocite
ASSOCIATED: Quartz Pyrite Magnetite
ALTERATION: Chlorite Epidote Calcite Malachite Azurite
Hematite Biotite K-Feldspar
ALTERATION TYPE: Propylitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic Pennask Batholith

LITHOLOGY: Granodiorite
Amphibolite Dike
Feldspar Porphyry Syenite
Gabbro
Pyroxenite
Hornblendite
Gneiss
Porphyritic Dacite

HOSTROCK COMMENTS: Amphibolite dikes, syenite and quartz monzonite plugs intrude Pennask granodiorite.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The LAKEVIEW showing is located approximately 1.5 kilometres west of Peachland. The showing consists of disseminated sphalerite, chalcopyrite, pyrite, galena, and molybdenite within granodiorite of the Early Jurassic Pennask Batholith. The southern side of the mineralized zone, which measures approximately 100 by 300 metres, is bounded by a feldspar-porphyry syenite intrusion. Amphibolite dikes are present along the north side. Propylitic alteration of the granodiorite is pervasive in the mineralized zone.

The property was optioned in 1957 by Canadian Exploration Limited, who carried out a program of stripping (6000 square metres), and 211 metres of diamond drilling in 8 holes. The results were discouraging and the option dropped. In 1965, King Resources Ltd. carried out a program of mapping, prospecting and trenching. Their work included examination of the LYLA NO. 2 showing, now known as the LAKEVIEW. They found a shaft 5 metres deep sunk on a quartz vein which contained fine to medium-grained pyrite and minor galena and sphalerite. Azurite and malachite were noted on nearby joint surfaces. The shaft was reported to have been sunk in the late 1890s by the Camp Hewitt Gold Mining Company. In 1967, a trenching program was funded by Pine Pacific Mines Ltd. and Slave Pacific Mines Ltd. Seventeen trenches were excavated for a total of approximately 490 metres of trenching. In 1979-80, Brenda Mines Ltd. carried out a program of prospecting and soil geochemistry. The program identified a lead-zinc soil anomaly in the vicinity of the LAKEVIEW showing.

Another mineral occurrence, the SILVER CUP, is included with

CAPSULE GEOLOGY

this showing, and is believed to be located several hundred metres to the east. Mineralization consists of minor amounts of magnetite, hematite, pyrite, chalcopyrite and chalcocite in small shears and slickensided low-angle fractures. These are hosted by an epidote-chlorite-biotite-potassium feldspar altered gabbro. Pyroxenite, hornblendite, gneiss and porphyritic dacite are also present. Malachite staining is noted near contacts. No additional information is available on the SILVER CUP occurrence.

BIBLIOGRAPHY

EMPR AR 1957-35; 1965-242; 1967-213
EMPR ASS RPT 673, 928, 8148, *9077
EMPR EXPL 1980-43
EMPR OF 1994-8
EMPR PF (Geological sketch map of Sliver Bell #1 mineral claim
c.1957; White, G. (1976): Memorandum Re: Don Campbell - Peachland)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW021**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROSE-MUNRO LAKE**, JASS, HEN,
MUN, GLEN, ROSE,
DALE, MUNRO LAKE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:
LATITUDE: 49 44 19 N
LONGITUDE: 119 56 46 W
ELEVATION: 1650 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Diamond drill hole DDH MUN 4-77 (Assessment Report 6558).

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5513735
EASTING: 287734

COMMODITIES: Silver Copper Zinc Lead Molybdenum

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite
ASSOCIATED: Pyrite Quartz Orthoclase
ALTERATION: Saussurite Sericite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au 105 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic Osprey Lake Intrusions

LITHOLOGY: Porphyritic Granodiorite
Quartz Latite Porphyry Dike
Quartz Monzonite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: TRENCH REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Channel
COMMODITY GRADE
Silver 3.0600 Grams per tonne
Copper 0.0500 Per cent
Molybdenum 0.0030 Per cent
Lead 0.0080 Per cent
Zinc 0.1500 Per cent

COMMENTS: Average values from channel samples over 108.2 metres of north trench.
REFERENCE: Assessment Report 10445.

CAPSULE GEOLOGY

The JASS showing is located 500 metres south of Eneas Lakes Provincial Park and approximately 24 kilometres northwest of Summerland.

The showing is hosted by a light-grey, weakly saussuritized porphyritic granodiorite of the Middle Jurassic Osprey Lake Intrusions. It is intruded by Tertiary dikes of quartz latite porphyry and quartz monzonite. Fracturing and cross-fracturing is common; one conspicuous fracture set has a strike between northeast and east with a steep southerly dip, and cross-fractures have various attitudes. Quartz and orthoclase form partly drusy veinlets up to 0.5 centimetre thick. Low grade alteration is pervasive with local narrow envelopes of sericitized country rock enclosing mineralized fractures and quartz veins. Pyrite, molybdenite and chalcopyrite, all partly oxidized, are disseminated in and close to the veinlets. The molybdenite is fine-grained, more abundant than chalcopyrite, and is primarily found in a later high-angle set of veins, which are almost always quartz-pyrite bearing.

In 1966, Lakeland Base Metals Ltd. discovered the JASS showing

CAPSULE GEOLOGY

after following-up anomalous stream geochemistry. Soil geochemical surveys, trenching and approximately 600 metres of percussion drilling were carried out in 1966 as a result of options by Brenmac Mines Ltd. and Brenda Mines Ltd. The results of the drilling are unknown, but the options on the property were dropped. In 1967, Lakeland attempted to extend geochemical anomalies by additional soil sampling but were unsuccessful.

Canadian Occidental Petroleum Ltd. staked the property in 1973, and in 1974 they carried out an extensive program of rock, soil and stream geochemistry, magnetometer surveys, and diamond drilling of 3 holes for a total depth of 275 metres. Several copper-molybdenum-zinc anomalies were outlined by the surface work and 3 were drilled. The results of the drilling were not recorded.

In 1976, a Regional Geochemical Survey release identified highly anomalous silver values in streams draining the Munro Lake Plateau. As a consequence, in 1977 Canadian Occidental shifted their focus to the silver potential of the property, re-analysed their soil and drill core samples for silver and drilled a 171 metre BQ diamond-drill hole. The best intersection, between 99.0 and 100.6 metres, assayed 0.396 per cent zinc and 10 grams per tonne silver (Assessment Report 6558). In 1981, Canadian Occidental trenched the area north of the 1977 drillhole. The northernmost of the two trenches exposed a highly altered, rubbly, friable granodiorite with anomalous mineralization. A 108.2-metre section averaged 3.06 grams per tonne silver, 0.15 per cent zinc, 0.05 per cent copper, 0.003 per cent molybdenum and 0.008 per cent lead (Assessment Report 10445). This was considered sub-economic and no further work was recommended.

In 1986 Almaden Resources Corp. staked the JASS showing and proceeded to carry out a VLF-EM survey. The survey successfully identified two conductors of significant strike length, as well as multiple "one-line" anomalies. This was followed in 1987 by 23 overburden drillholes; the concentrates from 15 of these were anomalous in silver and zinc. In 1988, 34 overburden holes totaling 296 metres were drilled. Analysis by heavy mineral concentration identified three subparallel east-northeast trending gold-silver-zinc anomalous zones in the basal till layer. In 1990, Almaden carried out a geophysical program consisting of line-cutting and magnetometer, VLF-EM and scintillometer surveys. The program outlined a number of east-northeast trending anomalous areas believed to be associated with a lineament which is known to host quartz veins containing gold and silver values.

In 1994, Almaden contracted Delta Geoscience Ltd. to carry out induced polarization and resistivity surveys of the property. The results suggested that a large pyritic alteration system had been identified, measuring approximately 900 metres by 1600 metres long in an east-west direction. Sulphide mineralization within the main IP anomaly appears to be strongly controlled by intersecting northeast and east-west structures (George Cross Newsletter No. 220, 1994).

BIBLIOGRAPHY

EMPR AR 1967-213
EMPR ASS RPT *5318, 6399, *6558, 8921, *10445, *15207, *16437,
18171, 20717, 23776, 24187
EMPR EXPL 1981-294; 1986-C38; 1987-C34; 1988-C23
EMPR GEM 1974-61; 1977-E35
EMPR OF 1994-8
EMPR PF (Dawson, J.M. (1985): Report on the Munro Lake Silver
Property, Almaden Resources Corporation, Prospectus dated
October 10, 1986; Munro Lake Gold-Silver Property, Almaden
Resources Corporation, Statement of Material Facts dated
December 11, 1990; Hendrickson, G.A. (1994): Munro Lake
Project Summary, Delta Geoscience Ltd. dated November 8, 1994)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A; 7686G;
8521G
GSC OF 409; 736; 1969
GCNL #108, #194, 1987; #126, 1990; #172, #210, #220, 1994; #119, 1995
V STOCKWATCH June 8, 1987

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW022**

NATIONAL MINERAL INVENTORY:

NAME(S): **CAMP HEWITT 3, PENNY 5-8, GLADSTONE, DEEP, ROHANNA**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E13E
BC MAP:
LATITUDE: 49 46 57 N
LONGITUDE: 119 44 47 W
ELEVATION: 600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of adits (Assessment Report 673).

Underground
MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5518068
EASTING: 302300

COMMODITIES: Copper Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Sphalerite Galena
ASSOCIATED: Quartz Calcite
ALTERATION: Chlorite Calcite Malachite
ALTERATION TYPE: Chloritic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
DIMENSION: Metres
COMMENTS: Shear zone.
STRIKE/DIP: I05 Polymetallic veins Ag-Pb-Zn±Au
235/85S TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Triassic-Jurassic
Lower Jurassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Pennask Batholith

LITHOLOGY: Greenstone
Andesite
Granodiorite
Graphitic Limestone
Syenite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: MAIN SHAFT VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Bulk Sample
COMMODITY
Silver 474.0000 Grams per tonne
Gold 3.0000 Grams per tonne
Copper 11.1000 Per cent

COMMENTS: Grades are average of 2 shipments of high grade quartz-chalcopyrite ore. Tonnages mined or shipped are unknown.

REFERENCE: Minister of Mines Annual Report 1897, page 609.

CAPSULE GEOLOGY

The CAMP HEWITT 3 occurrence is located on the west side of Okanagan Lake, approximately 1 kilometre northwest of Pincushion Bay. The prospect occurs in greenstone of the Triassic-Jurassic Nicola Group. To the south the Nicola Group rocks are underlain and intruded by granodiorite of the Early Jurassic Pennask Batholith. Eocene Penticton Group volcanics overlie the Nicola Group rocks to the north. Mineralization on the property is reported to follow shear zones within the Nicola greenstone. The main shear zone is up to 2 metres wide, striking 235 degrees and dipping 85 degrees southeast. The shear zone contains highly fractured greenstone and small, irregular calcite and quartz veining. Mineralization includes blebs and disseminations of chalcopyrite, pyrite, sphalerite, and galena in quartz veins. A shaft, commonly known as the main Gladstone shaft, was sunk by

CAPSULE GEOLOGY

the Camp Hewitt Mining and Development Company in the late 1890s to a depth of approximately 50 metres. Development work is reported to have included 40 metres of tunneling and crosscuts on the 30 and 45 metre levels. Seventy metres north of this main shaft is a second shaft which has been sunk in a shear zone striking 330 degrees and dipping 60 degrees southwest. Mineralization at this locality is the same as at the main shaft. Veins are up to 3 centimetres wide and malachite staining is common. A normal fault, 100 metres east of the shafts, strikes 020 degrees and dips 70 degrees southeast. East of this fault is a thin bed of graphitic limestone enclosed in greenstone. The limestone bed is fault displaced about 180 metres to the north. South of this limestone bed the greenstone is intruded by granodiorite of the Pennask Batholith. Cutting all rocks on the property are several "Coryell type" syenite dikes. They contain traces of minor pyrite and are fine-grained to highly porphyritic.

All of the early workings on the property are attributed to the Camp Hewitt Mining and Development Company, who developed the prospect under the name of the Gladstone Mine. However, despite the extensive workings, production records are limited to an 1897 notation that 2 small shipments of quartz containing chalcopyrite had been made to the smelter at Tacoma. The ore grades (average of both shipments) were: 3 grams per tonne gold, 474 grams per tonne silver, and 11.1 per cent copper (Minister of Mines Annual Report 1897, page 609). Tonnages mined or shipped are not recorded.

In 1972, Vega Mines Ltd. carried out a soil geochemical survey centred over the CAMP HEWITT 3 area, copper and zinc soil anomalies were identified in areas of known mineralization. In 1984, Charles Brett funded a VLF-EM survey over the same general area. The survey was able to identify gross lithological features, but was not useful in defining shear zones.

BIBLIOGRAPHY

EMPR AR 1896-579; *1897-609; 1898-1130; 1899-748; 1966-244
EMPR ASS RPT *673, *766, 3641, 3913, 12272
EMPR EXPL 1984-30
EMPR GEM 1972-45
EMPR OF 1989-5; 1994-8
EMPR PF (Philp, R.H.D. (1972): Report on the ROHANNA, KEL, and ZN Claims, Okanagan Region, B.C., Vega Mines Ltd. Prospectus)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW023**

NATIONAL MINERAL INVENTORY:

NAME(S): **CAMP HEWITT 8**, DEEP, MOUNTAIN VIEW (L.1000)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13E
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 47 30 N
LONGITUDE: 119 44 15 W
ELEVATION: 700 Metres

NORTHING: 5519063
EASTING: 302977

LOCATION ACCURACY: Within 500M

COMMENTS: Shaft (Assessment Report 673).

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite

ASSOCIATED: Pyrite Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Triassic-Jurassic
Eocene
Lower Jurassic

GROUP

Nicola
Penticton

FORMATION

Undefined Formation
Marron

IGNEOUS/METAMORPHIC/OTHER

Pennask Batholith

LITHOLOGY: Greenstone
Granodiorite
Rhyolite
Trachyandesite
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Overlap Assemblage

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The CAMP HEWITT 8 showing is located on the northeast side of Pincushion Mountain, approximately 1.2 kilometres northwest of Pincushion Bay.

The showing consists of small shears and quartz veins in greenstone of the Triassic-Jurassic Nicola Group. The area is covered by rhyolite, trachyandesite and andesite flows of the Eocene Marron Formation (Penticton Group) except in the Trepanier Creek valley where the Nicola Group rocks are exposed. Granodiorite of the Early Jurassic Pennask Batholith is found a short distance to the west.

An old 3.6-metre shaft is attributed to the Camp Hewitt Mining and Development Company which was active in this area during the period 1896-99. The shaft exposes several small shears striking northeast to north-northeast and dipping steeply to the southeast. Irregular quartz lenses with pyrite are found within the shears. Disseminated pyrite is found in the greenstone between shears. Occasional small lenses of galena with minor sphalerite are also noted. In 1965, Quinalta Petroleum Ltd. drilled a 35-metre diamond-drill hole at this location. There is no record of the hole intersecting mineralization.

In 1972, Vega mines Ltd. carried out a soil geochemical survey centred over the CAMP HEWITT 3 (082ENW022) area 1.2 kilometres to the southwest; copper and zinc anomalies were found. In 1984, Charles Brett funded a VLF-EM survey over the same general area. The survey was able to identify gross lithological features, but was not useful in defining shear zones.

BIBLIOGRAPHY

EMPR AR 1896-579; 1897-609; 1898-1130; 1899-748; 1966-244
EMPR ASS RPT *673, *766, 3641, 3913, 12272
EMPR EXPL 1984-30
EMPR GEM 1972-45

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 205
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR OF 1994-8
EMPR MAP 39
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW024**

NATIONAL MINERAL INVENTORY:

NAME(S): **CAMP HEWITT 12**, ROHANNA, ZN

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082E13E
 BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 47 30 N
 LONGITUDE: 119 43 04 W
 ELEVATION: 500 Metres

NORTHING: 5519012
 EASTING: 304397

LOCATION ACCURACY: Within 500M

COMMENTS: Adit portal (Assessment Report 673).

COMMODITIES: Gold Silver Zinc Lead Copper

MINERALS

SIGNIFICANT: Pyrite Sphalerite Galena Chalcopyrite
 ALTERATION: Calcite
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Podiform Disseminated
 CLASSIFICATION: Replacement
 TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Nicola	Undefined Formation	
Eocene	Penticton	Marron	
Lower Jurassic			Pennask Batholith

LITHOLOGY: Limestone
 Rhyolite
 Trachyandesite
 Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
 TERRANE: Quesnel
 METAMORPHIC TYPE: Contact
 Plutonic Rocks
 PHYSIOGRAPHIC AREA: Thompson Plateau
 RELATIONSHIP:
 GRADE:

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1972
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Silver	144.0000 Grams per tonne
Gold	0.2000 Grams per tonne
Copper	0.7200 Per cent
Lead	2.2400 Per cent
Zinc	4.9000 Per cent

COMMENTS: High-grade grab sample.

REFERENCE: Property File - Philp R.(1972):Report on the ROHANNA, KEL & ZN claims.

CAPSULE GEOLOGY

The CAMP HEWITT 12 showing is located above the confluence of Trepanier and Law creeks, approximately 1 kilometre upstream from the mouth of Trepanier Creek.

The area is covered by rhyolite, trachyandesite and andesite of the Eocene Marron Formation, Penticton Group except in the Trepanier Creek valley where the underlying Triassic-Jurassic Nicola Group rocks are exposed.

The showing consists of irregular pods, lenses and disseminations of pyrite, sphalerite, galena and chalcopyrite in Nicola Group limestone. The Nicola Group rocks form a pendant which is underlain by the Early Jurassic Pennask Batholith.

Evidence of early work on the showing is a caved adit, possibly dating from the 1890s when the Camp Hewitt Mining and Development Co. was active in this area, or from the late 1950s when some stripping was carried out on the LAKEVIEW (082ENW020) showing to the west. The adit was driven northeasterly into a limestone outcrop and exposed a pod of massive sphalerite with a minor amount of galena. In 1965, King Resources Company carried out a prospecting and mapping program

CAPSULE GEOLOGY

in the area, and in 1966 they followed up with a 4-hole, 62.6-metre diamond drill program. Hole number 2 was collared on a massive sulphide lens which proved to be only 4 centimetres thick; and only traces of sulphides were encountered after the first 0.46 metre. The other 3 holes did not intersect any mineralization of note. In 1972, Vega Mines Ltd. examined the showing.

A high-grade grab sample assayed 0.72 per cent copper, 4.9 per cent zinc, 2.24 per cent lead, 144 grams per tonne silver and 0.2 grams per tonne gold (Property File - Philp, R.H.D. (1972): Report on the ROHANNA, KEL and ZN Claims).

BIBLIOGRAPHY

EMPR ASS RPT *673, *766
EMPR OF 1994-8
EMPR PF (*Philp, R.H.D. (1972): Report on the ROHANNA, KEL and ZN Claims)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW025**

NATIONAL MINERAL INVENTORY:

NAME(S): **IRON HORSE**, IRON HORSE (L.4098), OKA,
SANBURG, BRENCAP, BRENCOLL,
SANDBERG, ILA, RED ROCK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:
LATITUDE: 49 48 18 N
LONGITUDE: 119 53 53 W
ELEVATION: 1271 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Drillhole OK88-20 (Assessment Report 18711).

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5520980
EASTING: 291481

COMMODITIES: Gold Cobalt Copper Arsenic Zinc Molybdenum Silver

MINERALS

SIGNIFICANT: Gold Pyrite Arsenopyrite Chalcopyrite Sphalerite
Molybdenite
ASSOCIATED: Pyrrhotite
ALTERATION: Garnet Epidote Pyroxene Wollastonite Tremolite
Biotite Prehnite Calcite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Massive
CLASSIFICATION: Skarn Replacement Igneous-contact Hydrothermal
TYPE: K04 Au skarn K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Nicola	Undefined Formation	
Lower Jurassic			Pennask Batholith

LITHOLOGY: Skarn
Marble
Diorite Dike
Diorite
Granodiorite
Limestone
Argillite
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Quesnel Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Gold 5.8000 Grams per tonne
COMMENTS: Gold assay is from 6.0 metre interval (117.4 to 123.6 metres) in
reverse circulation drillhole 88-20. Within this intersection is
a 3.0-metre section of 9.2 grams of gold per tonne.
REFERENCE: Assessment Report 18711.

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1988
SAMPLE TYPE:	Grab		
COMMODITY		GRADE	
Silver		13.0000	Grams per tonne
Gold		19.0000	Grams per tonne
Cobalt		0.0575	Per cent
Copper		1.0000	Per cent
Zinc		0.0730	Per cent

COMMENTS: Maximum values of 6 grab samples.
 REFERENCE: Paper 1989-3, pages 125-126.

CAPSULE GEOLOGY

The IRON HORSE prospect is located on a southeast trending ridge between Greata and Peachland creeks approximately 11 kilometres northwest of Peachland.

The IRON HORSE occurs in a pendant of limestone, argillite, and andesite of the Triassic-Jurassic Nicola Group which is underlain and intruded by dikes and sills of diorite and granodiorite of the Early Jurassic Pennask Batholith. Contact metamorphic effects are common along the contacts of the Nicola Group pendant; epidote, garnet, pyroxene wollastonite, tremolite, biotite, prehnite, and calcite form skarns containing disseminated and small massive lenses of sulphides. These sulphides include pyrite, chalcopyrite, pyrrhotite, arsenopyrite, sphalerite and molybdenite.

The first recorded work on the IRON HORSE dates from 1936 when the showing was trenched by the Sandburg brothers. In 1956, Noranda Exploration Co. Ltd. is reported to have carried out an SP survey, trenching, and some diamond drilling. In 1966, Brenmac Mines Ltd. carried out geological mapping, soil sampling, an I.P. survey, trenching, test pitting, built 5 miles of road, and drilled 250 metres in 11 short percussion holes and 4 rotary holes. The I.P. survey, which was filed for assessment, showed only a weak, irregular pattern. In 1978, Brican Resources Ltd. staked the property and cut 21 kilometres of survey line. In 1980, Esso Resources Canada Limited funded a magnetometer survey over 24 line kilometres of grid. Magnetic highs were identified which were found to coincide with skarn mineralization. The following year an airborne electromagnetic survey was flown over the entire area; the weak anomalies found in the survey were assumed to be related to an overburden response.

Beginning in 1986 the gold potential of Nicola Group skarns was investigated by Fairfield Minerals Ltd. During the next 2 years Fairfield carried out a major program of soil sampling, prospecting, linecutting, geological mapping, magnetometer surveys, trenching and 6000 metres of reverse circulation drilling. Exploration focused on a number of mineral occurrences within the Nicola Group, including: BOLIVAR WEST (082ENW098), BOLIVAR EAST (082ENW099), BOLIVAR ROAD (082ENW100), BOLIVAR CREEK (082ENW101), CAP (082ENW026) and IRON HORSE.

Prospecting and chip sampling of trenches on the IRON HORSE have identified mineralization with high gold values. Fine visible gold has been identified within marble containing minor disseminated arsenopyrite, and a continuous chip sample across 1.5 metres of garnetite skarn, with 2 per cent arsenopyrite, assayed 15.6 grams per tonne gold (Assessment Report 15834). Other assay results include: 38.3 grams per tonne gold over 1.5 metres in garnet skarn at the footwall contact of a low-angle fault; 15.7 grams per tonne gold across 0.8 metres of an arsenopyrite vein and clay gouge; and 8.2 grams per tonne gold across 2.0 metres of altered diorite with disseminated pyrite and arsenopyrite (Assessment Report 21923).

The 1988 reverse circulation drill program on the IRON HORSE prospect was funded by Placer Dome Inc. and consisted of 3429.38 metres in 25 holes. A grid pattern of holes was laid out to test for mineralized skarn horizons extending from gold-bearing skarn exposed in trenches. The drilling defined a general pattern of alternating zones of skarn and marble cut by diorite dikes and underlain by diorite and granodiorite. The skarn horizons correlated well between drillholes. Bedding in surface exposures indicates a dip slope on the south side of the IRON HORSE ridge. This forms the southern limb of an anticline with the axis plunging 10 degrees to the west along the ridge. Younger hornfelsed volcanics, interbedded with andesite and skarn, were intersected by the drilling on the west side of the grid and confirm the northwest plunge of the anticlinal structure.

Gold assays greater than 0.5 gram per tonne came from 12 holes (Assessment Report 18711). No single lithology was favoured; gold bearing intersections included skarn, marble, diorite and granodiorite, all containing a trace of pyrite. Hole 88-20 assayed

CAPSULE GEOLOGY

5.8 grams of gold per tonne over 6 metres from 117.4 to 123.6 metres (Assessment Report 18711). Within this intersection a 3-metre section assayed 9.2 grams gold per tonne (Assessment Report 18711). The best assay in hole 88-20, 14.9 grams per tonne gold over 1.52 metres, was associated with pink skarn containing 4 per cent disseminated and massive pyrite (Assessment Report 18711). The maximum values of 6 grab samples collected by the B.C. Geological Survey were: 1 per cent copper, 4.4 per cent arsenic, 19 grams per tonne gold, 13 grams per tonne silver, 0.0150 per cent bismuth, 0.0575 per cent cobalt and 0.0730 per cent zinc (Paper 1989-3, pp.125-126).

An association between sulphides and gold was noted but it was not definitive. Multi-element assays, if carried out, were not reported. Pyrite was the most commonly associated sulphide, usually disseminated in the wallrock. Massive sulphide pods composed of pyrite, pyrrhotite, arsenopyrite and chalcopyrite were intersected but returned low gold values. Gold mineralization was observed to occur mainly near skarn-marble contacts in close proximity to diorite dikes.

BIBLIOGRAPHY

EMPR AR *1936-26; *1966-185; 1967-212
EMPR ASS RPT 718, 886, 1110, 9261, *15834, 16761, 16788, *18711,
*21923, 24026
EMPR EXPL 1978-E38; 1979-46; 1987-C36; 1988-C24
EMPR OF 1994-8
EMPR P *1989-3, pp.38-40; pp.125-126
EMPR FIELDWORK 1987, pp. 270-272
EMPR PF (BrenMac Mines Ltd., Prospectus, 1966; See 082ENW017)
EMPR RGS 29
EMPR INF CIRC 1989-1, Table 1 (190)
GSC MAP 538A; 539A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969
GSC P 37-21
GCNL #120, #190, 1987; #185, 1988; #75, 1990
N MINER Dec. 15, 1986
WWW <http://www.richriver.bc.ca>
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW026**

NATIONAL MINERAL INVENTORY:

NAME(S): **CAP, BLUEBELL, PATRICIA,
TED 2, ELK 2, OKA**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:
LATITUDE: 49 48 20 N
LONGITUDE: 119 50 15 W
ELEVATION: 1030 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit portal (Assessment Report 672).

Underground
MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5520875
EASTING: 295840

COMMODITIES: Gold Silver Zinc Copper Lead
Arsenic

MINERALS

SIGNIFICANT: Pyrite Sphalerite Galena Chalcopyrite Pyrrhotite
ALTERATION: Garnet Pyroxene Biotite
ALTERATION TYPE: Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Stratabound
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic-Jurassic	Nicola	Undefined Formation	
Lower Jurassic			Pennask Batholith

LITHOLOGY: Limestone
Argillaceous Quartzite
Andesitic Greenstone
Diorite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE:

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Grab
COMMODITY
Silver 24.0000 Grams per tonne
Copper 0.2000 Per cent
Zinc 0.0668 Per cent

COMMENTS: Two mineralized grab samples. Low gold, arsenic, cobalt and bismuth values.

REFERENCE: Paper 1989-3, pages 125-126.

CAPSULE GEOLOGY

The CAP showing is located approximately 8 kilometres northwest of Peachland.

This showing occurs in a pendant of Triassic-Jurassic Nicola Group rocks which are underlain by diorite and granodiorite of the Early Jurassic Pennask Batholith. Old workings on the showing include a 6-metre adit and hillside stripping. The adit was driven on a bearing of 60 degrees into a lenticular outcrop of heavy brown oxides in limestone. The oxide material is localized along bedding in an irregular zone approximately 1.2 metres thick and 7 metres long. Heavy pyrite occurs in pods and lenses within the zone. Scattered grains of sphalerite, galena and chalcopyrite are present. Alteration minerals present include: garnet, pyroxene and biotite.

In the stripped areas thinner and less extensive bedded and semi-bedded oxide zones are present. Iron oxides are also noted along fractures in heavily broken argillaceous quartzites suspected of being a fault contact with limestone northwest of the adit.

CAPSULE GEOLOGY

Scattered replacement sphalerite mineralization can be seen in some exposures of light coloured crystalline limestone. Occasional grains of pyrite and galena are also noted. Sulphide mineralization appears to be limited to the light colored crystalline limestone; none was observed in the finer-grained and more argillaceous rocks. In the surrounding area, which is included in the CAP showing, sediments are cut by massive andesitic greenstone which is sparsely mineralized with pyrite, pyrrhotite, chalcopyrite and black sphalerite. Very little sulphide was noted away from the greenstone.

In 1964, several short holes were drilled by Quinalta Petroleum Ltd. of Calgary. Zinc mineralization was found in all massive limestone sections but analysis failed to identify the presence of any material of commercial value (Assessment Report 672). In 1965, the showing was examined by Western Resources Consultants Ltd. and an access road was constructed. In 1972, Canadian Johns-Manville Company Limited carried out geological mapping, magnetometer surveys and geochemical surveys. They concluded that the mineralized zones were too small and lenticular to be considered economic.

In 1986-87, Fairfield Minerals Ltd. carried out a prospecting program in this area. One sample of sulphide-rich metasediment collected from the area of the old workings assayed 1.3 grams per tonne gold, 27 grams per tonne silver, 0.29 per cent copper and 4.00 per cent zinc (Assessment Report 15834). In the Fairfield report, a reference is also made to sampling carried out in 1985 from which a grab sample assayed 5.0 grams per tonne gold, 12.3 per cent zinc and 17.0 per cent arsenic (Assessment Report 15834). No further details of this sample are given.

In 1988, Placer Dome Inc. and Fairfield Minerals Ltd. drilled 2 reverse circulation holes (171.91 metres each) in the area immediately southwest of the showing. No sulphides were encountered and assays did not have any gold values. Also in 1988, 2 mineralized grab samples collected by the B.C. Geological Survey assayed up to 0.2 per cent copper, 24 grams per tonne silver and 0.0668 per cent zinc with low gold, arsenic, cobalt and bismuth values (Paper 1989-3, pp.125-126).

The BLUEBELL II (082ENW027) occurrence, similar to the CAP, is located approximately 600 metres to the northeast.

BIBLIOGRAPHY

EMPR AR 1964-103
EMPR ASS RPT *672, *4040, *15834, 16761, 16788, 18711, 21923, 24026
EMPR EXPL 1987-C36; 1988-C24
EMPR P *1989-3, pp.38-40, pp.125-126
EMPR FIELDWORK 1987, pp.270-272
EMPR GEM 1972-45
EMPR OF 1988-28; 1994-8
EMPR RGS 29
GSC MAP 538A; 539A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969
GSC P 37-21
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW027**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUEBELL II**, PATRICIA, TED 3,
ELK 3, CAP

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 48 30 N
LONGITUDE: 119 49 51 W
ELEVATION: 1090 Metres

NORTHING: 5521166
EASTING: 296331

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of several trenches (Assessment Report 672).

COMMODITIES: Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Galena
ASSOCIATED: Pyrite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Disseminated
CLASSIFICATION: Hydrothermal
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic-Jurassic Lower Jurassic	Nicola	Undefined Formation	Pennask Batholith

LITHOLOGY: Quartzite
Diorite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The BLUEBELL II showing is located approximately 8 kilometres northwest of Peachland.

The showing occurs in quartzite of the Triassic-Jurassic Nicola Group which is underlain by diorite and granodiorite of the Early Jurassic Pennask Batholith.

Workings on the showing include 3 old pits dug in highly oxidized zones exposing greenish and brownish quartzites. In the northernmost pit there is a 4 to 5 centimetre thick shear zone. Grains and masses of pyrite are present in the zone and are sparsely disseminated through the adjacent fractured wallrock. A few grains of galena and sphalerite have been noted in some spots. Minor irregular zones of fracturing and iron oxide staining are locally exposed around the area of the showing.

In 1964, two short holes were drilled by Quinalta Petroleum Ltd. of Calgary. The results of this program are unknown. In 1965, the showing, along with the CAP (082ENW026) showing to the southwest, was examined by Western Resources Consultants Ltd. and an access road constructed. In 1972, Canadian Johns-Manville Company Limited carried out geological mapping, magnetometer surveys and geochemical surveys. They concluded that the mineralized zones, primarily those of the CAP showing to the southwest, were too small and lenticular to be considered economic.

BIBLIOGRAPHY

EMPR AR 1964-103
EMPR ASS RPT *672, *4040
EMPR GEM 1972-45
EMPR OF 1988-28; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 214
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW028**

NATIONAL MINERAL INVENTORY:

NAME(S): **KELLY**, LAST CHANCE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E12E
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 35 01 N
LONGITUDE: 119 43 51 W

NORTHING: 5495919
EASTING: 302616

ELEVATION: 620 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: Tunnel location (Geological Survey of Canada Paper 37-21).

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Tetrahedrite Sphalerite
ASSOCIATED: Pyrite Quartz Carbonate
ALTERATION: Quartz Carbonate Silica
ALTERATION TYPE: Quartz-Carb. Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Okanagan Intrusions

LITHOLOGY: Granite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1906
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 3428.0000 Grams per tonne
Lead 50.0000 Per cent

COMMENTS: High-grade grab sample.
REFERENCE: Minister of Mines Annual Report 1906, page 172.

CAPSULE GEOLOGY

The KELLY occurrence is located on the north side of Trout Creek, approximately 4 kilometres southwest of Summerland. The area is underlain by highly fractured and altered granite of the Jurassic Okanagan Intrusions, which is unconformably overlain to the east by a succession of clastic sediments, ash flows, and alkaline lavas of the Eocene Penticton Group, Marama and White Lake formations. The Trout Creek and Summerland fault zones may be part of a major Tertiary detachment zone along which the Okanagan granitic and Summerland volcanic complexes have been decoupled, by extensional tectonics, from the Monashee foreland to the east. Mineralization exposed at the KELLY occurrence includes galena, tetrahedrite, sphalerite and pyrite in a quartz-carbonate altered shear zone. The property was first developed under the name "Last Chance" in 1906 when a 36.5-metre decline was driven along a silicified shear zone. Two "pay streaks" were identified, 4 centimetres and 5 centimetres wide respectively. A high-grade grab sample assayed 3428 grams per tonne silver and 500 kilograms per tonne lead (Minister of Mines, Annual Report 1906, page 172). Limited production did take place during the period 1926 to 1927 when it became known as the KELLY mine. A total of 2 tonnes of ore were mined yielding 2769 grams of silver, 69 kilograms of lead and 63 kilograms of zinc (Minister of Mines Annual Report, Index No. 3, page 202).

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 216
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR *1906-172; 1926-200; 1927-476
EMPR INDEX *3-202
EMPR ASS RPT *13218
EMPR BC METAL MM00354
EMPR FIELDWORK *1977 p. 11-15
EMPR OF 1989-5; 1994-8
EMPR RGS 29
GSC MAP 538A; 539A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
GSC P *37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

BIBLIOGRAPHY

EMPR AR 1918-K203,*K211; 1934-D33; *1952-A41,A138
EMPR INDEX 3-207
EMPR ASS RPT 4039
EMPR BC METAL MM00358
EMPR EXPL 1979-43
EMPR OF 1989-5; 1994-8
EMPR PF (Lakeside Mines Limited: Key Map showing location of Silver
Shore Group)
EMPR RGS 29
GSC MAP 538A; 539A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW030**

NATIONAL MINERAL INVENTORY:

NAME(S): **GAYLE**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 47 54 N
LONGITUDE: 119 52 12 W
ELEVATION: 1000 Metres

NORTHING: 5520161
EASTING: 293471

LOCATION ACCURACY: Within 1 KM
COMMENTS: Centre of skarn (Assessment Report 887, Figure 5).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Pyrite
ALTERATION: Garnet Epidote
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn K07 Mo skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Nicola	Undefined Formation	Pennask Batholith
Lower Jurassic			

LITHOLOGY: Garnet Skarn
Limestone
Marble
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE:

CAPSULE GEOLOGY

The GAYLE skarn is located approximately 8.5 kilometres from Peachland. This area, west of Okanagan Lake, saw intensive exploration for copper-molybdenum porphyry deposits in the late 1960s. However, the only recorded work at this location is a 1967 soil geochemical report by J.F. McIntyre, who noted the presence of skarn. The geochemical survey identified a copper anomaly in the vicinity of the showing. The skarn occurs at the contact between Triassic-Jurassic Nicola Group limestone and marble, and granodiorite of the Early Jurassic Pennask Batholith. The skarn is a medium to coarse-grained garnet-epidote skarn, with garnet predominant. Pyrite and minor amounts of chalcopyrite and molybdenite are found in the skarn member along veins and shears.

BIBLIOGRAPHY

EMPR AR 1967-277
EMPR ASS RPT *887
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 539A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969
GSC P 37-21, p. 50

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW032**

NATIONAL MINERAL INVENTORY:

NAME(S): **HITCHENER RANCH**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 50 27 N
LONGITUDE: 119 40 20 W
ELEVATION: 630 Metres

NORTHING: 5524359
EASTING: 307870

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location of diatomite deposit (Geological Survey of Canada Map 539A).

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Eocene	Penticton	White Lake	

LITHOLOGY: Diatomite
Siltstone
Volcanic Breccia
Pyroclastic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The HITCHENER RANCH showing is located approximately 3 kilometres northwest of Westbank in the Glenrosa area.

The showing is described as a swamp deposit of nearly pure diatomite (Geological Survey of Canada Map 539A). It is underlain by and probably associated with the Eocene White Lake Formation, which consists of a thin-bedded clayey siltstone interbedded with volcanic breccia and pyroclastic rocks.

BIBLIOGRAPHY

EMPR OF 1988-13; 1994-8
EMPR MAP 39
EMPR RGS 29
GSC MAP 538A; *539A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969
GSC P *37-21, p. 49

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW033**

NATIONAL MINERAL INVENTORY:

NAME(S): **HALL CREEK**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 34 35 N
LONGITUDE: 119 05 28 W
ELEVATION: 1010 Metres

NORTHING: 5493634
EASTING: 348829

LOCATION ACCURACY: Within 1 KM

COMMENTS: West side of Hall Creek canyon (Geological Survey of Canada Memoir 79, page 143).

COMMODITIES: Asbestos

MINERALS

SIGNIFICANT: Asbestos Serpentine
ALTERATION: Serpentine
ALTERATION TYPE: Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Industrial Min.
TYPE: M06 Ultramafic-hosted asbestos

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE

Upper Paleozoic

GROUP

Anarchist

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Serpentinized Peridotite
Peridotite Sill
Serpentinite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The HALL CREEK asbestos showing is located approximately 9.5 kilometres north of Carmi, on the west side of Hall Creek canyon.

The showing consists of asbestos veins which cut through a serpentinitized peridotite of the Carboniferous-Permian Anarchist Group. The serpentine and asbestos occur in the lower 3 metres of a sill-like black saxonite (peridotite?) porphyry which is approximately 20 metres thick. The serpentine occurs as green bands in the black rock and the asbestos occurs in little veinlets in the serpentine. The bands and veinlets lie more or less parallel to the lower contact of the sill. The asbestos veins are seldom more than 2.5 centimetres thick.

BIBLIOGRAPHY

EMPR ASS RPT 17030
EMPR OF 1994-8; 1995-25
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8510G
GSC MEM *79, p. 143
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW035**

NATIONAL MINERAL INVENTORY:

NAME(S): **PANORAMA**, PANORAMA (L.905), SID 12

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 46 24 N
LONGITUDE: 119 49 40 W
ELEVATION: 800 Metres

NORTHING: 5517267
EASTING: 296404

LOCATION ACCURACY: Within 500M

COMMENTS: Location coordinates from Geological Survey of Canada Open File 1969.
The location is incorrectly plotted on map 1059A in Geological Survey of Canada Memoir 296.

COMMODITIES: Gold Silver Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite
ASSOCIATED: Quartz Marcasite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I VEIN, BRECCIA AND STOCKWORK

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic Pennask Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The PANORAMA showing is located on the east side of Greata Creek approximately 6 kilometres west of Peachland.

The showing is underlain by granodiorite of the Early Jurassic Pennask Batholith.

During the period 1899-1901 the showing was explored for gold and silver by J.L. Webster. An open cut and a 4-metre adit date from that period. In 1969, Brendako Mines Ltd. explored this area for porphyry copper deposits. The PANORAMA showing was covered by the SID 12 claim, although there are no records of exploration or results specifically directed at this showing.

References to mineralization in this area group the PANORAMA and the LITTLE DUNCAN (082ENW034) showings together. The MINFILE descriptions are therefore identical for these occurrences. The LITTLE DUNCAN is located 400 metres to the north.

Gold and silver values with a trace of copper (chalcopyrite?) were reportedly from quartz veins on the property. Another report refers to a 0.6 to 1.5 metre quartz vein carrying marcasite and galena.

BIBLIOGRAPHY

EMPR AR *1899-746
EMPR GEM *1969-293
EMPR OF 1989-5; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC MEM 296
GSC OF 409; 736; *1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW036**

NATIONAL MINERAL INVENTORY: 082E11 Mo1

NAME(S): **CARMI MOLY**, DOE, MARY O,
FAN, CA, PFC,
MY, MARY, MAY,
HUCK, MARC, LINDA,
LAND FR., E, LAKE

MINING DIVISION: Greenwood

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082E11E

UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 49 31 05 N
LONGITUDE: 119 10 04 W
ELEVATION: 1220 Metres

NORTHING: 5487306
EASTING: 343100

LOCATION ACCURACY: Within 500M
COMMENTS: Location of the E Zone (Assessment Report 16102).

COMMODITIES: Molybdenum Copper Uranium Silver Gold

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite Bornite Brannerite Uraninite
Pyrite
ASSOCIATED: Quartz Pyrite Muscovite Fluorite Magnetite
ALTERATION: Sericite Epidote Chlorite Fluorite Muscovite
ALTERATION TYPE: Sericitic Greisen
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated Breccia
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L05 Porphyry Mo (Low F- type) D06 Volcanic-hosted U
SHAPE: Tabular
MODIFIER: Other
DIMENSION: 1800 x 500 Metres STRIKE/DIP: 110/00 TREND/PLUNGE:
COMMENTS: E Zone.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic
Tertiary Unnamed/Unknown Informal
Valhalla Complex

LITHOLOGY: Granodiorite
Biotite Granodiorite
Quartz Diorite
Muscovite Biotite Quartz Monzonite
Quartz Monzonite
Breccia
Greisen
Alaskite
Feldspar Porphyry Dike

HOSTROCK COMMENTS: Greisen-type fracture-controlled mineralization also occurs in
alaskite stocks of the Valhalla Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks

INVENTORY

ORE ZONE: E REPORT ON: Y
CATEGORY: Indicated YEAR: 1985
QUANTITY: 17000000 Tonnes
COMMODITY GRADE
Molybdenum 0.0630 Per cent
REFERENCE: Assessment Report 16102.

CAPSULE GEOLOGY

rock. Silver and gold values were also reported in core (Assessment Report 5203).

The porphyry-breccia deposit is thought to have evolved by explosive venting of the underlying stock with breccia formation in structurally controlled cap rocks. Simultaneous magmatic emplacement of mineral phases from the stock developed in breccia voids.

Subsequently, mineralized greisens formed in root zones of the stock.

Total drill indicated open pitable resource, calculated in 1985, is 17.0 million tonnes grading 0.063 per cent molybdenum (0.105 per cent MoS₂) for the E Zone and 3.7 million tonnes grading 0.066 per cent molybdenum (0.110 per cent MoS₂) for the Lake Zone (Assessment Report 16102). In 1979, the total estimated open pitable geological resource, including the drill indicated resource, was 27 million tonnes grading 0.05 to 0.10 per cent MoS₂ for the E Zone and 13 million tonnes grading 0.05 to 0.10 per cent MoS₂ for the Lake Zone (Assessment Report 16102). In addition, at depth in the Lake Zone a drill indicated resource of about 4.5 million tonnes of over 0.2 per cent molybdenum (0.33 per cent MoS₂) occurs over an average 8.5-metre width (Assessment Report 16102). This resource is not amenable to open pit mining.

In 1990, Placer Dome Inc. drilled 3 diamond-drill holes which were positioned parallel to 3 old percussion holes. The results indicated that considerable down-hole contamination took place in the original percussion drilling, especially near the hole bottoms. The impact of this on the ore reserve potential of the property is unknown. The weighted average content of uranium and thorium in the 1990 drill holes are 7.6 and 8.3 parts per million respectively (Assessment Report 20275). This is slightly higher than a normal average for uranium in an acid intrusive rock, and approximately one-half of what could be considered a normal average for thorium (Assessment Report 20275).

BIBLIOGRAPHY

- EMPR AR 1962-68
EMPR ASS RPT *3740, *5203, 5204, 5430, 5519, 5860, 6023, 6276, 6932, *7413, 7683, 7900, 8356, *14559, *16102, 19298, *20275
EMPR EXPL 1975-25,26; 1976-31; 1977-33,34; 1978-33,34; 1979-41,42; 1980-41; 1985-C29,C30
EMPR FIELDWORK 1975, p. 30
EMPR GEM 1970-408; 1971-386; 1972-44; 1973-50; 1974-60,61
EMPR GEOLOGY *1975 pp.36,37
EMPR MAP 22; *29; 65 (1989)
EMPR OF 1990-32; 1992-1; 1994-8
EMPR PF (Report by Vestor Explorations Ltd. on Lithology and drillhole locations, 1974; Kenyon, J.M. and Morton, R.D. (c.1976): The Carmi Mo-(U) Deposit, Southern British Columbia; Maps by Craigmont Mines Limited, 1978)
EMPR RGS 29
EMR MP CORPFILE (Vestor Explorations Ltd.; The Granby Mining Company Limited; Craigmont Mines Limited; Dynamic Oil Limited)
EMR MIN BULL MR 223 (1989) B.C. 18
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A; 7686G; 8510G
GSC OF 409; 551; 736; 1969
CIM Mar. 1978, Vol.71, No.791, p. 128; Aug., 1980, p. 92
CIM Special Volume 15 (1976), Table 1, No. 1, in pocket.
CMH 1986-87, p. 381
GCNL #239, 1976; #36,#38,#128,#172,#184,#220, 1977; #184, 1978; #150,#187, 1979; #105, 1980; #158, 1982; #58, 1983; #62, 1984; #103, 1989; #5, 1990
N MINER Mar.3, May 5, Sept.8,29, Nov.17, 1977; Oct.18, 1979
W MINER June 1977, p. 20; *Feb. 1980, pp. 59,60
WWW <http://www.infomine.com/>
Kenyon, J.M. (1978): Mo and U Mineralization with Special Reference to a Mo-(U) Deposit at Carmi, B.C.; M.Sc. Thesis, University of Alberta (Abstract in CIM Nov. 1980, p. 28)
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW037**

NATIONAL MINERAL INVENTORY:

NAME(S): **IVY, IVY-O**

MINING DIVISION: Greenwood

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082E11E 082E06E
 BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 30 13 N
 LONGITUDE: 119 01 47 W
 ELEVATION: 1120 Metres

NORTHING: 5485422
 EASTING: 353048

LOCATION ACCURACY: Within 1 KM

COMMENTS: Mineralization in old pit at Line 17N - 100E (Assessment Report 3740).

COMMODITIES: Gold Silver Copper Zinc Molybdenum

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite Molybdenite
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
 CLASSIFICATION: Igneous-contact
 TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Anarchist	Undefined Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Hornblende Gneiss
 Pyritic Biotite Schist

HOSTROCK COMMENTS: The unnamed Middle Jurassic intrusion was previously mapped as Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan	Plutonic Rocks
METAMORPHIC TYPE: Contact	RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1971
SAMPLE TYPE: Grab	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	24.0000 Grams per tonne
Gold	21.0000 Grams per tonne
Copper	2.1800 Per cent
Molybdenum	0.0160 Per cent
Zinc	0.1200 Per cent

COMMENTS: Mineralization collected from old pit at 17N + 100E.
 REFERENCE: Assessment Report 3740.

CAPSULE GEOLOGY

The IVY showing is located on the south slope of Mullins Hill, approximately 7 kilometres east-northeast of Carmi.

The showing occurs in a contact zone between metasediments of the Carboniferous-Permian Anarchist Group and an unnamed Middle Jurassic intrusion. The intrusion was previously mapped as Middle Jurassic Nelson Intrusions (Geological Survey of Canada Map 1736A). Contact metamorphism of the sediments and assimilation of country rock by the intrusives is common. Massive lenses of pyrite and pyrrhotite contain flecks of chalcopyrite and molybdenite within bands of hornblende gneiss and pyritic biotite schist.

This area, north of the Highland Bell Mine (082ESW030), has seen extensive exploration since the turn of the century. Early interest in the Mullins Hill area focused on precious metals; later, during the 1970's, the exploration related to the CARMI MOLY (082ENW036) deposit spilled over into this area. A large number of programs have been carried out in the area to the south and southwest of the IVY showing.

In 1971, Husky Oil Ltd. funded a large molybdenum exploration program in this area. The program included prospecting, soil sampling and a magnetometer survey. A grab sample, collected from an

CAPSULE GEOLOGY

old pit on their grid at 17N + 100E, assayed 21 grams per tonne gold, 24 grams per tonne silver, 2.18 per cent copper, 0.12 per cent zinc and 0.016 per cent molybdenum (Assessment Report 3740). The soil sampling identified anomalies, but they did not correlate with known mineralization. Several northerly trending magnetic anomalies were identified by the geophysical survey. Additional work was recommended but there are no records of this being carried out.

BIBLIOGRAPHY

EMPR ASS RPT *3740
EMPR GEM 1971-386; 1972-44
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8510G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW038**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELK 3**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 36 04 N
LONGITUDE: 119 05 11 W
ELEVATION: 1200 Metres

NORTHING: 5496373
EASTING: 349246

LOCATION ACCURACY: Within 1 KM

COMMENTS: Mineralized outcrop on east side of railway (Assessment Report 2804, Figure 1).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite

ASSOCIATED: Pyrite

Quartz

Calcite

Magnetite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated

Vein

CLASSIFICATION: Hydrothermal

Epigenetic

TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Upper Paleozoic

Anarchist

Undefined Formation

LITHOLOGY: Hornblendite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Okanagan

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The ELK 3 showing is exposed on the east side of a railway cut about 250 metres south of Arlington Lakes. Included in the ELK 3 showing is an outcrop, approximately 320 metres to the northeast of the main showing, where copper (chalcopyrite?) has been noted (Assessment Report 3352, Figure 1).

The Arlington Lakes area was extensively prospected in the early part of this century, especially during the period 1910-13 when the Kettle Valley Railway was built. In 1970, Durocop Mines Ltd. prospected the general area around the ELK 3 showing. In 1971, Hudson's Bay Oil and Gas Ltd. carried out a magnetometer survey of the area. And in 1973, the area was prospected and the geology mapped for K.F. Brunning.

The ELK 3 showing consists of a hornblendite outcrop containing chalcopyrite and pyrite as fine disseminations and in quartz-calcite stringers. Magnetite is common, as finely disseminated grains and in fracture fillings. The hornblendite appears to be a mafic intrusion in the Carboniferous-Permian Anarchist Group rocks. These are in contact with the Cretaceous Okanagan Batholith to the north.

The ELK 7 (082ENW004) showing, located approximately 450 metres to the north-northeast, also occurs in Anarchist Group hornblendite.

BIBLIOGRAPHY

EMPR ASS RPT *2804, 3352, 4461
EMPR GEM 1970-407; 1971-399; 1973-51
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8510G
GSC MEM 79
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW039**

NATIONAL MINERAL INVENTORY:

NAME(S): **WALLACE**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 34 14 N
LONGITUDE: 119 05 04 W
ELEVATION: 1100 Metres

NORTHING: 5492972
EASTING: 349293

LOCATION ACCURACY: Within 1 KM

COMMENTS: Scheelite notation on geology map (Assessment Report 17030, Figure 2).

COMMODITIES: Tungsten Copper

MINERALS

SIGNIFICANT: Scheelite Chalcopyrite
ASSOCIATED: Garnet Epidote Quartz
ALTERATION: Garnet Epidote
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Skarn
TYPE: K05 W skarn K01 Cu skarn
COMMENTS: The garnet and epidote may be a result of high grade metamorphism.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Skarn
Limestone
Quartz Diorite

HOSTROCK COMMENTS: Unnamed Middle Jurassic intrusion was previously mapped as Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Okanagan Highland
GRADE:

CAPSULE GEOLOGY

The WALLACE skarn is located approximately 10 kilometres north-northeast of Carmi.

Scheelite, noted in thin section, occurs in quartz veinlets within a limestone pendant (Carboniferous-Permian Anarchist Group?) which has been altered to garnet and epidote. The garnet and epidote may be a result of high grade metamorphism. The skarn is hosted by an unnamed Middle Jurassic quartz diorite, which was previously mapped as Middle Jurassic Nelson Intrusions (Geological Survey of Canada, Map 1736A).

A report of an exploration program in 1987 for base and precious metals notes that there are several exposures of skarn in this area. The accompanying "Claim and Showings Plan" (Assessment Report 17030, Figure 2) identifies both scheelite and chalcopyrite mineralization at this location.

BIBLIOGRAPHY

EMPR ASS RPT 3352, 4461, 4720, *17030
EMPR EXPL 1988-C22
EMPR GEM 1971-399; 1973-51
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; *1736A;
7686G; 8510G
GSC MEM *79
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW040**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAKEVALE** LAKE VALE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 36 24 N
LONGITUDE: 119 05 16 W
ELEVATION: 1080 Metres

NORTHING: 5496993
EASTING: 349163

LOCATION ACCURACY: Within 1 KM

COMMENTS: Mine site (Geological Survey of Canada Open File 1969).

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Paleozoic
Cretaceous-Tertiary

GROUP

Anarchist

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Okanagan Batholith

LITHOLOGY: Granodiorite

HOSTROCK COMMENTS: Mapped by Little (GSC MAP 15-1961) as Anarchist Group and Nelson
Intrusions, by Tempeleman-Kluit (GSC MAP 1736A) as Okanagan Batholith.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Okanagan

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The LAKEVALE mine is located on the west side of the southernmost of the Arlington Lakes, approximately 14 kilometres north-northeast of Carmi.

The mine produced a small amount of ore during the period 1917-18. In 1917, the mine was operated by Saunier and Gachain who took out 9 tonnes of a quartz-galena ore (Minister of Mines Annual Report 1917, page 212). Assays of the ore and metal recovery, if shipped to a smelter, are not recorded. Development work in 1917 consisted of sinking (a shaft?) and drifting (on a vein?). In 1918, a lease was taken out on the claim by M. Shannier, who shipped 4.5 tonnes of silver-lead ore to the Trail smelter. Records show that approximately 3110 grams of silver were recovered; the amount of lead recovered is not recorded (Minister of Mines Index No. 3, page 202).

The LAKEVALE mine is believed to have been developed on a quartz vein in granodiorite of the Cretaceous-Tertiary Okanagan Batholith, near a contact with the Carboniferous-Permian Anarchist Group. This setting is similar to other workings in the Arlington camp. Details of the LAKEVALE mine vein are not available.

BIBLIOGRAPHY

EMPR AR *1917-212, 1918-211
EMPR INDEX *3-202
EMPR BC METAL MM00885
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8510G
GSC OF 409; 736; *1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW041**

NATIONAL MINERAL INVENTORY:

NAME(S): **DKD 2**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 35 13 N
LONGITUDE: 119 05 29 W
ELEVATION: 1040 Metres

NORTHING: 5494808
EASTING: 348841

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralized outcrop along Kettle Valley Railway (Assessment Report 4461).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite

ALTERATION: Malachite Silica Epidote Chlorite Biotite

Hematite Limonite

ALTERATION TYPE: Oxidation Silicific'n Propylitic Biotite Serpentin'zn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Paleozoic
Middle Jurassic

GROUP

Anarchist

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Quartz Diorite
Chloritic Gneissic Diorite
Mafic Diorite
Greenstone

HOSTROCK COMMENTS: Unnamed Middle Jurassic intrusion was previously mapped as Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Okanagan

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The DKD 2 showing is located 1.9 kilometres south of Arlington Lakes, and approximately 12 kilometres north-northeast of Carmi.

The showing consists of a mineralized outcrop on the Kettle Valley Railway right-of-way. Mineralization is hosted by an unnamed Middle Jurassic quartz diorite intrusion which is in contact with an altered gneissic diorite. The unnamed intrusion was previously mapped as Middle Jurassic Nelson Intrusions (Geological Survey of Canada Map 1736A). The altered diorite is strongly chloritized, silicified and, in some spots, serpentinized.

The DKD 2 showing consists of a west-northwest trending shear zone that dips 80 degrees south. Mineralization includes chalcopyrite, with limonite, specular hematite, epidote, chlorite, and biotite. Malachite staining is also noted. To the south approximately 50 metres is greenstone of the Carboniferous-Permian Anarchist Group.

The general area has numerous old workings, pits, and adits which date from the early 1900s. More recent work includes a 1971 magnetometer survey for Hudson's Bay Oil and Gas Ltd. and prospecting and geological mapping in 1973 for K.F. Brunning. In 1987, a small prospecting program was carried out by James McLeod for Edward Carson & Associates.

The 1971 magnetometer survey identified a magnetic anomaly along the geological contact between a gneissic diorite and a mafic diorite. It was noted that copper mineralization is coincident with this magnetic anomaly. Assays of the DKD 2 mineralization are not reported.

Mineralization similar to the DKD 2 showing is found 275 metres to the north along the railway right-of-way at the DKD 4 (082ENW043) showing.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 234
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *3352, *4461, 4720, 17030
EMPR EXPL 1988-C22
EMPR GEM 1971-399; 1973-51
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; *1736A;
7686G; 8510G
GSC MEM 79
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: 082ENW042

NATIONAL MINERAL INVENTORY:

NAME(S): BRU 21

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 34 57 N
LONGITUDE: 119 05 25 W
ELEVATION: 1010 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5494312
EASTING: 348908

LOCATION ACCURACY: Within 500M
COMMENTS: Adit portal (Assessment Report 4461).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
COMMENTS: Chalcopyrite is assumed.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE GROUP
Upper Paleozoic Anarchist

FORMATION
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The BRU 21 showing is located 2 kilometres south of Arlington Lakes, and approximately 12 kilometres north-northeast of Carmi.

The showing consists of two mineralized outcrops, 300 metres apart, along the Kettle Valley Railway right-of-way and an adit 75 metres east of the railway. All are hosted by greenstone of the Carboniferous-Permian Anarchist Group. Copper (chalcopyrite?) is noted at this location but no other information is available on the mineralogy.

In 1971, Hudson's Bay Oil and Gas Ltd. carried out a ground magnetometer survey of the area. In 1973, the area was prospected and the geology mapped for K.F. Brunning. The 1971 magnetometer survey identified a magnetic anomaly associated with a geological contact between gneissic diorite and a mafic diorite several hundred metres to the northeast (the DKD 2 (082ENW041) showing?).

A number of copper occurrences are found in this general area, but they are associated with quartz veins and shear zones in diorite, not greenstone.

BIBLIOGRAPHY

EMPR ASS RPT 3352, *4461, 4720, 17030
EMPR EXPL 1988-C22
EMPR GEM 1971-399; 1973-51
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8510G
GSC MEM 79
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW043**

NATIONAL MINERAL INVENTORY:

NAME(S): **DKD 4**, BRU

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 35 22 N
LONGITUDE: 119 05 26 W
ELEVATION: 1040 Metres

NORTHING: 5495084
EASTING: 348909

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralized outcrop along Kettle Valley Railway (Assessment Report 4461).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ALTERATION: Malachite Silica Epidote Chlorite Biotite

ALTERATION TYPE: Hematite
MINERALIZATION AGE: Oxidation Silicific'n Chloritic Serpentin'zn

DEPOSIT

CHARACTER: Shear Vein Disseminated
CLASSIFICATION: Hydrothermal Igneous-contact
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Quartz Diorite
Chloritic Gneissic Diorite

HOSTROCK COMMENTS: Unnamed Middle Jurassic intrusion was previously mapped as Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Okanagan
PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The DKD 4 showing is located 1.6 kilometres south of Arlington Lakes, and approximately 12.3 kilometres north-northeast of Carmi. The showing occurs in quartz diorite of a Middle Jurassic intrusion which is in contact with an altered gneissic diorite. This intrusion was previously mapped as Middle Jurassic Nelson Intrusions (Geological Survey of Canada Map 1736A). The altered diorite is strongly chloritized, silicified and, in some spots, serpentinized. The DKD 4 showing consists of a northwest-southeast trending, steeply dipping, narrow shear zone in a railway rock cut. Copper mineralization consists of chalcopyrite with abundant iron oxides, specular hematite, epidote, chlorite, and biotite. Malachite staining is also noted. The general area has numerous old workings, pits and adits which date from the early 1900s. Recent work includes a 1971 magnetometer survey for Hudson's Bay Oil and Gas Ltd. and in 1973, prospecting and geological mapping was carried out for K.F. Brunning. Some additional prospecting was carried out in 1987 by James McLeod for Edward Carson & Associates. The 1971 magnetometer survey identified a magnetic anomaly along the geological contact between a gneissic diorite and a mafic diorite. It was noted that copper mineralization is coincident with this magnetic anomaly. Similar mineral occurrences in this area are the DKD 2 (082ENW041) and the BRU 21 (082ENW042).

BIBLIOGRAPHY

EMPR ASS RPT *3352, *4461, 4720, 17030
EMPR EXPL 1988-C22
EMPR GEM 1971-399; 1973-51
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 237
REPORT: RGEN0100

BIBLIOGRAPHY

7686G; 8510G
GSC MEM 79
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW044**

NATIONAL MINERAL INVENTORY:

NAME(S): **DKD 6**, BRU

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 35 52 N
LONGITUDE: 119 05 08 W
ELEVATION: 1160 Metres

NORTHING: 5496000
EASTING: 349296

LOCATION ACCURACY: Within 500M

COMMENTS: Adit (Assessment Report 4461).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite Magnetite Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I VEIN, BRECCIA AND STOCKWORK

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Paleozoic
Middle Jurassic

GROUP

Anarchist

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Altered Basic Rock
Diorite
Chlorite Biotite Schist

HOSTROCK COMMENTS: Unnamed Middle Jurassic intrusion was previously mapped as Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The DKD 6 showing is located 1 kilometre south of Arlington Lakes and approximately 13 kilometres north-northeast of Carmi. The showing includes several copper occurrences and an adit near the south end of a small pond and east of the railway.

The showing occurs in diorite of an unnamed Middle Jurassic intrusion near the east contact of a north-south band of Carboniferous-Permian Anarchist chlorite-biotite schist. This intrusion was previously mapped as Middle Jurassic Nelson Intrusions (Geological Survey of Canada Map 1736A). An adit at this site has been driven eastward on a quartz vein. Disseminated magnetite, pyrite and chalcopyrite are noted in highly altered basic rocks (Anarchist Group?). Also included in the DKD 6 showing are two copper occurrences in Anarchist chlorite-biotite schist 100 metres to the northwest, disseminated chalcopyrite blebs in Anarchist chlorite-biotite schist 200 metres to the southwest, and a copper occurrence in diorite 250 metres to the west of the adit.

The general area has numerous old workings, pits, and adits which date from the early 1900s. More recent work includes a 1971 magnetometer survey for Hudson's Bay Oil and Gas Ltd. and prospecting and geological mapping in 1973 for K.F. Brunning. Some additional prospecting was carried out in 1978 by James Mcleod for Edward Carson & Associates.

The 1971 magnetometer survey identified a magnetic anomaly along the geological contact between a gneissic diorite and a mafic diorite. It was further noted that copper mineralization is coincident with this magnetic anomaly (Assessment Report 3352). Assays from the DKD 6 showing are not recorded.

The ELK 3 (082ENW038) showing, approximately 750 metres to the north, has some similarities to the DKD 6 showing.

BIBLIOGRAPHY

EMPR ASS RPT *3352, *4461, 4720, 17030
EMPR EXPL 1988-C22

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 239
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM 1971-399, 1973-51
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; *1736A;
7686G; 8510G
GSC MEM 79
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW045**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRU 22**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 34 53 N
LONGITUDE: 119 05 12 W
ELEVATION: 1060 Metres

NORTHING: 5494181
EASTING: 349166

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of three adits (Assessment Report 4461).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
COMMENTS: Chalcopyrite is assumed.
ASSOCIATED: Pyrite Hematite Quartz
COMMENTS: Pyrite is assumed.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I VEIN, BRECCIA AND STOCKWORK
COMMENTS: The shear hosting the quartz vein trends northwest-southeast.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Quartz Diorite
Diorite

HOSTROCK COMMENTS: Unnamed Middle Jurassic intrusion was previously mapped as Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The BRU 22 showing is located 2.5 kilometres south of Arlington Lakes, and approximately 12 kilometres north-northeast of Carmi.

The showing consists of 3 adits driven eastward on a quartz vein in a northwest-southeast trending shear zone. The shear zone cuts through quartz diorite of an unnamed Middle Jurassic intrusion. This intrusion was previously mapped as Nelson Intrusions (Geological Survey of Canada Map 1736A). Hematite is noted to occur in the shear zone, and it is reported that disseminated chalcopyrite and pyrite are commonly associated with specular hematite in and around shear zones in diorite on this property.

The general area has numerous old workings, pits, and adits which date from the early 1900s. More recent work includes a 1971 magnetometer survey for Hudson's Bay Oil and Gas Ltd. and prospecting and geological mapping in 1973 for K.F. Brunning. Additional prospecting was carried out in 1970 by James Mcleod for Edward Carson & Associates.

The 1971 magnetometer survey identified a magnetic anomaly along the geological contact between a gneissic diorite and a mafic diorite (both contact phases of the Nelson, possibly containing assimilated Anarchist?). It was noted that copper mineralization is coincident with this magnetic anomaly. Assays are not reported for the BRU 22 showing.

BIBLIOGRAPHY

EMPR ASS RPT 3352, *4461, 4720, 17030
EMPR EXPL 1988-C22
EMPR GEM 1971-399; 1973-51
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; *1736A;
7686G; 8510G
GSC MEM 79

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 241
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/02/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

2 diamond-drill holes for a total of 26 metres. No assays were recorded. Bulldozer trenching predates the above programs and is thought to have been carried out in the 1960s. In 1981, Cominco staked the property and carried out a soil geochemical survey. Samples were analysed for gold, silver, copper, lead and zinc. The results were discouraging and the property was dropped.

In 1984, M.S. Morrison carried out a VLF-EM survey. Three strong northwesterly trending anomalies were discovered. The claims were allowed to lapse, but were re-staked in 1985-86. In 1986, a biogeochemical survey was carried out by Morrison which identified anomalous zones of silver, arsenic, iron, lead, and zinc coincident with the ROSEMONT workings and extending to the northwest. The property was optioned by Zygote Resources Ltd. in 1987. They funded geological mapping, VLF-EM and magnetometer surveys and biogeochemical surveys. Although anomalous zones were identified, the property was allowed to lapse. It was re-staked in 1989 by Morrison who carried out another biogeochemical survey in 1990. A cadmium anomaly was discovered which coincides with previously identified VLF-EM anomalies. Richard H. Lonsdale acquired the Rosemont Crown Grant in 1993 and conducted sampling.

BIBLIOGRAPHY

EMPR AR 1901-1141; 1903-247; *1937-A36,D23; 1939-A77; 1940-63; 1941-60
EMPR INDEX 3-211
EMPR ASS RPT 4521, *5525, 9731, 11599, 15439, 16998, 20818, *24006
EMPR BC METAL MM00920
EMPR GEM 1973-50; 1975-E26
EMPR EXPL 1981-103
EMPR OF 1988-5; 1994-8
EMPR PF (Jones, H.M. (1988): A Report on the Auriferous Property, Zygote Resources Ltd., Prospectus dated July 15, 1988)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A; 7686G; 8510G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW047**

NATIONAL MINERAL INVENTORY:

NAME(S): **KNOB HILL**, KNOB HILL (L.2659), IVY-O 8

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 31 07 N
LONGITUDE: 119 01 21 W
ELEVATION: 1380 Metres

NORTHING: 5487075
EASTING: 353616

LOCATION ACCURACY: Within 1 KM
COMMENTS: Shaft (Assessment Report 5519).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Pyrite
ALTERATION: Garnet Limonite
ALTERATION TYPE: Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K SKARN
COMMENTS: The garnet may be a result of high grade metamorphism and not skarnification.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Garnet Skarn
Hornfels
Basic Dike
Quartz Diorite
Meta Sediment/Sedimentary Rock

HOSTROCK COMMENTS: Unnamed Middle Jurassic Intrusion was previously mapped as Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan
METAMORPHIC TYPE: Contact
PLUTONIC ROCKS RELATIONSHIP: Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland
GRADE:

CAPSULE GEOLOGY

The KNOB HILL showing is located on top of Mullins Hill, approximately 8 kilometres northeast of Carmi.

The showing occurs in a contact zone between metasediments of the Carboniferous-Permian Anarchist Group and quartz diorite of an unnamed Middle Jurassic Intrusion. This intrusion was previously mapped as Middle Jurassic Nelson Intrusions (Geological Survey of Canada Map 1736A). The garnet may be a result of high grade metamorphism and not skarnification. Mineralization consists of specks of chalcopyrite, molybdenite and pyrite in small lenses of garnet skarn and disseminated in hornfelsed contact zones associated with dikes. Mineralized areas are "capped" by a thick, hard layer of iron oxides.

This was an active exploration camp at the turn of the century when the Highland Bell (082ESW030) silver mine was discovered. Early references indicate a 12-metre shaft was sunk in an "iron cap" on the KNOB HILL in 1901. This claim was Crown granted as KNOB HILL (L.2659) in 1903. Numerous old workings, trenches, pits and open cuts occur in the general area of Mullins Hill. Those to the northeast are grouped under the ROSEMONT (082ENW046) occurrence 1.5 kilometres away, and those to the south are grouped under the IVY (082ENW037), which is located approximately 2 kilometres to the south.

In 1975, Vestor Explorations Ltd. drilled 2 percussion drillholes along the road immediately west of Mullins Creek. This was followed by 3 percussion holes in 1976. No results were filed in the assessment reports. An old 7.6-metre shaft noted on the drill plan may be the partly filled in shaft sunk in 1901.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 245
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1901-1141; 1903-247
EMPR ASS RPT *5519, 5914
EMPR EXPL 1975-E25; 1976-E31
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8510G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW048**

NATIONAL MINERAL INVENTORY:

NAME(S): **FAP, F.A.P., CRUMP,
CRU, ARM**

MINING DIVISION: Osoyoos

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 36 55 N
LONGITUDE: 119 51 13 W
ELEVATION: 800 Metres

NORTHING: 5499768
EASTING: 293876

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of trenching (Assessment Report 4691).

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Sphalerite Galena
ASSOCIATED: Magnetite Quartz Ilmenite Carbonate Mica
ALTERATION: Chlorite Quartz Carbonate Limonite Mica
ALTERATION TYPE: Propylitic Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 200 x 15 Metres
COMMENTS: Dimensions of shear zone.
STRIKE/DIP: I01 Au-quartz veins
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Okanagan Intrusions

LITHOLOGY: Amphibolite Gneiss
Hornblende Gneiss
Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1970
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Silver 27.4000 Grams per tonne
Gold 1.3700 Grams per tonne
Copper 0.3300 Per cent
Lead 1.3000 Per cent

COMMENTS: Assays from intersection between 46.5 and 49.8 metres in hole C-1.
REFERENCE: Property File - Mitchell, J.A. (1972): Report on Crump Group, page 7.

CAPSULE GEOLOGY

The FAP showing is located on the north side of Trout Creek, approximately 12 kilometres west of Summerland.
The showing occurs in a body of amphibolite gneiss within quartz diorite of the Jurassic Okanagan Intrusions. Mineralization consists of copper, lead, zinc, silver, and gold in quartz veins and shear zones in a northwest striking band of amphibolite gneiss. The zone dips easterly between 25 and 50 degrees, has a thickness of about 15 metres and has been traced northwesterly along strike for approximately 200 metres. Early reports refer to carbonatites and alkalic metasomatism (fentitization) but these were not substantiated by later geological work.
Early exploration on the FAP property is thought to have taken place in the 1930s, when a short adit was driven into the limonite zone. The adit has since caved and been lost. During the period 1968-70, Austro-Can Exploration Ltd. (later changed to Agio Resources Corp.) carried out a program of bulldozer trenching, geological mapping, soil sampling, magnetometer studies and 3 drillholes. No assessment records were filed on this work and the results are

CAPSULE GEOLOGY

unknown. In 1969, an airborne magnetometer survey was flown over the area. Gross geological features were identified by the survey. In 1970, geological mapping, geochemical surveys, and a ground magnetometer survey were carried out. Diamond drilling of 3 holes for a total of 335 metres was done on the eastern margin of the mineralized zone. The best intersection was between 46.5 metres and 49.8 metres depth in hole C-1. This section averaged 1.37 grams per tonne gold and 27.4 grams per tonne silver, 1.3 per cent lead, 0.33 per cent copper (Property File - Mitchell, J.A.(1972): Report on Crump Group, page 7). Mineralization exposed in trenches was observed to consist of chalcopyrite in veinlets and as disseminations between veinlets, and associated with magnetite, ilmenite and pyrite. In 1973, an electromagnetic survey was completed which outlined a major conductor. In 1975, a single 42-metre hole was drilled in the vicinity of the trenches. In 1982, additional geochemical sampling and prospecting was carried out. Two copper anomalies were identified. In 1983, diamond-drill hole 83-1 was completed to a depth of 62.4 metres. The hole encountered amphibolite gneiss with some minor shearing, bleaching and quartz veining. In 1985, an induced polarization survey was carried out. The survey identified chargeability anomalies; however the shear zone in the vicinity of the trenches did not have a definite response.

In 1986 detailed geological mapping reinterpreted the FAP showing as a mineralized shear zone which is hosted by a lens-shaped hornblende gneiss body. It was speculated that this may be part of a Proterozoic basement gneiss, similar to the Monashee gneiss normally only seen to the east of Okanagan Lake. Within the gneiss there is a strongly developed foliation and mafic minerals are typically altered to secondary chlorite. The main mineralized area is zoned into a chlorite-rich border, an outer quartz-carbonate-mica zone and an inner siliceous gossan. Pyrite and chalcopyrite are typically associated with quartz and quartz-carbonate veinlets in the quartz-carbonate-mica zone. The geological study concluded that the FAP showing is a fracture zone cutting basement amphibolites which have been metasomatically altered by the intrusion of a small ultrabasic to gabbroic plug and by quartz veining associated with hydrothermal fluids derived from the adjacent batholithic intrusions.

In 1987, 1 diamond-drill hole (68.8 metres) was undertaken to test the IP anomaly identified by the 1985 geophysics survey. The drill intersected pyrite and a conductive clay gouge in an east trending fracture zone. No other mineralization was observed and none of the drill core was analysed. In late 1988 a 4-hole drill program was carried out to test the main zone (DDH 88-1/148.4 metres), and the VLF-EM anomalies first outlined in 1973 (DDH 89-2, 89-3, 89-4/194.4 metres). The first hole failed to intersect mineralization, the others intersected a quartz vein stockwork with associated wallrock alteration. Mineralization consisting of pyrite, chalcopyrite, sphalerite, galena and a conductive clay gouge was found in the areas of the VLF-EM anomalies. Assay values ranged up to 1.7 grams of gold and 83.6 grams of silver per tonne, and 1.69 per cent copper over narrow widths (Assessment Report 18710).

BIBLIOGRAPHY

EMPR ASS RPT 2198, *4691, 5445, 10718, 11518, 13931, *15047,
16255, *18710
EMPR GEM 1973-52
EMPR EXPL 1975-E26; 1982-37; 1983-48; 1985-C30; 1986-C37; 1987-C34
EMPR OF 1994-8
EMPR PF (Mitchell, J.A. (1972): *Report on Crump Group)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW049**

NATIONAL MINERAL INVENTORY:

NAME(S): **SIL, RHYOLITE, BALDRY,
EMITTE, MISS TREPANIER, ASTRA,
BAAL, CALUMET, IDA**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W

UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 49 50 30 N
LONGITUDE: 119 51 42 W
ELEVATION: 1330 Metres

NORTHING: 5524955
EASTING: 294254

LOCATION ACCURACY: Within 500M
COMMENTS: Old shaft (Assessment Report 5319).

COMMODITIES: Copper Zinc Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Sphalerite
ASSOCIATED: Pyrite Pyrrhotite Quartz Carbonate
ALTERATION: Chlorite Epidote Quartz Carbonate Pyrite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Podiform Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I VEIN, BRECCIA AND STOCKWORK

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Nicola	Undefined Formation	
Lower Jurassic			Pennask Batholith

LITHOLOGY: Hornfels
Rhyolite
Rhyolite Breccia
Tuff
Agglomerate
Monzonite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
METAMORPHIC TYPE: Contact
PLUTONIC BELT: Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP:
GRADE:

CAPSULE GEOLOGY

The SIL showing is located on Mount Wilson, approximately 11.5 kilometres northwest of Peachland.

The showing occurs in a band of rhyolite, rhyolite breccia, tuffs and agglomerate of the Triassic-Jurassic Nicola Group, which forms the south slope of Mount Wilson. The area is underlain by granodiorite of the Early Jurassic Pennask Batholith. North of the showing, the volcanics have been intruded by a monzonite stock and are pervasively altered by chloritic epidote-quartz-carbonate-pyrite fractures. Pyrite, pyrrhotite, chalcopyrite and sphalerite occur as disseminations, fracture fillings, pods, and nearly massive lenses in the volcanic rocks. These sulphides as well as a minor occurrence of molybdenite are also present within quartz-carbonate veins.

An old shaft was reportedly hand dug in 1931-32 by the Brianson brothers. In 1966, the property was held by Boundary Exploration Limited who carried out 3.2 kilometres of road building and 120 metres of trenching. Peachland Copper Mines is also reported to have carried out trenching on the east slopes of Mount Wilson in the early 1970s. No assessment reports were filed on these programs. During 1974-75 Canadian Occidental Petroleum Ltd. carried out a program of geological mapping, rock, stream and soil geochemical surveys, magnetometer surveys, line cutting, road construction, and diamond drilling (1 hole/92.4 metres). They found that the intrusives were barren of sulphide mineralization, while hornfelsed volcanics contain numerous and widespread occurrences of pyrite and pyrrhotite. No records were filed on the diamond-drill program. In 1977, the Sil claims lapsed, but were re-staked in 1978 as the Rhyolite claims. In 1979, Brican Resources Ltd. established a 10-kilometre grid over the

CAPSULE GEOLOGY

volcanics. In 1980, Esso Resources Canada Ltd. carried out a ground magnetometer survey over that grid. They found that there was more magnetic variation over the intrusives than over the volcanics. They also carried out an airborne electromagnetic survey; however, only weak anomalies were found and they were related to overburden response. In 1982, Brican extended the grid to the northwest and carried out a 7.0-kilometre magnetometer survey. The survey identified several sharp magnetic anomalies.

BIBLIOGRAPHY

EMPR AR 1966-187
EMPR ASS RPT *5319, 8143, 9261, 10591
EMPR EXPL 1979-46; 1980-44; 1982-37
EMPR GEM 1975-E27,E28
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/15

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW050**

NATIONAL MINERAL INVENTORY:

NAME(S): **JAMES LAKE**, JOCK

MINING DIVISION: Vernon

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 57 27 N
LONGITUDE: 119 15 18 W
ELEVATION: 1360 Metres

NORTHING: 5536343
EASTING: 338255

LOCATION ACCURACY: Within 500M

COMMENTS: Main outcrop exposure in roadcut (Assessment Report 19552).

COMMODITIES: Copper Wollastonite

MINERALS

SIGNIFICANT: Chalcopyrite Wollastonite
ASSOCIATED: Garnet Diopside Wollastonite Pyrite
ALTERATION: Garnet Diopside Wollastonite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Stratiform
CLASSIFICATION: Skarn Industrial Min.
TYPE: K01 Cu skarn K09 Wollastonite skarn
COMMENTS: Flat lying banded skarn exposed over 340 metres.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic			Shuswap Metamorphic Complex

LITHOLOGY: Calc-silicate Skarn
Gneiss

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Monashee
METAMORPHIC TYPE: Contact Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP:
GRADE:

CAPSULE GEOLOGY

The JAMES LAKE showing is located 300 metres west of James Lake and approximately 18 kilometres northeast of Kelowna.

The showing consists of flat-lying, banded, calcium silicate skarn, which is overlain and underlain by gneissic rocks of the Upper Proterozoic Shuswap Metamorphic Complex. It is comprised of red, brown and green garnet, with local concentrations of fine-grained wollastonite and diopside. Pyrite and chalcopyrite are present in the skarn, and the enclosing gneiss is locally pyritic.

Skarn occurs for approximately 230 metres with about 100 metres of gneiss in between along a northwest trending roadcut (Personal Communication, Z.D. Hora, 1996). Also included in this occurrence is a smaller exposure of calcium silicate skarn, which outcrops for 20 metres along a roadcut, 680 metres southwest of the main exposure (Personal Communication, Z.D. Hora, 1996).

The property was examined for its precious and base metal potential by W.D. Yorke-Hardy, R.G. Irving and J.H. Wright in 1988-89. The results were discouraging and they concluded that the rock may be suitable for lapidary purposes. There are no records to suggest that the wollastonite potential has yet been evaluated.

BIBLIOGRAPHY

EMPR ASS RPT *19552
EMPR OF *1991-17; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8511G
GSC OF 409; 637; 736; 1969
PERS COMM (D. Hora, 1989)
Yorke-Hardy, W.D.(1988): *Prospecting Report on Jock Mineral Claims

DATE CODED: 1990/04/04
DATE REVISED: 1996/01/15

CODED BY: PSF
REVISED BY: JWP

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082ENW051**

NATIONAL MINERAL INVENTORY: 082E14 U1

NAME(S): **HAYNES LAKE**, KALLIS CREEK, PB,
PB 81-179, PEREGRINE, LANE GROUP,
CINDY GROUP

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082E14E 082E11E
BC MAP:
LATITUDE: 49 45 25 N
LONGITUDE: 119 08 07 W
ELEVATION: 1220 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Haynes deposit (Paper 1979-6).

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5513795
EASTING: 346207

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Ningyoite
ASSOCIATED: Marcasite
COMMENTS: Marcasite is inferred.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Epigenetic
TYPE: D04 Basal U
SHAPE: Regular
DIMENSION: 2000 x 700 Metres
COMMENTS: Area of mineralization.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Miocene	Chilcotin	Unnamed/Unknown Formation	Shuswap Metamorphic Complex
Upper Proterozoic			

LITHOLOGY: Carbonaceous Sandstone
Conglomerate
Vesicular Basalt
Granodiorite Ortho Gneiss

HOSTROCK COMMENTS: Deposit occurs in paleochannel fluvial sediments.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage Monashee
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: HAYNES LAKE
CATEGORY: Indicated
QUANTITY: 2000000 Tonnes
COMMODITY: Uranium
GRADE: 0.0170 Per cent
COMMENTS: Greater than 2 million tonnes at 0.02 per cent U3O8. Conversion used for U3O8 to uranium is 0.848.
REFERENCE: Sawyer, et.al., 1981.

REPORT ON: Y

YEAR: 1979

CAPSULE GEOLOGY

The HAYNES LAKE deposit is located approximately 30 kilometres southeast of Kelowna.

Work on the property, consisting of geological and radiometric surveys and diamond drilling, was carried out during the period 1973-1977 by Power Reactor and Nuclear Fuel Development Corporation (Japan) for Nissho-Iwai Canada Ltd.

The deposit is underlain by hornblende-biotite granodiorite orthogneiss of the Upper Proterozoic Shuswap Metamorphic Complex. To the southwest lies the Cretaceous Okanagan Batholith. The deposit occurs in Miocene paleochannel sediments just south of, and down gradient from, the junction of two major paleovalley structures. The sediments, which are mainly conglomerate and carbonaceous sandstone, are capped by an average of 75 metres of massive, vesicular, olivine-basalt of the Miocene Chilcotin Group.

The uranium mineralization, believed to be ningyoite, is commonly associated with iron sulphides, likely marcasite. The

CAPSULE GEOLOGY

mineralized area measures about 2000 by 700 metres. Ore estimates are in excess of 2 million tonnes grading slightly over 0.017 per cent uranium (Sawyer, et.al., 1981).

BIBLIOGRAPHY

EMPR ASS RPT *4629, 5115, *5582, 5982, 6964, 7865
EMPR EXPL 1975-29,30; 1976-30; 1977-38
EMPR FIELDWORK 1976, pp. 11-14
EMPR GEM 1973-52,53; 1974-64
EMPR GEOLOGY 1976 pp. 13-17; *1977-1981, pp. 12-16
EMPR MAP 22; 29
EMPR OF 1990-32; 1994-8
EMPR P *1979-6, pp. 31,37,47
EMPR RGS 29
EMPR PF (Miscellaneous claim maps of PB claims, August 1975; Inazumi, S. and Kikuchi, T. (1975): Geological and Diamond Drilling Report on the PB Mineral Claims)
EMR MIN BULL MR 223 B.C. 19
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A; 7686G; 8511G
GSC OF 409; 736; 1969
GSC P 81-23, pp. 37-47
CIM Special Volume *33, 1986, pp. 309-320 (Uranium Deposits of Canada
ECON GEOL Vol.77, 1982, p. 1193
GCNL #178,#183,#247, 1976; #43(Mar.2), 1977; #80(Apr.26),#198, #215, 1978
Bates, D.V., Murray, J.W. and Raudsepp, V. (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 32-34
*Sawyer, D.A., Turner, A.T., Christopher, P.A. and Boyle, D.R. (1981): Basal Type Uranium Deposits, Okanagan Region, South Central British Columbia; in Field Guides to Geology and Mineral Deposits, pp. 69-77, GAC/MAC/CGU, Calgary

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW052**

NATIONAL MINERAL INVENTORY:

NAME(S): **VENUS**, PB, KALLIS CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E14E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 46 50 N
LONGITUDE: 119 04 34 W
ELEVATION: 1260 Metres

NORTHING: 5516300
EASTING: 350540

LOCATION ACCURACY: Within 500M

COMMENTS: Venus outcrop (Sawyer, 1981, Figure 4). Drillholes to the northeast encountered sporadic and low radioactivity.

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Epigenetic
TYPE: D04 Basal U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Miocene
Upper Proterozoic

GROUP

Chilcotin

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Shuswap Metamorphic Complex

LITHOLOGY: Conglomerate
Basalt
Granodiorite Ortho Gneiss

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage Monashee

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The VENUS showing is located approximately 30 kilometres east-southeast of Kelowna.

Work on the property, consisting of geological and radiometric surveys and diamond drilling, was carried out in 1975 by Power Reactor and Nuclear Fuel Development Corporation (Japan) for Nissho-Iwai Canada Ltd. Most of the drillholes were drilled approximately 1.5 kilometres northeast of the showing.

The showing is underlain by hornblende-biotite granodiorite orthogneiss of the Upper Proterozoic Shuswap Metamorphic Complex. Loosely consolidated conglomerate outcrops at the southwestern end of a northeast trending structurally-controlled paleovalley. Several drillholes northeast of the outcrop encountered low sporadic radioactivity in the conglomerates beneath the plateau basalt of the Miocene Chilcotin Group. The maximum radioactivity measured in the 12 drillholes was 270 counts-per-second (DDH-55) using a Geiger GP-27 gamma-ray probe (Assessment Report 5582, Table 8-6-4). Background radiation was 50 counts-per-second.

BIBLIOGRAPHY

EMPR ASS RPT 4629, *5582
EMPR EXPL 1975, pp. 29-30; 1978, pp. 41-42
EMPR GEOLOGY 1977-1981, pp. 12-16
EMPR MAP 29
EMPR OF 1990-32; 1994-8
EMPR P 1979-6
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8511G
GSC OF 409; 736; 1969
GSC P 79-1A, pp. 349-356
Sawyer, D.A.; Turner, A.T.; Christopher, P.A.; and Boyle, D.R.
(1981): *Basal Type Uranium Deposits, Okanagan Region, South
Central British Columbia; in Field Guides to Geology and Mineral

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 254
REPORT: RGEN0100

BIBLIOGRAPHY

Deposits, pp. 69-77, GAC/MAC/CGU, Calgary

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW053**

NATIONAL MINERAL INVENTORY: 082E14 U2

NAME(S): **HYDRAULIC LAKE**, TYEE, KETTLE,
PB, PB 180-214

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082E14E
BC MAP:
LATITUDE: 49 47 50 N
LONGITUDE: 119 11 49 W
ELEVATION: 1250 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of deposit (Paper 1979-6).

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5518401
EASTING: 341897

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Ningyoite Gummite Autunite
ASSOCIATED: Marcasite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Epigenetic
TYPE: D04 Basal U
SHAPE: Regular
DIMENSION: 1000 x 200 x 50 Metres STRIKE/DIP:
COMMENTS: Dimensions of mineralized portion of paleochannel which trends
southeast. TREND/PLUNGE: 150/

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Miocene
Upper Proterozoic

GROUP

Chilcotin

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Shuswap Metamorphic Complex

LITHOLOGY: Conglomerate
Sandstone
Mudstone
Clay
Glacial Till
Granodiorite Ortho Gneiss

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage Monashee PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SOUTH PART REPORT ON: Y
CATEGORY: Measured YEAR: 1977
QUANTITY: 2055697 Tonnes
COMMODITY GRADE
Uranium 0.0310 Per cent
COMMENTS: Defined by grid drilling. Grade stated as 0.0366 per cent U3O8.
Conversion used for U3O8 to uranium is 0.848.

REFERENCE: Paper 1979-6, page 47 (from Trenholme, Oct. 1977, company report).

ORE ZONE: NORTH PART REPORT ON: Y
CATEGORY: Indicated YEAR: 1979
QUANTITY: 1000000 Tonnes
COMMODITY GRADE
Uranium 0.0170 Per cent
COMMENTS: Estimate by wide-spaced drilling. Greater than 1 million tonnes at
greater than 0.02 per cent U3O8. Conversion for U3O8 to U is 0.848.

REFERENCE: Paper 1979-6, page 47.

CAPSULE GEOLOGY

The HYDRAULIC LAKE deposit is located in the Hydraulic Creek valley 1.5 kilometres north of Hydraulic Lake and approximately 24 kilometres southeast of Kelowna.

Work on the property, prior to the uranium moratorium in 1980, consisted of geological and radiometric surveys and extensive diamond drilling. In 1976, Tyee Lake Resources Ltd. drilled 29 holes for a

CAPSULE GEOLOGY

total of 1,619 metres. In 1977, Noranda Exploration Company drilled 2,423 metres in 39 diamond-drill holes and 4,522 metres in rotary holes. In 1978, Placer Development optioned the property and carried out 360 metres of diamond drilling in 9 holes. Metallurgical testing of the uranium ore was done by Placer in 1979. PNC Exploration (Canada) Co. Ltd. conducted wide-spaced drilling in the north part of the deposit.

The deposit is underlain by hornblende-biotite granodiorite orthogneiss of the Upper Proterozoic Shuswap Metamorphic Complex. The deposit occupies the northern part of a southeast trending, structurally-controlled Miocene paleochannel, which overlies the metamorphic rocks. This paleochannel varies in width from 100 to 200 metres and is mineralized for a length of approximately 1000 metres, although ore-grade material is confined to a length of 500 to 600 metres. The average thickness of the deposit is 50 metres. The paleohydrologic gradient from northwest to southeast is about 2 per cent. The basalt formerly covering the deposit has been stripped off as a result of uplift and glaciation and the deposit is now covered by relatively impermeable beds of varved clay and glacial till. The olivine basalt and the fluvial sediments of the Miocene Chilcotin Group form the plateau basalt.

Conglomerate blankets the basement complex and also comprises thick horizons throughout the sedimentary sequence. Interbedded within the conglomerate units are much thinner horizons of fine to coarse-grained sandstone and minor mudstone. Fragments of slightly decomposed and carbonized wood and other forms of organic material are abundantly scattered throughout the sediments. Organic material within iron sulphide-rich zones of the deposit has been completely broken down to form humic acids, which have precipitated together with uranium in voids within the conglomerate.

Although marcasite is scattered throughout the mineralized paleochannel, there are two zones, corresponding to two small depressions in the basement complex, where marcasite is in sufficient quantity to cement the conglomerate.

Ningyoite, gummite and autunite are reported. It occurs mainly as star-shaped concretions and accretionary masses surrounding clasts and marcasite grains in carbonaceous filled voids. The uranium content of the sediments gradually increases with depth, the basal conglomerate often containing more than 0.1 per cent uranium.

Ore reserves of the southern part of the deposit are estimated at 2,055,697 tonnes averaging 0.031 per cent uranium (grade stated as 0.0366 per cent U3O8) (Paper 1979-6). Reserves of the northern part are estimated, by wide-spaced drilling, at over 1,000,000 tonnes of 0.017 per cent uranium (grade stated as 0.02 per cent U3O8) (Paper 1979-6). Conversion used for U3O8 to uranium is 0.848.

BIBLIOGRAPHY

- EMPR ASS RPT 5090, *5570, 5972, 6011, 6288, *6390, 6418
EMPR EXPL 1975-29,30; 1976-30,33; 1977-37,38; 1978-42,43
EMPR FIELDWORK 1976, pp. 11-14
EMPR GEM 1974-64
EMPR GEOLOGY *1976, pp. 13-17; 1977-1981, pp. 12-16
EMPR MAP 29
EMPR OF 1990-32; 1994-8
EMPR P *1979-6, pp. 31,36,37,47
EMPR PF (Brunette, J.A. (1977): Hydraulic Lake Project, Preliminary Study of Mineral Inventory, Placer Development Ltd.; Trenholme, L.S. (1978): *Geology of the Hydraulic Lake Uranium Deposit of Tye Lake Resources Ltd. Kelowna-Beaverdell Area, B.C.; Cannon, R.W. (1978): Final Report on the 1978 Program for the Tye Lake Resources - Hydraulic Lake Property, Placer Development Ltd.; Cannon, R.W. (1978): Memos on the Tye-Hydraulic Lake Property, July 27, Aug. 10 and Oct. 5; Lam, B.D. (1978): Placer Development Ltd., Metallurgical Research Centre, Tye Hydraulic Lake, Report No. 1 and May 12 memo; Cannon, R.W. (1979): Hydraulic Lake Assay Results, Placer Development Ltd. Memo April 6, 1979; Howard, D.A. (1979): Tye-Hydraulic Lake Progress Report, Placer Development Ltd. Memo May 1, 1979; Abstract of paper to be presented at CIM in Montreal by D.R. Boyle)
EMPR RGS 29
EMR MIN BULL MR 223 B.C. 20
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A; 7686G; 8511G
GSC OF 409; 551; 736; 1969
GSC P 79-1A, pp. 349-356; 81-23, pp. 37-47
CIM BULL Dec. 1978, p. 64; Mar. 1979, Vol. 72, No. 803, p. 96; Aug. 1980, Vol. 73, No. 820, pp. 89-108
CIM Special Volume *33, 1986, pp. 309-320 (Uranium Deposits of Canada)
CSPG BULL Vol. 25, No. 6 (Dec 1977), p. 1246

BIBLIOGRAPHY

ECON GEOL *Vol. 77, 1982, pp. 1189-1193
GCNL #77(Apr.22), #88(May 7), #96(May 19), #108(June 7), #122(June 25), #128(July 6), #136(July 16), #139(July 21), #145(July 29), #150(Aug.6), #171(Sept.7), #183(Sept.23), #193(Oct.7), #199(Oct.18), #216(Nov.10), #223(Dec.1), #247(Dec.28), 1976; #14, #7(Jan.11), #38(Feb.23), #45(Mar.4), #104(May 31), #122(June 24), #172(Sept.7), #220(Nov.16), 1977; #15(Jan.23), #50(Mar.13), #86, #100, #142(July 25), #172(Sept.7), 1978; #150, 1979
N MINER Sept. 8, Nov. 17, 1977; Jan. 26, Sept. 21, 1978; Aug. 16, 1979
Bates, D.V.; Murray, J.W.; and Raudsepp, V. (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 32-34
Canadian Mineralogist, 1981, Vol. 19, pp. 325-331
Sawyer, D.A.; Turner, A.T.; Christopher, P.A.; and Boyle, D.R., (1981): *Basal Type Uranium Deposits, Okanagan Region, South Central British Columbia; in Field Guides to Geology and Mineral Deposits, pp. 69-77, GAC/MAC/CGU, Calgary

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/25

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW054**

NATIONAL MINERAL INVENTORY:

NAME(S): **TREPANIER GORGE**, TRE 1,2

MINING DIVISION: Osoyoos

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 55 22 N
LONGITUDE: 119 59 10 W
ELEVATION: 1460 Metres

NORTHING: 5534320
EASTING: 285668

LOCATION ACCURACY: Within 500M

COMMENTS: Diamond-drill hole 75-1 (Assessment Report 5685).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT:	Chalcopyrite	Molybdenite			
ASSOCIATED:	Pyrite	Malachite	Quartz	Hematite	
ALTERATION:	Pyrite	Chlorite	Epidote	K-Feldspar	Biotite
ALTERATION TYPE:	Hematite	Malachite	Quartz		
MINERALIZATION AGE:	Propylitic	Oxidation			
	Unknown				

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic			Pennask Batholith

LITHOLOGY: Porphyritic Quartz Diorite

HOSTROCK COMMENTS: Brenda stock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: DRILLHOLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1975
SAMPLE TYPE: Drill Core	
<u>COMMODITY</u>	<u>GRADE</u>
Copper	0.0272 Per cent
Molybdenum	0.0040 Per cent
COMMENTS: Average values over entire 123.4 metre depth of drillhole 75-1.	
REFERENCE: Assessment Report 5691.	

CAPSULE GEOLOGY

The TREPANIER GORGE prospect is located in the upper reaches of the Trepanier Creek gorge, approximately 24 kilometres northwest of Peachland.

The property is underlain by porphyritic quartz diorite of the Early Jurassic Pennask Batholith, locally known as the Brenda stock. Alteration of the quartz diorite is generally confined to fractures and to narrow alteration envelopes around those fractures. Four main alteration assemblages have been noted; quartz-hematite-pyrite, chlorite-epidote-potassium feldspar, biotite-chalcopyrite, and chlorite. The dominant trend of these fractures is northwest, in contrast to the northeast trend at the Brenda mine (092HNE047). Chalcopyrite mineralization is present as very thin fracture fillings. Crosscutting relationships indicate that the chalcopyrite fracture fillings are oldest. Malachite is found in the Trepanier Creek gorge in both horizontal and steeply dipping fractures, and is associated with pyrite and chalcopyrite. Molybdenite has not been noted in the gorge but has been logged in drill core. Molybdenite has been noted in trenches to the north and west, where it is associated with quartz and hematite, but only rarely with chalcopyrite.

The showing was part of the extensive property holdings of Noranda Exploration Company Ltd. Numerous trenches, roads, and drillholes were left in this general area by Noranda; however, the

CAPSULE GEOLOGY

results of their work was not filed for assessment. In 1975-76, Canadian Occidental Petroleum carried out geological mapping, rock and soil geochemical surveys, and completed 2 diamond-drill holes. Hole 75-1 intersected sporadic chalcopyrite and molybdenite mineralization over the entire 123.44 metres, averaging 0.0272 per cent copper and 0.004 per cent molybdenum (Assessment Report 5691). The last 2.1 metres (121.34 - 123.44 metres) intersected a vertical fracture which assayed 0.29 per cent copper and 0.37 per cent molybdenum (Assessment Report 5691). Hole 75-2, located 800 metres to the north, was not as highly mineralized as hole 75-1; it contained more pyrite instead.

The NORTH BRENDA-CENTRAL showing (082ENW003) is located 1 kilometre to the northwest.

BIBLIOGRAPHY

EMPR AR 1965-163; 1966-184; 1967-205,211; 1968-215
EMPR ASS RPT 1187, 1970, *5685, *5691, 6062
EMPR GEM 1970-391; 1971-288; 1974-64
EMPR EXPL 1975-E28; 1976-E31
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969
CIM Special Volume 15, pp.186-194

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW055**

NATIONAL MINERAL INVENTORY:

NAME(S): **DAM**, M 82, BERN

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 53 18 N
LONGITUDE: 119 59 35 W
ELEVATION: 1580 Metres

NORTHING: 5530511
EASTING: 285017

LOCATION ACCURACY: Within 500M

COMMENTS: Diamond-drill hole DDHEX 8603 (Assessment Report 15594).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Pyrite Quartz
ALTERATION: Chlorite K-Feldspar
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic			Pennask Batholith

LITHOLOGY: Porphyritic Quartz Diorite

HOSTROCK COMMENTS: Brenda stock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Copper 0.1500 Per cent
Molybdenum 0.0190 Per cent
COMMENTS: Best intersection from drillhole DDHEX 8603 between 36.57 and 42.67 metres.
REFERENCE: Assessment Report 15594.

CAPSULE GEOLOGY

The DAM showing is located 0.8 kilometre northeast of the Brenda mine open pit (092HNE047), approximately 22 kilometres northwest of Peachland.

The area is underlain by porphyritic quartz diorite of the Early Jurassic Pennask Batholith, locally known as the Brenda stock. Chalcopyrite and molybdenite and minor associated pyrite occur in hairline fractures and narrow (3-10 millimetres) quartz veins. Silicate minerals are unaltered. Chlorite is ubiquitous in fine fractures. K-feldspar alteration selvages are well developed in the margins of quartz veins. Molybdenite is present in gouges and slips and is associated with quartz, which shows signs of post-mineralization disruption.

In 1986, Brenda Mines Ltd. drilled 3 holes for a total of 355 metres. Chalcopyrite and molybdenite were encountered in all 3 holes. Copper assays were generally less than 0.1 per cent and molybdenum less than 0.01 per cent; the best intersection was 0.15 per cent copper and 0.019 per cent molybdenum over 6.1 metres (Assessment Report 15594). This was considered an uneconomic grade by Brenda Mines, who concluded that the fracture system at the DAM showing was too tight to host economic mineralization, and that no further drilling was warranted.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 261
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *15594
EMPR EXPL 1987-C35
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969
CIM Special Volume 15, pp.186-194

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW056**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROY**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 58 30 N
LONGITUDE: 119 42 09 W
ELEVATION: 1080 Metres

NORTHING: 5539352
EASTING: 306232

LOCATION ACCURACY: Within 1 KM

COMMENTS: Diamond-drill hole (Assessment Report 2737).

COMMODITIES: Titanium Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Magmatic Industrial Min.
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic-Mesozoic	Harper Ranch	Undefined Formation	

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The ROY showing is located north of Lambly Lake, approximately 15 kilometres north-northwest of Westbank.
The showing was explored for copper in 1970 by the Cariboo Gold Quartz Mining Company Limited. Work consisted of magnetometer and geochemical surveys, 90 metres of trenching and 1 diamond-drill hole. In 1973, linecutting and a ground magnetometer survey was carried out by Wharf Resources Ltd.
The showing is underlain by greenstone of the Devonian-Triassic Harper Ranch Group, which in turn, is overlain to the southeast by trachyte to trachyandesite flows, ash flow tuff and minor mudstone of the Eocene Kitley Lake Formation. An altered volcanic of intermediate composition and rich in titaniferous magnetite was intersected between 112 metres and 161 metres depth in the diamond-drill hole.

BIBLIOGRAPHY

EMPR ASS RPT *2737, 4242, 4272
EMPR FIELDWORK 2000, pp. 191-222
EMPR GEM 1970-407, 1973-52
EMPR OF 1994-8
EMPR MAP 39
EMPR RGS 29
EMPR PF (Croteau, F.L. (1970): Geophysical and Geochemical Survey "ROY" claim group, Kelowna, B.C.)
GSC MAP 538A; 15-1969; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1995/01/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW057**

NATIONAL MINERAL INVENTORY:

NAME(S): **GEORGE LAKE**, NORTH BRENDA

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W 092H16E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 49 53 27 N
LONGITUDE: 120 00 03 W
ELEVATION: 1620 Metres

NORTHING: 5530807
EASTING: 715411

LOCATION ACCURACY: Within 500M

COMMENTS: Copper noted on map (Minister of Mines Annual Report 1967, Figure 22).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
COMMENTS: Chalcopyrite and molybdenite are assumed.
ASSOCIATED: Quartz Microcline
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic			Pennask Batholith

LITHOLOGY: Porphyritic Quartz Diorite

HOSTROCK COMMENTS: Brenda stock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The GEORGE LAKE showing is located on the northwest side of George Lake, approximately 23 kilometres northwest of Peachland. The showing consists of copper (chalcopyrite?) and molybdenum (molybdenite?) mineralization exposed in outcrops of a porphyritic quartz diorite of the Early Jurassic Pennask Batholith, locally known as the Brenda stock. Barren quartz-microcline veins are noted in the area. During the exploration boom around the Brenda mine (092HNE047) in the 1960s this showing was held by the Noranda Exploration Company Limited.

BIBLIOGRAPHY

EMPR AR 1966-180, *1967-Fig 22
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969
CIM Special Volume 15, pp.186-194

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW058**

NATIONAL MINERAL INVENTORY:

NAME(S): **KELOWNA**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E14W
BC MAP:

Underground

MINING DIVISION: Vernon

LATITUDE: 49 53 40 N
LONGITUDE: 119 26 51 W
ELEVATION: 380 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5529767
EASTING: 324220

LOCATION ACCURACY: Within 5 KM

COMMENTS: Within Kelowna city limits (Geological Survey of Canada Open File 1969).

COMMODITIES: Clay

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Industrial Min.
TYPE: R INDUSTRIAL ROCKS

HOST ROCK

DOMINANT HOSTROCK: Unknown

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marama	

LITHOLOGY: Clay

HOSTROCK COMMENTS: Insufficient information exists to determine if the showing is unconsolidated surficial material or is bedrock hosted.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Overlap Assemblage

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The KELOWNA clay showing is located in the Mount Dilworth area within the present Kelowna city limits. William Haug and Sons Brickworks used the clay to make bricks from before 1932 to 1940.

Mount Dilworth is formed of flow-banded dacite lavas of the Eocene Penticton Group, Marama Formation. To the north are trachyte to trachyandesite lavas and pyroclastic rocks of the Penticton Group, Marron Formation. Mount Dilworth is surrounded by glacial lake sediments on all sides, except on the southeast, where there are raised alluvial fans, terraces and deltas. Insufficient information exists to determine if the showing is a lacustrine deposit, or if it is a clay alteration zone in the volcanic rocks.

The clay was of two types: a light-yellow clay with some stones, and a hard dark-brown, non-calcareous clay. It was noted that the clay works well with 23.3 per cent water, although somewhat short. It was safe drying at 80 degrees centigrade with an average shrinkage of 4.6 per cent. The firing characteristics of the light yellow clay are: 04 cone, 16.5 per cent absorption, 1.3 per cent shrinkage, light pink colour, and soft with some scum. The firing characteristics of the dark brown clay are: 2 cone, 7.5 per cent absorption, 6 per cent shrinkage, brown red colour, and very hard with scum. Overall, the poor colours and scumming make the clay unattractive. It was also noted that the abundance of iron stain was due to the concretions in the clay (Bulletin 30, p. 51).

BIBLIOGRAPHY

EMPR BULL *30, pp. 8,51; 46, Fig. 2
EMPR OF 1994-8
EMPR PRELIM MAP 45
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8511G
GSC OF 409; 637; 736; *1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW059**

NATIONAL MINERAL INVENTORY:

NAME(S): **PAN, TRE, JO,
DAN, COLD**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 54 58 N
LONGITUDE: 119 58 44 W
ELEVATION: 1400 Metres

NORTHING: 5533559
EASTING: 286157

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of mineralized outcrops (Property File - Whalen, J.B. (1974):
Geology, Geochemistry and Magnetometer Survey of the Pan Claim Group,
Canadian Occidental Petroleum Ltd.).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Pyrite Quartz
ALTERATION: Pyrite Epidote Biotite Chlorite K-Feldspar
Sericite
ALTERATION TYPE: Propylitic Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic			Pennask Batholith

LITHOLOGY: Porphyritic Quartz Diorite

HOSTROCK COMMENTS: Brenda stock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The PAN showing is located in the upper reaches of the Trepanier Creek gorge, approximately 24 kilometres northwest of Peachland.

The property is underlain by porphyritic quartz diorite of the Early Jurassic Pennask Batholith, locally known as the Brenda stock.

Sulphide mineralization on the PAN showing is structurally controlled, and is found as fracture-coatings and vein-fillings in flat joints and northwest trending vertical fractures. The area of mineralization is characterized by a greater abundance of veins and fracture-fillings accompanied by rock alteration. These consist of pyrite-epidote, secondary biotite, chlorite, and quartz veins. The veins are often accompanied by K-feldspar alteration selvages and chlorite-sericite alteration of the host is common. There is no apparent zonation to the hydrothermal alteration, nor is there a pyrite halo. Molybdenite was noted in one location at the main PAN showing. Numerous chalcopyrite-pyrite exposures exist in the Trepanier Creek gorge for approximately 1 kilometre downstream from the main PAN showing. These exposures are included in the PAN occurrence.

The property was explored by Canadian Superior Exploration Ltd. in 1969, who carried out a soil sampling program northeast of the gorge. Noranda Exploration Company Ltd. explored this general area during the 1960s; however, it is not recorded if work was carried out in the Trepanier Creek gorge. In 1974, Canadian Occidental Petroleum Ltd. explored the gorge and adjacent area to the east with a program of geological mapping, rock and soil geochemistry, and a magnetometer survey. They found that soil geochemical anomalies coincided with known mineralization; likewise, stream sediment anomalies were found draining areas of known mineralization, especially on the west side of Trepanier Creek. The magnetometer survey was inconclusive.

BIBLIOGRAPHY

EMPR ASS RPT 1187, 1970
EMPR GEM 1969-291; 1970-391; 1971-288; 1974-63
EMPR OF 1994-8
EMPR PF (*Whalen, J.B. (1974): Geology, Geochemistry and Magnetometer
Survey of the Pan Claim Group, includes maps, Canadian Occidental
Petroleum Ltd.)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736A; 1969
CIM Special Volume 15, pp.186-194

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW060**

NATIONAL MINERAL INVENTORY:

NAME(S): **LONG LAKE NORTH**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 53 47 N
LONGITUDE: 119 59 47 W
ELEVATION: 1640 Metres

NORTHING: 5531416
EASTING: 284813

LOCATION ACCURACY: Within 500M

COMMENTS: Copper noted on map (Minister of Mines Annual Report 1967, Figure 22).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
COMMENTS: The presence of chalcopyrite and molybdenite is inferred.
ASSOCIATED: Quartz Microcline
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic			Pennask Batholith

LITHOLOGY: Porphyritic Quartz Diorite

HOSTROCK COMMENTS: Brenda stock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The LONG LAKE NORTH showing is located on the north side of Long Lake, approximately 23 kilometres northwest of Peachland.

The showing consists of copper (chalcopyrite?) and molybdenum (molybdenite?) mineralization exposed in outcrops of a porphyritic quartz diorite of the Early Jurassic Pennask Batholith, locally known as the Brenda stock. Barren quartz-microcline veins are noted in the area.

During the exploration boom around the Brenda mine (092HNE047) in the 1960s this showing was held by the Noranda Exploration Company Limited.

BIBLIOGRAPHY

EMPR AR 1966-180, *1967-Fig 22
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969
CIM Special Volume 15, pp. 186-194

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW061**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACK**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 33 50 N
LONGITUDE: 119 04 42 W
ELEVATION: 1080 Metres

NORTHING: 5492219
EASTING: 349714

LOCATION ACCURACY: Within 500M

COMMENTS: Quartz vein (Assessment Report 17030).

COMMODITIES: Copper Silver Molybdenum Gold

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I VEIN, BRECCIA AND STOCKWORK

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Gneissic Quartz Diorite
Gneiss
Quartz Diorite
Chlorite Biotite Schist

HOSTROCK COMMENTS: Unnamed Middle Jurassic quartz diorite intrusion was previously mapped as Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Okanagan

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1988
SAMPLE TYPE:	Chip		
COMMODITY		GRADE	
Silver		52.6900	Grams per tonne
Gold		0.6800	Grams per tonne
Copper		1.7200	Per cent
Molybdenum		1.1900	Per cent

COMMENTS: Composite chip sample of quartz vein; sample number 6663.
REFERENCE: Assessment Report 17030.

CAPSULE GEOLOGY

The BLACK showing is located 4.5 kilometres south of Arlington Lakes, and approximately 9.5 kilometres north-northeast of Carmi. The showing consists of a quartz vein hosted by an unnamed Middle Jurassic gneissic quartz diorite intrusion. This intrusion was previously mapped as part of the Middle Jurassic Nelson Intrusions (Geological Survey of Canada, Map 1736A). The quartz diorite lies near the west contact of a north-south band of Carboniferous-Permian Anarchist chlorite-biotite schist. The general area has numerous old workings, pits, and adits which date from the early 1900s. Exploration work in the general area includes a 1971 magnetometer survey for Hudson's Bay Oil and Gas Ltd. and prospecting and geological mapping in 1973 for K.F. Brunning. The showing was first sampled by James McLeod, who carried out a prospecting program for Edward Carson & Associates in 1987. A composite chip sample of the quartz vein, which contained chalcopyrite and molybdenite, assayed 1.72 per cent copper, 52.69 grams per tonne silver, 1.19 per cent molybdenum and 0.68 grams per tonne gold (Assessment Report 17030). Additional information about the vein is lacking.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 269
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 3352, 4461, 4720, *17030
EMPR EXPL 1988-C22
EMPR GEM 1971-399; 1973-51
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8510G
GSC MEM 79
GSC OF 409; 736; 1969

DATE CODED: 1996/02/20
DATE REVISED: / /

CODED BY: JWP
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW062**

NATIONAL MINERAL INVENTORY:

NAME(S): **REG 2**, AK 2

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 46 20 N
LONGITUDE: 119 47 49 W
ELEVATION: 880 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5517060
EASTING: 298619

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit (Assessment Report 17959, Map 1).

COMMODITIES: Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite
ASSOCIATED: Pyrite Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres
COMMENTS: Attitude of quartz vein in adit. STRIKE/DIP: L PORPHYRY TREND/PLUNGE: 030/76S

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Nicola	Undefined Formation	
Lower Jurassic			Pennask Batholith

LITHOLOGY: Greenstone
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Plutonic Rocks Quesnel

CAPSULE GEOLOGY

The REG 2 showing is located approximately 4 kilometres west of Peachland in a narrow creek valley.

The showing, which consists of a 7.5-metre long adit, has been the subject of a number of small work programs since the early 1960s. Prospecting, bulldozer stripping and hand trenching were carried out by R. Fulks and K. Fulks. Canadian Exploration Limited reportedly did some soil sampling and X-ray diamond drilling. Pine-Pacific Mines Limited also did some surface stripping and percussion drilling. It is not recorded who is responsible for the adit. Additional prospecting and sampling was carried out for C. Ashworth in 1988.

The showing is underlain by granodiorite of the Early Jurassic Pennask Batholith. Remnants of Triassic-Jurassic Nicola Group greenstone are found in the general area and in the immediate vicinity of the showing. Disseminated sphalerite, galena, pyrite and chalcopyrite in greenstone is exposed in a number of open cuts and trenches over an area of approximately 100 by 150 metres. Copper-stained (malachite?) granodiorite containing chalcopyrite as disseminations and as fine fracture fillings is also noted. The adit intersects a quartz vein 30 centimetres wide and two small shear zones. The quartz vein is milky white, strikes 030 degrees, dips 76 degrees southeast and contains traces of pyrite and galena. The shear zones average less than 45 centimetres in width, are exposed in the ceiling of the adit and pinch out rapidly downdip. They parallel the direction of the quartz vein, and contain up to 5 per cent disseminated pyrite, galena and sphalerite. A channel sample across a rusty 45 centimetre wide shear zone did not contain any significant values of gold, silver, lead, zinc or copper (Assessment Report 17959).

BIBLIOGRAPHY

EMPR ASS RPT *16787, *17959

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 271
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM 1988-C25
EMPR OF 1994-8
EMPR PF (Wilmot J.D. (1971): REG#2 & AK#2 Mineral Claims)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW063**

NATIONAL MINERAL INVENTORY:

NAME(S): **WESTBANK**

MINING DIVISION: Vernon

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 50 44 N
LONGITUDE: 119 32 55 W
ELEVATION: 400 Metres

NORTHING: 5524575
EASTING: 316774

LOCATION ACCURACY: Within 1 KM

COMMENTS: Bluff north of old ferry landing (Western Homes & Living, Oct. 1961).

COMMODITIES: Agate

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Volcanogenic Industrial Min.
TYPE: Q03 Agate

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Eocene	Penticton	White Lake	

LITHOLOGY: Sandstone
Siltstone
Volcanic Breccia
Pyroclastic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The WESTBANK agate nodules are exposed in a bluff located just north of the old ferry landing across Okanagan Lake from Kelowna. The nodules are found in a brown sandstone and clayey siltstone which are interbedded with minor volcanic breccia and pyroclastic rocks of the Eocene Penticton Group, White Lake Formation.

BIBLIOGRAPHY

EMPR RGS 29
EMPR OF 1994-8
EMPR PF (*Article in Western Homes and Living Oct. 1961)
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969
WESTERN HOMES & LIVING Oct. 1961

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW064**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAMB**

MINING DIVISION: Vernon

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 59 50 N
LONGITUDE: 119 43 23 W
ELEVATION: 1410 Metres

NORTHING: 5541875
EASTING: 304848

LOCATION ACCURACY: Within 1 KM

COMMENTS: Mineralized outcrop (Assessment Report 17854).

COMMODITIES: Silver Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Igneous-contact
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Paleozoic-Mesozoic GROUP: Harper Ranch FORMATION: Undefined Formation IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Hornfels
Syenite
Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Harper Ranch Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Grab
COMMODITY: Silver GRADE: 2.4000 Grams per tonne
Copper 0.1925 Per cent
REFERENCE: Assessment Report 17854.

CAPSULE GEOLOGY

The LAMB showing is located north of Lambly Lake, approximately 20 kilometres north-northwest of Westbank.

The LAMB showing is an occurrence of pyrite and chalcopyrite in hornfelsed metasediments of the Devonian-Triassic Harper Ranch Group. In the vicinity of the showing the Harper Ranch rocks are cut by an intrusion of syenite to monzonite composition.

The showing was found in 1988 by Kerr Addison Mines Limited, who carried out an extensive program of prospecting, geological mapping, geochemistry and geophysics in this area. Their focus was a "Hedley" type of gold-bearing skarn, which they were unsuccessful in finding in this area.

A grab sample of hornfels from the showing assayed 2.4 grams per tonne silver and 0.1925 per cent copper (Assessment Report 17854).

BIBLIOGRAPHY

EMPR ASS RPT *17854
EMPR EXPL 1988-C23
EMPR FIELDWORK 2000, pp. 191-222
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1969; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW065**

NATIONAL MINERAL INVENTORY:

NAME(S): **HALL**, DKD 4, BRU

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 35 05 N
LONGITUDE: 119 05 16 W

NORTHING: 5494554
EASTING: 349095

ELEVATION: 1040 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Adit (Assessment Report 4461).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
COMMENTS: Presence of chalcopyrite is assumed.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: * Unknown
DIMENSION: Metres
COMMENTS: Attitude of shear hosting quartz vein.

STRIKE/DIP: 015/60W

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Paleozoic
Middle Jurassic

GROUP

Anarchist

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Quartz Diorite
Gneissic Diorite
Mafic Diorite
Chlorite Biotite Schist

HOSTROCK COMMENTS: Unnamed Middle Jurassic intrusion was previously mapped as Nelson Intrusions (Geological Survey of Canada Map 1736A).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Okanagan

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The HALL showing is located 1.6 kilometres south of Arlington Lakes, and approximately 12 kilometres north-northeast of Carmi. The showing occurs in an unnamed Middle Jurassic quartz diorite, which was previously mapped as Middle Jurassic Nelson Intrusions (Geological Survey of Canada, Map 1736A). The quartz diorite lies near the west contact of a north-south band of Carboniferous-Permian Anarchist chlorite-biotite schist. An adit at this site has been driven eastward on a quartz vein in a shear striking 015 degrees and dipping 60 degrees west. Copper (chalcopyrite?) has been noted but no other information is available on the mineralogy. The general area has numerous old workings, pits, and adits which date from the early 1900s. Recent work includes a 1971 magnetometer survey for Hudson's Bay Oil and Gas Ltd. and prospecting and geological mapping in 1973 for K.F. Brunning. Additional prospecting was carried out in 1987 by James McLeod for Edward Carson & Associates. The 1971 magnetometer survey identified a magnetic anomaly along the geological contact between a gneissic diorite and a mafic diorite. It was noted that copper mineralization is coincident with this magnetic anomaly. Assays from this showing are not recorded. A similar mineral occurrence in this area is BRU 22 (082ENW045).

BIBLIOGRAPHY

EMPR ASS RPT 3352, *4461, *4720, 17030
EMPR EXPL 1988-C22
EMPR GEM 1971-399; 1973-51
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; *1736A;

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 275
REPORT: RGEN0100

BIBLIOGRAPHY

7686G; 8510G
GSC MEM 79
GSC OF 409; 736; 1969

DATE CODED: 1995/10/10
DATE REVISED: 1996/02/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW066**

NATIONAL MINERAL INVENTORY:

NAME(S): **SWAN**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 43 00 N
LONGITUDE: 119 54 04 W
ELEVATION: 1311 Metres

NORTHING: 5511170
EASTING: 290881

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of outcrops (Open File 1987-15, Figure 38).

COMMODITIES: Silica Mica

MINERALS

SIGNIFICANT: Quartz Muscovite
ASSOCIATED: Feldspar
ALTERATION: Malachite Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Middle Jurassic

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Pegmatite Industrial Min.
TYPE: O04 Feldspar-quartz pegmatite
DIMENSION: 120 x 75 x 60 Metres

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic Osprey Lake Intrusions

LITHOLOGY: Quartz Pegmatite
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: MAIN SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1987

COMMODITY
Silica

GRADE
99.5400 Per cent

REFERENCE: Open File 1987-15.

CAPSULE GEOLOGY

The SWAN showing is located approximately 20 kilometres north-west of Summerland and 2.4 kilometres west of Darke Lake Provincial Park.

In the mid-1970s, some stripping and sampling was carried out on the showing by Mr. Plank, a local resident. In the late 1970s the property was held by Okanagan Silica Ltd. There are no records of any subsequent property work, bulk sampling or production.

The showing is underlain by the Middle Jurassic Osprey Lake Intrusions; it consists of a quartz-pegmatite body, hosted by an altered, coarse-grained, intergranular quartz monzonite. The pegmatite is exposed in scattered outcrops, road cuts and trenches on a steep northeast-facing slope. The area exposed is approximately 60 by 120 metres with a vertical extent of about 75 metres. The pegmatite is composed of 25 per cent massive quartz, 10 per cent muscovite, 10 per cent feldspar, and the remaining 55 per cent is an intergrowth of quartz and feldspar with small amounts of muscovite.

A chip sample of quartz collected by the Geological Survey Branch analysed 99.54 per cent silica (Open File 1987-15). Muscovite occurs as pockets and seams of fine to coarse-grained pearly white subhedral to euhedral radiating clusters and books. Coarse-grained flakes of muscovite, to 1 centimetre in size, are commonly found with coarse-grained intergrowths of quartz and feldspar. Feldspar is present as orthoclase and albite. Masses of the host intrusive rock are sometimes present within the quartzose mass, peripherally accompanied by malachite and limonite staining.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 277
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR FIELDWORK 1982, p. 197
EMPR OF *1987-15; 1988-13; 1994-8
EMPR PF (*White, G. (1976): Memorandum on Swan Claims; Engineer's
Report and Pro-Forma Statements Re: Susan Group, 1972)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736A; 1969

DATE CODED: 1987/04/16
DATE REVISED: 1996/01/25

CODED BY: GRF
REVISED BY: JWP

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082ENW067**

NATIONAL MINERAL INVENTORY:

NAME(S): **STINKHOLE** FAULDER, LITTLE STINK,
STINKHOLE LAKE, STINKHOLE POND

MINING DIVISION: Osoyoos

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 37 46 N
LONGITUDE: 119 44 23 W
ELEVATION: 780 Metres

NORTHING: 5501037
EASTING: 302159

LOCATION ACCURACY: Within 500M
COMMENTS: The Stinkhole pond (Culbert, 1979).

COMMODITIES: Uranium Molybdenum

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U
DIMENSION: 150 x 60 Metres
COMMENTS: Dimensions of Stinkhole pond.

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Postglacial Sediments
Jurassic			Okanagan Intrusions

LITHOLOGY: Soil
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1979
SAMPLE TYPE: Auger
COMMODITY GRADE
Uranium 0.0353 Per cent
COMMENTS: Average thickness of uraniferous layer is 5.2 metres.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The STINKHOLE prospect is a postglacial uranium concentration in lake-bottom sediments and surrounding marshes. It is located in the Stinkhole pond, approximately 10.5 kilometres northwest of Summerland.

This is one of many young uranium occurrences discovered by D. G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of detailed auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions.

The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment occurs over an area measuring 14,900 square metres. The STINKHOLE pond is approximately 60 metres by 150 metres and is set in a marsh which is almost 500 metres long by 100 metres at the widest point. Augering of the STINKHOLE to an 8-metre depth revealed that the highest uranium content exists near the bottom (Assessment Report 6575). One hole averaged 0.0274 per cent over 8 metres, with the bottom 3 metres averaging 0.0476 per cent

CAPSULE GEOLOGY

(Assessment Report 6575). A 1.0-metre section of another hole analysed 0.0580 per cent uranium (Assessment Report 6575). The marsh was augered to 1 metre depth, with the best uranium value being 0.0140 per cent (Assessment Report 6575).

The STINKHOLE and surrounding marsh averages 0.0353 per cent uranium over a 5.2 metre thickness, beginning at 2.8 metres depth (Culbert, 1979). The highest 0.5-metre intersection analysed 0.0984 per cent (Culbert, 1979). Molybdenum enrichment (up to 0.07 per cent) also occurs (Culbert, 1988).

An adjacent area to the southeast, informally known as the "Little Stink", occupies an area of 5,000 square metres and it averages 0.0212 per cent over 3.5 metres depth beginning at the surface (Culbert, 1979). The highest 0.5-metre intersection analysed in the Little Stink was 0.0885 per cent uranium (Culbert, 1979).

BIBLIOGRAPHY

- EMPR ASS RPT *6575
EMPR EXPL 1977-34,35
EMPR FIELDWORK 1979, pp. 11-15
EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
CJES *Vol. 21, 1984 pp. 559-566
*IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document, Vienna, 1984), pp. 179-191.
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as Observed in the Natural Environment in British Columbia, Royal Commission on Uranium Mining, Accession List #2017S, 15 pages with Appendices
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3, pp. 313-330.

DATE CODED: 1987/03/20
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW068**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH FAULDER**, FAULDER 3, THREE PEAK BASIN

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 46 N
LONGITUDE: 119 46 00 W
ELEVATION: 850 Metres

NORTHING: 5504813
EASTING: 300350

LOCATION ACCURACY: Within 500M

COMMENTS: Small pond and surrounding marshes (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Recent
Jurassic

Postglacial Sediments
Okanagan Intrusions

LITHOLOGY: Soil
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Auger

YEAR: 1979

COMMODITY

GRADE

Uranium

0.0349

Per cent

COMMENTS: Average thickness of uraniferous layer is 2.5 metres.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The NORTH FAULDER showing is a postglacial uranium concentration in a pond and associated marsh sediments. It is located approximately 9.25 kilometres northwest of Summerland.

This is one of many uranium occurrences discovered by D.G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions.

The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment occurs over an area measuring 20,000 square metres. The average thickness of the uraniferous layer is 2.5 metres, which averages 0.0349 per cent uranium (Culbert, 1979). Within that layer a 0.5-metre section averages 0.0606 per cent uranium (Culbert, 1979). The uraniferous layer lies 1.7 metres below the surface (Culbert, 1979).

Other young uranium occurrences located nearby are ENEAS A (082ENW076), THREE PEAK BASIN (082ENW078), and MEADOW RIDGE (082ENW080).

BIBLIOGRAPHY

EMPR ASS RPT *6575, 7308, 7972

BIBLIOGRAPHY

- EMPR EXPL 1977-34-35
EMPR FIELDWORK 1979, pp. 11-15
EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
CJES *Vol. 21, 1984 pp. 559-566
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #2017S, 15 pages
with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium;
in Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3,
pp. 313-330.

DATE CODED: 1987/03/23
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW069**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOHNSON'S SLOUGH**, FAULDER, MEADOW VALLEY SLOUGH,
MEADOW VALLEY FIELD, MEADOW VALLEY POND, MVR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:
LATITUDE: 49 39 01 N
LONGITUDE: 119 48 08 W
ELEVATION: 720 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Johnson's Slough (Assessment Report 6575, Figure 5D).

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5503519
EASTING: 297733

COMMODITIES: Uranium Molybdenum

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Postglacial Sediments
Jurassic			Okanagan Intrusions

LITHOLOGY: Soil
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1979
SAMPLE TYPE: Auger
COMMODITY GRADE
Uranium 0.0150 Per cent
COMMENTS: At the Meadow Valley Slough the average thickness of the uraniferous layer is 2.0 metres.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The JOHNSON'S SLOUGH showing is a postglacial uranium concentration in a pond and in associated marsh sediments. It is located approximately 10.5 kilometres northwest of Summerland. This is one of many uranium occurrences discovered by D.G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium consisted of auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions. The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This is a process which is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation. Uranium enrichment occurs in three adjacent areas, informally known as Meadow Valley Slough, Meadow Valley Field and Meadow Valley Pond. Collectively these are known as JOHNSON'S SLOUGH. In the Meadow Valley Slough, uranium enrichment averages 0.0150 per cent uranium over an area measuring 6,400 square metres (Culbert, 1979). The uraniferous layer lies 2.5 metres below the surface and has an average thickness of 2.0 metres (Culbert, 1979). Within that layer a 0.5-metre section grades 0.0221 per cent uranium (Culbert, 1979). In the Meadow Valley Field uranium enrichment averages 0.0177

CAPSULE GEOLOGY

per cent uranium over an area measuring 3,000 square metres (Culbert, 1979). The uraniferous layer lies 1.0 metre below the surface and has an average thickness of 1.0 metres (Culbert, 1979). Within that layer a 0.5-metre section grades 0.0325 per cent uranium (Culbert, 1979). In the Meadow Valley Pond uranium enrichment averages 0.0185 per cent uranium over an area measuring 3,000 square metres (Culbert, 1979). layer a 0.5-metre section grades 0.0234 per cent uranium (Culbert, 1979). Molybdenum enrichment (up to 0.06 per cent) also occurs (Culbert, 1988).

BIBLIOGRAPHY

- EMPR ASS RPT *6575, 7308
EMPR EXPL 1977-34,35
EMPR FIELDWORK 1979, pp. 11-15
EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #2017S, 15 pages
with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3,
pp. 313-330.

DATE CODED: 1987/03/20
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW070**

NATIONAL MINERAL INVENTORY:

NAME(S): **AGUR-7**, AGUR

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 33 49 N
LONGITUDE: 119 47 37 W
ELEVATION: 930 Metres

NORTHING: 5493862
EASTING: 297996

LOCATION ACCURACY: Within 500M

COMMENTS: Small pond with high uranium assay (Assessment Report 6768, Figure 4).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Recent
Jurassic

Postglacial Sediments
Okanagan Intrusions

LITHOLOGY: Soil
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Auger

YEAR: 1979

COMMODITY

GRADE

Uranium

0.0150

Per cent

COMMENTS: Average thickness of uraniferous layer is 1.5 metres.

REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The AGUR-7 showing is a postglacial uranium concentration in lake-bottom sediments in a small pond. It is located approximately 9.5 kilometres southwest of Summerland.

This is one of many young uranium occurrences discovered by D. G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions.

The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment occurs in lake-bottom sediments over an area measuring 7,800 square metres (Culbert, 1979). An auger hole intersected a 1.5-metre thick layer averaging 0.0150 per cent uranium with a 0.5-metre section averaging 0.0303 per cent uranium (Culbert, 1979). The uraniferous layer lies 1.5 metres below the surface (Culbert, 1979).

The highest uranium value reported is a lake sediment grab sample which contained 0.152 per cent (Assessment Report 6768). It was noted that the uranium is not accompanied by abnormal amounts of thorium. The secondary uranium is far from being in equilibrium with its daughter products (19 per cent), but the radium levels tend to be above those usually associated with uranium resulting from alkaline

CAPSULE GEOLOGY

water transport of uranium alone. A large discrepancy between radium and lead 214 content suggests that the sedimentary uranium is in an adsorbed or surficial form with a high radon escape ratio.

Other young uranium occurrences located nearby are AGUR-1 (082ENW085) and AGUR-HILL (082ENW086).

BIBLIOGRAPHY

- EMPR ASS RPT *6768
EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document, Vienna, 1984), pp. 179-191
JGE 1981, Vol. 14, pp. 49-68
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as Observed in the Natural Environment in British Columbia, Royal Commission on Uranium Mining, Accession List #2017S, 15 pages with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3, pp. 313-330.

DATE CODED: 1987/03/23
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW071**

NATIONAL MINERAL INVENTORY:

NAME(S): **RIDDLE CREEK**, AGUR-ASH, VENT

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 32 40 N
LONGITUDE: 119 52 04 W
ELEVATION: 1400 Metres

NORTHING: 5491934
EASTING: 292553

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of radioactive zone east of volcanic centre (Fieldwork, 1981).

COMMODITIES: Uranium Thorium

MINERALS

SIGNIFICANT: Unknown
ALTERATION: Kaolinite Pyrite Silica
ALTERATION TYPE: Argillic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Volcanogenic
TYPE: D06 Volcanic-hosted U

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	Coryell Intrusions
Eocene			

LITHOLOGY: Trachyte
Volcanic Breccia
Syenite
Ash Flow
Tuff
Mafic Phonolite
Conglomerate
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1977
SAMPLE TYPE:	Grab		
COMMODITY		GRADE	
Thorium		0.0380	Per cent
Uranium		0.0120	Per cent

REFERENCE: Assessment Report 6750.

CAPSULE GEOLOGY

The RIDDLE CREEK showing is located approximately 15 kilometres north-southeast of Summerland.

A 5 by 2 kilometre radioactive area coincides with an Eocene volcanic centre. The principal radioactive rocks include trachytes, mafic phonolites and ash flows of the Eocene Penticton Group, Marron Formation and consanguineous syenite of the Eocene Coryell Intrusions. North of the radioactive area, polymictic conglomerates and andesite overlie granitic phases of the Jurassic Okanagan Intrusions and form the base of the Tertiary section.

The most radioactive rocks are thick (150 to 200 metres) trachyte lava flows. Assays contained up to 0.012 per cent uranium and 0.038 per cent thorium (Assessment Report 6750). Pervasive hydrothermal alteration of the trachyte and vent breccia has produced cream and white kaolinized rocks of variable radioactive response. The syenites, which lie to the west of the trachyte, average 0.006 per cent uranium and 0.032 per cent thorium (Assessment Report 6750).

Radioactive elements are concentrated on manganese pitch and dendritic growths on numerous small cracks. In this area a sediment sample from a small pond assayed 0.06 per cent uranium (Assessment

CAPSULE GEOLOGY

Report 6750).

In 1977, British Newfoundland Exploration Ltd. carried out geological mapping, silt and soil geochemical surveys, and a radiometric survey of the RIDDLE CREEK volcanic centre. They identified an area of above-average background radioactivity approximately 2 kilometres southwest of the RIDDLE CREEK radioactive zone. This included a contact zone between the Kitley Lake Member of the Marron Formation and Coryell syenite. This southwest zone is included in the RIDDLE CREEK occurrence.

In 1978, British Newfoundland drilled 7 diamond-drill holes for a total of 270 metres. Five of the holes were drilled in the syenite intrusive, while the remaining 2 were drilled into ash flows (Kitley Lake Member?) and basal conglomerates (Springbrook Formation?). An intense, argillic alteration zone was intersected which resulted in poor core recovery. There were no intersections of uranium or thorium mineralization. The claims were allowed to lapse after the uranium moratorium was declared in 1980.

In 1986, the southwest area was staked as the VENT property by M. Morrison and optioned to Zygote Resources Ltd. Geological and geochemical surveys in 1987 were followed by an 8 hole reverse circulation drill program in 1989. Four of the drillholes intersected brecciated, clay altered, pyrite enriched and silicified Marron Formation trachyte flows and tuffs. Precious metal values were negligible and Zygote Resources dropped their option on the property. Work since then by M. Morrison has consisted of magnetometer, VLF-EM and scintillometer surveys. No economic minerals have yet been identified on the VENT property.

BIBLIOGRAPHY

- EMPR ASS RPT *6750, 7362, 16854, 19712, 22842, 23309
EMPR FIELDWORK 1977, pp. 7-11; 1978, pp. 12-14; *1981, pp. 17-22;
EMPR EXPL *1978-35,36; 1988-C23
EMPR OF 1990-32; 1994-8
EMPR PF (Morrison M. (1990): Notice of Completion of Work; Jones H.M. (1988): A Report on the Vent Property, Zygote Resources Ltd., Prospectus dated July 15, 1988)
EMPR RGS 29
EMPR INF CIRC 1990-1, p. 45
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A; 7686G; 8521G
GSC OF 409; 736; 1969
GAC Field Trip #1, May 7-10, 1983, pp. 34-39
IAEA, 1985, Vol. STI/PUB/690 - Uranium in Volcanic Rocks, p. 331
W MINER Vol. 51 #5, May 1978, pp. 33-34
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as Observed in the Natural Environment in British Columbia, Royal Commission on Uranium Mining, Accession List #20175, 15 pages with Appendices.

DATE CODED: 1987/03/19
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW072**

NATIONAL MINERAL INVENTORY:

NAME(S): **LONG LAKE EAST**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 53 46 N
LONGITUDE: 119 59 26 W
ELEVATION: 1630 Metres

NORTHING: 5531369
EASTING: 285231

LOCATION ACCURACY: Within 500M

COMMENTS: Copper noted on map (Minister of Mines Annual Report 1967, Figure 22).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
COMMENTS: Chalcopyrite is inferred.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic			Pennask Batholith

LITHOLOGY: Porphyritic Quartz Diorite

HOSTROCK COMMENTS: Brenda stock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The LONG LAKE EAST showing is located on the east side of Long Lake, approximately 23 kilometres northwest of Peachland.

The showing consists of copper (chalcopyrite?) mineralization exposed in outcrops of porphyritic quartz diorite of the Early Jurassic Pennask Batholith, locally known as the Brenda stock. During the exploration boom around the Brenda mine (092HNE047) in the 1960s this showing was held by Noranda Exploration Company Limited.

BIBLIOGRAPHY

EMPR AR 1966-180, *1967-Fig 22
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969
CIM Special Volume 15, pp.186-194

DATE CODED: 1985/07/24
DATE REVISED: 1996/01/25

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW073**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRAIRIE FLATS, DALE MEADOWS, PRAIRIE SOUTH EDGE,
SUMMERLAND, PRAIRIE CREEK**

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082E12E
BC MAP:

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)

LATITUDE: 49 35 37 N
LONGITUDE: 119 41 21 W
ELEVATION: 500 Metres

NORTHING: 5496922
EASTING: 305667

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of deposit (Culbert,1979). Prairie Flats is located within the Summerland town limits.

COMMODITIES: Uranium Molybdenum

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary Syngenetic
TYPE: B08 Surficial U
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Eocene	Penticton	Marron	
Eocene	Penticton	White Lake	
Recent			Postglacial Sediments
Jurassic			Okanagan Intrusions

LITHOLOGY: Soil
Epiclastic Sediment/Sedimentary
Pyroclastic Rock
Lava
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: PRAIRIE FLATS REPORT ON: Y

CATEGORY: Measured YEAR: 1979
QUANTITY: 629000 Tonnes

COMMODITY GRADE
Uranium 0.0334 Per cent

COMMENTS: Tonnage is calculated from average thickness of 1.7 metres over 37.0 hectares with an average density of 1000 kilograms per cubic metre.

REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The PRAIRIE FLATS deposit occupies the lower reaches of the Prairie Creek valley. It is located within the Summerland municipal boundaries, immediately southwest of the town site. The area was once a marsh but has since been drained for agriculture use and residential development. The PRAIRIE SOUTH EDGE area is included with the PRAIRIE FLATS occurrence, but the uranium contained in the PRAIRIE SOUTH EDGE is not included in the PRAIRIE FLATS deposit because of its low grade.

The PRAIRIE FLATS deposit was discovered in 1979 by D.G. Leighton & Associates Ltd. during a regional uranium reconnaissance program. Work prior to the uranium moratorium in 1980 consisted of systematic soil augering and bench extraction tests.

This is a postglacial fluvial type of deposit where uranium occurs in a collector basin composed of organic-rich valley fill deposited by Prairie Creek. Upwelling of groundwater into organic-rich soils, topographic control, and concentration of uranium by evaporitic discharge and ion adsorption-reduction are the

CAPSULE GEOLOGY

principal depositional controls.

The area is underlain by granodiorite of the Jurassic Okanagan Intrusions, which is unconformably overlain by a succession of Eocene epiclastic sediments, pyroclastic rocks, and alkaline lavas of the Pentiction Group White Lake and Marron Formations.

The deposit occupies an area of approximately 37.0 hectares with an average thickness of 1.7 metres grading 0.0334 per cent uranium (Culbert, 1979). The estimated average density of the deposit is 1000 kilograms per cubic metre (Culbert, 1979), yielding a calculated quantity of 629,000 tonnes. The uraniferous layer begins at the surface. Ore reserves to a depth of approximately 2 metres are about 195 tonnes of uranium (230 tonnes of U308); it is estimated that uranium has accumulated at a rate of about 23 kilograms a year since glacial retreat (Canadian Journal of Earth Sciences Volume 21, 1984, page 561).

A contour map of the deposit showing variations in uranium grade identifies several areas with greater than 2.0 pounds (0.9 kilograms) U308 per square metre (Culbert, 1979). Cross-sections of the deposit, based on 28 auger holes, show high grade layers with greater than 0.1 per cent uranium (Culbert and Leighton, 1988, Figure 7). Molybdenum enrichment (up to 0.09 per cent) is also present (Culbert, 1988).

An adjacent area, known as the PRAIRIE SOUTH EDGE, occupies an area of approximately 10.8 hectares with an average thickness of 2.1 metres grading 0.0184 per cent uranium (Culbert, 1979). The estimated average density of the uraniferous layer in the PRAIRIE SOUTH EDGE is 1300 kilograms per cubic metre (Culbert, 1979). The uraniferous layer lies 1.2 metres below the surface (Culbert, 1979).

BIBLIOGRAPHY

- EMPR FIELDWORK 1979, pp. 11-15; *1990, pp. 163-170
EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 551, 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
CJES *Vol. 21, 1984 pp. 559-566
*IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document, Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as Observed in the Natural Environment in British Columbia, Royal Commission on Uranium Mining, Accession List #2017S, 15 pages with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3, pp. 313-330.

DATE CODED: 1987/03/20
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW074**

NATIONAL MINERAL INVENTORY:

NAME(S): **IGNIMBRITE LAKE**, FAULDER

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 37 45 N
LONGITUDE: 119 41 06 W
ELEVATION: 520 Metres

NORTHING: 5500863
EASTING: 306109

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Ignimbrite Lake (Assessment Report 6575, Figure 5f).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	White Lake	
Eocene	Penticton	Marron	
Recent			Postglacial Sediments
Jurassic			Okanagan Intrusions

LITHOLOGY: Soil
Trachyandesite
Volcanic Breccia
Epiclastic Sediment/Sedimentary
Pyroclastic Rock
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Auger

YEAR: 1979

COMMODITY: Uranium
GRADE: 0.0131 Per cent

COMMENTS: Average thickness of uraniferous layer is 1.5 metres.

REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

IGNIMBRITE LAKE is a postglacial uranium concentration in lake-bottom sediments. The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. In the case of a closed basin such as Ignimbrite Lake, concentration by evaporation may also be important. These processes are believed to still be active (Culbert and Leighton, 1988).

The area is underlain by granodiorite of the Jurassic Okanagan Intrusions which is unconformably overlain by the Nimpit Lake Member of the Marron Formation and the White Lake Formation all of the Penticton Group. The Nimpit Lake volcanics are recessive, reddish weathering, amygdaloidal, trachyandesites with minor intercalated pyroclastic deposits. The White Lake Formation consists of epiclastic sediments with minor volcanic breccia and pyroclastic rock.

The source of the uranium is thought to be the surrounding igneous and volcanic rocks, where groundwater rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Ignimbrite Lake contains layered brine, with 90 parts per billion

CAPSULE GEOLOGY

uranium in the upper part and 2800 parts per billion in the lower. The ratio of uranium to bicarbonate in these waters is moderately low (Assessment Report 6575). Auger sampling of the lake-bottom sediments has identified an area of uranium enrichment over 3,600 square metres (Culbert, 1979). A 1.5-metre thick layer averaged 0.0131 per cent uranium with a 0.5-metre section averaging 0.0193 per cent uranium (Culbert, 1979). The uraniferous layer lies 0.5 metre below the surface (Culbert, 1979).

BIBLIOGRAPHY

- EMPR ASS RPT *6575
EMPR EXPL 1977-34,35
EMPR FIELDWORK 1979, pp. 11-15
EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, No. 783, pp. 103-110
GAC Field Trip No. 1, May 7-10, 1983, pp. 29-33
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; and Raudsepp, V. (1980): Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners Report, Oct. 30, 1980, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #2017S, 15 pages
with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3,
pages 313-330.

DATE CODED: 1987/03/23
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW075**

NATIONAL MINERAL INVENTORY:

NAME(S): **WESTBENCH**, MADELINE LAKE, NKWALA

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 30 40 N
LONGITUDE: 119 38 44 W
ELEVATION: 490 Metres

NORTHING: 5487640
EASTING: 308496

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Madeline Lake (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

DIMENSION: 250 x 70 Metres

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Recent

Jurassic

Postglacial Sediments

Okanagan Intrusions

LITHOLOGY: Soil
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Overlap Assemblage

Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1979

SAMPLE TYPE: Auger

COMMODITY

GRADE

Uranium

0.0168

Per cent

COMMENTS: Average thickness of uraniferous layer is 4.0 metres.

REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The WESTBENCH showing is a postglacial uranium concentration in the lake-bottom sediments of Madeline Lake. It is located approximately 1.0 kilometre northwest of Westbench, a subdivision of Penticton.

This is one of many young uranium occurrences discovered by D. G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions.

The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This is a process which is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment occurs in lake-bottom sediments over an area measuring 16,800 square metres (Culbert, 1979). An auger hole intersected a 4.0-metre thick layer averaging 0.0168 per cent uranium with a 0.5-metre section averaging 0.0303 per cent uranium (Culbert, 1979). The uraniferous layer lies 2.5 metres below the surface (Culbert, 1979).

Other young uranium occurrences located nearby are NKWALA NORTH (082ENW087), NKWALA CENTER (082ENW088), NKWALA P. LINE (082ENW089) and NKWALA SOUTH (082ESW188).

BIBLIOGRAPHY

- EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #2017S, 15 pages
with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3,
pp. 313-330.

DATE CODED: 1988/01/29
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW076**

NATIONAL MINERAL INVENTORY:

NAME(S): **ENEAS A**, ENEAS, FAULDER,
ENEAS CREEK CANYON, ENEAS CANYON

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 56 N
LONGITUDE: 119 44 47 W
ELEVATION: 570 Metres

NORTHING: 5505069
EASTING: 301825

LOCATION ACCURACY: Within 500M
COMMENTS: Junction of Eneas Creek with tributary (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Postglacial Sediments
Jurassic			Okanagan Intrusions

LITHOLOGY: Peat
Soil
Silt
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Auger

YEAR: 1979

COMMODITY	GRADE	Per cent
Uranium	0.0130	

COMMENTS: Average thickness of uraniferous layer is 3.5 metres.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The ENEAS A is a postglacial uranium concentration in peat near the junction of Eneas Creek with an unnamed tributary.

This is one of many uranium occurrences discovered by D. G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions. Eneas Creek also drains parts of the Eocene Coryell Intrusions.

The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This is a process which is believed to still be taking place (Culbert and Leighton, 1988). The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment occurs in stream sediments and valley soils over an area measuring 59,000 square metres (Culbert, 1979). An auger hole intersected a 3.5-metre thick layer averaging 0.0130 per cent uranium with a 0.5-metre section averaging 0.0232 per cent uranium (Culbert, 1979). The uraniferous layer lies 1.0 metre below the surface (Culbert, 1979). A cross-section of this site shows a 3-metre thickness of peat grading 0.0100 to 0.0250 per cent uranium (Culbert and Leighton, 1988, Fig. 11). The peat layer is interrupted by a thin silt layer at approximately 3 metres depth. A 0.5-metre section

CAPSULE GEOLOGY

grades 0.0250 to 0.0500 per cent uranium at 4.5 metres depth (Culbert and Leighton, 1988, Fig. 11). The section is based on 8 auger holes to 4.5 metres depth. The ENEAS A is classified as a fresh water paleochannel deposit (Culbert and Leighton, 1988, Fig. 14).

BIBLIOGRAPHY

- EMPR ASS RPT 6575, 7308, 7972
EMPR EXPL 1977-34-35; 1978-35; 1979-45
EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, M.D.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission of
Inquiry, Health and Environmental Protection, Uranium Mining,
Commissioners Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #2017S, 15 pages
with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3,
pp. 313-330.

DATE CODED: 1988/01/29
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW077**

NATIONAL MINERAL INVENTORY:

NAME(S): **CONTACT POOL**, FAULDER

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 37 13 N
LONGITUDE: 119 43 39 W
ELEVATION: 820 Metres

NORTHING: 5499986
EASTING: 303005

LOCATION ACCURACY: Within 1 KM

COMMENTS: Swampy area, location approximate (Culbert, 1979).

COMMODITIES: Uranium

Molybdenum

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Eocene
Recent
Jurassic

Penticton

Marron

Postglacial Sediments
Okanagan Intrusions

LITHOLOGY: Soil
Trachyte
Andesite
Pyroclastic Rock
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1979

SAMPLE TYPE: Auger

COMMODITY

GRADE

Uranium

0.0302

Per cent

COMMENTS: Average thickness of uraniferous layer is 5.5 metres.

REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The CONTACT POOL showing is a postglacial uranium concentration in a pond and in surrounding marsh soils. It is located approximately 3 kilometres northwest of Summerland.

This is one of many uranium occurrences discovered by D.G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by Eocene trachyte, andesite and pyroclastic rocks of the Marron Formation, Penticton Group which unconformably overlies granodiorite of the Jurassic Okanagan Intrusions.

The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous and volcanic rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment occurs over an area measuring 3,800 square metres (Culbert, 1979). An auger hole intersected a 5.5-metre thick layer averaging 0.0302 per cent uranium with a 0.5-metre section averaging 0.0517 per cent uranium (Culbert, 1979). Molybdenum averages up to 0.04 per cent over 0.5 metre (Culbert, 1988). The uraniferous layer lies 1.0 metre below the surface (Culbert, 1979).

BIBLIOGRAPHY

- EMPR ASS RPT 6575
EMPR EXPL 1977-34-35
EMPR FIELDWORK 1979, pp. 11-15
EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
CJES Vol. 21, 1984 pp. 559-566
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #2017S, 15 pages
with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3,
pp. 313-330.

DATE CODED: 1988/01/29
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW078**

NATIONAL MINERAL INVENTORY:

NAME(S): **THREE PEAK BASIN**, FAULDER

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 35 N
LONGITUDE: 119 45 42 W
ELEVATION: 870 Metres

NORTHING: 5504461
EASTING: 300698

LOCATION ACCURACY: Within 500M

COMMENTS: Pond and associated marsh (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Recent
Jurassic

Postglacial Sediments
Okanagan Intrusions

LITHOLOGY: Soil
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1979

SAMPLE TYPE: Auger

COMMODITY

GRADE

Uranium

0.0377

Per cent

COMMENTS: Average thickness of uraniferous layer is 1.0 metre.

REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The THREE PEAK BASIN showing is a postglacial uranium concentration in a pond and in associated marsh sediments. It is located approximately 8.5 kilometres northwest of Summerland.

This is one of many uranium occurrences discovered by D.G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions.

The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This is a process which is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment occurs over an area measuring 3,500 square metres (Culbert, 1979). An auger hole intersected a 1.0-metre thick layer averaging 0.0377 per cent uranium with a 0.5-metre section averaging 0.0595 per cent uranium (Culbert, 1979). The uraniferous layer lies 2.5 metres below the surface (Culbert, 1979).

Other young uranium occurrences located nearby are NORTH FAULDER (082ENW068), ENEAS A (082ENW076), and MEADOW RIDGE (082ENW080).

BIBLIOGRAPHY

EMPR ASS RPT 6575, 7308, 7972
EMPR EXPL 1977-34,35
EMPR FIELDWORK 1979, pp. 11-15

BIBLIOGRAPHY

- EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
CJES *Vol. 21, 1984 pp. 559-566
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #2017S, 15 pages
with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3,
pp. 313-330.

DATE CODED: 1988/01/29
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW079**

NATIONAL MINERAL INVENTORY:

NAME(S): **BALD HILLS**, BALD HILLS A, BALD HILLS B

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 40 39 N
LONGITUDE: 119 51 49 W
ELEVATION: 1450 Metres

NORTHING: 5506712
EASTING: 293418

LOCATION ACCURACY: Within 1 KM
COMMENTS: Small marsh (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Postglacial Sediments
Middle Jurassic			Osprey Lake Intrusions

LITHOLOGY: Soil
Granodiorite
Granite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1979
SAMPLE TYPE: Auger
COMMODITY GRADE
Uranium 0.0123 Per cent
COMMENTS: The average thickness of the uraniferous layer in area "A" is 1.0 metre.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The BALD HILLS showing is a postglacial uranium concentration in a pond and in associated marsh sediments. It is located approximately 6.75 kilometres south of Darke Lake. This is one of many uranium occurrences discovered by D.G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granite and granodiorite of the Middle Jurassic Osprey Lake Intrusions. The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation. The showing comprises two areas of uranium enrichment in surficial soils which measure 11,200 and 6,400 square metres, respectively. The first area, "A", has an average thickness of 1.0 metre, which averages 0.0123 per cent uranium (Culbert, 1979). Within that layer a 0.5-metre section averages 0.0154 per cent uranium (Culbert, 1979). The uraniferous layer lies 1.0 metre below the surface (Culbert, 1979). The second area, "B", has an average thickness of 2.0 metres,

CAPSULE GEOLOGY

which averages 0.0103 per cent uranium (Culbert, 1979). Within that layer a 0.5-metre section averages 0.0127 per cent uranium (Culbert,

BIBLIOGRAPHY

- EMPR FIELDWORK 1979, pp. 11-15
EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
Culbert, R.R. (1979): *Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #20175, 15 pages
with Appendices.
Culbert, R.R. and Leighton, D.G. (1988): *Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Review, Vol. 3,
pp. 313-330.

DATE CODED: 1988/01/29
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW080**

NATIONAL MINERAL INVENTORY:

NAME(S): **MEADOW RIDGE** FAULTER

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 38 25 N
LONGITUDE: 119 45 48 W
ELEVATION: 975 Metres

NORTHING: 5502304
EASTING: 300499

LOCATION ACCURACY: Within 500M
COMMENTS: Small pond (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Postglacial Sediments
Jurassic			Okanagan Intrusions

LITHOLOGY: Soil
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage
Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Auger
YEAR: 1979
COMMODITY
Uranium
GRADE
0.0232 Per cent
COMMENTS: Average thickness of uraniferous layer is 3.0 metres.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The MEADOW RIDGE showing is a postglacial uranium concentration in a pond and in associated marsh sediments. It is located approximately 7.5 kilometres northwest of Summerland.

This is one of many uranium occurrences discovered by D.G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions.

The occurrence is recent, having formed from the interaction of uranium-rich groundwater with unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment occurs over an area measuring 5,200 square metres and averages 0.0232 per cent uranium (Culbert, 1979). The uraniferous layer lies 1.5 metres below the surface and has an average thickness of 3.0 metres (Culbert, 1979). Within that layer a higher grade section averages 0.0779 per cent uranium over 0.5 metre (Culbert, 1979).

Other young uranium occurrences located nearby are ENEAS A (082ENW076), ENEAS B (082ENW090), THREE PEAK BASIN (082ENW078), JOHNSON'S SLOUGH (082ENW069) and STINKHOLE (082ENW067).

BIBLIOGRAPHY

EMPR ASS RPT 6575
EMPR EXPL 1977-34,35

BIBLIOGRAPHY

- EMPR FIELDWORK 1979, pp. 11-15
EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #2017S, 15 pages
with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3,
pp. 313-330.

DATE CODED: 1988/01/29
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW081**

NATIONAL MINERAL INVENTORY:

NAME(S): **TREPANIER**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 49 24 N
LONGITUDE: 119 49 52 W
ELEVATION: 720 Metres

NORTHING: 5522834
EASTING: 296374

LOCATION ACCURACY: Within 1 KM

COMMENTS: Swampy basin in Trepanier Creek valley (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Recent
Lower Jurassic

Postglacial Sediments
Pennask Batholith

LITHOLOGY: Soil
Granodiorite
Quartz Diorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated materials.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1979

SAMPLE TYPE: Auger

COMMODITY

GRADE

Uranium

0.0133

Per cent

COMMENTS: Average thickness of uraniferous layer is 1.5 metres.

REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The TREPANIER showing is a postglacial uranium concentration in a swampy basin in the Trepanier Creek valley. It is located approximately 11.5 kilometres northwest of Peachland.

This is one of many uranium occurrences discovered by D.G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granodiorite and quartz diorite of the Early Jurassic Pennask Batholith.

The occurrence is recent, having formed from the interaction of uranium-rich groundwater with unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment occurs over an area measuring 2,800 square metres and averages 0.0133 per cent uranium (Culbert, 1979). The uraniferous layer lies 0.8 metre below the surface and has an average thickness of 1.5 metres (Culbert, 1979). Within that layer a higher grade section averages 0.0220 per cent uranium over 0.5 metre (Culbert, 1979).

BIBLIOGRAPHY

EMPR FIELDWORK 1979, pp. 11-15
EMPR OF 1990-32; 1994-8
EMPR RGS 29

BIBLIOGRAPHY

- GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
Culbert, R.R. (1979): *Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #20175, 15 pages
with Appendices.
Culbert, R.R. and Leighton, D.G. (1988): *Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Review, Vol. 3,
pp. 313-330.

DATE CODED: 1988/01/29
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW082**

NATIONAL MINERAL INVENTORY:

NAME(S): **WINN**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 59 40 N
LONGITUDE: 119 25 26 W
ELEVATION: 510 Metres

NORTHING: 5540829
EASTING: 326276

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of unnamed pond (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Paleozoic-Mesozoic
Eocene
Recent
Jurassic

GROUP

Harper Ranch
Penticton

FORMATION

Undefined Formation
Marron

IGNEOUS/METAMORPHIC/OTHER

Postglacial Sediments
Okanagan Intrusions

LITHOLOGY: Soil
Siltstone
Argillite
Granodiorite
Trachyte
Trachyandesite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch

Overlap Assemblage

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Auger

YEAR: 1979

COMMODITY
Uranium

GRADE
0.0084 Per cent

COMMENTS: Average thickness of uraniferous layer is 3.0 metres.

REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The WINN showing is a postglacial uranium concentration in lake-bottom sediments of an unnamed pond. It is located approximately 4.5 kilometres northwest of the Kelowna airport.

This is one of many young uranium occurrences discovered by D. G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling.

The area is underlain by siltstone and argillite of the Devonian-Triassic Harper Ranch Group which is intruded by granodiorite of the Jurassic Okanagan Intrusions and overlain by trachyte and trachyandesite of the Eocene Kitley Lake Member of the Marron Formation, Penticton Group.

The occurrence is recent, having formed from the interaction of uranium-rich groundwater with unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous and volcanic rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment occurs over an area measuring 12,000 square metres and averages 0.0084 per cent uranium (Culbert, 1979). The

CAPSULE GEOLOGY

uraniferous layer lies 2.0 metres below the surface and has an average thickness of 3.0 metres (Culbert, 1979). Within that layer a 0.5-metre section averages 0.0117 per cent uranium (Culbert, 1979).

BIBLIOGRAPHY

EMPR OF 1990-32; 1994-8
EMPR MAP 45
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8511G
GSC OF 409; 637; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document, Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pages 35-36, 183-184.
Culbert, R.R. (1979): *Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as Observed in the Natural Environment in British Columbia, Royal Commission on Uranium Mining, Accession List #20175, 15 pages with Appendices.
Culbert, R.R. and Leighton, D.G. (1988): *Young Uranium; in Unconventional Uranium Deposits, Ore Geology Review, Vol. 3, pages 313-330.

DATE CODED: 1988/01/29
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW083**

NATIONAL MINERAL INVENTORY:

NAME(S): **PACIFIC PEARL**, LITTLE WHITE MOUNTAIN, IDABEL LAKE,
STAR, WEST COAST GRANITE, WESTCOAST GRANITE

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082E11E 082E11W
BC MAP:

MINING DIVISION: Greenwood

LATITUDE: 49 41 56 N
LONGITUDE: 119 14 46 W
ELEVATION: 1450 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5507574
EASTING: 338031

LOCATION ACCURACY: Within 500M

COMMENTS: Site 1 (Assessment Report 22470). The Pacific Pearl quarry is located on the west side of Affleck creek. Two Idabel Lake quarries are located 2 to 3 kilometres to the east, on the west side of Stirling Creek (D. Hora, personal communication, 1996).

COMMODITIES: Granite Dimension Stone Building Stone

MINERALS

SIGNIFICANT: Orthoclase Quartz Plagioclase Biotite
ASSOCIATED: Apatite Zircon Sphene Magnetite
ALTERATION: Chlorite
ALTERATION TYPE: Chloritic
MINERALIZATION AGE: Cretaceous-Tertiary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Magmatic Industrial Min.
TYPE: R03 Dimension stone - granite

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary Okanagan Batholith

LITHOLOGY: Porphyritic Biotite Syenite
Quartz Syenite
Granite
Biotite Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The PACIFIC PEARL dimension stone prospect is located approximately 36 kilometres southeast of Kelowna. The Pacific Pearl quarry is located on the west side of Affleck creek. Two Idabel Lake quarries are located 2 to 3 kilometres to the east, on the west side of Stirling Creek (D. Hora, personal communication, 1996).

This stone forms a north-trending ridge with many large rock outcrops and scattered boulders below it. Available exposures and boulder sizes indicate low fracture density in the bedrock. The rock is homogeneous with no dark inclusions observed.

The PACIFIC PEARL stone is a coarse-grained cream-yellow-grey quartz syenite, which is part of by the Cretaceous-Tertiary Okanagan Batholith. The Okanagan Batholith is primarily composed of granite and biotite granodiorite. The PACIFIC PEARL quartz syenite may be an alkalic phase of the Okanagan Batholith, or it may be an unmapped later intrusion within the Okanagan Batholith.

Large, prominent, 1 to 2 centimetre, yellow orthoclase crystals form a uniform coarse texture in the rock. The medium-grained groundmass is made up of grey quartz, white plagioclase and black biotite. Minor constituents, less than 1 per cent each, are apatite, chlorite after biotite, zircon, sphene and magnetite. The rock appears fresh and shows no iron staining.

In thin section, there is a small amount of chlorite after biotite. Microperthitic texture is well developed in the orthoclase phenocrysts and may account for some pearly yellow-white schiller seen on the polished rock face. All grains are interlocked with no developed fabric. The rock takes a good polish (7/10) with minor surface cracks and some small pits at biotite grains. The cracks visible on the polished surface are tight and occur in orthoclase and quartz grains (D. Hora, personal communication, 1994).

In 1992, Pacific Granistone (operator 1992-93) produced some

CAPSULE GEOLOGY

blocks to test the market. Processed slabs were used as floor tile in some private residences and one Vancouver area mall. This stone was given the trade name of Pacific Pearl.

The Idabel Lake test quarries are opened in the stone phase with high microfracture density and have no commercial value.

Westcoast Granite Manufacturing processes Pacific Pearl from this property.

BIBLIOGRAPHY

EMPR ASS RPT *22470
EMPR FIELDWORK *1994, pp. 365-369
EMPR INF CIRC 1994-19, p. 17; 1995-1, p. 17
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8510G
GSC OF 409; 736; 1969
Stone World, October 1995, p. 43

DATE CODED: 1994/12/23
DATE REVISED: 1997/02/13

CODED BY: DH
REVISED BY: ZDH

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ENW084**

NATIONAL MINERAL INVENTORY:

NAME(S): **AGUR-MO**, AGUR

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 33 41 N
LONGITUDE: 119 47 04 W
ELEVATION: 830 Metres

NORTHING: 5493591
EASTING: 298650

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralized outcrop (Assessment Report 6768, Figure 4).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz Pyrite

COMMENTS: Molybdenite is associated with quartz-rich laminae in an aplite dike.

ALTERATION: Pyrite

ALTERATION TYPE: Leaching Pyrite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unknown

CLASSIFICATION: Unknown

TYPE: I VEIN, BRECCIA AND STOCKWORK

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Okanagan Intrusions

LITHOLOGY: Aplite Dike
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The AGUR-MO showing is located approximately 8.5 kilometres southwest of Summerland. The showing was discovered in 1977 by D.G. Leighton & Associates Ltd. who were carrying out a regional stream sediment program in this area.

Molybdenite occurs as fine blebs and streaks associated with coarse-grained quartz-rich laminae in a moderately fractured, fine-grained aplite dike. The aplite dike is hosted by granodiorite of the Jurassic Okanagan Intrusions. A number of aplite dikes are found in the vicinity. They vary from 3 to 12 metres wide and cut the granodiorite in an approximate east-west trend. The dikes have been moderately leached and contain traces of disseminated pyrite.

BIBLIOGRAPHY

EMPR ASS RPT *6768
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969

DATE CODED: 1995/08/28
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW085**

NATIONAL MINERAL INVENTORY:

NAME(S): **AGUR-1**, AGUR, AGUR LAKES,
AGW

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 34 15 N
LONGITUDE: 119 47 08 W
ELEVATION: 790 Metres

NORTHING: 5494644
EASTING: 298608

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of anomalous molybdenum (Culbert, 1979 and Assessment Report 6768).

COMMODITIES: Uranium Molybdenum

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Postglacial Sediments
Jurassic			Okanagan Intrusions

LITHOLOGY: Soil
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated materials.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1979
SAMPLE TYPE: Auger
COMMODITY GRADE
Uranium 0.0220 Per cent
COMMENTS: Average thickness of uraniferous layer is 2.0 metres.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The AGUR-1 showing is a postglacial uranium concentration in soils and in stream sediments. It is located in a marshy area beside a stream approximately 9.0 kilometres southwest of Summerland.

This is one of many young uranium occurrences discovered by D. G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions.

The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment averages 0.0220 per cent uranium over an area measuring 3,000 square metres (Culbert, 1979). The uraniferous layer lies 1.0 metre below the surface and has an average thickness of 2.0 metres (Culbert, 1979). Within that layer a 0.5-metre section grades 0.0558 per cent uranium (Culbert, 1979). The area is also anomalous in molybdenum; a 0.5-metre section grades about 0.03 per cent molybdenum (Culbert, 1988).

Other young uranium occurrences located nearby are AUGER-7 (082ENW070) and AUGER-HILL (082ENW086).

BIBLIOGRAPHY

- EMPR ASS RPT *6768
EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #2017S, 15 pages
with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3,
pp. 313-330.

DATE CODED: 1995/09/10
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW086**

NATIONAL MINERAL INVENTORY:

NAME(S): **AGUR-HILL**, AGUR

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 33 34 N
LONGITUDE: 119 48 19 W
ELEVATION: 840 Metres

NORTHING: 5493431
EASTING: 297136

LOCATION ACCURACY: Within 500M

COMMENTS: Largest of several ponds on hill (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Postglacial Sediments
Jurassic			Okanagan Intrusions

LITHOLOGY: Soil
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Auger

YEAR: 1979

COMMODITY: Uranium
GRADE: 0.0087 Per cent

COMMENTS: Average thickness of uraniferous layer is 1.0 metre.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The AGUR-HILL showing is a postglacial uranium concentration in lake-bottom sediments of several ponds. It is located approximately 10 kilometres southwest of Summerland.

This is one of many young uranium occurrences discovered by D. G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions.

The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment occurs in lake-bottom sediments over an area measuring 10,000 square metres. An auger hole intersected a 1.0-metre thick layer averaging 0.0087 per cent uranium with a 0.5-metre section averaging 0.0114 per cent uranium. The uraniferous layer lies 2.0 metres below the surface (Culbert, 1979).

Other young uranium occurrences located nearby are AGUR-1 (082ENW085) and AGUR-7 (082ENW070).

BIBLIOGRAPHY

EMPR ASS RPT 6768
EMPR OF 1990-32; 1994-8
EMPR RGS 29

BIBLIOGRAPHY

- GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #2017S, 15 pages
with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3,
pp. 313-330.

DATE CODED: 1995/09/10
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW087**

NATIONAL MINERAL INVENTORY:

NAME(S): **NKWALA NORTH**, NKWALA, NKWALA CASES

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 30 52 N
LONGITUDE: 119 40 38 W
ELEVATION: 990 Metres

NORTHING: 5488091
EASTING: 306217

LOCATION ACCURACY: Within 500M
COMMENTS: Small unnamed pond (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U
DIMENSION: 350 x 135 Metres

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Postglacial Sediments
Jurassic			Okanagan Intrusions

LITHOLOGY: Soil
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1979
SAMPLE TYPE: Auger
COMMODITY GRADE
Uranium 0.0118 Per cent
COMMENTS: Average thickness of uraniferous layer is 2.5 metres.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The NKWALA NORTH showing is a postglacial uranium concentration in lake-bottom sediments of a small unnamed pond. It is located approximately 3 kilometres northwest of Westbench, a subdivision of Penticton.

This is one of many uranium occurrences discovered by D.G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions.

The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment averages 0.0118 per cent uranium over an area measuring 47,500 square metres (Culbert, 1979). The uraniferous layer lies 5.5 metres below the surface and has an average thickness of 2.5 metres (Culbert, 1979). Within that layer a 0.5-metre section grades 0.0130 per cent uranium (Culbert, 1979).

Other young uranium occurrences located nearby are WESTBENCH (082ENW075), NKWALA CENTER (082ENW088), NKWALA P. LINE (082ENW089) and NKWALA SOUTH (082ESW188).

BIBLIOGRAPHY

- EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #2017S, 15 pages
with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3,
pp. 313-330.

DATE CODED: 1995/09/10
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW088**

NATIONAL MINERAL INVENTORY:

NAME(S): **NKWALA CENTER**, NKWALA, NKWALA CASES,
OXBOW LAKE, NKWALA MARSH, WESTBENCH

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 30 26 N
LONGITUDE: 119 40 35 W
ELEVATION: 990 Metres

NORTHING: 5487286
EASTING: 306249

LOCATION ACCURACY: Within 500M
COMMENTS: Oxbow Lake (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U
DIMENSION: 275 x 80 Metres

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Postglacial Sediments
Jurassic			Okanagan Intrusions

LITHOLOGY: Soil
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Auger

YEAR: 1979

COMMODITY	GRADE
Uranium	0.0079 Per cent

COMMENTS: Average thickness of uraniferous layer is 3.0 metres.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The NKWALA CENTER showing is a postglacial uranium concentration in lake-bottom sediments of Oxbow Lake. It is located approximately 3 kilometres west of Westbench, a subdivision of Penticton.

This is one of many young uranium occurrences discovered by D. G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions.

The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment averages 0.0079 per cent uranium over an area measuring 22,500 square metres (Culbert, 1979). The uraniferous layer lies at the surface and has an average thickness of 3.0 metres (Culbert, 1979). Within that layer a 0.5-metre section grades 0.0102 per cent uranium (Culbert, 1979). A cross-section of this site shows an approximately 3-metre thick uranium accumulation grading 0.010 to 0.025 per cent, with a 0.5-metre layer grading 0.025 to 0.050 per cent, and spot highs grading 0.050 to 0.075 per cent (Culbert and Leighton, 1988, Fig. 9a). The section is based on 8 auger holes to a depth of 8 metres. A uranium profile of one of the above auger holes

CAPSULE GEOLOGY

shows a 0.25-metre section grading approximately 0.055 per cent (Culbert and Leighton, 1988, Fig. 9a).

Other young uranium occurrences located nearby are WESTBENCH (082ENW075), NKWALA NORTH (082ENW087), NKWALA P. LINE (082ENW089) and NKWALA SOUTH (082ESW188).

BIBLIOGRAPHY

- EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document, Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as Observed in the Natural Environment in British Columbia, Royal Commission on Uranium Mining, Accession List #2017S, 15 pages with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3, pp. 313-330.

DATE CODED: 1995/09/10
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW089**

NATIONAL MINERAL INVENTORY:

NAME(S): **NKWALA P. LINE**, NKWALA, NKWALA CASES

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12E 082E05E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 30 00 N
LONGITUDE: 119 41 08 W
ELEVATION: 1110 Metres

NORTHING: 5486507
EASTING: 305556

LOCATION ACCURACY: Within 500M

COMMENTS: Unnamed marsh beside road (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Recent
Jurassic

Postglacial Sediments
Okanagan Intrusions

LITHOLOGY: Soil
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Auger

YEAR: 1979

COMMODITY: Uranium
GRADE: 0.0126 Per cent

COMMENTS: Average thickness of uraniferous layer is 3.0 metres.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The NKWALA P. LINE showing is a postglacial uranium concentration in lake-bottom sediments in an unnamed marsh. It is located approximately 3.5 kilometres northwest of Westbench, a subdivision of Penticton.

This is one of many uranium occurrences discovered by D.G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions.

The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment occurs over an area measuring 5,000 square metres (Culbert, 1979). An auger hole intersected a 3.0-metre thick layer averaging 0.0126 per cent uranium with a 0.5-metre section averaging 0.0184 per cent uranium (Culbert, 1979). The uraniferous layer begins at the surface (Culbert, 1979).

Other young uranium occurrences located nearby are WESTBENCH (082ENW075), NKWALA NORTH (082ENW087), NKWALA CENTER (082ENW088) and NKWALA SOUTH (082ESW188).

BIBLIOGRAPHY

EMPR OF 1990-32; 1994-8

BIBLIOGRAPHY

- EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, D.V.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission
of Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, Vol. 1, pp. 35-36, 183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #2017S, 15 pages
with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3,
pp. 313-330.

DATE CODED: 1995/09/10
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW090**

NATIONAL MINERAL INVENTORY:

NAME(S): **ENEAS B**, ENEAS, FAULDER,
ENEAS CREEK CANYON, ENEAS CANYON

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 39 23 N
LONGITUDE: 119 43 58 W
ELEVATION: 550 Metres

NORTHING: 5504014
EASTING: 302770

LOCATION ACCURACY: Within 1 KM
COMMENTS: Junction of Eneas Creek with a tributary (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary
TYPE: B08 Surficial U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Postglacial Sediments
Jurassic			Okanagan Intrusions

LITHOLOGY: Soil
Peat
Granodiorite

HOSTROCK COMMENTS: Surficial occurrence in postglacial unconsolidated material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1979
SAMPLE TYPE: Auger
COMMODITY GRADE
Uranium 0.0121 Per cent
COMMENTS: Average thickness of uraniferous layer is 2.0 metres.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The ENEAS B showing is a postglacial uranium concentration in soils and peat near the junction of Eneas Creek with an unnamed tributary.

This is one of many uranium occurrences discovered by D.G. Leighton & Associates Ltd. in the late 1970s. Work prior to the uranium moratorium in 1980 consisted of auger sampling. The area is underlain by granodiorite of the Jurassic Okanagan Intrusions. Eneas Creek also drains parts of the Eocene Coryell Intrusions.

The occurrence is recent, having formed from the interaction between uranium-rich groundwater and unconsolidated material containing organics or clay. This process is believed to still be taking place. The source of the uranium is thought to be the surrounding igneous rocks, where groundwaters rich in carbonate and alkali ions have leached labile uranium from fresh rock exposed after glaciation.

Uranium enrichment averages 0.0121 per cent uranium over an area measuring 15,800 square metres (Culbert, 1979). The uraniferous layer lies 1.7 metre below the surface and has an average thickness of 2.0 metres (Culbert, 1979). Within that layer a 0.5-metre section grades 0.0137 per cent uranium (Culbert, 1979).

BIBLIOGRAPHY

EMPR ASS RPT 6575, 7308, 7972
EMPR EXPL 1977-34-35; 1978-35; 1979-45

BIBLIOGRAPHY

- EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969
CIM BULL 1978, Vol. 71, #783, pp. 103-110
IAEA TECDOC 322 (Surficial Uranium Deposits, Technical Document,
Vienna, 1984), pp. 179-191
Bates, M.D.; Murray, J.W.; Raudsepp, V. (1980): Royal Commission of
Inquiry, Health and Environmental Protection, Uranium Mining,
Commissioners Report, Vol. 1, pp. 35-36,183-184.
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages.
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List #2017S, 15 pages
with Appendices.
*Culbert, R.R. and Leighton, D.G. (1988): Young Uranium; in
Unconventional Uranium Deposits, Ore Geology Reviews, Vol. 3,
pp. 313-330.

DATE CODED: 1988/01/29
DATE REVISED: 1996/01/25

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW091**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPOD**

MINING DIVISION: Vernon

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 58 03 N
LONGITUDE: 119 31 13 W
ELEVATION: 1060 Metres

NORTHING: 5538062
EASTING: 319267

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location of drillhole 88-1 (Assessment Report 18499).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
ALTERATION: Silica Chlorite Epidote Pyrite
ALTERATION TYPE: Silicific'n Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epithermal
TYPE: H05 Epithermal Au-Ag: low sulphidation

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Paleozoic-Mesozoic
Eocene

GROUP

Harper Ranch
Penticton

FORMATION

Undefined Formation
Marron

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Felsic Dike
Andesite
Meta Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1989

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Gold

0.7850

Grams per tonne

COMMENTS: Best intersection was from 4.6 metres to 7.6 metres in hole 88-1.

Sample is a split of reverse circulation drill cuttings.

REFERENCE: Assessment Report 18499.

CAPSULE GEOLOGY

The SPOD showing is located on the east side of Blue Grouse Mountain, approximately 8.5 kilometres north-northwest of Kelowna.

The property covers a sequence of andesitic volcanic rocks of the Eocene Penticton Group, Marron Formation. These are cut by a northwest trending felsic dike. The dike varies in width from 1 to 10 metres and has been traced along strike for approximately 1500 metres. The host andesite has been silicified in a contact zone up to 3 metres wide along the dike. Both the dike and andesite are cut by 2 stages of quartz veining. The veins are up to 1 centimetre in thickness, vuggy, and contain fine-grained disseminated pyrite. Weak propylitic alteration is common in the andesite. The Marron Formation volcanics are underlain by a pendant of Devonian-Triassic Harper Ranch Group metasediments.

Early, unrecorded work on the showing is evidenced by a small shaft found on the property by J. Stushnoff in 1987. His prospecting efforts that year identified anomalous gold geochemistry associated with the felsic dike. The property was optioned by QPX Minerals Inc. in 1988, and during the winter of 1988-89 Mine Quest Exploration Associates Ltd. on behalf of QPX carried out a program of soil sampling, geological mapping, and a VLF-EM geophysical survey. The surface work identified several anomalies which were then tested by a 5-hole 272.8-metre reverse circulation drill program. Hole depth

CAPSULE GEOLOGY

varied from 32.0 to 89.9 metres with a sample interval of 3.05 metres. The best drill intersection, from 4.6 metres to 7.6 metres in hole 88-1, assayed 0.785 grams per tonne gold (Assessment Report 18499). It was collared to test below a channel sample which had assayed 1.87 grams per tonne gold over 1 metre (Assessment Report 18499).

Another gold vein occurrence, the BLUE HAWK (082ENW002), is located approximately 2 kilometres to the north.

BIBLIOGRAPHY

EMPR ASS RPT 17576, *18499
EMPR OF 1988-5; 1994-8
EMPR MAP 39
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969

DATE CODED: 1995/11/18
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW092**

NATIONAL MINERAL INVENTORY:

NAME(S): **FERROUX**, WT

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 33 57 N
LONGITUDE: 119 08 44 W
ELEVATION: 1310 Metres

NORTHING: 5492571
EASTING: 344860

LOCATION ACCURACY: Within 500M
COMMENTS: Trench 89-B (Assessment Report 20070).

COMMODITIES: Gold Silver Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein Breccia
CLASSIFICATION: Hydrothermal
TYPE: I VEIN, BRECCIA AND STOCKWORK

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	
Cretaceous-Tertiary			Okanagan Batholith
Eocene			Coryell Intrusions

LITHOLOGY: Quartz Monzonite
Granodiorite
Dacite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Overlap Assemblage
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: TRENCH REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Channel
COMMODITY GRADE
Silver 0.7000 Grams per tonne
Gold 0.7200 Grams per tonne

COMMENTS: Sample number FTB018 from trench 89-B.
REFERENCE: Assessment Report 20070.

CAPSULE GEOLOGY

The FERROUX showing is located on the west side of Ferroux Creek approximately 9.5 kilometres north-northwest of Carmi.

The showing occurs in quartz monzonite of the Eocene Coryell Intrusions which is underlain by granodiorite of the Cretaceous-Tertiary Okanagan Batholith, overlain to the north by dacite of the Eocene Penticton Group, Marron Formation. A major fault is interpreted in the Ferroux Creek valley striking north-south.

Mineralization is associated with the Ferroux Creek fault where it is cut by east-west faults. Within and adjacent to these fault zones the quartz monzonite is brecciated, silicified and gossanous, with up to 10 per cent disseminated pyrite and minor pyrrhotite. Anomalous gold, silver, copper and zinc assays are associated with the fault structures.

The FERROUX showing was discovered in 1988 by Minnova Inc. through heavy mineral sampling techniques. Prospecting, geochemical and geological mapping programs were followed by trenching in 1989. A total of 355 metres was excavated in 9 trenches. Chip samples were collected from the trenches and analysed for gold, silver, copper, lead and zinc. The best precious metal values, obtained from trench 89-B, were 0.72 gram per tonne gold and 0.7 gram per tonne silver with lesser values of copper and zinc (Assessment Report 20070).

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 327
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 19108, *20070
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8510G
GSC OF 409; 736; 1969

DATE CODED: 1995/11/21
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW093**

NATIONAL MINERAL INVENTORY:

NAME(S): **ISINTOK, PIN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

Open Pit

MINING DIVISION: Osoyoos

LATITUDE: 49 35 07 N
LONGITUDE: 119 47 18 W
ELEVATION: 800 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5496257
EASTING: 298467

LOCATION ACCURACY: Within 1 KM

COMMENTS: Centre of several quartz veins (Assessment Report 7885).

COMMODITIES: Silver Copper Molybdenum

MINERALS

SIGNIFICANT: Tetrahedrite
COMMENTS: Molybdenum from assays only, molybdenite has not been observed.
ASSOCIATED: Quartz Pyrite Siderite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: 106 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Okanagan Intrusions

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1970
SAMPLE TYPE: Grab	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	144.0000 Grams per tonne
Copper	0.3300 Per cent
Molybdenum	0.1200 Per cent

COMMENTS: High-grade grab sample.
REFERENCE: Assessment Report 7885.

CAPSULE GEOLOGY

The ISINTOK showing is located 3 kilometres south of Faulder and 8 kilometres west-southwest of Summerland.
The showing consists of several quartz veins hosted in granodiorite of the Jurassic Okanagan Intrusions. Mineralization consists of quartz with pyrite or siderite and tetrahedrite and traces of malachite. Molybdenum values have been recorded in assays but molybdenite has not been observed in samples.
In 1966, Sulmac Exploration Services Ltd. carried out geological mapping, prospecting and soil sampling for Forest Kerr Mines Ltd. They identified a weak copper soil geochemical anomaly. In 1970, a Penticton prospector brought the property to the attention of Cominco. He had carried out some minor blasting and one sample collected assayed 144 grams per tonne silver, 0.33 per cent copper and 0.12 per cent molybdenum (Assessment Report 7885). In 1979, Cominco staked the property, and undertook a small program of geological mapping and geochemistry to evaluate its molybdenum potential. They found that the granodiorite in this area contains high background values in molybdenum. Two quartz veins were analysed for silver, with assays of 9 and 16 grams silver per tonne respectively (Assessment Report 7885). The area blasted by the prospector in 1970 is believed to be located approximately 500 metres to the east and is included in this occurrence.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 329
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 880, *7885
EMPR EXPL 1978-E35; 1979-43
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969

DATE CODED: 1995/11/22
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW094**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHEAR**

MINING DIVISION: Vernon

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 59 36 N
LONGITUDE: 119 34 11 W
ELEVATION: 780 Metres

NORTHING: 5541054
EASTING: 315821

LOCATION ACCURACY: Within 500M

COMMENTS: Grab sample of quartz stockwork with anomalous silver (Assessment Report 14784).

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Pyrite Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres
COMMENTS: Attitude of stockwork.

STRIKE/DIP: 023/46N

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Paleozoic-Mesozoic
Triassic-Jurassic

GROUP

Harper Ranch
Nicola

FORMATION

Undefined Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Harper Ranch

Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY

YEAR: 1985

Silver

GRADE

18.5000 Grams per tonne

COMMENTS: High-grade grab sample.
REFERENCE: Assessment Report 14784.

CAPSULE GEOLOGY

The SHEAR showing is located on Bald Range Creek, approximately 6 kilometres west of Wilson Landing.

The showing is a quartz stockwork, containing pyrite and minor amounts of galena, which strikes 023 degrees and dips 46 degrees north. It is hosted by andesite, which may be part of the Triassic-Jurassic Nicola Group. The area is underlain by arc clastics of the Devonian-Triassic Harper Ranch Group.

The property was found in 1985 by N.C. Lenard. A grab sample of the rusty weathering quartz stockwork from the east edge of the zone assayed 18.5 grams silver per tonne (Assessment Report 14784).

BIBLIOGRAPHY

EMPR ASS RPT *14784, 16094
EMPR OF 1994-8
EMPR MAP 39
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969

DATE CODED: 1995/11/23
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW095**

NATIONAL MINERAL INVENTORY:

NAME(S): **JACK, FLAP**

MINING DIVISION: Vernon

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 59 18 N
LONGITUDE: 119 48 47 W
ELEVATION: 1480 Metres

NORTHING: 5541126
EASTING: 298362

LOCATION ACCURACY: Within 500M

COMMENTS: Quartz vein (Assessment Report 19579).

COMMODITIES: Silver Copper Antimony Arsenic

MINERALS

SIGNIFICANT: Tetrahedrite
ASSOCIATED: Pyrite Quartz Carbonate
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I VEIN, BRECCIA AND STOCKWORK 106 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic-Mesozoic	Harper Ranch	Undefined Formation	
Triassic-Jurassic	Nicola	Undefined Formation	

LITHOLOGY: Greenstone
Andesite
Clastic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel Harper Ranch PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1989
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Silver	123.2000 Grams per tonne
Arsenic	0.0345 Per cent
Antimony	0.0253 Per cent

COMMENTS: High-grade grab sample.
REFERENCE: Assessment Report 19579.

CAPSULE GEOLOGY

The JACK showing is located between West Lake and Islahatl Lake, approximately 21 kilometres northwest of Westbank. The showing is a quartz-carbonate vein hosted in greenstone and andesite which may be part of the Triassic-Jurassic Nicola Group. The general area is underlain by arc clastic rocks of the Devonian-Triassic Harper Ranch Group. The showing was discovered in 1989 by Rea Gold Corporation who funded a prospecting program for precious metals in this area. The quartz-carbonate vein is mineralized with pyrite and minor amounts of tetrahedrite. Assay results from samples of this mineralization include: 123.2 grams of silver per tonne, 0.0253 per cent antimony, and 0.0345 per cent arsenic (Assessment Report 19579). An adjacent sample assayed 0.0454 per cent copper (Assessment Report 19579). A different Jack showing (082LSW118) occurs to the north on the southwest flank of Eileen Mtn. This showing is also a quartz vein and a sample assayed 2.79 grams per tonne gold (Assessment Report 19579).

BIBLIOGRAPHY

EMPR ASS RPT *19579
EMPR FIELDWORK 2000, pp. 191-222

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 332
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969

DATE CODED: 1995/11/24
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW096**

NATIONAL MINERAL INVENTORY:

NAME(S): **SYRUP**

MINING DIVISION: Vernon

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 58 13 N
LONGITUDE: 119 45 33 W
ELEVATION: 1360 Metres

NORTHING: 5538975
EASTING: 302150

LOCATION ACCURACY: Within 500M

COMMENTS: Quartz veins in roadcut (Assessment Report 19570).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Pyrite Quartz Pyrrhotite
ALTERATION: Silica Clay
ALTERATION TYPE: Silicific'n Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I VEIN, BRECCIA AND STOCKWORK 106 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic-Mesozoic
Jurassic

GROUP

Harper Ranch

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Okanagan Intrusions

LITHOLOGY: Pyritic Hornfels
Black Shale
Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1989

SAMPLE TYPE: Grab

COMMODITY

GRADE

Copper

0.0535

Per cent

COMMENTS: Sample number JS-12-R taken from 3 centimetre wide quartz vein containing 15 per cent pyrite.

REFERENCE: Assessment Report 19570.

CAPSULE GEOLOGY

The SYRUP showing is located 4 kilometres west-northwest of Lambly Lake and approximately 15.5 kilometres northwest of Peachland.

The showing consists of several small quartz veins and stringers in a hornfelsed zone in Devonian-Triassic Harper Ranch metasediments. Outcrops of quartz diorite of the Jurassic Okanagan Intrusions are found 1 kilometre to the south. The showing was found by Rea Gold Corporation in 1989.

Mineralization consists of rusty, vuggy quartz veins and stringers in an area of pyritic hornfelsed metasediments. A sample of a 3-centimetre wide quartz vein containing 15 per cent pyrite assayed 0.0535 per cent copper (Assessment Report 19570). Minor silica-clay alteration was noted on fractures near the sample site. Pyrrhotite is common along bedding planes in the adjacent black shales.

BIBLIOGRAPHY

EMPR ASS RPT *19570
EMPR FIELDWORK 2000, pp. 191-222
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 334
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 409; 637; 736; 1969

DATE CODED: 1995/11/24
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW097**

NATIONAL MINERAL INVENTORY:

NAME(S): **JUBILATION**, NOGAN

MINING DIVISION: Vernon

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 58 00 N
LONGITUDE: 119 42 53 W
ELEVATION: 1140 Metres

NORTHING: 5538457
EASTING: 305322

LOCATION ACCURACY: Within 500M

COMMENTS: Quartz veins in roadcut (Assessment Report 9186).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Paleozoic-Mesozoic Jurassic
GROUP: Harper Ranch
FORMATION: Undefined Formation
IGNEOUS/METAMORPHIC/OTHER: Okanagan Intrusions

LITHOLOGY: Limy Argillite
Hornblende Diorite
Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Harper Ranch
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Thompson Plateau

GRADE:

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 9.6000 Grams per tonne
Gold 1.0400 Grams per tonne
COMMENTS: Hornfels containing 5 per cent quartz and 1 per cent pyrite.
REFERENCE: Assessment Report 9186.

CAPSULE GEOLOGY

The JUBILATION showing is located 1 kilometre northwest of Lambly Lake, approximately 16 kilometres northwest of Peachland. The showing, comprising several quartz veins, occurs in metasediments of the Devonian-Triassic Harper Ranch Group. Quartz diorite of the Jurassic Okanagan Intrusions outcrops 1 kilometre to the south.

The JUBILATION showing was found in 1980 during a prospecting program funded by Cominco Ltd. It consists of hornfelsed limy argillite which is bleached, altered and cut by quartz veinlets. A sample which contained 5 per cent quartz and 1 per cent pyrite, assayed 1.04 grams per tonne gold and 9.6 grams per tonne silver (Assessment Report 9186).

Subsequent prospecting and geological mapping by M. Morrison in 1986-1987 identified a hornblende diorite intrusive to the northeast of the showing and re-interpreted the showing as being part of a large shear zone. Contact metamorphic effects appear to increase toward the southeast and fade toward the northwest. A soil sample collected in this area by Morrison contained 0.840 gram per tonne gold (Assessment Report 16504). This attracted the attention of Chevron Canada Ltd. who optioned the property in 1987 and carried out an unsuccessful trenching program. They dropped the option and did not file an assessment report on their work. In 1989, M. Morrison carried out a magnetometer survey over the area. The results did not prove

CAPSULE GEOLOGY

useful in delineating mineralized fault zones.

BIBLIOGRAPHY

EMPR ASS RPT *9186, 15157, 16504, 19110
EMPR EXPL 1980-45; 1986-C38; 1987-C34
EMPR FIELDWORK 2000, pp. 191-222
EMPR OF 1994-8
EMPR MAP 39
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969

DATE CODED: 1995/11/24
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW098**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOLIVAR WEST**, OKA

MINING DIVISION: Osoyoos

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 48 05 N
LONGITUDE: 119 57 02 W
ELEVATION: 1354 Metres

NORTHING: 5520726
EASTING: 287688

LOCATION ACCURACY: Within 500M

COMMENTS: Drillhole 88-26 (Assessment Report 18711).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite Sphalerite
ASSOCIATED: Quartz
ALTERATION: Silica Limonite
ALTERATION TYPE: Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Triassic-Jurassic
Lower Jurassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Pennask Batholith

LITHOLOGY: Andesite
Hornfels
Skarn
Mudstone Conglomerate
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Gold

14.3300

Grams per tonne

COMMENTS: Best intersection was from 103.6 - 105.2 metres in reverse circulation
drillhole 88-26.

REFERENCE: Assessment Report 18711.

CAPSULE GEOLOGY

The BOLIVAR WEST prospect is located on the west side of Bolivar Creek, approximately 15 kilometres west-northwest of Peachland.

The area is underlain by a pendant of Triassic-Jurassic Nicola Group andesite and lesser interbedded hornfelsed sediments and skarn. Granodiorite and diorite of the Early Jurassic Pennask Batholith intrude and underlay the Nicola Group rocks. These intrusive rocks outcrop several hundred metres to the south and west of the prospect.

Exploration in this area, for gold bearing quartz veins and shear zones, dates back to the 1890s when the ALMA MATER (082ENW017) and the SILVER KING (082ENW018) were developed. During the 1960s and early 1970s the entire area west of Okanagan Lake was subject to a major exploration effort directed at copper-molybdenum porphyry deposits.

Beginning in 1986 the gold potential of Nicola Group skarns was investigated by Fairfield Minerals Ltd. During the following 2 years Fairfield carried out a major program of soil sampling, prospecting, linecutting, geological mapping, magnetometer surveys, trenching and 6000 metres of reverse circulation drilling. Exploration focused on a number of mineral occurrences within the Nicola Group, including: BOLIVAR WEST, BOLIVAR EAST (082ENW099), BOLIVAR ROAD (082ENW100),

CAPSULE GEOLOGY

BOLIVAR CREEK (082ENW101), IRON HORSE (082ENW025), and CAP (082ENW026).

In 1987, Fairfield undertook a major trenching program on their OKA claim group. In the BOLIVAR WEST area, gold mineralization was found in a northeast trending quartz vein and arsenopyrite veinlets. A grab sample assayed 22.9 grams per tonne gold (Assessment Report 18711).

In 1988, a joint venture between Fairfield Minerals Ltd. and Placer Dome Inc. funded a 6000 metre reverse circulation drill program. In the BOLIVAR WEST area 6 vertical holes were drilled for a total of 808.25 metres. Holes were spotted to test several gold soil anomalies and to evaluate weak gold mineralization found in strongly fractured, quartz veined volcanic rocks exposed in trenches. Gold assays from 4 holes exceeded 0.5 gram per tonne (Assessment Report 18711). The best intersection, 14.33 grams per tonne gold over 1.52 metres in hole 88-26, was associated with an iron stained, fine-grained siliceous rock (Assessment Report 18711). Elevated gold values were not correlatable along bedding between the drillholes, and they were found in all rock types, including granodiorite, andesite, and a fine-grained siliceous rock. This was thought to suggest structural control on mineralization. The projection of the mineralized quartz vein found in 1987, passes immediately north of hole 88-26 and this vein may have been intersected by the drillhole. No arsenopyrite was noted in the drillholes but minor amounts of pyrite were common.

In 1994, 2 holes (291 metres) were drilled to test mineralization intersected in the previous drilling. One hole encountered pyrite, sphalerite and arsenopyrite, with minor gold, in a quartz-calcite vein.

BIBLIOGRAPHY

EMPR ASS RPT 15834, 16761, 16788, *18711, 21923, *24026
EMPR EXPL 1987-C36; 1988-C24
EMPR OF 1994-8
EMPR PF (See 082ENW017)
EMPR RGS 29
EMPR INF CIRC 1989-1, Table 1 (190)
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969
N MINER Dec. 15, 1986
WWW <http://www.infomine.com/>; <http://www.richriver.bc.ca>
Placer Dome File

DATE CODED: 1995/11/25
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

BOLIVAR CREEK (082ENW101), IRON HORSE (082ENW025), and CAP (082ENW026).

In 1988, a joint venture between Fairfield Minerals Ltd. and Placer Dome Inc. funded a 6000 metre reverse circulation drill program. In the BOLIVAR EAST area 1 inclined and 5 vertical holes were drilled for a total of 758.81 metres. Holes were spotted to test gold soil anomalies and gold showings in fractured volcanics and skarn exposed in trenches. Gold assays from 3 holes exceeded 0.5 gram per tonne (Assessment Report 18711). The best intersection, 7.07 grams per tonne gold over 1.52 metres in hole 88-32, was associated with a fine to medium-grained siliceous rock (Assessment Report 18711). Elevated gold values were found throughout the section which was taken as evidence of structural control on mineralization. All intersections with gold values of greater than 0.5 gram per tonne had associated pyrite and in hole 88-31, a trace of arsenopyrite.

In 1994, a hole (170 metres) was drilled to test mineralization previously detected in drilling. The hole intersected 16.2 grams per tonne gold over 1.0 metre, within a 2.5-metre section averaging 9.38 grams per tonne gold (Assessment Report 24026). The values occur in an altered zone of sericitized and silicified sheared mudstone and greywacke; a flake of visible gold and traces of pyrite and arsenopyrite occur.

BIBLIOGRAPHY

EMPR ASS RPT 15834, 16761, 16788, *18711, 21923, *24026
EMPR EXPL 1987-C36; 1988-C24
EMPR PF (See 082ENW017)
EMPR P 1989-3, pp.38-40, pp.125-126
EMPR FIELDWORK 1987, pp.270-272
EMPR OF 1994-8
EMPR RGS 29
EMPR INF CIRC 1989-1, Table 1 (190)
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969
N MINER Dec. 15, 1986
WWW <http://www.richriver.bc.ca>
Placer Dome File

DATE CODED: 1995/11/25
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW100**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOLIVAR ROAD**, OKA, IRON HORSE

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 48 12 N
LONGITUDE: 119 54 47 W
ELEVATION: 1298 Metres

NORTHING: 5520836
EASTING: 290394

LOCATION ACCURACY: Within 500M

COMMENTS: Drillhole 88-39 (Assessment Report 18711).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Unknown
ALTERATION: Silica Limonite
ALTERATION TYPE: Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Discordant
CLASSIFICATION: Skarn Hydrothermal
TYPE: K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Triassic-Jurassic
Lower Jurassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Pennask Batholith

LITHOLOGY: Skarn
Hornfels
Siltstone
Andesite
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Thompson Plateau

GRADE:

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Drill Core

COMMODITY

Gold

GRADE

2.0320

Grams per tonne

COMMENTS: Best intersection was in reverse circulation drillhole 88-39 from 22.9 - 24.4 metres.

REFERENCE: Assessment Report 18711.

CAPSULE GEOLOGY

The BOLIVAR ROAD prospect is located approximately 13 kilometres west-northwest of Peachland.

This area is underlain by Triassic-Jurassic Nicola Group andesite with lesser interbedded hornfelsed siltstone and skarn. The Nicola Group rocks form a large northwest-southeast trending pendant which is underlain and intruded by granodiorite and diorite of the Early Jurassic Pennask Batholith.

Exploration in this area, for gold bearing quartz veins and shear zones, dates back to the 1890s when the ALMA MATER (082ENW017) and the SILVER KING (082ENW018) were developed. During the 1960s and early 1970s the entire area west of Okanagan Lake was subject to a major exploration effort directed at copper-molybdenum porphyry deposits.

Beginning in 1986 the gold potential of Nicola Group skarns was investigated by Fairfield Minerals Ltd. During the following 2 years Fairfield carried out a major program of soil sampling, prospecting, linecutting, geological mapping, magnetometer surveys, trenching and 6000 metres of reverse circulation drilling. Exploration focused on a number of mineral occurrences within the Nicola Group, including:

CAPSULE GEOLOGY

BOLIVAR WEST (082ENW098), BOLIVAR EAST (082ENW099), BOLIVAR ROAD, BOLIVAR CREEK (082ENW101), IRON HORSE (082ENW025), and CAP (082ENW026).

In 1988, a joint venture between Fairfield Minerals Ltd. and Placer Dome Inc. funded a 6000 metre reverse circulation drill program. In the BOLIVAR ROAD area 5 vertical holes were drilled for a total of 701.04 metres. Holes were spotted to test gold soil anomalies. Gold assays from 2 locations exceeded 0.5 gram per tonne (Assessment Report 18711). The best intersection, 2.032 grams per tonne gold over 1.52 metres in hole 88-39, was associated with a fine to medium-grained siliceous rock with a trace of pyrite and abundant iron oxide (Assessment Report 18711). All significant gold results from drillholes in this area were within 27.4 metres of the surface.

BIBLIOGRAPHY

EMPR ASS RPT 15834, 16761, 16788, *18711, 21923, 24026
EMPR EXPL 1987-C36; 1988-C24
EMPR OF 1994-8
EMPR P 1989-3, pp.38-40, pp. 125-126
EMPR FIELDWORK 1987, pp. 270-272
EMPR PF (See 082ENW017)
EMPR RGS 29
EMPR INF CIRC 1989-1, Table 1 (190)
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969
N MINER Dec. 15, 1986
WWW <http://www.richriver.bc.ca>
Placer Dome File

DATE CODED: 1995/11/25
DATE REVISED: 1996/01/26

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW101**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOLIVAR CREEK**, MITCHELL, OKA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)

LATITUDE: 49 47 38 N
LONGITUDE: 119 56 33 W
ELEVATION: 1210 Metres

NORTHING: 5519869
EASTING: 288235

LOCATION ACCURACY: Within 500M

COMMENTS: Quartz vein (Assessment Report 15834, Plate 1).

COMMODITIES: Silver Gold Lead Molybdenum

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite Galena Molybdenite
ASSOCIATED: Quartz
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic-Jurassic Lower Jurassic	Nicola	Undefined Formation	Pennask Batholith

LITHOLOGY: Granodiorite
Diorite
Andesite
Hornfels
Siltstone
Skarn

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel Plutonic Rocks PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 103.7000 Grams per tonne
Gold 0.0020 Grams per tonne

COMMENTS: Sample from 0.5 metre wide quartz vein.
REFERENCE: Assessment Report 21923.

CAPSULE GEOLOGY

The BOLIVAR CREEK showing is located on the east side of Bolivar Creek on the OKA claims, approximately 14 kilometres west-northwest of Peachland.

This area is underlain by granodiorite and diorite of the Early Jurassic Pennask Batholith. The Triassic-Jurassic Nicola Group andesite, with lesser interbedded hornfelsed siltstone and skarn, form several northwest-southeast trending pendants in the Greata and Peachland creek valleys.

Exploration in this area, for gold bearing quartz veins and shear zones, dates back to the 1890s when the ALMA MATER (082ENW017) and the SILVER KING (082ENW018) were developed. During the 1960s and early 1970s the entire area west of Okanagan Lake was subject to a major exploration effort directed at copper-molybdenum porphyry deposits.

Beginning in 1986 the gold potential of Nicola Group skarns was investigated by Fairfield Minerals Ltd. During the following 2 years Fairfield carried out a major program of soil sampling, prospecting, linecutting, geological mapping, magnetometer surveys, trenching and 6000 metres of reverse circulation drilling. Exploration focused on

CAPSULE GEOLOGY

a number of mineral occurrences within the Nicola Group, including: BOLIVAR WEST (082ENW098), BOLIVAR EAST (082ENW099), BOLIVAR ROAD (082ENW100), IRON HORSE (082ENW025), and CAP (082ENW026).

In 1991, Fairfield Minerals Ltd. undertook a prospecting program on the gold potential of quartz veins on their OKA claim group. A 0.5-metre wide quartz vein, comprising the Bolivar Creek showing, occurs on the east side of Bolivar Creek, approximately 700 metres to the southwest of the BOLIVAR EAST (082ENW099) showing. Assay results from this vein are 103.7 grams per tonne silver, but only 0.002 gram per tonne gold (Assessment Report 21923). A previous sample taken in 1986 had assayed 47 grams per tonne gold (Assessment Report 15834). This vein also contained minor limonite, pyrite, arsenopyrite and galena.

In 1994, a hole (38.4 metres) was drilled to test continuity of the mineralized quartz vein. Molybdenum in quartz veins was intersected.

BIBLIOGRAPHY

EMPR ASS RPT *15834, 16761, 16788, 18711, *21923, *24026
EMPR EXPL 1987-C36; 1988-C24
EMPR OF 1994-8
EMPR PF (See 082ENW017)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969
N MINER Dec. 15, 1986
WWW <http://www.richriver.bc.ca>
Placer Dome File

DATE CODED: 1995/11/25
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW102**

NATIONAL MINERAL INVENTORY:

NAME(S): **OKA 8**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 47 57 N
LONGITUDE: 119 57 21 W
ELEVATION: 1340 Metres

NORTHING: 5520494
EASTING: 287299

LOCATION ACCURACY: Within 500M

COMMENTS: Quartz vein (Assessment Report 15834, Plate 1).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Arsenopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic-Jurassic	Nicola	Undefined Formation	
Lower Jurassic			Pennask Batholith

LITHOLOGY: Granodiorite
Diorite
Andesite
Hornfels
Skarn

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1986

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	5.4700	Grams per tonne
Gold	23.0000	Grams per tonne

COMMENTS: High-grade grab sample of quartz vein; sample number R2 OKA-18 B1-R11.
REFERENCE: Assessment Report 15834.

CAPSULE GEOLOGY

The OKA 8 showing is located on the east side of Bolivar Creek, approximately 15 kilometres west-northwest of Peachland.

The showing is underlain by a pendant of Triassic-Jurassic Nicola Group andesite and lesser interbedded hornfelsed sediments and skarn. Granodiorite and diorite of the Early Jurassic Pennask Batholith outcrop about 100 metres to the southwest.

Exploration in this area, for gold bearing quartz veins and shear zones, dates back to the 1890s when the ALMA MATER (082ENW017) and the SILVER KING (082ENW018) were developed. During the 1960s and early 1970s the area west of Okanagan Lake was subject to a major exploration effort directed at copper-molybdenum porphyry deposits.

Beginning in 1986 the gold potential of Nicola Group skarns was investigated by Fairfield Minerals Ltd. During the next 2 years Fairfield carried out a major program of soil sampling, prospecting, linecutting, geological mapping, magnetometer surveys, trenching and 6000 metres of reverse circulation drilling. Exploration focused on a number of mineral occurrences within the Nicola Group, including: BOLIVAR WEST (082ENW098), BOLIVAR EAST (082ENW099), BOLIVAR ROAD (082ENW100), IRON HORSE (082ENW025), and CAP (082ENW026).

A prospecting program in 1986 located a quartz vein on the OKA 8 claim near the west end of the Bolivar Creek road. Chip samples, 0.45 to 0.80 metre long, taken across the quartz vein assayed from 0.07

CAPSULE GEOLOGY

to 1.57 grams per tonne gold (Assessment Report 15834). A grab sample from the same area assayed 23.0 grams per tonne gold and 5.47 grams per tonne silver (Assessment Report 15834). High-grade samples contained arsenopyrite.

BIBLIOGRAPHY

EMPR ASS RPT *15834, *18711, 24026
EMPR EXPL 1987-C36; 1988-C24
EMPR OF 1994-8
EMPR PF (See 082ENW017)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969
N MINER Dec. 15, 1986
Placer Dome File

DATE CODED: 1995/11/25
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW103**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOOKOUT MOUNTAIN**, OKA 4

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 49 01 N
LONGITUDE: 119 50 08 W
ELEVATION: 1220 Metres

NORTHING: 5522136
EASTING: 296027

LOCATION ACCURACY: Within 500M

COMMENTS: Outcrop of silicified volcanic rock (Assessment Report 15834, Plate 2).

COMMODITIES: Gold Silver Arsenic

MINERALS

SIGNIFICANT: Arsenopyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Nicola	Undefined Formation	Pennask Batholith
Lower Jurassic			

LITHOLOGY: Andesite
Hornfels
Siltstone
Skarn
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1986
SAMPLE TYPE:	Grab		
COMMODITY		GRADE	
Silver		1.3700	Grams per tonne
Arsenic		8.4600	Per cent
Gold		15.2000	Grams per tonne
COMMENTS:	Sample number R2 OKA-9 B14-R2.		
REFERENCE:	Assessment Report 15834.		

CAPSULE GEOLOGY

The LOOKOUT MOUNTAIN showing is located on the OKA 4 claim on the west side of Lookout Mountain, approximately 8 kilometres northwest of Peachland.

This area is underlain by Triassic-Jurassic Nicola Group andesite with lesser interbedded hornfelsed siltstone and skarn. The Nicola Group rocks form a large northwest-southeast trending pendant which is underlain and intruded by granodiorite and diorite of the Early Jurassic Pennask Batholith.

A prospecting program in 1986 located mineralization approximately 1 kilometre north of the skarn showings at the CAP (082ENW026) and BLUEBELL (082ENW027) occurrences. An assay of a silicified volcanic rock containing blebs of arsenopyrite assayed 15.2 grams per tonne gold, 1.37 grams per tonne silver and 8.46 per cent arsenic (Assessment Report 15834).

BIBLIOGRAPHY

EMPR ASS RPT *15834
EMPR EXPL 1987-C36

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 348
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR OF 1994-8
EMPR PF (See 082ENW017)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969
N MINER Dec. 15, 1986
Placer Dome File

DATE CODED: 1995/11/25
DATE REVISED: 1996/01/25

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW105**

NATIONAL MINERAL INVENTORY:

NAME(S): **MISSION CREEK**, WILL 1-12, GALLAGHER'S CANYON

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E14W
BC MAP:

Open Pit Underground

MINING DIVISION: Vernon

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 51 15 N
LONGITUDE: 119 19 53 W
ELEVATION: 500 Metres

NORTHING: 5525023
EASTING: 332419

LOCATION ACCURACY: Within 500M

COMMENTS: Adit (Property File - White G., 1975).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold

MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Unconsolidated

CLASSIFICATION: Placer

TYPE: C01 Surficial placers

C02 Buried-channel placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Eocene
Upper Proterozoic
Quaternary

Penticton

White Lake

Shuswap Metamorphic Complex
Glacial/Fluvial Gravels

LITHOLOGY: Gravel
Conglomerate
Silt
Epiclastic
Pyroclastic
Gneiss

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Overlap Assemblage

Monashee

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The MISSION CREEK placer gold occurrence is found in the Mission Creek gravels downstream from an exposure of a Quaternary conglomerate in Gallagher's Canyon. This area is located within the Kelowna City municipal limits, approximately 12 kilometres east of the mouth of Mission Creek.

The conglomerate, which is believed to be the source of the gold, is underlain by epiclastic and pyroclastic rocks of the Eocene Penticton Group, White Lake Formation. These rocks have been thrust westward forming northerly trending, over-turned folds. The Mission Creek fault, located less than a kilometre to the south, exposes gneiss of the Upper Proterozoic Shuswap Metamorphic Complex.

The conglomerate is an interglacial alluvial deposit which is contained within a sequence of gently, eastward sloping glacial tills. Immediately underlying the conglomerate is a buff coloured, banded silt containing fragments of bituminous material. The conglomerate, as exposed in the upper reaches of Gallagher's Canyon, is a competent but interstitially friable, and limonitic weathering rock. The clasts are closely packed, and are composed of well-rounded to angular granite, diorite and argillite pebbles, cobbles and fragments. The interstitial material is predominately siliceous (quartz sand?). The conglomerate is conformably overlain by a well-bedded dark volcanic, averaging 1 metre in thickness. This volcanic may be related to the Pleistocene Lambly Creek Basalt eruptions to the west. It is speculated that the conglomerate, which outcrops as a rusty weathering gravel at the exit of Gallagher's Canyon, is actually the Rutland aquifer (Roed M.A. (1995): Geology of the Kelowna Area and Origin of the Okanagan Valley).

Early records of placer gold mining on Mission Creek date from 1876, although the discovery is credited to William Peon in 1861. Small-scale placer mining of the creek gravels continued intermittently until the 1930s. Recorded production (Bulletin 28, page 63) of gold during the period 1876 to 1895 was 20558 grams (661 troy ounces). Sluicing of the underlying silts and excavation of an

CAPSULE GEOLOGY

8-metre adit in the conglomerate is thought to date from the early to mid-1970s. Very high gold assays were reported from 8 overburden drillholes in 1975; however, they could not be reproduced by subsequent sampling. Much of Gallagher's Canyon is now covered by the Scenic Canyon Regional Park.

BIBLIOGRAPHY

EMPR AR 1876-423; 1877-405; 1878-378; 1879-241; 1886-213; 1887-277;
1888-317; 1889-292; 1890-379; 1894-753; 1926-200; 1933-198;
1934-D34; 1935-D15
EMPR BULL 28, p. 63
EMPR OF 1994-8
EMPR PF (*White G. (1975): Mission Au - Will 1-12 Mining Claims,
Memorandum to Dr. J.T. Fyles dated April 21, 1975; Renshaw R.E.
(1975): Geological Report on the Mission Creek Gold Deposits)
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8511G
GSC OF 409; 637; 736; 1969
Roed M.A. (1995): *Geology of the Kelowna Area and Origin of the
Okanagan Valley; Kelowna Geology Committee, 183 pages.

DATE CODED: 1996/02/20
DATE REVISED: 1996/02/21

CODED BY: JWP
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW106**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT SWITE AGATE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

MINING DIVISION: Vernon

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 57 48 N
LONGITUDE: 119 37 34 W
ELEVATION: Metres

NORTHING: 5537860
EASTING: 311663

LOCATION ACCURACY: Within 500M

COMMENTS: The Mount Swite agate locality is accessed from the Bear Creek (Lambly Creek) road via the Hidden Creek logging road that passes approximately 2 kilometres east of the summit (Exploration 1995, B.N. Church, in preparation).

COMMODITIES: Agate Gemstones

MINERALS

SIGNIFICANT: Agate
COMMENTS: Also opal present.
ASSOCIATED: Quartz Cristobalite
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Epigenetic Industrial Min.
TYPE: Q03 Agate

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Unnamed/Unknown Formation	

ISOTOPIC AGE: 51 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Basaltic Andesite

HOSTROCK COMMENTS: Attenborough Creek member.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

CAPSULE GEOLOGY

The Mount Swite agate locality is accessed from the Bear Creek (Lambly Creek) road via the Hidden Creek logging road that passes approximately 2 kilometres east of the summit.

The agates consist of quartz and cristobalite filling amygdales and fissures in the Attenborough Creek member. The amygdales are commonly elongated almond-shaped structures (0.5 to 5 cm), filled with fine grained blue-grey quartz, cristobalite and white plume opal aligned parallel to flow direction of the lava.

Thunder eggs are larger agates (baseball size) with radiating quartz crystals lining vugs and/or chalcedony in variegated horizontal or concentric bands on cavity floors or walls. Agates are believed to form within gas cavities of volcanic host rocks when microcrystalline chalcedony fibres nucleate on vug walls and grow inward. Oscillatory zoning and iris banding is the result of variations in silica concentrations in solutions at the tips of the growing chalcedonic fibers forming smooth and regular or botryoidal surfaces parallel to the banding (Heaney and Davis, 1995). The most probable source of the silica-rich solutions is the host Attenborough Creek andesite.

Analyses of the andesite from different locations shows uniform composition and excess silica based on norm calculations. It is concluded that part of the excess silica, accompanied by fluids and gases, moved from the andesite lava to gas cavities and fracture openings during the original lava cooling process.

BIBLIOGRAPHY

EMPR EXPL *1995 (B.N. Church, in preparation)
EMPR PF (Church, B.N. (1995): Sketch map and notes)
EMPR OF 1994-8
EMPR RGS 29

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 353
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 736; 1969
Heaney, P.J. and Davis, A.M. (1995): Observation and Origin of
Self-Organized Textures in Agates; Science, Volume 269,
pp. 1562-1565.

DATE CODED: 1996/04/20
DATE REVISED: 1996/04/26

CODED BY: BNC
REVISED BY: DEJ

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082ENW107**

NATIONAL MINERAL INVENTORY:

NAME(S): **ANGEL HOT SPRING**

MINING DIVISION: Vernon

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E14W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 47 42 N
LONGITUDE: 119 20 28 W
ELEVATION: 1100 Metres

NORTHING: 5518468
EASTING: 331515

LOCATION ACCURACY: Within 500M

COMMENTS: Angel Hot Spring is above McCullough road in the canyon section of Klo Creek drainage basin, approximately 300 metres below Kettle Valley railway cut, on the lower northern slope of Little White Mountain (Exploration in B.C., p. 131).

COMMODITIES: Travertine Hotspring

MINERALS

SIGNIFICANT: Calcite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Layered
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: H01 Travertine

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Recent

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Carbonate Tufa
Travertine

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

CAPSULE GEOLOGY

Angel Hot Spring is above the McCullough road in the canyon section of Klo Creek drainage basin, approximately 300 metres below the Kettle Valley railway cut, on the lower northern slope of Little White Mountain.

The area is underlain by gently dipping Shuswap gneiss and schist and small outliers of Chilcotin basalt accompanied by criss-crossing feeder dikes. The basalts range in age from Miocene to recent history and these rocks and associated fissures are believed to be a geothermal source. The area is within a region of high geothermal potential that includes much of the central and southern parts of the Okanagan Valley that is characterized by geothermal gradients ranging up to 70 degrees Celsius/kilometre.

Over a long period of time the stream has built a large mound of tufa 300 metres long, 150 metres wide, and up to 8 metres thick along the bottom of the valley of Angel Creek. The deposit consists of grey to brownish, crudely bedded, cellular carbonate tufa (travertine), forming successive lenses, each ranging from several centimetres to more than a metre thick, intercalated with gravel, logs, standing tree trunks, branches and twigs. The numerous cavities in the tufa are mostly the casts of twigs, sticks and other decaying or decayed and dissipated organic debris.

Analyses of the tufa obtained from 5 samples, collected from the length of the mound, show a range in CaO from 51.92 to 53.88 per cent, MgO from 0.26 to 0.44 per cent, Fe₂O₃ from 0.09 to 1.03 per cent, Al₂O₃ from 0.06 to 0.43 per cent, and SiO₂ from 0.37 to 1.73 per cent. There is a slight increase in SiO₂ and Fe₂O₃ distally from the spring and an overall decrease in Al₂O₃. In general the composition is similar to the Clinton tufa deposit. X-ray diffraction analyses of the 5 samples (courtesy of Jim McLeod of the Cominco Laboratory, Vancouver, B.C.) indicate that the predominant mineral in the tufa is calcite.

BIBLIOGRAPHY

EMPR EXPL *1995 - 131-133
EMPR OF 1994-8

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 355
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8511G
GSC OF 409; 637; 736; 1969
Roed M.A. (1995): Geology of the Kelowna Area and Origin of the
Okanagan Valley; Kelowna Geology Committee, 183 pages.

DATE CODED: 1996/04/20
DATE REVISED: 1996/05/01

CODED BY: BNC
REVISED BY: DEJ

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082ENW108**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARG 1**, GLEN LAKE, CAMP CREEK

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 46 41 N
LONGITUDE: 119 59 15 W
ELEVATION: 1440 Metres

NORTHING: 5518237
EASTING: 284927

LOCATION ACCURACY: Within 1 KM

COMMENTS: The exact location of this copper showing is uncertain (Assessment Report 10819).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ALTERATION: Sericite Quartz K-Feldspar
ALTERATION TYPE: Sericitic Potassic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic			Pennask Batholith
Middle Jurassic			Osprey Lake Intrusions

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: TRENCH

REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1960
SAMPLE TYPE: Chip
COMMODITY: Copper 0.8700 Per cent

COMMENTS: Assumed to be the average of a chip sample across a 125-metre trench.
REFERENCE: Quoted from earlier work in Assessment Report 7790.

CAPSULE GEOLOGY

The MARG 1 showing is located about 17 kilometres west of Peachland, near Glen Lake.

The area is underlain by granodiorite of the Early Jurassic Pennask Batholith. Outcrops of Triassic-Jurassic Nicola Group sedimentary and volcanic rocks occur to the east. The Middle Jurassic Osprey Lake Intrusions occur to the south.

Trenching was apparently carried out by Don Agur of Summerland in the early 1960s to expose a potassic alteration zone. Subsequently, percussion drilling was reportedly carried out by Juniper Mines Ltd. and Maverick Mines. No reports exist of this work. Ian Sutherland completed a geochemical survey in 1979 and did some prospecting in 1982.

A strongly altered potassic zone occurs in granodiorite and contains chalcopyrite in fractures. The area is well fractured with major fractures trending northeast-southwest.

Assessment Report 7790 states that an average assay of 0.87 per cent copper came from a 125-metre trench from the early 1960s.

BIBLIOGRAPHY

EMPR ASS RPT 1141, 2224, 7788, *7790, *10819
EMPR OF 1989-5; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 357
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 409; 736; 1969

DATE CODED: 1996/05/27
DATE REVISED: 1996/05/27

CODED BY: DEJ
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW109**

NATIONAL MINERAL INVENTORY:

NAME(S): **NIPPLE MOUNTAIN SPLITSTONE**, GLORY, FLAG,
MOUNTAIN ASH, KETTLE VALLEY

STATUS: Producer
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:
LATITUDE: 49 36 00 N
LONGITUDE: 119 08 12 W
ELEVATION: 1460 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Open Pit

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5496351
EASTING: 345610

COMMODITIES: Flagstone Dimension Stone Building Stone

MINERALS

SIGNIFICANT: Quartz Plagioclase
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Industrial Min.
TYPE: R08 Flagstone

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Unnamed/Unknown Formation	

LITHOLOGY: Dacite

HOSTROCK COMMENTS: Believed to be equivalent to the Kettle River Formation. Part of Reinecke's Nipple Mountain Series.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca Okanagan PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Overlap Assemblage

CAPSULE GEOLOGY

The Nipple Mountain Splitstone showing is located on Nipple Mountain 35 kilometres southeast of Kelowna.

The area was first mapped in detail by Reinecke (1915) and visited by the author in September, 1996. The Beaverdell camp is centred on a number of silver, gold and copper prospects discovered in 1897 and a few rich veins of silver-lead ore mined from 1913 to 1991. In 1995, Don Sandberg of Kelowna discovered splitstone resources in the Tertiary rocks.

Flagstone and splitstone (ashlar) products are a significant part of the dimension stone industry. Annually, 500 to 1000 tonnes of flagstone are produced and sold throughout Western Canada. In the Kootenay area, the Hamill micaceous quartzite (Cambrian) is quarried for flagstone on Porcupine Creek, 17.5 kilometres northeast of Salmo. The quartzite is sold locally and used in building facings and for various other decorative and architectural purposes. The term 'splitstone', as used in this report, is a more general term that includes metasedimentary and volcanic rocks that manifest a platy habit resulting from primary or secondary structures such as bedding, flow banding or cleavage. Unlike the Hamill quartzite, the characteristic banding and fabric of the Nipple Mountain volcanic rocks is non-sedimentary in origin. The volcanic splitstone has the advantage of being lightweight and less dense than the quartzite because of amygdules. However, quartzite flagstone has the beneficial feature of greater strength because of recrystallization due to metamorphism.

Splitstone is obtained from outcrops on the Glory claims 1500 metres east of the Dale Creek road on the west slope of Nipple Mountain.

At this locality, broadly jointed dacite is exposed in a 150 metre long, northerly-trending logging road cut. The dacite is flow banded, dips gently to the west, and is intersected by two sets of widely divergent, steeply dipping cross joints. The dacite (part of Reinecke's Nipple Mountain Series) is part of the Eocene Penticton Group and is believed to be equivalent to the Kettle River Formation.

Blocks of dacite up to 0.5 metre across can be readily levered from the cut face, rotated, then split with a mason's chisel into manageable slabs 3 to 5 centimetres thick. The most ready splits

CAPSULE GEOLOGY

occur on clay partings and planar concentrations of gas cavities. Surfaces of the slabs range from regular, finely rippled and flat to grooved with gas cavities, sometimes hackly and somewhat undular. Surface colour ranges from pale mauve to buff and, less commonly, light rust with minor manganese oxide stain.

Several truck loads of this splitstone have been shipped to Kelowna by Don Sandberg for personal use and test marketing with building supply stores. The current use is for garden walkways and patio construction. The advantage of the product is durability, pleasant pastel colours, good surface traction for outdoor use, the almost unlimited resource of the rock on Nipple Mountain and nearness of major population centres in the Okanagan Valley.

Kettle Valley Stone Company produces Mountain Ash from the area. Most of the product is being sold in the Pacific Northwest, but some is being used for two large buildings in Whistler.

BIBLIOGRAPHY

EM EXPL 1995, pp. 123-130; 1996-A24
EM FIELDWORK 1995, pp. 207-218; *1996, pp. 329-332
EM INF CIRC 1997-1, p. 23; 1998-1, p. 15
EMPR RGS 29
GSC MAP 1736A
GSC MEM 79
WWW <http://www.ldpetch.com>

DATE CODED: 1996/11/01
DATE REVISED: 2000/07/07

CODED BY: BNC
REVISED BY: LDJ

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082ENW110**

NATIONAL MINERAL INVENTORY:

NAME(S): **NIPPLE MOUNTAIN OPAL**, QUEEN, GLORY

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E11E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 36 54 N
LONGITUDE: 119 07 52 W
ELEVATION: Metres

NORTHING: 5498007
EASTING: 346059

LOCATION ACCURACY: Within 500M

COMMENTS: One of three opal localities (E&I Fieldwork 1996, B.N. Church, in prep.).

COMMODITIES: Opal Gemstones

MINERALS

SIGNIFICANT: Opal
ASSOCIATED: Quartz Chalcedony
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Hydrothermal
TYPE: Q11 Volcanic-hosted opal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Unnamed/Unknown Formation	

LITHOLOGY: Dacite
Andesite

HOSTROCK COMMENTS: Reinecke's (1915) Nipple Mountain Series.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage Okanagan

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Nipple Mountain Opal showing is located on Nipple Mountain, 35 kilometres southeast of Kelowna.

The showing occurs in the historic Beaverdell mining camp. The Beaverdell mining camp is centered on a number of silver, gold and copper prospects discovered in 1897 and a few rich veins of silver-lead ore mined from 1913 to 1991. In 1995, Don Sandberg of Kelowna discovered opal on the upper slopes of Nipple Mountain in the Eocene volcanic rocks underlying the Queen and Glory claims. The showing was visited by B.N. Church of the BC Geological Survey Branch in September, 1996.

Interest in opal occurrences in British Columbia has increased significantly since 1993 when the Klinker deposit was discovered near McGregor Creek northwest of Vernon. Similar smaller occurrences are known in the Kamloops, Salmon Arm, Spences Bridge, Keremeos and Kelowna areas (Read, 1995 and Church, 1996).

The volcanic rocks consist of dacite, andesite, trachyte and basalt lavas and breccias of the Eocene Penticton Group, probably equivalent to the Kettle River Formation. This is Reinecke's Nipple Mountain Series.

Don Sandberg initially discovered opal in a logging road cut in the area now covered by the Queen claims on the ridge extending north from Nipple Mountain, 1500 metres east of the Dale Creek road. Subsequently two other localities were found; one on a rock bluff 150 metres to the northwest of the road on the west slope of the ridge, and the other 400 metres to the east on the east side of ridge.

At the three localities opal occurs in flow banded dacite filling cavities in the bands, in brecciated structures, and on cross joints. The opal associated with banding is commonly 1 to 3 centimetres in diameter, almond shaped and roughly elongated in the direction of flow. The opal on cross-fractures includes translucent coatings a few millimetres thick, covering areas up to 0.5 square metres on the walls of the fissures. The largest opals occur on the east side of the ridge. Blocks of opal with rock inclusions weigh as much as 23 kilograms and opal fills breccia cavities several centimetres thick.

The opal is commonly waxy amber coloured but ranges to flesh,

CAPSULE GEOLOGY

peach, honey-hues and less commonly grey and rarely green. Some of the watery fissure-lining opal displays a weak play of colours.

In some instances white plume opal is associated with quartz and chalcedony that forms variegated horizontal or concentric bands on cavity floors or walls. The chalcedony is believed to form within gas cavities of volcanic host rocks when microcrystalline chalcedony fibres nucleate on vug walls and grow inward (O'Donoghue, 1983). Oscillatory zoning and iris banding, as seen in thin section, is the result of variations in silica concentrations in solutions at the tips of the growing chalcedonic fibers forming smooth and regular or botryoidal surfaces parallel to the banding (Heaney and Davis, 1995; Church, 1996).

The most probable source of the silica-rich solutions is the host Nipple Mountain dacite. Analyses of the rhyodacite shows marked excess silica based on norm calculations. For example, a fresh dacite sample from the Glory claims contains 74.06% SiO₂, 0.24% TiO₂, 14.13% Al₂O₃, 2.00% Fe₂O₃, 0.02% MnO, 0.49% MgO, 1.76% CaO, 3.65% Na₂O and 3.65% K₂O (major oxides recast to 100) that yields 34.3% free silica/quartz (CIPW norm). Thin sections reveal an estimated 7 per cent plagioclase phenocrysts, 1 per cent amphibole microlites and 1 per cent opaque minerals in a glassy and devitrified fine grained matrix, leaving a large amount of unaccounted (excess) silica. It is concluded that part of the excess silica, accompanied by fluids and gases, moved from the dacite lava to gas cavities and fracture openings, during the original magma cooling process, to form the opal, quartz and chalcedonic fillings.

BIBLIOGRAPHY

EM EXPLORATION 1995, pp. 123-130
EM FIELDWORK 1995, pp. 207-218; *1996 (B.N. Church, in prep.)
EMPR RGS 29
GSC MAP 1736A
GSC MEM 79

DATE CODED: 1996/11/01
DATE REVISED: 1996/11/01

CODED BY: BNC
REVISED BY: BNC

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082ENW111**

NATIONAL MINERAL INVENTORY:

NAME(S): **CANYON**, OKANAGAN GNEISS, RAINBOW GRANITE

STATUS: Producer Open Pit

MINING DIVISION: Vernon

REGIONS: British Columbia

NTS MAP: 082E14W

BC MAP:

LATITUDE: 49 49 13 N

LONGITUDE: 119 21 57 W

ELEVATION: 700 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Located near Klo Creek southeast East Kelowna.

UTM ZONE: 11 (NAD 83)

NORTHING: 5521334

EASTING: 329824

COMMODITIES: Dimension Stone

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive

CLASSIFICATION: Industrial Min.

TYPE: R03 Dimension stone - granite

R08 Flagstone

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE GROUP

Proterozoic

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Shuswap Metamorphic Complex

LITHOLOGY: Gneiss

Schist

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The area is underlain by gently dipping rocks of the Proterozoic Shuswap Terrane consisting of gneiss and schist.

Kettle Valley Stone Company produces decorative rock from the gneiss.

BIBLIOGRAPHY

EMPR EXPL 1995, pp. 131-133

EMPR OF 1994-8

EMPR RGS 29

GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;

7686G; 8511G

GSC OF 409; 637; 736; 1969

Roed M.A. (1995): Geology of the Kelowna Area and Origin of the

Okanagan Valley; Kelowna Geology Committee, 183 pages.

WWW <http://www.ldpetch.com/>

DATE CODED: 2000/07/27

DATE REVISED: 2000/07/27

CODED BY: GJP

REVISED BY: GJP

FIELD CHECK: Y

FIELD CHECK: N

MINFILE NUMBER: **082ENW112**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHADOW RIDGE** GEMINI

STATUS: Producer Open Pit

MINING DIVISION: Vernon

REGIONS: British Columbia

NTS MAP: 082E14W

BC MAP:

LATITUDE: 49 48 06 N

LONGITUDE: 119 02 10 W

ELEVATION: 1400 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Located 30 kilometres east of Kelowna.

UTM ZONE: 11 (NAD 83)

NORTHING: 5518568

EASTING: 353484

COMMODITIES: Dimension Stone

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive

CLASSIFICATION: Industrial Min.

TYPE: R INDUSTRIAL ROCKS

R08 Flagstone

R05 Dimension stone - andesite

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Miocene
Proterozoic

GROUP

Chilcotin

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Shuswap Metamorphic Complex

LITHOLOGY: Basalt

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Shadow Ridge area is underlain by rocks of Upper Proterozoic Shuswap Metamorphic Complex consisting of schist and gneiss, and volcanic and sedimentary rocks of the Eocene Penticton Group. The country rock is capped by massive, olivine-basalt of the Miocene and Pliocene Chilcotin Group.

Kettle Valley Stone Company produces multi-coloured decorative rock, ashlar and facing rock from Chilcotin columnar basalt.

BIBLIOGRAPHY

EMPR EXPL 1995, pp. 131-133

EMPR OF 1994-8

EMPR RGS 29

GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;

7686G; 8511G

GSC OF 409; 637; 736; 1969

Roed M.A. (1995): Geology of the Kelowna Area and Origin of the

Okanagan Valley; Kelowna Geology Committee, 183 pages.

WWW <http://www.ldpetch.com/>

DATE CODED: 2000/07/27
DATE REVISED: 2000/07/27

CODED BY: GJP
REVISED BY: GJP

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082ENW997**

NATIONAL MINERAL INVENTORY:

NAME(S): **DEMUTH**

MINING DIVISION: Osoyoos

STATUS: Anomaly
REGIONS: British Columbia
NTS MAP: 082E12W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 41 03 N
LONGITUDE: 119 59 27 W
ELEVATION: 1060 Metres

NORTHING: 5507811
EASTING: 284271

LOCATION ACCURACY: Within 500M

COMMENTS: Anomalous stream sediment sample (Assessment Report 7301).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Uranium is thought to be associated with magnetite and sphene in stream sediments.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Osprey Lake Intrusions

LITHOLOGY: Granite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The DEMUTH anomaly is located approximately 24 kilometres west-northwest of Summerland. The anomaly was previously included as MINFILE showing 082ENW072.

The area is underlain by granite and granodiorite of the Middle Jurassic Osprey Lake Intrusions.

Stream sediment sampling of drainages in this immediate area yielded values up to 0.093 per cent uranium (Assessment Report 7301). Subsequent soil sampling was not able to identify any area of uranium enrichment. It was concluded that the uranium in the stream sediments was associated with magnetite and sphene, and that the source was an undiscovered bedrock occurrence.

BIBLIOGRAPHY

EMPR ASS RPT *7301, 7964
EMPR EXPL 1979-44-45
EMPR OF 1990-32; 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8521G
GSC OF 409; 736; 1969

DATE CODED: 1987/03/23
DATE REVISED: 1995/10/05

CODED BY: LDJ
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW998**

NATIONAL MINERAL INVENTORY:

NAME(S): **IRON**, IRON HORSE, BILL

MINING DIVISION: Osoyoos

STATUS: Anomaly
REGIONS: British Columbia
NTS MAP: 082E13W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 51 50 N
LONGITUDE: 119 54 56 W
ELEVATION: 1460 Metres

NORTHING: 5527575
EASTING: 290477

LOCATION ACCURACY: Within 1 KM

COMMENTS: Centre of magnetic anomaly (Assessment Report 942).

COMMODITIES: Magnetite

MINERALS

SIGNIFICANT: Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Skarn
TYPE: K SKARN

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic Lower Jurassic	Nicola	Undefined Formation	Pennask Batholith

LITHOLOGY: Limestone
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Thompson Plateau

GRADE:

CAPSULE GEOLOGY

The IRON anomaly is located approximately 16 kilometres northwest of Peachland. The IRON anomaly was previously included as MINFILE 082ENW060.

Exploration work filed on this showing consists of a ground magnetometer survey carried out in 1967 for Tro-Buttle Explorations Ltd. The survey was able to define an anomaly at the south edge of the claim group.

The anomaly area contains a skarn in limestone of the Triassic-Jurassic Nicola Group, which has been intruded by granodiorite of the Early Jurassic Pennask Batholith. The geophysical discussion of the survey results suggests that the magnetic anomaly may be due to 1 to 4 per cent magnetite in the skarn.

BIBLIOGRAPHY

EMPR AR 1967-227
EMPR ASS RPT *942
EMPR OF 1994-8
EMPR P 1989-3, pp.38-40, pp.125-126
EMPR FIELDWORK 1987, pp.270-272
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8522G
GSC OF 409; 637; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/06

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ENW999**

NATIONAL MINERAL INVENTORY:

NAME(S): **REDCAP**, SUE, IDLEBACK

MINING DIVISION: Greenwood

STATUS: Anomaly
REGIONS: British Columbia
NTS MAP: 082E11W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 30 57 N
LONGITUDE: 119 17 40 W
ELEVATION: 1430 Metres

NORTHING: 5487331
EASTING: 333925

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of copper-zinc soil anomalies (Assessment Report 2173).

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary			Okanagan Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The REDCAP anomaly is centred approximately 750 metres north of Idleback Lake and 20 kilometres east of Penticton. The REDCAP was previously included as MINFILE showing 082ENW057.

The area is underlain by granodiorite of the Cretaceous-Tertiary Okanagan Batholith.

The anomaly consists of several copper and zinc soil anomalies discovered in 1969 by Cro-Mur Mines Ltd. A swampy area to the east drains the anomalous area, contains bog iron and is probably a gossan (Assessment Report 2173, Figure 5). In 1970, Cro-Mur Mines Ltd. embarked on a program which consisted of 7.2 kilometres of road construction, 140 metres of trenching and 4,600 square metres of stripping. No assessment reports were filed on this program.

BIBLIOGRAPHY

EMPR ASS RPT *2173
EMPR GEM 1970, P. 406
EMPR OF 1994-8
EMPR RGS 29
GSC MAP 538A; 15-1961; 1701A; 1712A; 1713A; 1714A; 1736A;
7686G; 8510G
GSC OF 409; 736; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1995/10/07

CODED BY: GSB
REVISED BY: JWP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE001**

NATIONAL MINERAL INVENTORY:

NAME(S): **PROVIDENCE (L.618)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 42 N
LONGITUDE: 118 40 04 W
ELEVATION: 933 Metres

NORTHING: 5441209
EASTING: 378290

LOCATION ACCURACY: Within 500M

COMMENTS: The Providence (Lot 618) mine is situated immediately north of Providence Creek, 2.5 kilometres north of the Greenwood post office. A short access road, along the north boundary of Greenwood municipality, connects the mine directly to Highway 3, located 0.5 kilometre to the west.

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite Tetrahedrite Argentite
 Proustite Silver Gold Pyrite

ASSOCIATED: Quartz Calcite

ALTERATION TYPE: Silicific'n

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Mesothermal Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: 370 x 1 Metres STRIKE/DIP: 050/50

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Paleozoic
Jurassic-Cretaceous
Tertiary

GROUP

Knob Hill

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Greenwood Pluton
Unnamed/Unknown Informal

LITHOLOGY:

Chert
Quartz Chlorite Schist
Alkalic Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Slide Mountain

METAMORPHIC TYPE: Regional

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Okanagan Highland

GRADE: Amphibolite

CAPSULE GEOLOGY

The Providence (Lot 618) mine is situated immediately north of Providence Creek, 2.5 kilometres north of the Greenwood post office. A short access road, along the north boundary of Greenwood municipality, connects the mine directly to Highway 3, located 0.5 kilometre to the west.

The Greenwood mining area is underlain by more than a dozen mappable units comprising a variety of sedimentary, volcanic, metamorphic and intrusive rocks that range from Paleozoic to Tertiary in age.

The Paleozoic age Knob Hill Group is the oldest of four major mutually unconformable bedded assemblages. These rocks consist of massive and banded metacherts and lesser amounts of quartz chlorite schist, some amphibolitic schists and gneisses, and a few marble bands. The rocks have been affected by deformation and metamorphism causing recrystallization and the development of foliation, quartz veins parallel to foliation and much deformation of individual beds. The Attwood Group is Permo-Carboniferous, according to much fossil evidence. The rocks consist mainly of black argillite, some sharpstone conglomerate beds, greywacke, limestone lenses and metavolcanic rocks units. The Brooklyn Group is Triassic age and commonly overlies Knob Hill rocks in 'valleys' eroded through the Attwood sequence. It is characterized by thick basal conglomerate, interfingering shales and limestones, and an upper sequence of volcanic breccias. Abundant chert clasts derived from the underlying Knob Hill formations characterize both the Attwood and Brooklyn sharpstone conglomerates. Both Attwood and Brooklyn rocks were affected by chlorite and amphibole grade regional metamorphism

CAPSULE GEOLOGY

and important tectonic movements. Locally this deformation resulted in the development of thrusts faults, tight recumbent and overturned folds. The Eocene Penticton Group is the youngest assemblage in the area. This group comprises the Kettle River Formation consisting mostly of arkosic sandstones, and the Marron Formation consisting of three volcanic members - the Yellow Lake mafic phonolites, the Nimpit Lake tan trachytes, and the Park Rill andesites. These rocks have been tilted by block faulting related to graben development.

The igneous intrusions range from ultramafic rocks to an assortment of granite to syenite and diorite plutonic rocks and related hypabyssal bodies. Ages range from Triassic to Tertiary. The oldest intrusions are heterogeneous hornblende diorites/gabbros locally referred to as the 'Old Diorite' unit. These rocks occur as numerous small, stock-like bodies that are associated with major faults scattered across the central part of the mining area. Partially digested xenoliths of Attwood sedimentary and volcanic rocks are common in the diorite, suggesting a late Paleozoic or early Mesozoic age. Clasts of this diorite are found in the Brooklyn sharpstone conglomerate, proving a pre-Middle Triassic age for this intrusive rock. Serpentinized ultramafic rocks are also widely distributed throughout the area. These rocks are often associated with the 'Old Diorite' unit. The serpentinite was emplaced as lenses and sill-like bodies, probably in semi-solid state, along unconformity surfaces and in major fault zones. The Greenwood and Wallace Creek plutons are the largest intrusions in the region. These biotite-hornblende granodiorite bodies are associated with many of the skarns and quartz veins in the area. Potassium/argon analyses of these rocks yield late Jurassic/early Cretaceous ages. Microdiorite intrusions are widely scattered across the area occurring as small stocks and feeder dikes to the Eocene age Park Rill andesite lavas and older Triassic andesitic assemblages. The Coryell intrusions are among the youngest igneous rocks in the area forming small stocks, dikes and sills on fault zones and unconformities feeding the Eocene age Marron volcanic rocks.

The Providence mine operated intermittently from 1893 to 1973, with the periods 1903 to 1920 and 1940 to 1945 being most productive. A total of 10,426 tonnes of ore has been mined, yielding 183 kilograms of gold, 42,552 kilograms of silver, 183 tonnes of lead, 118 tonnes of zinc and minor copper.

The mine workings consist of about 3000 metres of development on seven levels serviced by two main shafts. The old shaft (No. 1), located 140 metres north of Providence Creek, gives access to the upper four levels to a depth of about 70 metres. This in combination with a winze on the fourth level services the lower levels. Shaft No. 2 is 100 metres north of Providence Creek and 140 metres southwest of No. 1. Drifts from both shafts join on the third and fourth levels. Shaft No. 3, located 45 metres north of No. 1, is an inclined exploratory working about 25 metres deep.

The Providence claim is almost entirely underlain at surface by greenish grey quartz chlorite schists of the Knob Hill Group at the northern boundary of the Greenwood granodiorite stock. The schists dip 30 to 70 degrees northeast and are cut by a northeast-trending Tertiary Coryell-related feldspar porphyry dike, which is exposed between the two main shafts. The granodiorite is encountered in the southwest part of the mine below the fifth level.

The workings mostly follow ore shoots within a narrow quartz vein. The ore minerals consist of pyrite, galena, sphalerite, chalcopyrite, tetrahedrite, proustite, native silver and free gold, in quartz carbonate gangue.

The vein strikes 050 degrees and dips 40 to 60 degrees southeast. It has been traced underground for more than 370 metres, and ranges from a fraction of a centimetre to 0.75 metre in width. Unbroken quartz rarely extends from wall to wall, and more commonly strands of quartz are separated by thin, lenticular bands of altered country rock. The vein is irregular in size and attitude on the lower levels. In a few places these changes can be correlated with the passage of the vein from one rock to another. Thus, in the northeast part of the fourth level the vein pinches to a gouge-filled fissure on passing from the relatively hard silicified rocks to soft chloritic schists. On the No. 5 level the vein appears to be more persistent in the silicified rocks than in the granodiorite.

Faults of at least two ages displace the mineral bearing fissure. The older group, which is pre-mineral in age, strikes north 30 to 50 degrees east and dips gently northwest. Local dip reversals were seen along several low angle faults, and rolls in the fault plane were noted in every case where an individual fault could be traced for any distance. In each case the hanging wall has moved down with reference to the footwall, thus indicating

CAPSULE GEOLOGY

normal faulting. Offsets along these faults range from 1 to 24 metres. The maximum offset was measured along a fault that is now occupied by a post-mineral feldspar porphyry dike.

Veins are, in places, slightly enlarged where they intersect these pre-mineral faults; at other places narrow quartz stringers may follow the fault plane. The younger group of faults strikes north 30 degrees west to north 10 degrees east and dips at high angles. Displacements along these faults are small. They are post mineral and offset the vein as well as the older group of faults.

There are no known published ore reserves for this mine.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1893-1077; 1894-755, map after 758; 1896-563; 1897-588;
1903-166,170,171; 1904-213,219; 1905-179,183; 1906-158;
1907-109,215; 1917-213; 1918-210; 1919-166,174; 1920-156;
1921-182,188; 1924-167; 1925-197,367; 1926-213; 1927-237;
1928-248; 1929-257; 1930-224; 1934-D6; 1935-A25,D3,G2; 1937-A42,
D34; 1938-A34,D39; 1939-37,91; 1940-A77; 1941-25,73; 1942-26,68;
1943-67; 1944-40,63; 1945-43,96; 1946-35,134; 1950-118; 1951-41,
133; 1952-41,140; 1953-109; 1954-119; 1955-45; 1956-A48;
1957-A44; 1958-A44; 1960-A53; 1961-A47; 1973-A52
EMPR ASS RPT 12815
EMPR BC METAL MM00911
EMPR BULL 1 (1932), pp. 84-85; 20, III-13
EMPR GEM 1973-41
EMPR INDEX 3-209; 4-124
EMPR MR MAP 6 (1932)
EMPR OF 1990-25, 1998-10
EMPR P *1986-2, pp. 50-51, 52
EMPR PF (McArthur, W.E. (1974): Letter)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957, 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P *45-20, pp. 20-22; 67-42; 79-29
GSC SUM RPT 1902A-127-128

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE002**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELKHORN (L.818)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 36 N
LONGITUDE: 118 40 28 W
ELEVATION: 800 Metres

NORTHING: 5441034
EASTING: 377799

LOCATION ACCURACY: Within 500M

COMMENTS: The Elkhorn (L.818) mine is centred on Highway 3 near the north boundary of Greenwood municipality.

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite Tetrahedrite Proustite
Silver Gold Argentite Pyrite

ASSOCIATED: Quartz

ALTERATION TYPE: Silicific'n

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Tension fracture near contact with granodiorite body.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	Greenwood Pluton
Jurassic-Cretaceous			Unnamed/Unknown Informal
Tertiary			

LITHOLOGY: Schist
Chert
Argillite
Granodiorite
Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Elkhorn (Lot 818) mine is centred on Highway 3 near the north boundary of Greenwood municipality. See Providence (082ESE001) for a detailed regional geology.

Production from this property has been episodic in the period 1905 to 1947 and has never exceeded 30 tonnes per year. Total recorded mine output amounts to 179 tonnes of ore which yielded 5.2 kilograms of gold, 456.5 kilograms of silver, 8.2 tonnes of lead, and 1.7 tonnes of zinc.

The mine workings consist of an inclined shaft 80 metres deep servicing a level at the bottom, and an upper level at about 20 metres depth. The shaft is also connected to an intermediate adit level at 34 metres depth. The underground workings follow a narrow quartz vein, dipping 45 to 65 degrees southeast, hosted by silicified Knob Hill schists (Paleozoic) outcropping near the north contact of the Greenwood granodiorite stock (Jurassic-Cretaceous).

The ore minerals consist of pyrite, galena, sphalerite and minor amounts of tetrahedrite and proustite. Some native silver has been reported in the stopes above the adit level.

The vein is cut by several faults that strike north 30 to 50 degrees east and dip at low angles to the northwest. The hanging wall in each case moved down with reference to the footwall. Offsets along these faults range from a few metres to 9 metres. On the 34-metre adit level, the vein is cut by two post-mineral feldspar porphyry dikes, and has not been located beyond the dike that is exposed 41 metres northeast of the inclined shaft. The other dike, which is exposed in the level at the inclined shaft, has not offset the vein.

No ore reserves are available for this property.

BIBLIOGRAPHY

EMPR AR 1894-map after 758; 1897-588; 1902-181; 1903-167,170;
1904-213,219; 1905-180,183; 1906-159,250; 1907-109,214; 1911-285;
1912-167,323; 1914-167; 1917-203,449; 1925-197; *1926-214;
1927-237;
1928-250; 1935-A25,G52; 1937-A36,D31; 1939-36; 1944-63; 1947-156;
1953-110
EMPR ASS RPT 12815
EMPR OF 1990-25
EMPR P *1986-2, p. 35
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
EMPR BC METAL MM00846
EMPR BULL 1 (1932)
EMPR INDEX 3-195
GSC OF 481; 637; 1969
GSC P *45-20, p. 18; 67-42; 79-29
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: GNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE003**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAKE (L.765)**, SKYLARK CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 42 N
LONGITUDE: 118 39 06 W
ELEVATION: 1100 Metres

NORTHING: 5439330
EASTING: 379425

LOCATION ACCURACY: Within 500M

COMMENTS: The Lake occurrence is located 1.5 kilometres east of Greenwood, immediately north of Last Chance (L.753) (082ESE216).

COMMODITIES: Silver Gold

MINERALS

SIGNIFICANT: Pyrite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Fissure fillings.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Lake occurrence is located 1.5 kilometres east of Greenwood, immediately north of Last Chance (Lot 753) (082ESE216).
The Lake claim was Crown Granted to W.A. Corbett in 1898. Veins with gold and silver values occur in greenstones of the Upper Paleozoic Knob Hill Group.

BIBLIOGRAPHY

EMPR AR 1894-map after 758, 1898-1124,1195, 1901-1057, 1903-168
EMPR ASS RPT 12815
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC OF 481; 1969
GSC P 67-42; 79-29
GSC MAP 828; 45-20A, 828; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/03/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE004**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDFINCH (L.820)**, GOLD FINCH

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Open Pit Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 10 N
LONGITUDE: 118 39 59 W
ELEVATION: 914 Metres

NORTHING: 5438366
EASTING: 378329

LOCATION ACCURACY: Within 500M

COMMENTS: The Goldfinch claim is 0.7 kilometre east of the post office at Greenwood. Access to the claim is from the 'E.P.U.' claim (082ESE006) which lies immediately to the east and a spur road on the west which branches from the Lind Valley road.

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Silver Gold Tetrahedrite
 Arsenopyrite Pyrrhotite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	
Jurassic-Cretaceous			Greenwood Pluton

LITHOLOGY: Granodiorite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Goldfinch claim is centred at an elevation of 914 metres, 0.7 kilometre east of the post office at Greenwood. Access to the claim is from the 'E.P.U.' claim (082ESE006) which lies immediately to the east and a spur road on the west which branches from the Lind Valley road.

Intermittent production from Goldfinch from 1902 to 1944 was 299 tonnes of ore, resulting in 18 kilograms of gold, 88 kilograms of silver, 8 tonnes of lead and 2 tonnes of zinc.

Mining began on the Goldfinch claim in 1902 and by 1903 the workings consisted of a shaft 30 metres deep and about 30 metres of drifting plus some stope development. Target of these operations was a quartz vein in the east margin of the Jurassic-Cretaceous Greenwood granodiorite stock. This activity continued for several more years then lay dormant. In 1940 the property was reactivated with the installation of a small mining plant. Development work in 1943 and 1944 included 634 metres of open-cutting, 38 metres of drifting in the main tunnel and some raising. Small tonnages of ore were obtained in 1940, 1941 and 1944 prior to final closing of the mine.

No ore reserves have been reported.

BIBLIOGRAPHY

EMPR AR 1902-181; 1903-167,170,247; 1904-213,219; 1905-181; 1906-159; 1940-24,77; 1941-25,61; 1943-67; 1944-40,63
EMPR BC METAL MM00948 (includes other claims)
EMPR BULL 101, p. 212, Appendix 6
EMPR INDEX 3-197
EMPR *P 1986-2, p. 36
EMPR OF 1990-25
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 374
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 481; 637; 1969
GSC P 45-20; 67-42; 79-29
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/16

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE005**

NATIONAL MINERAL INVENTORY:

NAME(S): **BAY**, BAY FR. (L.3285), BAY FRACTION

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 05 12 N
LONGITUDE: 118 39 16 W
ELEVATION: 1021 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5438408
EASTING: 379202

LOCATION ACCURACY: Within 500M

COMMENTS: The Bay mine is 1.5 kilometres east of Greenwood. Access to the mine is from a short side road which joins the main road to Phoenix, 0.4 kilometre to the northwest of the Bay claim.

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite Petzite
Gold

ASSOCIATED: Quartz

ALTERATION: Chlorite Carbonate

ALTERATION TYPE: Propylitic Chloritic Carbonate

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Mesothermal Epigenetic

TYPE: I01 Au-quartz veins

DIMENSION: 150 x 1 Metres

COMMENTS: Fissure filling.

105 Polymetallic veins Ag-Pb-Zn±Au

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous Greenwood Pluton

LITHOLOGY: Granodiorite
Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Bay mine is 1.5 kilometres east of Greenwood, at an elevation of 1021 metres. Access to the mine is from a short side road which joins the main road to Phoenix, 0.4 kilometre to the northwest of the Bay claim.

Production from this claim in the period 1904 to 1941 totals 17 kilograms of gold and 14 kilograms of silver from 447 tonnes of ore mined. More than half of the mining was completed in 1935. Exploration continued on the property until 1946.

Underground development consists of two inclined shafts and about 60 metres of drifting. Evidence of the intensity of surface exploration in past years is indicated by the numerous trenches.

The claim is underlain by part of the Greenwood granodiorite pluton (Jurassic-Cretaceous) and fine grained dark coloured Tertiary dikes. The granodiorite is a mesocratic medium-grained rock with shearing and some propylitic alteration adjacent to the mineral bearing fractures.

The deposit comprises a single quartz vein dipping 35 to 50 degrees east. The vein varies from several centimetres to a metre in width and can be traced for a strike length of 150 metres in the surface workings. North of the shafts, the vein is well delineated. Elsewhere it consists of braided quartz veinlets enveloping lenses of mineralized country rock. Pyrite, galena, sphalerite, chalcopyrite, petzite, and free gold comprise the ore minerals in the quartz-carbonate gangue. Finely crystalline petzite with well defined cubic cleavage has been mistaken for galena in the Bay vein, but may be distinguished by its lighter colour, finer grain, and common association with free gold. Pyrite and an occasional small flake of free gold are found in the altered granodiorite adjacent to the vein fissures. High grade ore shoots are characterized by minutely fractured vitreous quartz of greenish blue cast, by the presence of finely crystalline petzite, and by the absence of

CAPSULE GEOLOGY

coarsely crystalline galena and sphalerite.

The main ore production has come from the south shaft. This was sunk to a depth of 20 metres following, at first, the hangingwall, and then, footwall of the vein. In an attempt to locate a faulted segment of the vein, a raise was driven to surface from a 12-metre long tunnel connected on the east to the bottom of the shaft. The north shaft was sunk to a depth of 30 metres and yielded only a small amount of high grade ore. An important southeasterly dipping fault, located between the shafts, cuts and displaces the vein.

Other faults cut the vein but do not displace it more than a metre. Broken fragments of vein material in the breccia zones and free gold in fault gouge indicate that there has been some post mineral movement along most of the cross faults. Shearing parallel with or at an acute angle to the walls of the vein, and along thin septa of altered country rock in the vein, fractured the quartz along closely spaced parallel planes before the close of mineralization. These fracture planes served as channelways for later mineralizing solutions and are now occupied in some places by thin seams of metallic minerals, chlorite, and carbonate, giving the vein a distinctive banded appearance known as ribbon structure.

There are no known published ore reserves for this mine.

BIBLIOGRAPHY

- EMPR PF (Galloway (1927): GREENWOOD AREA)
- EMPR AR 1904-219; 1905-181,183; 1906-159; 1907-109,214; 1913-141; 1922-174; 1934-A25; 1935-A25,D10,G52; 1936-D55; 1937-A36,D31; 1941-24; 1946-135
- EMPR BULL 1 (1932), p. 84-84
- EMPR BC METAL MM00820
- EMPR INDEX 3-189
- EMPR OF 1990-25
- EMPR P *1986-2, pp. 29-31
- EMPR MR MAP 6 (1932)
- EMPR PRELIM MAP 59
- EMPR AEROMAG MAP 8497G
- GSC P *45-20, pp. 16-17; 67-42; 79-29
- GSC OF 481; 637; 1969
- GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/15

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE006**

NATIONAL MINERAL INVENTORY:

NAME(S): **EPU**, E PLURIBUS UNUM (L.3253), E.P.U.

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 05 06 N
LONGITUDE: 118 39 40 W
ELEVATION: 1100 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5438234
EASTING: 378711

LOCATION ACCURACY: Within 500M

COMMENTS: The 'E.P.U.' claim (E Pluribus Unum (Lot 3253)) is 1.2 kilometres east of Greenwood. Access is via the Bay mine (082FSE005) which adjoins to the east.

COMMODITIES: Silver

Gold

Lead

Zinc

MINERALS

SIGNIFICANT: Arsenopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Jurassic-Cretaceous

Greenwood Pluton

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The 'E.P.U.' claim (E Pluribus Unum (lot 3253)) is 1.2 kilometres east of Greenwood at the elevation of 991 metres. Access is via the Bay mine (082ESE005) which adjoins to the east.

Production from the 'E.P.U.', in the period 1903 to 1905 and in 1915 and 1947, totals 571 tonnes of ore which yielded 44.6 kilograms of gold, 229.5 kilograms of silver, 7.6 tonnes of lead, and 1.1 tonnes of zinc. Approximately one half of this production was achieved in 1905.

By 1913 a gold bearing quartz vein, 15 to 30 centimetres wide, had been developed by a shaft 60 metres deep and shipments of ore, aggregating several thousand dollars, had from time to time been made. The bottom of the shaft shows a strong vein, but the values are quite low. At this point it was decided to run a crosscut tunnel to tap the vein at depth. At the time, the property possessed a hoist, pump, and steam drill capable of sinking at least 120 metres. Capital for the driving of the tunnel was supplied by a complicated share system, partly cash and partly work. The tunnel was first driven about 70 feet in a direction nearly parallel to the vein; then, from a point about halfway in the tunnel, another crosscut was started at an angle of about 35 degrees to the former; the tunnel then twists and turns. The vein, as exposed at surface, is in granite, while the tunnel, which is 520 metres long is entirely in metamorphic rocks. A few felsic dikes, probably apophyses from the main body of the granite, are seen in the tunnel.

The last production from 'E.P.U.' was in 1947. Restoration of 60 metres of collapsed tunnels at this time allowed mining of a faulted remnant of the vein below the bottom level.

There are no ore reserve estimates available for this property.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1902-181; 1903-167; 1904-212,213,219; 1905-255; 1906-159;
1913-141; 1914-334; 1915-201,446; 1925-197; 1926-447; 1928-248;
1946-134; 1947-156
EMPR BC METAL MM00849
EMPR BULL 1-84

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 378
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR INDEX 3-194
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2, pp. 34-35
EMPR PF (GREENWOOD AREA, GALLOWAY, 1927)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE007**

NATIONAL MINERAL INVENTORY:

NAME(S): **BARBARA (L.817), HELEN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 00 N
LONGITUDE: 118 40 16 W
ELEVATION: 1000 Metres

NORTHING: 5438064
EASTING: 377977

LOCATION ACCURACY: Within 500M

COMMENTS: The Barbara occurrence is located at the southeast boundary of the municipality of Greenwood. See also Helen (082ESE010).

COMMODITIES: Copper Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Chalcopyrite Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Mesothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	
Jurassic-Cretaceous			Greenwood Pluton

LITHOLOGY: Granodiorite
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Barbara (Lot 817) is underlain by granodiorite of the Greenwood Pluton and greenstone of the Upper Paleozoic Knob Hill Group. A quartz vein, striking north-south, dipping 50 degrees east and varying in width from 2.5 to 60 centimetres, carries galena, chalcopyrite, sphalerite and pyrite associated with gold and silver values.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1899-848; 1903-167; 1904-212,219; 1906-250; 1913-141;
1922-173;
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (GREENWOOD AREA, GALLOWAY, 1927)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
1928-248
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE008**

NATIONAL MINERAL INVENTORY:

NAME(S): **DYNAMO (L.2087)**, STARVEOUT (L.2944), MAYFLOWER,
MAMONT (L.879), HAMILTON

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 04 48 N
LONGITUDE: 118 40 10 W
ELEVATION: 1100 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5437691
EASTING: 378091

LOCATION ACCURACY: Within 500M

COMMENTS: The Dynamo claim is centred on the transmission line midway between Twin Creek and Lind Creek, 1 kilometre southeast of the post office at Greenwood. The Starveout and Mamont claims lie immediately to the west of Dynamo. The Lind Valley road provides ready access to the property.

COMMODITIES: Silver Lead Gold Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Mesothermal Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Paleozoic
Jurassic-Cretaceous

GROUP

Knob Hill

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Greenwood Pluton

LITHOLOGY:

Chert
Serpentinite
Granodiorite
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Dynamo (Lot 2087) claim is centred on the transmission line midway between Twin Creek and Lind Creek, 1 kilometre southeast of the post office at Greenwood. The Starveout (Lot 2944) and Mamont (Lot 879) claims lie immediately to the west of Dynamo. The Lind Valley road provides ready access to the property.

Production from this property in the period 1914 to 1955 totals 385 tonnes of ore which yielded 3 grams per tonne of gold; 59 grams per tonne of silver; 27.8 tonnes of lead; and 7.3 tonnes of zinc. In the early years of production, from 1914 to 1942, the ore (201 tonnes) was mined principally from the Dynamo claim. More recently, until 1955, Mamont supplied most of the ore.

This property consists of numerous open cuts and underground development comprising four adit tunnels, ranging 30 to 500 metres in length, and several shafts 3 to 30 metres deep.

The property straddles the southern contact of the Greenwood stock (Cretaceous Nelson Intrusions?). The mine workings follow five broken quartz filled gash fractures, 5 centimetres to 1-metre wide, developed in granodiorite, metamorphosed Upper Paleozoic Knob Hill rocks and serpentinite. The ore minerals consist of pyrite, galena, sphalerite and a minor amount of chalcopyrite.

There are no ore reserves quoted for this property.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1899-849; 1901-1229; 1903-167; 1905-181,255; 1906-159; 1914-511; 1922-174; 1925-197; 1927-235; 1931 - ; 1932-25,129; 1933-161; 1934-D7; 1936-D56; 1938-A34; 1947-156; 1948-127; 1949-149; 1950-118; 1951-51,134; 1952-140; 1953-110; 1955-A47
EMPR BC METAL MM00845

BIBLIOGRAPHY

EMPR INDEX 3-194; 4-121
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (McDougall, B.W.W. (1926): The D.A. Group of Mineral Claims
and the Dynamo Mineral Claim, Deadwood and Skylark Camp)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P *45-20, pp. 17-18; 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE009**

NATIONAL MINERAL INVENTORY:

NAME(S): **ARGO**, MAMONT (L.879)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 48 N
LONGITUDE: 118 40 40 W
ELEVATION: 867 Metres

NORTHING: 5437705
EASTING: 377482

LOCATION ACCURACY: Within 500M

COMMENTS: The Argo occurrence is located within several kilometres of Greenwood.

COMMODITIES: Copper Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Galena Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Paleozoic
Jurassic-Cretaceous

GROUP

Knob Hill

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Greenwood Pluton

LITHOLOGY: Granodiorite
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Argo is underlain by granodiorite of the Greenwood Pluton and greenstone of the Upper Paleozoic Knob Hill Group. Quartz veins, varying from 5 to 90 centimetres wide, striking about 25 degrees northeast, occur in the rocks. Low grade copper ore was found in the Argo tunnel, but was not mined at that time. Pyrite, galena, sphalerite and chalcopyrite are associated with gold and silver.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1909-130; 1910-121; 1912-167; 1913-141,163; 1914-334;
1916-253; 1917-213; 1928-248
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE010**

NATIONAL MINERAL INVENTORY:

NAME(S): **HELEN (L.691)**, CAPITAL PRIZE (L.914), MAPLE LEAF (L.1484),
MAPLE LEAF FRACTION (L.2040), SKYLARK CAMP, BARBARA

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 04 42 N
LONGITUDE: 118 40 46 W

UTM ZONE: 11 (NAD 83)
NORTHING: 5437522
EASTING: 377356

ELEVATION: 833 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The Helen occurrence is located within several kilometres of
Greenwood. See also Barbara (082ESE007).

COMMODITIES: Silver

Gold

Copper

Lead

Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Mesothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Paleozoic

GROUP

Knob Hill

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Helen occurrence is underlain by highly metamorphosed greenstones and quartzites of the Upper Paleozoic Knob Hill Group. A quartz vein, striking west and dipping 60 degrees south, varying from a fraction of a centimetre to 60 centimetres wide, occurs along a well defined fissure in the metasediments. Pyrite, galena, sphalerite and possibly tetrahedrite are associated.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-756; 1901-1230; 1902-181; 1903-167,170; 1904-213,219;
1905-180,183; 1906-250; 1907-219; 1920-350; 1921-184,347; 1922-174;
1925-197,445; 1934-D6; 1940-24
EMPR BC METAL MM00866
EMPR BULL 1-84
EMPR INDEX 3-199
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (GREENWOOD AREA, GALLOWAY, 1927)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

metres. Access is 1.8 kilometres easterly by winding dirt road from the main Greenwood to Phoenix road.

The Greenwood-Grand Forks area contains Late Paleozoic and Mesozoic volcanic and sedimentary rocks, mainly in the greenschist facies of regional metamorphism, which are intruded by Mesozoic plutons and unconformably overlain by Tertiary volcanoclastic and flow rocks. The pre-Tertiary stratiform rocks are contained in a series of five, north dipping thrust slices with bounding faults, which at many places are marked by layers and lenses of deformed serpentinite. These thrust slices lie above high grade metamorphic complexes.

The Late Paleozoic rocks in the Greenwood area are the Knob Hill Group of chert, greenstone and related diorite and serpentinite, and the Attwood Group of dark grey argillite, limestone and minor volcanic rocks. They are unconformably overlain by the Brooklyn Formation of clastic sedimentary rocks, limestone and largely submarine pyroclastic breccias and related dioritic intrusions. These rocks probably formed in an environment of growth faulting and explosive volcanism (Open File 1990-25).

The distribution of the Tertiary rocks is controlled by a complicated array of extension faults. Three sets are recognized. The oldest are gently east dipping, at or near the base of the Tertiary. Later, dominantly west dipping listric normal faults have caused rotation so that the Tertiary strata dip to the east at moderate angles. The apparent offset on each of the five of these faults is measured in kilometres. The third and latest faults are north to northeast trending, steeply dipping, strongly hinged and influenced by the earlier faults.

The Skylark property is underlain by a sequence of northwest trending volcanic and sedimentary rocks of the Carboniferous or Permian Attwood Group which are intruded to the west by granodiorite of the Cretaceous Greenwood stock (Nelson Intrusions). The predominant rock type is argillite which strikes northwest and dips 35 degrees northeast. A sequence of andesitic volcanic rocks is found to be overlain by the argillite which in turn is overlain by bedded chert. The Skylark mine is located on a quartz vein in argillite near the east boundary of the Greenwood stock. The Skylark vein strikes approximately 020 degrees and dips 52 degrees east. It has been traced for over 200 metres by surface and underground workings. In the old stopes, the maximum reported width of the vein was 0.76 metre.

The Skylark claim was staked in 1893 by S. Bloyer and mined in the early years with some good results. The Skylark (Lot 763) and Denver (Lot 764) claims were Crown granted to G. Lavagnino in 1898. The focus of interest on the Skylark claim is a mineralized quartz-carbonate vein in argillite and greenstone units of the Attwood Group. The vein, has been worked mainly from 2 inclined shafts, dips 52 degrees southeast, averages 15 to 20 centimetres wide, and has a strike length of about 200 metres. The deeper shaft, which was completed in 1906, is 60 metres deep, plunges about 55 degrees to the east, and follows the vein to a depth of 24 metres where it is displaced easterly about 9 metres by a flat-lying fault. The vein was picked up again by a crosscut, and a winze was sunk on it to a depth of about 10 metres. On the 24-metre level of the mine a drift was run on the vein for about 75 metres following a north-south structure. The ore readily breaks free from the wallrocks and is easily mined.

Mining on the Skylark claim in the period 1893 to 1940 was intermittent, with the greatest production attained from 1905 to 1907, and 1915 (Skylark Development Company Limited), and in 1935 (W. McArthur). Total ore shipped for this period amounted to 1866 tonnes having 5282 kilograms of silver, 22.5 kilograms of gold, 25.8 tonnes of lead, and 4.8 tonnes of zinc. Recent production in 1988 and 1989 (Skylark Resources Ltd.) added an additional 33,298 tonnes, with recoveries of 11,751 kilograms of silver, 90 kilograms of gold, 9536 kilograms of copper, 107,538 kilograms of lead and 43,608 kilograms of zinc.

The values commonly occur as 'pay streaks' near the hanging and footwalls. The pay streak near the hanging wall is generally larger. Widths on it average 15 to 20 centimetres but a width of 38 centimetres is reported at one point. The mineralization has been described variously as fine grained steel grey galena accompanied by tetrahedrite and ruby silver; solid arsenopyrite with fine grained galena and sphalerite; and pyrite, silver bearing stibnite and native silver. The ore is easily mined and readily breaks free from the wall rocks. The vein occurs in a zone of intense silicification and carbonatization.

In 1980, the mine was reactivated and the Skylark vein was worked along strike for 150 metres and stoped down dip for 60

CAPSULE GEOLOGY

metres.

The H zone (Billy Fraction, Lot 999), discovered in 1984, is hosted by an andesite dike system intrusive into granodiorite along north trending fractures. This is likely a segment of the vein faulted from the south end of the earlier mine workings. The orebody itself is contained in a fault within an andesite dike. The fracture/fault structure strikes 040 degrees and dips 50 degrees to the southeast. Mineralization consists of fine-grained, banded sulphides with a variable quartz content (10-40 per cent). The vein matter varies from 2.5 to 60 centimetres in width but averages 10 centimetres. Sulphide mineralization consists of pyrite, hematite, sphalerite, galena, chalcopyrite, pyrargyrite, proustite and native silver. Locally both hanging wall and footwalls display fault breccia and gouge. Many subparallel faults have caused the ore zone to pinch, swell and locally be sheared. Measured reserves in 1986 for the H zone were 77,103 tonnes grading 685.6 grams per tonne silver and 2.74 grams per tonne gold (Assessment Report 15731).

The Serp zone occurs below the southwest part of the H zone and cuts the main shear structure at an oblique angle. The Serp zone is identified by the presence of serpentine, chlorite, carbonate and talc. This serpentinite is an erratic non-planar zone of variable thickness and orientation, with an indicated trend of 330 degrees that dips approximately 35 degrees east. The Serp zone is found intercalated with andesitic volcanic rocks that are within the granodiorite. The Serp zone contains variable high gold and silver values associated for the most part with narrow (1-6 centimetre) pyrite veinlets; native gold is also observed.

In 1986, a decline ramp was driven to the H zone and drifting and raising carried out. The decline was extended to 458 metres in 1987 and a drift driven to the Serp zone. Production from the H zone began December 7, 1987 at 90 tonnes per day, the ore being shipped to the Robert Mines Ltd. mill some 4 kilometres south of Greenwood. Mining operations ceased in early 1989. During this period, total production was increased by 33,298 tonnes, with recoveries of 11,751 kilograms of silver, 90 kilograms of gold, 9536 kilograms of copper, 107,538 kilograms of lead, and 43,608

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
- EMPR AR 1893-1077; 1894-755, map after 758; 1895-702,703; 1896-577;
*1897-591; 1898-1196; 1902-180,181; 1903-167,168; 1904-212;
1905-180,183; 1906-158,250,253; 1907-109,215; 1908-251;
1915-201,446; 1917-449; 1919-174; 1920-156; 1934-D8; 1935-G52;
1936-D57; 1940-A24; 1964-171
- EMPR ASS RPT 542, 1819, 5181, 5925, 6694, 6958, 8396, 8745, 11757,
*15731
- EMPR BC METAL *MM00042, MM00948
- EMPR ENG INSP Annual Report 1990
- EMPR EXPL 1979-16; 1980-19; 1983-15
- EMPR FIELDWORK 1984, pp. 17-21
- EMPR GEM 1969-306; 1974-33,34; 1976-E20,E21
- EMPR MAP 59; 65
- EMPR MIN STATS 1990, pp. 25,29,68,69
- EMPR MINING 1988, Vol. 1, p. 47
- EMPR MR MAP 6 (1932)
- EMPR OF *1990-25; 1992-1; 1998-10
- EMPR P 1986-2, pp. 57-58
- EMPR PF (McDougall, 1926; Plan showing claims, 1985; Skylark Resources Ltd. News Release)
- EMPR PRELIM MAP 59
- EMR MP CORPFILE (Spokane and Great Northern Mining Company; Greenwood Explorations Ltd.; Skylark Resources Ltd.)
- GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
- GSC MEM 21; 38
- GSC OF 481; 637; 1969
- GSC P 45-20A; 67-42; 79-29
- CMH 1988-89
- GCNL #144,#153,#200,#206,#230,1984;#67,#71,#75,#77,#85,#133,#146,#148,
#150,#156,#172,#180,#191,#211,1985; #11,#13,#59,#64,#113,#126,#148,
#189,#126,#113,#118,1986; #206 (Oct.27),#15(Jan.22),#67(Apr.6),
#83(Apr.30),#185,#206(Oct.27),#211,#247,1987
- IPDM Nov. 1985
- N MINER Nov.1, 1984; Mar.7, May 16, July 18, Aug.29, Sept.23, 1985;
Apr.14, Aug.18, Oct.13, 1986
- V STOCKWATCH Sept.1,18,29, Oct.21, 1987

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE012**

NATIONAL MINERAL INVENTORY:

NAME(S): **CRESCENT (L.1711)**, CRESCENT FRACTION

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 06 N
LONGITUDE: 118 39 10 W
ELEVATION: 1280 Metres

NORTHING: 5440073
EASTING: 379360

LOCATION ACCURACY: Within 500M

COMMENTS: The Crescent claim is 2.7 kilometres northeast of the centre of Greenwood. Access is on a side road which connects the Phoenix road to the old railway grade on Montezuma Ridge.

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Permian

GROUP

Attwood

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Crescent claim is 2.7 kilometres northeast of the centre of Greenwood at the elevation of 1280 metres (4200 feet). Access is on a side road which connects the Phoenix road to the old railway grade on Montezuma Ridge.

Production from this claim was intermittent from 1905 to 1959 with the greatest tonnage recorded in 1905 and 1908. The total mine output was 250 tonnes which carried 1.9 grams per tonne gold; 453.8 grams per tonne silver; 3 tonnes of lead; and 3.5 tonnes of zinc.

The mine development consists of a shaft and adit (now mostly collapsed) on a narrow quartz vein.

The vein strikes 020 degrees and stands vertically. It consists of 15 centimetres of quartz mineralized with galena, sphalerite (zinc blende) and tetrahedrite (grey copper). Near the vein the country rock has the appearance of an iron cap owing to the oxidation of original pyrite. A sample of this cap assayed traces of gold and silver. A sample across the vein assayed 8.2 grams per tonne gold; 204 grams per tonne silver and 0.2 per cent lead. The sorted ore reportedly assayed 3806 grams per tonne (111 ounces per ton) silver.

The host rocks on the Crescent claim are mostly dark grey argillite and some conglomerate of the Attwood Group accompanied by a minor amount of serpentinite and old diorite.

No ore reserve data is available for this property.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1896-582; 1900-990; 1903-168; 1905-180,183; 1906-159;
1908-114,248; 1909-130,132; 1913-141; 1919-174; 1920-156;
1923-184; 1925-197; 1926-213; 1935-A25,D10; 1938-A34,D37;
1940-23,77; 1941-24; 1959-A46
EMPR BC METAL MM00842
EMPR INDEX 3-193; 4-120
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2, p. 33

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 388
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR PF (GREENWOOD AREA, GALLOWAY, 1927)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

exposed by the Brooklyn 'glory hole'. The sharpstone beds lie to the east and the limestone to the west. The floor is mainly limestone with some sharpstone conglomerate in the southern part. The length is about 564 metres, and the width varies from about 122 metres in the south to less than 15 metres in the extreme north.

The Brooklyn mine, at the north end of the mineralized zone, was developed from two glory holes at surface and a number of underground stopes serviced by a 130-metre inclined shaft with working levels at 24, 46, 76, 91, and 106 metres. The total recorded ore production is 258,290 tonnes, which includes the two main periods of operation from 1900 to 1908 and 1937 to 1940.

The Idaho mine, at the south end of the mineralized zone, includes an inclined shaft and two levels, the deepest of which connects with the 76-metre level of the Brooklyn mine. A total of approximately 2300 metres of tunnelling was completed at the Brooklyn and Idaho mines by the first closing of operations in 1908.

The Brooklyn and Idaho claims were staked in 1891 by J. Taylor, D. McLaren, and associates and Crown-granted in 1898 and 1899, respectively. The Dominion Copper Company, Limited began development work in May 1899. By 1906, the workings included 3 shafts and about 2.4 kilometres of drifts and crosscuts. The mine produced a considerable tonnage, largely from the Brooklyn claim, during the period 1901 to 1908, although production was not continuous during that period. Meanwhile the ownership underwent several reorganizations and operations were carried by the Montreal & Boston Consolidated Mining and Smelting Company, Limited, the Dominion Copper Company, and finally the New Dominion Copper Company, Limited. Subsequent operations were confined largely to the Rawhide claim (082ESE026) which is located 1800 metres to the southeast. In 1910, a majority interest in New Dominion Copper was acquired by The British Columbia Copper Company, Limited, Spokane. In 1915, this company came under control of Canada Copper Corporation, Limited, of New York. The Brooklyn workings were pumped out in 1918 and rehabilitation work began but the company closed out all its operations in November of that year.

Brooklyn-Stemwinder Gold Mines, Limited, was incorporated in 1933 to acquire the Stemwinder, Standard Fraction, Joker, Montezuma, New York, and Brooklyn claims. Intermittent exploration work was carried out by the company and by lessees. W.E. McArthur leased the property in 1937 and some 30 metres of drifting and 90 metres of raising was done. Production is believed to be from the Brooklyn. The lease was given up in March 1940. The company resumed exploration work in 1946 with a diamond drill program which was completed in 1947. Several zones of mineralization were indicated and these were investigated by underground work during 1948-1949, including 80 metres of crosscut adit, 38 metres of drifting, and 360 metres of diamond drilling in 22 holes. The mine closed in 1949 and the company charter was surrendered in 1952. Columbia Copperfields Ltd. apparently held the property in the 1950's but no work was reported. Continental Consolidated Mines Ltd. acquired the property in 1959 and underground work was carried on until mid December; ore recovered from the Stemwinder workings was shipped the following year to the Granby concentrator. The Granby Mining Company Limited purchased the property in 1963.

At the Brooklyn occurrence, talc is associated with serpentinized ultramafic rocks which are widely distributed in the area of the Phoenix mine. The ultramafic rocks show massive and schistose phases; sheared margins are often altered to talc and talc-carbonate schist. The contacts with surrounding country rock are intensely sheared. The ultramafics are Mesozoic in age, intruding mainly Triassic Brooklyn Group volcanoclastics and sediments and Cretaceous Greenwood granodiorite. Talc is found north of the Phoenix pit, not exposed on surface but in drill holes on the Brooklyn claim. The talc occurs below a major thrust which separates Brooklyn rocks from basement rocks of the Upper Paleozoic Knob Hill Group (Personal Communication - Church, 1988).

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
EMPR AR 1894-756, map after 758; 1897-592, 593, 594; 1898-1123, 1195;
1899-604, 771, 849; 1900-877, 880; 1901-1054, 1188; 1902-124, 173, 176;
1904-209, *211; 1905-179, 183; 1906-157; 1907-109, 110, 215;
1908-248; 1916-518; 1918-209; 1926-215; *1927-237;
1928-243-247; 1929-257, 258; 1930-223; 1932-129; 1933-160;
1934-D8; 1936-D55; 1937-A36, D33; 1938-A34, D38; 1939-36, 42, 90;
1940-23, 75; 1946-135; 1947-157; 1948-127; *1949-149-155;
1952-140; 1953-110; 1960-A52, 65-66; 1961-65; 1963-68;
1964-111-112; 1965-170; 1966-194; 1967-227; 1968-231
EMPR ASS RPT 9817, 10588, 13030, 14092

BIBLIOGRAPHY

EMPR BC METAL MM00828
EMPR BULL 1 (1932), p. 84,85; 1 (1934), p. 20; 101, pp. 59,235,
Appendix 4B
EMPR GEM 1969-305; 1973-39-40; 1974-34
EMPR INDEX 3-190,200; 4-120
EMPR OF 1988-19, 1990-25
EMPR MR MAP 6 (1932)
EMPR P 1986-2; 1989-3, pp. 41-43,99
EMPR PF (See Phoenix, 082ESE020)
EMPR PRELIM MAP 59
EMR MP CORPFILE (The Dominion Copper Company, Limited; New Dominion
Copper Company, Limited; Brooklyn Stemwinder Gold Mines, Limited;
Hercules Consolidated Mining, Smelting and Power Corporation,
Limited; Continental Cinch Mines Ltd.; The Granby Mining Company
Limited)
GSC MAP 6-1957; *16A,828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21, pp. 94-102
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
GSC SUM RPT 1902, pp. 90-116,133; 1908
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary
Country; Sunfire Publications Limited, pp. 82-115
CIM Transactions Vol. 5 (1902), pp. 365-378; Vol. 59 (1956), pp.
384-394
PERS COMM (Church, N., 1988)

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

CAPSULE GEOLOGY

done. Production is believed to be from the Brooklyn. The lease was given up in March 1940. The company resumed exploration work in 1946 with a diamond drill program which was completed in 1947. Several zones of mineralization were indicated and these were investigated by underground work during 1948-1949, including 80 metres of crosscut adit, 38 metres of drifting, and 360 metres of diamond drilling in 22 holes. The mine closed in 1949 and the company charter was surrendered in 1952. Columbia Copperfields Ltd. apparently held the property in the 1950's but no work was reported. Continental Consolidated Mines Ltd. acquired the property in 1959 and underground work was carried on until mid December; ore recovered from the Stemwinder workings was shipped the following year to the Granby concentrator.

The Granby Mining Company Limited purchased the property in 1963. An open pit was established on the Idaho claim from which during 1963-1964, 137,333 tonnes of ore were removed. During 1966-1967 an open pit on the Stemwinder claim produced 63,339 tonnes of ore.

The most widespread rock around the Brooklyn and Stemwinder is a peculiar aggregate of subangular to subrounded fragments of white, red, and green chert; various types of volcanic and coarse grained granitic rocks; and occasionally, finely crystalline limestone. The rock may be called chert breccia. It is one type of cherty material comprising the sharpstone unit.

Two northerly trending, curved, lenticular bodies of another peculiar rock, which will be referred to as limestone breccia, occur near and in the Stemwinder mine. It consists of subangular fragments of greyish white finely crystalline limestone ranging in size from one to several centimetres, together with a few smaller fragments of chert, set in a fine grained matrix of carbonate, chlorite, quartz, and clay minerals. Where faults are absent, the contact with the chert breccia is abrupt rather than gradational. Westward, near the Brooklyn mine, the chert breccia is in sharp contact along a northerly trending line with finely crystalline, thin bedded, siliceous or argillaceous limestone. The distinct and regular bedding of the latter strikes north and dips 75 to 80 degrees eastward. Although the bedded limestone is more than 300 metres thick on the north side of Twin Creek, it appears to be absent a short distance to the south, on the opposite side of the drift filled valley bottom.

In the old part of the Stemwinder mine, faults are the most conspicuous feature. Two important fault sets strike variably west of north. Faults of one set dip moderately to steeply east, and faults of the other set dip 25 to 40 degrees westward. Faults of a third set appear to cut those of the other two sets. The third set strikes northeasterly and dips moderately or steeply to the northwest or to the southeast. They are characterized by much gouge and by fluting that is close to horizontal. Although on the surface the limestone breccia appears to be fairly continuous, in the workings it is found to be cut into isolated blocks by the numerous faults. The blocks, ranging in size from a metre to several metres, are in fault contact with chert breccia on all sides. On No. 1 level the segmentation occurs in a northerly trending belt roughly 60 metres wide. This belt is bounded on the west, almost directly below the glory hole, by a fault, beyond which the rock is all chert breccia.

All of the ore of the old part of the Stemwinder mine occurs in this belt. The ore bodies are fault blocks of limestone breccia which have been partly recrystallized as coarse grained grey calcite containing irregular veinlets and larger masses of chalcopyrite and pyrite. Usually the mineralization ends at the faults bounding the limestone breccia blocks, but in a few places the chert breccia, for a few feet beyond such a fault, is brecciated and moderately well mineralized. The ore is strikingly different to that of the Brooklyn mine. It contains no garnet or other lime silicate gangue minerals, no specularlite, and no quartz. However, it is similar to the Brooklyn ore in its virtual restriction to carbonate rocks and in its relation to faults which may well be pre-ore in age. The orebody mined in the Stemwinder glory hole was a block of mineralized limestone breccia bounded on both sides and below by faults. The lower bounding fault dips 25 degrees westward and contains a thin sheet of pulaskite porphyry. The intensity of the mineralization of the limestone breccia shows a marked increase near this fault.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
EMPR AR 1894-756, map after 758; 1895-703; 1896-563,578,581;
1897-592; 1898-1123, 1899-604,771.; 1900-877; 1901-1054,1058,1188;
1902-176; 1903-165; 1904-25,209,211; 1905-179,183; 1906-157,250;

BIBLIOGRAPHY

1907-110; 1918-470; 1919-166; 1926-477; 1928-243-247; 1929-257;
1930-223; 1932-129; 1933-160; 1939-36; 1940-23; *1949-149-155;
1952-140; 1953-110; 1959-58; 1960-A52,60; 1961-65; 1963-68;
1964-111; 1965-170; 1966-194; 1967-227; 1968-231
EMPR BULL 1 (1932), pp. 84,85; 1 (1934), p. 20; 101, p. 235
EMPR GEM 1969-305, 1973-39, 1974-34-35
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2; 1989-3, pp. 41-43,99
EMPR PF (See Phoenix, 082ESE020)
EMPR PRELIM MAP 59
EMR MP CORPFILE (The Granby Mining Company Limited; Phoenix Copper
Company Limited; Brooklyn-Stemwinder Gold Mines, Limited; The
Dominion Copper Company, Limited; New Dominion Copper Company;
Limited; Hercules Consolidated Mining, Smelting and Power
Corporation, Limited; Continental Cinch Mines Ltd.)
GSC MAP 15A,*16A, 749G, 828; 45-20A, 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21, pp. 94-102
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
GSC SUM RPT 1902, pp. 90-116
CIM Transactions Vol. 59 (1956), pp. 384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary
Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE015**

NATIONAL MINERAL INVENTORY:

NAME(S): **GILT EDGE (L.977)**, PHOENIX MINE

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 14 N
LONGITUDE: 118 35 30 W
ELEVATION: 1387 Metres

NORTHING: 5440225
EASTING: 383826

LOCATION ACCURACY: Within 500M

COMMENTS: Part of the Phoenix Mine. Shaft location is on GSC Map 16A. The Phoenix pit (082ESE020) lies 1000 metres to the south. See Phoenix, Brooklyn (082ESE013) and Stewwinder (082ESE014).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Garnet Epidote Chlorite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry Skarn
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Jurassic-Cretaceous

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Microdiorite
Augite Porphyry
Augite Porphyry Dike
Arkose
Limestone
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Gilt Edge claim (Lot 977) lies 1 kilometre to the north of the Phoenix pit (082ESE020), at the head of Deadman gulch in an area of extensive drift cover. The early exploratory work, dating from prior to 1912, consists of a shallow shaft, some trenching and a few diamond drill holes.

The mineralized zone, consisting of pyrite and chalcopyrite disseminations, is of slight superficial extent. It is cut off to the west by an augite porphyry dike (Tertiary), while to the east it is overlain by sediments (arkose) of the Kettle River Formation and lavas of the Marron Formation, both of Tertiary age.

See Phoenix for additional details on development, geology and mineralization in the area.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT 809
EMPR BULL 101, p. 235
EMPR GEM
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2, 1989-3, pp. 41-43, 99
EMPR PRELIM MAP 59
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21, pp. 56,71,85
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
CIM Transactions Vol. 59 (1956), pp. 384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE015**

MINFILE NUMBER: **082ESE016**

NATIONAL MINERAL INVENTORY:

NAME(S): **RED ROCK (L.1472)**, PHOENIX MINE

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 20 N
LONGITUDE: 118 36 17 W
ELEVATION: 1530 Metres

NORTHING: 5438577
EASTING: 382838

LOCATION ACCURACY: Within 500M

COMMENTS: Part of the Phoenix Mine. The claim was located 1 kilometre southwest of the Phoenix pit (082ESE020). Shaft location is on GSC Map 16A.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Garnet Epidote Chlorite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Upper Paleozoic
Triassic

GROUP

Knob Hill
Brooklyn

FORMATION

Unnamed/Unknown Formation
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Chert
Greenstone
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Red Rock claim (Lot 1472) lies 1 kilometre southwest of the Phoenix pit (082ESE020), on the east slope of Knob Hill. Early work consists of a shallow shaft. The claim was Crown granted to J.C. Haas and others in 1900.

Little is know of the showing. Mineralization likely consists of pyrite and chalcopyrite disseminations in chert and greenstone of the Upper Paleozoic Knob Hill Group. These rocks are overlain by sharpstone conglomerate and limestone of the Triassic Brooklyn Group.

See Phoenix for additional details on development, geology and mineralization in the area.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1898-1123, 1900-992
EMPR BULL 101, p. 235
EMPR OF 1990-25
EMPR MR MAP 6 (1932)
EMPR P 1986-2; 1989-3, pp. 41-43, 99
EMPR PRELIM MAP 59
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
CIM Transactions Vol. 59 (1956), pp. 384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1996/03/09

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE017**

NATIONAL MINERAL INVENTORY:

NAME(S): **BALD EAGLE (L.1473)**, PHOENIX MINE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 15 N
LONGITUDE: 118 36 09 W
ELEVATION: 1494 Metres

NORTHING: 5438419
EASTING: 382997

LOCATION ACCURACY: Within 500M

COMMENTS: Part of the Phoenix Mine. The claim was located 1 kilometre southwest of the Phoenix pit (082ESE020). Shaft location is on GSC Map 16A.

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Epidote Garnet Magnetite Hematite Chlorite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Brooklyn Unnamed/Unknown Formation

LITHOLOGY: Limestone
Sharpstone Conglomerate
Siltstone
Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Bald Eagle claim (Lot 1473) lies 1 kilometre southwest of the Phoenix pit (082ESE020), on the east slope of Knob Hill. Early work consists of a shaft. The claim was Crown granted to F.P. Buck in 1900.

Little is know of the showing. Mineralization likely consists of pyrite and chalcopyrite disseminations in sharpstone conglomerate and limestone of the Triassic Brooklyn Group. These rocks are underlain by chert and greenstone of the Upper Paleozoic Knob Hill Group.

See Phoenix for additional details on development, geology and mineralization in the area.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1900-990
EMPR BULL 101, p. 235
EMPR OF 1990-25
EMPR MR MAP 6 (1932)
EMPR P 1986-2; 1989-3, pp. 41-43, 99
EMPR PRELIM MAP 59
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
CIM Transactions Vol. 59 (1956), pp. 384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE018**

NATIONAL MINERAL INVENTORY: 082E2 Cu2

NAME(S): **GREY EAGLE (L.793)**, PHOENIX MINE, GRAY EAGLE

STATUS: Past Producer Open Pit

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E02E

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 49 05 19 N

NORTHING: 5438536

LONGITUDE: 118 35 53 W

EASTING: 383324

ELEVATION: 1506 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Part of the Phoenix Mine. The claim is located 800 metres south of the Phoenix pit (082ESE020). Pits are located on GSC Map 16A and Figure 16, EMPR Paper 1986-2. Production in 1916 is included with Phoenix.

COMMODITIES: Copper Iron Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Pyrite
ASSOCIATED: Garnet Hematite Specularite

MINERALIZATION AGE: Triassic

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Replacement
TYPE: K03 Fe skarn K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Triassic GROUP: Brooklyn FORMATION: Unnamed/Unknown Formation IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Sharpstone Conglomerate
Limestone
Siltstone
Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Grey Eagle claim (Lot 793) is located 800 metres south of the Phoenix pit (082ESE020). It adjoins the Knob Hill claim to the northwest, the Aetna (082ESE022) to the north and the War Eagle claim (082ESE019) to the east. The claim was Crown granted to J.P. Graves in 1899.

Prior to 1912, the ore body was diamond drilled and developed by open cuts and stripping which exposed a body of magnetite as much as 10 metres thick with a lateral extent of more than 370 square metres. In 1916, the ore body, which was opened up by No. 2 Tunnel, amounted to 45,360 tonnes, running 0.2 per cent copper, 36 per cent iron and 0.7 gram per tonne gold (Annual Report 1916, page 259).

The magnetite occurs in flat lying sharpstone conglomerate of the Triassic Brooklyn Group. The ore is dense, massive magnetite containing disseminated grains of pyrite and a small amount of chalcopyrite. It is similar to the upper ores on the Knob Hill and Ironsides claims which have an 'iron cap'. Garnet in masses and as solitary crystals occurs as inclusions in the ore. Owing to the small size of the ore body and the small copper content, there has been no sustained mining of this deposit.

See Phoenix for additional details on development, geology and mineralization in the area.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894 - map after 758; 1897-593; 1899-849; 1900-876-877;
1902-177; *1916-258-259; 1917-202; 1929-257; 1967-231
EMPR BULL 101, p. 235
EMPR GEM 1970-428, 1971-375, 1972-36, 1973-39, 1974-34-35
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2; 1989-3, pp. 41-43, 99
EMPR PRELIM MAP 59

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 399
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21, pp. 54,71-74
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
GSC SUM RPT 1902, pp. 90-116
CIM Transactions Vol. 5 (1902), pp. 365-378; Vol. 59 (1956), pp.
384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary
Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE019**

NATIONAL MINERAL INVENTORY: 082E2 Cu2

NAME(S): **WAR EAGLE (L.678)**, PHOENIX MINE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Open Pit Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 22 N
LONGITUDE: 118 35 43 W
ELEVATION: 1490 Metres

NORTHING: 5438625
EASTING: 383529

LOCATION ACCURACY: Within 500M

COMMENTS: Part of the Phoenix Mine. The claim is located 700 metres south of the Phoenix pit (082ESE020). Shaft location is on GSC Map 16A.

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite
ASSOCIATED: Hematite Epidote Garnet Calcite Quartz
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Brooklyn	Unnamed/Unknown Formation	

LITHOLOGY: Sharpstone Conglomerate
Limestone
Siltstone
Tuff
Microdiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The War Eagle claim (Lot 678) is 700 metres south of the Phoenix pit (082ESE020) and adjoins the Aetna (082ESE022) and Grey Eagle (082ESE018) claims, situated to the north and west, respectively. The claim was Crown granted to R. Denzler and T.W. Johnson in 1897.

The mine was first developed by a two compartment vertical shaft sunk to the 30-metre level, which is also connected to the surface by a 100-metre long adit crosscut driven from the south. The ore was delivered from the property by gravity tram to a spur line of Canadian Pacific railway extending west from Hartford junction. This work was done by the Consolidated Mining & Smelting Company of Canada in 1909. In 1928, the War Eagle and other surrounding claims were held by the Hercules Consolidated Mining, Smelting, and Power Corporation, Limited. No clear documentation of production exists for the War Eagle; minor production may be included with the Showshoe (082ESE025).

The principal mineralized zone is hosted in sharpstone conglomerate (Triassic Brooklyn Group) above the main level, except at the north end of No. 2 north crosscut, where the ore dips a low angle to the north and west, below the main level. The ore consists of finely disseminated chalcopyrite and pyrite in a dense epidotic gangue and coarser irregular bands of grey calcite and quartz. A diamond drill hole through this ore body showed a vertical thickness of 9 metres.

A large body, averaging about 11 metres thick and composed mostly of magnetite and pyrite (with little or no copper mineralization), was encountered in crosscut No. 1 north, above the main level. This body measures 40 by 50 metres in plan projection and dips gently to the north.

Trenches in the northeast part of the claim expose massive magnetite and pyrite lenses across widths ranging from 9 to 15 metres. However, many of the open cuts show only lean ore or barren gangue with an abundance of massive green epidote containing some pyrite and calcite.

CAPSULE GEOLOGY

See Phoenix for additional details on development, geology and mineralization in the area.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-756, map after 758; 1897-576, 593; 1900-878; 1902-174;
1907-115; 1909-133; 1928-248; 1967-231
EMPR BULL 101, p. 235, Appendix 6
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2; 1989-3, pp. 41-43, 99
EMPR PRELIM MAP 59
GSC MAP 15A, *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21, pp. 11, 15, 86, 93-94
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
CIM Transactions Vol. 59 (1956), pp. 384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary
Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE020**

NATIONAL MINERAL INVENTORY: 082E2 Cu2

NAME(S): **PHOENIX (KNOB HILL)**, PHOENIX MINE, KNOB HILL (L.590),
KNOB HILL-IRONSIDES, GRANBY PHOENIX, OLD IRONSIDES (L.589),
AETNA (L.978), VICTORIA (L.933), PHOENIX (L.894),
IDAHO (L.981), BROOKLYN (L.796), STEMWINDER (L.588),
GOLD DROP (L.899), SNOWSHOE (L.891), RAWHIDE (L.892)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Open Pit Underground

MINING DIVISION: Greenwood

LATITUDE: 49 05 27 N
LONGITUDE: 118 35 58 W
ELEVATION: 1500 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5438785
EASTING: 383228

LOCATION ACCURACY: Within 500M

COMMENTS: Several important mines were developed around the old town of Phoenix. The main Phoenix mine is centred on the claim of the same name, located six kilometres east of Greenwood at the elevation of 1370 metres. Access to Phoenix is paved road east from Greenwood and by an all weather gravel road west from the Grand Forks section of Highway 3. The Knob Hill claim covers part of the Phoenix pit. Location of old shaft and glory hole is on GSC Map 16A. Production includes Old Ironsides (082ESE021), Aetna (082ESE022) and Victoria (082ESE023). Other associated claims include Brooklyn, Stemwinder, Gilt Edge, Red Rock, Bald Eagle, Grey Eagle, War Eagle, Curlew, Snowshoe, Rawhide, Monarch, Gold Drop, Bank of England and Yellow Jacket (082ESE013-019 and 082ESE024-030, respectively). See also Phoenix Tailings (082ESE262).

COMMODITIES: Copper Gold Silver Lead Iron

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite Gold Silver
ASSOCIATED: Quartz Chlorite Calcite Epidote Garnet
Amphibole Specularite Hematite

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Replacement Hydrothermal
TYPE: K01 Cu skarn K04 Au skarn
 K03 Fe skarn T01 Tailings

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Brooklyn Unnamed/Unknown Formation

LITHOLOGY: Limestone
Chert Pebble Conglomerate
Sharpstone Conglomerate
Argillite
Chert
Greenstone
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Several important mines were developed around the old town of Phoenix. The main Phoenix mine, centred on the claim (Lot 894) of the same name, is located six kilometres east of Greenwood at the elevation of 1370 metres. Access to Phoenix is by paved road east from Greenwood or by an all weather gravel road west from the Grand Forks section of Highway 3.

The first claims in the Phoenix area were staked by Henry White (Knob Hill (Lot 590)) and Matthew Hatter (Old Ironsides (Lot 589) (082ESE021)) on July 15th, 1891. The claims were Crown granted in 1896. In 1896, J.F.C. Miner, a rubber footwear manufacturer from Granby, Quebec, together with mining promoter J.P. Graves and A.L. Little of Spokane, Washington, formed the Miner-Graves Syndicate. In 1899, they incorporated The Granby Consolidated Mining and Smelting Company, Limited and, in 1901, consolidated under The Granby Consolidated Mining, Smelting and Power Company, Limited.

CAPSULE GEOLOGY

The Canadian Pacific Railway extended a branch line to Phoenix and underground mining of copper and gold ores began using a combination of square set and room and pillar stopes serviced by numerous shafts and adits. Later, open pit mining methods were developed and the Old Ironsides mine became one of the first open pit mines in Canada. In 1900, the City of Phoenix was incorporated, construction of the British Columbia Copper Co.'s smelter at Greenwood was largely completed, and the Granby smelter at Grand Forks was 'blown in' in the fall of the year.

In the early days most of the ore feeding the smelter at Grand Forks came from the Old Ironsides mine; however, 8 different mineralized zones contributed to production from the Granby property. Ore was also produced in the mining camp by the Consolidated Mining and Smelting Company, primarily from the Snowshoe mine (082ESE025). Production rates from the camp varied markedly but attained as much as 3000 tons per day at this time. In 1919, the Granby mine and smelter closed owing to a number of factors at the end of World War I, including low copper prices, decreasing ore grades and a shortage of coking coal for the smelter furnaces.

W.E. McArthur leased the property in 1936 and began recovering ore from the old workings; he subsequently purchased the property from Granby and intermittent exploration and development work continued until 1946. Attwood Copper Mines Limited optioned the property in 1951 and conducted geological mapping, geophysical and geochemical surveys and diamond drilling until 1953.

In 1955, the Granby company re-purchased the property and began an evaluation with intent of developing an open pit, trackless mining operation. A subsidiary company, Phoenix Copper Company Limited, was incorporated in June 1956. Open pit production began in 1959 from the general area of the underground mine at a rate of 900 tons per day which was increased to 2000 tons per day in 1961 and to 3000 tons per day in 1972. By 1964, 4 open pits, the Old Ironsides, Idaho (082ESE013), Snowshoe and Stemwinder (082ESE014) were in operation. By 1973, declining production was supplemented by stockpiled low grade copper ore. Mill feed was also augmented by ore trucked from the Lone Star mine, 20 kilometres to the south in Washington State. An unsuccessful attempt was also made to mill ore from the Oro Denoro mine (082ESE063). Granby terminated mining operations at Phoenix in 1974 and later dismantled and moved the mill. Subsequently the property was purchased by Noranda mines Ltd.

No significant work was done on the property until 1981 when Noranda optioned the Phoenix property to Kettle River Resources Ltd., who carried out an exploration program focused on the precious metal potential of the property. A drilling program discovered the Sylvester K zone (082ESE046) in 1983. Noranda elected to participate in exploration during 1984 through 1985 and continued drilling Sylvester K and other anomalies found during the course of previous geological, geophysical and geochemical surveys. In 1987 Skylark Resources Ltd. attempted to mine the Sylvester K deposit but abandoned the operation after unsuccessfully processing only a few tons of the ore. During 1989 through 1990 Kettle River Resources Ltd. acquired outright ownership of the property from Noranda. Battle Mountain (Canada) Inc. optioned the property from Kettle River Resources Ltd. and conducted a program of reconnaissance mapping and sampling during the early in 1990. This work was subsequently expanded to a larger program including establishment of a survey-controlled grid over the southwestern part of the property around the Phoenix workings, with cut and flagged cross lines at 100 metre intervals. A magnetometre survey and a geochemical soil survey over the entire grid was followed by detailed geological mapping of a portion of the grid at the scale of 1:1000. Drilling programs were completed during 1991 and 1992 with no encouraging results.

Mining in the Phoenix area was from four principal ore bodies underlying (1) the Old Ironsides (082ESE021), Knob Hill (082ESE020) and Victoria (082ESE023) claims; (2) the Gold Drop (082ESE028), Rawhide (082ESE026) and Snowshoe (082ESE025) claims; (3) the Brooklyn and Idaho (082ESE013) claims; and (4) the Stemwinder (082ESE014) claim. Other claims associated with the Phoenix Mine are Aetna (082ESE022), Curlew (082ESE024), Monarch (082ESE027), Gilt Edge (082ESE015), Red Rock (082ESE016), Bald Eagle (082ESE017), Grey Eagle (082ESE018), War Eagle (082ESE019), Bank of England (082ESE029) and Yellow Jacket (082ESE030).

Total production, between 1900 and 1978, from the Phoenix Mine was 21,552,284 tonnes of ore containing 28,341 kilograms of gold, 183,036 kilograms of silver and 235,693 tonnes of copper. In addition to this production, 12 tonnes of ore was shipped from the Gold Drop mine in 1900; plus 855,634 tonnes of ore from the Rawhide

CAPSULE GEOLOGY

mine between 1904 and 1916; plus 545,129 tonnes from Snowshoe between 1900 and 1911; and 292,834 tonnes from the Brooklyn, Idaho and Stemwinder operations between 1900 and 1960.

The first period of production, from 1900 to 1919, was largely by underground mining on the Knob Hill, Ironsides, Gold Drop, Monarch, Victoria, Snowshoe and Curlew claims. Systematic development, consisting of an extensive system of tunnels and stopes, began in 1895 and comprised three adit levels on the Old Ironsides and Knob Hill claims, at elevations of 1440 metres, 1414 metres and 1386 metres. To the east, five levels, serviced in part by the Victoria shaft, were developed on the Victoria and Aetna claims at elevations of 1451 metres, 1356 metres, 1334 metres, 1315 metres and 1305 metres. At the close of the first period of operations in June 1919, a total of 12,434,620 tonnes of ore had been mined from stoped areas, exceeding 48,000 square metres in lateral extent, accessed by a 37-kilometre long network of interconnected tunnels.

Intermittent mining took place by W.E. McArthur from 1920 to 1942, mainly from the Old Ironsides claim. This period produced 47,107 tonnes of ore.

Renewed operations by the Granby company in 1959 began excavations which, by the final close of mining activity in 1976, resulted in removal of almost the entire old underground workings. This created a large elliptical 425 by 800-metre open pit. Mining took place largely on the Knob Hill, Old Ironsides, Aetna, Victoria, Brooklyn, Idaho, Stemwinder, Snowshoe and Rawhide claims. From 1959 to 1978, 9,070,560 tonnes of residual low grade ore was extracted.

The geology of the Phoenix area is complex. The mine is underlain by an intricately folded, faulted, metamorphosed and mineralized sequence of Paleozoic and Mesozoic volcanic and sedimentary rocks that are overlain in turn by Eocene volcanic and epiclastic rocks. Paleozoic rocks at Phoenix include the Knob Hill Group, consisting mostly of chert, cherty argillite, greenstone and a minor amount of limestone. Scanty fossil evidence indicates that the Knob Hill rocks may be as old as Devonian, although some geologists suggest a Permo-Carboniferous age. These rocks are unconformably overlain by Brooklyn limestone, sharpstone conglomerate, argillite and the Eholt volcanics believed to be Middle-Upper Triassic age. Small microdiorite intrusions together with possibly coeval andesites of the Eholt Formation, overlie and intrude Brooklyn limestone and sharpstone conglomerate units. North-trending fold axes and a series of north-dipping thrusts, associated with serpentinite slices, have been identified within the pre-Tertiary assemblages. Locally, sedimentary rocks of the Eocene Kettle River Formation unconformably overlie the older rocks. These are feldspathic sandstones and conglomerates containing interbeds of rhyolite ash and minor carbonaceous seams. Overlying and intruding these beds are pulaskite and augite porphyry dikes and sills, and trachyte and mafic phonolite volcanics of the Eocene Marron Formation.

The ores of the Phoenix area are almost exclusively the result of limestone alteration. The extensive deposits of low grade copper ore, which have given rise to the mining industry at Phoenix, occur in mineralized areas of the Brooklyn limestone, which have all the characteristics of metasomatic replacements. These replacements are composed essentially of chlorite-epidote skarn rocks with variable amounts of garnet, calcite and quartz, accompanied by blebs and disseminations of pyrite, chalcocopyrite, magnetite and specularite. The skarn and copper minerals are localized in a band of impure limestone above a well-defined footwall argillite. The thickness of mineralization varies from a maximum of 60 metres to less than 1 metre at the limits of mining. The ore beds are generally inclined downward to the east, but dips vary and a series of north-south faults have produced irregularities.

The main ore body outcrops on the Knob Hill and Old Ironsides claims, on the south side of a ravine that is the headwater area of Twin Creek. In its downward and eastward extension the ore body passes onto the Victoria and Aetna claims. The mountain in this area is divided by a 'great' pulaskite porphyry dike which is traceable southerly for 1200 metres from the Victoria claim through the Aetna and War Eagle claims. The dike is relatively fresh, has not been cross-fissured by any subsequent geological events, and continues at depth for at least a few hundred metres, as proven by diamond drilling. The main body of ore, on the Knob Hill, Ironsides and other westerly claims, is composite in character and consists of two lenses which coalesce about their central portions. The western lens is at least 750 metres long, from 12 to 38 metres thick, and from 112 to over 275 metres wide. The eastern lens is apparently not so long, but approaches the magnitude of the former in width and

CAPSULE GEOLOGY

thickness. The combined thickness of the two at their point of junction is about 57 metres. In its southern extension this composite ore body appears to break up into subordinate ribs and wedges of ore separated by complementary ribs of almost barren gangue rock. A similar condition also appears to occur to the east of the main ore body and the 'great' dike, where a rather flat lying zone, consisting in part of pay ore, has been found on about the same level as No. 3 tunnel. The general strike of the outcrop of the ore body is 010 degrees with dips to the east ranging from 45 to 60 degrees. The dip flattens with depth and on the lower levels averages from 15 to 30 degrees. A downfaulted block of Tertiary rock, viewed in the 1000-metre long Victoria to Gold Drop tunnel (elevation 1450 metres), separates the east side of the Phoenix pit from an eastern extension of the Old Ironsides - Knob Hill skarn zone.

The Gold Drop mine (082ESE028) develops only part of an extensive and practically continuous ore body, which outcrops on the Gold Drop claim, swings down and across the Rawhide and Curlew, and terminates on the Snowshoe claim. The whole, when broadly viewed, has, on a horizontal plan, the form of a compressed crescent with northward trending horns, broken by the occurrence of the detached Gold Drop No. 1 ore body and the north Snowshoe body. The ore body rests on a floor of sharpstone beds and in the Gold Drop proper there is an entire absence of Brooklyn limestone and Tertiary intrusives. The ore body of the Gold Drop proper is developed in the southeast part of the Gold Drop claim, and the northeast part of the Monarch claim (082ESE027). The strike varies from 013 degrees to 032 degrees, with an easterly dip, which averages about 40 degrees, but flattens to about 25 degrees below the level of the Monarch drift.

The known length of the ore body along the strike of the Monarch drift is over 320 metres, and its width to the boundary of the claim is about 96 metres. The thickness probably averages about 9 metres, the diamond drill logs showing a range from 2 to 17 metres.

The Rawhide mine (082ESE026) develops the continuation of the Gold Drop-Monarch ore body. The mine workings, underlying about three hectares on the western part of the Rawhide claim, consist of several large stopes and glory holes accessed by approximately 1400 metres of tunnelling on seven levels. The ore body, which attains a maximum thickness of 23 metres near the northwest boundary of the claim, rests on Brooklyn sharpstone conglomerate beds dipping 13 to 25 degrees north and northeast.

The Snowshoe mine (082ESE025) consists of two main mineralized zones worked to a depth of about 65 metres. Development to the end of operations in 1911 included several open cuts, glory holes, two shafts and a series of stopes accessed by 3000 metres of tunnelling. Surface excavations, including a 70 by 120-metre pit, completed between 1957 and 1964, resulted in the production of about 270,000 tonnes of low grade ore from the southern part of the claim.

The south ore body (Snowshoe mine) is a continuation of the one developed in the Curlew, Rawhide, and Gold Drop mines. It is broadly considered as one ore body, though bands, wedges, and ribs of slightly mineralized gangue rock break its continuity. These were removed or left in stopes depending on their size and structure. Along the Snowshoe-Curlew boundary the footwall dips north at about 40 degrees. To the west, it has a curving strike to the north with easterly dips ranging from 30 to 65 degrees. North of the main shaft at the first cross-cut, the strike is northeasterly with southeast dips from 40 to 50 degrees. In its downward extension, the ore body apparently swings to the northeast, which brings it adjacent to, or in contact with, the north ore body. The north and south axis of the ore body is about 180 metres and the east and west axis is about 80 metres long. The thickness of the ore according to the cross sections varies from 8 to 11 metres with occasional local swells giving a greater thickness over small areas.

The footwall rocks are sharpstone conglomerate beds, tuffs, and red and grey argillites, with local patches of quartzose crystalline limestone. The hanging wall consists of the garnet and epidote rocks of the mineralized zone into which the ore either insensibly fades, or from which it is separated by a gouge filled fissure (slip). The ore body in depth terminates abruptly against the quartzose rocks of the Knob Hill group, on the plane of a presumably pre-mineral fault or contact plane, which dips west at from 15 to 38 degrees. The ore body throughout is cut by numerous fissures, which in places have a marked influence on the character of the ore, and which were the main channels of circulation of the ore bearing solutions. Many of these have been filled during the closing stages of deposition with quartz, calcite, chalcopyrite, and pyrite in

CAPSULE GEOLOGY

banded arrangement.

The north ore body was probably at one time connected surficially with both the South Snowshoe and Gold Drop No. 1 bodies, but has been separated by subsequent erosion. From the mine plans and sections, the main part of the north ore body has a length north and south of 110 metres on the surface, a width ranging from 34 to 46 metres, and is from 2 to 17 metres thick, the average being about 11 metres. The dip of the footwall varies from 18 to 56 degrees east. A fault dipping west at 12 degrees cuts the ore off. To the north this fault steepens to 47 degrees and with a displacement of about 12 metres brings the lower part of the ore body to surface. The ore at this point lies on an augite porphyry dike which has been intruded along the footwall. In its northern extension, the strike of the ore body swings to the northeast and the sharpstone footwall gives place to the quartzose rocks of the Knob Hill group. The dip is to the southeast from 22 to 65 degrees, averaging about 45 degrees. The ore in this portion of the body was of higher grade than the average mined in the camp, particularly in the copper content.

The Brooklyn and Idaho mines (082ESE013) are situated on a mineralized zone crossing the valley of Twin Creek, about 700 metres northwest of the Phoenix pit. The zone is an elongated pear shaped form, broad and shallow at the south, narrowing and becoming steeper to the north until it is enclosed by almost vertical walls of limestone, as exposed by the Brooklyn 'glory hole'. The sharpstone beds lie to the east and the limestone to the west. The floor is mainly limestone with some sharpstone conglomerate in the southern part. The length is about 564 metres, and the width varies from about 122 metres in the south to less than 15 metres in the extreme north.

The Brooklyn mine, at the north end of the mineralized zone, was developed from two glory holes at surface and a number of underground stopes serviced by a 130-metre inclined shaft with working levels at 24, 46, 76, 91, and 106 metres. The total recorded ore production is 258,290 tonnes, which includes the two main periods of operation from 1900 to 1908 and 1937 to 1940.

The Idaho mine, at the south end of the mineralized zone, includes an inclined shaft and two levels, the deepest of which connects with the 76-metre level of the Brooklyn mine. A total of approximately 2300 metres of tunnelling was completed at the Brooklyn and Idaho mines by the first closing of operations in 1908. In the period 1963 to 1964, open pit excavations in a 75 by 150-metre area near the Idaho shaft yielded an additional 130,000 tonnes of ore. Subsequently the area became the main tailings pond for the Phoenix mine.

The Stemwinder mine (082ESE014) is 300 metres east of the Brooklyn and Idaho workings and 500 metres north of the Phoenix pit. Production from the Stemwinder began with a trial shipment of 4.5 tonnes of ore in 1895, seven years after the claim was first located by prospectors. Intermittent production between 1900 and 1949 yielded 32,014 tonnes of ore from workings consisting of an open stope and glory hole connected to 450 metres of tunnelling on two levels, at 32 and 61 metres depth, serviced by an inclined shaft and two portals. These workings were the focus of later excavations, in the period 1964 to 1967, which produced a 55 by 146-metre open pit from which 73,322 tonnes of ore was supplied to the Phoenix mill. A total of 718,475 tonnes of waste rock from this operation aided in the construction of a tailings pond and water reclamation site in the vicinity of the Idaho workings.

The most widespread rock around the Brooklyn and Stemwinder is a peculiar aggregate of subangular to subrounded fragments of white, red, and green chert; various types of volcanic and coarse grained granitic rocks; and occasionally, finely crystalline limestone. The rock may be called chert breccia. It is one type of cherty material comprising the sharpstone unit.

Two northerly trending, curved, lenticular bodies of another peculiar rock, which will be referred to as limestone breccia, occur near and in the Stemwinder mine. It consists of subangular fragments of greyish white finely crystalline limestone ranging in size from one to several centimetres, together with a few smaller fragments of chert, set in a fine grained matrix of carbonate, chlorite, quartz, and clay minerals. Where faults are absent, the contact with the chert breccia is abrupt rather than gradational. Westward, near the Brooklyn mine, the chert breccia is in sharp contact along a northerly trending line with finely crystalline, thin bedded, siliceous or argillaceous limestone. The distinct and regular bedding of the latter strikes north and dips 75 to 80 degrees eastward. Although the bedded limestone is more than 300 metres thick on the north side of Twin Creek, it appears to be

CAPSULE GEOLOGY

absent a short distance to the south, on the opposite side of the drift filled valley bottom.

In the old part of the Stemwinder mine, faults are the most conspicuous feature. Two important fault sets strike variably west of north. Faults of one set dip moderately to steeply east, and faults of the other set dip 25 to 40 degrees westward. Faults of a third set appear to cut those of the other two sets. The third set strikes northeasterly and dips moderately or steeply to the northwest or to the southeast. They are characterized by much gouge and by fluting that is close to horizontal. Although on the surface the limestone breccia appears to be fairly continuous, in the workings it is found to be cut into isolated blocks by the numerous faults. The blocks, ranging in size from a metre to several metres, are in fault contact with chert breccia on all sides. On No. 1 level the segmentation occurs in a northerly trending belt roughly 60 metres wide. This belt is bounded on the west, almost directly below the glory hole, by a fault, beyond which the rock is all chert breccia.

All of the ore in the old part of the Stemwinder mine occurs in this belt. The ore bodies are fault blocks of limestone breccia which have been partly recrystallized as coarse grained grey calcite containing irregular veinlets and larger masses of chalcopyrite and pyrite. Usually the mineralization ends at the faults bounding the limestone breccia blocks, but in a few places the chert breccia, for a few feet beyond such a fault, is brecciated and moderately well mineralized. The ore is striking different to that of the Brooklyn mine. It contains no garnet or other lime silicate gangue minerals, no specularlite, and no quartz. However, it is similar to the Brooklyn ore in its virtual restriction to carbonate rocks and in its relation to faults which may well be pre-ore in age. The orebody mined in the Stemwinder glory hole was a block of mineralized limestone breccia bounded on both sides and below by faults. The lower bounding fault dips 25 degrees westward and contains a thin sheet of pulaskite porphyry. The intensity of the mineralization of the limestone breccia shows a marked increase near this fault.

In summary, the Phoenix ore body appears to be localized by the fault system, the footwall argillite and impurity of the overlying limestone. No igneous source rocks are known, nevertheless, it is assumed that deep seated granitic rocks under the mine area produced the mineralizing solutions which were then channelled by faults to favourable facies sites in the Brooklyn limestone for replacement and deposition.

Ore reserves of the Phoenix mine as of December 31, 1974 were as follows: 874,000 tonnes of ore grading 0.807 per cent copper; 2,555,468 tonnes of marginal ore (stockpile) grading 0.40 per cent copper; and 2,163,907 tonnes of waste (Geology, Exploration and Mining, 1974, page 35). Ore produced from this date to the end of operations on October 4, 1978, totalled 3,022,104 tonnes (Mining in B.C., 1975-1980, Vol. 1, page 10).

In 1985, Kettle River Resources Ltd. and Noranda Explorations Company Limited began a program to evaluate grade and recovery methods on 4,145,835 tonnes of tailings from past production of the Phoenix pit. The Phoenix Tailings (082ESE262) are located about 3.5 kilometres northeast of the mine.

In 1995, with support from the Explore B.C. Program, Kettle River Resources Ltd. carried out a limited program of sonic drilling and sampling of the Phoenix mine tailings to assess their gold content and determine the economics of re-processing. In all, 42 metres of drilling was done in two holes which were fully sampled. The gold content was found to be 20 per cent lower than previously reported. Metallurgical studies on the sampled material determined that re-grinding and cleaner flotation would produce a concentrate grading approximately 18 per cent copper and 207 grams per tonne gold (Explore B.C. Program 95/96 - M46).

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-756; 1896-562,578,581; 1897-582,592; 1898-1122; 1899-604,752,768,769; 1900-864,876,877,880,904; 1901-1051,1052,1071; 1902-175,177; 1903-164; 1904-209-211,221; 1905-28,176,183; 1906-156,160; 1907-109-110,114,215,219; 1908-114,115,128,248; 1909-132-133,227; 1910-123,244; 1911-174,175,285; 1912-167,175-178,323; 1913-161; 1914-339-340; 1915-187,188-191; 1916-258-259; 1917-201-202; 1918-208; 1919-166; 1920-20,21,155,156; 1924-167; *1928-242-247; 1936-A34,A38,D55,D57; 1937-A36,A41,D33; 1938-A34,D38; 1939-36,90; 1940-24,75; 1941-25,72; 1942-26,67; 1946-135; 1955-46-47; 1956-75; 1957-38-40; 1958-36; 1959-A46,A50,58; 1960-A53,A56,65; 1961-A47,A51,65; 1962-A48,A51,69; 1963-A47,

BIBLIOGRAPHY

A51,68; 1964-A53,A57,111-112; 1965-A53,A57,170; 1966-A48,A49,194;
1967-A50,A52,227-228,231; 1968-A50,A52,231-232; 1969-A52,A53;
1970-A51,A52; 1971-A51,A52; 1972-A51,A52; 1973-A51,A52; 1974-A117,
A119; 1975-A91,A93; 1976-A101,A102; 1977-113,114; 1978-125,126
EMPR ASS RPT 67, 4750, 15058, 21240, 22653, 25364
EMPR BC METAL MM00949
EMPR BULL 20, Part III, pp. 12-13, 14; 101, pp. 14, 53, 57, 59, 89,
236, Appendix 4B,6
EMPR FIELDWORK 1984, pp. 17-21; 1989, pp. 237-246
EMPR GEM 1969-305-306, 1970-428; 1971-375-376; 1972-36; 1973-39-40;
1974-34-35
EMPR INDEX 3-198,202
EMPR MINING 1975-1980, *Vol.1, pp. 9-10
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1998-10
EMPR P 1986-2; 1989-3, pp. 41-43, 99, Appendix 7
EMPR PF (Photos: Victoria shaft and ore bins, 1907; Phoenix mill
from headwall of Old Ironsides pit, July 1965; Phoenix Mine Map
Index; A Brief History and Description of the Phoenix Operation,
January 1, 1971; Phoenix, Granby Mining Company Limited, Article G,
Mineral Industries in Western Canada, September, 1974; Fahrni, K.C.
(1974): Description of Phoenix Mineral Claims; Kettle River
Resources Ltd. Annual Report 1992)
EMPR PRELIM MAP 59
EMR MIN BULL MR 166
EMR MP CORPFILE (Attwood Copper Mines Limited; The Granby Mining
Company Limited; Israel Continental Oil Company Limited, 1978
Annual Report)
EMR MP RESFILE (Phoenix Mine)
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
GSC SUM RPT 1970, pp. 90-116, 133
CANMET INF CIRC 311, 18 pp.
CIM 10th Annual Mining Congress, September 1974, Section VI, Article
G, pp. 1-7
CIM Special Volume 8, pp. 315-320; 9 (1968), pp. 273-280; 16 (1978),
pp. 109-111
CIM Transactions Vol. 5 (1902), pp. 365-378; Vol. 59 (1956), pp.
384-394
CMH 1972,1973,1976,1977, p.136
ECON GEOL Vol. 64, pp. 822-824
GCNL (Jan.18)(Dec.27), 1973; #23 (Feb.4), 1976; (Jan 20), 1977; #32
(Feb. 15), #39 (Feb.24), #93 (May 14), 1977; #13 (Jan 19), #31
(Feb.14), #154 (Aug.11), 1978; #151 (Aug.7), 1985
N MINER Feb. 16, Jun 1, Aug. 10, 1978; Feb. 22, p. 21, 1979; Aug.
1985
W MINER Vol. 47 (June 1974), pp. 23-29; (Feb. 1979), p. 14; (March
1979), p. 43
WWW <http://www.kettleriver.com>
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary
Country; Sunfire Publications Limited, pp. 82-115
Peatfield, G.R. (1978): Geologic History and Metallogeny of the
Boundary District, Southern British Columbia and Northern
Washington; unpublished Ph.D. Thesis, Queen's University, 250
pages and appendices
Seraphim, R.H. (1957): Phoenix Camp, B.C.; in Structural Geology of
Canadian Ore Deposits, 6th Commonwealth Mining and Metallurgical
Congress, Vol. 2, pp. 132-136
Placer Dome File
Vancouver Sun Sept. 17, 1976

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

CAPSULE GEOLOGY

residual low grade ore was extracted.

The mine is underlain by chert, cherty argillite, greenstone and a minor amount of limestone of the Upper Paleozoic Knob Hill Group. These rocks are unconformably overlain by limestone, sharpstone conglomerate, argillite and Eholt volcanics of the Triassic Brooklyn Group. Copper ore occurs in mineralized areas of the Brooklyn limestone, which have all the characteristics of metasomatic replacements. These replacements are composed essentially of chlorite-epidote skarn rocks with variable amounts of garnet, calcite and quartz, accompanied by blebs and disseminations of pyrite, chalcopyrite, magnetite and specularite.

The main ore body outcrops on the Old Ironsides and Knob Hill claims; in its downward and eastward extension it passes into the Victoria and Aetna claims. The body is composite in character and consists of two lenses which coalesce about their central portions. The western lens is at least 750 metres long, from 12 to 38 metres thick, and from 112 to over 275 metres wide. The eastern lens is apparently not so long, but approaches the magnitude of the former in width and thickness. The combined thickness of the two at their point of junction is about 57 metres. In its southern extension this composite ore body appears to break up into subordinate ribs and wedges of ore separated by complimentary ribs of almost barren gangue rock. A similar condition also appears to occur to the east of the main ore body and a 'great' pulaskite porphyry dike, where a rather flat lying zone, consisting in part of pay ore, has been found on about the same level as No. 3 tunnel. The general strike of the outcrop of the ore body is 010 degrees with dips to the east ranging from 45 to 60 degrees. The dip flattens with depth and on the lower levels averages from 15 to 30 degrees. A downfaulted block of Tertiary rock, viewed in the 1000-metre long Victoria to Gold Drop tunnel (elevation 1450 metres), separates the east side of the Phoenix pit from an eastern extension of the Old Ironsides - Knob Hill skarn zone.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
EMPR AR 1894-754-map after 758; 1896-563,578; 1897-592; 1898-1122;
1899-604,752,768,818; 1900-864,873,876,880; 1901-1051,1052-1054,
facing 1056,1071; 1902-176,177; 1904-215; 1907-114; 1911-175;
1912-167,175-178; 1913-161; 1928-243-247; 1936-A34,A38,D55;
1937-A36,A41,D33; 1938-A34,D38; 1939-90; 1955-46; 1959-60; 1960-65;
1961-65; 1962-69; 1963-68; 1964-111-112; 1965-170; 1966-194;
1967-227; 1968-231
EMPR BULL 101, p. 236
EMPR GEM 1969-305-306; 1970-428; 1971-375-376; 1972-36; 1973-39-40;
1974-34-35
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2; 1989-3, pp. 41-43, 99
EMPR PF (See Phoenix, 082ESE020)
EMPR PRELIM MAP 59
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21, pp. 71-74
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
GSC SUM RPT 1902, pp. 90-116,133
CIM Transactions, Vol. 5 (1902), pp. 365-378; Vol. 59 (1956), pp.
384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary
Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

BIBLIOGRAPHY

1965-170; 1966-194; 1967-227; 1968-231
EMPR BULL 101, p. 236
EMPR GEM 1969-305; 1970-428; 1971-175; 1972-36; 1973-39; 1974-34-35
EMPR MINING 1975-1980, Vol. 1, pp. 9-10
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2; 1989-3, pp. 41-43, 99
EMPR PF (See Phoenix 082ESE020)
EMPR PRELIM MAP 59
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21 pp. 71-74, 15
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
GSC SUM RPT 1902, pp. 90-116
CIM Transactions Vol. 59 (1956), pp. 384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary
Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

BIBLIOGRAPHY

EMPR AR 1894-756, map after 758; 1898-1123, 1196; 1899-768;
1900-876, 877, 880; 1901-1053, 1071; 1902-174, 177; 1903-248; 1906-156;
1907-110; 1914-339; *1916-258; 1918-208; 1921-347; 1957-38-39;
1958-36; 1965-170; 1966-194; 1967-227; 1968-231
EMPR BULL 101, p. 236
EMPR GEM 1969-305; 1970-428; 1971-375; 1972-36; 1973-39; 1974-34-35
EMPR MINING 1975-1980, Vol. 1, pp. 9-10
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2; 1989-3, pp. 41-43, 99
EMPR PF (See Phoenix 082ESE020)
EMPR PRELIM MAP 59
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21, pp. 15, 71-74
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
GSC SUM RPT 1902, pp. 90-116
CIM Transactions Vol. 59 (1956), pp. 384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary
Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE024**

NATIONAL MINERAL INVENTORY: 082E2 Cu11

NAME(S): **CURLEW (L.893)**, PHOENIX MINE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 32 N
LONGITUDE: 118 34 55 W
ELEVATION: 1370 Metres

NORTHING: 5438913
EASTING: 384508

LOCATION ACCURACY: Within 500M

COMMENTS: Part of the Phoenix Mine. Adit locations are on GSC Map 16A.
Production is included with Phoenix (082ESE020).

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Gold Silver Pyrite Magnetite
ASSOCIATED: Garnet Epidote Chlorite Quartz Calcite
Hematite

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn K04 Au skarn
K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Brooklyn Unnamed/Unknown Formation

LITHOLOGY: Limestone
Argillite
Sharpstone Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Curlew mine is 1100 metres east of the Phoenix pit (082ESE020), on a fractional claim of the same name, lying between the Rawhide (082ESE026) and Snowshoe (082ESE025) claims. The Curlew claim (Lot 899) was Crown granted to R. Denzler in 1898. In 1907, the claim was acquired by the Granby Consolidated Mining, Smelting & Power Company, Ltd. Production is included with the Phoenix.

The ore was developed by raises from the Curlew adit prior to 1912. The triangular Curlew segment of the ore body was 70 metres long and up to 55 metres wide, with an average thickness of 8 metres. The ore zone, consisting of disseminated chalcopyrite and some massive magnetite lenses in limy rocks, is underlain by sharpstone conglomerate that dips 35 degrees north onto the Snowshoe claim.

See Phoenix for additional details on development, geology and mineralization in the area.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-map after 758; 1897-594; 1898-1195; 1906-160; 1907-114;
1910-122; 1913-164; 1915-191; 1918-208
EMPR BULL 101, p. 236
EMPR OF 1990-25
EMPR P 1986-2; 1989-3, pp. 41-43, 99
EMPR PF (See Phoenix 082ESE020)
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21, pp. 71,72,83
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
CG 1898 R. Denzler
CIM Transactions Vol. 59 (1956), pp. 384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 416
REPORT: RGEN0100

BIBLIOGRAPHY

Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/12

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE025**

NATIONAL MINERAL INVENTORY: 082E2 Cu12

NAME(S): **SNOWSHOE (L.891)**, PHOENIX MINE

STATUS: Past Producer Open Pit Underground MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E02E

BC MAP:

LATITUDE: 49 05 40 N

LONGITUDE: 118 35 04 W

ELEVATION: 1400 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Part of the Phoenix Mine. Old glory holes and adits are located on GSC Map 16A. The Snowshoe pit is located on Figure 16 (EMPR Paper 1986-2). Production after 1911 is included with Phoenix (082ESE020).

UTM ZONE: 11 (NAD 83)

NORTHING: 5439164

EASTING: 384331

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite Gold
ASSOCIATED: Quartz Calcite Specularite Hematite Epidote
 Garnet Chlorite Amphibole

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Brooklyn Unnamed/Unknown Formation

LITHOLOGY: Limestone
Sharpstone Conglomerate
Siltstone
Tuff
Porphyry Dike
Serpentinite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Quesnel

INVENTORY

ORE ZONE: ROCK REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1997
SAMPLE TYPE: Grab
COMMODITY GRADE
Gold 13.3000 Grams per tonne
Copper 2.0700 Per cent

REFERENCE: EMPR Bulletin 101, Appendix 4B.

CAPSULE GEOLOGY

The Snowshoe mine is 1000 metres east of the Phoenix pit (082ESE020), adjacent to the Gold Drop (082ESE028) claim to the west and the Rawhide (082ESE026) and Curlew (082ESE024) claims to the south. The Snowshoe claim (Lot 891) was staked by J. Taylor and S. Mangott in 1891. It was restaked in 1893 by R. Denzler and W. Gibbs and Crown granted to T. McDonnell in 1898.

The Snowshoe Gold & Copper Mines, Limited, a susidiary of The British Columbia (Rossland and Slocan) Syndicate (Limited), was incorporated in 1901 and produced from 1900 to 1904. In 1906, the Consolidated Mining and Smelting Company of Canada (Limited) leased the property and operated the mine until it closure in 1911. During this period, production totalled 545,129 tonnes, yielding 1284 kilograms of gold, 4950 kilograms of silver and 6322 tonnes of copper.

The Granby Consolidated Mining, Smelting and Power Company, Limited purchased the property in 1913 but did not operate it at the time. W.E. McArthur acquired the property in the 1930s and Attwood Copper Mines Limited optioned it in 1951. In 1955, Granby optioned the property and conducted mining operations in the Snowshoe pit in 1959 and from 1962 to 1964. Production during this time is included

CAPSULE GEOLOGY

with the Phoenix.

The Snowshoe mine (082ESE025) consists of two main mineralized zones worked to a depth of about 65 metres. Development to the end of operations in 1911 included several open cuts, glory holes, two shafts and a series of stopes accessed by 3000 metres of tunnelling. Surface excavations, including a 70 by 120-metre pit, completed between 1957 and 1964, resulted in the production of about 270,000 tonnes of low grade ore from the southern part of the claim.

The south ore body (Snowshoe mine) is a continuation of the one developed in the Curlew, Rawhide, and Gold Drop mines. It is broadly considered as one ore body, though bands, wedges, and ribs of slightly mineralized gangue rock break its continuity. These were removed or left in stopes depending on their size and structure. Along the Snowshoe-Curlew boundary the footwall dips north at about 40 degrees. To the west, it has a curving strike to the north with easterly dips ranging from 30 to 65 degrees. North of the main shaft at the first cross-cut, the strike is northeasterly with southeast dips from 40 to 50 degrees. In its downward extension, the ore body apparently swings to the northeast, which brings it adjacent to, or in contact with, the north ore body. The north and south axis of the ore body is about 180 metres and the east and west axis is about 80 metres long. The thickness of the ore according to the cross sections varies from 8 to 11 metres with occasional local swells giving a greater thickness over small areas.

The footwall rocks are sharpstone conglomerate beds, tuffs, and red and grey argillites, with local patches of quartzose crystalline limestone. The hanging wall consists of the garnet and epidote rocks of the mineralized zone into which the ore either insensibly fades, or from which it is separated by a gouge filled fissure (slip). The ore body in depth terminates abruptly against the quartzose rocks of the Knob Hill group, on the plane of a presumably pre-mineral fault or contact plane, which dips west at from 15 to 38 degrees. The ore body throughout is cut by numerous fissures, which in places have a marked influence on the character of the ore, and which were the main channels of circulation of the ore bearing solutions. Many of these have been filled during the closing stages of deposition with quartz, calcite, chalcopyrite, and pyrite in banded arrangement.

The north ore body was probably at one time connected surficially with both the South Snowshoe and Gold Drop No. 1 bodies, but has been separated by subsequent erosion. From the mine plans and sections, the main part of the north ore body has a length north and south of 110 metres on the surface, a width ranging from 34 to 46 metres, and is from 2 to 17 metres thick, the average being about 11 metres. The dip of the footwall varies from 18 to 56 degrees east. A fault dipping west at 12 degrees cuts the ore off. To the north this fault steepens to 47 degrees and with a displacement of about 12 metres brings the lower part of the ore body to surface. The ore at this point lies on an augite porphyry dike which has been intruded along the footwall. In its northern extension, the strike of the ore body swings to the northeast and the sharpstone footwall gives place to the quartzose rocks of the Knob Hill group. The dip is to the southeast from 22 to 65 degrees, averaging about 45 degrees. The ore in this portion of the body was of higher grade than the average mined in the camp, particularly in the copper content.

A mineralized grab sample assayed 2.07 per cent copper, and 13.3 grams per tonne gold (EMPR Bulletin 101, Appendix 4B).

See Phoenix for additional details on development, geology and mineralization in the area.

Battle Mountain (Canada) Inc. and Kettle River Resources Ltd. drilled 8 holes, totalling 764 metres on the Snowshoe Group in 1992.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
- EMPR AR 1894-756, map after 758; 1896-578, 581; 1897-582, 593;
1898-1123, 1161, 1196; 1899-604, 763; 1900-870, 873, 880;
1901-1051, 1058, 1062, 1151; 1902-174, 182-183; 1903-170, 173;
1904-222, 300; 1905-183; 1906-156, 161, 250; 1907-113, 115, 215;
1908-116, 248; 1909-134; 1910-122; 1911-176; 1913-164;
1914-339; 1915-1191; 1918-208, 209; 1955-46; 1956-75; 1957-39,
40; 1958-36; 1959-58-60; 1962-69; 1963-68; 1964-111; 1965-170;
1966-194; 1967-227, 231; 1968-231
- EMPR ASS RPT 22112
- EMPR BC METAL MM00931
- EMPR BULL 101, pp. 57, 80, 90, 236, Appendix 4B, 6
- EMPR INDEX 3-214
- EMPR MR MAP 6 (1932)
- EMPR OF 1990-25

BIBLIOGRAPHY

EMPR P 1986-2
EMPR PF (Surface and adit plans, scale 1:20, Snowshoe Gold Mines
Ltd., Feb. 28, 1942; see also Phoenix (082ESE020))
EMPR PRELIM MAP 59EMPR P 1989-3, pp. 41-43, 99
EMR MP CORPFILE (Cominco Ltd.; The Granby Mining Company Limited;
Attwood Copper Mines Limited)
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21, pp. 11, 15, 86-89, 91, 92
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
GSC SUM RPT 1902, pp. 90-116,133
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary
Country; Sunfire Publications Limited, pp. 82-115
CIM Transactions Vol. 59 (1956), pp. 384-394

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE026**

NATIONAL MINERAL INVENTORY: 082E2 Cu10

NAME(S): **RAWHIDE (L.892)**, PHOENIX MINE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Open Pit Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 26 N
LONGITUDE: 118 35 06 W
ELEVATION: 1450 Metres

NORTHING: 5438732
EASTING: 384281

LOCATION ACCURACY: Within 500M

COMMENTS: Part of the Phoenix Mine. Old adits and glory holes are located on GSC Map 16A. Production after 1916 is included with Phoenix (082ESE020).

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite
ASSOCIATED: Quartz Calcite Garnet Epidote Chlorite
 Amphibole Specularite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Brooklyn Unnamed/Unknown Formation

LITHOLOGY: Limestone
Sharpstone Conglomerate
Siltstone
Tuff
Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Rawhide mine is 1000 metres southeast of the Phoenix pit (082ESE020), adjacent to the Monarch (082ESE027) claim to the west and Gold Drop (082ESE028), Snowshoe(082ESE026) and Curlew (082ESE024) claims to the north. The Rawhide claim (Lot 892) was staked by G.W. Rumberger and associates in 1891. It was restaked in 1893 by R. Denzler, D. McInnes and W. Gibbs. Incorporated in 1899, The Dominion Copper Company, Limited, operated the mine until 1908. In 1909, the New Dominion Copper Company, Limited reopened the mine and it operated until closing in 1918. From 1904 to 1916, production totalled 855,634 tonnes, yielding 1056 kilograms of gold, 6910 kilograms of silver and 8441 tonnes of copper. In 1928, Pacific Tidewater Mines, Ltd. optioned the claim.

Continental Consolidated Mines acquired the Rawhide in 1959 and from 1960 to 1962, The Granby Mining Company Limited mined on a royalty basis. Production during this time is included with the Phoenix. In 1963, Granby purchased the claim.

The Rawhide mine develops the continuation of the Gold Drop-Monarch ore body. The mine workings, underlying about three hectares on the western part of the Rawhide claim, consist of several large stopes and glory holes accessed by approximately 1400 metres of tunnelling on seven levels. The ore body, which attains a maximum thickness of 23 metres near the northwest boundary of the claim, rests on Brooklyn sharpstone conglomerate and reddish brown argillites and tuffs, dipping 13 to 25 degrees north and northeast. The ore is similar to the average types in the camp. Garnet and epidote are the most prominent gangue minerals and chalcopyrite the only valuable metallic mineral.

See Phoenix for additional details on development, geology and mineralization in the area.

Battle Mountain (Canada) Inc. and Kettle River Resources Ltd. drilled 8 holes, totalling 764 metres on the Snowshoe Group in 1992.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-756, map after 758; 1897-593; 1898-1123; 1899-771;
1901-1054, 1062; 1904-211, 222; 1905-179, 183; 1906-158, 161, 250;
1907-109, 110, 114-115, 215; 1908-116, 248; 1909-133; 1910-118, 122,
244; 1911-174, 175, 176, 285; 1912-163, 167; 1913-141, 161, 170, 420;
1914-399, 511; 1915-333; 1916-518; 1918-208; 1928-247; 1949-150;
1960-65; 1961-65; 1962-69; 1963-68; 1965-170; 1966-194; 1967-227;
1968-231
EMPR ASS RPT 22112
EMPR BC METAL MM00914
EMPR BULL 101, pp. 57, 236, Appendix 6
EMPR INDEX 3-210
EMPR OF 1990-25
EMPR P 1986-2; 1989-3, pp. 41-43, 99
EMPR PF (See Phoenix 082ESE020)
EMPR PRELIM MAP 59
EMR MP CORPFILE (The Dominion Copper Company Limited; New Dominion
Copper Company Limited; Continental Cinch Mines Ltd., The Granby
Mining Company Limited)
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21, pp. 11, 15, 94-97
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29EMPR MR MAP 6 (1932)
CIM Transactions Vol. 59 (1956), pp. 384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary
Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE027**

NATIONAL MINERAL INVENTORY: 082E2 Cu11

NAME(S): **MONARCH (L.701)**, PHOENIX MINE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Open Pit Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 22 N
LONGITUDE: 118 35 29 W
ELEVATION: 1585 Metres

NORTHING: 5438619
EASTING: 383812

LOCATION ACCURACY: Within 500M

COMMENTS: Part of the Phoenix Mine. Old pit located on GSC Map 16A.
Production is included with Phoenix (082ESE020).

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite Gold Silver
ASSOCIATED: Epidote Calcite Quartz Garnet Amphibole
 Chlorite Hematite Specularite

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn K04 Au skarn
 K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Brooklyn Unnamed/Unknown Formation

LITHOLOGY: Limestone
 Sharpstone Conglomerate
 Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Monarch mine is 800 metres southeast of the Phoenix pit (082ESE020), adjacent to the Aetna (082ESE022), Rawhide (082ESE026) and Gold Drop (082ESE028) claims to the west, east and north, respectively. The Monarch claim (Lot 701) was Crown granted to R. Humphrey in 1897. In 1904, the claim was acquired by the Granby Consolidated Mining, Smelting & Power Company, Ltd. Production is included with the Phoenix.

The original underground workings at the Monarch mine, in the northwest part of the Monarch claim, were accessed from drifts at the base of an inclined two compartment shaft 30 metres deep. In 1909 an important ore body was delineated by drilling in the area east of the shaft. This was subsequently developed from a tunnel connecting the old workings with the shaft. A raise from the Monarch drift at the Gold Drop mine joined the main tunnel at the Monarch mine allowing the ore to be conveyed to the Curlew portal.

In the vicinity of the shaft a shallow opencut exposed a mineralized zone characterized by narrow bands of magnetite together with chalcopyrite and pyrite and veinlets of sulphides accompanied by specularite. The gangue in this association consists mostly of epidote and coarsely crystalline grey calcite. The magnetite is often interbanded with calcite and contains calcite inclusions, the banding ranging in thickness from 0.5 to 1 metre. Along the west side of the opencut the ore is broken and the sulphides are extensively oxidized. The same conditions prevailed in the old underground workings.

The main ore body east of the shaft dips slightly to the southeast and is roughly circular in plan with a diameter of about 45 metres and an average thickness of 9 metres. The ore is largely magnetite and carries 1.17 per cent copper, 1 gram per tonne gold and 13.7 grams per tonne silver (GSC Memoir 21, page 84).

See Phoenix for additional details on development, geology and mineralization in the area.

Battle Mountain (Canada) Inc. and Kettle River Resources Ltd. drilled 8 holes, totalling 764 metres on the Snowshoe Group in 1992.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-756, map after 758; 1897-576, 591, 594; 1898-1123;
1902-174; 1905-176; 1910-22; 1914-399; 1915-191; 1918-208
EMPR ASS RPT 22112
EMPR BULL 101, p. 236
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2; 1989-3, pp. 41-43, 99
EMPR PF (See Phoenix 082ESE020)
EMPR PRELIM MAP 59
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21, pp. 11, 15, 63, 72, 83-84
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
CIM Transactions Vol. 59 (1956), pp. 384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary
Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

CAPSULE GEOLOGY

9 metres, the diamond drill logs showing a range from 2 to 17 metres.

See Phoenix for additional details on development, geology and mineralization in the area.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-756, map after 758; 1896-578, 581; 1897-575, 582, 593;
1898-1123; 1899-771; 1900-870, 878; 1901-1051, 1062, 1063; 1902-174,
183; 1905-176; 1906-160, 250; 1907-110, 114, 215; 1909-133; 1910-122;
1911-175; 1912-167, 171, 175-178; 1913-161, 166, 170; 1914-339;
1915-189; 1916-258; 1917-202; 1918-208, 220; 1927-235; 1930-223;
1935-A25; 1938-A34; 1939-36; 1940-24; 1941-24, 61; 1946-136;
1965-170; 1966-194; 1967-227; 1968-231
EMPR BC METAL MM00856
EMPR BULL 101, p. 236, Appendix 6
EMPR GEM 1974-34-35
EMPR INDEX 3-197
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2; 1989-3, pp. 41-43, 99
EMPR PF (See Phoenix 082ESE020)
EMPR PRELIM MAP 59
EMR MP CORPFILE (The Granby Mining Company Limited; Attwood Copper
Mines Limited)
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21, pp. 11, 15, 57, 71, 81-83
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
GSC SUM RPT 1902, pp. 90-116
CIM Transactions Vol. 59 (1956), pp. 384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary
Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE029**

NATIONAL MINERAL INVENTORY:

NAME(S): **BANK OF ENGLAND (L.1235)**, BANK OF ENGLAND FR. (L.462S), PHOENIX MINE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 14 N
LONGITUDE: 118 36 06 W
ELEVATION: 1435 Metres

NORTHING: 5438387
EASTING: 383057

LOCATION ACCURACY: Within 500M

COMMENTS: Part of the Phoenix Mine. Old adit and shaft are located on GSC Map 16A.

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Gold Silver
ASSOCIATED: Quartz Calcite Epidote Amphibole Chlorite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Brooklyn	Unnamed/Unknown Formation	

LITHOLOGY: Sharpstone Conglomerate
Argillite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Bank of England claim (Lot 1235) lies 1100 metres southeast of the Phoenix pit (082ESE020), adjacent to Monarch (082ESE027) and Rawhide (082ESE026) to the north. Early work consists of an adit and shaft. In 1906, the claim was acquired by the Granby Consolidated Mining, Smelting & Power Company, Ltd and Crown granted to the company in 1907. In 1928, Pacific Tidewater Mines, Ltd. optioned the claim. In 1938, R. Forshaw shipped 3 tonnes of ore, yielding 31 grams of gold and 156 grams of silver.

Little is known of the showing. Mineralization likely consists of pyrite and chalcopyrite disseminations in sharpstone conglomerate, argillite and limestone of the Triassic Brooklyn Group. These rocks are underlain by chert and greenstone of the Upper Paleozoic Knob Hill Group.

See Phoenix for additional details on development, geology and mineralization in the area.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1906-160, 1907-219, 1908-250, 1915-190, 1928-247, 1938-A34
EMPR BC METAL MM00818
EMPR BULL 101, p. 237, Appendix 6
EMPR INDEX 3-188
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2; 1989-3, pp. 41-43
EMPR PF (See Phoenix 082ESE020)
EMPR PRELIM MAP 59
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM 21-54
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
CIM Transactions Vol. 59 (1956), pp. 384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 427
REPORT: RGEN0100

BIBLIOGRAPHY

Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE030**

NATIONAL MINERAL INVENTORY:

NAME(S): **YELLOW JACKET (L.1327)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 31 N
LONGITUDE: 118 34 45 W
ELEVATION: 1340 Metres

NORTHING: 5438878
EASTING: 384711

LOCATION ACCURACY: Within 500M

COMMENTS: Part of the Phoenix Mine. Old shaft location is on GSC Map 16A.

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Gold
ASSOCIATED: Quartz Calcite Garnet Epidote Chlorite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Sharpstone Conglomerate
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Yellow Jacket claim (Lot 1327) lies 1200 metres east of the Phoenix pit (082ESE020), adjacent to Curlew (082ESE024) to the west. Early work consists of a shaft. The claim was Crown granted to J.F. Cunningham and J. Mulligan in 1904.

Little is know of the showing. Mineralization likely consists of pyrite and chalcopyrite disseminations in sharpstone conglomerate, argillite and limestone of the Triassic Brooklyn Group. These rocks are underlain by chert and greenstone of the Upper Paleozoic Knob Hill Group.

See Phoenix for additional details on development, geology and mineralization in the area.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1904-301
EMPR BULL 101, p. 237
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2; 1989-3, pp. 41-43, 99
EMPR PF (See Phoenix 082ESE020)
EMPR PRELIM MAP 59
GSC MAP *16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *21
GSC OF 481; 637; 1969
GSC P 45-20A; 67-42; 79-29
CIM Transactions Vol. 59 (1956), pp. 384-394
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary Country; Sunfire Publications Limited, pp. 82-115

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE031**

NATIONAL MINERAL INVENTORY: 082E2 Au7

NAME(S): **MARSHALL (L.2388)**, SAN JACINTO, BRANDON (L.2382),
LITTLE BURNE (L.2383)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 06 39 N
LONGITUDE: 118 36 15 W
ELEVATION: 1390 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5441016
EASTING: 382930

LOCATION ACCURACY: Within 500M

COMMENTS: The Marshall (Lot 2388) and adjoining Sylvester K (Lot 2382) claim (082ESE046) claim are centred near Providence Lake, 1.7 kilometres northwest of Phoenix and 5.8 kilometres northeast of Greenwood. Access is via the Providence Lake road which runs north from the Phoenix mine site.

COMMODITIES: Gold Silver Copper Lead Zinc
Cadmium

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrrhotite Pyrite Gold
Chalcopyrite Arsenopyrite Magnetite Marcasite
ASSOCIATED: Quartz Garnet Epidote Magnetite Hematite
Specularite Amphibole Pyroxene
ALTERATION: Chlorite Hematite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive Stratiform Disseminated
CLASSIFICATION: Skarn Replacement
TYPE: K04 Au skarn K02 Pb-Zn skarn
K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Brooklyn	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

ISOTOPIC AGE: 206 +/- 8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Amphibole

LITHOLOGY: Limestone
Sharpstone Conglomerate
Chloritic Siltstone
Marble
Argillite
Chert
Garnet Skarn
Quartz Monzonite
Granodiorite

HOSTROCK COMMENTS: Providence Lake stock age dating, Church, 1986, EMPR Paper 1986-2.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Quesnel
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels

INVENTORY

ORE ZONE: NO. 1 REPORT ON: Y
CATEGORY: Indicated YEAR: 1974
QUANTITY: 45350 Tonnes
COMMODITY: Gold GRADE: 17.1400 Grams per tonne
REFERENCE: Northern Miner, October 25, 1979.

CAPSULE GEOLOGY

The Marshall (Lot 2388) and adjoining Sylvester K (Lot 2382) claim (082ESE046) claim are centred near Providence Lake, 1.7 kilometres northwest of Phoenix and 5.8 kilometres northeast of Greenwood. Access is via the Providence Lake road which runs north from the Phoenix mine site.

CAPSULE GEOLOGY

Between 1967 to 1975, 370 tonnes of ore was shipped from the Marshall claim, yielding 15.2 kilograms of gold, 17.6 kilograms of silver, 0.47 tonne of copper, 2.3 tonnes of lead, and 0.56 tonne of zinc.

The Marshall claim was Crown granted in 1904. Several hand dug trenches and two shafts near the west boundary of the claim are the only remnants from the early years of prospecting. The first major exploration activity was undertaken in 1938 when seven holes comprising 411 metres of diamond drilling and much bulldozer trenching was completed between the two old shafts. The first shipment of ore was in 1967 by leasees from an open cut on the 'San Jacinto zone', 120 metres west of Providence Lake. In 1968 this zone was explored further by 560 metres of diamond drilling and bulldozer trenching. This eventually resulted in the ore shipments. Bulk sample work in 1974 by San Jacinto Explorations Limited, indicated a resource of 45,350 tonne at 17 grams per tonne gold (Northern Miner, October 25, 1979).

The principal rocks underlying the Sylvester K and Marshall claims are sedimentary units of the Triassic Brooklyn Group and offshoot apophyses and dikes of the Lower Jurassic Providence Lake microdiorite stock. The Brooklyn beds are steep, mostly easterly dipping, comprising thick basal sharpstone conglomerates, overlain by a relatively thin transitional argillaceous facies, and a thick upper limestone unit. The Providence Lake microdiorite stock, dated 206 Ma, intrudes the limestone and conglomerate, feeding the somewhat younger volcanic rocks of the Eholt Formation.

Mineralization comprises stratabound massive sulphide in limestone lenses and sulphide disseminations in the accompanying sharpstones and argillaceous rocks of the Brooklyn sequence. The ore mineralogy consists principally of pyrite and smaller amounts of pyrrhotite and marcasite, and traces of chalcopyrite accompanied by carbonates, quartz, and chlorite. The San Jacinto zone has a somewhat broader array of minerals that includes magnetite, specularite, galena, sphalerite, garnet, epidote, and amphibole. The effect of the mineralizing solutions on wallrocks of the ore zone is well displayed in the Sylvester K zone where the footwall argillites have been transformed locally into a fine grained biotite bearing hornfels. Here numerous thin pyrite stringers carry gold and silver values for more than 10 metres distal from the massive sulphide bodies. Elsewhere, chlorite and hematite are common on joints and cracks in the host rocks.

Source of the mineralizing solutions is believed to be the microdiorite stock, although no significant mineralization is visible south of Providence Lake where the main microdiorite body intrudes the Brooklyn limestone. However, considering the wide distribution of microdiorite dikes in the area, it is possible that the principal plutonic body lies at depth.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
- EMPR AR 1901-1229; 1904-300; 1905-176; 1907-229; 1918-473; 1924-368; 1938-D38; 1967-A52,*228-230; 1968-232; 1971-A52; 1975-A93
- EMPR ASS RPT 827, 882
- EMPR BC METAL MM00893
- EMPR BULL 101, p. 237, Appendix 6
- EMPR FIELDWORK *1983, pp. 7-14
- EMPR GEM 1969-305, 1971-376, 1973-40
- EMPR MINING 1975-1980, p. 54
- EMPR MR MAP 6 (1932)
- EMPR OF 1990-25
- EMPR P *1986-2, pp. 39-41; 1989-3, pp. 41-43, 45, 99
- EMPR PF (Kettle River Resources Ltd., New Release, October 15, 1983)
- EMPR PRELIM MAP 59
- EMR MP CORPFILE (San Jacinto Explorations Limited)
- GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
- GSC OF 481; 637; 1969
- GSC P 45-20; 67-42; 79-29
- GCNL #220, Nov.18, Jan.31, 1975; #191, 1976; Dec.16, 1982; Aug.7, 1985
- N MINER Oct.25, 1979

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE032**

NATIONAL MINERAL INVENTORY: 082E2 Au9

NAME(S): **GOLDEN CROWN (L.600)**, GOLDEN CROWN MINE, CROWN,
WELLINGTON CAMP, J & R (L.1059), HARD CASH (L.1062),
MACARTHUR

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E

Underground

MINING DIVISION: Greenwood

BC MAP:
LATITUDE: 49 04 32 N
LONGITUDE: 118 34 33 W

UTM ZONE: 11 (NAD 83)

ELEVATION: 1326 Metres
LOCATION ACCURACY: Within 500M

NORTHING: 5437051
EASTING: 384916

COMMENTS: The adjoining Golden Crown (Lot 600) and Winnipeg (Lot 599) (082ESE033) claims are 7.5 kilometres east of Greenwood and 3.2 kilometres southeast of Phoenix. Access to the property is 1.2 kilometres east from Hartford Junction by dirt road on an old railway grade. The Golden Crown shaft is on a ridge between Skeff and Snowshoe creeks (Assessment Report 20431).

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Chalcopyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Chlorite
ALTERATION TYPE: Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Massive
CLASSIFICATION: Mesothermal Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Upper Paleozoic
Permian

GROUP

Knob Hill

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Old Diorite

ISOTOPIC AGE: 258 +/- 10 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Whole rock

LITHOLOGY: Andesite
Andesitic Flow
Andesitic Tuff
Greenstone
Diorite
Gabbro
Serpentinite

HOSTROCK COMMENTS: 'Old Diorite' is Permian or possibly older (EMPR Paper 1986-2 and GSC Open File 1990-25).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: GOLDEN CROWN

REPORT ON: Y

CATEGORY: Indicated
QUANTITY: 56850 Tonnes

YEAR: 1989

COMMODITY	GRADE	
Silver	17.8300	Grams per tonne
Gold	15.2600	Grams per tonne
Copper	0.7000	Per cent

COMMENTS: Estimated drill indicated reserves; includes Winnipeg (082ESE033).
REFERENCE: Attwood Gold Corporation, Filing Statement, May 31, 1989.

CAPSULE GEOLOGY

The adjoining Golden Crown (Lot 600) and Winnipeg (Lot 599) (082ESE033) claims are 7.5 kilometres east of Greenwood and 3.2 kilometres southeast of Phoenix at the elevation of 1340 metres. Access to the property is 1.2 kilometres east from Hartford Junction

CAPSULE GEOLOGY

by dirt road on an old railway grade.

Intermittent production from 1900 to 1941 on the Golden Crown was 2488 tonnes of ore yielding 38.5 kilograms of gold, 70 kilograms of silver, and 38 tonnes of copper. An additional 53,316 tonnes of ore, with significant gold and silver, was mined from the Winnipeg.

The Winnipeg and Golden Crown claims were staked in 1891. By 1897 both properties had undergone vigorous development. The Golden Crown was Crown granted to W.J. Porter in 1886. A number of small copper and gold bearing quartz veins were found. At this time a crosscut adit was collared to intercept 5 of the most interesting veins. No. 2 vein that was exposed on top of the hill was a prime target and cut at 85 metres at a depth of 24 metres. A shaft was then sunk 18 metres on No. 2 vein, which was 3 to 50 centimetres wide and consisted of decomposed quartz and the sulphides from which high gold assays had been obtained. The enclosing country rock was also somewhat mineralized and yielded gold values. No. 3 is a small vein of quartz and sulphides exposed in a cut 10 metres south of No. 2 vein. Nearby No. 5 vein, the site of the second shaft is about a metre wide and composed of quartz, pyrrhotite and copper and iron pyrite carrying high gold values.

By 1899 the Golden Crown shaft had been sunk to a depth of about 90 metres on the main vein which ranged to 2.4 metres wide. Crosscut levels to the south, from the shaft to the vein, had been made at the 30 and 46 metre levels. At the 90 metre level, drifts were being run both north and south, but had not at the time, reached ore, having been driven only about 6 metres each way from the shaft. By 1903 development was completed on three veins. The Golden Crown shaft was down to 98 metres connecting several levels, the longest of which was about 275 metres.

The Golden Crown claim is underlain mostly by the greenstones except locally along the east boundary of the claim and the southeast end of the underground workings where diorite is encountered. No visible structural features are evident on surface, although geophysical interpretation suggests two parallel faults trending north, bounding the area between the Winnipeg shaft and the Golden Crown shaft. The best continuous gold values occur between these two interpreted faults. West of the faults the veins are of the quartz-calcite variety (Assessment Report 20431).

The Greenwood-Grand Forks area contains Upper Paleozoic and Mesozoic volcanic and sedimentary rocks, mainly in the greenschist facies of regional metamorphism, which are intruded by Mesozoic plutons and unconformably overlain by Tertiary volcaniclastic and flow rocks.

The pre-Tertiary stratiform rocks are contained in a series of five, north dipping thrust slices with bounding faults which at many places are marked by layers and lenses of deformed serpentinite. These thrust slices lie above high grade metamorphic complexes.

The Upper Paleozoic rocks in the Greenwood area are the Knob Hill Group of chert, greenstone and related diorite and serpentinite, and the Attwood Group of dark grey argillite, limestone and minor volcanic rocks. They are unconformably overlain by the Brooklyn Formation of clastic sedimentary rocks, limestone and largely submarine pyroclastic breccias and related dioritic intrusions. These rocks probably formed in an environment of growth faulting and explosive volcanism (Open File 1990-25).

The distribution of the Tertiary rocks is controlled by a complicated array of extension faults. Three sets are recognized. The oldest are gently east dipping, at or near the base of the Tertiary. Later, dominantly west dipping listric normal faults have caused rotation so that the Tertiary strata dip to the east at moderate angles. The apparent offset on each of the five of these faults is measured in kilometres. The third and latest faults are north to northeast trending, steeply dipping, strongly hinged and influenced by the earlier faults.

The Golden Crown property is underlain by Knob Hill Group greenstones intruded by the Permian or possibly older "Old Diorite". The greenstone ranges from andesite to basalt in composition, and occurs as flows and tuffs. The rocks are locally metamorphosed to greenschist facies with only a weak fabric being developed. All the rocks have been weakly propylitically altered with chlorite being the predominant alteration mineral.

Regionally, the Old Diorite occurs principally in a narrow belt at the base of the Knob Hill Group. It consists of a coarse-grained hornblende diorite with many crisscrossing light coloured veins of felsic rock. The coarse-grained phases grade into finer grained diorites and these in turn grade into greenstones of the Knob Hill Group. Pervasive felsic veinlets usually continue through the transition. Dykes and irregular bodies of Old Diorite also intrude

CAPSULE GEOLOGY

the Knob Hill greenstone. The Old Diorite is also closely associated with serpentinite bodies.

Mineralization in the Golden Crown mine area consists of a northwest trending swarm or network of steeply north and south dipping quartz-sulphide or massive sulphide veins which range in width from centimetres to several metres. The veins occur along parallel to subparallel, northwest trending structures hosted in greenstone and diorite. Four known mineralized structures are called the King, George, MacArthur, and Lynn and/or Ivory veins.

Three types of veins have been identified: 1) quartz veins with disseminated pyrrhotite, pyrite and chalcopyrite; 2) massive sulphide veins of pyrrhotite with lesser amounts of pyrite, chalcopyrite and quartz; and 3) quartz-calcite veins containing massive pyrite and chalcopyrite. The first type of vein occurs throughout the property but contains no significant gold values. The second type generally occurs east of the Golden Crown shaft; this type carries the best gold, silver and copper values. The third type of vein occurs west of the Golden Crown shaft. These veins have yielded high copper values but generally low gold values (Assessment Report 20431). The Golden Crown is classified as a mesothermal-type vein deposit.

In 1967, Sabina Mines Ltd. and Scurry-Rainbow Oil Limited initiated geophysical work followed by 1652 metres of diamond drilling in 16 holes. In 1977, a small amount of drilling (317 and 769 metres, respectively) was done by Golden Crown Syndicate and Con Am Resources Ltd. In 1979, Consolidated Boundary Exploration Limited drilled an additional 329 metres on the property.

Drilling between 1983 and 1986, under option to Grand Forks Mines Ltd., delineated the known mineralized zone at the Golden Crown property and also resulted in the discovery of seven other mineralized zones, including the Centre vein. The Center vein is located halfway between the Golden Crown and Winnipeg workings and is a lenticular massive sulphide vein consisting of pyrrhotite, chalcopyrite and minor pyrite. Between 1987 and 1989, additional drilling and underground development was done by the company, now known as Attwood Gold Corporation. A new exploration adit was driven 603 metres to the Center vein. The trackless adit was completed at 782 metres from the portal. Crosscuts were driven in early 1988 to the Golden Crown shaft and to the expected location of the Winnipeg shaft. A raise was also completed to the Golden Crown 30-metre level. An estimated drill indicated resource was made of 56,850 tonnes averaging 15.26 grams per tonne gold, 17.83 grams per tonne silver and 0.70 per cent copper (Attwood Gold Corporation, Filing Statement, May 31, 1989).

BIBLIOGRAPHY

- EM EXPL 1998-65-75
- EMPR AEROMAG 8497G
- EMPR AR 1896-562,578; 1897-582,595; 1899-604,763; 1900-870,880; 1901-1052,1062; 1902-H183; 1903-H174; 1905-J183; 1941-A25; *1967-230-231
- EMPR ASS RPT 8482, *8851, 10258, 12131, 14641, *20431
- EMPR BC METAL MM00861
- EMPR EXPL 1980-18; 1983-10; 1986-C17
- EMPR FIELDWORK 1984, pp. 17-21
- EMPR INDEX 3-198
- EMPR MAP 59; 65
- EMPR MR MAP 6 (1932)
- EMPR OF *1990-25; 1992-1; 1998-10
- EMPR P *1986-2, pp. 58-59
- EMPR PF (Consolidated Boundary Explorations, Drill Hole Data, November 1979; Grand Forks Mines Ltd., Statement of Material Facts, December 11, 1987; Attwood Gold Corporation, Filing Statement, May 31, 1989, in 082ESE033; Attwood Gold Corp., Prospectus, July 1989; Kim, H. (1987): Report on the Preliminary Geological, Geophysical and Geochemical Exploration of the Winner Claim Group, in Silver Lady Resources Inc., Prospectus, March 1987, in 082ESE163).
- EMPR PRELIM MAP 59
- EMR MIN BULL MR 223 B.C. 4
- EMR MP CORPFILE (Sabina Mines Ltd.; Con-Am Resources Ltd.; Consolidated Boundary Exploration Limited; Mundeel Mines Ltd.; Grand Forks Mines Ltd.)
- GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
- GSC MEM 21; 38
- GSC OF 481; 637; 1969
- GSC P 45-20; 67-42; 79-29
- GSC SUM RPT 1902, p. 135
- GCNL #50,#51,#60,#70,#74,#117,#196, 1978; #223, Nov.29, 1979; #121, #135, 1983; #43,#165, 1985; #190,#112,#217, 1986; #27,#81, 1988;

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 434
REPORT: RGEN0100

BIBLIOGRAPHY

#33(Feb.6), 1989; #111, 1990
IPDM Mar./Apr. 1984
MIN REV Mar/Apr 1981, p. 51
V STOCKWATCH Nov. 16, 1987
WIN Jan. 1987
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

53,316 tonnes of ore yielding 363 kilograms of gold, 1137 kilograms of silver, 86 tonnes of copper, and 0.17 tonne of lead. An additional 2488 tonnes of ore was mined from the Golden Crown. Production from 1910 to 1912 is reported in the Annual Reports to have come from the Wellington Group of claims; this likely refers to the Winnipeg.

The Winnipeg and Golden Crown claims were staked in 1891. By 1897 both properties had undergone vigorous development. The Winnipeg was Crown granted to D. McIntosh in 1896. A number of small copper and gold bearing quartz veins were found. At this time a crosscut adit was collared to intercept 5 of the most interesting veins. No. 2 vein that was exposed on top of the hill was a prime target and cut at 85 metres at a depth of 24 metres. A shaft was then sunk 18 metres on No. 2 vein, which was 3 to 50 centimetres wide and consisted of decomposed quartz and the sulphides from which high gold assays had been obtained. The enclosing country rock was also somewhat mineralized and yielded gold values. No. 3 is a small vein of quartz and sulphides exposed in a cut 10 metres south of No. 2 vein. Nearby No. 5 vein, the site of the second shaft is about a metre wide and composed of quartz, pyrrhotite and copper and iron pyrite carrying high gold values.

On the Winnipeg, the main shaft was developed on a vein that appeared to be aligned with the No. 4 vein exposed 100 metres to the northwest on the Golden Crown claim. By 1899, the Winnipeg shaft was sunk to a depth of about 90 metres with levels begun at 30 metres intervals. Total underground development by 1903 on the Winnipeg claim amounted to about 1370 lineal metres and near the end of mine operations in 1912 it is estimated that there was more than 5000 metres of tunnelling completed.

In 1967, Sabina Mines Ltd. and Scurry-Rainbow Oil Limited initiated geophysical work followed by 1652 metres of diamond drilling in 16 holes. In 1977, a small amount of drilling (317 and 769 metres, respectively) was done by Golden Crown Syndicate and Con Am Resources Ltd. In 1979, Consolidated Boundary Exploration Limited drilled an additional 329 metres on the property. Between 1983 and 1986, under option to Grand Forks Mines Ltd., the property was drilled and several mineralized zones, including the Centre Vein, were discovered. Between 1987 and 1989, additional drilling and underground development was done by the company, now known as Attwood Gold Corporation. An estimated drill indicated resource was made of 56,850 tonnes averaging 15.26 grams per tonne gold, 17.83 grams per tonne silver and 0.70 per cent copper (Attwood Gold Corporation, Filing Statement, May 31, 1989).

Mineralization on the property consists of pyrite, pyrrhotite and chalcopyrite, occurring in discontinuous quartz veins and lenses hosted in the greenstones of the Upper Paleozoic Knob Hill Group and the 'Old Diorite' of Permian age. The Winnipeg claim is underlain mostly by diorite on the east and greenstones on the west. The claims appear to be traversed by an important southeasterly trending fault, off of which the many quartz filled gash fractures containing the ore, may have developed.

See the Golden Crown for a more complete description of the regional geology and mineralization.

BIBLIOGRAPHY

- EM EXPL 1998-65-75
- EMPR AEROMAG 8497G
- EMPR AR 1895-703; 1896-563,578,581; 1897-582,595-586; 1898-1127; 1899-604,763; 1900-870,880; 1901-1051,1052,1062; 1902-183; 1903-170,171,172,173; 1904-219,222; 1905-183,184; 1908-115; 1909-130; 1910-121,244; 1911-174,176,285; 1912-163-164,167,323; 1938-A34; 1939-A36; 1940-75; 1941-72; *1967-230-231; 1968-232-233
- EMPR ASS RPT 8482, *8851, 10258, 12131, 14641, 16090, *20431
- EMPR BC METAL MM00944
- EMPR EXPL 1980-18; 1983-10; 1986-C17
- EMPR FIELDWORK 1984, pp. 17-21
- EMPR INDEX 3-218
- EMPR MAP 59; 65
- EMPR MR MAP 6 (1932)
- EMPR OF *1990-25; 1992-1; 1998-10
- EMPR P *1986-2, pp. 58-59
- EMPR PF (Consolidated Boundary Explorations, Drill Hole Data, November 1979, in 082ESE032; Grand Forks Mines Ltd., Statement of Material Facts, December 11, 1987, in 082ESE032; Attwood Gold Corporation, Filing Statement, May 31, 1989; Attwood Gold Corp., Prospectus, July 1989, in 082ESE032; Kim, H. (1987): Report on the Preliminary Geological, Geophysical and Geochemical Exploration of the Winner Claim Group, in Silver Lady Resources Inc., Prospectus, March 1987, in 082ESE163)

BIBLIOGRAPHY

EMPR PRELIM MAP 59
EMR MIN BULL MR 223 B.C. 4
EMR MP CORPFILE (Sabina Mines Ltd.; Con-Am Resources Ltd.;
Consolidated Boundary Exploration Limited; Mundeel Mines Ltd.;
Grand Forks Mines Ltd.)
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM 21; 38
GSC OF 481; 637; 1969
GSC P 45-20; 67-42; 79-29
GSC SUM RPT 1902, p. 135
GCNL #50,#51,#60,#70,#74,#117,#196, 1978; #223, Nov.29, 1979; #121,
#135, 1983; #43,#165, 1985; #190,#112,#217, 1986; #27,#81, 1988;
#33(Feb.6), 1989; #111, 1990
IPDM Mar/Apr 1984
MIN REV Mar/Apr 1981, p. 51
WIN Jan. 1987
V STOCKWATCH Nov. 16, 1987

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

(Lot 788) (082ESE035) mines is centered four kilometres northwest of Greenwood at the elevation of 1050 metres. Access is by good gravel road which connects the property to the Mother Lode Creek road and Greenwood. The Greyhound (082ESE050) claim lies 1700 metres to the southeast.

Copper and iron-skarn mineralization occurs at several locations in the Greenwood mining camp. The skarn deposits are associated with the Upper Paleozoic Knob Hill Group and the unconformably overlying rocks of the Triassic Brooklyn Group. The Tertiary Penticton and Marron groups consisting of volcanoclastic and flow rocks unconformably overlie the Knob Hill and Brooklyn rocks.

The Knob Hill Group consists of massive chert, greenstone and amphibolite with minor pods and thin, widely scattered beds of limestone and argillite. The Brooklyn Group includes thick units of sharpstone conglomerate and limestone, as well as thinner beds of siltstone, sandstone and calcareous chert-pebble conglomerate. The sharpstone conglomerate contains angular fragments of chert and minor limestone, greenstone and jasper clasts set in a fine-grained chert, calcite and chlorite-rich matrix. The conglomerate is massive near its base and commonly bedded near its top, with numerous interbeds of sandstone, shale, siltstone and minor limestone. The conglomerate is overlain by the Brooklyn limestone which reaches 350 metres in thickness and comprises limestone and minor siltstone.

Regionally the Knob Hill Group trends east to southeast and dips moderately north, whereas the Brooklyn Group strikes north to northeast and dips steeply east. The rocks are broadly folded and have been affected by low grade regional metamorphism. They are truncated to the north by granodiorite of the Cretaceous Wallace Creek batholith, the southern margin of which has irregular apophyses and satellite intrusions that have thermally metamorphosed the country rocks. The major intrusive event is represented by the Cretaceous Greenwood stock and Wallace Creek batholith which are considered to be part of the Nelson Intrusions and genetically related to economic skarn development in the Greenwood camp (Paper 1989-3).

Earlier intrusive activity comprise small diorite, microdiorite, quartz feldspar porphyry and gabbro bodies that show varying degrees of alteration, but are not apparently associated with economic skarn mineralization. Tertiary intrusions include many dykes, sills and irregular bodies of monzodiorite and other alkalic rocks.

The formation of skarn in the district appears to be preferentially controlled by the contact between Brooklyn limestone and underlying sharpstone and siltstone beds. The largest and most productive precious metal enriched (PME) copper skarns are in the lower part of the Brooklyn Formation, either in the transition zone between the lower sharpstone and the Brooklyn limestone, or within the Brooklyn limestone itself.

The copper skarn mineralization at the Mother Lode pit occurs in the same member of the Brooklyn Formation as the skarns at the Phoenix mine (082ESE020). The protolith is believed to be mainly sharpstone conglomerate, calcareous siltstone and limestone. The formation, which strikes northwards and dips steeply east, also includes a lower sharpstone conglomerate overlain by skarn-altered siltstone and lenses of Brooklyn limestone and an overlying fine-grained sharpstone. These stratified rocks are cut by slightly skarn-altered granodiorite and feldspar porphyry (quartz syenite) dykes from several centimetres to 30 metres wide. These dykes are found at all levels of the mine from surface down to the 152 metre level.

Skarn alteration of limestone and sharpstone conglomerate is fairly extensive. The limestone is mostly altered to garnet skarn, but banded garnet-epidote-actinolite skarn is also common. In the sharpstone conglomerate, the original chert pebbles are replaced by recrystallized strained quartz, while the volcanic fragments are partially replaced by epidote, garnet, magnetite and minor sulphides.

The ore at the Mother Lode mine consists of many lenses, pods and irregular zones of chalcopyrite, pyrite and magnetite as grains, aggregates and thread-like streaks and lenses, distributed in a gangue composed of varying proportions of actinolite, garnet, epidote, calcite and quartz. Chalcopyrite also occurs in larger and purer masses. Magnetite occurs in irregular masses and lenses of considerable size.

The Mother Lode orebody is flanked by limestone on the northwest and by a northerly trending normal fault on the southeast. The ore has a warped configuration trending northeast and then east at the north end of the body and steepening in inclination from 45 degrees southeast to nearly vertical at depth.

The main mineralized zone is semi-circular and outcropped for a length of 365 metres with a width of approximately 60 metres. It has

CAPSULE GEOLOGY

been explored by underground workings to a depth of 152 metres, but most of the mining was above the 121 metre level. The general strike of the zone is 030 degrees with 45 to 70 degree southeast dips.

The Mother Lode claim was staked in 1891 and Crown granted in 1899. Exploration began with an adit crosscut in 1896 followed by an expanded program of shaft sinking and completion of a smelter at Greenwood in 1901. Underground development to 1902 totalled 2360 metres of tunnelling. In 1908 the shaft was deepened to 150 metres forming the basis for mining on four levels. Operations continued until 1918 when the mine and smelter closed. The Sunset claim was at first developed separately from Mother Lode. The Mother Lode was renewed by Woodgreen Copper Mines Limited in 1956 as an open pit mine supported by a 900-tonne per day mill. Production continued in 1959 at a reduced rate of 450 tonnes per day. This was augmented somewhat in 1960 with ore from the Sunset mine. Operations closed in 1962 and the concentrator was removed from the mine site.

Ore reserves at the Mother Lode mine are based on estimated tonnage remaining in pillars and sills in the old underground workings and unmined mineralization between the 120-metre level and chert basement. Estimated ore reserves for the Mother Lode are 300,000 tonnes, grading 0.5 gram per tonne gold, 4.5 grams per tonne silver and 0.65 per cent copper.

Combined (proven and probable) reserves at the Mother Lode and Greyhound are 407,288 tonnes grading 0.65 per cent copper, 0.51 gram per tonne gold and 4.44 grams per tonne silver (Royex Sturgex Mining Ltd., Information Circular 27/04/84).

A grab sample assayed 2.6 per cent copper, 3.6 grams per tonne gold, and 18 grams per tonne silver (EMPR Bulletin 101, Appendix 4B).

In 1996, YGC Resources drilled 7 holes, totalling 814 metres on the property.

BIBLIOGRAPHY

EMPR AR 1894-map after 758; 1896-577,581; 1897-582,*585-586;
*1898-1121-1122; 1899-604,752,765-766; 1900-721,866,875,880;
1901-1051,1054-1055,1058; 1902-24,176,178; 1903-165,170; 1904-209,
214-216; 1905-175,177,178,182; 1906-156,250; 1907-109,111,
113; 1908-112; 1909-130,273; 1910-244; 1911-174,176,285;
1912-163,164,167,236; 1913-141-146,161,320,421; 1914-333,511;
1915-198,199,203,446; 1916-254,518; 1917-22,203,211,374; 1918-209;
1956-75; 1959-A46,58; *1960-A53,64,65; 1961-A47,64,65; 1962-A48,68;
*1968-228-230
EMPR ASS RPT 2217, 2845, 2897, 9044, 19046
EMPR BC METAL MM00900
EMPR BULL 101, pp. 57, 237, Appendix 4B, 6
EMPR FIELDWORK 1984, pp. 17-21; 1987, pp. 273-275
EMPR GEM 1969-307; 1970-429-430; 1971-380-381; 1973-38-39;
1974-36-37
EMPR INDEX 3-206
EMPR MAP 59; 65
EMPR OF *1990-25; 1992-1; 1998-10
EMPR P 1986-2; *1989-3, pp. 41-43, 99, Appendix 7
EMPR PF (*Frederick, F.H. (1951): Report on Mother Lode - Sunset
Mines; *Allen, A.R. (1967): The Mother Lode and Greyhound
Properties; Photographs; Sulamet Mines Ltd. (circa 1956): Diamond
Drillhole Plan, in 082ESE050)
EMR MIN BULL MR 223 (1989) B.C. 7
EMR MP CORPFILE (Cadillac Explorations Limited; Greyhound Mines Ltd.;
Aabro Mining & Oils Ltd.; Cumberland Mining Company Limited; The
British Columbia Copper Company, Limited; GM Resources Limited;
Mascot Mines & Petroleum Limited)
GSC MAP 29A,*30A; 6-1957
GSC MEM *19; 21; 38
GSC OF 481; 637; 1969
GSC P 45-20; 67-42; 79-29
CANMET IR 600; 748
CIM Transactions Vol. 5 (1902) pp. 365-378; Vol. 49 (1956)
CMJ July 1, 1907 pp. 228-233
EMJ Vol. 95, No. 12 (1913), pp. 559-601
N MINER Apr.12, 1984

DATE CODED: 1985/07/24
DATE REVISED: 1997/03/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

northerly trending anticlinal structure. A thrust plate of Knob Hill chert passes only a short distance under the floor of the Sunset mine and at a slightly greater depth under the Mother Lode. Chalcopyrite was most abundant in the Sunset mine but tonnage was relatively small.

BIBLIOGRAPHY

this data is from Mother Lode (082ESE034), requires checking:
EMPR AR 1894-map after 758; 1896-562,581; 1897-576,585,586; 1898-1122;
1899-767; 1900-875,876,946; 1901-1051,1055,1056; 1902-176,178,304;
1903-165,166,171; 1904-25,209,211,212; 1905-179,183; 1906-158,250;
1907-109,111; 1908-248; 1915-203,446; 1916-254,518; 1917-203,211,
449; 1918-209; 1930-448; *1960-64-65; 1961-64-65; 1962-68;
*1968-228-230
EMPR ASS RPT 2217, 2845, 2897, 9044, 19046
EMPR BC METAL MM00937
EMPR BULL 101, p. 237
EMPR FIELDWORK 1984, pp. 17-21; 1987, pp. 273-275
EMPR GEM 1973-38; 1974-36
EMPR INDEX 3-215
EMPR MAP 59; 65
EMPR OF *1990-25; 1992-1
EMPR P *1986-2, pp. 40-42; *1989-3; pp. 41-43, 99
EMPR PF (*Frederick, F.H. (1951): Report on Mother Lode - Sunset
Mines; Allen, A.R. (1967): The Mother Lode and Greyhound
Properties; reports in 082ESE034; Salamet Mines Ltd. (circa 1956):
Property Plan in 082ESE050)
EMR MIN BULL MR 223 (1989) B.C. 7
EMR MP CORPFILE (Cadillac Explorations Limited; Greyhound Mines Ltd.;
Aabro Mining & Oils Ltd.; Cumberland Mining Company Limited; The
British Columbia Copper Company, Limited; GM Resources Limited;
Mascot Mines & Petroleum Limited)
GSC MAP 29A; *30A; 6-1957
GSC MEM *19; 21; 38
GSC OF 481; 637; 1969
GSC P 45-20; 67-42; 79-29
CANMET IR 600; 748
CIM Transactions Vol. LIX (1956)
CMJ July 1, 1907 pp. 228-233

DATE CODED: 1985/07/24
DATE REVISED: 1997/03/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

CAPSULE GEOLOGY

hornblende migmatite, strike north and dip 30 degrees west. This suggests that a fault separates the two sequences on either side of Morrissey Creek.

The deposit is comprised of medium to coarse grained (2 to 6 millimetres), brownish weathering, white dolomite, containing scattered streaks and spots of light green to yellowish green serpentine, flakes of yellow to light brown phlogopite and vein like bodies of feldspar. Various other minor constituents include calcite, forsterite, diopside, spinel, anthophyllite, tremolite, biotite and apatite. A sample of randomly collected chips from the quarry east of Morrissey Creek contained 30.86 per cent CaO, 20.69 per cent MgO, 1.19 per cent insolubles, 0.98 per cent R2O3, 0.49 per cent Fe2O3, 0.039 per cent MnO, 0.03 per cent P2O5, 0.004 per cent sulphur and 46.20 per cent ignition loss (Geology, Exploration and Mining in B.C. 1970, p. 491). Dolomite reserves are estimated at 1 million tonnes (Assessment Report 13176, p. 14).

The dolomitic limestone west of Morrissey Creek is medium grained and white in colour. Chert beds are prominent within this unit. The limestone contains minor diopside, mica and serpentine.

Dolomite and limestone were initially quarried here for building stone and lime as early as 1916. Ramshead Quarries Ltd. quarried the dolomite for building stone from 1968 to 1971. V.T.S. Quarry Ltd. performed some minor exploration work for agricultural lime in 1984. No production figures are available.

BIBLIOGRAPHY

EMPR AR *1960-142,143; 1968-297
EMPR ASS RPT 13176
EMPR EXPL 1985-A48
EMPR FIELDWORK 1985, p. 240
EMPR GEM 1969-384; *1970-490,491; 1971-455
EMPR INF CIRC 1985-1, p. 46
EMPR OF 1992-18, p. 123
GSC MAP 6-1957
GSC OF 481; 1969
GSC P 69-22, p. 8
CANMET RPT *452, Vol.5, pp. 140,141; *811, Part 5, p. 190

DATE CODED: 1985/07/24
DATE REVISED: 1989/09/14

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE037**

NATIONAL MINERAL INVENTORY:

NAME(S): **BAILEY SILICA**, GRAND FORKS

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 18 N
LONGITUDE: 118 24 40 W
ELEVATION: 1167 Metres

NORTHING: 5428971
EASTING: 396800

LOCATION ACCURACY: Within 5 KM

COMMENTS: Within 4 kilometres of Grand Forks to the southeast.

COMMODITIES: Silica

MINERALS

SIGNIFICANT: Silica
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Pegmatite Industrial Min.
TYPE: O04 Feldspar-quartz pegmatite

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Proterozoic			Grand Forks Gneiss

LITHOLOGY: Gneiss
Pegmatite
Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The property is located near the U.S. border, 4 kilometres southeast of Grand Forks. It was acquired in 1942 by the Consolidated Mining and Smelting Company of Canada, Limited, as a source of silica for use as a flux in the smelting operations at Trail. Production between 1943 and 1947, totalled 73,163 tonnes of silica.

A vein or pegmatitic mass of quartz, running as high as 96 per cent silica, with 0.14 per cent iron, occurs within Proterozoic Grand Forks Gneiss.

BIBLIOGRAPHY

EMPR AR 1942-92; *1943-87; 1944-83; 1945-132; *1946-207; 1947-222
EMPR BC METAL (Production fiche on fluxes for Bailey Silica)

DATE CODED: 1985/07/24
DATE REVISED: 1997/07/21

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE038**

NATIONAL MINERAL INVENTORY:

NAME(S): **PUYALLUP (L.1152)**, WHITE'S CAMP, GOOSMUS CREEK,
~~CENTRAL CAMP~~

MINING DIVISION: Greenwood

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 50 N
LONGITUDE: 118 37 24 W
ELEVATION: 1380 Metres

NORTHING: 5430269
EASTING: 381301

LOCATION ACCURACY: Within 500M

COMMENTS: At headwaters of Goosmus Creek between Mount Wright and Rusty Mountain.

COMMODITIES: Talc Soapstone

MINERALS

SIGNIFICANT: Talc
COMMENTS: Blue massive talc.
ALTERATION: Serpentine Talc Carbonate
ALTERATION TYPE: Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Metamorphic Replacement Industrial Min.
TYPE: M07 Ultramafic-hosted talc-magnesite

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Serpentinite
Serpentinized Schist
Ultramafic
Soapstone
Ultramafic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Several occurrences of talc-carbonate alteration have been reported by McCammon (1967), associated with the serpentinite belt on the southwest slopes of Mount Wright, 7 kilometres southeast of Greenwood. Access to the area is via the Goosmus Creek road that turns west from the Phoenix haulage road.

The serpentinite occurs in a northeast dipping thrust zone with mainly Knob Hill Group rocks on the hanging wall to the northeast and Attwood Group rocks and quartz and feldspar porphyry intrusions in the footwall to the southwest. The serpentinite is intensely sheared and mottled dark and light green with talc occurring on slip surfaces. On the Puyallup claim, at the headwaters of Goosmus Creek between Mount Wright and Rusty Mountain, an exploration trench dug by Lexington Mines (1969) cut through serpentinite exposing narrow lens of distinctive light blue talc.

To the east, south of Gibbs Creek, ultramafic rock is locally altered to talc (Little, 1983).

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1893-1077; 1896-577,581,582; 1897-583; 1898-1127; 1901-1062;
1903-172; 1904-222
EMPR GEM *1970-413-425
EMPR MAP 59
EMPR MR MAP 6 (1932)
EMPR OF 1988-19, 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
EMR MINES BRANCH RPT *803-61 (Spence, 1940)
GSC EG SERIES #2, pp. 49-50

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 447
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 6-1957; 828; 45-20A; 1500A; 1736A
GSC MEM 21
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 45-20; 67-42; 79-29, p. 22

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE039**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTHWIND**, NORTH WIND, AFTERMATH,
JOY 1

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:
LATITUDE: 49 13 00 N
LONGITUDE: 118 06 04 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5452126
EASTING: 419813

COMMODITIES: Gold Silver Copper Lead

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite Galena
ASSOCIATED: Quartz
ALTERATION: Chlorite Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Nelson Intrusions

LITHOLOGY: Porphyritic Granite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The area is underlain by porphyritic granite and granodiorite of the Jurassic Nelson Batholith, which is in contact to the east with syenite of the Eocene Coryell Intrusives. Remnants of Anarchist and Mt. Roberts volcanics and sediments are present.

A shear zone, trending north 45 degrees east, dipping 65 degrees east, is up to 2 metres and cuts the granite. Quartz stringers within the shear zone contain pyrite, pyrrhotite and chalcopyrite. A sample returned 29.3 grams per tonne silver (Assessment Report 13367). Another sample 1 kilometre to the northeast returned 8.68 grams per tonne gold and 29.1 grams per tonne silver (Assessment Report 13606). A sample taken in 1936 returned 11 grams per tonne gold and 158 grams per tonne silver (Sargent, 1936).

Rex Silver Mines Ltd. conducted sampling and geophysical surveys in the area in 1983, 1985 and 1986.

BIBLIOGRAPHY

EMPR AR 1918-210,470; 1936-E42
EMPR ASS RPT *12367, *13606, 14758
EMPR BC METAL MM00813
EMPR INDEX 3-187
EMPR PF (SARGENT, 1936)

DATE CODED: 1985/07/24
DATE REVISED: 1999/10/12

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE040**

NATIONAL MINERAL INVENTORY:

NAME(S): **THREE JACKS**, JOY 2, SEAL

MINING DIVISION: Trail Creek

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 12 24 N
LONGITUDE: 118 01 38 W
ELEVATION: 1400 Metres

NORTHING: 5450938
EASTING: 425178

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Silver Copper

MINERALS

SIGNIFICANT: Tetrahedrite Pyrite Chalcopyrite
ASSOCIATED: Quartz Calcite Epidote Tremolite Garnet
ALTERATION: Epidote Garnet
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Skarn Replacement

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Pennsylvan.-Permian Eocene	Unnamed/Unknown Group	Mount Roberts	Coryell Intrusions

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The area is underlain by an east-trending belts of greenstones, tuffs, limestones and argillaceous sediments of the Carboniferous-Permian Mt. Roberts Formation. These are cut by porphyritic granite of the Jurassic Nelson Intrusions and syenites of the Eocene Coryell Intrusions. Coryell rocks to the north of the showing are radioactive (10,000 cpm).

Pyrite, chalcopyrite and tetrahedrite mineralization is hosted by a skarn zone within limestone. The skarn contains variable epidote and garnet. Mineralization is controlled by northeast-trending shear zones, which contain quartz-carbonate stringers and lenses.

Rex Silver Mines Ltd. conducted sampling and geophysical surveys in the area in 1983, 1985 and 1986. Taff Resources Ltd. conducted a geochemical survey on the Seal claims in the area in 1988 and 1989.

BIBLIOGRAPHY

EMPR ASS RPT *12367, 13606, 14757, 18937, 19421
EMPR EXPL 1978-E14

DATE CODED: 1985/07/24
DATE REVISED: 1999/10/12

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE041**

NATIONAL MINERAL INVENTORY: 082E2 Cu13

NAME(S): **LEXINGTON (L.645)**, CITY OF DENVER (L.1161), CENTRAL CAMP,
WHITE'S CAMP, KING MIDAS, GRENOBLE

STATUS: Developed Prospect

Underground

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E02E

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 49 00 42 N

LONGITUDE: 118 36 55 W

ELEVATION: 1265 Metres

NORTHING: 5430010

EASTING: 381884

LOCATION ACCURACY: Within 500M

COMMENTS: Lexington adit in the northwest corner of Lot 645, 50 metres east of
Goosmus Creek, 10 kilometres south-southeast of Greenwood (Geology,
Exploration and Mining 1970). The Lexington is 10 kilometres
southeast of Greenwood and 1.1 kilometres north of the International
Boundary. Access to the mine is from the Boundary road 1 kilometre
west of the Phoenix (082ESE020) - Lone Star (in Washington State)
haulage road. The City of Paris (082ESE042) lies 500 metres to the
southeast.

COMMODITIES: Copper

Gold

Silver

Lead

Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite

ASSOCIATED: Quartz

ALTERATION: Limonite Malachite

COMMENTS: Also manganese oxide staining.

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Stockwork

Disseminated

Vein

CLASSIFICATION: Porphyry

Mesothermal

Epigenetic

TYPE: L04 Porphyry Cu ± Mo ± Au

I05

Hydrothermal

Polymetallic veins Ag-Pb-Zn±Au

H04 Epithermal Au-Ag-Cu: high sulphidation

DIMENSION: 900 x 300 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Also Tertiary age veins. Dimension is area of porphyry copper
mineralization.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Paleozoic

Upper Paleozoic

Lower Jurassic

GROUP

Unnamed/Unknown Group

Attwood

FORMATION

Unnamed/Unknown Formation

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Lexington Intrusion

ISOTOPIC AGE: 200 Ma

DATING METHOD: Uranium/Lead

MATERIAL DATED: Zircon

LITHOLOGY: Quartz Porphyry

Serpentinite

Felsite

Quartz Feldspar Porphyry

Diorite Dike

Quartz Chlorite Schist

Meta Quartzite

Basalt Andesite Lava

Phyllite

Quartz Wacke

HOSTROCK COMMENTS: Age date of Lexington Intrusion by Church (Fieldwork 1991, page 295).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

Quesnel

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: MAIN

REPORT ON: Y

CATEGORY:	Indicated	YEAR:	1995
QUANTITY:	147000 Tonnes		
COMMODITY		GRADE	
Gold		8.9000	Grams per tonne
Copper		0.9600	Per cent

COMMENTS: Estimated drill indicated reserve by Bren-Mar.
 REFERENCE: Northern Miner, February 26, 1996 and Info. Circular 1996-1, page 15.

CAPSULE GEOLOGY

The Lexington (Lot 645) is 10 kilometres southeast of Greenwood and 1.1 kilometres north of the International Boundary, at the elevation of 1265 metres, east of Goosmus Creek. Access to the mine is from the Boundary road 1 kilometre west of the Phoenix (082ESE020) - Lone Star (in Washington State) haulage road. The City of Paris (082ESE042) lies 500 metres to the southeast.

Work began on the Lexington claim in 1899. This property is adjacent to the City of Paris property on the west. A total of 360 metres of underground tunnelling was completed to 1901. In the period 1968 to 1981, additional exploration, including trenching and diamond drilling, was completed. In 1980 a new adit was driven midway between the City of Paris and Lexington adits. This work included 210 metres of drifting and crosscut tunnelling and 34 metres of raise development.

Much of the recent exploration has focused on the widespread, low grade copper mineralization associated with the quartz porphyry intrusion on the Lexington, City of Paris, Lincoln and adjacent claims. This 'porphyry' mineralization is mostly contained within a 900-metre long, 300-metre wide segment of the quartz porphyry exposed between the main ultrabasic intrusion and a smaller subparallel serpentinite splay near Goosmus Creek. The principal mode of occurrence of the main ore minerals, pyrite and chalcopyrite, is in fractures and disseminations and, to some extent, in quartz stockworks. Anomalous copper values have also been obtained in the serpentinite splay adjacent to the quartz porphyry intrusion near Goosmus Creek, just below the Lexington portal. This sheared serpentinite contains interfoliated impregnations and massive lenses of pyrite, chalcopyrite and magnetite.

The McCarren-Goosmus creeks area is underlain by a southeasterly striking 1.6-kilometre wide belt of Paleozoic(?) gneiss and schist bounded both north and south by zones of Paleozoic or Early Mesozoic metavolcanic and metasedimentary beds. These rocks are cut by a wide variety of igneous intrusions, including a porphyritic quartz-feldspar porphyry stock and a few large serpentinite and gabbro dyke-like bodies. Also, dykes and irregular-shaped diorite intrusions are found throughout the area cutting many of the units. The youngest rocks consist of a few pulaskite and basalt dykes and a small outlier of Tertiary conglomerate.

The rocks of the gneiss-schist belt form a basement complex of thinly layered quartz-chlorite schist, massive lenses of pure metaquartzite and graphitic quartzite, minor muscovite schist and carbonated schist, and a prominent zone of chlorite-amphibole schist. Sharp-crested, shallow plunging folds are locally well developed in the laminated units. The gneissosity and foliation are generally inclined to the northeast, with dips ranging from about 20 to 60 degrees.

The volcanic and sedimentary units which overlie the basement complex comprise a lower zone of basalt and andesite lava, an intermediate zone of carbonaceous phyllite and an upper zone of quartz wacke and conglomerate - the total sequence being more than 304 metres thick. The overall disposition of these units is almost horizontal, although some beds are steeply inclined on the limbs of minor folds.

The oldest igneous intrusions, probably Early Mesozoic age, consist of an assemblage of genetically related small stocks and hypabyssal felsic intrusions mapped as quartz-feldspar porphyry, quartz porphyry, felsite and schistose felsite. The largest of these units is a body of quartz-feldspar porphyry located near the junction of McCarren and Gidon creeks. An elongated composite quartz porphyry felsite intrusion (the Lexington property "dacite") follows the general course of Goosmus Creek and appears to be an easterly extension of the quartz-feldspar porphyry stock.

Late intrusives on the Lexington property include Cretaceous(?) serpentinite masses, early Tertiary diorite and alkali-diorite dykes and stocks, and pre-diorite andesite dykes(?). The felsic igneous rocks (quartz porphyry, quartz-feldspar porphyry) are intruded by a large serpentinite dyke-like body which extends northwest from the vicinity of the Lone Star mine south of the International Boundary to

CAPSULE GEOLOGY

McCarren Creek, a distance of about 7.2 kilometres. This ultramafic body as well as a similar-sized intrusion at Mount Wright and several other smaller lenses, consist primarily of an antigorite-rich serpentinite. Early Tertiary fine to medium-grained diorite dykes and a number of irregular-shaped intrusions are found throughout the area and cut the felsic intrusions and units of the metamorphic complex.

The overall disposition of the rock types on the property is that of a gently to moderately dipping sheet (quartz porphyry or "dacite") enclosed by, and locally intruded by serpentinite. The general dip of the major contacts is 20 to 30 degrees to the northeast, with the strike changing in a gentle arc from northwest in the south, to nearly east-west in the north. Foliation in both the "dacite" and serpentinite generally parallels strike, but is more steeply dipping (30-60 degrees to the northeast). The "dacite"-serpentinite package is in turn cut by northeast to north striking, steep normal faults, a moderately northwest dipping thrust fault, a probable east trending vertical fault and unknown amount of local contact shearing and faulting observed in talc-rich zones of the serpentinite.

Gold-copper-(silver) mineralization occurs in several styles in the Central Camp, an area that has been prospected and mined since 1890 when the region was first explored. Most mineralization is related to local structural environments and virtually all significant mineralization occurs within the quartz porphyry to felsite unit (locally termed "dacite"), at or close to its contacts with either the hanging wall or footwall serpentinites. The principal varieties of mineralization include: 1) major quartz veins and vein systems, 2) veins, silicified zones and replacements, 3) fracture-fill and disseminated sulphides and 4) mineralized shear zones in serpentinite.

The No. 7 mine (082ESE043) is on the most productive vein (style 1 mineralization) located on a ridge south of McCarren Creek, approximately 2.5 kilometres north-northwest of the Lexington adit which is on the Lexington claim (Lot 645). The vein crops out along the north contact of a narrow appendage of a serpentinite intrusion. Two periods of intermittent production were recorded from this mine, 1901 to 1913, and 1934 to 1945. The City of Paris mine (082ESE042) is on a vein system (style 1 mineralization) near the south contact of the serpentinite intrusion, about 3 kilometres south-southeast of the No. 7 mine and 500 metres south-southeast of the Lexington adit. The City of Paris portal is on the Number Four claim (Lot 791), with the underground workings extending easterly onto the City of Paris claim (Lot 622) and the Lincoln claim (Lot 621). Production of ore was mostly in the year 1900 with some ore shipments also recorded from 1937 to 1940. The Lincoln vein is exposed on the south side of the serpentinite and appears to be the vein followed by the main northwest drift on the bottom level of the City of Paris mine. A small shipment of ore was made from the Lincoln portal located on the Lincoln claim (Lot 621), 182 metres east of the City of Paris mine. A 76-metre adit was driven on a pyrite-chalcopyrite vein on the Lexington claim.

Style 2 mineralization is exemplified by the so-called Mabel veins (082ESE149), located between the No. 7 and City of Paris mines. These veins consist of a series of small, auriferous quartz stringers. Production in 1937 was from an inclined shaft sunk on a narrow zone of silicified schist. Some of the silicified zones and quartz stringers in the Mabel area are related to broader, replacement-type sulphide deposits apparently associated with large Tertiary diorite dykes.

Style 4 mineralization is evident west of the Lexington portal, where high copper grades occur locally in serpentinite adjacent to a quartz porphyry intrusion. Shears within the serpentinite contain pyrite and chalcopyrite. Assays across a 30-metre width range from 0.36 to 0.76 per cent copper (Geology, Exploration and Mining in British Columbia 1970).

The Lexington property now includes most of the workings in the Central Camp. Recent exploration is focused on style 3 mineralization, widespread low-grade copper mineralization associated with the quartz porphyry (dacite) in the City of Paris area. This "main zone" mineralization is contained roughly within a 914-metre long, 304-metre wide segment of the quartz porphyry exposed between the main serpentinite intrusion and a somewhat smaller serpentinite body near Goosmus Creek. The principal mode of occurrence of the main minerals, pyrite and chalcopyrite, is in fractures and disseminations and to a less extent in quartz stockworks. The rock is commonly leached at surface, with fracture faces being coated with limonite and malachite or black manganese oxide. Fractures are strongly developed locally and the intensity of mineralization

CAPSULE GEOLOGY

appears proportional to the relative development of fractures. A statistical study of fractures in the quartz porphyry shows two fracture directions, a dominant direction striking 125 degrees, dipping 55 degrees northeast, and a weaker system striking 160 degrees, dipping 50 degrees northeast. Cross-joints and tension fractures commonly strike about 030 degrees and dip 65 degrees northwest and 101 degrees and dip steeply, respectively. The broadest exposed area of fair to good mineralization is centred about 243 metres north of the City of Paris portal. Smaller areas are found 152 metres south of the Lincoln portal (Geology, Exploration and Mining in British Columbia 1970).

Surface and underground exploration work on the Lexington property has been continuous since the 1960s.

Candol Developments drilled 10 holes on the property in 1989.

In 1993, proven mineable reserves were stated as 131,500 tonnes grading 9.6 grams per tonne gold and 1.48 per cent copper (Northern Miner, February 1, 1993). The mineralized zone consists of three subzones, the Main, Vacher and Golden Cache. Ore reserves for this property, according to 1981 estimates, indicate 313,527 tonnes, grading 5.44 grams per tonne gold and 1.96 per cent copper, calculated using a 15 per cent dilution factor. An additional 110,000, tonnes grading 1.99 grams per tonne gold and 0.92 per cent copper, is amenable to possible open pit mining (International Prospector & Developer Magazine, Mar/Apr 1982).

Britannia Gold Corporation and Bren-Mar Resources Ltd. widened the Grenoble adit and completed work on a 600-metre decline to the Main zone containing a drill indicated reserve estimated at 162,000 tonnes grading 8.9 grams per tonne gold and 0.96 per cent copper. (Northern Miner, February 26, 1996 and Information Circular 1996-1, page 15). The decline is being extended a further 235 metres to allow underground diamond drilling of the 'lower' Main zone.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
EMPR AR 1892-544; 1894-757, map after 758; 1896-562,581;
1897-583-585; 1898-1125,1126; 1899-604,753,754; 1900-869;
1901-1062,1229; 1905-254; 1922-177; 1937-D31; 1938-D37
EMPR ASS RPT 408, 1707, 1775, 3563, 5378, 8461, 11365, 16417, 22919,
23300, 24614
EMPR EXPL 1975-E13; 1980-20; 1983-13; 1995-15,66,67; 1996-E4
EMPR FIELDWORK *1991, pp. 295-297; 1996, pp. 211-213
EMPR GEM 1969-308,309,350; *1970-413-425; *1971-376-379; 1972-35
EMPR INF CIRC 1993-13, p.17,19; 1994-1, p.17,20; 1995-9, p.15;
1996-1, p.15; 1997-1, p.19
EMPR MR MAP 6 (1932)
EMPR OF 1992-1; 1990-25; 1994-1
EMPR P 1986-2, pp. 31,33
EMPR PF (List of recorded mineral claims; Hemsworth, F.J. (1962):
Report on the King Midas Property; Fominoff, P.J. and Baird, J.G.
(1971): Report on an Induced Polarization Survey; *Phendler, R.W.
(1974): Report on the Lexington Property; Phendler, R.W. (1974):
Economic Study on Orebody of Gold-Copper Property; Filing
Statement, Canadian Pawnee Oil Corporation, May 1987)
EMPR PRELIM MAP 59
EMR MIN BULL MR 181 BC 201; *223 BC 3
EMR MP CORPFILE (Lexington Mines Ltd.; Aalenian Resources Ltd.;
Grenoble Energy Limited; Canadian Pawnee Oil Corporation)
GSC MAP 828; 834; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM 38 Part I, pp. 383-388
GSC OF 481; 637; 1969
GSC P 45-20; 65-1, pp. 56-60; 67-42; 79-29
GSC SUM RPT 1901, pp. 51A-67A
CIM Special Volume 15 (1976), p. 39; *46, pp. 851-854
GSA Vol.75, No.5 (1964), pp. 465-468
GCNL Dec.16, 1974; #100,#137,#168, 1980; #21,#49,#83,#100,#115,#138,
1981; #41, 1982; #52, 1983; #155,#230, 1984; #159, 1986;
#11,#26,#32, 1987; #1(Jan.4),#24,#65, 1988; #21(Jan.30), 1990;
#26(Feb.6),#68(Apr.6),#72(Apr.10),#78(Apr.22), 1992,#87(May 5),
#138(July 17), 1992; #161(Aug.22), 1995
IPDM Mar/Apr 1982
N MINER Mar.26, 1981; Mar.4,11, July 29, 1982; May 8, 1989; Feb.1,
1993; Feb.26, Aug.5, 1996
PR REL Gold City Industries Ltd., July 31, 2002; Mar.6, 2003
Canadian Pawnee Oil Corporation, VSE Filing Statement 63/85; VSE
Amended Filing Statement 5/87
Phendler, R.W. (1988): Summary Report on the Lexington Property,
Statement of Material Facts, Eutruscan Resources Ltd., 06/02/87;
Phendler, R.W. (1979): Report on the Lexington Copper-Gold Property,
Statement of Material Facts, Grenoble Energy Limited, Sept. 18,

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 454
REPORT: RGEN0100

BIBLIOGRAPHY

1980

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE042**

NATIONAL MINERAL INVENTORY: 082E2 Cu13

NAME(S): **CITY OF PARIS (L.622)**, LINCOLN (L.621), NUMBER FOUR (L.791),
KING MIDAS, CENTRAL CAMP, WHITE'S CAMP,
LEXINGTON

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 00 31 N
LONGITUDE: 118 36 31 W
ELEVATION: 1370 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The City of Paris mine is 10 kilometres southeast of Greenwood and 1.1 kilometres north of the International Boundary, east of Goosmus Creek. Access to the mine is from the Boundary road 1 kilometre west of the Phoenix (082ESE020) - Lone Star (in Washington State) haulage road. The Lexington (082ESE041) lies 500 metres to the northwest.

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5429660
EASTING: 382365

COMMODITIES: Silver Gold Copper Lead Zinc
Antimony

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Chalcopyrite Pyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Carbonate Fuchsite
ALTERATION TYPE: Quartz-Carb. Serpentin'zn
MINERALIZATION AGE: Tertiary
ISOTOPIC AGE: 56.7 +/- 1.0 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Fuchsite

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Age date from Church (Fieldwork 1996, page 212).

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Unnamed/Unknown Group	Unnamed/Unknown Formation	Lexington Intrusion
Lower Jurassic			
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			

LITHOLOGY: Quartz Porphyry
Serpentinite
Listwanite

HOSTROCK COMMENTS: Age date of Lexington Intrusion by Church (Fieldwork 1991, page 295).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Quesnel

CAPSULE GEOLOGY

The City of Paris mine is 10 kilometres southeast of Greenwood and 1.1 kilometres north of the International Boundary, at the elevation of 1370 metres, east of Goosmus Creek. Access to the mine is from the Boundary road 1 kilometre west of the Phoenix (082ESE020) - Lone Star (in Washington State) haulage road. The Lexington (082ESE041) lies 500 metres to the northwest.

Production from the City of Paris mine for the period 1900 to 1940 was 1926 tonnes of ore containing 26.6 kilograms of gold, 139 kilograms of silver, 60.4 tonnes of copper and a small amount of lead and zinc. About 85 per cent of this production was in 1900. An additional 8 tonnes of ore was produced from the Lincoln claim in 1962 and 1963, yielding about 11.5 kilograms of silver, 373 kilograms of lead and a minor amount of gold and zinc.

The City of Paris (Lot 622) and Lincoln (Lot 621) claims were Crown granted in 1895 to J. Stevens. Development of the City of Paris mine began in 1898. A crosscut adit was driven 250 metres northeast to intersect the main southeasterly trending vein system at about 90 metres below the hill side. From this intersection drifting was extended 180 metres northwest on the vein, connecting with the City of Paris shaft, and further drifting of 90 metres to the southeast towards the Lincoln shaft. At the end of the main

CAPSULE GEOLOGY

period of production in 1900 the total mine development consisted of 1580 metres of drifts and crosscut tunnels, 213 metres of raises and 113 metres of shafts.

In 1962, King Midas Mines Ltd. drove a short adit near the base of the Lincoln shaft, immediately southeast of the City of Paris workings. This operation produced a small amount of high grade silver ore in 1962 and 1963. In the period 1968 to 1981, additional exploration, including trenching and diamond drilling, was completed. In 1980 a new adit was driven midway between the City of Paris and Lexington adits. This work included 210 metres of drifting and crosscut tunnelling and 34 metres of raise development.

The City of Paris mine is on a vein system near the south contact of a major ultramafic lens. The vein system consists of two locally discontinuous, subparallel veins developed along the margin of a narrow serpentinite appendage flanking the main ultramafic body. The veins trend northwest at about 160 degrees and vary in width from 5 metres to mere stringers of ore. The vein system dips 55 degrees northeast and has an exposed strike length of 460 metres. The City of Paris vein, which follows the northeast side of the serpentinite appendage, is the source of much of the mined ore.

The Lincoln vein occurs on the south side of the serpentinite appendage. This is the vein followed by the main northwest trending drift on the bottom level of the mine. The lithologies in this area are impregnated with and traversed by stringers of quartz and calcite carrying sulphides, which diminish in amount with distance from the main lead. The ore on northwest occurs in chutes and consists of argentiferous galena, sphalerite, tetrahedrite, chalcopyrite and pyrite, while in the southeast drift the ore is almost massive pyrite and chalcopyrite. Some of the best assay results were obtained from the Lincoln shaft and portal area. The metal values are unevenly distributed, running in pay streaks. A grab sample from the vein near the Lincoln shaft assayed 2.1 grams per tonne gold, 182 grams per tonne silver, 1.84 per cent copper, 3.98 per cent lead, 0.12 per cent zinc, 0.073 per cent arsenic, and 0.93 per cent antimony (Geology, Exploration and Mining 1970, page 421).

The origin of the vein system is related to reactivation of thrusting at the contact between the Lexington quartz porphyry and hangingwall serpentinite during the development of the Republic graben. The veins clearly existed prior to emplacement of the Tertiary dikes, as evidenced by the damming of these dikes adjacent to the veins. However, the veins are also younger than the penetrative deformation that is commonly seen in the surrounding country rocks. An analysis of fuchsite obtained from quartz stringers in listwanite, immediately north of the Lincoln workings, yielded a K/Ar age of 56.7 +/- 1.0 Ma.

Much of the recent exploration has focused on the widespread, low grade copper mineralization associated with the quartz porphyry intrusion on the City of Paris, Lincoln, Lexington and adjacent claims. This 'porphyry' mineralization is mostly contained within a 900-metre long, 300-metre wide segment of the quartz porphyry exposed between the main ultrabasic intrusion and a smaller subparallel serpentinite splay near Goosmus Creek. The principal mode of occurrence of the main ore minerals, pyrite and chalcopyrite, is in fractures and disseminations and, to some extent, in quartz stockworks. Anomalous copper values have also been obtained in the serpentinite splay adjacent to the quartz porphyry intrusion near Goosmus Creek, just below the Lexington portal. This sheared serpentinite contains interfoliated impregnations and massive lenses of pyrite, chalcopyrite and magnetite.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
- EMPR AR 1892-544; 1894-757, map after 758; 1896-562,581; 1897-583; 1898-1125; 1899-604,752,*753; 1900-864,869; 1901-1051,1062; 1905-183,254; 1922-177; 1937-A36,D31; 1938-A33,D37; 1939-36; 1940-23; 1962-A48,69; 1962-A47
- EMPR ASS RPT 408, 1775, 5378, 9361, 10487, 22919, 23300, 24614
- EMPR BC METAL MM00837, MM00879
- EMPR BULL 1 (1932), p. 84
- EMPR EXPL 1975-E13
- EMPR FIELDWORK 1991, pp. 295-297; *1996, pp. 211-213
- EMPR GEM *1970-413-425; 1971-376-379
- EMPR INDEX 3-192; 4-122
- EMPR MR MAP 6 (1932)
- EMPR OF 1992-1; 1990-25; 1994-1
- EMPR P *1986-2, pp. 31,33
- EMPR PF (Starr, C.C. (1926): Report of Preliminary Examination of

BIBLIOGRAPHY

the City of Paris Mine, 4 p.; Sketch of Mine Workings (1"=50');
Photo of Lincoln Vein, 1970; The following reports are in
082ESE041: Hemsworth, F.J. (1962): Report on the King Midas
Property; and Phendler, R.W. (1974): Report on the Lexington
Property)
EMPR PRELIM MAP 59
GSC MAP 828; 834; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM 38 Part I, pp. 383-388
GSC OF 481; 637; 1969
GSC P 45-20; 67-42; 79-29
GSC SUM RPT 1901, pp. 51A-67A; 1902, p. 124
CIM Special Volume *46, pp. 851-854
CIM Transactions Vol. 5 (1902), p. 369
WWW <http://www.infomine.com/index/>

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE043**

NATIONAL MINERAL INVENTORY: 082E2 Au5

NAME(S): **NO. 7 (L.623)**, NUMBER SEVEN, WHITE'S CAMP,
CENTRAL CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 01 30 N
LONGITUDE: 118 38 28 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5431532
EASTING: 380027

COMMODITIES: Gold Silver Lead Zinc Cadmium

MINERALS

SIGNIFICANT: Pyrite Sphalerite Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	
Upper Paleozoic	Attwood	Unnamed/Unknown Formation	

LITHOLOGY: Chert
Chloritic Schist
Serpentinite
Quartz Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The No. 7 mine is on the claim of the same name (Lot 623), on a ridge crest at the elevation of 1370 metres, 3.3 kilometres east of the confluence of McCarren and Gidon creeks, 7.5 kilometres southeast of Greenwood. Access to the property is 2.4 kilometres travelling southerly and up hill by winding dirt road from the McCarren Creek road. The Lexington (082ESE041) and City of Paris (082ESE042) lie 2.5 kilometres to the southeast.

The intermittent operations of the No. 7 mine from 1901 to 1945 produced a total of 13,748 tonnes of ore yielding 92.4 kilograms of gold, 3110 kilograms of silver, 97 tonnes of lead, and 6.2 tonnes of zinc.

The potential of No. 7 was recognized early in the Greenwood camp and the claim was Crown granted in 1895 to J. Schofield. By 1897, a 40-metre deep inclined shaft was developed on the claim to service 60 metres of underground drifting. At the approximate time of final closing of the mine 50 years later, in 1945, the mine workings comprised a 100-metre inclined shaft, adit levels at 12 and 90 metres, and intermediate levels at 30 and 55 metres. Old mine maps show that the underground work on these four levels totals about 1580 metres. The 90-metre adit level is open from portal to face, a distance of about 580 metres, but the other levels are partly caved southeast of the inclined shaft. Other workings include an adit drift 40 metres northwest of the 12-metre No. 1 adit, a large number of surface pits, and a deep trench along the vein from which some underhand stoping was done.

The mine is developed on a quartz vein on a major southeasterly trending boundary fault between Upper Paleozoic Knob Hill Group on the northeast and Attwood Group on the southwest. Contained in part within the fault zone, and hosting this vein, are a schistose quartz feldspar intrusion and serpentinite. A variety of young Tertiary dikes have invaded, and are superimposed on, the vein structure.

The quartz vein at the mine site has been traced for a strike length of more than 300 metres. The vein ranges from 10 centimetres to 1.5 metres wide and dips 40 to 65 degrees northeast, having dike

CAPSULE GEOLOGY

rocks or chloritic schists of the Knob Hill Group on the hanging wall and highly sheared talc-carbonate rocks of the serpentinite body on the footwall.

Mineralization consists of pyrite, sphalerite and some galena dispersed in blue-grey quartz along the central portion of the vein. The most productive part of the vein was southeast of the inclined shaft above the 55-metre level.

A large number of northeasterly striking faults displace the vein. Displacements along these faults range from a few feet to almost 60 metres. The maximum displacement was measured on the fault exposed in the southeast end of the 90-metre level and on the surface 60 metres southeast of the long open cut. The vein has not been located beyond this fault. Movement along these faults has been largely post mineral. Evidence of some pre-mineral movement is furnished by unbroken vein quartz seams and lenses, up to 20 centimetres by 3 metres, in the fault zone exposed at the southeast end of the 90-metre level. Subsidiary faults of small displacement are part of this same fault zone, and offset both vein and the post mineral quartz trachyte dike. Thus this single fault zone has been the locus of both pre- and post-mineral movements.

The No. 7 fault zone is an ancient structure believed to be a possible continuation of the Chesaw thrust in Washington state. The serpentinite is part of a disrupted Paleozoic ophiolite complex. Because of the ductile nature of these rocks, the belt has become a tectonically active zone and the locus of much shearing, thrusting, igneous intrusion and vein mineralization. The common Mg-Fe carbonate (listwanite) alteration and serpentinization are believed to be related to major thrusting of the ophiolitic rocks during the Jurassic. In the early Tertiary these thrusts were re-activated by a tectonic compression directed subparallel to the developing northerly elongated graben structures. Igneous activity at the same time is believed to be related to numerous vein deposits.

No ore reserve estimate is available for this property.

BIBLIOGRAPHY

- EMPR AR 1892-544; 1894-map after 758; 1896-562,577,582; 1897-582, 583; 1898-1125; 1900-878; 1901-1051,1052,1056; 1902-176,179; 1903-166,170; 1905-183; 1909-131; 1910-118,120,224; 1911-285; 1912-167; 1913-421; 1925-197; 1934-A25; 1935-A25,D11,G52; 1936-D55; 1937-A36,D31; 1938-A34,D36; 1939-37,77; 1940-24,63; 1941-25,61; 1945-43,95
- EMPR BC METAL MM00904
- EMPR BULL 1 (1932), pp. 84-85
- EMPR CORPFILE (Cominco Ltd.)
- EMPR EXPL 1978-E16; 1979-14
- EMPR GEM 1969-308; 1970-413-425
- EMPR INDEX 3-207
- EMPR *P 1986-2, p. 42
- EMPR PF (GREENWOOD AREA, GALLOWAY, 1927)
- GSC MAP 828; 45-20A
- GSC P *45-20, pp.18-20
- GSC SUM RPT 1901, pp. 51-69; 1902, pp. 128-129

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE044**

NATIONAL MINERAL INVENTORY: 082E2 Cu8

NAME(S): **RUBY (L.1333)**, SMITH'S CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 02 42 N
LONGITUDE: 118 41 10 W
ELEVATION: 933 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

UTM ZONE: 11 (NAD 83)

NORTHING: 5433828
EASTING: 376787

COMMODITIES: Copper Silver Molybdenum Gold

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Sharpstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Ruby claim is 5 kilometres south of Greenwood and 1 kilometre east of Boundary falls in what the early prospectors referred to as Smith's Camp. Access is just east of Highway 3 via the McCarren Creek road. The claim was located and worked part time prior to 1896. In 1900, the claim was Crown granted to G. Cook and W.G. McMynn, and subsequent to the discovery of good ore grade mineralization, two adit tunnels were initiated on a copper-silver skarn. The first tunnel was driven 50 metres and the second 18 metres, at 46 metres below the first. Little additional work was done until 1941 when George Boag and partner leased the property and reconditioned the tunnels. Then in 1956 Edward Cooke made a shipment of 28 tonnes of clean-up ore.

The Ruby claim is in an area of limited outcrop underlain by Triassic Brooklyn limestone and sharpstone conglomerate intruded by Eocene microdiorite dikes. The mineralization is pyrite and chalcopyrite occurring as fracture fillings in northeast dipping argillite beds and skarn development associated with interbedded Brooklyn limestone.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1896-582; 1898-1125; 1900-992; 1901-1051,1057; 1902-176;
1903-166; 1905-183; 1941-72
EMPR BULL 1-84
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE045**

NATIONAL MINERAL INVENTORY: 082E2 Ag1

NAME(S): **SKOMAC**, REPUBLIC (L.426), NON SUCH (L.389),
LAST CHANCE (L.644), HIDDEN TREASURE (L.1019), COSMOPOLITAN (L.1680),
TIPPERARY, ML 430 (L.644), ML 423 (L.389,426,1019,1680),
MAY MAC, ROBERT MINES, NONSUCH,
NONESUCH, SMITH'S CAMP, GREENWOOD GOLD,
BOUNDARY FALLS

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 03 39 N
LONGITUDE: 118 42 19 W
ELEVATION: 899 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of Portal of No. 7 adit, 750 metres west of Boundary Creek, 3.75 kilometres south-southwest from the town of Greenwood and 1.75 kilometres north-northwest from Boundary Falls (Geology 1977-1981, page 8). Another Last Chance (L.753) lies 5.5 kilometres to the northeast, east of Greenwood.

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5435619
EASTING: 375426

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Chalcopyrite Tetrahedrite
Silver Argentite Gold Polybasite
ASSOCIATED: Quartz
ALTERATION: Talc Scapolite
ALTERATION TYPE: Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Cylindrical
MODIFIER: Faulted
DIMENSION: Metres STRIKE/DIP: 325/60E TREND/PLUNGE:
COMMENTS: Shear zone hosting quartz veins.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Pennsylvan.-Permian	Attwood	Undefined Formation	
Pennsylvan.-Permian	Knob Hill	Undefined Formation	
Cretaceous			Unnamed/Unknown Informal
Triassic			Unnamed/Unknown Informal

LITHOLOGY: Argillite
Black Shale
Serpentinite
Diorite
Meta Quartzite
Siliceous Gneiss
Andesite Dike
Pulaskite Dike
Microdiorite Dike
Granodiorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland
Plutonic Rocks
RELATIONSHIP: Pre-mineralization GRADE: Amphibolite

INVENTORY

ORE ZONE: SKOMAC

REPORT ON: Y

CATEGORY:	Indicated	YEAR:	1981
QUANTITY:	37191 Tonnes		
COMMODITY		GRADE	
Silver		342.8000	Grams per tonne
Gold		3.4000	Grams per tonne
Lead		2.0000	Per cent
Zinc		2.0000	Per cent

COMMENTS: In addition, 8164 tonnes of dump material grades 116.5 grams per tonne silver.

REFERENCE: Northern Miner, April 9, 1981.

CAPSULE GEOLOGY

This property, also known as the Skomac mine, is centred on a treeless south facing hill side, at an elevation of 900 metres, 4 kilometres southwest of Greenwood. Access to the mine is about 3 kilometres by dirt road travelling north from Highway 3 near Boundary Falls.

Intermittent production from this property, from 1903 to 1983, totalled 3574 tonnes, yielding 18.5 kilograms of gold, 693 kilograms of silver, 58 tonnes of lead, 36 tonnes of zinc and 864 kilograms of copper.

The Republic, Non Such, Last Chance, Hidden Treasure and Cosmopolitan claims were staked in the early 1890's, in the area locally known as Smith's camp. The Republic (Lot 426) was Crown granted to E.J. Roberts in 1894; the Non Such (Lot 389) and Last Chance (Lot 644) to Republic Gold Mining Company in 1897; the Hidden Treasure (Lot 1019) to the company in 1898; and the Cosmopolitan (Lot 1680) to Cosmopolitan Gold Mining and Smelting Company in 1900. The Republic Gold Mines of Greenwood, B.C., Limited, incorporated in 1900, acquired most of the claims. The property was purchased by O. Lofstad in 1922 and optioned to J.E. Taylor in 1933. Greenwood Gold Mines, Limited optioned it in 1935 and drove the No. 5 adit on the Last Chance. In 1961, G. Scholes and J.J. McMahon acquired the claims as Mineral Leases 423 and 430 and Skomac Mines Limited operated the property until 1965. Robert Mines Ltd. acquired the claims in 1973 and restaked the surrounding area as the May Mac claims. The No. 6 adit and later the No. 7 adit were developed from 1974 to 1973.

The area is underlain by a wide ranging section of Tertiary, Mesozoic and Upper Paleozoic rocks which have undergone several episodes of deformation and are intruded by diorite, serpentinite and a variety of dykes. A quartz vein system trends northwest subparallel to a sheared contact between Permo-Carboniferous Attwood Group argillite and shale and metamorphosed Triassic 'old' diorite. Numerous microdiorite and granodiorite dykes emanating from this diorite complex cut the Attwood Group argillites. Local exposures of Attwood Group conglomerate and sandstone also occur. Cretaceous serpentinite has been injected along the contact between the Permo-Carboniferous Attwood Group argillite and older metamorphosed basement complex rocks consisting of Permo-Carboniferous Knob Hill Group metaquartzites and siliceous gneisses, and at the boundary of the Triassic 'old' diorite complex where serpentinite schist is locally the host rock to the veins. A mylonitic rock composed of quartz grains and scapolite in a talc matrix forms the hanging wall of the vein in adits 4 and 5. Fresh andesite and pulaskite dykes, evidently feeders to nearby Tertiary lava flows, are found in several places crosscutting many of the main structures, including the veins. The age of vein system is bracketed by the concordant Cretaceous serpentinite bodies and crosscutting Tertiary pulaskite and andesite dykes.

Basement complex Knob Hill Group metaquartzite and gneisses have a general foliation trend of west and northwest with north dips although reversals and contortions are common. Deformation of the Attwood Group appears to be the result of vertical movement of the "old" diorite complex against relatively incompetent shales and argillites during intrusion. This appears to be the origin of a large sharp-crested syncline west of the minesite and smaller chevron-type flexures. The majority of fractures dip steeply to the east or southeast and strike between 020 and 040 degrees.

The Skomac mine workings consist of several adits on a quartz vein system traceable on three claims, the Non Such, Republic and Last Chance. Adits 4 to 7 comprise the main workings and adits 1 to 3 are on what appears to be a parallel vein system that is further downslope. The first mine development began in the period 1894 to 1896 when a number of adits and shafts were worked. The company drove two tunnels, one approximately 23 metres higher than the other; the upper one extending 121 metres on the vein and the lower one 69 metres, chiefly on the vein, with a crosscut from this tunnel

CAPSULE GEOLOGY

a distance of 20 metres. An upraise was put in between the upper tunnel and surface, 20 metres in height. In the upper tunnel the vein is persistent, but varies from 0.35 to 1.8 metres in width, and contains iron sulphides carrying gold and silver. The gangue is quartz with oxides of iron in the fractures. Numerous open cuts and shallow shafts have been excavated on the same lead higher up the hill on the Non Such claim, with about the same results. On the Last Chance claim, which adjoins the Non Such on the north west, an inclined shaft was sunk, as far as could be ascertained, about 23 metres on the extension of the Non Such vein. About 8 metres below the collar of the main shaft, the lead is split in three veins hosted in black argillite. The vein on the hanging wall is 20 centimetres wide, the one in the centre is 0.45 metre, and one on the footwall is 0.66 metre wide. The ore minerals are galena, chalcopryrite, and iron pyrites in a gangue of quartz. Another drift had been run about 6 metres below the upper one to the west and the two drifts connected by a raise. At the end of the lower tunnel the vein had faulted to the south and had not been found again. The vein in this tunnel measures 76 centimetres across in the widest part and is well mineralized in galena, chalcopryrite, and pyrite containing gold and silver.

The mine site is situated near the base of a diorite bluff between the elevations 850 and 1000 metres. The upper levels of the mine are almost entirely within the black phyllitic argillite formation of the Attwood Group. The lowest two levels follow a sheared ultrabasic intrusion occupying the contact between argillites and the large diorite body to the north.

The several quartz veins in the mine have been emplaced on closely spaced en echelon fractures, striking 325 degrees and dipping about 50 degrees northeast. The shear zone is 3.8 metres wide with the veins averaging 0.9 metre in width but swelling to 1.8 metres locally. The vein system has a variable northwest strike and for the most part dips 55 degrees northeast, although local variations are common and dips as low as 35 degrees are evident. The main break transecting the property is about 180 metres long. Within the total strike distance there are four known veins or shoots labelled AA, A, B and C. The ore shoots appear to be aligned gash structures, striking 015 degrees and plunging 40 degrees northerly, almost at right angles to the principal shear direction. These consist of thickened mineralized quartz lenses, each of which are 15 to 35 metres in length. Interruption of the veins is caused by pinching, fault offsets and crosscutting dykes. An important set of younger cross fractures strike 020 to 040 degrees - a direction on which there has been intrusion of Tertiary dikes and some faulting off of the veins. The origin of the vein structures is thought to be the result of regional shearing stress deflected into and taken up by the incompetent formations along the diorite contact. Major fault dislocations are not common, but movement in minor fractures trending subparallel to crosscutting Tertiary dykes has resulted in a number of sinistral offsets on the veins of 1.5 to 4.5 metres. Reactivation of larger shears trending subparallel to the vein system has resulted in significant dextral strike-slip movement offsetting some of the Tertiary dykes.

Mineralization consists of pyrite, galena, sphalerite, chalcopryrite, accessory tetrahedrite and some native silver with associated gold values. Argentite and polybasite have also been identified.

The ore reserves are about 37,200 tonnes, grading 3.4 grams per tonne gold, 342.8 grams per tonne silver, 2 per cent lead and 2 per cent zinc. In additions, 8164 tonnes of dump material grades 116.5 grams per tonne silver (Northern Miner, April 9, 1981).

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
EMPR AR 1894-755, map after 758; 1896-577,582; *1897-576,587;
1898-1125,1195; 1900-990; 1902-180; 1903-170; 1904-213-214,219;
1905-183; *1913-150-151; 1914-334; 1915-201,446; *1922-175-176;
1933-162; 1934-A25,D8; 1937-A36,D35; 1962-A48,69; 1963-A48;
*1964-A53,110,111; 1965-167,168; 1969-A53; 1975-A93; 1976-A102
EMPR BC METAL MM00929, MM00948
EMPR EXPL 1975-E14; 1978-E18; 1979-15
EMPR FIELDWORK *1976, pp. 7-10; 1984, p. 20
EMPR GEM 1969-426
EMPR GEOLOGY *1977-1981, pp. 1-12
EMPR INDEX 3-210
EMPR IR 1984-3, p. 106; 1984-4, p. 120; 1984-5, p. 114
EMPR MAP 59
EMPR MINING 1975-1980, Volume 1, pp. 11,54,58
EMPR MR MAP 6 (1932)

BIBLIOGRAPHY

EMPR OF 1990-25; 1998-10
EMPR P *1986-2, pp. 51-56
EMPR PRELIM MAP 59
EMPR PF (see *082ESE045, 082ESE171; 082ESE General File; Prospectus,
Empire Gold Resources Ltd., Sept.17, 1986; Plan map of underground
workings; Geology of the Skomac Mine and Boundary Falls Area)
EMR MP CORPFILE (Skomac Mines Ltd., Ganda Silver Mines Ltd., Robert
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
Mines Ltd., Amro Minerals Corp.)
GSC MEM 38, Part III, Map 83A
GSC OF 481; 637; 1969
GSC P 65-1, p. 60; 67-42; 79-29
GCNL Jan.12,22, Feb.27, Mar.17, 1976; #217(Nov.10), #245, 1977; #12,
1980; #35,#186, 1983
N MINER Mar. 18, 1978; Jan.15, Apr.9, 1981
W MINER Dec. 1980

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE046**

NATIONAL MINERAL INVENTORY: 082E2 Au10

NAME(S): **SYLVESTER K (L.2385)**, SYLVESTER K FR. (L.2386), NEW YORK (L.901),
TIMER FR. (L.1705), BELMONT FR. (L.1422), CIMERON (L.980),
DISCOVERY, ML 100

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 06 23 N
LONGITUDE: 118 36 21 W
ELEVATION: 1410 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5440524
EASTING: 382798

COMMENTS: The Sylvester K (Lot 2382) claim and adjoining Marshall (Lot 2388) claim (082ESE031) are centred near Providence Lake, 1.7 kilometres northwest of Phoenix and 5.8 kilometres northeast of Greenwood. Access is via the Providence Lake road which runs north from the Phoenix mine site.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Marcasite Chalcopyrite
COMMENTS: Traces of chalcopyrite.
ASSOCIATED: Quartz
ALTERATION: Carbonate Chlorite Hematite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Stratabound Stratiform Massive Disseminated
CLASSIFICATION: Replacement
TYPE: K04 Au skarn
DIMENSION: 90 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: The deposit has volcanogenic massive sulphide characteristics.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Brooklyn	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

ISOTOPIC AGE: 206 +/- 8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Amphibole

LITHOLOGY: Limestone
Sharpstone Conglomerate
Argillite
Volcaniclastic Breccia
Microdiorite

HOSTROCK COMMENTS: Providence Lake microdiorite stock age dating, Church, 1986, EMPR Paper 1986-2.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP:
GRADE: Hornfels

INVENTORY

ORE ZONE: DISCOVERY
REPORT ON: Y
CATEGORY: Indicated
QUANTITY: 50000 Tonnes
COMMODITY: Gold
GRADE: 8.5700 Grams per tonne
COMMENTS: 50,000 to 100,000 tons.
REFERENCE: Kettle River Resources Ltd., Exploration Update, February 1986 (NMI).

CAPSULE GEOLOGY

The Sylvester K (Lot 2382) claim and adjoining Marshall (Lot 2388) claim (082ESE031) are centred near Providence Lake, 1.7 kilometres northwest of Phoenix and 5.8 kilometres northeast of Greenwood. Access is via the Providence Lake road which runs north from the Phoenix mine site.

There are no records of ore being processed or shipped from Sylvester K. Ore was shipped from the Marshall claim in the period

CAPSULE GEOLOGY

from 1967 to 1975.

On the Sylvester K claim, numerous old hand dug pits and trenches are evidence of the early exploration. The claim was Crown granted in 1900. In 1982, following the discovery of an electromagnetic anomaly, trenching with a backhoe revealed sulphides (Discovery zone) in rough alignment with mineralization on the Marshall claim. This was confirmed in 1983 with more extensive trenching and a program of 20 test holes totalling 1900 metres of diamond drilling. Drilling on the Discovery zone delineated approximately 50,000 tones of mostly low-value pyritic ore in a zone 240 metres long and 1 to 6 metres wide. Spot gold grades within this zone locally exceed 10 grams per tonne. Indicated ore is estimated at 50,000 to 100,000 tons of 8.6 grams per tonne gold (Kettle River Resources Ltd., Exploration Update, February 1986, according to National Mineral Inventory card 082E/2 Aul0). Drilling on the New York zone, 85 metres east of the Discovery, intersected 3 metres of 5.3 grams per tonne gold (GCNL #150 (Aug.5), 1983).

The principal rocks underlying the Sylvester K and Marshall claims are sedimentary units of the Triassic Brooklyn Group and offshoot apophyses and dikes of the Lower Jurassic Providence Lake microdiorite stock. The Brooklyn beds are steep, mostly easterly dipping, comprising thick basal sharpstone conglomerates, overlain by a relatively thin transitional argillaceous facies, and a thick upper limestone unit. The Providence Lake microdiorite stock, dated 206 Ma, intrudes the limestone and conglomerate, feeding the somewhat younger volcanic rocks of the Eholt Formation (Brooklyn Group).

Mineralization comprises stratabound massive sulphides in limestone lenses and sulphide disseminations in the accompanying sharpstones and argillaceous rocks of the Brooklyn sequence. The ore mineralogy consists principally of pyrite and smaller amounts of pyrrhotite and marcasite, and traces of chalcopyrite accompanied by carbonates, quartz, and chlorite. The effect of the mineralizing solutions on wallrocks of the ore zone is well displayed in the Sylvester K zone where the footwall argillites have been transformed locally into a fine grained biotite bearing hornfels. Here numerous thin pyrite stringers carry gold and silver values for more than 10 metres distal from the massive sulphide bodies. Elsewhere, chlorite and hematite are common on joints and cracks in the host rocks.

Source of the mineralizing solutions is believed to be the microdiorite stock, although no significant mineralization is visible south of Providence Lake where the main microdiorite body intrudes the Brooklyn limestone. However, considering the wide distribution of microdiorite dikes in the area, it is possible that the principal plutonic body lies at depth.

Echo Bay Mines Ltd. drilled 10 holes totalling 1056 metres in 1997.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
- EMPR AR 1900-993; 1915-450
- EMPR ASS RPT 10613, 10632, 11119, 13030, 25302
- EMPR EXPL 1982-25; 1997-48
- EMPR FIELDWORK *1983, pp. 7-14; 1985, pp. 45-48
- EMPR MR MAP 6 (1932)
- EMPR OF 1990-25
- EMPR P *1986-2, pp. 39-41
- EMPR PRELIM MAP 59
- EMPR PF (News Release, Kettle River Resources Ltd., May 9, 1983)
- EMR MP CORPFILE (Kettle River Resources Ltd.)
- GSC MAP 16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
- GSC MEM 21
- GSC OF 481; 637; 1969
- GSC P 45-20; 67-42; 79-29
- GCNL #199, #215, #219, #246, 1982; #8, #15, #22, #27, #34, #68, #90, #105, #117, #118, #142, #150, #207, 1983; #139, #224, 1984; #137, 1985
- IPDM Jan/Feb, Aug/Sept, 1983
- N MINER Nov. 25, 1982; Feb. 17, Apr. 14, May 19, Jun. 16, 1983; Jun. 21, 1984
- NAGMIN June 1, 1983
- Dawson, J.M. (1982): Report on the Sylvester K Property, in VSE Statement of Material Facts, Kettle River Resources Ltd., Jan. 13, 1983

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE047**

NATIONAL MINERAL INVENTORY: 082E2 Au1

NAME(S): **ATHELSTAN (L.1065)**, JACKPOT (L.2224), ATHELSTAN-JACKPOT,
ATHELSTAN FR. (L.1320), JACKPOT FR. (L.3158), BUTTE (L.1067),
WINDFALL (L.1210S), WELLINGTON CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 03 54 N
LONGITUDE: 118 33 57 W
ELEVATION: 1220 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Athelstan-Jackpot mine is 8.5 kilometres southeast of Greenwood and 1.5 kilometres northwest of the confluence of Skeff and July creeks. Access to the mine is from an abandoned railway grade at an elevation of 1150 metres, and connecting roads from the Winnipeg mine (082ESE033) and Hartford Junction to the northwest, and Highway 3 to the east.

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5435862
EASTING: 385622

COMMODITIES: Gold Chromium Silver Copper Lead Talc

MINERALS

SIGNIFICANT: Arsenopyrite Pyrite Copper Talc Chromite
ASSOCIATED: Carbonate Ankerite Calcite Mariposite
ALTERATION: Talc Carbonate Limonite
ALTERATION TYPE: Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au E08 Replacement Carbonate-hosted talc

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Permian	Knob Hill	Unnamed/Unknown Formation	Unnamed/Unknown Informal

ISOTOPIC AGE: 258 +/- 10 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Whole rock.

LITHOLOGY: Serpentinite
Listwanite
Diorite
Greenstone
Ultramafic

HOSTROCK COMMENTS: Serpentinized ultramafic rocks; 'Old Diorite' is Permian or older (EMPR Paper 1986-2 and GSC Open File 1990-25).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Okanagan Highland
GRADE: Greenschist

CAPSULE GEOLOGY

The Athelstan-Jackpot mine is 8.5 kilometres southeast of Greenwood and 1.5 kilometres northwest of the confluence of Skeff and July creeks. Access to the mine is from an abandoned railway grade at an elevation of 1150 metres, and connecting roads from the Winnipeg mine (082ESE033) and Hartford Junction to the northwest, and Highway 3 to the east.

Production from the property from 1900 to 1940, resulted in 16,739 tonnes or ore containing 186.7 kilograms of gold, 157.2 kilograms of silver, 50.8 tonnes of copper, and 193 kilograms of lead.

Exploration and mining on the Athelstan (Lot 1065) and Jackpot (Lot 2224) claims began independently with no interconnection of workings. In 1900 operations commenced on the Athelstan claim with shaft development, drifting and the installation of a small plant. Much additional exploration and development was completed between 1909 and 1912. The Jackpot adit, located 335 metres to the east and 90 metres below the Athelstan mine, is connected to an inclined 17-metre shaft with levels at depths of 10 and 16 metres. By 1942 the

CAPSULE GEOLOGY

combined underground development included 91 metres of shaft sinking and 570 metres of tunnelling.

Ultrabasic rocks and diorite dikes are the main rocks exposed in these workings. Included in the ultrabasic rocks are light coloured talc-carbonate lenses, known locally as 'listwanites'. These rocks weather brown and contain talc and ferromagnesian carbonate in various proportions. Their outcrops are marked by limonitic gossan produced by the oxidation of the carbonate. The rocks show some variation in lithological character from one locality to another. Sheared varieties consisting largely of talc and serpentine with subordinate amounts of carbonate are common near the contacts of the talc-carbonate rocks against serpentine. Massive varieties, largely made up of a brown coloured ferromagnesian carbonate, probably ankerite, and some calcite, are well exposed around the Athelstan surface workings. Other varieties containing a conspicuous green mica, probably mariposite, are common in the underground workings of the Jackpot mine. Contacts between the talc-carbonate rocks and serpentine are usually gradational. The total extent of exposed talc-carbonate rock is not known, but they extend from an elevation of 1280 metres at the top of the hill above the Athelstan adit, at least as far as the Jackpot adit and outcrop over a maximum width of about 168 metres. (GSC Paper 45-20).

The rocks are traversed by an irregular system of pre-mineral fissures that have strongly influenced the rising ore bearing solutions by providing channelways for them, and gouge filled barriers capable of deflecting them.

The common ore minerals are pyrite and arsenopyrite. These form replacements in the listwanite rocks. Disseminations of chromite occur locally in the sheared listwanite, such as on the adjoining Butte (Lot 1067) claim, where 17.1 per cent chromium has been reported from a three-metre wide open cut. Near surface the ore is oxidized to limonite and a white arsenous oxide which attained shipping grade locally.

The shape and size of several ore bodies that were mined in the early days can be inferred from the accessible workings. At the Jackpot mine the two ore bodies that were mined from the present adit crosscut were crescentic in plan and plunged from 10 to 40 degrees to the east along their longest axis. They ranged in thickness from one to 7.6 metres and probably averaged 3 metres. They were stoped over a length of at least 30.5 metres and across a width of at least 12 metres. Narrower parts of these same ore bodies have been mined in past years. At the Athelstan mine the only accessible stope is about 18 metres long, averaging about 12 metres wide, and ranging from 1 to 2.4 metres in height. A winze, which was sunk in the floor of this stope to a depth of 3.6 metres during the summer of 1936, is entirely in ore.

The foot and hanging walls of the ore bodies commonly follow well-defined fissures, and occasionally such fissures also form the lateral limits of the ore bodies. Sulphides may extend for several centimetres beyond these fissures, but these are extremely erratic.

Chemical composition of the wallrock has also had a marked influence on ore deposition. Those rocks containing a high percentage of carbonates were most susceptible to replacement by the ore bearing solutions, whereas those containing appreciable amounts of serpentine were apparently the least susceptible.

The ore bodies are displaced by several northwesterly dipping normal faults, however, movements are not thought to be large. Locally the faulted-off segments of the ore have been found within the mine workings.

There are no available ore reserve estimates for this mine.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
- EMPR AR 1898-1122,1194; 1900-870; 1901-1051,1052,1062,1063; 1903-170, 171,172; 1904-209,211,219,222; 1905-179,183; 1906-158,161; 1908-116,248; 1909-133,134; 1910-118,122; 1911-174,176,285,291; 1912-163, 167,326; 1914-353; 1932-122; 1934-A24,D3; 1935-D10; 1936-D55; 1937-A36,D33; 1938-A33,D38; 1939-35,90; 1940-23,75; 1941-72; 1942-67; 1945-95
- EMPR BC METAL MM00816
- EMPR BULL 1 (1932), p. 84
- EMPR INDEX 3-188
- EMPR MR MAP 6 (1932)
- EMPR OF 1988-19; 1990-25
- EMPR P *86-2, pp. 27-29
- EMPR PRELIM MAP 59
- EMR IR 785 (1937), p. 150
- GSC MAP 83A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 469
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 38
GSC OF 481; 637; 1969
GSC P *45-20, pp. 2-24; 67-42; 79-29
GSC SUM RPT 1900, pp. 58A,66A; 1902, p. 135A
GCNL #70,#117,#143,#150, 1981
WM Aug. 1952, p. 49

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE048**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD BUG (L.890)**, D.A. (L.824), SUDBURY,
D.A. FRACTION, DA

STATUS: Past Producer Open Pit Underground
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 06 38 N
LONGITUDE: 118 40 57 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of mine symbol on topography map, at the north boundary
of the Greenwood municipality.

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5441109
EASTING: 377213

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Hematite Pyrite Pyrrhotite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn K04 Au skarn
 K02 Pb-Zn skarn K03 Fe skarn
COMMENTS: Fracture filling.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	Greenwood Pluton
Jurassic-Cretaceous			Unnamed/Unknown Informal
Tertiary			

LITHOLOGY: Chert
Limestone
Granite
Granodiorite
Pulaskite Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Slide Mountain Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Gold Bug (Lot 890) is located at the north boundary of the Greenwood municipality. The property is underlain by chert and limestones of the Paleozoic Knob Hill Group; granite and granodiorite of the Cretaceous Greenwood Stock; and pulaskite porphyry of Miocene age. Chalcopyrite, pyrite, pyrrhotite, and magnetite or hematite occur along fractures and interstitially between grains in a skarn zone formed at the contact of the limestone and granitic rocks. Intermittent production from 1901 to 1954, totalled 89 tonnes, resulting in 68 kilograms of silver, 1 kilogram of gold, and minor copper, lead and zinc.

BIBLIOGRAPHY

EMPR AR 1894-map after 758; 1896-582; 1897-588; 1898-1122,1195;
1899-604,848,849; 1902-181; 1903-167; 1904-213,219; 1905-181;
1906-159; 1907-111; 1918-210; 1924-168; 1925-197; 1926-214;
*1927-235,236; 1928-250; 1932-25,129; 1939-A36,91; 1940-23,
1953-110; 1954-48,119
EMPR ASS RPT 12815
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
EMPR INDEX 3-193,197; 4-121
EMPR BC METAL MM00855
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 471
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 45-20; 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE049**

NATIONAL MINERAL INVENTORY: 082E2 Cu6

NAME(S): **AH THERE (L.1960)**, GREYHOUND

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 54 N
LONGITUDE: 118 42 10 W
ELEVATION: 950 Metres

NORTHING: 5439783
EASTING: 375702

LOCATION ACCURACY: Within 500M

COMMENTS: The Ah There (Lot 1960) and Greyhound (082ESE050) claims are centred just northwest of the confluence of Motherlode and Greyhound creeks and approximately 2.5 kilometres northwest of Greenwood. The adjoining claims are readily accessible from the Motherlode Creek road. The Mother Lode (082ESE034) and Sunset (082ESE035) claims lie 1700 metres to the northwest.

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite Pyrrhotite
COMMENTS: Pyrrhotite is rare.
ASSOCIATED: Magnetite Hematite Specularite Garnet Epidote

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn K04 Au skarn
 K03 Fe skarn
COMMENTS: Fracture filling.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Brooklyn	Unnamed/Unknown Formation	
Jurassic-Cretaceous			Greenwood Pluton

LITHOLOGY: Limestone
 Tuff
 Granodiorite
 Pulaskite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Quesnel

CAPSULE GEOLOGY

The Ah There (Lot 1960) and Greyhound (082ESE050) claims are centred just northwest of the confluence of Motherlode and Greyhound creeks and approximately 2.5 kilometres northwest of Greenwood. The adjoining claims are readily accessible from the Motherlode Creek road. The Mother Lode (082ESE034) and Sunset (082ESE035) claims lie 1700 metres to the northwest.

Work began on Ah There claim in about 1900 with the sinking of a 45-metre deep shaft. This activity resulted in a trial shipment of 24 tonnes of ore in 1903 by McRae Copper Mines, Limited. The claim was Crown granted to G.D. Lyson in 1903 and again to C. McRae in 1921. Except for a number of brief exploration projects, such as some diamond drilling in 1912, 1916 and 1956, the property remained more or less dormant until open pit mining on the Greyhound claim began in 1969 and continued through 1971. In 1973, Mascot Mines & Petroleum Limited drilled 162 metres in 5 percussion holes on the Ah There claim.

The property is underlain by skarnified units of the Triassic Brooklyn Group and granodiorite which forms the west boundary of the Jurassic-Cretaceous Greenwood pluton. Pulaskite dikes, feeders to the Eocene Marron volcanic rocks, are common.

Mineralization consists of pyrite, chalcopyrite, pyrrhotite, magnetite and specularite, occurring on fractures and interstitially near the contact of the carbonate rocks, skarn and the granodiorite.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1900-876; 1901-1056; 1903-166,170,246; 1921-347; 1929-257
EMPR ASS RPT 2897, 2845, 881, 5023
EMPR BULL 101, p. 237
EMPR GEM 1969-307; 1970-429; 1971-380; 1973-38; 1974-35
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1989-3, pp. 41-43, 99; 1986-2
EMPR PF (GREENWOOD AREA,GALLOWAY,1927; Salamet Mines Ltd. (circa
1956): Diamond Drill Hole plan, in 082ESE050))
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/03/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE050**

NATIONAL MINERAL INVENTORY: 082E2 Cu6

NAME(S): **GREYHOUND (L.1014)**, MOTHER LODE

STATUS: Past Producer
 REGIONS: British Columbia
 NTS MAP: 082E02E
 BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 06 N
 LONGITUDE: 118 42 10 W
 ELEVATION: 950 Metres

NORTHING: 5440154
 EASTING: 375711

LOCATION ACCURACY: Within 500M

COMMENTS: The Greyhound (Lot 1014) and Ah There (082ESE049) claims are centred just northwest of the confluence of Motherlode and Greyhound creeks and approximately 2.5 kilometres northwest of Greenwood. The adjoining claims are readily accessible from the Motherlode Creek road. The Mother Lode (082ESE034) and Sunset (082ESE035) claims lie 1700 metres to the northwest.

COMMODITIES: Copper Gold Silver Cobalt

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Hematite Pyrite Pyrrhotite
 COMMENTS: Pyrrhotite is rare.
 ASSOCIATED: Epidote Chlorite Hematite Garnet Actinolite

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive Disseminated
 CLASSIFICATION: Skarn
 TYPE: K01 Cu skarn K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Brooklyn	Unnamed/Unknown Formation	
Jurassic-Cretaceous			Greenwood Pluton

LITHOLOGY: Limestone
 Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: GREYHOUND REPORT ON: Y

CATEGORY: Combined YEAR: 1984
 QUANTITY: 407288 Tonnes
 COMMODITY GRADE

Silver	4.4500	Grams per tonne
Gold	0.5100	Grams per tonne
Copper	0.6500	Per cent

COMMENTS: Proven and probable; includes the Mother Lode deposit (082ESE034).
 REFERENCE: Royex Sturgex Mining Ltd., Information Circular 27/04/84.

CAPSULE GEOLOGY

The Greyhound (Lot 1014) and Ah There (082ESE049) claims are centred just northwest of the confluence of Motherlode and Greyhound creeks and approximately 2.5 kilometres northwest of Greenwood. The adjoining claims are readily accessible from the Motherlode Creek road. The Mother Lode (082ESE034) and Sunset (082ESE035) claims lie 1700 metres to the northwest.

Production from the Greyhound open pit in the brief period of mine operations from 1970 to 1971 amounted to 803,326 tonnes of ore, yielding 15.6 kilograms of gold, 349 kilograms of silver and 597 tonnes of copper.

The Greyhound claim was Crown granted in 1898 to W.J. Harris. Work began on the Greyhound claim in 1900 with some underground exploration which included a shaft, 60 metres deep, and a crosscut driven from the bottom. Except for a number of brief exploration projects, such as some diamond drilling in 1912, 1916 and 1956, the property remained more or less dormant until open pit mining on the Greyhound claim began in 1969 and continued through 1971. This

CAPSULE GEOLOGY

excavation amounted to about 900,000 tonnes of ore and waste material. Mascot Mines & Petroleum Limited purchased the property in 1973. They conducted magnetometer, geological and geochemical surveys, and drilled 2118 metres in 25 diamond drill holes, 224 metres in 7 rotary holes and 935 metres in 15 percussion holes on the combined Greyhound and Mother Lode properties.

The property is underlain by skarnified units of the Triassic Brooklyn Group and granodiorite which forms the west boundary of the Jurassic-Cretaceous Greenwood pluton. Pulaskite dikes, feeders to the Eocene Marron volcanic rocks, are common.

Mineralization consists of pyrite, chalcopyrite, pyrrhotite, magnetite and specularite, occurring on fractures and interstitially near the contact of the carbonate rocks, skarn and the granodiorite.

Estimated ore reserves for the Greyhound pit are reportedly about 180,000 tonnes averaging 0.6 per cent copper.

Combined (proven and possible) reserves at the Mother Lode and Greyhound are 407,288 tonnes grading 4.45 grams per tonne silver, 0.51 grams per tonne gold, and 0.65 per cent copper (Royex Sturgex Mining Ltd., Information Circular, 27/04/84).

A grab sample assayed 0.6 per cent copper, 4.0 grams per tonne silver and 0.074 per cent cobalt (EMPR Bulletin 101, Appendix 4B).

In 1996, YGC Resources completed 814 metres of diamond drilling in 7 holes on the property.

BIBLIOGRAPHY

- EM EXPL 1996-E4
- EMPR AEROMAG MAP 8497G
- EMPR AR 1898-1195; 1900-896; 1901-1056; 1903-166; 1907-112; 1911-176; 1916-254; 1929-257; 1955-46; 1956-75; 1968-230; 1970-A52; 1971-A52
- EMPR ASS RPT 2897, 2845, 2217
- EMPR BC METAL MM00900
- EMPR BULL 101, pp. 80, 83, 89, 91, 238, Appendix 4B, 6
- EMPR FIELDWORK 1984, pp. 17-21; 1987, 273-275
- EMPR GEM 1969-307; 1970-429-430,479; 1971-26,380-381; 1973-38-39; 1974-36-37
- EMPR MR MAP 6 (1932)
- EMPR OF 1990-25; 1998-10
- EMPR P 1986-2; 1989-3, pp. 41-43, 99
- EMPR PF (*Allan, A.R. (1967): The Mother Lode and Greyhound Properties in 082ESE034; Mascot Gold Mines Prospectus 1984 in 092JNE001; Salamet Mines Ltd. (circa 1956): Property Plans, Diamond Drill Hole plans and sections)
- EMPR PRELIM MAP 59
- EMR MIN BULL MR 223 (1989) B.C. 5, B.C. 7
- GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
- GSC OF 481; 637; 1969
- GSC P 67-42; 79-29
- Financial Post Aug. 11, 1973

DATE CODED: 1985/07/24
DATE REVISED: 1997/03/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE051**

NATIONAL MINERAL INVENTORY:

NAME(S): **BUCKHORN (L.1107)**, TAM O'SHANTER, GOTCHA,
RAINBOW

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 05 30 N
LONGITUDE: 118 42 28 W
ELEVATION: 950 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The property is located 2.5 kilometres west of Greenwood, on the lower section of Buckhorn Creek. Access is by bush trail from the main road, 1.5 kilometres southwest of the Greyhound mine (082ESE050). See also Tam O'Shanter (082ESE130).

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5439050
EASTING: 375321

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Copper Molybdenite
ASSOCIATED: Malachite
ALTERATION: Chlorite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Jurassic	Knob Hill	Undefined Formation	Nelson Intrusions

LITHOLOGY: Diorite
Microdiorite
Chert
Greenstone

HOSTROCK COMMENTS: Buckhorn intrusion.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Okanagan Highland
GRADE: Greenschist

CAPSULE GEOLOGY

The Buckhorn property is 2.5 kilometres west of Greenwood at an elevation of 950 metres, on the lower section of Buckhorn Creek. Access is by bush trail from the main road, 1.5 kilometres southwest of the Greyhound mine (083ESE050).

The Greenwood mining camp reached a height of activity early in the century with production from dozens of mineral properties. In 1894, the first record of work is documented on the Buckhorn claim, which gained Crown grant status in 1899. By 1901, a shaft was sunk to a depth of 67 metres and 82 metres of drifting was completed on two levels. At this time two car loads of copper ore were shipped, returning a slight profit. There was little subsequent work in the area until 1964 when Silver Dome Mines Ltd. built 16 kilometres of road, completed 4000 metres of stripping and 1860 metres of diamond drilling, in addition to a geochemical soil sampling program and a magnetometer survey. This was followed in 1966-74 by an IP survey, trenching, diamond drilling and percussion drilling programs sponsored by San Jacinto Exploration Ltd. See Tam O'Shanter (082ESE130) for additional work in the area.

The focus of much of this work was a mineralized Mesozoic dioritic stock (Nelson Intrusions) which intrudes Permo-Carboniferous Knob Hill chert and greenstones. The mineralization consists of pyrite, chalcopyrite, native copper, malachite and molybdenite disseminations in the stock. The alteration is principally chlorite.

BIBLIOGRAPHY

EMPR PF (Stewart, G.O.M. (1976): Property description, in 082ESE130);
(Salamat Mines Ltd. (Circa 1956): Property Plan, in 082ESE050;

BIBLIOGRAPHY

Geology map, 1966)
EMPR AR 1894-map after 758; 1898-1122; 1899-604,848; 1900-876,878;
1903-166; 1921-347; 1968-227
EMPR GEM 1969-307; 1971-381; 1974-33
EMPR ASS RPT 881, 1878, 4125, 5023
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC MAP 828, 6-1957; 10-1967; 1500A; 1736A
EMR MP CORPFILE (Silver Dome Mines Ltd.; Crown Silver Development
Ltd.)

DATE CODED: 1985/07/24
DATE REVISED: 1996/12/06

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE052**

NATIONAL MINERAL INVENTORY:

NAME(S): **MORRISON (L.654)**, DEADWOOD CAMP, MOTHER LODE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 18 N
LONGITUDE: 118 43 34 W
ELEVATION: 900 Metres

NORTHING: 5440563
EASTING: 374016

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Pyrrhotite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn

TYPE: K01 Cu skarn
K03 Fe skarn

K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Brooklyn	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
Schist
Tuff
Andesite
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

CAPSULE GEOLOGY

This claim is 4.5 kilometres northwest of Greenwood at the elevation of about 1040 metres (3400 feet) on the north slope overlooking Mother Lode creek. A good gravel road connects the property directly to Greenwood.

Production from the Morrison is recorded from 1901 to 1903. A total of 2647 tonnes of ore was shipped yielding 7.5 grams per tonne of gold; 26 grams per tonne of silver; and 10.7 tonnes of copper.

According to the early reports, exploratory shafts and cuts were completed on the property prior to 1897 and by 1899 three mineralized 'leads' were discovered running nearly parallel to Motherlode Creek. The first lead, 3.6 metres wide, was intercepted in a crosscut adit at 27 metres from the portal; the second, 1.5 metres wide, at 125 metres; and the third, 20 metres wide, at 170 metres. At the face the tunnel gained a depth of 50 metres.

Mine development to 1900 consisted of 660 metres of crosscuts and drifts, about 115 metres of sinking and raising, and 180 metres of surface trenching. By 1903 total tunnelling amounted to 1140 metres.

Little is known about the geology of the Morrison other than it appears to be a low grade skarn deposit with some crystalline limestone similar, perhaps, to the Mother Lode (082ESE034), Sunset (082ESE035) and Greyhound (082ESE050) deposits. Mineralization consists of pyrite with some pyrrhotite and minor amounts of chalcopyrite.

No estimate of mineral reserves is available.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1897-585,586; 1898-1122; 1899-604,766-767; 1900-876;
1901-1051,1052,1055; 1902-176,179; 1903-165,170; 1904-25,211;
1905-179; 1907-109; *1961-64

BIBLIOGRAPHY

EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (GREENWOOD AREA,GALLOWAY,1927; *J.W.M. (1956): Plan of Drill
Holes and Adit; *Salamet Mines Ltd. (circa 1956): Diamond Drill
Hole and Geology plans, in 082ESE050)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE053**

NATIONAL MINERAL INVENTORY: 082E2 Cu6

NAME(S): **BIG COPPER**, COPPER MINE (L.456), YUTACAN, COPPERAPAI'S, ENTERPRISE (L.617), COPPER CAMP, BLUE BIRD

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:
LATITUDE: 49 07 24 N
LONGITUDE: 118 47 04 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Big Copper deposit, on the Copper Mine (Lot 456) claim, adjoins the King Solomon claim (082ESE054) to the south. The property straddles the northeast-southwest trending ridge on Copper Mountain, at the head of Wallace and Ingram creeks. Access to the property is by gravel road 8 kilometres west of Greenwood.

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5442699

EASTING: 369807

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Chalcocite Bornite Copper
ASSOCIATED: Quartz Garnet
ALTERATION: Hematite Malachite
ALTERATION TYPE: Hematite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Triassic GROUP: Brooklyn FORMATION: Undefined Formation IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Limestone
Sharpstone Conglomerate
Greenstone
Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Quesnel
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1977
SAMPLE TYPE: Chip
COMMODITY: Copper GRADE: 1.2000 Per cent
COMMENTS: Sample width of 3.0 metres.
REFERENCE: Assessment Report 6436.

CAPSULE GEOLOGY

The Big Copper deposit, on the Copper Mine (Lot 456) claim, adjoins the King Solomon claim (082ESE054) to the south. The property straddles the northeast-southwest trending ridge on Copper Mountain at 1500 metres elevation, at the head of Wallace and Ingram creeks. Access to the property is by gravel road 8 kilometres west of Greenwood.

The claim was located in 1887 and the earliest recorded development occurred in 1894, when a 5-metre shaft was sunk and a 12-metre tunnel was driven. The Copper Mine was Crown granted to J. Moran in 1896. In 1902 work was done which exposed an ore-body 53 metres in length and 25 metres in width. An open cut averaging 4.5 metres in width and 8 metres in height was run north-northwest for 27 metres in copper ore, of which there was a considerable quantity stockpiled in the dump near the excavation. In 1913, a zone of high grade copper ore was developed by open-cut stopping for a length of 60 metres. In 1917, the Big Copper and King Solomon mines together

CAPSULE GEOLOGY

shipped 860 tonnes. Production for Big Copper, between 1912 and 1918, totalled 2206 tonnes, resulting in 42,642 grams of silver and 71,083 kilograms of copper.

In 1953 and 1954, W.E. McArthur completed a program of stripping and diamond drilling on the Copper Mine and King Solomon claims. This work led to the discovery of a body of sulphides, from which two carloads of ore were shipped to the Tacoma Smelter. In 1954, the property was optioned to Noranda Exploration Ltd. that drilled near the old showings and did some surface stripping in the same area. Development up to this point included an open pit on King Solomon and an adit on the Copper Queen claims. The following year 16 claims on Copper Queen were optioned to Consolidated Mining and Smelting Co. of Canada Ltd. Geological mapping and 4 diamond drill holes totalling 614 metres were then completed. Aztec Exploration Ltd. continued this work beginning in 1956. Subsequent exploration programs by McIntyre Porcupine Mines Ltd., Pechiney Development Ltd., Riocanex Ltd. and Utah Mines Ltd., respectively in 1967, 1970, 1977 and 1980, included geological mapping, magnetometer and geochemical soil sampling, induced polarization surveys, bulldozer stripping and diamond drilling. Many of these exploration programs ranged beyond the original mineral occurrences on Copper Mountain, and probed widely in search of subcropping Phoenix-like deposits in the extensive Triassic limestone units that characterize the area.

On the Copper Mine claim (also known as 'Big Copper') the ore consists of an oxidized cap of red earthy hematite, with a small amount of native copper and copper carbonate accompanied by masses of black chalcocite below. Other minerals noted included bornite, quartz and garnet. The original ore assayed several per cent copper and appreciable silver and gold. Re-sampling of the old workings by Riocanex in 1977 yielded grades ranging between 0.64 per cent copper over 3.5 metres and 2.75 per cent copper of random fragments (Assessment Report 6436).

The copper bearing unit is believed to be a Tertiary, pre-volcanic regolith formed by weathering of mineralized limestone, with possibly some transport of the products of weathering.

A diamond drill hole completed by McIntyre Mines Ltd. in 1967, just west of the west boundary of the Copper Mine claim, encountered skarn mineralization at depth associated with Brooklyn limestone, such as found in the vicinity of the Phoenix ore-body. The hole was drilled vertically to test an I.P. anomaly. After penetrating 170 metres of Tertiary volcanic rocks, the drill intersected Triassic limestone. The last 16 metres of the hole were in skarn, including an interval from 179-180 metres of green epidote breccia in fine grained dense purplish hornfels with 1-2 per cent disseminated pyrite.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-755, map after 758; 1896-562, 577, 582; 1897-586; 1898-1125; 1899-604, 767; 1902-180; 1903-166; 1912-323; *1913-149-150, 163; 1916-254, 518; 1917-203, 211, 213, 449; 1918-210
EMPR ASS RPT 1082, 2453, 5842, 6017, 6378, 6394, *6436, 8497, 8823
EMPR BC METAL MM00840
EMPR EXPL 1977-E18, 1978-E20
EMPR FIELDWORK 1988-11-18
EMPR INDEX 3-192
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR PF (GREENWOOD AREA, GALLOWAY, 1927)
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC SUM RPT *1902, pp. 125-126, 137
WWW http://infomine.com/index/properties/COPPER_CAMP.html

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

the base of the Tertiary in Copper Camp. This zone includes regolithic copper showings that are believed to have formed by Tertiary concentration from sulphide bodies previously developed within the Brooklyn limestone.

On the King Solomon claim, the main deposit occurs at the contact between an alkali porphyry dike and crystalline limestone. These rocks are much fractured and traversed by little slips and in places the limestone is reduced to small blocks. Locally the main fissures in the limestone are filled with oxidized iron and copper sulphides. Where the Tertiary volcanic rocks have been stripped away by glacial erosion, the upper surface of the deposit is characterized by earthy red hematite. The edges of the limestone blocks are commonly corroded and encrusted by red hematite, yellow limonite and copper ore minerals. Specimens can be gathered showing a nucleus of chalcopryrite surrounded by bornite and a periphery of chalcocite. Malachite, azurite, native copper, chrysocolla are some of the associated accessory minerals. The ore is said to have run several per cent copper accompanied by appreciable gold and silver values.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-755, map after 758; 1896-562, 582; 1897-576, 586;
1898-1125, 1127; 1899-604, 768; 1901-1051; 1902-176, 180; 1903-166;
1905-183; 1913-150; 1916-255; 1917-203, 213, 449; 1939-A39, 81;
1940-A64; *1954-48, 119-122; 1955-A47, 47; 1956-75; 1960-64;
1966-244; 1967-227
EMPR ASS RPT 770, 1082, 2453, 5842, 6017, 6378, 6394, 6436, 8497,
8823, 12328
EMPR BC METAL MM00881
EMPR EXPL 1977-E18, 1978-E20
EMPR INDEX 3-202
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (GREENWOOD AREA, GALLOWAY, 1927)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC SUM RPT 1900-R20, 21, 1901-A64-67, *1902-125, 135, 137, 432, 436
WWW http://infomine.com/index/properties/COPPER_CAMP.html

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

of the ore was taken from a thickened part of the vein where it traverses the contact between granodiorite and schistose volcanic rocks. The Enterprise section is 425 metres to the north of the Jewel shaft with the main orebody lying between the White and Enterprise shafts. The orebody had a length of more than 122 metres averaging 1.9 metres wide and ranging to 4.8 metres wide. The Rowe ore shoot, located midway between the Jewel and the main Enterprise workings, was comparatively small and high grade. A pulaskite dyke followed, displaced and eventually cut the vein. The Anchor ore shoot, 150 metres north of the Enterprise orebody, was small and detached from the Enterprise.

Locally the metamorphosed volcanic and sedimentary rocks are not always distinguishable, both being fine-grained and medium or dark coloured with primary structures such as bedding and flow banding being confused with foliation or gneissosity. Generally the sedimentary rocks are brittle and quartz-rich, however, compositions vary and some biotitic varieties have the same competence as the amphibole-rich volcanic rocks. The bulk of the northwest striking and steeply northeast dipping sedimentary rocks are located in the north part of the property near the Anchor workings. They are locally called quartzites but few are true quartzites and more appropriate terms would be quartz wacke or lithic wacke. The volcanic rocks are most abundant on the Jewel claim. The massive character of the volcanic rocks is due to a combination of intense regional metamorphism and primary structures. Field and petrographic data indicate that at least some of the original rock formed as a result of massive accumulations of lava flows and pillow lava. Crosscutting feeder dykes and sills are significant and contribute to the massive aspect of the volcanic rocks. The metamorphosed schistose volcanic rocks are compositionally basalts.

Igneous intrusions in the Jewel mine area include a large Lower Cretaceous granodiorite pluton and a host of younger pulaskite and lamprophyre dykes. The granodiorite returned a potassium-argon age date of 128 Ma +/- 5 Ma, and is correlative with Nelson Intrusions. The granodiorite is a homogeneous medium-grained grey body intruding the metavolcanic rocks along a northwest trending contact in the southwest part of the camp. Alteration is minor with some replacement of amphibole by epidote. The intrusive has produced little effect in both the metavolcanic and metasedimentary rocks. Granodiorite dykes occur and are compositionally similar to the main granodiorite body and are probably offshoots from it. Pulaskite dykes are numerically most important. Several types are evident including both quartz-bearing and under saturated types. The largest pulaskite dyke is exposed between the Enterprise portal and the Jewel shaft. A second smaller dyke is located midway between the Enterprise portal and Enterprise shaft. Post-vein lamprophyre dykes as well as the pulaskite dykes are of probable Lower Tertiary age and cut all other major geological units on the property.

The Dentonia vein ranges widely in attitude with strikes varying from 000 to 050 degrees averaging about 020 degrees and dipping between 30 and 60 degrees southeast. As the dip increases the vein generally narrows, merging with steeply dipping joints and shears also striking about 020 degrees, and a set of strong crossjoints at roughly 045 degrees and vertical dips developed at right angles to the strike and foliation of the local country rocks. The age of the Dentonia vein is bracketed by the granodiorite which locally hosts the vein, and by crosscutting pulaskite and lamprophyre dykes. The dykes are correlated with petrographically similar Tertiary lavas at the summit of Mount Pelly and with volcanic rocks which occur to the west near Midway, dated at 49 Ma +/- 2 Ma. In general, the Dentonia vein cuts granodiorite in the south, metasedimentary rocks in the north, and intervening metavolcanic rocks. Vein widths vary from an average of 0.9 metre to a maximum of 4.8 metres.

Mineralization within the quartz vein includes mostly pyrite, galena and chalcopyrite with sphalerite, tellurides, native gold and possible arsenopyrite. The minerals are not especially abundant, occurring mainly as grey streaks and fine disseminations or as small pockets and lenses. At a number of places granodiorite dykes interrupt the vein and locally cut the vein off. Splays and screens of country rock as well as post-vein pulaskite or lamprophyre dykes cause considerable dilution in some areas. There is generally very little alteration or silicification of the wallrock, but minor shattered zones or minute parallel cracks contain stringer-type mineralization.

Ore controls are attributed to several factors, the most important of which are deflections in the vein attitude and the response of the main fissure zone to sudden changes in the composition of the host rocks. Both of these features are present in the Jewel ore body. Here the vein is enlarged and somewhat

CAPSULE GEOLOGY

refracted at the intersection of brittle granodiorite and the less competent schistose volcanic rocks. A major deflection in the strike of the vein is not so apparent in the case of the Anchor shoot at the greenstone/metaquartzite contact, although the vein is generally less steeply inclined. The great width of quartz in the main part of the Enterprise section appears to be solely the result of a major variation in the direction of the fissure zone caused by stresses acting on rather homogeneous greenstone.

The origin of the vein structure is the result of regional stresses. Apparently, tensional gash fractures developed attendant to north-trending shears in response to compressional stress from the southwest, allowing the influx of quartz. The amount of movement was small and the direction is believed to have been largely horizontal. The host rocks are not thought to have offered any special opportunity for chemical reaction with the ore bearing solutions, however, there was a tendency for the greenstone to split and fray under stress, the walls of the vein and septa showing some evidence of replacement. The age of the Dentonia vein is bracketed by the Wallace Creek granodiorite, which locally hosts the vein, and crosscutting young dikes. A sample of the granodiorite from the Denero Grande shaft area returned an early Cretaceous potassium/argon date of 128 +/- 5 Ma (Church, 1986). The numerous feldspar porphyry and pulaskite dikes found, cutting across the mine workings, are clearly feeders to the Marron lavas of the Penticton Group (Eocene).

The continuation of the Dentonia vein 183 metres south of the Jewel workings to the Denero Grande claim has resulted in the Denero Grande shaft being sunk to a depth of 155 metres followed by extensive underground development. Silica smelter credits have been received from some shipments of ore.

Both measured (semi-proven) and indicated (probable) reserves at Dentonia were 90,710 tonnes grading 68.56 grams per tonne silver and 10.96 grams per tonne gold (Northern Miner - May 29, 1975).

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
EMPR AR 1896-582; 1897-588,589; 1898-1124,1194,1195; 1899-604,764,765,817; 1900-878; 1901-1056; 1902-H176,H179,H180; 1903-H166,H171; 1905-J183; 1906-H159; 1909-K131,K132; 1910-K120; 1912-K167,K323; *1913-K146-K149,K163,K421; 1914-K334,K399,K511; 1915-K201,K446; 1916-K21,K518; 1917-F20; 1921-G184; 1922-N176,N177; 1926-A215; 1927-G237; 1928-C250; 1930-A222,A223; 1931-A125; 1932-A130; *1933-A158-A160; 1934-D5; 1935-A25,A30,D10,G52; 1936-D25,D56; 1937-A29,A36,A41,D32; 1938-A27,A34,D37; 1939-A29,A36,A77; 1940-A17,A63; 1941-A18,A24,A25,A61; 1942-A20,A26,A59; 1943-A37,A63; 1944-A33; 1945-A95; 1946-A28,A135; 1947-A37,A155,A276; 1948-A37,A127,A192-A193; 1974-A117,A119; 1975-A91,A93
EMPR BC METAL MM00875
EMPR BULL 1 (1932), pp. 84,85; 20, Part II, pp. 11-12
EMPR ENG INSP (Mine plans; Geology)
EMPR EXPL 1975-E15; 1980-21,22; 1984-7
EMPR FIELDWORK 1974, pp. 56-58; 1986, p. 19
EMPR GEM 1973-41; *1974-39-51
EMPR INDEX 3-194,201
EMPR INF CIRC 1985-1, pp. 22,42; 1986-1, pp. 41,45; 1988-1, pp. 20,59
EMPR IR 1986-1, p. 110
EMPR MAP 65
EMPR MIN STATS 1985, p. 48
EMPR MINING 1975-1980, Vol. I, pp. 8,9
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1998-10
EMPR P 1986-2, pp. 36-37
EMPR PF (Starr, C.C. (1928): Report of Preliminary Examination of the Jewel-Etheopea Group, 4 p.; *Hedley, M.S. (1941): Geology of the Jewel Lake Camp (Eastern part) and of the Dentonia Mine, Boundary District, 40 pp.; Church, B.N. and Winsby, J. (1974): Dentonia Mine; Plan map showing underground workings, 1983; Progress Report, Drill and Assay Results on Dentonia Mine, Colt Resources Ltd.)
EMR MIN BULL MR 166, p. 14
EMR MP CORPFILE (Dentonia Mines Ltd.; Colt Res. Ltd.; Dentonia Res. Ltd.)
EMR MP RESFILE (Dentonia Mines Ltd.)
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42, 79-29
GSC SUM RPT 1901, p. 65; 1902, p. 127
CANMET IR 1933-743, pp. 101-106; 1935-763, p. 226
CIM Reporter Oct. 30, 1981

BIBLIOGRAPHY

CMJ Dec.5, 1973
GCNL #100(May 23), #179(Sept.12),#186(Sept.20), #214(Oct.31), 1973;
Feb.3, #214(Nov.4), 1974; Nov.28, 1975; June 16, #134, 1981; #227,
1982; #8,#14,#16,#34,#47,#68,#72,#78,#93, 1983
IPDM May/Apr 1983
N MINER May 3, 1973; Mar.28, 1974; May 29, 1975; May 28, 1981;
Jan.27, Apr.14, July 7, 1983
NAGMIN June 1, 1983
W MINER Sept. 1975
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE056**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAKE VIEW (L.1576)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 19 N
LONGITUDE: 118 36 33 W
ELEVATION: 1570 Metres

NORTHING: 5449669
EASTING: 382749

LOCATION ACCURACY: Within 500M

COMMENTS: An adit, 500 metres south-southeast from the summit of Mount Roderick Dhu, north of Jewel Lake, 12 kilometres north-northeast from the town of Greenwood (Assessment Report 9910).

COMMODITIES: Silver Gold Lead Copper

MINERALS

SIGNIFICANT: Galena Pyrrhotite Chalcopyrite Telluride Malachite

Azurite

ASSOCIATED: Quartz Pyrite

ALTERATION: Limonite Malachite

Azurite Hematite

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: H08 Alkalic intrusion-associated Au

DIMENSION: Metres

I01 Au-quartz veins

STRIKE/DIP: 340/90E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Carboniferous
Eocene

GROUP

Knob Hill

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Coryell Intrusions

LITHOLOGY: Schistose Quartz Wacke
Schistose Lithic Wacke
Pulaskite Dike
Pulaskite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Slide Mountain

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

Plutonic Rocks

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

SAMPLE TYPE: Grab

YEAR: 1981

COMMODITY

Silver

Gold

Copper

GRADE

100.1000

4.6000

0.3300

Grams per tonne

Grams per tonne

Per cent

REFERENCE: Assessment Report 9910.

CAPSULE GEOLOGY

The Jewel Lake area is underlain by a complex of metamorphic rocks mostly of sedimentary and volcanic origin correlative with the Carboniferous or older Knob Hill Group, and a large granodiorite intrusion correlative to the Juro-Cretaceous Nelson Plutonic Rocks. Small dikes and sill-like bodies (Eocene Coryell), feeders to nearby Tertiary lavas, pervade these units.

Locally the metamorphosed volcanic and sedimentary rocks are not always distinguishable, both being fine-grained and medium or dark coloured with primary structures such as bedding and flow banding being confused with foliation or gneissosity. Generally the sedimentary rocks are brittle and quartz-rich, however, compositions vary and some biotitic varieties have the same competence as the amphibole-rich volcanic rocks. These rocks are locally called quartzites but few are true quartzites and more appropriate terms would be quartz wacke or lithic wacke. The massive character of the volcanic rocks is due to a combination of intense regional

CAPSULE GEOLOGY

metamorphism and primary structures. Field and petrographic data indicate that at least some of the original rock formed as a result of massive accumulations of lava flows and pillow lava. Crosscutting feeder dikes and sills are significant and contribute to the massive aspect of the volcanic rocks. The metamorphosed schistose volcanic rocks are compositionally basalts. These metasedimentary and metavolcanic rocks form part of the Carboniferous (Pennsylvanian-Mississippian) or older Knob Hill Group.

Igneous intrusions in the Jewel Lake camp include a large Lower Cretaceous granodiorite pluton and a host of younger pulaskite and lamprophyre dikes. The granodiorite is correlative with Nelson Plutonic Rocks. It is a homogeneous medium-grained grey body which intrudes the metavolcanic rocks along a northwest trending contact in the southwest part of the camp. The intrusive has produced little effect in both the metavolcanic and metasedimentary rocks. Granodiorite dikes occur and are compositionally similar to the main granodiorite body and are probably offshoots from it. Pulaskite dikes are numerically most important. Several types are evident including both quartz-bearing and undersaturated types. Post-vein lamprophyre dikes as well as the pulaskite dikes are of probable Lower Tertiary age and cut all other major geological units.

The Lake View claim (Lot 1576) is located 609 metres north-northeast from the Roderick Dhu claim (Lot 598, 082ESE125). The area is underlain by north-northeast striking and east dipping metasedimentary rocks of the Carboniferous

(Pennsylvanian-Mississippian) or older Anarchist Group. The rocks are schistose quartz wackes or lithic wackes and are intruded by Lower Tertiary pulaskite dikes. A quartz fissure-vein occurs in a shear/fracture zone that roughly parallels the bedding/foliation planes of the host metasedimentary rocks. The vein strikes 340 degrees with near vertical dips to the east and is finely fractured with hematite/limonite staining. Mineralization consists of galena, pyrrhotite, pyrite, chalcopyrite and telluride with prominent malachite staining and minor azurite. Vein widths range from a few centimetres to 1.5 metres. An adit follows the vein for 30 metres where it discontinuously pinches and swells.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1896-578; 1897-590; 1901-1056; 1902-H305; 1931-A125;
1934-D6
EMPR ASS RPT 8709, *9910
EMPR EXPL 1980-22,23; 1981-151
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE057**

NATIONAL MINERAL INVENTORY:

NAME(S): **HUMMINGBIRD (L.1369)**, OK (L.1478), HUMMINGBIRD FR. (L.1249)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 08 42 N
LONGITUDE: 118 27 58 W
ELEVATION: 767 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5444610
EASTING: 393078

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Gold Silver Zinc Lead Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite Pyrrhotite Marcasite
Arsenopyrite
ASSOCIATED: Quartz
ALTERATION: Silica
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE Upper Paleozoic GROUP Anarchist FORMATION Unnamed/Unknown Formation IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Hummingbird (Lot 1369) is underlain by bedded limestone, of the Upper Paleozoic Anarchist Group. The limestone is replaced by silica along fractures which carry pyrite, pyrrhotite, marcasite, sphalerite, arsenopyrite, galena and minor chalcopyrite in stringers and as isolated segregations along bedding planes. To the north, sediments have been intruded by a dark, fine-grained diabase dike. Sulphides occur in vein-fissures in limestone and at the contact with andesite. Values of 37 grams per tonne gold and 24 grams per tonne silver were reported.

BIBLIOGRAPHY

EMPR AR 1897-597; 1899-603,755; 1900-870,873,991; 1901-1065; 1905-185; 1906-163; 1916-517; 1925-193; 1926-447; 1929-255; 1939-36; 1940-24; 1941-25; 1942-26,59; 1943-63
EMPR ASS RPT 5395, 6225, 6895
EMPR EXPL 1975-E12, 1977-E14
EMPR GEM 1978-E16
EMPR PF
GSC MAP 828
GCNL #158, 1978

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE058**

NATIONAL MINERAL INVENTORY:

NAME(S): **STRAWBERRY (L.1765)**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 00 N
LONGITUDE: 118 28 04 W
ELEVATION: 700 Metres

NORTHING: 5447021
EASTING: 393003

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear

CLASSIFICATION: Unknown

TYPE: I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Upper Paleozoic

GROUP: Anarchist

FORMATION: Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Strawberry (Lot 1765) occurrence is underlain by greenstone of the Anarchist Group. Pyrite, pyrrhotite, and chalcopyrite in quartz occur in a shear zone in the greenstone.

BIBLIOGRAPHY

EMPR AR 1899-756; 1900-870,873,992; 1901-1064; 1905-183; 1906-163;
1926-204,448
GSC MAP 828

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE059**

NATIONAL MINERAL INVENTORY:

NAME(S): **RATHMULLEN**, MAPLE LEAF (L.1502), SUMMIT CAMP

STATUS: Showing

Underground

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E02E

BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 08 11 N

LONGITUDE: 118 30 23 W

ELEVATION: 1100 Metres

NORTHING: 5443710

EASTING: 390122

LOCATION ACCURACY: Within 500M

COMMENTS: The Rathmullen Group, which includes the Maple Leaf (Lot 1502) claim, is located northwest of Thimble Mountain, 1.5 kilometres northeast of the B.C. (Lot 882) claim (082ESE060).

COMMODITIES: Copper

Silver

Gold

Zinc

MINERALS

SIGNIFICANT: Pyrrhotite Chalcopyrite Pyrite

ASSOCIATED: Quartz Calcite

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein Disseminated

CLASSIFICATION: Epigenetic Skarn

TYPE: I06 Cu±Ag quartz veins

Hydrothermal

K01

Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic

Jurassic-Cretaceous

Eocene

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Wallace Creek Batholith

Coryell Intrusions

LITHOLOGY:

Diorite

Greenstone

Limestone

Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

SAMPLE TYPE: Rock

YEAR: 1991

COMMODITY

Silver

GRADE

327.9000

Grams per tonne

Gold

3.2900

Grams per tonne

Copper

1.9800

Per cent

Zinc

0.2900

Per cent

COMMENTS: Sample of dump material.

REFERENCE: Assessment Report 22105.

CAPSULE GEOLOGY

The Rathmullen Group, which includes the Maple Leaf (Lot 1502) claim, is located northwest of Thimble Mountain, 1.5 kilometres northeast of the B.C. (Lot 882) claim (082ESE060).

Turn of the century workings on the Maple Leaf claim, which was Crown granted in 1899, consists of a 40-metre shaft with a drift up to 22 metres. The drift passed through a 8.5-metre wide ore zone. Mineralization consists of quartz gangue carrying pyrrhotite, chalcopyrite and gold values within diorite. Thirty three tonnes of ore were reported being shipped to a smelter in 1904. The claim was owned by W.M. Gowans in 1928.

In 1991, Pan Orvana Resources Inc. conducted mapping and geochemical sampling east of this showing. However, a sample of quartz-calcite vein material on a dump at this site returned an assay of 1.98 per cent copper, 327.9 grams per tonne silver, 3.29 gram per tonne gold and 0.29 per cent zinc (Assessment Report 22105).

The area is underlain by limestone of the Triassic Brooklyn Group. These rocks are cut by diorites of the Jurassic-Cretaceous

CAPSULE GEOLOGY

Wallace Creek Pluton and porphyries of the Eocene Coryell
Intrusions.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1899-603,*761,849; 1900-870; 1901-1064; 1904-219
EMPR ASS RPT 22105
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (Starr, C.C. (1928): Report of Preliminary Examination
of the Maple Leaf Claim, Eholt, B.C., 3 p.)
GSC MAP *828; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/04/30

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE060**

NATIONAL MINERAL INVENTORY:

NAME(S): **B.C. (L.882)**, B.C. EHOLT MINE LTD, B.C. MINE,
 NOVELTY FR. (L.949), B.C. FR. (L.464S), MAY (L.1409),
 DAISY FR. (L.948), EHOLT, SUMMIT CAMP

STATUS: Past Producer	Underground	MINING DIVISION: Greenwood
REGIONS: British Columbia		
NTS MAP: 082E02E		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 49 07 54 N		NORTHING: 5443204
LONGITUDE: 118 31 10 W		EASTING: 389159
ELEVATION: 1150 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: The property is 12.5 kilometres northeast of Greenwood. Access is a few kilometres east of Highway 3 via a bush road following an old railway grade.		

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite	Pyrrhotite	Pyrite	Sphalerite	Hematite
ASSOCIATED: Wollastonite	Pyroxene	Garnet	K-Feldspar	Quartz
ALTERATION: Calcite	Epidote	Zoisite		
MINERALIZATION AGE: Jurassic-Cretaceous				

DEPOSIT

CHARACTER: Massive				
CLASSIFICATION: Skarn	Replacement			
TYPE: K01 Cu skarn			K04 Au skarn	
DIMENSION: 60 x 20	Metres	STRIKE/DIP: 020/90	TREND/PLUNGE:	

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Brooklyn	Unnamed/Unknown Formation	
Eocene	Penticton	Marron	
Eocene			Coryell Intrusions

LITHOLOGY: Limestone
 Greenstone
 Pulaskite Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Quesnel	

CAPSULE GEOLOGY

The property is 12.5 kilometres northeast of Greenwood at the elevation of 1150 metres. Access is a few kilometres east of Highway 3 via a bush road following an old railway grade.

The B.C. claim was Crown granted to J. Keough in 1897. The B.C. Chartered Co. Ltd. soon acquired the property and began mine development. The property is unique in the district inasmuch as the ore is principally chalcopyrite. By 1899 a single compartment shaft was sunk to 50 metres. This, plus 610 metres of tunnelling and a 30-metre raise, constituted the underground work. A railway siding was constructed and the first shipments of high grade copper ore were to the Canadian Smelting Co. Ltd. in Trail, then to Grand Forks on completion of the Granby smelter in that town. The B.C. Mine remains the oldest and became one of the principal shipping mines in the Boundary district. At the time of closure in August 1903 the workings consisted of a 'glory-hole' and other underground developments from which more than 90,000 tonnes of ore were produced. Additionally, minor intermittent production to 1938 resulted in a total of 93,874 tonnes of ore, yielding 4094 tonnes of copper, 6665 kilograms of silver and 31 kilograms of gold.

The ore occurs as replacement lenses of chalcopyrite, pyrrhotite and minor pyrite in limestone of the Triassic Brooklyn Group. The limestone is interbedded with greenstone breccias, tuffaceous beds and conglomerates. The associated skarn and gangue minerals include garnet (the most abundant), quartz, calcite, epidote, actinolite and chlorite. Peripheral parts of the ore zone contain minor amounts of specularite and sphalerite. These rocks are cut by pulaskite porphyry dikes and sills that are feeders to the nearby Marron volcanics (Tertiary). The main lode is 60 metres

CAPSULE GEOLOGY

long and 20 metres wide (contracting downward) and dips gently to the east. It is very much cut up by intrusive sheets of porphyry which form regular floors to the ore which has been mined to a depth of 120 metres. There are two sets of these sheets, one a coarser grained reddish porphyry with biotite and feldspar phenocrysts and, a younger pinkish pulaskite porphyry intrusion. Both intrusions have distinct salbands against the ore - the ore having platy jointing parallel to the sheets. According to mine records diamond drill holes to a depth of 280 metres cut several mineralized zones but a large proportion of the core consisted of pulaskite porphyry that precluded further mining.

BIBLIOGRAPHY

EMPR AR 1897-595; 1898-1195; 1899-603,*761-762,817; 1900-870,880,946;
1901-1051,1064; 1902-183; 1903-170,171,173; 1904-215,221; 1905-
183; 1906-156,162,163,250; 1907-109,112,115,215; 1916-254,518;
1917-201,449; 1918-207; 1919-166; *1927-229-231; 1937-A36,D33;
1938-A33,D38; 1966-194
EMPR GEM 1974-38; 1975-E14; 1976-E21
EMPR ASS RPT 47, 117, 178, 809, 5356, 21329
EMPR BC METAL MM00822
EMPR INDEX 3-188
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR AEROMAG MAP 8497G
GSC SUM RPT 1902, pp. 106,114,*121-123,135
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC MAP *828; 6-1957; 10-1967; 1500A; 1736A
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary
Country; Sunfire Publications Limited, pp. 116-122.
Chevron File

DATE CODED: 1985/07/24
DATE REVISED: 1996/10/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE061**

NATIONAL MINERAL INVENTORY:

NAME(S): **IRON CREEK, JOY 4**

MINING DIVISION: Trail Creek

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 15 N
LONGITUDE: 118 02 24 W
ELEVATION: 1463 Metres

NORTHING: 5448820
EASTING: 424218

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead Zinc Silver Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratiform Disseminated
CLASSIFICATION: Volcanogenic
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Pennsylvan.-Permian Eocene	Unnamed/Unknown Group	Mount Roberts	Coryell Intrusions

LITHOLOGY: Rhyolite
Volcanic
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Iron Creek is underlain by rhyolite of the Mt. Roberts Formation. Galena occurs at the contact with Coryell rocks. The strike of the deposit is 55 degrees northeast and the dip is 48 degrees northwest. There is the potential for a large low grade stratiform deposit in the volcanics.

A sample submitted, by owner Sam Craig, in 1978, assayed 0.11 per cent lead, 0.11 per cent zinc and 0.007 per cent copper (Addie, G., 1978).

Rex Silver Mines Ltd. conducted sampling and geophysical surveys in the area in 1983, 1985 and 1986.

BIBLIOGRAPHY

EMPR ASS RPT *12367, 13606, 14757
EMPR OF 1999-2; 1998-10
EMPR PF (Addie, G. (1978): Assay submitted by Sam Craig)

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE062**

NATIONAL MINERAL INVENTORY: 082E2 Cu5

NAME(S): **EMMA (L.591)**, MOUNTAIN ROSE (L.794), EMMA BLUEBELL,
BRAYFOGLE (L.1491), JUMBO (L.592), MINNIE MOORE (L.593),
BREY FOGLE, SUMMIT CAMP, BLUEBELL

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 07 48 N
LONGITUDE: 118 32 58 W
ELEVATION: 1167 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Emma Mine is 10.2 kilometres northeast of Greenwood, on the divide between Eholt and Fisherman creeks. The property adjoins the Oro Denoro Mine (082ESE063) to the south. Access to these properties is about 0.6 kilometre southwest from Highway 3 by level gravel road along an old railway bed.

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5443063

EASTING: 386967

COMMODITIES: Copper Gold Silver Zinc Germanium
Molybdenum Cobalt

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Pyrite Magnetite Sphalerite
Tetrahedrite
ASSOCIATED: Quartz Calcite Garnet Magnetite Epidote
Pyroxene Scapolite Amphibole
ALTERATION: Chlorite Hematite Clinozoisite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn
DIMENSION: 200 x 120 x 8 Metres STRIKE/DIP: K03 Fe skarn 018/90 TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic Brooklyn Unnamed/Unknown Formation Wallace Creek Batholith
Jurassic-Cretaceous
ISOTOPIC AGE: 143 +/- 5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Limestone
Marble
Argillite
Skarn
Garnetite
Granodiorite
Hornblende Feldspar Diorite

HOSTROCK COMMENTS: Church, 1986 (EMPR P 1986-2).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Quesnel
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels

CAPSULE GEOLOGY

The Emma Mine is 10.2 kilometres northeast of Greenwood, at the elevation 1066 metres on the divide between Eholt and Fisherman creeks. The property adjoins the Oro Denoro Mine (082ESE063) to the south. Access to these properties is about 0.6 kilometre southwest from Highway 3 by level gravel road along an old railway bed.

At Emma, mining began from a skarn zone exposed during railroad construction in 1894. By 1905, production was derived mainly from underground development that consisted of a two-compartment shaft, 80 metres deep, with levels at 45 and 75 metres. A fire disrupted operations in 1912, however, the workings were restored in 1916 and production continued until 1921. Underground development in this period included 50 metres of shaft sinking, 285 metres of raising, and 770 metres of drift and crosscut tunnelling.

Production in the period 1901 to 1927, totalled 241,538 tonnes of ore, containing, 211.8 kilograms of gold, 2434 kilograms of silver and 2350 tonnes of copper.

CAPSULE GEOLOGY

The orebody at the Emma Mine is vertical and strikes northerly, roughly parallel to the bedding in the Brooklyn (Triassic) limestone, near the eastern contact of the Wallace Creek (Jurassic-Cretaceous) granodiorite body. Mineralization, consisting mostly of pyrite, chalcopyrite, and magnetite impregnations in garnetite, is mostly confined to a narrow zone about 8 metres wide and 100 metres long.

In 1987, Skylark Resources Ltd. drilled 873 metres in 6 holes on the Emma, Mountain Rose and Jumbo claims. Several mineralized intervals were intersected in the holes, including a 1.5-metre width of 0.018 per cent germanium. Other holes encountered zinc and molybdenum mineralization. (Assessment Report 17308).

A grab sample assayed 0.16 per cent copper, 1.2 grams per tonne silver and 0.14 per cent cobalt (EMPR Bulletin 101, Appendix 4B).

Echo Bay Mines Ltd. drilled 5 holes totalling 250 metres in 1997.

BIBLIOGRAPHY

- EM EXPL 1997-48
- EMPR AR 1894-757, map after 758; 1895-703; 1896-581; 1897-582, 594; 1898-1124; 1899-604; 1900-870, 878, 880, 990; 1901-1064; 1902-176, 183; 1903-143, 170, 172, 173; 1904-136, 209, 219, 221; 1905-164, 165, 175, *178, 183; 1906-149, 156, 158, 162, 163, 250; 1907-104, 109, 112, 113, 115, 214, 215, 219; 1908-116, 248; 1911-174, 176, 185; 1912-163, 167, 323; 1915-199; 1916-253, 256, 257, 518; 1917-198, 211, 214, 449; 1918-207, 209, 470; 1919-164; 1920-155; 1921-180; 1965-171; 1967-232; 1968-233
- EMPR AEROMAG MAP 8497G
- EMPR ASS RPT 178, 5356, 5801, 17308, 21329, 25423
- EMPR BC METAL MM00848
- EMPR BULL 101, pp. 57, 80, 89, 238, Appendix 4B, 6
- EMPR GEM 1969-306; 1970-430; 1974-38; 1975-E14-15; 1976-E21
- EMPR GEOLOGY 1976, pp. 1-13
- EMPR INDEX 3-195, 206
- EMPR MR MAP 6 (1932)
- EMPR OF 1990-25
- EMPR P *1986-2, pp. 43-44; 1989-3, pp. 41-43, 99
- EMPR PF (Roberts, R. (1929): Report on the Emma and Oro Denoro Mines; Campbell, D.D. (1968): Progress Report Oro Denoro Copper Deposit, in 082ESE063; Kettle River Resources Ltd. Website (Nov. 1999): Greenwood Area, 1 p.)
- EMPR PRELIM MAP 59
- EMR MP CORPFILE (The British Columbia Copper Company, Limited; Cominco Ltd.)
- GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A
- GSC MEM 19, p. 1
- GSC OF 481; 637; 1969
- GSC P 65-1, pp. 56-60; 67-42; 79-29
- GSC SUM RPT 1902, pp. 123, 135
- CIM Transactions *Vol. 10 (1907), pp. 188-194; Vol. 59 (1956), pp. 384-394
- WWW <http://www.kettleriver.com/>
- [http://www.infomine.com/index/properties/BLUEBELL_\(ORO_DENORO\).html](http://www.infomine.com/index/properties/BLUEBELL_(ORO_DENORO).html)

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

CAPSULE GEOLOGY

possible ore reserves at 42,460,000 tonnes grading 0.92 per cent copper, 0.82 grams per tonne gold, and 10.97 grams per tonne silver. This breaks down to 3,524,400 tonnes of reasonably assured ore grading 1.32 per cent copper, 0.82 grams per tonne gold, and 10.97 grams per tonne silver; 18,388,600 tonnes of indicated ore grading 0.80 per cent copper, 0.82 gram per tonne gold, and 10.97 grams per tonne silver; 6,331,200 tonnes of possible ore grading 0.75 per cent copper, 0.79 gram per tonne gold, and 10.97 grams per tonne silver; and 14,216,500 tonnes of possible ore, below the diorite sill, grading 1.07 per cent copper, and minor gold and silver. (Western Miner, February 1967, page 49.)

Exploration activity on the property and adjacent areas from 1950 to 1989 is summarized in Assessment Report 21329. See also History of Exploration and Development on National Mineral Inventory card 082E2 Cu4.

The area is underlain by limestone, sharpstone conglomerate, tuffs and breccias of the Triassic Brooklyn Group. These rocks are cut by granodiorite of the Jurassic-Cretaceous Wallace Creek Pluton and alkaline syenite of the Eocene Coryell Intrusions.

A skarn sample assayed 2.2 per cent copper, 6.0 grams per tonne, silver, and 0.15 grams per tonne gold (EMPR Paper 1989-3, Appendix 7). Another sample assayed 0.03 per cent cobalt (EMPR Bulletin 101, Appendix 4B).

Echo Bay Mines Ltd. drilled 5 holes totalling 250 metres in 1997.

BIBLIOGRAPHY

- EM EXPL 1997-48
- EMPR AEROMAG MAP 8497G
- EMPR AR 1896-563,578,581, 1897-582,594; 1898-1124; 1899-603,762; 1900-870,878,880; 1901-1051,1064; 1903-170,173; 1904-209,219,221; 1905-175,178,179,183; 1906-156,162,250; 1907-109,112,215; 1908-112,115,248; 1909-134,277; 1910-118,122,244; 1911-177; 1916-254,518; 1917-199; *1965-171-172; 1966-195; *1967-232,233; *1968-233-235
- EMPR ASS RPT 67, 117, 178, 21329, 24666
- EMPR BC METAL MM00907
- EMPR BULL 101, pp. 57, 238, Appendix 4B, 6
- EMPR GEM 1969-306; 1970-430; 1974-38; 1975-E14; 1976-E21
- EMPR GEOLOGY *1976, pp. 1-13
- EMPR INDEX 3-208
- EMPR OF 1990-25; 1998-10
- EMPR MR MAP 6 (1932)
- EMPR P *1986-2, pp. 43-48; 1989-3, pp. 41-43, 99, Appendix 7
- EMPR PF (Roberts, R. (1929): Report on the Emma and Oro Denoro Mines; West Coast Resources Ltd. (c.1966): Map of Diamond Drill Holes and Magnetic Anomaly Outline; Photo of Bulk Sampling, July 7, 1966; Weymark, W.J. (1966): Surface Plan: Mining Works, Drill Holes and Investigations; Drill Hole cross sections, date unknown; Sutherland-Brown, A. (1967,1969): Geological Sketch Maps and Diamond Drill Hole locations; *Campbell, D.D. (1968): Progress Report Oro Denoro Copper Deposit; West Coast Resources Ltd., Statement of Material Facts, Jan. 14, 1970; Kettle River Resources Ltd. (Nov. 1999): Greenwood Area, 1 p.; Rock sample photos; Geology of the Oro Denoro Mine by B.N.Church)
- EMPR PRELIM MAP 59
- EMR MIN BULL MR 223, B.C. 8
- EMR MP CORPFILE (The British Columbia Copper Company, Limited; West Coast Resources Ltd.; Kettle River Resources Ltd.; Skylark Resources Ltd.)
- GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A
- GSC MEM 19, pp. 1,43
- GSC OF 481; 637; 1969
- GSC P 65-1, pp. 56-60; 67-42; 79-29
- CIM Transactions Vol. 5 (1902), pp. 365-378; Vol. 59 (1956), pp. 384-394
- GCNL Mar.10, 1967; #62, 1968; Jan.18, 1983
- W MINER *Feb. 1967, p. 49; Oct. 1968, p. 150
- WWW <http://www.kettleriver.com/>
- [http://www.infomine.com/index/properties/BLUEBELL_\(ORO_DENORO\).html](http://www.infomine.com/index/properties/BLUEBELL_(ORO_DENORO).html)

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE064**

NATIONAL MINERAL INVENTORY:

NAME(S): **R. BELL (L.1506)**, CORDICK (L.625), SUMMIT CAMP,
PAC

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 07 09 N
LONGITUDE: 118 31 40 W
ELEVATION: 990 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5441827
EASTING: 388523

LOCATION ACCURACY: Within 500M

COMMENTS: The R. Bell (Lot 1506) and adjoining Cordick (Lot 625) claims are situated 11 kilometres northeast of Greenwood, just east of Highway 3, at a point 2.5 kilometres south of Wilgress Lake. See also PAC (082ESE194).

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite Sphalerite
ASSOCIATED: Quartz Magnetite Epidote Garnet Calcite
ALTERATION: Hematite Malachite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive Vein Disseminated
CLASSIFICATION: Skarn Epigenetic Hydrothermal
TYPE: K01 Cu skarn K03 Fe skarn
I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic
Jurassic
Eocene

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions
Coryell Intrusions

LITHOLOGY: Limestone
Greenstone
Sharpstone Conglomerate
Tuff
Granodiorite
Pulaskite Porphyry
Alkalic Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

The R. Bell (Lot 1506) and adjoining Cordick (Lot 625) claims are situated 11 kilometres northeast of Greenwood, just east of Highway 3, at a point 2.5 kilometres south of Wilgress Lake.

The first recorded work on the R. Bell claim was 1896 when a shaft was sunk to a depth of about 30 metres on a seam of high grade chalcopyrite in eruptive rocks. The claim was Crown granted in 1900 and in 1901 ore was shipped (267 tonnes, yielding 110.7 kilograms of silver and 20.8 tonnes of copper) by the Granby Consolidated Mining, Smelting and Power Company Ltd. Total underground development at this time was 120 metres of shaft sinking and 180 metres of cross-cutting and drifting. Ore shipped from the Cordick in 1918 totalled 20 tonnes, yielding 2053 grams of silver and 450 kilograms of copper. Exploration of the property continued intermittently after the production period and in 1927 a tunnel was driven connecting the R. Bell and Cordick claims following a southeasterly striking vein. The face of this tunnel displayed pyrite and hematite associated with quartz and calcite gangue minerals across a vein width of more than 1 metre. The Cordick epidote-garnet-calcite skarn contains pyrite, pyrrhotite, chalcopyrite, hematite, and in places magnetite with sphalerite in calcite veins.

The host rock in the area is greenstone, stained locally with copper carbonate minerals and cut by a large 30-metre wide, barren, pulaskite porphyry dike. The greenstones are interbedded with tuffs, limestone and sharpstone conglomerates of the Triassic

CAPSULE GEOLOGY

Brooklyn Group. These are intruded by granodiorite of the Jurassic Nelson Intrusions and alkaline syenite of the Eocene Coryell Intrusions.

In 1995, after many years of inactivity, the discovery of a Carlin-type gold occurrence (PAC, 082ESE194), 150 metres from the R. Bell and Cordick copper skarn workings, sparked renewed exploration activity by Kettle River Resources Ltd. Trenching has exposed 30 metres of intensely silicified limestone similar to the discovery outcrop where two chip samples of 2.4 and 1.8 metres across structure returned assays of 19.5 and 32 grams per tonne gold, respectively.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-map after 758; 1896-578; *1897-594,595; 1900-870,992;
1901-1051,1052,*1064; 1905-183; 1927-232; 1967-233; 1968-235
EMPR ASS RPT 78, 2770, 5356, 6175, 22707, 24666, 24768, 25423
EMPR BC METAL MM00841, MM00912
EMPR EXPL 1975-E14; 1976-E21
EMPR GEM 1970-431; 1974-38
EMPR INDEX 3-193, 210
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC SUM RPT 1902, pp. 106,135
WWW <http://www.kettleriver.com>

DATE CODED: 1985/07/24
DATE REVISED: 1996/10/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE065**

NATIONAL MINERAL INVENTORY:

NAME(S): **NIAGRA (L.1356)**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 30 N
LONGITUDE: 118 28 28 W
ELEVATION: 800 Metres

NORTHING: 5440546
EASTING: 392391

LOCATION ACCURACY: Within 500M

COMMENTS: The Niagra (L.1356) is located on Fisherman Creek.

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Brooklyn	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
Sharpstone Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Niagra (L.1356) is located on Fisherman Creek. No information is available aside from 14 metres of tunnelling and shafting being done in 1901.

BIBLIOGRAPHY

EMPR AR 1901-1065
EMPR MR MAP 6 (1932)
GSC MAP 828

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE066**

NATIONAL MINERAL INVENTORY:

NAME(S): **GATEWAY**, MOONLIGHT (L.1528), GOLDEN DAWN (L.1349),
ALAMEDA (L.2876), DAN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:

Open Pit Underground

MINING DIVISION: Greenwood

LATITUDE: 49 28 48 N
LONGITUDE: 118 56 34 W
ELEVATION: 1150 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5482631
EASTING: 359275

LOCATION ACCURACY: Within 500M

COMMENTS: The Gateway property overlooks Beaverdell Creek on the north slopes of Kloof Ridge, between 1150 - 1250 metres elevation, 10.5 kilometre northeast of Beaverdell. Access to the property is from a dirt side road that joins the main Beaverdell Creek road at a point approximately 1 kilometre east of Larsen Creek. Location is an adit on Geological Survey Map 37A. Assessment Report 11972 shows old workings up the hill, to the south.

COMMODITIES: Gold Silver Copper Molybdenum

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Pyrrhotite Arsenopyrite Gold

 Silver Molybdenite

ASSOCIATED: Quartz Carbonate

ALTERATION: Limonite Carbonate Chalcedony

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epithermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Jurassic			Westkettle Batholith

LITHOLOGY: Argillite
Limestone
Quartz Diorite
Porphyritic Dike

HOSTROCK COMMENTS: Westkettle is part of the Nelson Intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Okanagan Highland

GRADE: Hornfels

CAPSULE GEOLOGY

The Gateway property overlooks Beaverdell Creek on the north slopes of Kloof Ridge, between 1150 - 1250 metres elevation, 10.5 kilometre northeast of Beaverdell. Access to the property is from a dirt side road that joins the main Beaverdell Creek road at a point approximately 1 kilometre east of Larsen Creek.

The area has been explored intermittently since the first influx of prospectors in 1878. Surface programs consisting of panning, lode prospecting and trenching led to the discovery of silver, gold and copper in 1896.

The property was staked in 1896 and consists of an alignment of the Gateway claim and three additional claims adjoining in succession to the southeast - the Golden Dawn (Lot 1349), Moonlight (Lot 1528) and Alameda (Lot 2876). These claims were worked regularly each summer from 1903 to 1911. The workings on the Gateway claim include a short adit and shallow shaft. On the Golden Dawn there is a 9-metre deep shaft and a 9-metre long adit. The Moonlight has several prospect pits and the Alameda features a shaft and two prospect pits. Significant gold has been reported on the Alameda claim and copper values ranging to 5 per cent are reported from various showings on the other claims.

The property is underlain mostly by metasedimentary rocks (argillites and limestones) of the Upper Paleozoic Anarchist Group. These rocks are intruded by porphyritic and fine grained felsic dikes that appear to be offshoots of the Jurassic Westkettle pluton

CAPSULE GEOLOGY

(Nelson Intrusions), that occurs as a large mass of quartz diorite downhill, just below the claims. A number of dark coloured, basic Tertiary dikes also intrude the country rocks.

The mineral occurrences on the Gateway, Moonlight and Golden Dawn claims are mostly pyrite and chalcopyrite bearing quartz veins frequently associated with white porphyry dikes. The sulphides on the Alameda claim are pyrrhotite and pyrite, forming stringers and fine grained disseminations in the hornfelsed country rocks.

In 1983, P. Peto prospected, relocated and sampled the showings. The following is a brief description of samples from the property (Assessment Report 11972):

- pyrite bearing hornfels from a 2 x 3-metre open cut,
- molybdenite in a 1-metre wide quartz vein in granitic rocks,
- limonitic quartz-carbonate breccia in a fault zone,
- chalcopyrite, pyrite in drusy quartz from a 3-metre pit,
- massive pyrite pod from hornfels in a prospect pit,
- pyrite and chalcopyrite in chalcedonic quartz from dump, and
- pyrite, clay and carbonate alteration in hornfels breccia.

BIBLIOGRAPHY

EMPR AR 1903-247; 1904-298
EMPR ASS RPT *11972, 23969
EMPR AEROMAG MAP 7686G
GSC MEM *79, PP. 134-135
GSC MAP 37A; 6-1957; 1736A
GSC OF 481; 637; 1969
GCNL #213, 1979

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE067**

NATIONAL MINERAL INVENTORY:

NAME(S): **O.K. (L.573S)**, IVANHOE (L.574S), OK,
MONA (L.2841), MEXICO (L.2867), ROI,
TRIPLE LAKE, KETTLE, CLEAVER

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:
LATITUDE: 49 28 04 N
LONGITUDE: 118 55 14 W
ELEVATION: 1325 Metres
LOCATION ACCURACY: Within 500M

Open Pit

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5481231
EASTING: 360850

COMMENTS: The O.K. claim (Lot 573s), 12 kilometres east of Beaverdell, lies adjacent to and south of the Ivanhoe claim (L. 574s). The claims are in the Triple Lakes area. Access to the property is by logging roads from either the main Kettle Valley road to the east or from Beaverdell to the west.

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Arsenopyrite Chalcopyrite Galena
Sphalerite
ASSOCIATED: Quartz
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Jurassic	Anarchist	Undefined Formation	Westkettle Batholith

LITHOLOGY: Quartz Diorite
Hornblende Diorite
Hornfels

HOSTROCK COMMENTS: Westkettle is part of the Nelson Intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Slide Mountain
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels
PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The O.K. claim (Lot 573s) is 12 kilometres east of Beaverdell and 48 kilometres north of Rock Creek. It lies adjacent to and south of the Ivanhoe claim (Lot 574s). The claims are at about 1325 metres elevation, in the Triple Lakes area that is the headwater basin of Canyon Creek. The area has been extensively logged resulting in a network of four wheel drive roads. Access to the property is by logging roads from either the main Kettle Valley road to the east or from Beaverdell to the west.

The O.K. and Ivanhoe claims were located in 1897 and Crown granted to Samuel Larsen and Henry Thoen in 1908. In 1938, S. Peterson shipped 5 tonnes of ore, resulting in 187 grams of silver and 124 grams of gold.

The development work on the O.K. claim consists of large, shallow open pits or trenches in the shatter zone. Assays of samples of quartz and pyrrhotite from the bottom of the main pit (about 3.5 metres deep) report gold values. A second pit, about 3 metres deep, shows a considerable mass of pyrrhotite. A third pit, about 30 metres away, tests the continuity of the ore body.

The area underlying the claims is characterized by large gossan-cap showings with quartz veins and traces of gold. There appears to be a contact between granitic rocks and a diabase body (sill or dike) that is badly shattered and invaded by numerous quartz stringers accompanied by local concentrations of pyrrhotite and arsenopyrite. The shatter zone is about 30 metres wide and strikes southeast.

The original target on the Ivanhoe claim is a northerly trending quartz vein carrying pyrite, arsenopyrite and minor

CAPSULE GEOLOGY

chalcopyrite; free gold was obtained by panning. The vein is about 30 centimetres wide, vertical, and is hosted in quartz diorite of the Jurassic Westkettle Batholith (Nelson Intrusions) that contains stringers of pyrite. The old workings are obscure - there may be two subparallel mineralized zones which show in two 5-metre pits, or there may be a single faulted zone.

A soil sampling program by Carmac Resources Ltd., in 1990, shows that the area is weakly anomalous in arsenic and gold, and these anomalies coincide with pyrrhotite rich gossans on which the early development work was focused. Assays of the gossan material show <300 parts per billion gold. A grab sample from a 10-centimetre wide quartz vein assayed 1.4 grams per tonne gold.

In 1994, Phelps Corporation of Canada, Limited conducted 40-line kilometres of soil sampling in the area.

In 1994 and 1995, R.E. Gale sampled and mapped the showings. A grab sample from a 30-centimetre wide quartz vein assayed 23.3 grams per tonne gold and 0.21 per cent copper (Assessment Report 23969).

BIBLIOGRAPHY

EMPR AR 1898-1119; 1900-879; *1901-1137; 1902-182; 1908-251;
1913-160; 1917-205; 1938-A34,D22
EMPR INDEX 3-207
EMPR BC METAL MM00906
EMPR ASS RPT 8703, 10456, *19525, 20122, 22396, 22929, 23835, *23969
24307
EMPR AEROMAG MAP 7686G
GSC MAP 37A; 6-1957; 1736A
GSC MEM 79, p. 136
GSC OF 481; 637; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE068**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOGUL (L.2857)**, MONITOR (L.2858), CLEAVER

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 28 53 N
LONGITUDE: 118 53 58 W
ELEVATION: 1365 Metres

NORTHING: 5482706
EASTING: 362418

LOCATION ACCURACY: Within 500M

COMMENTS: The Mogul claim (L. 2857) is 15 kilometres east of Beaverdell, at the head of Stewartson Creek. Access to the property is by logging roads from either the main Kettle Valley road to the east or from Beaverdell to the west.

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Arsenopyrite
ASSOCIATED: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Jurassic	Anarchist	Undefined Formation	Westkettle Batholith

LITHOLOGY: Quartz Diorite
Basic Dike
Greenstone
Tuff

HOSTROCK COMMENTS: Westkettle is part of the Nelson Intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Slide Mountain
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1938
SAMPLE TYPE: Unknown
COMMODITY: Gold GRADE: 51.0000 Grams per tonne
COMMENTS: Sample across 33 centimetres.
REFERENCE: Annual Report 1938, page D22.

CAPSULE GEOLOGY

The Mogul claim (L. 2857) is 15 kilometres east of Beaverdell and 49 kilometres north of Rock Creek. It straddles the crest of Lake Ridge at the elevation of 1365 metres at the head of Stewartson Creek. The area has been extensively logged resulting in a network of four wheel drive roads. Access to the property is by logging roads from either the main Kettle Valley road to the east or from Beaverdell to the west.

The Mogul claim was staked in 1896, at a time when there was a great influx of prospectors to the Kettle River area. By 1898 there were many stakings on Lake Ridge (Horseshoe Mountain) and considerable surface and near-surface work was done. But by 1901 activity had waned and no attention was paid to this area until 1928. In that year H.E. Hunnings and Company started development on the Mogul claim and in the next year the Mogul Mining Co. Ltd. had acquired many claims in the area but concentrated their efforts on the Mogul and Silver Dollar (L. 2842) (082ESE069), located to the north.

The Mogul showing is a quartz vein located near the north

CAPSULE GEOLOGY

boundary of the claim. The vein is up to a metre wide at surface and hosted in quartz diorite. It strikes 60 metres southwest from a shaft where it is cut off by a large basic dike. The shaft was sunk in early days and later deepened to 15 metres. In 1928, an adit, collared on the adjacent Monitor claim (L. 2858) was driven at 290 degrees for 43 metres where a short raise intersected the bottom of the shaft. A crosscut and drift were developed from the base of the shaft. Then a drift from the main crosscut was advanced in a westerly and southerly direction for a total distance of 26 metres, with two diverging tunnels at the end, 11 metres and 6 metres respectively. In the west drift a considerable amount of faulted mineralization, containing occasional values in gold, was followed over a distance of 9 metres. The company decided, after making a shipment of 4 or 5 tonnes of ore to the smelter, to stop work until deeper development could be undertaken. In the latter part of the 1930's the claim was leased and small shipments of ore were made until 1940. Production totalled 212 tonnes, resulting in 9580 grams of gold and 5193 grams of silver.

Mineralization consists of pyrite, pyrrhotite and a little arsenopyrite in silicified quartz diorite, locally, with little true vein quartz. As seen in the shaft, the vein is irregular, in part because of flat faults, and varies from several centimetres to 0.6 metre wide. The shaft area has been extensively mined forming a glory hole.

Early assay results on the vein are reported to range in values up to 132 grams per tonne gold and 21 grams per tonne silver. A sample across 71 centimetres, 3 metres below the collar of the shaft assayed 58 grams per tonne gold and a trace of silver. A sample across 33 centimetres, 15 metres from the portal on a separate zone, assayed 51 grams per tonne gold and trace of silver (Annual Report 1938, page D22).

The area is primarily underlain by quartz diorite related to the Jurassic Westkettle pluton (Nelson Intrusions) and Upper Paleozoic Westkettle volcanic and sedimentary rocks of the Anarchist Group. These rocks locally consist of fine grained andesitic tuffs and lava flows, chert and volcanic derived sedimentary rocks with some interbedded limestone trending northerly.

In 1994, Phelps Corporation of Canada, Limited conducted 40-line kilometres of soil sampling in the area.

BIBLIOGRAPHY

EMPR AR 1900-879; 1901-1137; 1902-182; 1903-247; 1905-181; 1913-160;
1917-205; 1928-254; 1929-259; 1930-221; *1931-124; 1932-128;
1933-155; 1936-A34; 1937-D31; *1938-D17-D19,D22,D36; 1939-77;
1940-62
EMPR ASS RPT 19524, 23835
EMPR AEROMAG MAP 7686G
EMPR INDEX 3-205
EMPR BC METAL MM00897
GSC MEM 79, p. 136
GSC MAP 37A, 6-1957; 1736A
GSC OF 481; 637; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE069**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER DOLLAR (L.2842)**, CLEAVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 10 N
LONGITUDE: 118 53 38 W
ELEVATION: 1430 Metres

NORTHING: 5483221
EASTING: 362833

LOCATION ACCURACY: Within 500M

COMMENTS: The Silver Dollar claim (L. 2842) is 15 kilometres east of Beaverdell, northwest of Stewartson Creek on the crest of Lake Ridge. Access to the property is by logging roads from either the main Kettle Valley road to the east or from Beaverdell to the west.

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Arsenopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epithermal
TYPE: I01 Au-quartz veins
COMMENTS: Lenses and fissure fillings.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Jurassic	Anarchist	Undefined Formation	Westkettle Batholith

LITHOLOGY: Greenstone
Tuff
Porphyry Syenite Augite Dike

HOSTROCK COMMENTS: Westkettle is part of the Nelson Intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Contact
PLUTONIC ROCKS RELATIONSHIP: Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland
GRADE: Hornfels

CAPSULE GEOLOGY

The Silver Dollar claim (L. 2842) is 15 kilometres east of Beaverdell and 48 kilometres north of Rock Creek. It lies at about 1400 metres elevation, northwest of Stewartson Creek on the crest of Lake Ridge. The area has been extensively logged resulting in a network of dirt roads. Access to the property is by logging roads from either the main Kettle Valley road to the east or from Beaverdell to the west.

By 1898 there were many stakings on Lake Ridge (Horseshoe Mountain) and considerable surface and near-surface work was done up to 1903. At this time the Silver Dollar claim was Crown granted to C. Newman and J. Patterson. Subsequently, activity in the area waned. The principal workings on the property consisted of a shaft, about 12 metres deep, with a crosscut tunnel at 6 metres depth. The ore is comprised of pyrite, pyrrhotite and arsenopyrite hosted by a dense metamorphosed greenstone, cut by light coloured (Tertiary?) dikes. The ore bodies found in the greenstone in this area are, as a rule, lenticular in shape and often disconnected.

In 1928, H.E. Hunnings and Company began development work on the Mogul claim (L. 2857) (082ESE068) and, soon after, the Mogul Mining Co. Ltd. was formed and many claims in the area were acquired by this company, including the Silver Dollar. The first work consisted of extending the underground development on the Silver Dollar claim to block out ore reserves. In 1929, the company drove a tunnel about 11 metres from the bottom of the shaft to tap the possible downward extension of the ore found in the shaft above. Near the bottom of the shaft an augite syenite porphyry dike was encountered. The tunnel was driven in a semicircle in the porphyry until the greenstone unit was intersected again, however, no additional ore was discovered. Between 1933 and 1940, several tonnes of ore were shipped from the Mogul claim. No recorded

CAPSULE GEOLOGY

production exists for the Silver Dollar. In 1938, production from the nearby Barnato claim (082ESE109) resulted renewed activity throughout the area. At this time, Cominco optioned much of the ground and completed an exploration program consisting of mapping, prospecting, test pitting and drilling. This showed that the veins in the vicinity were erratic along strike and diminished in thickness and grade with depth.

During the period 1965 to 1966, Amcana Gold Mines conducted a program of road construction, claim surveying, trenching and diamond drilling (4 short holes) in the area of the Barnato and Hackla (082ESE157) claims. In 1994, Phelps Corporation of Canada, Limited conducted 40-line kilometres of soil sampling in the area.

The area is underlain by volcanic and sedimentary rocks of the Anarchist Group (Upper Paleozoic) and igneous intrusions. The bedded assemblage locally consist of fine grained andesitic tuffs and lava flows, chert, and volcanic-derived sedimentary rocks with some interbedded north-trending limestone. This succession is intruded by quartz diorite and related dikes associated with the Jurassic Westkettle pluton (Nelson Intrusions). The Anarchist Group is intensely hornfelsed along the contact with the quartz diorite.

BIBLIOGRAPHY

EMPR AR 1898-1119; 1900-879; 1901-1138; 1902-182; 1903-248; 1905-181;
1913-160; *1917-205; *1929-C259; 1938-D17,D18
EMPR EXPL 1978-E28; 1979-28
EMPR ASS RPT 364, 6751, 8703, 10456, 23835
EMPR AEROMAG MAP 7686G
EMPR BULL 1 (1932), p. 86
GSC MEM *79, p. 82, 132, 136-137
GSC MAP 37A; 6-1957, 1736A
GSC OF 481; 637; 1967

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/01

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

old workings, the eastern margin of which is covered with glacial till. The vein is 3 to 4 metres wide and consists mostly of massive fluorite, bounded on the west by 1.5 to 2 metres of fluorite-matrix breccia and a thin composite banded margin adjacent to altered country rocks. The massive part of the vein is coarse grained, apple to emerald green fluorite and some pale purple fluorite cut by numerous vuggy quartz veins. Within the mine, numerous large vugs have been reported which are locally in excess of one metre in width and filled with white kaolin or lined with crystals of barite, quartz, calcite and fluorite. The marginal breccia contains altered subangular fragments of volcanic country rocks in a matrix of purple and green fluorite, chalcedony, kaolin, pyrite, quartz and calcite. The banded western margin of the vein comprises both crystalline and massive, barite with calcite, fluorite, chalcedony and quartz. Chalcopryrite, galena, chalcocite and covellite have been reported by previous investigator but these minerals are no longer exposed. Numerous fluorite veinlets, 4 to 5 centimetres thick and subparallel to the main vein, cut the altered volcanic rocks. Fluorite mineralization is exposed again one kilometre north of the mine. In this area a 1-metre-wide vein cuts the altered volcanic rocks. It consists of massive pale purple, and pale green fluorite intruded by younger quartz veins and a breccia a few centimetres across consisting of angular fluorite fragments in a matrix of small quartz crystals. Small vugs lined with quartz crystals are abundant. A strong fault lineament connects this showing with the main workings and projects some distance to the north and south. Drilling shows intermittent development of fluorite mineralization along this fault but no economic grades have been reported except from the main workings.

BIBLIOGRAPHY

EM PF (Rylands, Chris, J.P. (Winter/Spring 2000): The Rock Candy Mine, Vol. 1, No. 4, 4 pages; Rylands, Chris (Spring 2000): The Rock Candy Mine, Vol. 1, No. 2, 5 pages)
EMPR AEROMAG MAP 8497G
EMPR AR 1917-25,201; 1918-195,207,222; *1919-164-165,370; 1920-24,154; 1921-180; 1922-170; 1923-25,177,180; 1925-51,192; 1926-204; 1929-254,454; 1930-31,228; 1947-211; 1965-264; *1967-305-308
EMPR BC METAL (Fluorspar; Rock Candy Fiche)
EMPR FIELDWORK *1988, pp. 470-473
EMPR MP CORPFILE (Cominco Ltd.; Acorn Resources)
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1992-16
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC EC GEOL *No. 6, pp. 23-28; No. 34
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29; 89-1E
WWW <http://www.canadianrockhound.com>; <http://www.gemnews.net>

DATE CODED: 1985/07/24
DATE REVISED: 1991/03/28

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE071**

NATIONAL MINERAL INVENTORY:

NAME(S): **VAL**, SIL, MIKE,
MINT

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 40 N
LONGITUDE: 118 39 08 W
ELEVATION: 1402 Metres

NORTHING: 5433711
EASTING: 379262

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Silica

MINERALS

SIGNIFICANT: Silica
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Industrial Min.
TYPE: I07 Silica veins

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE

Permian-Triassic

GROUP

Knob Hill

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

The Val property is located about 6.4 kilometres south of Greenwood at the elevation of 1400 metres on the south-facing slope of Mount Attwood. Access is via the McCarren Creek road which turns east off of Highway 3 near Boundary Falls. At 9 kilometres on the McCarren road there is a left turn onto a little used bush road which leads to the property 3 kilometres to the northwest.

The property is underlain by cherts and phyllites of the Knob Hill Group which have been intruded by dioritic dikes of various ages. Silica occurs in these host rocks as large tabular bodies of massive, fine grained white quartz. The origin of the quartz body is unknown but there is some agreement that it is a vein, although a few authors believe it to be the result of remobilization of a cherty beds in the Knob Hill Group. The vein has been traced easterly on strike for 350 metres. A second smaller vein occurs on strike 400 metres further east. Several samples analysed by the Geological Survey Branch returned 98.7 per cent silica.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1967-320
EMPR ASS RPT 3917, 4795, *12472
EMPR GEM 1973-564
EMPR MR MAP 6 (1932)
EMPR OF 1987-15, 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE072**

NATIONAL MINERAL INVENTORY: 082E1 Au5

NAME(S): **LUCKY JOHN**, EXCHANGE

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 30 N
LONGITUDE: 118 27 46 W
ELEVATION: 700 Metres

NORTHING: 5449793
EASTING: 393422

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic
TYPE: I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP
Upper Paleozoic Anarchist
Jurassic-Cretaceous

FORMATION
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER
Nelson Intrusions

LITHOLOGY: Metasedimentary
Porphyry
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Lucky John is underlain by Permian (?) Anarchist sediments intruded by Lower Cretaceous(?) Nelson porphyritic granodiorite, which in turn are intruded by Paleocene(?) Coryell syenite, shonkinite, and pulaskite. Pyrite and chalcopyrite occur in a dark-grey crystalline fine-grained micaceous rock which is cut by and intruded in a fine-grained light grey highly siliceous rock.

BIBLIOGRAPHY

EMPR AR 1896-578; 1897-596; 1898-1128; 1901-1065; 1928-238;
1930-227; 1931-121; 1939-91; 1966-196
EMPR ASS RPT 8883

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE073**

NATIONAL MINERAL INVENTORY: 082E1 Au5

NAME(S): **VOLCANO (L.1476)**, FANTANINE (L.1477), VOLCANIC,
~~BROWN'S CAMP~~

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 18 N
LONGITUDE: 118 26 04 W
ELEVATION: 1100 Metres

NORTHING: 5447530
EASTING: 395444

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Igneous-contact
TYPE: K01 Cu skarn

K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous			Nelson Intrusions

LITHOLOGY: Granodiorite
Limestone
Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Volcano claim is on Volcanic Mountain located just east of the Granby River, 16 kilometres north of Grand Forks. This is a short distance west and a little north of the Golden Eagle claim. Most of the development work on this property dates from 1900. Much of this was done on the south and southwest slopes of Volcanic Mountain and consists of numerous open cuts, stripping, and a tunnel 240 metres long near the base of the hill. On the south slope the ground is covered with a dark red loam and gravel which is evidently the result of oxidation of pyrite and pyrrhotite. At about the same elevation on the bluff to the southwest, erosion has exposed large masses of pyrite and pyrrhotite associated with garnetite, epidote and silica.

Remnants of limestone occur as thin coverings on the mineralized zone and a porphyry dike cuts through the zone. Near the bottom of the bluff, at an elevation of 655 metres, a tunnel has been driven for 240 metres in a north-easterly direction. The greater part of this tunnel was driven in porphyry but near the face highly siliceous rocks containing disseminated pyrite were encountered. A series of flat drill holes fanning from the face of this tunnel penetrated soft talcose gouge but no significant metal values were returned. In an open cut at the top of the bluff, at 985 metres elevation, massive pyrrhotite occurs together with evidence of intense metamorphism. A granodiorite stock exposed immediately southeast of the claim shows pyrite, chalcopyrite and pyrrhotite at the contact. This intrusion is believed to be the source of mineralization and local metamorphism.

BIBLIOGRAPHY

EMPR AR 1899-758; 1900-993; 1906-163; 1928-237
EMPR GEM 1972-34

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE074**

NATIONAL MINERAL INVENTORY: 082E1 Cu1

NAME(S): **LITTLE BERTHA (L.959)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:
LATITUDE: 49 11 36 N
LONGITUDE: 118 25 22 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5449922
EASTING: 396339

COMMODITIES: Copper Gold Silver Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous			Nelson Intrusions

LITHOLOGY: Quartz Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Little Bertha (L.959) is underlain by Permian (?) Anarchist sediments intruded by Jurassic Nelson porphyritic granodiorite, which in turn are intruded by Paleocene (?) Coryell syenite, shonkinite, and pulaskite. East of Granby River both the Anarchist and Nelson rocks are in fault contact with the Grand Forks Group metamorphic rocks. Pyrite, chalcopyrite, and galena in quartz gangue in Nelson quartz porphyry.

BIBLIOGRAPHY

EMPR AR 1897-597; 1899-603,759; 1900-731; 1901-1064; 1905-186;
1906-163; 1908-115; 1910-224; 1915-201,446; 1916-517;
1917-214; 1919-164; 1920-154; 1922-169; 1924-164; 1925-194;
1927-266; 1928-238; 1932-124; 1937-D32; 1938-A33; 1939-36,91
EMPR ASS RPT 8945
EMR MP CORPFILE (PATHFINDER CONSOLIDATED MINING CO., ALWIN MINING
COMPANY LTD.)
BC DEPT OF LANDS MIN REF MAP 6,1932
GSC MAP 749G, 6-1957

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE075**

NATIONAL MINERAL INVENTORY: 082E1 Cu1

NAME(S): **PATHFINDER (L.782)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 11 30 N
LONGITUDE: 118 24 46 W
ELEVATION: 1233 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5449723
EASTING: 397064

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Gold Silver Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: J01 Polymetallic manto Ag-Pb-Zn I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous Nelson Intrusions

LITHOLOGY: Quartz Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca Quesnel PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks

CAPSULE GEOLOGY

PERMIAN(?) ANARCHIST SEDIMENTS INTRUDED BY L.CRET-
ACEOUS(?) NELSON PORPHYRITIC GRANODIORITE, WHICH
IN TURN ARE INTRUDED BY PALEOCENE(?) CORYELL
SYENITE, SHONKINITE, AND PULASKITE. E OF GRANBY R
BOTH ANARCHIST AND NELSON ROCKS ARE IN FAULT CON-
TACT WITH THE GRAND FORKS GP METAMORPHIC ROCKS.
PYRITE, CHALCOPYRITE, AND GALENA IN QUARTZ GANGUE
IN NELSON QUARTZ PORPHYRY.

BIBLIOGRAPHY

EMPR AR 1897-597; 1899-603,759; 1900-873; 1901-1064; 1905-186;
1906-163; 1908-115; 1910-224; 1915-201,446; 1916-517; 1917-214;
1919-164; 1920-154; 1922-169; 1924-164; 1925-194; 1927-226;
1928-238; 1932-124; 1937-D32; 1938-433; 1939-36,61,91; 1966-197
EMPR ASS RPT 8945
BC DEPT OF LANDS MIN REF MAP 6,1932
EMR MP CORPFILE (PATHFINDER CONSOLIDATED MINING CO., ALWIN MINING
COMPANY LTD.)
GSC MAP 1957-6, 749G
GCNL #27,#228,1980
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE076**

NATIONAL MINERAL INVENTORY:

NAME(S): **MONO (L.2205)**, THIMBLE MOUNTAIN

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 06 N
LONGITUDE: 118 27 58 W
ELEVATION: 700 Metres

NORTHING: 5447204
EASTING: 393128

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE.

BIBLIOGRAPHY

EMPR AR 1901-992; 1902-1065

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE077**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAILOR BOY (L.1093)**, SHICKSHOCK (L.992), IKE

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 09 06 N
LONGITUDE: 118 29 16 W
ELEVATION: 1033 Metres

NORTHING: 5445382
EASTING: 391513

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Magnetite Pyrrhotite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Replacement
TYPE: K01 Cu skarn K03 Fe skarn
 K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Knob Hill	Unnamed/Unknown Formation	
Jurassic-Cretaceous	Brooklyn	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
 Sharpstone Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

A WEDGE OF BROOKLYN LIMESTONE, ARGILLITE, AND SHARPSTONE CONGLOMERATE HAS BEEN ENVELOPED BY NELSON DIORITE AND EXTENSIVELY REPLACED BY SKARN. THE SKARN CONTAINS IRREGULAR BODIES OF MASSIVE MAGNETITE AND PYRRHOTITE CARRYING MINOR PYRITE, CHALCOPYRITE, AND SPHALERITE.

BIBLIOGRAPHY

EMPR AR 1899-850; 1900-992; 1906-163
EMPR ASS RPT 3780, 5057
EMPR GEM 1972-34, 1974-32

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE078**

NATIONAL MINERAL INVENTORY:

NAME(S): **BUNKER HILL (L.1609)**, SEATTLE, IKE,
M.L. 360

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

MINING DIVISION: Greenwood

LATITUDE: 49 07 54 N
LONGITUDE: 118 28 34 W
ELEVATION: 1133 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5443142
EASTING: 392320

LOCATION ACCURACY: Within 500M

COMMENTS: The Bunker Hill (L.1609) is located on the northern slope of
Thimble Mountain.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Brooklyn	Unnamed/Unknown Formation	
Jurassic-Cretaceous	Penticton	Kettle River	
Jurassic			Nelson Intrusions

LITHOLOGY: Sandstone
Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

PYRITE, MAGNETITE, AND CHALCOPYRITE IN SKARN IN
LIMESTONE AND LIMY GRIT NEAR A DIORITIC INTRUSION.

BIBLIOGRAPHY

EMPR AR 1905-254
EMPR ASS RPT 3159
EMPR GEM 1969-309, 1971-374

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE079**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN EAGLE (L.1334)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:
LATITUDE: 49 10 00 N
LONGITUDE: 118 26 04 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5446974
EASTING: 395433

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Gold Silver Pyrite Malachite
 Marcasite Azurite Copper Arsenopyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Pyrite
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Anarchist Unnamed/Unknown Formation

LITHOLOGY: Tuffaceous Rock
 Greenstone
 Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Quesnel

CAPSULE GEOLOGY

The Golden Eagle mine is situated 15 kilometres up the Granby River from Grand Forks, on the east side, and 2.5 kilometres from the main road at an elevation of 850 metres. The development, dating from 1898 and the early part of the century, consists of a shaft 45 metres deep, a crosscut tunnel 117 metres long, and drifting and stoping for 110 metres. The crosscut adit was driven east-southeast from the northeast corner of the claim. Two veins were cut - the first 43 metres from the beginning of the crosscut, and the other at 117 metres, which vary in width from 5 centimetres to 2 metres.

The Golden Eagle vein occurs along the western contact of the most westerly of two large porphyry dikes. The country rock in the vicinity of the workings is greenstone with distinctive small fragments of crystalline limestone. Near the veins greenstone has been altered by silicification and pyritization. The veins are composed of saccharoidal calcite, quartz, chalcopyrite, pyrite and arsenopyrite. The sulphides are oxidized throughout the mine to iron oxide, malachite and chrysocolla. Some native copper has been reported. Assay results are from 7 grams per tonne of gold, 70 grams per tonne of silver on the first vein; 2.1 grams per tonne of gold, 31 grams per tonne of silver, and 0.5 per cent copper, for the second vein in (tunnel sample); and 12.3 grams per tonne gold, 860 grams per tonne silver, and 5.6 per cent copper for the second vein (stope sample).

Production from 1900 to 1941 totalled 81,613 grams of silver, 8927 grams of gold, and 15,296 kilograms of copper from 1099 tonnes.

BIBLIOGRAPHY

EMPR AR 1899-758; 1900-870,873,991; 1901-1064; 1904-221; 1905-185;
1906-163; 1907-109,115; 1908-115; 1909-134,273;
1910-118,244,1925-193; 1939-A36; 1941-25
EMPR BC METAL MM00862

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 526
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR INDEX 3-198

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE080**

NATIONAL MINERAL INVENTORY:

NAME(S): **JUDITTA**, RICHMOND (L.2232)

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 00 N
LONGITUDE: 118 25 34 W
ELEVATION: 900 Metres

NORTHING: 5448815
EASTING: 396076

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Lead Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic

GROUP

Anarchist

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Tuffaceous Metasedimentary
Chert
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

FRANKLIN TYPE ALTERED VOLCANIC TUFFS AND CHERTY QUARTZITES IN CONTACT WITH GRANITE AND LIMESTONE (WITH LIMESTONE IN PODS ALONG CONTACT). PULASKITE-PORPHYRY DYKES WHICH INTRUDE THE TUFF ARE MINZD WITH PYRITE AND CU CARBONATE. TWO SHAFTS AND A TUNNEL HAVE BEEN WORKED ON IN ONE SHAFT , FRACTURES WITH GLEN,AG,AU WERE SAMPLED.

BIBLIOGRAPHY

EMPR AR 1899-760; 1901-1231; 1907-219; 1923-180; 1927-226

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

prospecting in the camp that began in the late 1800's. By 1901, the No. 1 vein on the Mother Lode claim was stripped for 38 metres and a shaft sunk to a depth of 15 metres. From the bottom of this shaft a cross-cut tunnel was driven for 18 metres, where a 2-metre-wide section of the vein was intersected. Also, a crosscut adit was driven for 73 metres cutting 1.2 metres of the same vein at a depth of 50 metres, where good gold and silver values were encountered. Another tunnel was driven on No. 2 vein for 15 metres, and below this, downhill, another tunnel was driven on the same vein for 9 metres. The No. 3 vein was stripped for 24 metres and a crosscut adit begun at lower elevation to intercept this structure.

Subsequent work on the property was intermittent and not well recorded. Since 1965, several operators have explored the showings and shipped small quantities of ore. In 1965 Christina Lake Mines Ltd. completed geological, geochemical and magnetometer surveys and a minor amount of diamond drilling. In 1968, Dalex Mines Ltd. conducted an induced polarization survey, considerable stripping and trenching, and 7 drill holes totalling 653 metres.

In April 1986, Westrim Resources Inc. acquired an option agreement on the property, the object being to evaluate the Mother Lode (Lot 1508), the Eva Bell (Lot 2031) (082ESE169) and the Halifax (Lot 3042) (082ESE099) claims. The program consisted of trenching and 425 metres of diamond drilling at Mother Lode and detailed fill-in soil geochemical surveys in the Halifax/Eva Bell area. The results indicate that gold bearing quartz veins at the Mother Lode are discontinuous and therefore have very limited tonnage potential. However, a special feature of the property is platinum associated with the sulphides. Assays of mineralization in the quartz vein range from a trace to 8.57 grams per tonne platinum (O'Neill and Gunning, 1934).

BIBLIOGRAPHY

EM GEOFILE 2000-2, 2000-5
EMPR AR 1899-849; 1900-872,1066; 1901-1066; 1902-304; 1903-174;
1917-201; 1925-194; 1931-122; 1932-123; 1964-112; 1965-173;
1966-198; 1968-236
EMPR ASS RPT 1508, 1920, 7508, 12046
EMPR BULL 1-80
EMPR EXPL 1978-E13; 1979-13
EMPR GEM 1969-311; 1972-33; 1973-36; 1974-32
EMPR MIN 1975
EMPR PF
GSC EC GEOL 13, p. 104
GCNL Jan.15,Jul.2,Aug.6, 1976; Jan.26,Nov. 24, 1978
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE082**

NATIONAL MINERAL INVENTORY: 082E1 Au1

NAME(S): **MOLLY GIBSON (L.595 S)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 18 N
LONGITUDE: 118 06 58 W
ELEVATION: 1633 Metres

NORTHING: 5447139
EASTING: 418646

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold Silver Iron Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Replacement
TYPE: K04 Au skarn K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous Unnamed/Unknown Group Mount Roberts

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

ALTERED AND SILICIFIED LIMY SEDIMENTS AND CRYSTAL-LINE LIMESTONES ARE INTRUDED BY FINE-GRAINED PORPHYRITIC ALKALINE-SYENITE DYKES. TO THE SOUTH BIOTITE MONZONITE IS CUT BY NUMEROUS SYENITE DYKES. LENSE OF PYRRHOTITE, CHALCOPYRITE, AND PYRITE, UP TO 60 X 180 X 300 CM LIE DOWN SLIP IN THE META-SEDIMENTS. THE META-SEDS ARE REPLACED BY CALCIC SILICATES, SULPHIDES AND QUARTZ.

BIBLIOGRAPHY

EMPR AR 1909-273; 1911-177; 1917-199; 1918-204; 1919-164; 1920-155;
1922-170; 1923-214; 1924-191; 1926-205; 1928-235; 1929-255;
1930-228; 1931-122; 1932-122; 1933-149; 1934-A24; 1935-G52;
1936-D27; 1937-D32; 1938-A33,D37; 1940-24
EMPR ASS RPT 8811, 11989
EMPR BULL 1-80
EMPR MIN 1975
EMPR PF (Starr, C.C. (1928): Report of Preliminary Examination of the Mollie Gibson Mine, (3 pages and diagram of main workings)
GSC MAP 1957-6, 792
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE083**

NATIONAL MINERAL INVENTORY:

NAME(S): **INLAND EMPIRE (L.3880)**, BERLIN (L.11157), SAGINAW (L.3879),
SAGINAW FR. (L.3881), PRIDE OF CASCADE, A AND G FR. (L.14469),
INLAND EMPIRE FR (L.11156), WASHINGTON (L.11138), HIDDEN HAND (L.11139),
GRANVILLE MOUNTAIN, BIG SHEEP CREEK, SHEEP CREEK

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

Underground

MINING DIVISION: Trail Creek

LATITUDE: 49 12 24 N
LONGITUDE: 118 03 58 W
ELEVATION: 1733 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5450977
EASTING: 422346

LOCATION ACCURACY: Within 500M

COMMENTS: Located 10 kilometres east of Paulsen. See also Berlin (082ESE084).

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous
Jurassic
Eocene

GROUP
Rossland

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions
Coryell Intrusions

LITHOLOGY: Greenstone
Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Granitic rocks of the Nelson Intrusions intrude volcanics and greenstones of the Rossland Group. These are cut by porphyritic syenites of the Eocene Coryell Intrusives. A north-striking, steeply dipping fissure contains quartz lenses mineralized with galena, sphalerite, chalcopyrite and pyrite.

Production between 1912 and 1930 resulted in 216,663 grams of silver, 29,702 grams of gold and 566 kilograms of copper from 4133 tonnes. See also the Berlin (082ESE084).

Prominent Resources Corporation conducted surveys and sampling in 1985. In 1992, Crown Resources Corp. conducted an airborne geophysical survey in the area.

BIBLIOGRAPHY

EMPR AR 1903-163; 1905-172; 1906-154; 1907-108; 1908-105; 1909-129;
1910-116; 1911-173; 1912-162,323; 1913-135; 1914-332; 1916-208;
1917-199; 1936-E21,E24; 1938-D37; 1940-63
EMPR ASS RPT *14733, 22580
EMPR BC METAL MM00670
EMPR INDEX 3-189,187
EMPR PF (Starr, C.C. (1941): Notes on Inland Empire, Berlin and other groups; Claim Map; Plan and Section of Mine Workings (1947))
GSC MAP 6-1957
GCNL #124(June 27), #131(July 9), #145(July 27), 1979

DATE CODED: 1985/07/24
DATE REVISED: 1999/10/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE084**

NATIONAL MINERAL INVENTORY:

NAME(S): **BERLIN (L.11157)**, ALICE L (L.4321), INLAND EMPIRE,
INDEPENDENT (L.11136), GLENDALE (L.11137), GRANVILLE MOUNTAIN,
BIG SHEEP CREEK, SHEEP CREEK

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:
LATITUDE: 49 12 12 N
LONGITUDE: 118 04 16 W
ELEVATION: 1833 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 10 kilometres east of Paulsen. See also Inland Empire (082ESE083), located to the southwest.

Underground
MINING DIVISION: Trail Creek
UTM ZONE: 11 (NAD 83)
NORTHING: 5450612
EASTING: 421976

COMMODITIES: Lead Copper Zinc Gold Silver

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Rossland	Unnamed/Unknown Formation	
Jurassic			Nelson Intrusions
Eocene			Coryell Intrusions

LITHOLOGY: Greenstone
Andesite
Diorite
Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel Plutonic Rocks PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Granitic rocks of the Nelson Intrusions intrude volcanics and greenstones of the Rossland Group. These are cut by porphyritic syenites of the Eocene Coryell Intrusives. A north-striking, steeply dipping fissure contains quartz lenses mineralized with galena, sphalerite, chalcopyrite and pyrite. Production in 1939 and 1940 totalled 383 tonnes containing 21,399 grams silver and 2302 grams gold; see also Inland Empire (082ESE083). In 1980, Boundary Consolidated Exploration Limited drilled 8 holes, totalling 1006 metres on the Albion, Berlin and Alice L. claims. Prominent Resources Corporation conducted surveys and sampling in 1985. In 1989, Boundary Gold Corporation drilled 2 holes totalling 185 metres on the Berlin claim. In 1992, Crown Resources Corp. conducted an airborne geophysical survey in the area.

BIBLIOGRAPHY

EMPR AR 1906-154; 1907-108; 1913-424; 1914-332; 1917-199,449;
1918-204; 1919-164; 1922-171; 1924-166; 1928-235; 1932-80,124;
1936-E21; 1938-D37; 1939-35,77; 1940-23,63;
EMPR ASS RPT 8416, *14733, 19020, 22580
EMPR BC METAL MM00669, MM00670
EMPR INDEX 3-187,189
EMPR PF (See 082ESE083: Claim Map; Starr, C.C. (1941): Notes)

DATE CODED: 1985/07/24
DATE REVISED: 1999/10/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE086**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALBION NO. 2 (L.12489)**, B.C. (L.13489), U.S. (L.13490),
ALBION FR. (L.12491), DUBROVNIK (L.5436), DULUTH (L.12490),
GRANVILLE MOUNTAIN, BIG SHEEP CREEK, SHEEP CREEK

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:
LATITUDE: 49 11 42 N
LONGITUDE: 118 04 10 W
ELEVATION: 1833 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Trail Creek

UTM ZONE: 11 (NAD 83)

NORTHING: 5449684

EASTING: 422085

COMMODITIES: Gold

Silver

Zinc

Lead

MINERALS

SIGNIFICANT: Galena Pyrite Chalcopyrite Sphalerite Specularite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au 101 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Jurassic-Cretaceous
Eocene

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions
Coryell Intrusions

LITHOLOGY: Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

A north-striking quartz vein, about 2 metres wide, contains pyrite, galena, sphalerite, chalcopyrite and specularite. The vein occurs within syenites of the Eocene Coryell Intrusions.

Production between 1939 and 1964 resulted in 25,255 grams of silver, 4418 grams of gold, 365 kilograms of lead and 337 kilograms of zinc from 541 tonnes.

Boundary Consolidated Exploration Limited and Prominent Resources Corporation conducted geophysical surveys in 1984 and drilling of 9 holes totalling 418 metres in 1984. A 2.6-metre drill intersection assayed 242 grams per tonne silver and 13.6 grams per tonne gold (Assessment Report 14330). Prominent conducted surveys and sampling in 1985. In 1992, Crown Resources Corp. conducted an airborne geophysical survey in the area.

BIBLIOGRAPHY

EMPR AR 1920-350; 1932-197; 1936-E21; 1940-63; 1962-A47,70;
1964-A53,113
EMPR ASS RPT 8416, 13595, *14330, *14733, 19020, 22580
EMPR BC METAL MM00646
EMPR INDEX 3-187; 4-119
EMPR PF (See 082ESE083: Claim Map; Starr, C.C. (1941): Notes)
Chevron File

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE087**

NATIONAL MINERAL INVENTORY:

NAME(S): **ENTERPRISE (L.14563)**, HUCKLEBERRY (L.14564), KING PETER (L.14566), LUCKY PETER (L.14567), CORBIN (L.14569), NORWAY-STAR (L.14570), EUREKA (L.14565), CASTLETON (L.14571), DIXIE, GRANVILLE MOUNTAIN, BIG SHEEP CREEK, SHEEP CREEK

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

Underground

MINING DIVISION: Trail Creek

LATITUDE: 49 12 24 N
LONGITUDE: 118 02 52 W
ELEVATION: 1600 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5450959
EASTING: 423681

LOCATION ACCURACY: Within 500M

COMMENTS: The location of the centre of Enterprise (L.14563) is near Paulson. The Castleton lies 800 metres to the north.

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: Metres

STRIKE/DIP: 335/70S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous
Jurassic
Eocene

GROUP

Rossland

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions
Coryell Intrusions

LITHOLOGY: Greenstone
Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Granitic rocks of the Nelson Intrusions intrude volcanics and greenstones of the Rossland Group. These are cut by porphyritic syenites of the Eocene Coryell Intrusives. Fissures contain quartz lenses mineralized with galena, sphalerite, chalcopyrite and pyrite. Production in 1932 from the Enterprise and in 1939 from the Castleton, 800 metres to the north, totalled 8024 grams of silver, 871 grams of gold, 960 kilograms of lead and 1671 kilograms of zinc from 24 tonnes.

In 1970, Placid Oil Company conducted geological mapping, geophysical and geochemical surveys and drilling of 5 holes totalling 445.6 metres. Prominent Resources Corporation conducted surveys and sampling in 1985. In 1992, Crown Resources Corp. conducted an airborne geophysical survey in the area.

BIBLIOGRAPHY

EMPR AR 1922-170; 1923-178; *1926-205; 1927-226; 1936-E21,*E24
EMPR ASS RPT 13606, *14733, 14757, 19421, 22580
EMPR BC METAL MM00659, MM00651
EMPR GEM 1970, p. 436
EMPR INDEX 3-195, 191
EMPR PF (Claim Map in 082ESE083)

DATE CODED: 1985/07/24
DATE REVISED: 1999/10/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE088**

NATIONAL MINERAL INVENTORY:

NAME(S): **CALEDONIA (L.1756)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 02 24 N
LONGITUDE: 118 10 16 W
ELEVATION: 1367 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5432563
EASTING: 414411

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Chromite Magnetite
MINERALIZATION AGE: Paleozoic

DEPOSIT

CHARACTER: Podiform
CLASSIFICATION: Magmatic

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Permian
GROUP: Unnamed/Unknown Group

FORMATION: Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Serpentinite
Dunite

HOSTROCK COMMENTS: Dismembered ophiolite.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

THE PROPERTY IS CENTRED ON NICKELIFEROUS ULTRA-MAFIC ROCKS CARRYING FINELY DISSEMINATED NICKEL SULPHIDES, CHROMITE, AND MAGNETITE IN DUNITE.

BIBLIOGRAPHY

EMPR AR 1899-848; 1903-246; 1939-36
EMPR GEM 1972-33, 1973-35

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE089**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRIZE NO. 2 (L.120S)**, FFC

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 24 N
LONGITUDE: 118 11 34 W
ELEVATION: 1000 Metres

NORTHING: 5438146
EASTING: 412915

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Pyrite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Unnamed/Unknown Group	Mount Roberts	

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

A COMPLEX ASSEMBLAGE OF GABBRO DIORITE AND GRANITE HAS INTRUDED THE MT ROBERTS FM LIMESTONE AND GREY-WACKE. COPPER OCCURS IN THE NELSON GABBRO AND DIORITE OR ADJACENT TO THE CONTACT WITH THE LIMESTONE AND ASSOCIATED WITH A GARNETIFEROUS SKARN. DISSEMINATED CHALCOPYRITE WITH PYRRHOTITE AND PYRITE.

BIBLIOGRAPHY

EMPR AR 1907-219
EMPR ASS RPT 2371, 3054, 3503
EMPR GEM 1970-433, 1971-373

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE090**

NATIONAL MINERAL INVENTORY:

NAME(S): **MESSENGER (L.121S)**, FFC

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 24 N
LONGITUDE: 118 11 10 W
ELEVATION: 1067 Metres

NORTHING: 5438138
EASTING: 413402

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Unnamed/Unknown Group	Mount Roberts	

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

CHALCOPYRITE OCCURS WITH PYRITE AND PYRRHOTITE
DISSEMINATED IN ALTERED GREYWACKE AND LIMESTONE IN
LOCAL AREAS ADJACENT TO INTRUSIVE QUARTZ DIORITE
AND MINOR GABBRO.

BIBLIOGRAPHY

EMPR AR 1907-219
EMPR ASS RPT 2371, 3054, 3503
EMPR GEM 1970-433, 1971-373

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE091**

NATIONAL MINERAL INVENTORY: 082E1 Ni1

NAME(S): **CASTLE MOUNTAIN NICKEL**, MASTADON (L.2384S), MAMMOTH (L.2385S),
DOMINION (L.2386S), PAN (L.2387S), CANYON (L.2390S),
MASTODON, CHROMEX NICKEL

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:
LATITUDE: 49 00 33 N
LONGITUDE: 118 10 29 W
ELEVATION: 960 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit and open cuts, 4.75 kilometres south-southeast from the south tip of Christina Lake on the southwest slope of Castle Mountain, 22.4 kilometres east of Grand Forks (Property File - Maps and plans).

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5429140
EASTING: 414094

COMMODITIES: Nickel Chromium Iron Magnetite Copper
Platinum

MINERALS

SIGNIFICANT: Magnetite Heazlewoodite Chromite Pentlandite Pyrrhotite
Pyrite Millerite Brucite Chalcopyrite Serpentine
ASSOCIATED: Magnetite Pyrite Serpentine Pyrrhotite
ALTERATION: Serpentine Talc Carbonate Chlorite Quartz
ALTERATION TYPE: Serpentin'zn Quartz-Carb. Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Podiform Massive
CLASSIFICATION: Magmatic Hydrothermal Industrial Min.
TYPE: M03 Podiform chromite
SHAPE: Irregular
MODIFIER: Sheared Fractured
DIMENSION: 2440 x 1220 Metres
COMMENTS: Ultramafic body; dips 38 degrees east.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Carboniferous	Anarchist	Undefined Formation	
Jurassic	Rossland	Unnamed/Unknown Formation	
Jurassic			Ultramafic Intrusions
Jurassic			Nelson Intrusions

LITHOLOGY: Serpentinite
Dunite
Gabbro
Quartz Porphyry Dike
Quartz Feldspar Porphyry Sill
Greenstone Breccia
Greenstone Tuff
Greenstone Flow
Meta Sediment/Sedimentary Rock
Monzonite

HOSTROCK COMMENTS: Ultramafic body (ophiolite?) is emplaced in Rossland Group rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP: Post-mineralization

PHYSIOGRAPHIC AREA: Okanagan Highland
GRADE: Greenschist

INVENTORY

ORE ZONE: CASTLE MOUNTAIN NICKEL
CATEGORY: Indicated
QUANTITY: 354676100 Tonnes
COMMODITY: Nickel
GRADE: 0.2000 Per cent
REPORT ON: Y
YEAR: 1970

COMMENTS: Mineable by open pit. An appreciable part of the Ni present in the form of Ni-bearing serpentine, is not recoverable by conven. methods.
REFERENCE: Statement of Material Facts 07/74, Chromex Nickel Mining Ltd.

CAPSULE GEOLOGY

The area is predominantly underlain by Lower to Middle Jurassic

CAPSULE GEOLOGY

Rossland Group massive greenstone, andesite, latite, agglomerate and volcanic breccia. Minor greywacke and interbedded limestone with lenses of silicified equivalents, also occur.

At the Castle Mountain Nickel deposit, a wedge-shaped ultramafic complex comprised of serpentinized dunite of the Carboniferous or older Anarchist Group has been tectonically emplaced against chlorite and carbonate altered Rossland Group greenstone breccias, tuffs, flows and metasedimentary rocks. The Rossland Group rocks surround the ultramafic body to the west, north and northeast while foliated monzonites of the Middle to Late Jurassic Nelson Intrusions, outcrop to the east and southeast. The contacts with these surrounding rocks are fault-bounded and commonly quartz-talc- carbonate altered. The serpentinite body has been mapped as an upthrust section of an ophiolite (J. Fyles, personal communication, 1989).

The faulted and sheared ultramafic body is 2440 metres long, 1220 metres wide and dips 38 degrees east. The rock is largely serpentinite and is composed of variably oxidized alternating layers of serpentinized dunite and gabbro or their equivalents. Locally unaltered dunite is present. Mesh textures in serpentine are absent, as are bastites, and there are no relict orthopyroxene grains which suggests the that protolith was massive dunite. The dunite and gabbro layers are intercalated with porphyritic dykes or sill-like bodies which constitute up to 30 per cent of the ultramafic rock mass. Predominant quartz-feldspar porphyry sills occur regularly throughout the body; crosscutting quartz porphyry dykes, diorite porphyry dykes and lamprophyre dykes are also common. Shearing and fracturing are pervasive throughout the ultramafic body with the zones commonly quartz-talc-carbonate altered.

Nickeliferous magnetite and nickel sulphide minerals consisting of pentlandite, millerite and heazlewoodite are more or less uniformly distributed and disseminated throughout the ultramafic body. Heazlewoodite is the most common of the nickel sulphide minerals. Nickel-bearing serpentine and nickeliferous pyrite are also common; pentlandite is intergrown with pyrrhotite. Some chalcopyrite and brucite have also been identified. Approximately 42 per cent of the total nickel content is held in solid solution with magnetite and sulphides hold the balance (Property File - R. Steiner, 1972). Dykes carry up to 0.19 per cent nickel as millerite, nickeliferous magnetite or heazlewoodite. Chromite occurs as disseminated grains, stringers and massive lenses. Disseminated chromite is ubiquitous; stringers of chromitite consisting of elongate trains of coarse crystals give the rock a "pebbly" texture with chromite forming 15 to 40 per cent of the rock. Pods of massive chromitite have been exposed in scattered workings across the serpentinite. The randomly located pods vary in size from 3 to 7 metres in length and 2 to 3 metres in width. Surface and underground development have shown that the chromite mineralization is structurally disrupted by a multitude of fractures and shears. Individual shears vary from 1 to 15 centimetres in width and can be grouped into zones up to 30 metres wide. Occasionally chromite is found to be concentrated along some of the shear planes. There is no specific orientation to the chromite mineralization but there has been some suggestion that it trends roughly northwest and dips subvertically. An adit and underground workings explored chromite lenses occurring in the hangingwall of a strong fault which strikes northeast and dips 50 degrees southeast. In 1918, about 725 tonnes of chromite ore, grading 38.5 per cent Cr2O3 was shipped from these workings.

The ultramafic body becomes gabbroic at depth with dykes becoming thinner and less frequent and dunite/gabbro layering thicker. Chromite and magnetite content decreases but nickel sulphides (millerite, pentlandite) increase.

Underground diamond drilling has suggested indicated reserves of 354,676,100 tonnes of ore with an average grade of 0.2 per cent total nickel (Statement of Material Facts 07/74, Chromex Nickel Mining Ltd.). However, serious concerns about the validity of the nickel resource potential has been raised by others and further work and testing has been recommended (Property File - Grove, E.W. and Johnson, W.M., 1975). The drilling has shown that nickel mineralization is uniform to depth and the chromite mineralization is erratic.

Platinum is said to occur with chromitite in the serpentinite, but the only record is the Munition Resources Commission report (W. Thomlinson, 1920). Rock samples assayed up to 0.68 gram per tonne platinum.

BIBLIOGRAPHY

EM GEOFILE 2000-2, 2000-5
EMPR AR *1917-F199,F200; *1918-K25,K204,K205; 1919-N370; 1920-N24;

BIBLIOGRAPHY

1922-N170; 1928-C236; 1931-A121,A122; 1967-234; 1968-236
EMPR ASS RPT 860, *6457, 6665, 7067, 15627
EMPR EXPL 1977-E12; 1978-E13; 1979-13; 1987-C14
EMPR GEM 1969-311,312; 1970-433; 1971-373; 1972-34; 1973-35
EMPR PF (*Steiner, R. (1972): A Summary Report on the Castle
Mountain Nickel Deposit; *Grove, E.W., Johnson, W.M. (1975):
Report on Chromex Nickel Mines Ltd. Proposal; *Miscellaneous maps,
(claim; forest cover; Stevenson, J.S. (1941) geology; Steiner, R.
(1972) drill plan and section); Peatfield, G.R. (1978): Excerpt
from Ph.D. Thesis, Geologic History and Metallogeny of the
"Boundary District"; Steiner, R. (1977): Geological Report on
Holdings of Chromex Nickel Mines Ltd.; Stevenson, J.S. (1938):
Cascade Chromite Occurrences, Property examined June, 1938; Hings,
D.L. (1967): Geophysical Report by Klyceptor Surveys Limited)
EMR MIN BULL MR 223 B.C. 2
EMR MP COMM FILE CR-301.00
EMR MP CORPFILE (Northern Syndicate Ltd.; Chromex Nickel Mines Ltd.)
GSC EC GEOL 13, p. 106
GSC MAP 828; 6-1957; 10-1967; 1736A
GSC MEM 38, Part III, Map 82A
GSC OF 481; 1969
CANMET IR 69-75; 70-38
GCNL #115 (June 15) 1971

DATE CODED: 1985/07/24
DATE REVISED: 1990/05/04

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE092**

NATIONAL MINERAL INVENTORY:

NAME(S): **KING (L.177S)**, QUEEN (L.178S)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 48 N
LONGITUDE: 118 13 04 W
ELEVATION: 700 Metres

NORTHING: 5438916
EASTING: 411102

LOCATION ACCURACY: Within 500M

COMMENTS: The King (L.177S) is located on the east shore of Christina Lake.

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Unnamed/Unknown Group	Mount Roberts	

LITHOLOGY: Greenstone
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE.

BIBLIOGRAPHY

EMPR AR 1911-291

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE093**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALMA (L.1039)**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 54 N
LONGITUDE: 118 12 34 W
ELEVATION: 633 Metres

NORTHING: 5437239
EASTING: 411684

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Unnamed/Unknown Group	Mount Roberts	

LITHOLOGY: Meta Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

SEDIMENTARY ROCKS ARE INTRUDED BY SYENITE AND GABBRO. STRINGER CARRIES SOME GALENA AND PYRITE.

BIBLIOGRAPHY

EMPR AR 1900-872,989; 1905-254; 1922-171
EMPR ASS RPT 3054

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE094**

NATIONAL MINERAL INVENTORY:

NAME(S): **CANNON BALL (L.1036)**, FFC

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 54 N
LONGITUDE: 118 12 04 W
ELEVATION: 800 Metres

NORTHING: 5437229
EASTING: 412292

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Replacement
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Unnamed/Unknown Group	Mount Roberts	

LITHOLOGY: Greywacke
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

CHALCOPYRITE OCCURS WITH PYRITE AND PYRRHOTITE
DISSEMINATED IN ALTERED GREYWACKE AND LIMESTONE IN
LOCAL AREAS ADJACENT TO INTRUSIVE QUARTZ DIORITE
AND MINOR GABBRO.

BIBLIOGRAPHY

EMPR AR 1900-872,990; 1922-171; 1926-447
EMPR ASS RPT 2371, 3054, 3503
EMPR GEM 1970-433, 1971-373

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE095**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELMORE (L.972)**, SHAMROCK, FFC

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 24 N
LONGITUDE: 118 10 10 W
ELEVATION: 1233 Metres

NORTHING: 5438119
EASTING: 414619

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Unnamed/Unknown Group	Mount Roberts	

LITHOLOGY: Greywacke
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

A COMPLEX ASSEMBLAGE OF GABBRO DIORITE AND GRANITE HAS INTRUDED THE MT ROBERTS FM LIMESTONE AND GREY-WACKE. COPPER OCCURS IN THE NELSON GABBRO OR DIORITE OR ADJACENT TO THE CONTACT WITH THE LIMESTONE AND ASSOCIATED WITH A GARNETIFEROUS SKARN.

BIBLIOGRAPHY

EMPR AR 1900-990; 1921-181
EMPR ASS RPT 2371, 3054
EMPR GEM 1970-433

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE096**

NATIONAL MINERAL INVENTORY:

NAME(S): **EUREKA (L.1145)**, FFC

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 00 N
LONGITUDE: 118 12 34 W
ELEVATION: 500 Metres

NORTHING: 5435571
EASTING: 411657

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Unnamed/Unknown Group	Mount Roberts	

LITHOLOGY: Greywacke
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

A COMPLEX ASSEMBLAGE OF GABBRO DIORITE AND GRANITE HAS INTRUDED THE MT ROBERTS FM LIMESTONE AND GREY-WACKE. COPPER OCCURS IN THE NELSON GABBRO OR DIORITE OR ADJACENT TO THE CONTACT WITH THE LIMESTONE AND ASSOCIATED WITH A GARNETIFEROUS SKARN.

BIBLIOGRAPHY

EMPR AR 1903-246; 1904-219; 1906-159
EMPR ASS RPT 3054

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE097**

NATIONAL MINERAL INVENTORY:

NAME(S): **FIFE**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 03 30 N
LONGITUDE: 118 12 16 W
ELEVATION: 600 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5434639
EASTING: 412008

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Gold Limestone

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Upper Paleozoic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Igneous-contact Industrial Min.
TYPE: K01 Cu skarn R09 Limestone

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Unnamed/Unknown Group	Mount Roberts	

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

LIMESTONE QUARRY FOR FLUX.
FFC-A COMPLEX ASSEMBLAGE OF GABBRO DIORITE AND
GRANITE HAS INTRUDED THE MT ROBERTS FM LIMESTONE
AND GREYWACKE. COPPER OCCURS IN THE NELSON GABBRO
OR DIORITE OR ADJACENT TO THE CONTACT WITH THE
LIMESTONE AND ASSOCIATED WITH A GARNETIFEROUS
SKARN.

BIBLIOGRAPHY

EMPR AR 1909-134; 1910-122,132; 1911-176,291; 1953-111
EMPR ASS RPT 2371, 3054
EMPR GEM 1970-433

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE098**

NATIONAL MINERAL INVENTORY: 082E1 Pb3

NAME(S): **MANITOU (L.1753)**, EVE BELL, BURNT BASIN

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:
LATITUDE: 49 10 06 N
LONGITUDE: 118 07 28 W
ELEVATION: 4100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5446777
EASTING: 418034

COMMODITIES: Lead Zinc

MINERALS

SIGNIFICANT: Sphalerite Galena
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Unnamed/Unknown Group	Mount Roberts	

LITHOLOGY: Limestone
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Manitou (L.1753), Eva Bell (L.2031) (082ESE169) and Halifax (L.3042) (082ESE099) are adjacent claims in the south central part of the Burnt Basin camp. This small mining camp is situated approximately 13 kilometres northeast of Christina Lake and roughly 25 kilometres west of Trail in southeastern B.C. Access to the property is via Highway 3 from either Grand Forks or Castlegar to the Paulson Bridge. From a point 0.4 kilometre southwest of the Paulson Bridge a dirt road extends along the eastern side of the claims and across the southern part of the property. Elevations range from 1,300 metres on Halifax claim to the highest point in the immediate area at 1450 metres on the Eva Bell claim.

Little has been recorded regarding the early prospecting in the camp that began in the late 1800's. In 1902 the Manitou claim (L.1753) was Crown-granted to R. Cooper. Work on the claim at this time was done in shallow shafts, open cuts, and trenches. In 1937, the claim was part of 21 claim group held by J. Grafton of Rossland. Since 1965, several operators have explored the showings and shipped small quantities of ore (mainly from the Eva Bell claim). In 1965 Christina Lake Mines Ltd. completed geological, geochemical and magnetometer surveys and a minor amount of diamond drilling. This was followed in 1968 by Dalex Mines Ltd. that did an induced polarization survey, considerable stripping and trenching and 7 drill holes totalling 653 metres. A few years later in 1971 Burnt Basin Mines Ltd. undertook a program of geological mapping, a magnetometer survey, trenching and stripping, drilling that included 5 holes totalling 200 metres, and production of 43 tonnes of ore grading 210 grams per tonne of silver, 16 per cent zinc and 8 per cent lead. In the period 1972 to 1975, Donna Mines Ltd. reported line cutting and a magnetometer survey on the Eva Bell and Halifax claims and five short drill holes, cat trenching and percussion drilling on Eva Bell. At this time the company shipped 13,500 tonnes of ore. In 1975 to 1976, Alviji Mines Ltd. operated the property and shipped 485 tonnes of ore grading 106 grams per tonne of silver, 4.45 per cent lead, 6.75 per cent zinc and 21.5 per cent magnetite. In 1977, Paulson Mines Ltd. completed 457 metres of drilling on the Halifax claim and published intercept values, up to 2 metres, grading 420 grams per tonne silver, 19.7 per cent lead and 14.9 per cent zinc. In 1978, Oliver Resources Ltd. completed 10 kilometres of electromagnetic, induced polarization, and magnetometer surveying and the following year

MINFILE NUMBER: **082ESE098**

CAPSULE GEOLOGY

Granges Exploration Ltd. did 291 metres of diamond drilling on the Eva Bell and BP No.2 claims.

In April 1986, Westrim Resources Inc. acquired an option agreement on the property, the object being to evaluate the Mother Lode (L.1508) and the Eva Bell (L.2031) and Halifax (L.3042) claims. The program included detailed soil sampling carried out across the Halifax and Eva Bell claims and the intervening Manitou claim. The results indicate a more or less continuous zone of mineralization 350 metres long and 100 metres wide across the three claims. Burnt basin is underlain by a variety of bedded rocks and igneous intrusions. The sedimentary and volcanic bedded rocks are mostly in the southern part of the camp. These units are assigned to the Mount Roberts Formation (Permian?) and include clean and dirty grey limestone beds of variable thickness interlayered with siltstone and minor chert. North of these units is an area of mostly massive andesitic volcanic rocks. Fragmental textures are found in places in the volcanic rock commonly associated with a carbonate matrix and small limestone lenses. These beds are cut by numerous felsic dikes and sills related to the Coryell batholith (Tertiary).

Mineralization in southern part of Burnt Basin includes magnetite/sulphide replacements, and sulphide disseminations. Disseminated pyrite is occasionally seen in granitic plutons and volcanic rocks, and scattered pyrite and pyrrhotite is common in hornfels. Replacement deposits occur in recrystallized limestone and the volcanic rocks. The altered limestone is characterized by coarse sparry calcite and garnets 1-5 millimetres in diameter. The volcanic rocks host skarn minerals in the form of epidote-garnet patches accompanied by pyrite and calcite. The pyrite generally comprises 1-2 per cent of the rock (rarely as much as 10-20 per cent). Most of the old workings are small replacements developed in limestone adjacent to dikes. These bodies were mined principally for silver, although they contained significant but erratic zinc, lead, copper and gold values. On the Manitou claim the mineralization, consisting of sphalerite, galena and pyrite in a siliceous gangue, occurs in veins and segregations. Owing to the broken nature of the ground, caused by the intrusion of offshoot dikes from the adjacent batholith, the ore bodies are difficult to follow.

BIBLIOGRAPHY

EMPR AR 1902-305; 1927-226
EMPR MIN 1975
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE099**

NATIONAL MINERAL INVENTORY: 082E1 Pb2

NAME(S): **HALIFAX (L.3042)**, BURNT BASIN

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:
LATITUDE: 49 10 00 N
LONGITUDE: 118 07 40 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5446596
EASTING: 417788

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Replacement
TYPE: K02 Pb-Zn skarn K04 Au skarn
 K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Unnamed/Unknown Group	Mount Roberts	

LITHOLOGY: Limestone
 Siltstone
 Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Slide Mountain

CAPSULE GEOLOGY

The Halifax (L.3042), Manitou (L.1753) (082ESE098) and Eva Bell (L.2031) (082ESE169) are adjacent claims in the south central part of the Burnt Basin camp. This small mining camp is situated approximately 13 kilometres northeast of Christina Lake and roughly 25 kilometres west of Trail in southeastern B.C. Access to the property is via Highway 3 from either Grand Forks or Castlegar to the Paulson Bridge. From a point 0.4 kilometre southwest of the Paulson Bridge a dirt road extends along the eastern side of the claims and across the southern part of the property. Elevations range from 1,300 metres on Halifax claim to the highest point in the immediate area at 1450 metres on the Eva Bell claim.

Little has been recorded regarding the early prospecting in the camp that began in the late 1800's. However, since 1965 several operators have explored the showings and shipped small quantities of ore (mainly from the Eva Bell claim). In 1965 Christina Lake Mines Ltd. completed geological, geochemical and magnetometer surveys and a minor amount of diamond drilling. This was followed in 1968 by Dalex Mines Ltd. that did an induced polarization survey, considerable stripping and trenching and 7 drill holes totalling 653 metres. A few years later in 1971 Burnt Basin Mines Ltd. undertook a program of geological mapping, a magnetometer survey, trenching and stripping, drilling that included 5 holes totalling 200 metres, and production of 43 tonnes of ore grading 210 grams per tonne of silver, 16 per cent zinc and 8 per cent lead. In the period 1972 to 1975, Donna Mines Ltd. reported line cutting and a magnetometer survey on the Eva Bell and Halifax claims and five short drill holes, cat trenching and percussion drilling on Eva Bell. At this time the company shipped 1,3500 tonnes of ore. In 1975 to 1976, Alviji Mines Ltd. operated the property and shipped 485 tonnes of ore grading 106 grams per tonne of silver, 4.45 per cent lead, 6.75 per cent zinc and 21.5 per cent magnetite. In 1977, Paulson Mines Ltd. completed 457 metres of drilling on the Halifax claim and published intercept values, up to 2 metres, grading 420 grams per tonne of silver, 19.7 per cent lead and 14.9 per cent zinc. In 1978, Oliver Resources Ltd. completed 10 kilometres of

CAPSULE GEOLOGY

electromagnetic, induced polarization and magnetometer surveying and the following year Granges Exploration Ltd. did 291 metres of diamond drilling on the Eva Bell and BP No.2 claims.

In April 1986, Westrim Resources Inc. acquired an option agreement on the property, the object being to evaluate the Mother Lode (L.1508) (082ESE081), the Eva Bell and Halifax claims. The program included a detailed fill-in soil geochemical survey in the Halifax/Eva Bell area. In the Halifax/Eva Bell area, detailed soil sampling was carried out across the Halifax and Eva Bell claims and the intervening Manitou claim (L.1753). The results indicate a more or less continuous belt of mineralization 1500 metres long and 100 metres wide across the three claims, that includes, from east to west, the Eva Bell Production and Northwest zones, the Halifax zone and the Ennismore zone.

The Halifax zone lies approximately 600 metres west of the Eva Bell Production zone. The sulphide mineralization comprises both massive lenses and disseminations of galena, sphalerite, magnetite and pyrrhotite within irregularly bedded limestone. Previous development work consists of several trenches and short drill holes that have partially delineated a number of subparallel 1 to 2.5 metres wide galena and sphalerite-rich pods grading 100 grams per tonne of silver, 7 per cent lead and 12 per cent zinc. Further exploration in 1988, by Ram Explorations Ltd., near the main trench, exposed massive magnetite in grey to black siliceous limestone along the contact with a brown pyroclastic unit. Pods of massive sphalerite and galena, up to 75 centimetres across, occur within the magnetite-rich limestone adjacent to this contact - the contact being characterized by rusty limonite and black manganese staining. Samples of the host limestone show patches of steely grey, very fine-grained magnetite grading to finely disseminated magnetite accompanied by pyrrhotite and minor chalcopyrite. Sphalerite occurs as pale brown, fine sugary grains intergrown with fine to medium-grained crystalline galena.

The Halifax - Eva Bell deposits include the Emmismore zone, the Halifax zone, and the Eva Bell Production and Northwest zones. Burnt basin is underlain by a variety of bedded rocks and igneous intrusions. The sedimentary and volcanic bedded rocks are mostly in the southern part of the camp. These units are assigned to the Mount Roberts Formation (Permian?) and include clean and dirty grey limestone beds of variable thickness interlayered with siltstone and minor chert. North of these units is an area of mostly massive andesitic volcanic rocks. Fragmental textures are found in places in the volcanic rock commonly associated with a carbonate matrix and small limestone lenses. These beds are cut by numerous felsic dikes and sills related to the Coryell batholith (Tertiary).

Mineralization on the Halifax and Eva Bell claims includes magnetite/sulphide replacements, and sulphide disseminations. Disseminated pyrite is occasionally seen in the volcanic rocks, and scattered pyrite and pyrrhotite is common in hornfels. Replacement deposits occur in recrystallized limestone and the volcanic rocks. The altered limestone is characterized by coarse sparry calcite and garnets 1 to 5 millimetres in diameter. The volcanic rocks host skarn minerals in the form of epidote-garnet patches accompanied by pyrite and calcite. The pyrite generally comprises 1 to 2 per cent of the rock (rarely as much as 10 to 20 per cent). Most of the old workings are small replacements developed in limestone adjacent to dikes. These bodies were mined principally for silver, although they contained significant but erratic zinc, lead, copper and gold values.

BIBLIOGRAPHY

EMPR AR 1901-1067; 1903-247; 1927-226; 1928-236; 1929-255; 1930-228;
1937-D35; 1948-128; 1949-156; 1968-238
EMPR ASS RPT 1920, 7508
EMPR EXPL 1978-E13, 1979-13
EMPR GEM 1969-311, 1972-33, 1973-36, 1974-32
EMPR MIN 1975
EMPR PF
GCNL #226,1975, #115,#134,#155,1977
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE100**

NATIONAL MINERAL INVENTORY: 082E1 Pb2

NAME(S): **ARLINGTON (L.2596)**

STATUS: Developed Prospect

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E01E

BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 24 N

LONGITUDE: 118 07 46 W

ELEVATION: 1500 Metres

NORTHING: 5447339

EASTING: 417677

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold

Silver

Lead

Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite

MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive

CLASSIFICATION: Replacement

TYPE: K04 Au skarn

K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Permian

GROUP

Unnamed/Unknown Group

FORMATION

Mount Roberts

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY:

Limestone

Volcanic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

ROSSLAND GP VOLCANICS WITH CONSIDERABLE LIMESTONE
AND ARGILLACEOUS SEDIMENTS LOCALLY ALTERED TO
SKARN.

BIBLIOGRAPHY

EMPR AR 1899-760; 1903-246; 1921-347
EMPR ASS RPT 1920, 7508
EMPR EXPL 1975-E10, 1978-E13, 1979-13
EMPR GEM 1972-33, 1973-36, 1974-32
EMPR MIN 1975
EMPR PF

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE101**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOHN BULL (L.2051)**, SPRUCE, BURGIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

Underground

MINING DIVISION: Trail Creek

LATITUDE: 49 11 00 N
LONGITUDE: 118 05 28 W
ELEVATION: 1600 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5448409
EASTING: 420487

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Arsenopyrite Galena Sphalerite
ASSOCIATED: Quartz Calcite Magnetite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Pennsylvan.-Permian	Unnamed/Unknown Group	Mount Roberts	
Jurassic			Nelson Intrusions
Eocene			Coryell Intrusions

LITHOLOGY: Greenstone
Limestone
Argillite
Quartz Monzonite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Granitic rocks of the Nelson Intrusions intrude volcanics, limestones and greenstones of the Carboniferous-Permian Mount Roberts Formation. These are cut by porphyritic syenites of the Eocene Coryell Intrusives. Gold values (up to 5.13 grams per tonne) are related to quartz veining, propylitically altered diorite, quartz diorite, greenstone, andesite, brecciation and shear zones (Assessment Report 23713).

In 1992, Crown Resources Corp. conducted an airborne geophysics, ground magnetometry, soil sampling rock chip sampling and reverse circulation drilling. In 1994, Gold City Resources conducted geochemical sampling, ground magnetics and mapping and sampling of old trenches and adits.

BIBLIOGRAPHY

EMPR AR 1901-872,991; 1902-1067
EMPR ASS RPT *23203, 23635, *23713

DATE CODED: 1985/07/24
DATE REVISED: 1999/10/06

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE102**

NATIONAL MINERAL INVENTORY: 082E1 Au3

NAME(S): **BURNT BASIN (L.1136)**, AJAX (L.1509)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:
LATITUDE: 49 10 36 N
LONGITUDE: 118 08 40 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5447726
EASTING: 416590

COMMODITIES: Gold Lead Zinc Silver Cadmium

MINERALS

SIGNIFICANT: Sphalerite Galena
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive Vein Disseminated
CLASSIFICATION: Replacement
TYPE: K02 Pb-Zn skarn K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Unnamed/Unknown Group	Mount Roberts	

LITHOLOGY: Limestone
Argillite
Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Burnt Basin mining camp is located in the headwater area of Texas creek and Josh Creek in the Christina Range, 30 kilometres northeast of Grand Forks and 10 kilometres east of the north end of Christina Lake. The area is reached by turning west onto a gravel road from Highway 3 at a point 0.4 kilometre southwest of the Paulson Bridge, then proceeding 0.3 kilometre on the gravel road, and then west on a 4-wheel-drive road for about 3 kilometres.

Prospecting and development work in the Burnt Basin camp began in the early 1900's when the nearby Greenwood and Rossland camps were flourishing. The largest recorded production within the Burnt Basin camp was from the Burnt basin claim (Lot 1136) with 4,900 tonnes that yielded approximately 1 gram per tonne of gold, 460 grams per tonne of silver, 190 tonnes of lead and 255 tonnes of zinc. The Mother Lode (Lot 1508) (082ESE081), Eva Bell (Lot 2031) (082ESE169), Molley Gibson (Lot 595) (082ESE082), Halifax (Lot 3042) (082ESE099), and International (Lot 2873) (082ESE104) produced smaller tonnages.

Since the 1960's a number of companies have conducted mineral surveys and some small scale mining. Much of this activity was focused on silver-lead-zinc sulphide occurrences on the Eva Bell, Halifax, Burnt Basin and Ajax claims, although more recently, the gold-bearing quartz veins on the Motherlode claim have been a favourite target for exploration.

Burnt basin is underlain by a variety of bedded rocks and igneous intrusions. The sedimentary and volcanic bedded rocks are mostly in the southern part of the camp. These units are assigned to the Mount Roberts Formation (Permian?) and include clean and dirty grey limestone beds of variable thickness interlayered with siltstone and minor chert. North of these units is an area of mostly massive andesitic volcanic rocks. Fragmental textures are found in places in the volcanic rock commonly associated with a carbonate matrix and small limestone lenses. These beds are cut by numerous felsic dikes and sills related to the Coryell batholith (Tertiary). In the northern part of the camp, extensive areas are underlain by granitic rocks of the Nelson Plutonic Complex (Jurassic).

Mineralization in Burnt Basin is varied and includes

CAPSULE GEOLOGY

auriferous quartz veins, magnetite/sulphide replacements, and sulphide disseminations. Disseminated pyrite is occasionally seen in granitic plutons and volcanic rocks, and scattered pyrite and pyrrhotite is common in hornfels. Replacement deposits occur in recrystallized limestone and the volcanic rocks. The altered limestone is characterized by coarse sparry calcite and garnets 1 to 5 millimetres in diameter. The volcanic rocks host skarn minerals in the form of epidote-garnet patches accompanied by pyrite and calcite. The pyrite generally comprises 1 to 2 per cent of the rock (rarely as much as 10 to 20 per cent). Most of the old workings are small replacements developed in limestone adjacent to dikes. These bodies were mined principally for silver, although they contained significant but erratic zinc, lead, copper and gold values.

BIBLIOGRAPHY

EMPR AR 1899-848; 1900-872; 1901-1066,1229; 1932-123; 1966-198;
1968-236
EMPR ASS RPT 1920, 7508
EMPR EXPL 1975-E10, 1978-E13
EMPR GEM 1969-311, 1972-33, 1973-36, 1974-32, 1979-13
EMPR MIN 1975
EMPR PF
GCNL #115,#134,#155,1977
GCNL AUG 24,31,1977

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE103**

NATIONAL MINERAL INVENTORY: 082E1 Au4

NAME(S): **KITTIE (L.1748)**, ALDEEN (L.1749), TUNNEL (L.1750)

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 36 N
LONGITUDE: 118 07 10 W
ELEVATION: 1500 Metres

NORTHING: 5447698
EASTING: 418412

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Sphalerite Galena Magnetite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive Vein Disseminated
CLASSIFICATION: Replacement
TYPE: K02 Pb-Zn skarn K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Unnamed/Unknown Group	Mount Roberts	

LITHOLOGY: Limestone
Argillite
Volcanic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

AREA IS UNDERLAIN BY PENNSYLVANIAN OR PERMIAN ROSSLAND GP VOLCANICS WHICH CONTAIN CONSIDERABLE LIMESTONE AND ARGILLACEOUS LIMESTONE. NW-STRIKING BEDS APPEAR TO BE IN NW-PLUNGING FOLDS AND ARE CUT BY DYKES AND SILLS OF DIORITE AND SYENITE. MINERALIZATION IS IRREGULAR AND CONSISTS OF SPHALERITE WITH MINOR GALENA AND MAGNETITE IN ALTERED LIMESTONE.

BIBLIOGRAPHY

EMPR AR 1901-1067; 1902-303; 1939-91; 1966-196
EMPR ASS RPT 1920, 7508
EMPR EXPL 1978-E13, 1979-13
EMPR GEM 1973-36, 1974-32
EMPR PF
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE104**

NATIONAL MINERAL INVENTORY: 082E1 Au4

NAME(S): **INTERNATIONAL (L.2873)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:
LATITUDE: 49 11 42 N
LONGITUDE: 118 07 28 W
ELEVATION: 1667 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5449742

EASTING: 418078

COMMODITIES: Lead Zinc Copper Silver

MINERALS

SIGNIFICANT: Sphalerite Galena Magnetite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive Vein
CLASSIFICATION: Replacement
TYPE: K02 Pb-Zn skarn K04 Au skarn
 K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Unnamed/Unknown Group	Mount Roberts	

LITHOLOGY: Limestone
 Argillite
 Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

AREA IS UNDERLAIN BY PENNSYLVANIAN OR PERMIAN ROSSLAND GP VOLCANICS, WHICH CONTAIN CONSIDERABLE LIMESTONE AND ARGILLACEOUS LIMESTONE. NW-STRIKING BEDS APPEAR TO BE IN NW-PLUNGING FOLDS AND ARE CUT BY DYKES AND SILLS OF DIORITE AND SYENITE. MINERALIZATION IS IRREGULAR AND CONSISTS OF SPHALERITE WITH MINOR GALENA AND MAGNETITE IN ALTERED LIMESTONE.

BIBLIOGRAPHY

EMPR AR 1904-299; 1901-1067
EMPR GEM 1969-311, 1972-33, 1973-36

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE105**

NATIONAL MINERAL INVENTORY: 082E8 Cu1

NAME(S): **MOUNTAIN CHIEF (L.2393)**, MORNING GLORY, SUNSET,
CALGARY, MORNING GLORY FR., REN,
BULLDOG, NORTH WEST SILVER, RENATA GOLD,
KING, CLIFF, PEGGY,
RICKWARD

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E08E
BC MAP:
LATITUDE: 49 24 30 N
LONGITUDE: 118 06 04 W
ELEVATION: 800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Trail Creek

UTM ZONE: 11 (NAD 83)

NORTHING: 5473433
EASTING: 420123

COMMODITIES: Copper Silver Lead Zinc Gold
Molybdenum Tungsten

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Pyrite Azurite Malachite
Chalcoite Galena Sphalerite Scheelite
ASSOCIATED: Epidote Pyroxene
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Igneous-contact Replacement
TYPE: K01 Cu skarn K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Unnamed/Unknown Group	Mount Roberts	
Eocene			Coryell Intrusions

LITHOLOGY: Limestone
Syenite
Diorite
Granodiorite
Jasperoid

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

This property is located on the west side of Lower Arrow Lake about 2 kilometres south of Renata. The main workings are on the Mountain Chief claim (Lot 2393) at about the 800 metre elevation on the east side of Dog Creek.

The Mountain Chief claim was Crown-granted in 1903 to P. McDonald, W. Ross and associates. Initial work on the property was done in open cutting. No further activity was reported until 1917 when the property, consisting of 4 claims and a fraction, namely the Mountain Chief, Morning Glory, Sunset, Calgary, and Morning Glory Fraction, was owned by N. McDaniels and associates. Mountain Chief Mining Company, Limited was formed in December 1928 to acquire and develop the property. Development work to 1920 included a large amount of stripping and open cutting, an inclined shaft 34 metres deep with a level at 15 metres driven northerly 11 metres, from which an inclined raise was driven to connect with a surface trench. An aerial tram 990 metres long was erected in 1919. The company ceased operations in 1919 due to lack of funds and the property reverted to the owners, N. McDaniel and associates. The owners resumed work on the showings in the summer of 1922 and some sorted ore was shipped from open cuts; most of the ore shipped from the property came from a large surface trench.

The property was idle from 1922 until acquired by Renata Copper Company, Limited, which was formed in January 1954. In the latter part of 1955 the property was optioned to United Estella Mines Ltd. and about 122 metres of diamond drilling was done in 4 holes from the shaft and the 15 metre level; the option was dropped after this work. The Renata Copper Company charter was surrendered in 1962.

MINFILE NUMBER: **082ESE105**

CAPSULE GEOLOGY

In 1966, W.S. Davidson optioned the surrounding North West Silver claims, and conducted a geochemical survey. In 1970, I. Wiebe optioned the Mountain Chief and surrounding Ren claims and conducted mapping and a magnetic survey. In 1984, Silver Dart Minerals Inc. staked the Bulldog claims and rehabilitated and sampled the old workings. In 1990, Alpine West Mineral Exploration Services explored the property.

Skarn-related mineralization occurs in altered silicified limestone, of the Permian Mount Roberts Formation, within a large roof pendant surrounded by syenite of the Eocene Corell intrusions. In the upper workings, at about 800 metres elevation and where the mining took place, the mineralization consists of chalcopryrite, pyrite, bornite malachite, azurite and chalcocite. Mineralization appears to be controlled by a series of parallel fault structures. A 3.65-metre sample from a shaft assayed 6.46 per cent copper, 368 grams per tonne silver and 0.5 gram per tonne gold (Assessment Report 12936). In the lower trenches, about 800 metres to the north, mineralization consists of disseminations and veins of galena, sphalerite, chalcopryrite and scheelite. Molybdenite has been reported. A sample from a trench assayed 1.1 per cent copper, 13.8 per cent lead, 5.8 per cent zinc, and 133 grams per tonne silver (Assessment Report 12936).

BIBLIOGRAPHY

EMPR AR 1901-1225; 1917-173; 1918-182-183; 1919-140; 1920-137;
1922-210; *1927-328-329; 1955-65-66
EMPR ASS RPT 930, *3090, 12936, 20141
EMPR BC METAL MM00687
EMPR GEM 1971-397
EMPR INDEX 3-206
EMPR PF (Starr, C.C. (1947): Report on the King Group)
EMR MP CORPFILE (Mountain Chief Mining Company, Limited; United
Estella Mines Ltd.)
GSC MAP 1957-6

DATE CODED: 1985/07/24
DATE REVISED: 1999/10/05

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE106**

NATIONAL MINERAL INVENTORY:

NAME(S): **TRIPOLI (L.1613S)**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 06 N
LONGITUDE: 118 23 34 W
ELEVATION: 1000 Metres

NORTHING: 5482305
EASTING: 399123

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic			Nelson Intrusions

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE.

BIBLIOGRAPHY

EMPR AR 1914-350

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE107**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACK BEAR (L.2597S)**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 30 N
LONGITUDE: 118 24 22 W
ELEVATION: 1200 Metres

NORTHING: 5483064
EASTING: 398171

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic			Nelson Intrusions

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE.

BIBLIOGRAPHY

EMPR AR 1900-872; 1906-160,164; 1907-219; 1908-250; 1912-B26;
1915-K350

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE108**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER QUEEN (L.1316S)**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 48 N
LONGITUDE: 118 24 40 W
ELEVATION: 1200 Metres

NORTHING: 5483627
EASTING: 397820

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic Eocene	Anarchist	Unnamed/Unknown Formation	Coryell Intrusions

LITHOLOGY: Volcanic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

A VEIN CARRYING IRON, COPPER, AND LEAD SULPHIDES,
AND AVERAGING 150 CM IN WIDTH, OCCURS IN QUARTZ
GANGUE. NO FURTHER GEOLOGICAL INFORMATION.

BIBLIOGRAPHY

EMPR AR 1913-424, 1914-348

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE109**

NATIONAL MINERAL INVENTORY:

NAME(S): **BARNATO (L.2848)**, YORKSHIRE LASS (L.3024), BARNATO FR. (L.2865),
 KETTLE PAN, CLEAVER,
 WARD

STATUS: Past Producer	Underground	MINING DIVISION: Greenwood
REGIONS: British Columbia		
NTS MAP: 082E07W		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 49 28 31 N		NORTHING: 5482010
LONGITUDE: 118 53 25 W		EASTING: 363064
ELEVATION: 1230 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: The Barnato (Lot 2848) claim, 15 kilometres east of Beaverdell, lies immediately east of the Hackla (Lot 2847) (082ESE157). It is in the headwater area of Stewartson Creek on the east slope of Lake Ridge. Access to the property is by dirt roads from either the main Kettle Valley road to the east or from Beaverdell to the west.		

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Arsenopyrite	Pyrrhotite	Pyrite	Sphalerite	Chalcopyrite
Galena				
ASSOCIATED: Quartz				
ALTERATION: Sericite	Kaolin	Quartz	Microcline	Epidote
ALTERATION TYPE: Sericitic				
MINERALIZATION AGE: Jurassic				

DEPOSIT

CHARACTER: Vein	Massive	Disseminated
CLASSIFICATION: Hydrothermal	Epigenetic	
TYPE: I05 Polymetallic veins	Ag-Pb-Zn±Au	
DIMENSION: Metres		STRIKE/DIP: 040/80W
COMMENTS: Fissure fillings and massive sulphide lenses.		TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Anarchist	Undefined Formation	Westkettle Batholith
Jurassic			

LITHOLOGY: Tuffaceous Sediment/Sedimentary
 Tuff
 Chert
 Limestone
 Quartz Diorite

HOSTROCK COMMENTS: Westkettle is part of the Nelson Intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	Plutonic Rocks	PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Slide Mountain	RELATIONSHIP:	GRADE: Hornfels
METAMORPHIC TYPE: Contact		

CAPSULE GEOLOGY

The Barnato (Lot 2848) claim is 15 kilometres east of Beaverdell and 48 kilometres north of Rock Creek. It lies at the elevation of about 1230 metres, immediately east of the Hackla (Lot 2847) (082ESE157), in the headwater area of Stewartson Creek on the east slope of Lake Ridge. The area has been extensively logged resulting in a network of roads. Access to the property is by dirt roads from either the main Kettle Valley road to the east or from Beaverdell to the west.

The Barnato claim was Crown granted to Victor Swanson and Samuel Larson in 1905, the property having been worked and explored since 1878. Surface programs consisting of prospecting and trenching led to the discovery of gold in 1896. The target of exploration was a quartz vein, 0.8 metre wide, that carried some pyrite and arsenopyrite. General assays gave 15 grams per tonne gold and 3.5 grams per tonne silver. The main development was a 12-metre shaft and two open cuts - one 1.5 by 3.6 metres and another 1.7 by 3.0 metres. In 1917, it was observed that no work had been done on this claim for some time and the workings had caved to some extent.

In 1938, further development on the Barnato claim resulted in shipping 77 tonnes of ore to Tacoma, Washington, for smelting.

CAPSULE GEOLOGY

The ore averaged 54 grams per tonne gold, 7.9 grams per tonne silver and 10.17 per cent arsenic. At about the same time Consolidated Mining and Smelting Company of Canada Ltd. (Cominco) optioned the property and completed an exploration program consisting of mapping, prospecting, test pitting and drilling. This showed that the veins in the vicinity of the main Barnato workings were erratic along strike and diminished in thickness and grade with depth. During the period 1965 to 1966, Amcana Gold Mines Ltd. conducted a program of road construction, claim surveying, trenching and diamond drilling (4 short holes) in the area of the main Barnato workings.

Production from 1937-1939 and 1966-1967 totalled 296 tonnes, resulting in 9704 grams of gold, 4136 grams of silver, 407 kilograms of copper and 119 kilograms of lead.

In 1977, Camnor Resources Ltd. acquired the property from G. Bleiler. Subsequently, the company completed several programs consisting of ground and air geophysical surveys, soil and rock chip sampling, mapping, trenching, prospecting and limited diamond drilling (5 NQ holes, totalling 302.9 metres). Golden Seal Resources Ltd. optioned the property in 1986 and completed a small percussion drill program totalling 202.4 metres in 4 holes. Because of poor results Golden Seal terminated the option. Following this, limited soil and rock chip sampling and mapping programs were done by Camnor Resources Ltd. In 1979, Carmac Resources Ltd. acquired the property and over the following years did additional exploratory work.

In 1994, Phelps Corporation of Canada, Limited conducted 40-line kilometres of soil sampling in the area.

The Barnato property is underlain by volcanic and sedimentary rocks of the Anarchist Group (Upper Paleozoic) and igneous intrusions. The bedded assemblage locally consist of fine grained andesitic tuffs and lava flows, chert, and volcanic-derived sedimentary rocks with some interbedded north-trending limestone. This succession is intruded by quartz diorite and related dikes associated with the Westkettle pluton (Nelson Intrusions). The Anarchist Group is intensely hornfelsed along the contact with the quartz diorite.

The upper section of the claim, where the workings are situated, is underlain by quartz diorite, and a narrow band of fine grained sedimentary rocks that extends through this part of the property from the northeast. Development work consists of a number of open-cuts and one adit, including 8 metres of crosscut and 15 metres drifting. Cominco put down 4 or 5 diamond drill holes to explore the principal mineral zone at depth.

The principal zone is associated with a narrow, irregular fissure which strikes 035 degrees and dips 70 degrees southeast. The fissure was drifted on for 15 metres and was found to be only locally mineralized; 18 metres south of the adit it is faulted 4.6 metres to the east. In the continuation beyond the fault, the fissure contains patches of heavy arsenopyrite up to 20 centimetres wide. Open cuts show the same mineralized fissure extending 24 metres northward, and 60 metres southward from the adit. The drift at the southern end breaks into a large open cut that displays the strongest mineralization on the property. Here the lead consists of bands, stringers, irregular masses and impregnations of sulphides; there is no apparent structural reason for the wide section noted. Two or three bands of sulphide occur in the drift and in the crosscut. The mineralization is not everywhere directly related to the fissure, although it is commonly localized close to it.

The quartz diorite host rocks have been strongly altered, first to a bleached sericitized rock and then more intensely to a soft whitish mass consisting almost entirely of kaolin. In the more advanced phases of alteration, there is some secondary quartz and microcline and locally a little epidote - the dioritic texture being almost completely destroyed. Sulphides include pyrite, arsenopyrite, sphalerite, pyrrhotite, chalcopyrite and galena. Microscopic examinations shows the paragenesis to be arsenopyrite, followed in order by pyrrhotite, pyrite, sphalerite, chalcopyrite and galena. The gold is definitely later than arsenopyrite and is related to pyrite and sphalerite - some gold clearly being post pyrite. There is massive vein quartz but commonly the sulphides occur in silicified rock containing watery-looking quartz. Much of the pyrite is feathery to botryoidal in appearance, weathering to a cellular 'lacy' structure.

Other open cuts to the southeast of the main showing, and an old adit and shallow shaft, display small widths of chiefly pyritic mineralization. The strike of mineralization is mostly north-northeast, although some ancillary structures are extremely irregular.

BIBLIOGRAPHY

EMPR AR 1900-879; 1905-254; 1917-205; 1928-255; 1937-A36; 1938-A34,
*D17-D20,D36; 1939-36,76; 1962-67; 1966-A49,193; 1967-A52,225
EMPR ASS RPT 364, 4238, 6751, 8703, 10098, 10456, 14952, 19524,
20122, 22396, 22929, 23835, 24307
EMPR EXPL 1978-E28; 1979-28; 1986-C35; 2002-51-62
EMPR AEROMAG MAP 7686G
EMPR BC METAL MM00818
EMPR INDEX 3-188
EMPR BULL 1 (1932), p. 86
GCNL #59, 1986
GSC MAP 37A; 6-1957, 1736A
GSC MEM 79, p. 136
GSC OF 481; 637; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE110**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAPLE LEAF**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 50 N
LONGITUDE: 118 28 34 W
ELEVATION: 900 Metres

NORTHING: 5450429
EASTING: 392462

LOCATION ACCURACY: Within 5 KM

COMMENTS: Located on Pass Creek, 500 metres east of Rock Candy Mines road,
6.4 kilometres from the main road on Granby River.

COMMODITIES: Gold Silver Platinum

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite

ASSOCIATED: Magnetite

MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic

TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Paleozoic
Jurassic

GROUP

Anarchist

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions

LITHOLOGY: Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

This old claim, owned by William Kelsall in 1937, is on Pass creek about 460 metres east of the Rock Candy Mines road, 6.4 kilometres from the main road on Granby River. The claim is about 200 metres above the road on a rocky hillside some 60 metres below the rounded edge.

The intrusive rocks are dioritic and porphyritic of the Jurassic Nelson Intrusives and the older rocks are probably strongly altered Anarchist metasediments. A quartz vein is traceable for nearly 300 metres north-south along the hillside; it passes under talus on the north and fades out into stringers on the south. The dip is steep to the east and the width apparently varies between 1.2 and 2.0 metres.

An adit, driven 14 metres due east to crosscut the vein, shows at the face 2 metres of quartz of irregular attitude. A small shaft is sunk on the vein about 30 metres northeast of the adit portal. A second shaft, 84 metres to the north, is 7.5 metres deep. In these workings about 2 metres of white to glassy quartz contains pyrite in granular masses and inter-crystal films, in addition to a little arsenopyrite. Some small pockets of black powdery magnetite occur in the adit and upper shaft.

Values in platinum had been reported from these workings. Hedley took 6 samples and assayed for platinum, gold and silver. Three samples from the upper shaft, one from the lower shaft and two from the adit were taken as representative of the better mineralized quartz and also of the magnetite-bearing pockets. One sample returned: 0.69 gram per tonne gold, 27.4 grams per tonne silver; the other five samples returned each a trace in gold and trace to 13.7 grams per tonne silver. Each sample returned nil in platinum (Hedley, 1937).

BIBLIOGRAPHY

EM GEOFILE 2000-5
EMPR ASS RPT 12365
EMPR GEM 1978-E28
EMPR PF (*Hedley, M.S. (1937): Special Report on Maple Leaf, 2 p.)

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE110**

MINFILE NUMBER: **082ESE111**

NATIONAL MINERAL INVENTORY:

NAME(S): **MONTANA (L.2640)**, FOURTH OF JULY (L.2638), MULDOON (L.2639),
COLORADO (L.2641), IDAHO (L.2642), GUTS,
CANYON CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:
LATITUDE: 49 25 48 N
LONGITUDE: 118 53 04 W
ELEVATION: 960 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Montana property is located 42 kilometres north of Rock Creek and 10 kilometres east-southeast of Beaverdell. The claims are between 800 and 1100 metres elevation, on the lower section of Canyon Creek and its tributary, Fourth of July Creek. Access to the centre of the property, and to the confluence of these streams, is from the main Christian Valley road westerly, about 2 kilometres on the Canyon Creek road.

Open Pit Underground MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5476966
EASTING: 363361

COMMODITIES: Copper Silver Zinc Lead Gold

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Galena Sphalerite Malachite
Azurite
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Shear Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Jurassic			Westkettle Batholith

LITHOLOGY: Greenstone
Rhyolite
Dacite
Porphyritic Dacite
Diabase
Chert
Argillite
Feldspar Porphyry

HOSTROCK COMMENTS: Westkettle is part of the Nelson Intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

Plutonic Rocks PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Montana property is located 42 kilometres north of Rock Creek and 10 kilometres east-southeast of Beaverdell. The claims are between 800 and 1100 metres elevation, on the lower section of Canyon Creek and its tributary, Fourth of July Creek. Access to the centre of the property, and to the confluence of these streams, is from the main Christian Valley road westerly, about 2 kilometres on the Canyon Creek road.

This area has been explored intermittently since the first influx of prospectors in 1878. Surface programs consisting of panning, lode prospecting and trenching led to the discovery of silver, gold and copper in the region in 1896.

The property was first staked just prior to 1900 and consists of the Montana claim (Lot 2640) and a cluster of adjacent claims including Muldoon (Lot 2639) and Fourth of July (Lot 2638) on the north, and the Colorado (Lot 2641) and Idaho (Lot 2642) claims to the west. In 1900, good showings of copper-gold mineralization were reported on the Montana, Colorado and Fourth of July claims and \$2000 was expended in this year on development work. By 1901, an adit was driven on the Fourth of July claim following a pyrrhotite-bearing lead in diabase (dike?). The tunnel was driven north beyond

CAPSULE GEOLOGY

a winze near the portal. On the Montana claim, an adit was driven easterly for 21 metres on a northerly dipping shear zone, a small winze was sunk on this structure, and two open cuts were developed on parallel structures 30 metres to the south. The claims were Crown granted to A. Waddell and W.G. McMynn in 1903.

No known subsequent work was recorded on this property until 1985, at which time Sundance Gold Ltd. re-examined the old workings. This was followed in 1986 by a limited geological, geochemical and geophysical program completed by Agrel Resources Ltd., that targetted the showings on the Montana claim. From 1987 to 1990, Control Energy Corp. carried out an exploration program to gain access and to re-explore the old workings.

The property is underlain mostly by volcanic and metasediment rocks of the Upper Paleozoic Anarchist Group. These units trend west and northwest and include greenstone, rhyolite, dacite, porphyritic dacite, diabase, chert and argillite. A variety of Tertiary felspar porphyry and basic dikes are common as are older felsic dikes related to the Jurassic Westkettle pluton (Nelson Intrusions) and/or the Cretaceous Okanagan batholith.

The principal mineralization exposed in the original adit on the Montana property consists of irregularly distributed iron sulphides with traces of gold and silver, associated with quartz lenses in a sheared fine grained igneous rock within black shaley beds. A well mineralized grab sample from the dump returned an assay of 0.35 per cent copper, 0.44 per cent lead, 4.28 per cent zinc, 107 grams per tonne silver, and 21 grams per tonne gold (Assessment Report 15173). A second adit, located 87 metres north of Canyon Creek, explores a highly oxidized quartz vein that contains malachite, azurite, pyrite, galena and sphalerite. The vein is 0.5 metre wide and dips 70 degrees northeast. Assays of the altered mineralization show several grams per tonne silver and up to 1.2 grams per tonne gold. Another adit, located 25 metres to the northwest, crosscuts a steeply dipping, sulphide-bearing quartz-carbonate vein mineralized with pyrite and malachite. The vein is 0.8 metre wide and strikes northwest. A grab sample from the vein returned 174 grams per tonne silver and 1.2 grams per tonne gold.

A cut on the same vein, just northwest of the portal, returned an assay of 2.03 per cent copper, 43 grams per tonne silver and 0.137 gram per tonne gold.

BIBLIOGRAPHY

EMPR AEROMAG MAP 7686G
EMPR AR 1898-1120; 1900-879; *1901-1136-1137; 1902-177,182;
1903-246,248,262; 1904-299; 1913-159
EMPR ASS RPT 2951, 9528, 14313, 15173, 18899, *20112
EMPR EXPL 1985-C27; 1986-C36; 2002-51-62
EMPR GEM 1970-410, 1971-397
GSC MAP 37A; 6-1957; 1736A
GSC MEM 79
GSC OF 481; 637; 1969
GCNL #?, 1987
STOCKWATCH Aug.28, 1987

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE112**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPOTTED HORSE (L.887)**, SILVER CHARM

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 05 18 N
LONGITUDE: 118 40 58 W
ELEVATION: 700 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5438639
EASTING: 377138

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Lead Silver Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Nelson Intrusions

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

FISSURE VEIN 10 TO 105 CM WIDE CARRIES PYRITE, GALENA, SPHALERITE, AND MINOR CHALCOPYRITE IN A GANGUE OF QUARTZ IN GRANODIORITE.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-MAP; 1898-1196; 1923-182; 1924-168; 1925-A7,197; 1926-212; 1927-405; 1965-167
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (SKOMAC MINES)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE113**

NATIONAL MINERAL INVENTORY:

NAME(S): **IMPERIAL**, EMLINE (L.1081S), BADGER,
STEEVES GROUP, EMMALINE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:
LATITUDE: 49 06 24 N
LONGITUDE: 118 58 28 W
ELEVATION: 733 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: ADIT ON "IMPERIAL", ASS. RPT. 1766

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5441191
EASTING: 355897

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrrhotite Chalcopyrite
MINERALIZATION AGE: Triassic-Jurassic

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Upper Paleozoic
GROUP: Anarchist
FORMATION: Unnamed/Unknown Formation
IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Volcanic Rock
Ultramafic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: VEIN
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY: Silver
Gold
GRADE: 1.8000 Grams per tonne
0.0600 Grams per tonne
COMMENTS: Up to 8 feet in width.
REFERENCE: N-S Vein.

CAPSULE GEOLOGY

IRREGULAR QUARTZ VEINS CONTAIN INTIMATELY ASSOCIATED PYRITE, GALENA AND SPHALERITE, THE AREA BEING UNDERLAIN BY GREENSTONE AND DETRITAL SEDIMENTS OF THE ANARCHIST GP WHICH ARE INTRUDED BY HIGHLY ALTERED ULTRABASIC DYKES.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1913-154; 1914-511; 1925-198; 1926-211; 1927-234; 1928-251;
1934-D9; 1935-A25; 1936-D55; 1947-153; 1949-149; 1952-139;
1953-109
EMPR ASS RPT 1766, 2882, 12089
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE114**

NATIONAL MINERAL INVENTORY:

NAME(S): **RIVERSIDE (L.1031) (M-415)**, H.R. (L.1033), RIVERSIDE NO.2 FR. (L.2605 S)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 42 N
LONGITUDE: 118 58 16 W
ELEVATION: 800 Metres

NORTHING: 5441740
EASTING: 356155

LOCATION ACCURACY: Within 500M

COMMENTS: The Riverside (L.3031) (M-415) is located 4 miles northwest of Rock Creek on the east bank of the Kettle River.

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite Chalcopyrite
ASSOCIATED: Quartz Calcite
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE Upper Paleozoic GROUP Anarchist FORMATION Unnamed/Unknown Formation IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Volcanic Rock
Ultramafic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

IRREGULAR QUARTZ VEINS CONTAIN INTIMATELY ASSOCIATED PYRITE, GALENA & SPHALERITE, THE AREA BEING UNDERLAIN BY GREENSTONE & DETRITAL SEDIMENTS OF THE ANARCHIST GROUP WHICH ARE INTRUDED BY HIGHLY-ALTERED ULTRABASIC DYKES.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1898-1196; 1900-879; 1901-1057,1146; 1903-168; 1905-181;
1907-109,215; 1913-153-154; 1920-350; 1921-186,188; 1938-D23
EMPR ASS RPT 1766, 2882, 12089
EMPR GEM 1976-E22, 1977-E17
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GCNL #24, 1976
GCNL #186, #203, 1982
INTERNATIONAL PROSPECTOR & DEVELOPER MAG MAR/APR 1983

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE115**

NATIONAL MINERAL INVENTORY:

NAME(S): **COMMONWEALTH (L.1029)**, BIG EDDY (L.1030)

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 00 N
LONGITUDE: 118 58 22 W
ELEVATION: 900 Metres

NORTHING: 5442299
EASTING: 356047

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Pyrite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Nelson Intrusions

LITHOLOGY: Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

A 20 CM QUARTZ VEIN PINCHING TO 2.5 CM WIDE, CARRIES GALENA AND PYRITE IN ALTERED DIORITE. THE ROCK IS HIGHLY SHATTERED, WITH SMALL QUARTZ STRINGERS OCCURRING THROUGHOUT.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1898-1195; 1901-1146
EMPR ASS RPT 1766, 2882, 12089
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE116**

NATIONAL MINERAL INVENTORY:

NAME(S): **WILD ROSE** GOLCONDA FR. (L.2149), CLEVELAND (L.2150),
WILD ROSE FR. (L.1387), GOLD BED (L.1388), ACE,
BELL, LAOCOON (L.2147), YORK (L.1385),
YORK FR. (L.2148), WILDROSE, TAM O'SHANTER

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 04 12 N
LONGITUDE: 118 43 10 W
ELEVATION: 1400 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5436661
EASTING: 374414

LOCATION ACCURACY: Within 500M

COMMENTS: The Wild Rose is located 3.5 kilometres southwest of Greenwood. See also Tam O'Shanter (082ESE130).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Arsenopyrite Pyrite Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Unknown
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous
Upper Paleozoic

GROUP

Attwood
Knob Hill

FORMATION

Unnamed/Unknown Formation
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone
Argillite
Black Shale
Chert Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: WILD ROSE

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 2694 Tonnes

YEAR: 1991

COMMODITY

Gold

GRADE

8.5700 Grams per tonne

REFERENCE: GCNL #42 (March 2), 1998.

ORE ZONE: WILD ROSE

REPORT ON: Y

CATEGORY: Indicated
QUANTITY: 15537 Tonnes

YEAR: 1991

COMMODITY

Gold

GRADE

10.1500 Grams per tonne

REFERENCE: GCNL #42 (March 2), 1998.

CAPSULE GEOLOGY

The Wild Rose is located 3.5 kilometres southwest of Greenwood. The Wildrose vein structure was discovered in 1895 and has been explored by 242 metres of workings on a main or adit No. 1 level, two shorter upper adit levels and numerous short shafts, cross trenching and at least 20 diamond drill holes. The area is underlain by greenstone, capped by altered volcanic tuffs. An oxidized zone, 150 centimetres wide, in a shear zone carried quartz, pyrite, pyrrhotite and arsenopyrite.

In 1986, Wild Rose Resources Ltd. conducted geochemical and geophysical surveys and drilling of 12 holes, totalling 521 metres.

In 1998, First Gold Resources Corp. conducted exploration consisting of an underground program of drilling, sampling and drifting (90 metres) on the Wild Rose.

Based on 1991 data, resources are estimated at probable 15,537

CAPSULE GEOLOGY

tonnes grading 10.15 grams per tonne gold and possible 2694 tonnes grading 8.57 grams per tonne gold (GCNL #42 (March 2), 1998).

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1896-577; 1897-587; 1898-1125; 1902-180; 1906-253; 1907-111;
1921-186; 1933-161
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (*Paxton, J. (1986): The 1986 Wild Rose Exploration Program,
Prospectus, Wild Rose Resources Ltd., June 10, 1987)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GCNL #42 (Mar.2), 1998

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE117**

NATIONAL MINERAL INVENTORY:

NAME(S): **CROWN**, CROWN II, WENDY

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 59 N
LONGITUDE: 118 36 27 W
ELEVATION: 1400 Metres

NORTHING: 5437933
EASTING: 382621

LOCATION ACCURACY: Within 500M

COMMENTS: The Crown showings are located on the southern flanks of Knob Hill and 5 kilometres east of Greenwood.

COMMODITIES: Copper

Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
ASSOCIATED: Quartz Calcite
ALTERATION TYPE: Chloritic Pyrite Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Massive
CLASSIFICATION: Epigenetic Hydrothermal Replacement
TYPE: I01 Au-quartz veins
COMMENTS: Fracture fillings and replacements.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Upper Paleozoic
Triassic
Jurassic-Cretaceous

GROUP

Knob Hill
Brooklyn

FORMATION

Unnamed/Unknown Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY:

Greenstone
Andesite
Chert
Diorite
Sharpstone Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Crown showings are located on the southern flanks of Knob Hill and 5 kilometres east of Greenwood.

The Crown showings were initially expressed as geophysical and geochemical anomalies in 1986. Follow-up trenching and diamond drilling by a Noranda Mines and Consolidated Boundary Exploration Ltd. Joint Venture, uncovered several areas of gold mineralization in shallow to moderate dipping, northwest striking shear zones. Sampling in one trench had an assay of 34.56 grams per tonne over 2 metres (Kim, 1987).

The area was worked as the Wendy claims in 1966 and 1970. In 1966, the claims were examined by Meridian Exploration Syndicate, under option from J. Forshaw. They conducted geophysical and geochemical surveys and drilling, which encountered pyrite, pyrrhotite and chalcopyrite, with copper values of 0.2 per cent over 21 metres (Assessment Report 835). In 1970, Granby Mining Company Limited conducted an IP survey in the area.

The area is underlain by volcanics and metasediments of the Upper Paleozoic Attwood Group; greenstones and cherts of the Upper Paleozoic Knob Hill Group; and sharpstone conglomerate of the Triassic Brooklyn Group. These rocks are intruded by diorites.

BIBLIOGRAPHY

EMPR ASS RPT *835, 2770, 14641, 15596, *17340, 17345
EMPR AR 1966-193
EMPR GEM 1970-427
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (Kim, H.(1987): Report on the Preliminary Geological,

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 576
REPORT: RGEN0100

BIBLIOGRAPHY

Geophysical and Geochemical Exploration of the Winner Claim Group,
in Silver Lady Resources Inc., Prospectus, March 1987, in
082ESE163)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC MEM 21
GSC P 45-20; 67-42; 79-29
GSC OF 481; 637; 1969
GSC MAP 16A; 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/04/24

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE118**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEN, WHALES**

MINING DIVISION: Greenwood

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 09 00 N
LONGITUDE: 118 48 34 W

NORTHING: 5445707
EASTING: 368054

ELEVATION: 1400 Metres

LOCATION ACCURACY: Within 1 KM
COMMENTS: TRENCH

COMMODITIES: Zinc Silver Lead Copper

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Pyrite Pyrrhotite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Brooklyn	Unnamed/Unknown Formation	

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Pen showing is about 12 kilometres northwest of Greenwood and 4 kilometres northwest of Copper Mountain. It lies south of Wallace Creek. Access to the property is by road from Highway 3, along the Boundary and Wallace creeks. The Mabel-Jenny showing (082ESE203) lies about 3 kilometres to the southwest.

The showing was discovered by R.J. Forshaw in 1969. In 1970, Orequest trenched and drilled the showing. From 1975 to 1978, Rio Tinto Canadian Exploration Limited explored the area with geological mapping, geophysical surveys, soil geochemistry and two diamond drill holes.

In 1990 and 1991, Canamax Resources Inc. conducted geological mapping, soil sampling and rock chip sampling.

The claims are underlain by Upper Paleozoic Knob Hill Group argillite, greenstone, and chert. The Knob Hill is locally overlain by the sharpstone conglomerate and limestone of the Triassic Brooklyn Group and arkose and tuffs of the Eocene Kettle River Formation (Penticton Group). Intrusive rocks include granodiorite on the Middle Jurassic Nelson Batholith and syenite and diorite of the Eocene Coryell Intrusives.

A copper-zinc skarn occurs in Brooklyn limestone. In 1970, trenching exposed a garnet-pyroxene skarn pod 9 by 3 metres which contains pyrite, pyrrhotite, sphalerite and chalcopyrite. Three, 3-metre samples averaged 0.125 per cent copper, 27.5 grams per tonne silver, and over 1 per cent zinc. Drilling failed to intercept significant mineralization (Assessment Report 5842). A garnet-pyroxene-wollastonite skarn north of Wallace Creek (1.6 kilometres northeast of the Pen showing) contains minor sphalerite, pyrrhotite, pyrite and chalcopyrite.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT 2925, 5842, 6017, 6394
EMPR EXPL 1975-E16, 1976-E19, 1977-E19, 1978-E20
EMPR GEM 1970-429
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 578
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE119**

NATIONAL MINERAL INVENTORY:

NAME(S): **TEXAS (L.662)**, GRANADA (L.869), MIDWAY,
G-TO, BORNITE J,
GRAHAM CAMP

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:
LATITUDE: 49 01 24 N
LONGITUDE: 118 50 58 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5431697
EASTING: 364793

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Brooklyn	Unnamed/Unknown Formation	
Jurassic			Nelson Intrusions

LITHOLOGY: Sharpstone
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Midway property includes the Texas (Lot 662) and Granada (Lot 869) reverted Crown grants, located six kilometres west of the village of Midway in south-central B.C.

The Midway property contains a copper-gold mineralized system related to skarn alteration within Triassic sediments. These sediments, together with lesser Triassic volcanics and minor Paleozoic volcanics, are exposed within the Midway Window or Inlier, centrally located in the north-trending Eocene age Toroda Creek Graben. This window is surrounded by Eocene volcanics and epiclastic sediments.

The Triassic sediments consist of two major stratigraphic units, a lower limestone and an overlying chert-pebble (sharpstone) conglomerate. These are extensively intruded by at least four phases of monzonitic porphyritic intrusions interpreted, on regional considerations, to be Cretaceous in age. The "crowded-feldspar porphyry" phase, perhaps later than the rest, appears to be genetically related to the formation of extensive garnet-epidote-pyroxene skarn along the limestone - conglomerate contact. The skarn is locally well mineralized with chalcopyrite and pyrite. The stratigraphic units, the intrusions, and the skarn are divided by northeast trending faults.

During 1990, Battle Mountain (Canada) Inc. completed a program of geological mapping, soil geochemistry, a total field magnetic survey on a 54-kilometre grid and sampling of historical drill core on the Midway property optioned from Maymac Petroleum Corp.

Previous work has included historical pitting and adits, with no recorded production. The property has been explored by various companies for skarn related copper and iron (magnetite) mineralization, as well as for porphyry copper. The 1990 program included sampling previously unsampled sections of core, drilled by Maymac Petroleum in 1981 and 1983, from one of two extensive skarn altered and mineralized areas on the property.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-754; 1895-703; 1896-582; 1897-576; 1921-186; 1928-250;

BIBLIOGRAPHY

1962-68; 1968-195
EMPR ASS RPT 2049, 3920, 4124, 5381, 7129, 8236, 9553, 21315
EMPR EXPL 1975-E15, 1978-E19
EMPR GEM 1969-303, 1972-37
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (Cukor, V. (1987): J Claims, Midway, Kyber Resources Inc.
Prospectus; 1991 Diamond Drill Program drill logs and sections,
Battle Mountain (Canada) Inc.)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
WWW http://www.infomine.com/index/properties/MIDWAY+_RAINBOW.html

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE120**

NATIONAL MINERAL INVENTORY:

NAME(S): **GEM (L.697)**, DEADWOOD CAMP, MOTHER LODE

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 24 N
LONGITUDE: 118 43 22 W
ELEVATION: 1200 Metres

NORTHING: 5440743
EASTING: 374264

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Pyrite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Igneous-contact Replacement
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Anarchist	Undefined Formation	
Upper Paleozoic	Knob Hill	Undefined Formation	

LITHOLOGY: Limestone
Sharpstone Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

UNDERLAIN BY PERMIAN ANARCHIST GP SEDIMENTS AND VOLCANICS, INTRUDED BY ACIDIC ROCKS OF CRETACEOUS NELSON INTRUSIVES. COPPER MINERALIZATION GENERALLY OCCURS WITHIN SKARN ZONES IN LIMESTONE OF THE ANARCHIST GP SEDIMENTS NEAR THE CONTACT OF THE NELSON INTRUSIVE ROCKS. NO FURTHER GEOLOGICAL INFORMATION AVAILABLE.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-Map after 758; 1897-586; 1899-848; 1904-219;
1961-64; 1965-168
EMPR ASS RPT 2845
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE121**

NATIONAL MINERAL INVENTORY:

NAME(S): **TONEY (L.1907)**, VEN, GOTCHA

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 48 N
LONGITUDE: 118 42 10 W
ELEVATION: 1333 Metres

NORTHING: 5437745
EASTING: 375657

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive Disseminated Vein
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Paleozoic
Jurassic

GROUP

Anarchist

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions

LITHOLOGY: Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

EAST-UNDERLAIN BY ANARCHIST GP SEDIMENTS INTRUDED BY DIORITE OF CRETACEOUS NELSON INTRUSIONS. WEST-CONGLOMERATES AND CHERT ARE UNDERLAIN BY INTERBEDDED SILTSTONE AND GREYWACKE. CHALCOPYRITE AND PYRITE OCCUR AS DISSEMINATIONS OR FRACTURE FILLINGS IN DIORITE. PYRRHOTITE OCCURS IN GENERALLY MASSIVE FORM IN THE EAST ZONE WHERE DIORITE INTRUDES METASEDIMENTS.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1919-370, 1967-225,226,277
EMPR ASS RPT 1067, 1878, 3932, 4125, 4237
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GCNL #130, 1973

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE122**

NATIONAL MINERAL INVENTORY:

NAME(S): **CYCLOPS (L.1244)**, SILVER CHIEF FR., CHIEF FR.,
LANCASTER LASS (L.1687), BLACK BELL (L.1689), MATTIE DAVIS (L.795),
SUMMIT CAMP

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 07 17 N
LONGITUDE: 118 33 09 W
ELEVATION: 1140 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Cyclops (Lot 1244) is 10.2 kilometres northeast of Greenwood,
on the divide between Eholt and Fisherman creeks. The property
adjoins the Oro Denoro Mine (082ESE063) to the north. Access to
these properties is about 0.6 kilometre southwest from Highway 3 by
level gravel road along an old railway bed.

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5442111
EASTING: 386724

COMMODITIES: Zinc Lead Silver Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite Chalcopyrite Magnetite
ASSOCIATED: Quartz Calcite Garnet Hematite Malachite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratiform Disseminated Massive Vein
CLASSIFICATION: Skarn Replacement
TYPE: K02 Pb-Zn skarn
DIMENSION: 45 x 3 Metres STRIKE/DIP: 010/90 TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Triassic
GROUP: Brooklyn
FORMATION: Unnamed/Unknown Formation
IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Limestone
Argillite
Marble
Sharpstone Conglomerate
Skarn
Gabbro

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP:
GRADE: Hornfels

INVENTORY

ORE ZONE: MAIN SHOWING
CATEGORY: Indicated
QUANTITY: 4500 Tonnes
COMMODITY: Zinc
GRADE: 9.0000
REPORT ON: Y
YEAR: 1952
Per cent

COMMENTS: Based on 490 metres of drilling by New Jersey Zinc Corp.
REFERENCE: Assessment Report 10589.

CAPSULE GEOLOGY

The Cyclops (Lot 1244) is 10.2 kilometres northeast of Greenwood, at the elevation 1140 metres on the divide between Eholt and Fisherman creeks. The property adjoins the Oro Denoro Mine (082ESE063) to the north. Access to these properties is about 0.6 kilometre southwest from Highway 3 by level gravel road along an old railway bed.

The claim was Crown granted in 1899 to J.F. Hill. In the early 1950's, the property, owned by W. Cudworth and W. Trombley, was developed by Silver Chief Mines. About 490 metres of diamond drilling (by New Jersey Zinc Corp.) indicated 4500 tonnes of 8 to 10 per cent zinc (Assessment Report 10589). An adit was driven to the south for 40 metres. At 30 metres, a 5.5-metre raise was driven to the bottom of an old shaft. A 258.5-tonne shipment of ore averaged 5.9 per cent zinc, a yield of 15,254 kilograms (Annual Report 1952,

CAPSULE GEOLOGY

p. 141).

In 1967 and 1968, Giant Exploration Limited conducted trenching and magnetometer and soil surveys. In 1981 and 1982, Kettle River Resources conducted geological mapping and sampling. A 1.8-metre chip sample assayed 16.0 per cent zinc, 0.50 per cent lead and 4.5 grams per tonne silver (Assessment Report 10589).

The property is underlain by limestone, argillite and skarn of the Triassic Brooklyn Group. The skarn carries sphalerite, chalcopyrite, pyrite, magnetite and minor galena; the skarn has been silicified in places. Development work in the 1950's showed a mineralized zone to be up to 3.6 metres in width. A concordant body of gabbro, which post-date the Triassic rocks, occurs to the south and southeast of the mineralized zone.

BIBLIOGRAPHY

EMPR AR 1894-map after 758; 1899-848, 1900-991; 1904-221; *1952-141;
1967-233, 1968-235
EMPR ASS RPT 1580, 5356, *10589
EMPR GEOLOGY *1976, pp. 1-13
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE123**

NATIONAL MINERAL INVENTORY:

NAME(S): **CROESUS (L.866)**, JOHANNESBERG (L.2072), JOHANNESBURG

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 45 N
LONGITUDE: 118 40 09 W
ELEVATION: 1130 Metres

NORTHING: 5435746
EASTING: 378068

LOCATION ACCURACY: Within 500M

COMMENTS: The Croesus (Lot 866) claim is located on the lower slopes of Mount Attwood, 2.5 kilometres south of Greenwood. Access to the area is from Highway 3 via the Lind Valley road and an old logging road that skirts the northwest spur of Mount Attwood.

COMMODITIES: Copper Silver Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Pyrite Sphalerite
ASSOCIATED: Garnet Calcite Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn G04 Besshi massive sulphide Cu-Zn
COMMENTS: The deposit has VMS characteristics.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Attwood	Unnamed/Unknown Formation	
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
Tuffaceous Argillite
Calc-silicate
Garnetite
Serpentinite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Slide Mountain

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1968
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 6.9000 Grams per tonne
Copper 1.6100 Per cent
REFERENCE: Assessment Report 1648.

CAPSULE GEOLOGY

The Croesus (Lot 866) claim is located on the lower slopes of Mount Attwood, 2.5 kilometres south of Greenwood. Access to the area is from Highway 3 via the Lind Valley road and an old logging road that skirts the northwest spur of Mount Attwood.

The showings consist of an alignment of sulphide lenses (about 400 metres in length) associated with limestone, greenstone and black argillite formations of the Permian Attwood Group. The claim is bisected by a major southeast-trending fault along which units of the Attwood Group and serpentinite from the northeast are thrust over Permo-Carboniferous Knob Hill rocks, mostly chert, on the southwest. A cross-section of the main mineralized zone shows 3 metres of limestone and 7.5 metres of massive sulphides and calc-silicates intruded by a 15-metre dike. The principal sulphide minerals are massive pyrite and pyrrhotite, sphalerite and fine grained chalcopyrite.

Early workings on the Croesus claim consist of a 30-metre inclined shaft. The claim was Crown granted to J.E. McEwen in 1902. In 1968 and 1969, Ortega Minerals Ltd. conducted geophysical and

CAPSULE GEOLOGY

geochemical surveys. A chip sample assayed 6.9 grams per tonne silver and 1.61 per cent copper (Assessment Report 1648).
Echo Bay Mines Ltd. drilled 6 holes totalling 556 metres in 1997.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1901-1230; 1911-291; 1968-228
EMPR ASS RPT *1648, 1887, 2054, 24665
EMPR GEM 1969-308
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE124**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEXICON (L.3303)**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 31 N
LONGITUDE: 118 40 21 W
ELEVATION: 1100 Metres

NORTHING: 5435319
EASTING: 377815

LOCATION ACCURACY: Within 500M

COMMENTS: The Lexicon (Lot 3303) claim is located on the lower slopes of Mount Attwood, 3 kilometres south of Greenwood. Access to the area is from Highway 3 via the Lind Valley road and an old logging road that skirts the northwest spur of Mount Attwood.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite

ASSOCIATED: Garnet

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Syngenetic Skarn

TYPE: G04 Besshi massive sulphide Cu-Zn K01 Cu skarn

COMMENTS: The deposit has VMS characteristics.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	

LITHOLOGY: Chert
Phyllite
Limestone
Greenstone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Slide Mountain

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1968

SAMPLE TYPE: Chip

COMMODITY

GRADE

Copper

0.8300 Per cent

REFERENCE: Assessment Report 1648.

CAPSULE GEOLOGY

The Lexicon (Lot 3303) claim is located on the lower slopes of Mount Attwood, 3 kilometres south of Greenwood. Access to the area is from Highway 3 via the Lind Valley road and an old logging road that skirts the northwest spur of Mount Attwood.

The area is underlain by limestone, greenstone and argillite of the Permo-Carboniferous Knob Hill Group. Early workings on the Lexicon claim consist of an 18-metre long adit exposing a flat-lying 2-metre wide band of massive pyrrhotite with garnetite and fine-grained chalcopyrite. East of the adit portal is an iron-stained capping, 30 by 9 metres, adjacent to granitic rock.

In 1968 and 1969, Ortega Minerals Ltd. conducted geophysical and geochemical surveys. A sample of chips assayed 0.83 per cent copper (Assessment Report 1648).

BIBLIOGRAPHY

EMPR AR 1911-291; 1968-273
EMPR GEM 1969-308
EMPR ASS RPT *1648, 2054
EMPR OF 1990-25
EMPR P 1986-2

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 588
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE125**

NATIONAL MINERAL INVENTORY:

NAME(S): **RODERICK DHU (L.598)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 10 N
LONGITUDE: 118 37 17 W
ELEVATION: 1646 Metres

NORTHING: 5449411
EASTING: 381852

LOCATION ACCURACY: Within 500M

COMMENTS: Quartz vein exposure, 950 metres south-southwest from the summit of Mount Roderick Dhu, west of Jewel Lake, 11.5 kilometres north-northeast from the town of Greenwood (Assessment Report 1814).

COMMODITIES: Silver Gold Lead

MINERALS

SIGNIFICANT: Galena Pyrite Telluride
ASSOCIATED: Quartz
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H08 Alkaline intrusion-associated Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Carboniferous	Anarchist	Undefined Formation	Unnamed/Unknown Informal
Tertiary			

LITHOLOGY: Schistose Quartz Wacke
Schistose Lithic Wacke
Pulaskite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Undivided Metamorphic Assembl. Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization PHYSIOGRAPHIC AREA: Okanagan Highland GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1931
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 51.4000 Grams per tonne
Gold 38.4000 Grams per tonne

COMMENTS: Sample from sorted ore.
REFERENCE: Minister of Mines Annual Report 1931, page A125.

CAPSULE GEOLOGY

The Jewel Lake area is underlain by a complex of metamorphic rocks mostly of sedimentary and volcanic origin correlative with the Carboniferous or older Anarchist Group, and a large granodiorite intrusion correlative to the Juro-Cretaceous Nelson Plutonic Rocks. Small dykes and sill-like bodies, feeders to nearby Tertiary lavas, pervade these units.

Locally the metamorphosed volcanic and sedimentary rocks are not always distinguishable, both being fine-grained and medium or dark coloured with primary structures such as bedding and flow banding being confused with foliation or gneissosity. Generally the sedimentary rocks are brittle and quartz-rich, however, compositions vary and some biotitic varieties have the same competence as the amphibole-rich volcanic rocks. These rocks are locally called quartzites but few are true quartzites and more appropriate terms would be quartz wacke or lithic wacke. The massive character of the volcanic rocks is due to a combination of intense regional metamorphism and primary structures. Field and petrographic data indicate that at least some of the original rock formed as a result of massive accumulations of lava flows and pillow lava. Crosscutting feeder dykes and sills are

CAPSULE GEOLOGY

significant and contribute to the massive aspect of the volcanic rocks. The metamorphosed schistose volcanic rocks are compositionally basalts. These metasedimentary and metavolcanic rocks form part of the Carboniferous (Pennsylvanian-Mississippian) or older Anarchist Group.

Igneous intrusions in the Jewel Lake camp include a large Lower Cretaceous granodiorite pluton and a host of younger pulaskite and lamprophyre dykes. The granodiorite is correlative with Nelson Plutonic Rocks. It is a homogeneous medium-grained grey body which intrudes the metavolcanic rocks along a northwest trending contact in the southwest part of the camp. The intrusive has produced little effect in both the metavolcanic and metasedimentary rocks. Granodiorite dykes occur and are compositionally similar to the main granodiorite body and are probably offshoots from it. Pulaskite dykes are numerically most important. Several types are evident including both quartz-bearing and undersaturated types. Post-vein lamprophyre dykes as well as the pulaskite dykes are of probable Lower Tertiary age and cut all other major geological units.

On the Roderick Dhu claim (L.598) a quartz fissure-vein is hosted in north-northeast striking and east dipping metasedimentary rocks of Group. These rocks are schistose quartz wackes or lithic wackes and are intruded by a Lower Tertiary pulaskite dyke. The quartz vein appears to be in a prominent fracture zone that roughly parallels the bedding foliation planes of the host metasedimentary rocks. At the southern extremity of the vein, widths range from 5 to 30 centimetres and is mineralized with galena, pyrite and telluride. Limonite occurs in fractures within the quartz. A shaft was sunk to 23 metres depth and stopping carried out 30 metres south. The quartz vein has been traced 152 metres northeast where a second shaft was sunk 7.6 metres in the vein, but mineralization is sparse. To the north of this point, the vein has been displaced by a 61 metre wide pulaskite dyke.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1896-563; 1897-590; 1903-H166,H170; 1904-G219; *1921-G184,
G347; 1931-A125; 1934-D6; 1967-227; 1968-231
EMPR ASS RPT 1814, 11464
EMPR BULL 1 (1932), p. 85; 20, Part II, p. 12
EMPR EXPL 1983-20
EMPR GEM 1969-304
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/22

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE126**

NATIONAL MINERAL INVENTORY:

NAME(S): **AMANDY (L.2795)**, AMANDA

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 39 N
LONGITUDE: 118 37 40 W

NORTHING: 5448463
EASTING: 381366

ELEVATION: 1524 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Shaft H, 1.5 kilometres south-southwest from the summit of Mount Roderick Dhu, west of Jewel Lake, 10.75 kilometres north-northeast from the town of Greenwood (Minister of Mines Annual Report 1935-D2).

COMMODITIES: Silver

Gold

Lead

Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Telluride Sylvanite
ASSOCIATED: Quartz Pyrite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H08 Alkalic intrusion-associated Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Carboniferous
Eocene
Jurassic-Cretaceous

GROUP

Anarchist

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Coryell Intrusions
Nelson Intrusions

LITHOLOGY: Schistose Quartz Wacke
Schistose Lithic Wacke
Pulaskite
Granodiorite
Pulaskite Dike
Granodiorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Okanagan Highland

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1935

COMMODITY

Silver

GRADE

188.5000

Grams per tonne

Gold

17.1000

Grams per tonne

REFERENCE: Minister of Mines Annual Report 1935, page D2.

CAPSULE GEOLOGY

The Jewel Lake area is underlain by a complex of metamorphic rocks mostly of sedimentary and volcanic origin correlative with the Carboniferous or older Anarchist Group, and a large granodiorite intrusion correlative to the Juro-Cretaceous Nelson Plutonic Rocks. Small dykes and sill-like bodies, feeders to nearby Tertiary lavas, pervade these units.

Locally the metamorphosed volcanic and sedimentary rocks are not always distinguishable, both being fine-grained and medium or dark coloured with primary structures such as bedding and flow banding being confused with foliation or gneissosity. Generally the sedimentary rocks are brittle and quartz-rich, however, compositions vary and some biotitic varieties have the same competence as the amphibole-rich volcanic rocks. These rocks are locally called quartzites but few are true quartzites and more appropriate terms would be quartz wacke or lithic wacke. The massive character of the volcanic rocks is due to a combination of intense regional metamorphism and primary structures. Field and petrographic data indicate that at least some

CAPSULE GEOLOGY

of the original rock formed as a result of massive accumulations of lava flows and pillow lava. Crosscutting feeder dykes and sills are significant and contribute to the massive aspect of the volcanic rocks. The metamorphosed schistose volcanic rocks are compositionally basalts. These metasedimentary and metavolcanic rocks form part of the Carboniferous (Pennsylvanian-Mississippian) or older Anarchist Group.

Igneous intrusions in the Jewel Lake camp include a large Lower Cretaceous granodiorite pluton and a host of younger pulaskite and lamprophyre dykes. The granodiorite is correlative with Nelson Plutonic Rocks. It is a homogeneous medium-grained grey body which intrudes the metavolcanic rocks along a northwest trending contact in the southwest part of the camp. The intrusive has produced little effect in both the metavolcanic and metasedimentary rocks. Granodiorite dykes occur and are compositionally similar to the main granodiorite body and are probably offshoots from it. Pulaskite dykes are numerically most important. Several types are evident including both quartz-bearing and undersaturated types. Post-vein lamprophyre dykes as well as the pulaskite dykes are of probable Lower Tertiary age and cut all other major geological units.

On the Amandy claim (L.2795), north striking fractured and sheared metasedimentary rocks of the Carboniferous (Pennsylvanian-Mississippian) or older Anarchist Group dip 30 to 60 degrees east. The rocks are schistose quartz wackes or lithic wackes and are intruded by a swarm of Lower Tertiary pulaskite dykes and Lower Cretaceous granodiorite dykes.

Quartz fissure-veins have a tendency to occur in fracture zones that roughly parallel the bedding/foliation planes of the metasedimentary rocks. The quartz vein in the dominant fracture zone is alternately banded with host rock. Mineralization consists of pyrite which is oxidized near surface, galena, sphalerite and tellurides (possibly sylvanite). The vein width ranges from a few centimetres to 3 metres, and extends for short distances along strike and down-dip. This vein swings northeast along bedding/foliation planes in the northern part of the claim. In less prominent fracture zones east and northeast of the main fracture zone, quartz veins also occur with similar mineralization and widths ranging from 1 to 45 centimetres.

Past development consists of open cuts, pits, shafts and a small amount of drifting.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
- EMPR AR 1897-590; 1903-H246; *1934-D6; *1935-D2; 1936-D56; 1937-A36, D32; 1939-A36; 1940-A23,A63; 1941-A24,A61; 1946-A135,A136; 1947-A155,A156; 1967-227; 1968-231
- EMPR ASS RPT 1814, 11464
- EMPR BULL 20, Part III, p. 12
- EMPR EXPL 1983-20
- EMPR GEM 1969-304; 1971-379,380
- EMPR MR MAP 6 (1932)
- EMPR OF 1990-25
- EMPR P 1986-2
- EMPR PRELIM MAP 59
- GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
- GSC OF 481; 637; 1969
- GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/22

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE127**

NATIONAL MINERAL INVENTORY:

NAME(S): **LADY OF THE LAKE (L.1171)**, ELECTRIC, SKIPPER

MINING DIVISION: Greenwood

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 01 N
LONGITUDE: 118 37 16 W
ELEVATION: 1570 Metres

NORTHING: 5449132
EASTING: 381867

LOCATION ACCURACY: Within 500M

COMMENTS: An adit, 1.15 kilometres south-southwest from the summit of Mount Roderick Dhu, west of Jewel Lake, 11 kilometres north-northeast from the town of Greenwood (Assessment Report 11464).

COMMODITIES: Silver Gold Lead

MINERALS

SIGNIFICANT: Galena Pyrite Telluride
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H08 Alkaline intrusion-associated Au
DIMENSION:

STRIKE/DIP: 340/50E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE Carboniferous GROUP Anarchist FORMATION Undefined Formation IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Schistose Quartz Wacke
Schistose Lithic Wacke

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional Plutonic Rocks RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Grab
COMMODITY Silver GRADE 178.2000 Grams per tonne
Gold 12.3000 Grams per tonne

COMMENTS: Sample from adit dump material.
REFERENCE: Assessment Report 11464.

CAPSULE GEOLOGY

The Jewel Lake area is underlain by a complex of metamorphic rocks mostly of sedimentary and volcanic origin correlative with the Carboniferous or older Anarchist Group, and a large granodiorite intrusion correlative to the Juro-Cretaceous Nelson Plutonic Rocks. Small dykes and sill-like bodies, feeders to nearby Tertiary lavas, pervade these units.

Locally the metamorphosed volcanic and sedimentary rocks are not always distinguishable, both being fine-grained and medium or dark coloured with primary structures such as bedding and flow banding being confused with foliation or gneissosity. Generally the sedimentary rocks are brittle and quartz-rich, however, compositions vary and some biotitic varieties have the same competence as the amphibole-rich volcanic rocks. These rocks are locally called quartzites but few are true quartzites and more appropriate terms would be quartz wacke or lithic wacke. The massive character of the volcanic rocks is due to a combination of intense regional metamorphism and primary structures. Field and petrographic data indicate that at least some of the original rock formed as a result of massive accumulations of lava flows and pillow lava. Crosscutting feeder dykes and sills are significant and contribute to the massive aspect of the volcanic rocks. The metamorphosed schistose volcanic rocks are compositionally basalts. These metasedimentary and metavolcanic rocks form part of

CAPSULE GEOLOGY

the Carboniferous (Pennsylvanian-Mississippian) or older Anarchist Group.

Igneous intrusions in the Jewel Lake camp include a large Lower Cretaceous granodiorite pluton and a host of younger pulaskite and lamprophyre dykes. The granodiorite is correlative with Nelson Plutonic Rocks. It is a homogeneous medium-grained grey body which intrudes the metavolcanic rocks along a northwest trending contact in the southwest part of the camp. The intrusive has produced little effect in both the metavolcanic and metasedimentary rocks. Granodiorite dykes occur and are compositionally similar to the main granodiorite body and are probably offshoots from it. Pulaskite dykes are numerically most important. Several types are evident including both quartz-bearing and undersaturated types. Post-vein lamprophyre dykes as well as the pulaskite dykes are of probable Lower Tertiary age and cut all other major geological units.

The Lady of the Lake claim (L.1171) adjoins the Roderick Dhu claim (L.598-082ESE125) to the south. A quartz fissure-vein is hosted in north-northeast striking and east dipping metasedimentary rocks of Group and are comprised of schistose quartz wackes or lithic wackes. The quartz vein appears to be in a fracture zone that roughly parallels the bedding/foliation planes of the host metasedimentary rocks. Near the north boundary of the claim a 0.4 metre wide quartz vein is exposed by a small pit. One hundred and eighty metres south an adit follows a 0.75 metre wide quartz vein for 30 metres which trends 340 degrees and dips 50 degrees east. The vein is extremely fractured for initial 3.6 metres and eventually pinches out. Mineralization consists of galena, pyrite and telluride.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1897-590; 1899-849; 1902-H304; 1921-G184,G347; 1931-A125;
1934-D6
EMPR ASS RPT 1814, *11464
EMPR EXPL 1983-20
EMPR GEM 1969-304
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/23

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE128**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIDWAY MINE**, NANCY

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 02 24 N
LONGITUDE: 118 48 34 W
ELEVATION: 1100 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5433480
EASTING: 367762

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Silver Zinc Lead Gold

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Tertiary Knob Hill Unnamed/Unknown Formation

LITHOLOGY: Serpentinite
Quartz Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Slide Mountain

CAPSULE GEOLOGY

The Midway mine is located about 4 kilometres northwest of the town of Midway on the open grassy south facing slope of the Kettle River valley at 1000 metres elevation. Access to the property is via the Murray Gulch road, which is accessed by driving north from the sharp bend in Highway 3 at the former Kettle Valley railway crossing.

The history of the property in the early years is uncertain other than numerous pits as evidence of prospecting from the pre 1950s era. In 1968, D. Moore mined 19 tonnes of ore grading 14 grams per tonne of gold, 1506 grams per tonne of silver, 15 per cent lead, and 16 per cent zinc. Underground development at the Midway mine consists of 75 metres of drifting on 3 levels with 15 metres of raise and a small amount of open stoping. In 1983 Dentonia Resources/Kettle River Resources the property and complete geological mapping and geochemical and magnetometer surveys. From 1987 through 1989, BP Resources Canada Ltd. works on the property by an option agreement and completes a program of rock sampling, heavy mineral sampling, a VLF/EM survey and a diamond drill program. In 1990, Minnova signed an option deal for a complete re-evaluation of the property.

At the Midway mine Jurassic quartz feldspar porphyry sills and dykes, similar to the Lexington porphyry, intrude serpentinite. Commonly these intrusives are altered with saussuritized feldspars, pervasive clay and quartz-pyrite-sericite alteration, and less often, silicification. The very strong correlation between this alteration and the presence of the quartz-feldspar porphyry, not only at this location but elsewhere in the Greenwood camp, suggests that the emplacement of the intrusion was responsible for the alteration. Anomalous gold, silver, arsenic and antimony are common in strongly altered quartz-feldspar porphyry. At the Midway mine, steep massive sulphide shear zones, enriched in pyrite -arsenopyrite -galena - sphalerite and stibnite, are hosted within the altered intrusion.

Alteration of the serpentinite to listwanite is the earliest alteration event. This is presumed to be a result of a major southeast trending, north dipping thrust fault of pre-Jurassic age. A by-product of the listwanite alteration is the formation of quartz veins. Such white, crystalline quartz veins are common

CAPSULE GEOLOGY

on the property but do not appear to be mineralized.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1962-68; 1968-A52; 1969-A53; 1977-114; 1979-127
EMPR ASS RPT 11953
EMPR BC METAL MM00896
EMPR GEM 1969-304, 426
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
INTERNATIONAL PROSPECTOR & DEVELOPER MAG MAY-JUNE 1982

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE129**

NATIONAL MINERAL INVENTORY:

NAME(S): **GARNET**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 08 00 N
LONGITUDE: 118 12 58 W
ELEVATION: 1000 Metres

NORTHING: 5442990
EASTING: 411289

LOCATION ACCURACY: Within 5 KM

COMMENTS: The Garnet is located east of Christina Lake near Texas Creek.

COMMODITIES: Copper

Molybdenum

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Permian

GROUP: Unnamed/Unknown Group

FORMATION: Mount Roberts

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1895-479; 1898-1195; 1906-253
EMPR ASS RPT 1811
EMPR GEM 1969-311
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE130**

NATIONAL MINERAL INVENTORY: 082E2 Cu3

NAME(S): **TAM O'SHANTER (L.2405)**, BENGAL (L.2375), RAINBOW,
 IVA LENORE, GOTCHA, SINTER,
 SHANTER

STATUS: Prospect	Underground	MINING DIVISION: Greenwood
REGIONS: British Columbia		
NTS MAP: 082E02E		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 49 05 23 N		NORTHING: 5438870
LONGITUDE: 118 43 45 W		EASTING: 373754
ELEVATION: 1112 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: Location of workings on Reverted Crown grant Lot 2405, located near the headwaters of Buckhorn Creek, about 4 kilometres west of the community of Greenwood (Assessment Report 18798). See also Iva Lenore (082ESE172), Buckhorn (082ESE051), and Wild Rose (082ESE116).		

COMMODITIES: Copper Gold Silver Lead Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite	Molybdenite	Copper	Galena	Pyrite
Pyrrhotite				
ASSOCIATED: Quartz	Pyrite	Pyrrhotite		
ALTERATION: Silica	Hematite	Clay	Limonite	
ALTERATION TYPE: Silicific'n		Oxidation		
MINERALIZATION AGE: Tertiary				

DEPOSIT

CHARACTER: Vein	Disseminated			
CLASSIFICATION: Hydrothermal	Porphyry	Epithermal		
TYPE: H05	Epithermal Au-Ag: low sulphidation		L04	Porphyry Cu ± Mo ± Au
I05	Polymetallic veins Ag-Pb-Zn±Au			

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Knob Hill	Undefined Formation	
Tertiary	Princeton	Kettle River	
Jurassic			Nelson Intrusions

LITHOLOGY: Greenstone
 Andesite Tuff
 Siliceous Rock
 Breccia
 Cherty Tuff
 Chert
 Diorite
 Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Quesnel	
METAMORPHIC TYPE: Regional	RELATIONSHIP: GRADE:

CAPSULE GEOLOGY

The Tam O'Shanter property is located on Ingram Ridge, near the headwaters of Buckhorn Creek, about 4 kilometres west of Greenwood. The property consists of a large number of recorded claims and mineral leases including the Tam O'Shanter (Lot 2405) and Bengal (Lot 2375) claims. See also Iva Lenore (082ESE172) and Buckhorn (082ESE051).

The Tam O'Shanter claim was Crown granted to C.R. Forde and Associates in 1903 but apparently little development was done at this time; the claim was sold to A.J. Morrison in 1918. Other than 2 old shafts from the turn of the century, no development work was done until 1918 at which time the first thorough evaluation of the property began. In the period 1921 to 1922, owners Morrison & McGillis completed a 63-metre adit and an 8-metre raise; this followed a 'lead' of crushed country rock and soft gouge containing galena, chalcopyrite and pyrite, with gold and silver values in a quartz gangue. From this operation, 2.7 tonnes were shipped, resulting in 12 grams of gold, 2052 grams of silver and a small quantity of lead.

Silver Dome Mines Ltd. acquired the property in 1963 and began a program of road construction (16 kilometres), soil sampling, a

CAPSULE GEOLOGY

magnetometer survey, trenching and 1865 metres of diamond drilling. In 1964, Crown Silver Development Ltd. acquired a 50 per cent interest in the property. By June 1965, the major work, amounting to 3962 metres of trenching and stripping, and 2438 metres of diamond drilling, had outlined several anomalous areas.

During the period 1966 to 1974 there was almost continuous exploration activity on the property by Sun Oil Ltd., Mapletree Exploration Ltd. and Mascot Mines Ltd. Work completed included 43 diamond-drill holes, totalling roughly 3810 metres, and 63 percussion-drill holes, totalling about 3048 metres. The results of this work located a medium sized zone of 0.3 per cent copper on the Buckhorn claim (082ESE051) associated with the old workings. A zone 304 metres long and 60 to 121 metres wide, with intercepts ranging from 0.15 to 0.3 per cent copper, was found on the Iva Lenore claim (082ESE172). Several other zones were exposed which appeared interesting but drill results were poor (in the range of 0.1 per cent copper).

From 1975 to 1978, George O.M. Stewart became involved with the property. He made detailed studies of alteration and fracture patterns along with geologic mapping as an aid to designing an additional exploration program. As a result of this study, an area of intense silicification was disclosed adjacent to the Bengal shaft. The zone also contained abundant limonite. In 1979, Oneida Resources Ltd. completed 8.2 kilometres of grid centred around the Bengal shaft zone and drilled three diamond-drill holes totalling 658 metres to test the zone. In May 1980, a 60-metre long backhoe trench was completed across a portion of the Bengal shaft zone. In May 1981, G.H. Rayner completed a detailed geological study centred around the Bengal shaft area covering an area of approximately 1500 by 2000 metres. In 1982 Oneida Resources Ltd. amalgamated with several other companies to form New Frontier Petroleum. In 1983 trenching (60 metres) was done near the Bengal shaft. At the same time approximately 30 metres of trenching was completed about 1500 metres to the north where copper staining was uncovered on a new logging road.

In 1987 the property was re-examined by Echo Bay Mines Ltd. and BP Selco Ltd. In 1988, Pacific Houston Ltd. did an IP survey, which recorded a significant conductor, and 806 metres of diamond drilling. In 1990 Kettle River Resources Ltd. and Dentonia Resources Ltd. purchased the property followed by an option agreement with Minnova Inc. This led to geological mapping, evaluation of geophysical data, geochemical soil sampling, and drilling (11 holes, 1970 metres). Drilling in 1992, encountered 6.53 grams per tonne gold and 0.83 per cent copper over 3.3 metres (Northern Miner, February 17, 1992).

The Tam O'Shanter property is underlain by an assemblage of silicified rock, chert and cherty tuffs, and andesite tuffs of the Carboniferous or Permian Knob Hill Group. These rocks have been intruded by a stock of diorite and quartz diorite related to the Middle-Late Jurassic Nelson intrusions.

The principal mineralization is in the Knob Hill greenstones. In the Nelson intrusive rocks, pyrite is occasionally prominent with or without quartz; chalcopyrite is very sparse. This intrusion was the focus of most of the work and drilling completed on the property in the past. In the greenstones, the mineralization is of two types: disseminated sulphides and quartz stringers containing sulphides. The disseminated sulphides are chalcopyrite, pyrrhotite and pyrite. The quartz stringers contain molybdenite and sometimes chalcopyrite. Occasional grains of molybdenite look like disseminations, but close examination show them to be associated with threads of quartz. Native copper also occurs in the greenstones. Hematite stringers are found in all of the rock types.

The epithermal mineralization discovered on this property is related to Tertiary faulting and the associated alteration tends to be restricted to the Kettle River Formation. The dominant geological feature of the property is the steep northeast trending Deadwood fault that forms the eastern margin of the Toroda Graben. The fault separates the Penticton Group on the west and northwest from the Knob Hill Group to the east. The major area of alteration and focus of exploration is at a splay in the Deadwood fault that encloses a zone of the basal Tertiary Kettle River sediments, which are clay altered and locally silicified. The northern portion of this zone, called the Bengal Zone, is a silicified ridge of outcrops on which there are a series of trenches and the old Bengal shaft. The fine grained quartz that comprises the ridge is commonly brecciated and contains up to 10 per cent fine grained pyrite and some clay minerals. The mineralization here appears to be controlled by a small, steeply dipping, north-northeast trending fracture related to the main fault. A similar zone of alteration occurs in a conglomeratic facies of the Kettle River Formation, 200 metres south of the Bengal Zone where the

CAPSULE GEOLOGY

Deadwood fault splays into two subparallel structures. Several backhoe trenches have been dug at this point exposing strongly clay altered conglomerate between, and east of the main fault structures, and a zone of massive, fine grained, banded quartz which is referred to as the 'Sinter Zone'.

In summary, all of the mineralization discovered to date on the property appears to be related to Tertiary faulting and the associated alteration tends to be restricted mostly to the Kettle River Formation.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1896-577; 1897-587; 1903-H248; 1906-H253; 1918-K474; 1920-N120,N164; *1921-G182,G188; *1922-N176; 1956-90; 1961-74; *1964-111; 1965-168; 1966-193; 1967-226
EMPR ASS RPT 562, 1878, 5023, 8795, *18798, 18917, *20588, 22529, 22914, 24042, 24543, 25128
EMPR GEM 1969-307; 1971-381; 1973-37,38; 1974-33
EMPR INF CIRC 1991-1, pp. 66,67; 1993-1, p. 20
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
EMPR PF (Location, geology and drillhole location maps, 1976; Property description by G.O.M Stewart, 1976; Kettle River Resources Ltd. Report to Shareholders, 1992; Kettle River Resources Ltd. Website (Nov.1999): Greenwood Area, 1 p.)
EMR MP CORPFILE (Silver Dome Mines Ltd.; Crown Silver Development Ltd.)
GSC MAP 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 1969
GSC P 67-42; 79-29
GCNL #34 (Feb. 18), #90 (May 10) 1983
N MINER Feb. 24, 1983; Feb. 17, 1992
WWW <http://www.kettleriver.com>; <http://www.infomine.com/>
North American Gold Mining Industry News, Vol. 1, No. 2 (June 1, 1983)

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/24

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE131**

NATIONAL MINERAL INVENTORY:

NAME(S): **BULLER (L.3242)**, HOMESTAKE (L.3167), ALPHA (L.3174),
EAGLE (L.577), MAY QUEEN (L.435S), CRESCENT (L.3383),
THE LAYOVER (L.434S), CONNECTION (L.954S), MURTL FR. (L.3019)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 02 42 N
LONGITUDE: 118 30 58 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Location of centre of Crown grant from 1:50 000 map.

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5433565
EASTING: 389210

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Pyrite Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Brooklyn	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
Sharpstone
Volcanic
Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

In the early 1900's, work consisted of drifts and shafts (one up to 14 metres) on several claims. In 1929, pyrite and chalcopyrite in quartz was noticed in volcanic. A 0.6-metre sample assayed 2.4 per cent copper and 28 grams per tonne silver.
In 1969 Granby Mining Company Limited conducted magnetometre survey over the claims.

BIBLIOGRAPHY

EMPR AR 1901-1065,1066; 1905-254; 1906-161,162; 1910-248;
1913-424; *1929-255
EMPR ASS RPT 1889
EMPR GEM 1969-309

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE132**

NATIONAL MINERAL INVENTORY:

NAME(S): **STAN**, ROCKLAND (L.1493)

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 30 N
LONGITUDE: 118 35 40 W
ELEVATION: 1100 Metres

NORTHING: 5442576
EASTING: 383673

LOCATION ACCURACY: Within 500M

COMMENTS: CENTRE OF CROWN GRANT FROM 1:50,000 MAP

COMMODITIES: Copper

Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Chalcocite Molybdenite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Skarn

TYPE: K01 Cu skarn
 K03 Fe skarn

K04 Au skarn
K05 W skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Paleozoic

GROUP

Anarchist

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone
 Chert
 Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

GREENSTONE, QUARTZITE, ARGILLITE AND ALTERED SEDIMENTARY ROCKS OF THE PERMIAN ANARCHIST FM ARE CUT BY GRANITIC ROCKS OF THE NELSON BATHOLITH. MINOR BASIC DYKES ARE PRESENT ALONG FRACTURES AND SHEAR ZONES WHICH CUT THE GRANITIC ROCKS. MAGNETITE, HEMATITE, PYRITE, CHALCOPYRITE, BORNITE, CHALCOCITE AND MOLYBDENITE OCCUR IN LIME SILICATE SKARN.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1901-1230; 1966-195; 1967-234; 1968-273
EMPR ASS RPT 768, 889, 1162, 1816, 2113, 13030
EMPR GEM 1970-428, 1971-375, 1972-36
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE133**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOP**, LEE, BAR

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 54 N
LONGITUDE: 118 53 10 W
ELEVATION: 1300 Metres

NORTHING: 5441953
EASTING: 362366

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

Molybdenum

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Shear

CLASSIFICATION: Igneous-contact Replacement

TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Paleozoic

GROUP

Anarchist

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

UNDERLAIN BY ANDESITES AND GREENSTONE TUFFS OF THE ANARCHIST GP IN CONTACT WITH A MAJOR PORPHYRY OF THE CORYELL INTRUSIVES . COPPER AND MOLYBDENUM ANOMALIES ASSOCIATED WITH THE CONTACT.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT 2948
EMPR GEM 1970-412, 1971-382
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE134**

NATIONAL MINERAL INVENTORY:

NAME(S): **POPPY**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 24 N
LONGITUDE: 118 46 10 W
ELEVATION: 1500 Metres

NORTHING: 5442674
EASTING: 370901

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Chalcocite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Hydrothermal
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Sharpstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

SHARPSTONE CONGLOMERATE WITH ASSOCIATED ARGILLITE, IS OVERLAIN CONFORMABLY BY LIMESTONE. PYROXENE-GARNET-FLUORITE BEARING SKARN HAS DEVELOPED. QUARTZ DIORITE, ANDESITIC AND TRACHYANDESITIC FLOWS, AND PULASKITE OUTCROP ALSO. CHALCOPYRITE, BORNITE, AND CHALCOCITE OCCUR IN A FRACTURE ZONE IN NON-REPLACED LIMESTONE.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1967-213
EMPR ASS RPT 1082, 2253, 2453, 5842, 6017, 6378, 6394, 6436, 8497, 8823
EMPR EXPL 1977-E18, 1978-E20
EMPR GEM 1970-429
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE135**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELKHORN FR. (L.297S)**, ELKHORN FRACTION

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 30 N
LONGITUDE: 118 40 10 W
ELEVATION: 833 Metres

NORTHING: 5440841
EASTING: 378160

LOCATION ACCURACY: Within 500M

COMMENTS: The Elkhorn Fr. (Lot 297S) is located north of Greenwood, between the Elkhorn (082ESE002) to the west and Providence (082ESE001) to the east.

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Argentite Gold Silver
ASSOCIATED: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Fissure filling.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	Greenwood Pluton
Jurassic-Cretaceous			

LITHOLOGY: Chert
Schist
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Elkhorn Fr. (Lot 297S) is located north of Greenwood, between the Elkhorn (082ESE002) to the west and Providence (082ESE001) to the east.

Production from 1925 to 1927 amounted to 44 tonnes of ore, yielding 249 grams of gold, 241.8 kilograms of silver, 2.3 tonnes of lead, and 5.3 tonnes of zinc.

A 5 to 40-centimetre wide quartz vein is hosted by silicified Knob Hill schists (Paleozoic) outcropping near the north contact of the Greenwood granodiorite stock (Cretaceous). The ore minerals consist of pyrite, galena, sphalerite, argentite, native silver and native gold. The vein is likely an extension of the Providence vein.

BIBLIOGRAPHY

EMPR AR 1914-167; 1925-197; *1926-213; 1927-237
EMPR ASS RPT 12815
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
EMPR BC METAL MM00847
EMPR INDEX 3-195
GSC OF 481; 637; 1969
GSC P 45-20; 67-42; 79-29
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE136**

NATIONAL MINERAL INVENTORY:

NAME(S): **VAN, BURR**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 30 N
LONGITUDE: 118 22 34 W
ELEVATION: 1000 Metres

NORTHING: 5483024
EASTING: 400344

LOCATION ACCURACY: Within 500M

COMMENTS: COMMON CLAIM POST OF VAN 1-4 M.C.'S, CENTRE OF MINERALIZED A

COMMODITIES: Zinc

Copper

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Pyrite
MINERALIZATION AGE: Cretaceous

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Jurassic

Nelson Intrusions

LITHOLOGY: Granite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

PYRITE, SPHALERITE, AND CHALCOPYRITE ARE PRESENT IN A HIGHLY FRACTURED ZONE IN PORPHYRITIC GRANITE OF THE NELSON INTRUSIVE ROCKS NEAR THE CONTACT WITH GRANODIORITE OF THE VALHALLA INTRUSIVE ROCKS. THE HOST ROCK IS MODERATELY TO INTENSELY ALTERED AND IS IN PARTS HEAVILY SERICITIZED.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT 3124, 5514
EMPR EXPL IN B.C. 1975-E24
EMPR GEM 1971-398
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE137**

NATIONAL MINERAL INVENTORY:

NAME(S): **PBE 71 AND 73**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 18 N
LONGITUDE: 118 27 22 W
ELEVATION: 600 Metres

NORTHING: 5440149
EASTING: 393722

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite Pyrite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K05 W skarn

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Nelson Intrusions

LITHOLOGY: Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

FINELY DISSEMINATED MOLYBDENITE AND PYRITE OCCUR
IN LIMEY SKARN NEXT TO A SYENITE LIMESTONE
CONTACT. MOLYBDENUM, 0.037 PERCENT.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT 3172
EMPR GEM 1970-432, 1971-374
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE138**

NATIONAL MINERAL INVENTORY:

NAME(S): **PBE 68**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 54 N
LONGITUDE: 118 26 58 W
ELEVATION: 667 Metres

NORTHING: 5439399
EASTING: 394194

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Molybdenum Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Sphalerite Pyrite
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn
TYPE: K05 W skarn K01 Cu skarn
 K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Brooklyn	Unnamed/Unknown Formation	
Eocene			Coryell Intrusions

LITHOLOGY: Limestone
 Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

CAPSULE GEOLOGY

AREA IS UNDERLAIN BY LIMESTONE INTRUDED BY SYENITE. MINERAL OCCURRENCES OCCUR IN SKARN ZONES AT THE LIMESTONE-SYENITE CONTACT. PIECES OF MASSIVE PYRITE, CHALCOPYRITE, SPHALERITE AND MOLYBDENITE OCCUR IN A SURFACE DUMP. SKARN WITH DISSEMINATED CHALCOPYRITE AND MOLYBDENITE.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT 3172, 6695, 7235
EMPR EXPL 1978-E15, 1979-14
EMPR GEM 1970-432, 1971-374
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE139**

NATIONAL MINERAL INVENTORY:

NAME(S): **PBE 66**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 30 N
LONGITUDE: 118 26 58 W
ELEVATION: 600 Metres

NORTHING: 5438658
EASTING: 394180

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite Pyrite Chalcopyrite
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn
TYPE: K07 Mo skarn K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic Eocene	Brooklyn	Unnamed/Unknown Formation	Coryell Intrusions

LITHOLOGY: Limestone
Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

AREA IS UNDERLAIN BY LIMESTONE INTRUDED BY SYENITE. MINERALIZATION OCCURS IN SKARN ZONES AT THE LIMESTONE-SYENITE CONTACT. MOLYBDENUM SHOWING.

BIBLIOGRAPHY

EMPR GEM 1970-432, 1971-374
EMPR EXPL 1978-E15
EMPR ASS RPT 3172, 6695, 7235
EMPR EXPL 1979-14

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE140**

NATIONAL MINERAL INVENTORY:

NAME(S): **PBE 64**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 24 N
LONGITUDE: 118 27 04 W
ELEVATION: 600 Metres

NORTHING: 5438475
EASTING: 394055

LOCATION ACCURACY: Within 500M
COMMENTS: TRENCH SHOWING?

COMMODITIES: Molybdenum Iron

MINERALS

SIGNIFICANT: Magnetite Molybdenite Pyrite Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn Industrial Min.
TYPE: K05 W skarn K01 Cu skarn
K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Brooklyn	Unnamed/Unknown Formation	
Eocene			Coryell Intrusions

LITHOLOGY: Limestone
Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

HEAVY MAGNETITE AND SULPHIDES OCCUR AT A LIMESTONE
-SYENITE CONTACT IN A SKARN ZONE.

BIBLIOGRAPHY

EMPR GEM 1970-432, 1971-374
EMPR EXPL 1978-E15
EMPR ASS RPT 3172, 6695, 7235
EMPR EXPL 1979-14

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE141**

NATIONAL MINERAL INVENTORY:

NAME(S): **PBE 31 AND 32**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 24 N
LONGITUDE: 118 26 04 W
ELEVATION: 1000 Metres

NORTHING: 5434746
EASTING: 395202

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic
Eocene

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Coryell Intrusions

LITHOLOGY: Limestone
Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

AREA IS UNDERLAIN BY LIMESTONE INTRUDED BY SYENITE. MINERALIZATION OCCURS IN THE SKARN ZONES AT THE LIMESTONE-SYENITE CONTACT. PYRITE-CHALCO-PYRITE SHOWING.

BIBLIOGRAPHY

EMPR ASS RPT 3172,6691
EMPR GEM 1970-432, 1971-374
EMPR EXPL IN B.C. 1978-E15
EMPR GEM 1970-456
EMPR PF (BRIEF RPT)
GSC MEM 184-210-12
GSC MAP 1667

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE142**

NATIONAL MINERAL INVENTORY:

NAME(S): **SD 7, RADAR, NO. 2**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 22 N
LONGITUDE: 118 23 28 W
ELEVATION: 1880 Metres

NORTHING: 5442036
EASTING: 398502

LOCATION ACCURACY: Within 500M

COMMENTS: Showing No. 2, Map #3 (Assessment Report 3172).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT:	Uraninite	Uranophane	Autunite	Carnotite
ASSOCIATED:	Quartz	Biotite		
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Magmatic Pegmatite
TYPE: O02 Rare element pegmatite - NYF family

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic			Grand Forks Gneiss
Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Pegmatite
Biotite Gneiss
Biotite Schist
Amphibole Schist
Pyroxene Schist
Quartz Monzonite
Diorite
Amphibolite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1978
SAMPLE TYPE:	Drill Core		
COMMODITY	Uranium	GRADE	0.0330 Per cent

COMMENTS: Sample over 2.7 metres.
REFERENCE: Assessment Report 7621.

CAPSULE GEOLOGY

The area is underlain by the Upper Proterozoic Grand Forks Gneiss, a raised fault block of high grade metamorphic rocks which are part of the Shushwap Metamorphic Complex. The rocks consist of biotite, amphibole, and pyroxene schists and gneisses, interlayered with pegmatite and leucogranite, with minor quartzites and calcareous rocks. These rocks are cut by north trending quartz monzonite stocks and dykes and small stocks of biotite-hornblende diorite and quartz diorite with minor amphibolite and pyroxenite. Regional foliation of the gneisses strikes northwest and dips 20 to 50 degrees southwest. Principal host rocks for the uranium mineralization are quartz-rich pegmatites, which are interlayered with the biotite gneisses and schists. Uraninite is associated with biotite clots in the pegmatite and uranophane and autunite occur along fractures and joints in the pegmatite and biotite gneiss. Distribution of the uranium is erratic within the pegmatites, which seldom exceed 2.0 metres in thickness. The radioactive area measures about 40 by 40 metres. A grab sample assayed 0.44 per cent uranium (Assessment Report 3172) and a drill hole intersected 0.04 per cent uranium over 4.5 metres (Assessment Report 7621).

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 613
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *3172, *5585, 5964, 6449, 6536, *7621
EMPR EXPL 1975-11; 1976-18; 1977-12,13
EMPR GEM *1970-432,433; 1971-374
EMPR OF 1990-32, p. 21
CIM BULL Aug. 1980, p. 100
GSC MAP 6-1957
GSC OF 551; 1969
GSC P 69-22

DATE CODED: 1985/07/24
DATE REVISED: 1987/03/05

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE143**

NATIONAL MINERAL INVENTORY:

NAME(S): **SD 18 AND 20**, RADAR 4, NO. 1

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 06 N
LONGITUDE: 118 23 52 W
ELEVATION: 1160 Metres

NORTHING: 5441551
EASTING: 398007

LOCATION ACCURACY: Within 500M

COMMENTS: Showing No. 1, Map #3 (Assessment Report 3172).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Uraninite Uranophane Autunite Carnotite
ASSOCIATED: Quartz Biotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Magmatic Pegmatite
TYPE: O02 Rare element pegmatite - NYF family

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic			Grand Forks Gneiss
Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Pegmatite
Biotite Gneiss
Biotite Schist
Quartz Monzonite
Diorite
Amphibolite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1978
SAMPLE TYPE: Drill Core
COMMODITY: Uranium GRADE: 0.0250 Per cent
COMMENTS: Sample over 4.6 metres.
REFERENCE: Assessment Report 7621.

CAPSULE GEOLOGY

The area is underlain by the Upper Proterozoic Grand Forks Gneiss, a raised fault block of high grade metamorphic rocks which are part of the Shuswap Metamorphic Complex. The rocks consist of biotite, amphibole, and pyroxene schists and gneisses, interlayered with pegmatites and leucogranite, with minor quartzites and calcareous rocks. These rocks are cut by north trending quartz monzonite dykes and stocks and dykes and small stocks of biotite-hornblende diorite and quartz diorite with minor amphibolite and pyroxenite. Regional foliation of the gneisses strikes northwest and dips 20 to 50 degrees southwest.

Principal host rocks for the uranium mineralization are quartz-rich pegmatites which are interlayered with the biotite gneisses and schists. Uraninite is associated with biotite clots in the pegmatite and uranophane and autunite occur along fractures and joints in the pegmatite and biotite gneiss. Distribution of the uranium is erratic within the pegmatites, which seldom exceed 2.0 metres in thickness. A grab sample assayed 0.27 per cent uranium (Assessment Report 3172) and a drillhole intersected 0.025 per cent uranium over 4.6 metres (Assessment Report 7621). Uraninite is associated with biotite-rich pegmatites within biotite schists and gneisses.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 615
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *3172, *5585, 5964, 6449, 6536, *7621
EMPR EXPL 1975-11; 1976-18; 1977-12-13
EMPR GEM 1970-432, 433; 1971-374
EMPR OF 1990-32, p. 21
CIM BULL Aug. 1980, p. 100
GSC MAP 6-1957
GSC OF 551; 1969
GSC P 69-22

DATE CODED: 1985/07/24
DATE REVISED: 1987/03/05

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE144**

NATIONAL MINERAL INVENTORY:

NAME(S): **SD 37**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 30 N
LONGITUDE: 118 23 09 W
ELEVATION: 1040 Metres

NORTHING: 5440424
EASTING: 398858

LOCATION ACCURACY: Within 500M

COMMENTS: Showing #4, Map #3 (Assessment Report 3172).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Uraninite
ASSOCIATED: Quartz Biotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Magmatic Pegmatite
TYPE: O02 Rare element pegmatite - NYF family

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic			Grand Forks Gneiss
Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Pegmatite
Biotite Gneiss
Biotite Schist
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP:

GRADE: Amphibolite

CAPSULE GEOLOGY

The area is underlain by the Upper Proterozoic Grand Forks Gneiss, a raised fault block of high grade metamorphic rocks which are part of the Shuswap Metamorphic Complex. The rocks consist of biotite, amphibole, and pyroxene schists and gneisses, interlayered with pegmatites and leucogranite, with minor quartzites and calcareous rocks. These rocks are cut by north trending quartz monzonite dykes and stocks and dykes and small stocks of biotite-hornblende diorite and quartz diorite with minor amphibolite and pyroxenite. Regional foliation of the gneisses strikes northwest and dips 20 to 50 degrees southwest.

Principal host rocks for the uranium mineralization are quartz-rich pegmatites which are interlayered with the biotite gneisses and schists. Uraninite is associated with biotite clots in the pegmatite. Radioactivity of small pegmatite lenses measured 1500 counts per second on a SRAT SPP2 scintillometre (background is 80-100 counts per second) (Assessment Report 5585).

BIBLIOGRAPHY

EMPR ASS RPT *3172, 5585, 5964, 6392, 6536
EMPR EXPL 1975-11; 1976-18; 1977-12,13
EMPR GEM 1971-374
EMPR OF 1990-32, p. 21
CIM BULL Aug. 1980, p. 100
GSC MAP 6-1957
GSC OF 551; 1969
GSC P 69-22

DATE CODED: 1985/07/24
DATE REVISED: 1987/03/05

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE145**

NATIONAL MINERAL INVENTORY:

NAME(S): **SD 41**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 55 N
LONGITUDE: 118 23 04 W
ELEVATION: 1050 Metres

NORTHING: 5439341
EASTING: 398940

LOCATION ACCURACY: Within 500M

COMMENTS: Showing #5, Map #3 (Assessment Report 3172).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Uraninite
ASSOCIATED: Quartz Biotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Magmatic Pegmatite
TYPE: O02 Rare element pegmatite - NYF family

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic			Grand Forks Gneiss
Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Pegmatite
Biotite Gneiss
Biotite Schist
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

The area is underlain by the Upper Proterozoic Grand Forks Gneiss, a raised fault block of high grade metamorphic rocks which are part of the Shuswap Metamorphic Complex. The rocks consist of biotite, amphibole, and pyroxene schists and gneisses, interlayered with pegmatites and leucogranite, with minor quartzites and calcareous rocks. These rocks are cut by north trending quartz monzonite dykes and stocks and dykes and small stocks of biotite-hornblende diorite and quartz diorite with minor amphibolite and pyroxenite. Regional foliation of the gneisses strikes northwest and dips 20 to 50 degrees southwest.

Principal host rocks for the uranium mineralization are quartz-rich pegmatites which are interlayered with the biotite gneisses and schists. Uraninite is associated with biotite clots in the pegmatite.

BIBLIOGRAPHY

EMPR ASS RPT *3172, 5585, 5964, 6392, 6535, 6536
EMPR GEM 1971-374
EMPR EXPL 1975-11; 1976-18; 1977-12,13
EMPR OF 1990-32, p. 21
CIM BULL Aug. 1980, p. 100
GSC MAP 6-1957
GSC OF 551; 1969
GSC P 69-22

DATE CODED: 1985/07/24
DATE REVISED: 1987/03/05

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE146**

NATIONAL MINERAL INVENTORY:

NAME(S): **IKE 22**, SEATTLE?

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 08 42 N
LONGITUDE: 118 29 10 W
ELEVATION: 1000 Metres

NORTHING: 5444638
EASTING: 391620

LOCATION ACCURACY: Within 500M
COMMENTS: SHAFT

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Upper Paleozoic GROUP: Anarchist FORMATION: Unnamed/Unknown Formation IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Metasedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

E-W STRIKING FAULT CUTS NE-TRENDING LIMEY TUFF. PYRITE AND CHALCOPYRITE OCCURS WEAKLY ALONG THE FAULT IN SKARN ZONES. MAGNETITE OCCURS ERRATICALLY ALONG THE FAULT, AND ALONG THE WALLS OF SMALL BIOTITE PORPHYRY INTRUSIONS.

BIBLIOGRAPHY

EMPR ASS RPT 3159, 3780, 4424
EMPR GEM 1972-34; 1973-36
GCNL NO 80,1970

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE147**

NATIONAL MINERAL INVENTORY: 082E2 Cu16

NAME(S): **SAPPHO (L.2039)**, CABIN, PT

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 22 N
LONGITUDE: 118 42 22 W
ELEVATION: 1040 Metres

NORTHING: 5429537
EASTING: 375229

LOCATION ACCURACY: Within 500M

COMMENTS: The Sappho claim (Lot 2029), is centred 9.6 kilometres south of Greenwood and 0.6 kilometre north of the International Boundary. Access to the property is 2.7 kilometres on a winding dirt road southeast of the Norwegian Creek road. Location of adit portal from Figure 20, EMPR Paper 1986-2, page 57.

COMMODITIES: Copper Silver Platinum Gold Palladium

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Platinum
ASSOCIATED: Epidote Chlorite Garnet Magnetite

MINERALIZATION AGE: Tertiary
ISOTOPIC AGE: 156 +/- 3 Ma

DATING METHOD: Argon/Argon

MATERIAL DATED: Hornblende

DEPOSIT

CHARACTER: Disseminated Shear
CLASSIFICATION: Magmatic
TYPE: H08 Alkalic intrusion-associated Au

K01 Cu skarn

COMMENTS: The Jurassic date is similar to other adjacent alkalic complexes.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Attwood	Unnamed/Unknown Formation	
Eocene			Coryell Intrusions
Jurassic			Lexington Intrusion

LITHOLOGY: Shonkinite
Monzonite
Amphibolite
Microdiorite
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: BULLSEYE

REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 2002
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Platinum	2.0180 Grams per tonne
Palladium	0.9380 Grams per tonne
Gold	2.2630 Grams per tonne
Copper	25.6000 Per cent
Silver	254.0000 Grams per tonne

COMMENTS: Grab samples of well mineralized specimens.
REFERENCE: GeoFile 2002-2.

CAPSULE GEOLOGY

The Sappho claim (Lot 2039), at 1040 metres elevation, is centred 9.6 kilometres south of Greenwood and 0.6 kilometre north of the International Boundary. Access to the property is 2.7 kilometres on a winding dirt road southeast of the Norwegian Creek road.

Production from this property was recorded from 1916 to 1918. This amounted to 102 tonnes of ore containing 6,127 grams per tonne of silver and 6.2 tonnes of copper.

The old workings consist of a cluster of pits and shafts in the central part of the claim. C.E. Johnson and others made ore shipments from these workings between 1916 and 1918. In 1927, A. Bravard and associates drove a short adit south to intersect the

CAPSULE GEOLOGY

same mineralization at depth. A grab sample of ore taken from one of the pits assayed 3.2 per cent copper and 0.9 gram per tonne platinum (Annual Report 1927, page 235). In 1964, Triform Mining Ltd. held the property as the Cabin Group and conducted a geophysical survey, trenching and diamond drilling. In 1967, Silver Standard Mines Limited conducted geological mapping, a magnetometer survey and trenching. G.O.M. Stewart trenched in 1975 and 1978. In 1981, Kettle River Resources Ltd. conducted geological mapping, trenching and sampling. Noranda Exploration Company, Limited carried out geological and geochemical surveys in 1984 and 1985.

The principal rock types underlying the claim are a microdiorite intrusion (Jurassic?), exposed in the central area and southeast corner of the claim, and younger crosscutting Eocene Coryell syenomonzonite-shonkinite intrusions. Greenstones, of uncertain age, hosting these intrusions are well exposed near the east boundary of the claim and in the south central area.

Mineralization consists mostly of pyrite and chalcopyrite disseminations in shears and blebs and pods of the same minerals in biotite shonkinite and pegmatoid phases of the Coryell intrusion. Sulphides are also found locally in skarns of epidote, chlorite, garnet and magnetite near intrusive contacts.

The Jurassic date on material said to host the Sappho deposit is in contrast to the traditional Eocene Coryell assignment. There are indications that later event have disturbed the age around 100 Ma.

The Cu-Ag-PGE mineralization occurs in shallow dipping massive to semi massive veins, blebs and pods of chalcopyrite-pyrite-magnetite ore and as disseminations in pyroxenite and syenite dykes. Thin leucocratic melanite bearing syenite veins are found locally at the margins of the sulphide oxide assemblages.

The deposit is typed as an Alkalic intrusion-associated gold-silver deposit. The mineralizers are believed to represent immiscible fluids evolved in oxidized, CO₂-rich alkaline magma chambers.

There are no ore reserve estimates for this property.

BIBLIOGRAPHY

EM GEOFILE 2000-5, 2002-2
EMPR AR 1916-518; 1917-449; 1918-211; *1927-234-235; 1928-250;
*1964-110; 1967-226
EMPR ASS RPT 3335, 9364, 12924, *13913
EMPR BC METAL MM00923
EMPR FIELDWORK *1982, pp. 27-32; 2001, pp. 389-396, pp. 171-176
EMPR GEM 1975-E13
EMPR INDEX 3-212
EMPR OF 2002-07
EMPR PF (Stewart, G.O.M. (1976): Sketch map and letter on Cabin Group; Rock sample location map, 1981; Magnetic survey maps, 1982)
EMPR P *1986-2, pp. 53-54, 57
EMR MP CORPFILE (Kettle River Resources Limited)
GSC SUM RPT 1918, Pt. G., p. 8
WWW <http://www.infomine.com/index/properties/SAPPHO.html>

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE148**

NATIONAL MINERAL INVENTORY:

NAME(S): **BAT**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 54 N
LONGITUDE: 118 38 16 W
ELEVATION: 1267 Metres

NORTHING: 5430415
EASTING: 380247

LOCATION ACCURACY: Within 1 KM
COMMENTS: CENTRE OF CLAIMS

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Galena Chalcopyrite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP
Upper Paleozoic Anarchist

FORMATION
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Schistose Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

GALENA, PYRITE, AND PYRRHOTITE OCCUR IN AND AROUND QUARTZ VEINS IN PHYLLITIC SCHISTS SURROUNDED BY GRANITE. DISSEMINATED COPPER IS PRESENT IN ALTERED GRANITE.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT 3563
EMPR GEM 1971-380
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE149**

NATIONAL MINERAL INVENTORY: 082E2 Au6

NAME(S): **MABEL (L.609)**, CORNICOPIA (L.608), KING MIDAS,
WHITE'S CAMP, CENTRAL CAMP, MO

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 01 18 N
LONGITUDE: 118 37 44 W
ELEVATION: 1500 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5431143
EASTING: 380913

LOCATION ACCURACY: Within 500M

COMMENTS: The Mabel property is located at the head of Gidon Creek, a tributary of McCarren Creek, 8 kilometres south-southeast of Greenwood.

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive
CLASSIFICATION: Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Carboniferous	Anarchist	Unnamed/Unknown Formation	

LITHOLOGY: Siliceous Argillite
Serpentinized Schist
Quartz Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The property is located at the head of Gidon Creek, a tributary of McCarren Creek, 8 kilometres south-southeast of Greenwood.

The initial work in the Mabel area consists of a number of shallow shafts and trenches opened about 1892 on small pyritiferous quartz veins and zones of pyrrhotite-bearing siliceous argillites. The Mabel (Lot 609) and Cornicopia (Lot 608) claims were Crown granted to J. Douglas in 1894. There is no further record of development until 1937 when Crown-grants centred about the old Mabel claim were owned or controlled by G.H. Worthington and associates. An inclined 30-metre deep shaft was sunk at that time.

King Midas Mines Ltd., in 1962, consolidated many of the old Crown grants and carried out a reconnaissance geochemical survey. An adit was driven approximately 120 metres to an area below the old workings. Apparently no significant mineralization was intersected in this operation.

Lexington Mines Ltd. in 1968 acquired the Mabel and adjacent Crown grants. Work done during the period 1969 to 1971 inclusive, included detailed geological mapping, soil and silts geochemical surveys, and magnetometer and induced potential surveys.

Aalenian Resources Ltd. in January 1974 optioned a 75 per cent interest in 23 Crown granted claims and leases and 53 located claims.

The McCarren Creek, Goosmus Creek area is underlain by a southeasterly striking 1.5-kilometre-wide belt of Paleozoic gneiss and schist bounded both north and south by zones of Paleozoic or early Mesozoic metavolcanic and metasedimentary beds. These rocks are cut by a wide variety of igneous intrusions, including porphyritic quartz feldspar stock and a few serpentinite and gabbro bodies. Also, dykes and irregular-shaped microdiorite intrusions are found throughout the area cutting many of the units. The youngest rocks are pulaskite and basalt

CAPSULE GEOLOGY

dykes and a small outlier of Tertiary conglomerate. The oldest intrusion is an elongated serpentinite body that extends northwest from south of the International Boundary to McCarren Creek, a distance of 7 kilometres.

The so-called Mabel veins are located between the City of Paris and the No.7 mines. The veins consist of a series of small auriferous quartz stringers which were actively prospected in 1897 and again in 1937. The only production from the area was in 1937 when an inclined shaft was sunk on a narrow zone of silicified schist that yielded 106 tonnes of ore with low gold, silver and copper values.

A detailed examination of the Mabel area shows that some of the silicified zones and quartz stringers are related to broader replacement-type sulphide deposits associated with large Tertiary microdiorite dykes. The replacements occur as thin pyrite-pyrrhotite layers in laminar-bedded siliceous argillites or ill-defined zones of more massive sulphides. Analysis of a pyrrhotite-rich composite sample from a 3 metre wide replacement lense, exposed on the main road south of the Mabel portal shows 15.04 per cent iron, 0.05 per cent copper, and only a trace of gold and silver.

In 1937, 106 tonnes of ore were shipped from this property. From this ore 435 grams per tonne of gold, 1244 grams per tonne of silver and 24.5 kilograms of copper were recovered.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1892-544; 1894-757; 1896-563; 1897-584; 1935-D5; 1937-D22;
1962-69, 1969-308; 1970-413; 1971-376; 1972-35
EMPR ASS RPT 1775, 3563
EMPR GEM 1975-E13
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE150**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAKESIDE FR. (L.1023)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 02 N
LONGITUDE: 118 36 55 W

NORTHING: 5447301
EASTING: 382253

ELEVATION: 1155 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: A tunnel 137 metres east from the lower eastern shore of Jewel Lake, 9.5 kilometres north-northeast from the town of Greenwood (Minister of Mines, Annual Report 1933-A159).

COMMODITIES: Silver

Gold

Lead

Copper

MINERALS

SIGNIFICANT: Pyrite Galena Chalcopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic Discordant

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: Metres

STRIKE/DIP: 070/68S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Carboniferous
Jurassic-Cretaceous
Tertiary

GROUP

Knob Hill

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions
Unnamed/Unknown Informal

LITHOLOGY: Granodiorite
Schistose Meta Basalt
Quartz Wacke
Lithic Wacke
Granodiorite Dike
Pulaskite Dike
Lamprophyre Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Okanagan Highland

GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1941

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

281.1000

Grams per tonne

Gold

41.8000

Grams per tonne

COMMENTS: Sample from a pile of sorted material.

REFERENCE: Property File (Hedley, M.S. 1941: Geology of the Jewel Lake Camp).

CAPSULE GEOLOGY

The Jewel Lake area is underlain by a complex of metamorphic rocks mostly of sedimentary and volcanic origin correlative with the Carboniferous or older Knob Hill Group, and a large granodiorite intrusion correlative to the Juro-Cretaceous Nelson Plutonic Rocks. Small dykes and sill-like bodies, feeders to nearby Tertiary lavas, pervade these units. Four north striking and one northwest striking quartz fissure-vein structures are known in the Jewel Lake camp, all of which have received some development.

Locally the northwest striking and steeply northeast dipping metamorphosed volcanic and sedimentary rocks are not always distinguishable, both being fine-grained and medium or dark coloured with primary structures such as bedding and flow banding being confused with foliation or gneissosity. Generally the sedimentary rocks are brittle and quartz rich, however compositions vary and some biotitic varieties have the same competence as the amphibole-rich volcanic

CAPSULE GEOLOGY

rocks. These rocks are locally called quartzites but few are true quartzites and more appropriate terms would be quartz wacke or lithic wacke. The massive character of the volcanic rocks is due to a combination of intense regional metamorphism and primary structures. Field and petrographic data indicate that at least some of the original rock formed as a result of massive accumulations of lava flows and pillow lava. Crosscutting feeder dykes and sills are significant and contribute to the massive aspect of the volcanic rocks. The metamorphosed schistose volcanic rocks are compositionally basalts. These metasedimentary and metavolcanic rocks form part of the Carboniferous (Pennsylvanian-Mississippian) or older Anarchist Group.

Igneous intrusions include a large Lower Cretaceous granodiorite pluton and a host of younger Lower Tertiary pulaskite and lamprophyre dykes. The granodiorite returned a K-Ar age date of 128 plus or minus 5 million years. The granodiorite is a homogeneous medium-grained grey body which intrudes the metavolcanic rocks along a northwest trending contact in the southwest part of the camp. Alteration is minor with some replacement of amphibole by epidote. The intrusive has produced little effect in both the metavolcanic and metasedimentary rocks. Granodiorite dykes occur and are compositionally similar to the main granodiorite body and are probably offshoots from it. Pulaskite dykes are numerically most important. Several types are evident including both quartz-bearing and undersaturated types.

On the Lakeside claim (L.1023), 381 metres northwest of the Dentonia vein structure (Minfile 082ESE055), a quartz vein occurs in a shear zone 0.7 to 1.2 metres wide. The vein ranges in width from 20 to 91 centimetres but averages 25 to 30 centimetres and is mineralized with pyrite and small amounts of galena and sphalerite. The vein attitude varies from 035 to 070 degrees and dips 68 degrees south.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1898-1124; 1899-604,849; 1933-A159; 1939-A36; 1940-A24,A63;
1941-A25
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (082ESE150; *082ESE055, Hedley, M.S. (1941): Geology of the
Jewel Lake Camp (Eastern Part) and of the Dentonia Mine, Boundary
District, 40 pp.)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/14

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE151**

NATIONAL MINERAL INVENTORY:

NAME(S): **ETHIOPIA (L.932)**, DENTONIA

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 13 N
LONGITUDE: 118 36 32 W
ELEVATION: 1249 Metres

NORTHING: 5447631
EASTING: 382726

LOCATION ACCURACY: Within 500M

COMMENTS: Portal 300 metres east from the mid-eastern shore of Jewel Lake, 10 kilometres north-northeast from the town of Greenwood (Geology, Exploration and Mining 1974, page 40).

COMMODITIES: Silver

Gold

Lead

Copper

MINERALS

SIGNIFICANT: Pyrite Galena Chalcopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

ISOTOPIC AGE: 125 +/- 5 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Granodiorite

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal

Discordant
Hydrothermal

Disseminated
Epigenetic

TYPE: I01 Au-quartz veins

I05

Polymetallic veins Ag-Pb-Zn±Au

H08 Alkalic intrusion-associated Au

COMMENTS: Age date by W.H. Mathews (1964), Geochron Laboratories Ltd., K40/K constant = 1.22 x 10⁽⁻⁴⁾/g.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Paleozoic

Jurassic-Cretaceous

ISOTOPIC AGE: 128 +/- 5 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Bio Hornblende Granodiorite

Tertiary

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Wallace Creek Batholith

Coryell Intrusions

LITHOLOGY: Granodiorite
Greenstone
Pelitic Schist
Chert
Schistose Meta Basalt
Quartz Wacke
Lithic Wacke
Pulaskite
Lamprophyre

HOSTROCK COMMENTS: Age date by B.N. Church, 1986.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Slide Mountain

METAMORPHIC TYPE: Regional

Plutonic Rocks

RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Okanagan Highland

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1941

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

61.7000

Grams per tonne

Gold

6.8000

Grams per tonne

REFERENCE: Property File (Hedley, M.S., (1941): Geology-Jewel Lake Camp.

CAPSULE GEOLOGY

The Jewel Lake area is underlain by greenstones, pelitic schists and chert of the Upper Paleozoic Knob Hill Group; these are intruded by a large granodiorite intrusion (Wallace Creek pluton) correlative to the Juro-Cretaceous Nelson Plutonic Rocks. Small dykes and sill-like bodies, feeders to nearby Tertiary lavas, pervade these units. Four north striking and one northwest striking quartz fissure-vein structures are known in the Jewel Lake Camp, all of

CAPSULE GEOLOGY

which have received some development.

The Jewel (Dentonia) quartz vein (082ESE055) is exposed over a length of approximately 1828 metres and can be traced from a point 457 metres north of the Ethiopia adit (Lot 932) and south a distance of 1371 metres to the Denero Grande workings (Lot 851). Essentially it follows a fracture zone which strikes south across the trend of the metamorphosed rocks. The fracture zone dips east to southeast at 30 to 60 degrees with variable strike, widths and amount of shearing. It has been developed on the Jewel (Lot 850), Enterprise (Lot 1022), Anchor (Lot 1021), Ethiopia (Lot 932) and most recently on the Denero Grande (Lot 851) claims.

Locally the northwest striking and steeply northeast dipping metamorphosed volcanic and sedimentary rocks are not always distinguishable, both being fine-grained and medium or dark coloured with primary structures such as bedding and flow banding being confused with foliation or gneissosity. Generally the sedimentary rocks are brittle and quartz-rich, however, compositions vary and some biotitic varieties have the same competence as the amphibole-rich volcanic rocks. These rocks are locally called quartzites but few are true quartzites and more appropriate terms would be quartz wacke or lithic wacke. The massive character of the volcanic rocks is due to a combination of intense regional metamorphism and primary structures. Field and petrographic data indicate that at least some of the original rock formed as a result of massive accumulations of lava flows and pillow lava. Crosscutting feeder dykes and sills are significant and contribute to the massive aspect of the volcanic rocks. The metamorphosed schistose volcanic rocks are compositionally basalts.

Igneous intrusions in the Jewel Lake camp include a large Lower Cretaceous granodiorite pluton and a host of younger pulaskite and lamprophyre dykes. The granodiorite is a homogeneous medium-grained grey body intruding the metavolcanic rocks along a northwest trending contact in the southwest part of the camp. Alteration is minor with some replacement of amphibole by epidote. The intrusive has produced little effect in both the metavolcanic and metasedimentary rocks. Granodiorite dykes occur and are compositionally similar to the main granodiorite body and are probably offshoots from it. Pulaskite dykes are numerically most important. Several types are evident including both quartz-bearing and undersaturated types. Post-vein lamprophyre dykes as well as the pulaskite dykes are of probable Lower Tertiary age and cut all other major geological units.

The Dentonia quartz vein ranges widely in attitude with strikes varying from 000 to 050 degrees averaging about 020 degrees and dipping between 30 and 60 degrees southeast. The age of the Dentonia vein is bracketed by the granodiorite which locally hosts the vein and by crosscutting pulaskite and lamprophyre dykes. The dykes are correlated with petrographically similar Tertiary lavas of the summit of Mount Pelly and with volcanic rocks which occur to the west near Midway, dated at 49 plus or minus 2 million years. In general, the Dentonia vein cuts granodiorite in the south, metasedimentary rocks in the north and intervening metavolcanic rocks. Vein widths vary from an average of 0.9 metres to a maximum of 4.8 metres.

On the Ethiopia claim the Dentonia quartz fissure-vein is splayed into three sections across a distance of 48 metres. The vein dip varies from 35 to 45 degrees southeast. The Ethiopia adit explores the westernmost branch and central branch of the vein structure. The westernmost branch of the vein is irregular and discontinuous with widths up to 45 centimetres locally. The central branch is a shattered zone up to 45 centimetres wide containing irregular quartz veinlets and appears to be cut off by a pulaskite dyke. In general, the quartz vein widths range from 10 to 50 centimetres up to 1.2 metres. Mineralization is erratic and sparse and consists of pyrite, galena and chalcopyrite with the wide portions of the vein containing minor pyrite only.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
- EMPR AR 1899-848; 1900-878; 1901-1056; 1902-H180; 1903-H166,H171;
1913-K147; 1921-G184,G347; 1930-A223; 1931-A125; 1933-A158,A159;
1939-A36; 1940-A24,A63
- EMPR BC METAL MM00850
- EMPR ENG INSP (Mine plans, 1939)
- EMPR GEM 1974-39,40,41
- EMPR INDEX 3-195
- EMPR MR MAP 6 (1932)
- EMPR OF 1990-25
- EMPR P 1986-2
- EMPR PF (*Hedley, M.S., (1941): Geology of the Jewel Lake Camp

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 628
REPORT: RGEN0100

BIBLIOGRAPHY

(Eastern Part) and of the Dentonia Mine, Boundary District, 40
pp. in 082ESE055)
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/15

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE152**

NATIONAL MINERAL INVENTORY: 082E2 Au3

NAME(S): **NORTH STAR (L.1165)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 04 N
LONGITUDE: 118 36 03 W
ELEVATION: 1448 Metres

NORTHING: 5447341
EASTING: 383307

LOCATION ACCURACY: Within 500M

COMMENTS: No. 1 (Upper) adit, 1.25 kilometres south-southwest from the summit of Mount Pelly, east of Jewel Lake, 10.25 kilometres north-northeast from the town of Greenwood (Minister of Mines, Annual Report 1933-A159; 1936-D24).

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Chalcopyrite Telluride

ASSOCIATED: Sylvanite

MINERALIZATION AGE: Quartz

Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H08 Alkalic intrusion-associated Au
SHAPE: Cylindrical
MODIFIER: Fractured
DIMENSION:
COMMENTS: Strike and dip are variable.

STRIKE/DIP: 030/40E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Carboniferous	Knob Hill	Undefined Formation	Unnamed/Unknown Informal
Tertiary			

LITHOLOGY: Quartz Wacke
Lithic Wacke
Lamprophyre Dike
Pulaskite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Slide Mountain

Plutonic Rocks

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold

37.7000

Grams per tonne

REFERENCE: George Cross Newsletter #172, September 8, 1987.

CAPSULE GEOLOGY

The Jewel Lake area is underlain by a complex of metamorphic rocks mostly of sedimentary and volcanic origin correlative with the Carboniferous or older Knob Hill Group, and a large granodiorite intrusion correlative to the Juro-Cretaceous Nelson Plutonic Rocks. Small dykes and sill-like bodies, feeders to nearby Tertiary lavas, pervade these units.

Locally the metamorphosed volcanic and sedimentary rocks are not always distinguishable, both being fine-grained and medium or dark coloured with primary structures such as bedding and flow banding being confused with foliation or gneissosity. Generally the sedimentary rocks are brittle and quartz-rich, however, compositions vary and some biotitic varieties have the same competence as the amphibole-rich volcanic rocks. These rocks are locally called quartzites but few are true quartzites and more appropriate terms would be quartz wacke or lithic wacke. The massive character of the volcanic rocks is due to a combination of intense regional metamorphism and primary

CAPSULE GEOLOGY

structures. Field and petrographic data indicate that at least some of the original rock formed as a result of massive accumulations of lava flows and pillow lava. Crosscutting feeder dykes and sills are significant and contribute to the massive aspect of the volcanic rocks. The metamorphosed schistose volcanic rocks are compositionally basalts. These metasedimentary and metavolcanic rocks form part of the Carboniferous (Pennsylvanian-Mississippian) or older Anarchist Group.

Igneous intrusions in the Jewel Lake camp include a large Lower Cretaceous granodiorite pluton and a host of younger pulaskite and lamprophyre dykes. The granodiorite is correlative with Nelson Plutonic Rocks. It is a homogeneous medium-grained grey body which intrudes the metavolcanic rocks along a northwest trending contact in the southwest part of the camp. The intrusive has produced little effect in both the metavolcanic and metasedimentary rocks. Granodiorite dykes occur and are compositionally similar to the main granodiorite body and are probably offshoots from it. Pulaskite dykes are numerically most important. Several types are evident including both quartz-bearing and undersaturated types. Post-vein lamprophyre dykes as well as the pulaskite dykes are of probable Lower Tertiary age and cut all other major geological units.

On the North Star claim (L.1165), the North Star quartz fissure-vein crosscuts northwest striking metasedimentary rocks comprised of quartz wackes and lithic wackes which form part of the Carboniferous (Pennsylvanian-Mississippian) or older Anarchist Group. The quartz vein strikes 030 degrees across the metasedimentary rocks and dips 40 to 60 degrees southeast. The vein is highly irregular and disjointed with widths ranging from 10 centimetres to 1.2 metres and locally to 3.4 metres. The quartz vein has a tendency to either increase or decrease in width or split at the changes in attitude of the vein. Lower Tertiary pulaskite and lamprophyre dykes cut both the metasedimentary rocks and vein and locally has shattered or displaced the vein.

Mineralization consists of pyrite, galena, sphalerite, chalcopyrite and tellurides (possibly sylvanite). Some ore shoots average 20 centimetres in width and are localized at abrupt changes in attitude of the vein and are generally not continuous.

The North Star quartz vein is the northern extension of the adjoining Gold Drop quartz vein (L.1415, 082ESE153) to the south.

Past development consists of two shafts and two adits with considerable drifting, crosscutting and stoping. In addition, numerous open cuts have traced the surface expression of the vein.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
- EMPR AR 1896-578; 1897-590; 1898-1124; 1899-765; 1901-1056;
 - *1931-A125; 1932-A130; 1933-A28,A159,A160; *1934-A25,D5,D6;
 - *1935-A25,D3-D5,G52; *1936-D23-D25; 1937-A30,A36,D32;
 - 1938-A34,D37; 1939-A37,A77
- EMPR ASS RPT 9961, 11932
- EMPR BULL 1, (1932), p. 85; 20, Part III, p. 12
- EMPR ENG INSP (Geological Plan, 1936)
- EMPR EXPL 1981-166; 1983-9
- EMPR MR MAP 6 (1932)
- EMPR OF 1990-25
- EMPR P 1986-2
- EMPR PF (*082ESE055, Hedley, M.S., (1941): Geology of the Jewel Lake Camp (Eastern Part) and Dentonia Mine, Boundary District, 40 pp.; *082ESE153; 082ESE152; Wood, D.H. (1990): Preliminary Report on Gold Drop Property for Solex Energy Inc.)
- EMPR PRELIM MAP 59
- EMR MP CORPFILE (Askalta Oil Company Ltd.; Superior Gold Mines Ltd.; Greenbridge Gold Mines Ltd.)
- GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A; 828
- GSC OF 481; 637; 1969
- GSC P 67-42; 79-29
- CANMET IR 1937, No. 785, p. 146
- GEM 1974, pp. 39-51

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/21

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE153**

NATIONAL MINERAL INVENTORY: 082E2 Au4

NAME(S): **GOLD DROP (L.1415)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 09 57 N
LONGITUDE: 118 36 04 W
ELEVATION: 1396 Metres

NORTHING: 5447125
EASTING: 383282

LOCATION ACCURACY: Within 500M

COMMENTS: Upper adit, 1.4 kilometres south-southwest from the summit of Mount Pelly, east of Jewel Lake, 10 kilometres north-northeast from the town of Greenwood (Minister of Mines, Annual Report 1933-A159; 1946-A136).

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Chalcocopyrite Telluride
Gold Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H08 Alkaline intrusion-associated Au
SHAPE: Cylindrical
MODIFIER: Fractured
DIMENSION:
COMMENTS: Strike and dip of the vein are variable.

STRIKE/DIP: 030/40E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Carboniferous	Knob Hill	Undefined Formation	Nelson Intrusions
Jurassic-Cretaceous			Unnamed/Unknown Informal
Tertiary			

LITHOLOGY: Quartz Wacke
Lithic Wacke
Meta Basalt
Granodiorite Dike
Lamprophyre Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Okanagan Highland

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1984

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	164.5000	Grams per tonne
Gold	39.4000	Grams per tonne

REFERENCE: George Cross Newsletter #189, October 1, 1984.

CAPSULE GEOLOGY

The Gold Drop mine is 8.5 kilometres north of Greenwood and about one kilometre east of the south end of Jewel Lake. Access is from the Jewel Lake road and Dentonia mine via the Jewel shaft.

Production from this claim was recorded over a period of seven years between 1926 to 1941. A total of 296 tonnes of ore was mined yielding 5 grams per tonne gold; 29 grams per tonne silver; and a minor amount of lead.

The two adits are 16 metres apart vertically, and explore the Gold Drop vein at shallow depth. The lower adit, elevation 1380 metres, driven as a crosscut, gradually changes direction from slightly west of north to almost east and reached the vein 67 metres from the portal. The vein was followed 17 metres in a

CAPSULE GEOLOGY

northerly direction, and a small part of it was stoped. The upper adit, at elevation 1400 metres, is collared about 24 metres northeast of this stope and heads northerly for about 6 metres to the vein. It then follows the vein about 21 metres slightly east of north to a point where the vein splits. The left split is followed for 24 metres and the right split for about 76 metres. The latter split trends north easterly for about 24 metres and then runs parallel to the left split. Shipments to Trail have been made by previous operators from one small stope in the left split, from several small stopes in the right split, and from the lower adit.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1897-589,590; 1899-764; 1900-991; 1902-H179; 1925-A198,A199;
1927-C237; 1928-C250; 1930-A223; *1931-A24,A125; 1932-A28,A130;
1933-A158,A159; 1938-A34; 1939-A36; 1940-A24; 1941-A24,A61;
*1946-A136
EMPR ASS RPT 9961, 11932
EMPR BULL 1, (1932), pp. 84,85; 20, Part III, p. 12
EMPR EXPL 1981-166; 1983-9
EMPR GEM 1974-42
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2, p. 35
EMPR PF (*082ESE153-Mine plans; *082ESE055, Hedley, M.S., (1941):
Geology of the Jewel Lake Camp (Eastern Port) and of the
Dentonia Mine, Boundary District, 44 pp.; Wood, D.H. (1990):
Preliminary Report on Gold Drop Property for Solex Energy Inc.)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GCNL #163(Aug.24), 1992

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE154**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOREEN (L.1709)**, MAUREEN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 12 N
LONGITUDE: 118 42 16 W
ELEVATION: 1267 Metres

NORTHING: 5438489
EASTING: 375552

LOCATION ACCURACY: Within 1 KM

COMMENTS: SHAFT AND ASSAY #101; ASS. RPT. 4125

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE: Upper Paleozoic
GROUP: Knob Hill

FORMATION: Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Microdiorite
Andesite
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Pyrite, chalcopyrite and molybdenite occur as disseminations in the Buckhorn microdiorite stock which intrudes andesite and chert of the Knob Hill formation.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT 4125, 881, 5023
EMPR GEM 1974-34
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (Salamat Mines Ltd. (circa 1956): Property Plan, in 082ESE050)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE155**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOST**, GOLD BUG (L.895)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 47 N
LONGITUDE: 118 44 19 W
ELEVATION: 1110 Metres

NORTHING: 5441479
EASTING: 373124

LOCATION ACCURACY: Within 500M

COMMENTS: Location of this showing as described in Assessment Report 4234, lies between Deadwood and Motherlode creeks. On the Gold Bug, 1 kilometre to the east, an adit symbol is shown on the map in the report.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Malachite Celadonite
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	

LITHOLOGY: Andesite Lava
Andesite
Sharpstone Conglomerate
Chert
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Location of this showing as described in Assessment Report 4234, lies between Deadwood and Motherlode creeks. On the Gold Bug, 1 kilometre to the east, an adit symbol is shown on the map in the report.

The area is covered by Eocene andesite and trachy-andesite (Marron Formation, Penticton Group) which overlie Paleozoic sediments (Knob Hill Group), which are exposed east of a north-trending fault. The sediments consist of sharpstone conglomerate, chert and green argillites. Scattered malachite occurs in the andesite.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
- EMPR AR 1898-1195
- EMPR ASS RPT 3482, 4234
- EMPR GEM 1972-37
- EMPR MR MAP 6 (1932)
- EMPR OF 1990-25
- EMPR P 1986-2
- EMPR PF (Salamat Mines Ltd. (circa 1956): Diamond Drill Hole Plan, in 082ESE050; Property and Geology plan (circa 1956) in 082ESE052)
- EMPR PRELIM MAP 59
- GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
- GSC OF 481; 637; 1969
- GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE156**

NATIONAL MINERAL INVENTORY:

NAME(S): **IKE 14**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 08 06 N
LONGITUDE: 118 28 04 W
ELEVATION: 833 Metres

NORTHING: 5443500
EASTING: 392935

LOCATION ACCURACY: Within 500M
COMMENTS: I.P. ANOMALY "A", ASS. RPT. 4424?

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Brooklyn	Unnamed/Unknown Formation	

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

THE W AND N CLAIMS ARE UNDERLAIN BY MASSIVE AND BEDDED LIMESTONES; AND THE CENTRAL, S, AND EAST CLAIMS BY GRITTY LIMESTONES CARRYING SOME SKARN FRACTIONS NEAR DIORITE. THE SKARN CONTAINS DISSEMINATIONS OF PYRITE AND CHALCOPYRITE WITH ASSOCIATED MAGNETITE. NORTH OF THE DIORITE, MALACHITE STAINING OCCURS.

BIBLIOGRAPHY

EMPR ASS RPT 3780, 4424
EMPR GEM 1969-309,351, 1972-34, 1973-36

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE157**

NATIONAL MINERAL INVENTORY:

NAME(S): **HACKLA (L.2847)**, MAME (L.2864), M.L. 400,
CLEAVER

STATUS: Showing Open Pit
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 28 31 N
LONGITUDE: 118 53 36 W
ELEVATION: 1265 Metres

NORTHING: 5482015
EASTING: 362843

LOCATION ACCURACY: Within 500M

COMMENTS: The Hackla claim (Lot 2847), 15 kilometres east of Beaverdell, lies immediately west of the Barnato (Lot 2848) (082ESE109). It is in the headwater area of Stewartson Creek on the east slope of Lake Ridge. Access to the property is by dirt roads from either the main Kettle Valley road to the east or from Beaverdell to the west.

COMMODITIES: Gold Silver Copper Zinc

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Arsenopyrite Chalcopyrite Sphalerite
Gold
ASSOCIATED: Quartz Magnetite
ALTERATION: Sericite Kaolin Quartz Microcline Epidote
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
COMMENTS: Fracture filling and disseminated.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Jurassic	Anarchist	Undefined Formation	Westkettle Batholith

LITHOLOGY: Andesite
Tuff
Greenstone
Lava Flow
Chert
Limestone
Quartz Diorite
Porphyry Dike

HOSTROCK COMMENTS: Westkettle is part of the Nelson Intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Contact
PLUTONIC ROCKS RELATIONSHIP: Plutonic Rocks
PHYSIOGRAPHIC AREA: Okanagan Highland
GRADE: Hornfels

INVENTORY

ORE ZONE: SHEAR REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Chip
COMMODITY
Silver 3.4000 Grams per tonne
Gold 6.7000 Grams per tonne
COMMENTS: Sample width is 40 centimetres.
REFERENCE: Assessment Report 19524.

CAPSULE GEOLOGY

The Hackla claim (L. 2847) is 14.5 kilometres east of Beaverdell and 48 km north of Rock Creek. It lies at the elevation of about 1265 meters, immediately west of the Barnato claim (L. 2848) (082ESE109) in the headwater area of Stewartson Creek on the east slope of Lake Ridge. The area has been extensively logged resulting in a network of four wheel drive roads. Access to the property is by logging roads from either the main Kettle Valley road to the east or from Beaverdell to the west.

CAPSULE GEOLOGY

The first work on the Hackla claim was reported in 1900, although surface programs consisting of prospecting and trenching led to the discovery of gold in the area in 1896. In 1917 it was observed that no work had been done in the area for some time and the workings had caved to some extent.

In 1938, Cominco completed an exploration program consisting of mapping, prospecting, test pitting and drilling. This showed that the veins on the property were erratic and diminished in thickness and grade with depth. During the period 1965 to 1966, Amcana Gold Mines conducted a program of road construction, claim surveying, trenching and diamond drilling (4 short holes) in the area of the main Barnato workings. In 1977, Camnor Resources Ltd. acquired the property from G. Bleiler. Subsequently, the company completed several programs consisting of ground and air geophysical surveys, soil and rock chip sampling, mapping, trenching and prospecting. Golden Seal Resources optioned the property in 1986 and received no encouraging results. Following this, limited soil and mapping programs were carried out by Camnor Resources Ltd. In 1989, Carmac Resources Ltd. completed a detailed chip sampling program on a shear zone near the northeast extremity of the Hackla claim and in the vicinity of two short adits on the contact zone between quartz diorite and andesite in the adjacent Barnato claim. The best results from the shear was a 40-centimetre width assaying 67 grams per tonne gold and 3.4 grams per tonne silver (Assessment Report 19524).

In 1994, Phelps Corporation of Canada, Limited conducted 40-line kilometres of soil sampling in the area.

The Hackla claim is primarily underlain by quartz diorite related to the Jurassic Westkettle pluton (Nelson Intrusions) and Upper Paleozoic Westkettle volcanic and sedimentary rocks of the Anarchist Group. These rocks locally consist of fine grained andesitic tuffs and lava flows, chert and volcanic derived sedimentary rocks with some interbedded limestone trending northerly.

Mineralization consisting of pyrite, pyrrhotite, minor magnetite, arsenopyrite and chalcopyrite with some gold, occurs in quartz veins, fracture fillings and as disseminations within both the quartz diorite and volcanic rocks. The mineralization appears to be localized in part along the contact between the intrusive and surrounding country rocks.

The principal mineralization on the Hackla claim is exposed in an open cut in altered quartz diorite on the northern part of the claim. A lead 90 to 120 centimetres wide that contains massive pyrrhotite, pyrite, arsenopyrite and minor chalcopyrite is cut off by a porphyry dike. Mineralization within altered quartz diorite is locally massive and grades into silicified rock. There is no free gold discernible in hand specimens, but gold may be panned from many of the oxidized mineralized zones. Arsenopyrite and pyrrhotite were the earliest sulphides to form, and gold has, in some cases, proved to have been introduced at a later date together with pyrite (and sphalerite). This may well account for the erratic values obtained in sampling. Pyrite is younger than pyrrhotite and arsenopyrite and is seen locally to contain small cavities surrounded by a rim of pyrite with colloform texture.

There has been little or no shearing, but rather light and irregular fracturing which has produced single or complex fissures or breccia zones. Commonly rock alteration that is marked by sericitization in its weaker phases and by the production of kaolin (dickite), chlorite, actinolite and epidote in stronger phases. There is in stronger phases secondary quartz and, in the Barnato, veinlets of quartz and secondary microcline.

BIBLIOGRAPHY

EMPR AR 1900-879; 1903-247; 1928-255; 1938-D17-D20
EMPR BULL 1 (1932), p. 86
EMPR ASS RPT 4238, 6751, 8703, 10456, *19524, 20122, 22396, 22929, 23835
EMPR AEROMAG MAP 7686G
EMPR EXPL 1978-E28; 1979-28
GSC MAP 37A; 6-1957; 1736A
GSC MEM 79
GSC OF 481; 637; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1997/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE158**

NATIONAL MINERAL INVENTORY:

NAME(S): **SEATTLE (L.652)**, LOYAL CANADIAN (L.1608)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 54 N
LONGITUDE: 118 28 16 W
ELEVATION: 1000 Metres

NORTHING: 5443135
EASTING: 392685

LOCATION ACCURACY: Within 500M

COMMENTS: CENTRE OF "SEATTLE", L.652

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Chalcocite Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn K04 Au skarn
 K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Anarchist Unnamed/Unknown Formation

LITHOLOGY: Metasedimentary
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Slide Mountain

CAPSULE GEOLOGY

GREY AND WHITE LIMESTONE IS INTRUDED BY SMALL DIORITE DYKES AND BOUNDED TO THE NORTH BY GRANO-DIORITE, AND TO THE SOUTH BY GREENSTONE. LENTICULAR SHAPED SKARN ZONES CARRY CHALCOPYRITE, CHALCO-CITE, PYRITE, MAGNETITE AND COPPER CARBONATES.

BIBLIOGRAPHY

EMPR AR 1897-597; 1899-754; 1903-172; 1905-185; 1923-179; 1928-236
EMPR ASS RPT 2073, 3780, 4424
EMPR GEM 1969-309, 1972-34, 1973-36

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE159**

NATIONAL MINERAL INVENTORY:

NAME(S): **FANNY JOE (L.729S)**, BEV

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 18 N
LONGITUDE: 118 37 13 W
ELEVATION: 1400 Metres

NORTHING: 5434834
EASTING: 381622

LOCATION ACCURACY: Within 500M

COMMENTS: The Fanny Joe and Sunnyside (082ESE160) claims are located 5.6 kilometres southeast of Greenwood, between 1300 and 1500 metres elevation, on the north side of the ridge 1 kilometre west of the summit of Mount Attwood. Access to the property may be gained by travelling 19.7 kilometres from Greenwood, via the Lind Creek road or 13 kilometres via the McCarren Creek road. See also Sunnyside (082ESE160).

COMMODITIES: Silver Lead Zinc Copper Manganese

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Galena Arsenopyrite
ASSOCIATED: Quartz Pyrolusite
COMMENTS: Manganese oxide.

MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive Vein
CLASSIFICATION: Epigenetic Skarn
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Permian Attwood Unnamed/Unknown Formation

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Fanny Joe and Sunnyside (82ESE160) claims are located 5.6 kilometres southeast of Greenwood, between 1300 and 1500 metres elevation, on the north side of the ridge 1 kilometre west of the summit of Mount Attwood. Access to the property may be gained by travelling 19.7 kilometres from Greenwood via the Lind Creek road or 13 kilometres via the McCarren Creek road.

The Fanny Joe (Lot 929s) claim was Crown granted to C.H. Tye in 1908. The initial target of exploration on the Fanny Joe was a 10-centimetre wide, steep easterly-dipping pyrite and galena bearing quartz vein, traceable on strike for 90 metres. Several open cuts and a 3-metre deep shaft was the first development. In 1933, the shaft was deepened to 6 metres where a considerable amount of manganese oxide was encountered. About 100 metres uphill a second similar vein was discovered.

In 1976, Silver Falls Resources Ltd. acquired the property and discovered three types of mineral occurrences on Sunnyside and the surrounding claims. The main zone consists of skarn mineralization associated with Permian Attwood Group limestone near the contact with a small granodiorite intrusion. A second zone, in the same limestone unit, contains galena, sphalerite, magnetite and chalcopyrite associated with quartz veins. A third zone, on the Bev 2 claim, consists of a 1.2-metre-wide shear structure containing pyrite and minor amounts of chalcopyrite and sphalerite, in silicified sedimentary rocks.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1908-251; *1933-161
EMPR ASS RPT 4462, 5872
EMPR GEM 1973-37, 1974-33, 1976-E20
EMPR MR MAP 6 (1932)

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 640
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE160**

NATIONAL MINERAL INVENTORY:

NAME(S): **SUNNYSIDE (L.2879)**, BEV, ML 401

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 16 N
LONGITUDE: 118 37 05 W
ELEVATION: 1490 Metres

NORTHING: 5434769
EASTING: 381783

LOCATION ACCURACY: Within 500M

COMMENTS: The Bev claims are located 5.5 kilometres southeast of Greenwood, between 1300 and 1500 metres elevation, near the crest of the ridge, 2 kilometres west of the summit of Mount Attwood. Access to the property may be gained by travelling 19 kilometres from Greenwood, via the Lind Creek road or 13 kilometres via the McCarren Creek road. See also Fanny Joe (082ESE159).

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Sphalerite Galena Arsenopyrite
ASSOCIATED: Garnet Epidote Quartz
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Skarn Epigenetic
TYPE: K01 Cu skarn I05 Polymetallic veins Ag-Pb-Zn±Au
 K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Permian
Upper Paleozoic

GROUP

Attwood
Knob Hill

FORMATION

Unnamed/Unknown Formation
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
 Garnetite
 Skarn
 Gneiss
 Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Bev claims are located 5.5 kilometres southeast of Greenwood, between 1300 and 1500 metres elevation, near the crest of the ridge, 2 kilometres west of the summit of Mount Attwood. Access to the property may be gained by travelling 19 kilometres from Greenwood, via the Lind Creek road or 13 kilometres via the McCarren Creek road.

The Sunnyside (Lot 2879) was Crown granted to M. McBean in 1903. In 1923, D. Spooner prospected the claim; a sample assayed 1.42 per cent copper, 106 grams per tonne silver and 1.4 grams per tonne gold (Annual Report 1923, page 182). In 1976, Silver Falls Resources Ltd. acquired the property together with the Fanny Joe (082ESE0159) and Sunnyside claims.

The main zone of mineralization consists of skarn mineralization associated with Permian Attwood Group limestone near the contact with a small granodiorite intrusion on the Sunnyside claim. A second zone nearby in same limestone unit contains galena, sphalerite, magnetite and chalcopyrite associated with quartz veins. A third zone, on the Bev 2 claim, about 1 kilometre southwest of the Sunnyside claim, consists of a 1.2 metre-wide shear structure containing pyrite and minor amounts of chalcopyrite and sphalerite in silicified metasedimentary rocks of the Upper Paleozoic Knob Hill Group.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1903-248; *1923-182
EMPR ASS RPT 4462, *5872

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 642
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM 1973-37, 1974-33, 1976-E20
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE161**

NATIONAL MINERAL INVENTORY:

NAME(S): **RATTLER (L.1265)**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 36 N
LONGITUDE: 118 37 16 W
ELEVATION: 1667 Metres

NORTHING: 5435391
EASTING: 381573

LOCATION ACCURACY: Within 500M
COMMENTS: CENTRE OF CROWN GRANT L.1265

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE Permian GROUP Attwood FORMATION Unnamed/Unknown Formation IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

COPPER MINERALIZATION OCCURS AS DISSEMINATIONS OF CHALCOPYRITE IN LIMY ROCKS AND TO A LESSER EXTENT IN MASSIVE MAGNETITE LENSES INJECTED BETWEEN LIMY SEDIMENTARY ROCKS AND FOOTWALL ARGILLITE. GOLD AND SILVER OCCUR IN SOLID SOLUTION AND AS MINUTE BLEBS IN PYRITE AND CHALCOPYRITE GRAINS.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1933-161; 1968-272
EMPR ASS RPT 1232, 4750, 7296, 8255
EMPR EXPL 1979-15
EMPR GEM 1973-39, 1974-34
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE162**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIDAS**, DEER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E08E
BC MAP:

MINING DIVISION: Trail Creek

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 20 18 N
LONGITUDE: 118 02 34 W
ELEVATION: 1633 Metres

NORTHING: 5465591
EASTING: 424247

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Molybdenum Copper Tungsten Zinc

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite Sphalerite Scheelite Fluorite
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Breccia Disseminated
CLASSIFICATION: Unknown
TYPE: L03 Alkalic porphyry Cu-Au L07 Porphyry W

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Eocene Coryell Intrusions

LITHOLOGY: Syenite
Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Quesnel

CAPSULE GEOLOGY

CORYELL SYENITE AND MONZONITE AND APHANITIC FELDSPAR PORPHYRY ARE INTRUDED BY A SWARM OF NW-STRIKING DYKES OF FELDSPAR BIOTITE PORPHYRY, SYENITE PORPHYRY, AND ANDESITE. E-TRENDING BRECCIA ZONES DISRUPTING THE DYKES ARE SURROUNDED BY A STOCKWORK OF QUARTZ AND MAGNETITE, WHICH DIMINISHES AWAY FROM THE BRECCIA. CHALCOPYRITE, AND RARE SPHALERITE AND SCHEELITE OCCUR IN BRECCIA. MOLYBDENITE OCCURS IN THE QUARTZ MONZONITE PHASE OF THE SYENITE AND DISSEMINATED IN THE SYENITE.

BIBLIOGRAPHY

EMPR ASS RPT 4236, 4867, 5101, 5196, 5197, 7367, 8854, 10301
EMPR BULL 9-16
EMPR EXPL 1979-31
EMPR GEM 1973-49; 1974-59
EMPR OF 1991-17

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 646
REPORT: RGEN0100

BIBLIOGRAPHY

in Silver Lady Resources Inc., Prospectus, March 1987)
EMPR GEM 1973-39
EMPR BC METAL MM00943
EMPR INDEX 3-218
EMPR INSPECT RPT 1974
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC P 45-20; 67-42; 79-29
GSC OF 481; 637; 1969
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/04/24

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE164**

NATIONAL MINERAL INVENTORY:

NAME(S): **JEWEL CREEK**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 08 00 N
LONGITUDE: 118 38 10 W
ELEVATION: 1000 Metres

NORTHING: 5443567
EASTING: 380653

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite Pyrrhotite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Upper Paleozoic GROUP: Anarchist FORMATION: Unnamed/Unknown Formation IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Greenstone
Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

THE PROPERTY IS UNDERLAIN BY GREENSTONES, GREYWACKES, LIMESTONES AND PARAGNEISSES OF THE TRIASSIC ANARCHIST GROUP. A STRONGLY GARNETIFEROUS SKARN IS DEVELOPED AT THE CONTACT BETWEEN THESE ANARCHIST GROUP ROCKS AND A GRANODIORITE INTRUSION. MINERALIZATION OCCURS AS MASSIVE BLEBS AND DISSEMINATIONS OF CHALCOPYRITE, PYRITE, MAGNETITE AND PYRRHOTITE.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT 7297, 8086
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE165**

NATIONAL MINERAL INVENTORY:

NAME(S): **FREMONT(L.1217)**, FREEMONT

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 24 N
LONGITUDE: 118 39 58 W

NORTHING: 5438798
EASTING: 378359

ELEVATION: 930 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Freemont mine shaft and vein (Assessment Report 5124), at the north end of Greenwood.

COMMODITIES: Silver Gold Copper

MINERALS

SIGNIFICANT: Chalcopyrite Silver Pyrite

ASSOCIATED: Quartz Carbonate

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

COMMENTS: Fissure fillings.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Paleozoic
Jurassic-Cretaceous
Tertiary

GROUP

Knob Hill

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Greenwood Pluton
Unnamed/Unknown Informal

LITHOLOGY: Greenstone
Chert
Granodiorite
Diorite
Feldspar Porphyry
Lamprophyre

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Location of Freemont mine shaft and vein (Assessment Report 5124), at the north end of Greenwood.

Chert, schists and greenstones of the Paleozoic Knob Hill Group are intruded by granodiorite and diorite of the Greenwood Stock. All rocks have been injected by quartz-calcite veins. Younger dikes of feldspar porphyry and lamprophyre intrude chert and granodiorite. Two veins, or segments of the same vein, on the Freemont claim carry pyrite, chalcopyrite, and a trace of native silver along their walls.

Production in 1918 amounted to 5 tonnes of ore, yielding 4479 grams of silver and 31 grams of gold.

BIBLIOGRAPHY

EMPR AR 1903-167, 1906-159, 1917-213
EMPR GEM 1974-37
EMPR ASS RPT 5124, 12815
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
EMPR BC METAL MM00854
EMPR INDEX 3-196
EMPR PF (Geology map and report, 1974)
GSC OF 481; 637; 1969
GSC P 45-20; 67-42; 79-29
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE165**

MINFILE NUMBER: **082ESE166**

NATIONAL MINERAL INVENTORY:

NAME(S): **PLUTO (L.2393)**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 00 N
LONGITUDE: 118 42 28 W
ELEVATION: 1000 Metres

NORTHING: 5439977
EASTING: 375342

LOCATION ACCURACY: Within 1 KM

COMMENTS: Centre of Crown Grant, L.2393; Claim map, adjacent to Greyhound L.1014 (082ESE050).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Hematite Magnetite

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Replacement Skarn
TYPE: K01 Cu skarn

K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Sandstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Limy skarn, which contains pyrite, epidote, hematite, and chlorite, is overlain by grey arkose carrying 1 to 5 per cent pyrite. Near the skarn the arkose exhibits an increase of chlorite, epidote and hematite. The Greyhound deposit contains magnetite and chalcopyrite.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1904-300
EMPR ASS RPT 881, 2845, 2897, 5023
EMPR GEM 1971-380, 1974-37
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (Greenwood Area, Galloway, 1927; Salamet Mines Ltd. (circa 1950): Property Plan, in 082ESE050)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GCNL Jul.26, 1973

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE167**

NATIONAL MINERAL INVENTORY: 082E8 Mo1

NAME(S): **WEWA, RAM, BIG CREEK,
SCREECHING CAT**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E08E
BC MAP:

MINING DIVISION: Trail Creek
UTM ZONE: 11 (NAD 83)

LATITUDE: 49 17 00 N
LONGITUDE: 118 00 16 W
ELEVATION: 1650 Metres

NORTHING: 5459439
EASTING: 426951

LOCATION ACCURACY: Within 1 KM
COMMENTS: Centre of claim group (Assessment Report 5326); claim map.

COMMODITIES: Molybdenum Copper Fluorite

MINERALS

SIGNIFICANT: Fluorite Molybdenite Chalcopyrite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I VEIN, BRECCIA AND STOCKWORK

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Nelson Intrusions
Eocene			Coryell Intrusions

LITHOLOGY: Monzonite
Diorite
Felsite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The area is underlain by propylitized monzonite, intruded by a diorite stock (Jurassic Nelson Intrusions) and by dykes of diorite, andesite, and felsite porphyry (Eocene Coryell Intrusions).

Fluorite occurs in minor fault breccia on Ram 10, Wewa 29, and Ram 30, and accompanied by minor chalcopyrite on Wewa 29. A molybdenite-bearing quartz vein cuts felsite porphyry on Ram 9.

R.M. Reininger conducted geochemical and magnetometer surveys on the Wewa 1-40 claims in 1971. H. Veermans and B. Botel held the Wewa and Ram claim groups in 1974. In the same year, Brascan Resources Limited optioned the property and conducted geological mapping, a magnetometer survey over 17 line-miles and geochemical surveys comprising 635 soils and 80 silt samples. The area was restaked as the Screeching Cat in 1978. This is likely the same occurrence as Wewa (082FSW349).

BIBLIOGRAPHY

EMPR ASS RPT 3802, 5326, 7873
EMPR GEM 1972-44; 1974-58
EMPR OF 1992-16
GSC MAP 6-1957

DATE CODED: 1985/07/24
DATE REVISED: 1998/12/21

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE168**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAYFLOWER (L.1284)**, LILLIE MAY (L.1285), GUTS,
KETTLE

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 26 42 N
LONGITUDE: 118 53 04 W
ELEVATION: 1130 Metres

NORTHING: 5478633
EASTING: 363403

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite
ASSOCIATED: Quartz
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Jurassic	Anarchist	Undefined Formation	Nelson Intrusions

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Chalcopyrite and pyrrhotite, with associated gold and silver values, occur in northeast-trending veins in andesite of the Upper Paleozoic Anarchist Group. These are intruded by granites and syenites of the Jurassic Nelson Intrusions.

BIBLIOGRAPHY

EMPR GEM 1970-410, 1971-397, 1974-58
EMPR ASS RPT 2951, *11375
EMPR AR 1903-247,248
EMPR AEROMAG MAP 7686G
GSC OF 481; 637; 1969
GSC MEM 79
GSC MAP 37A; 6-1957; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE169**

NATIONAL MINERAL INVENTORY: 082E1 Pb3

NAME(S): **EVA BELL (L.2031)**, BURNT BASIN

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 06 N
LONGITUDE: 118 07 10 W
ELEVATION: 1500 Metres

NORTHING: 5446772
EASTING: 418398

LOCATION ACCURACY: Within 500M

COMMENTS: CENTRE OF CROWN GRANT, L.2031; 1:50,000 MAP

COMMODITIES: Silver Lead Zinc Cadmium Gold

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite
ASSOCIATED: Garnet Wollastonite Epidote Magnetite Pyrrhotite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive Podiform Disseminated
CLASSIFICATION: Skarn
TYPE: K02 Pb-Zn skarn K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Permian Unnamed/Unknown Group Mount Roberts

LITHOLOGY: Limy Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Eva Bell (Lot 2031), Manitou (Lot 1753) (082ESE098) and Halifax (Lot 3042) (082ESE099) are adjacent claims in the south central part of the Burnt Basin camp. This small mining camp is situated approximately 13 kilometres northeast of Christina Lake and roughly 25 kilometres west of Trail in southeastern B.C. Access to the property is via Highway 3 from either Grand Forks or Castlegar to the Paulson Bridge. From a point 0.4 kilometre southwest of the Paulson Bridge a dirt road extends along the eastern side of the claims and across the southern part of the property. Elevations range from 1,300 metres on Halifax claim to the highest point at 1450 metres on the Eva Bell claim.

Little has been recorded regarding the early prospecting in the area other than in 1901 a shaft, 12 metres deep, and a crosscut adit were developed on the Eva Bell claim. In 1902, Eva Bell claim was Crown granted to J. Rogers and H.L. Jones. Since 1965, several operators have explored the showings and shipped small quantities of ore. In 1965, Christina Lake Mines Ltd. completed geological, geochemical and magnetometer surveys and a minor amount of diamond drilling. This was followed in 1968 by Dalex Mines Ltd. completed an induced polarization survey, considerable stripping and trenching and 7 drill holes totalling 653 metres. A few years later in 1971 Burnt Basin Mines Ltd. undertook a program of geological mapping, a magnetometer survey, trenching and stripping, drilling that included 5 holes totalling 200 metres, and production of 43 tonnes of ore grading 210 grams per tonne of silver, 16 per cent zinc and 8 per cent lead. In the period 1972 to 1975, Donna Mines Ltd. reported line cutting and a magnetometer survey on the Eva Bell and Halifax claims and five short drill holes, cat trenching and percussion drilling on Eva Bell. At this time the company shipped 13,500 tonnes of ore. In 1975 to 1976, Alviji Mines Ltd., a company closely associated with Donna Mines Ltd., operated the property and shipped 485 tonnes of ore grading 106 grams per tonne of silver, 4.45 per cent lead, 6.75 per cent zinc and 21.5 per cent magnetite. The company name 'Alvija' was changed to Paulson Mines Ltd. in 1976. In 1977, Paulson Mines Ltd. completed 457 metres of drilling on the Halifax claim and published intercept values, up to 2 metres, grading 420 grams per tonne of silver, 19.7 per cent lead and 14.9 per cent zinc. In

CAPSULE GEOLOGY

1978, Oliver Resources Ltd. completed 10 kilometres of electromagnetic, induced polarization and magnetometer surveying and the following year Granges Exploration Ltd. did 291 metres of diamond drilling on the Eva Bell and BP No.2 claims.

In April 1986, West Rim Resources Inc. acquired an option agreement on the property, the object being to evaluate the Mother Lode (Lot 1508) and the Eva Bell (Lot 2031) and Halifax (Lot 3042) claims. The program included a detailed fill-in soil geochemical survey that was carried out across the Halifax and Eva Bell claims and the intervening Manitou claim (Lot 1753). The results indicate a more or less continuous zone of mineralization 350 metres long and 100 metres wide across the three claims.

The claims lie in a 3-kilometre-wide northeasterly trending belt of Mount Roberts sedimentary rocks (Permian). The belt is bounded on the north by Nelson plutonic rocks (Jurassic) and outliers of the Coryell batholith (Tertiary) on the south. The sedimentary units are mostly limy siltstones interbedded with platy limestone. These beds are sharply folded plunging 25 to 60 degrees northwest with axial planes inclined northeast. The sediments are intruded by altered offshoot pulaskite and pulaskite porphyry dikes from the Coryell batholith that mostly trend parallel to the axial planes of the folds.

The mineral showings in the claim area comprise both massive sulphide bodies and disseminations composed of galena, sphalerite, magnetite and pyrrhotite in limey argillaceous hornfelsed rock. Skarns are especially well developed around the upper Eva Bell showings. The associated mineralization consists of pyrite, pyrrhotite, arsenopyrite, magnetite, chalcopyrite, galena and sphalerite accompanied by exotic accessory minerals including cubanite, nicolite, violarite, loellingite, cobaltite, acanthite and argentian pentlandite. These minerals are concentrated in small pods commonly, measuring 1.5 x 2 x 3 metres, closely associated with pyroxene, calcite, amphibole, and hematite commonly on bedding planes and in the crests of folds.

BIBLIOGRAPHY

EMPR AR 1901-1066; 1902-304; 1937-D35; 1972-A52; 1973-A52; 1974-A119; 1975-A93; 1976-A102
EMPR ASS RPT 1920, 7508, 17046
EMPR BC METAL MM00830 (Burnt Basin)
EMPR EXPL 1978-E13, 1979-13
EMPR GEM 1972-33; 1973-22,36; 1974-24,32
EMPR MINING 1975-1980, Vol. 1, pp. 7, 54, 58
EMPR PF
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE170**

NATIONAL MINERAL INVENTORY:

NAME(S): **BONANZA FR. (L.1617)**, NETA (L.996), GRAND FORKS BELLE (L.1618),
MCKINLEY, RUBY, FRENCH & ENGLISH,
ENGLISH & FRENCH, COLORADO, NEVADA,
MTN. VIEW, MOTHERLODE, IRON MASK,
JUMBO, BLUEBELL

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:
LATITUDE: 49 08 54 N
LONGITUDE: 118 26 34 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Bonanza adit location.

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5444948
EASTING: 394787

COMMODITIES: Lead Zinc Silver Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Marcasite Pyrrhotite
 Chalcopyrite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Replacement
DIMENSION: Metres STRIKE/DIP: 360/45W TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Brooklyn Unnamed/Unknown Formation

LITHOLOGY: Limestone
 Tuffaceous Sediment/Sedimentary
 Argillite
 Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Quesnel

CAPSULE GEOLOGY

The Ruby Claim Group envelopes the Bonanza (Lot 1617) and Neta (Lot 996) reverted Crown grants which in 1900 were known as the French & English Group along with the Colorado, Nevada, Mtn. View and three others. In 1900, a 30-metre tunnel was reported. In 1901, two tunnels, one 27 metres long and one 43 metres long in addition to two shafts, one 21 metres and one 3.6 metres deep were reported on the Bonanza. Two other shafts, 9 and 7.6 metres deep and one tunnel 12 metres long were reported.

Volcanic tuffs and limestones are intruded by porphyry dikes. The main intrusives are granodiorite. The orebody is a replacement of volcanic tuffs, apparently lensoid in shape carrying sulphides in silica and calcite.

In 1925, the Grand Forks Mining Syndicate shipped 25 tonnes of ore containing 31 grams of gold, 498 grams of silver, 508 kilograms of lead and 1016 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR 1901-1065; *1925-192-193; 1929-254; 1936-A34
EMPR ASS RPT 11538
EMPR BC METAL MM00650
EMPR INDEX 3-190
EMPR PF (*Sookochoff, L. (1986): Report on the Initial Exploration Results of the Ruby Claim Group, Prospectus, American Girl Resources Inc., July 2, 1987; *Sookochoff, L. (1988): Exploration Progress Report on the Ruby Claim Group, Statement of Material Facts, American Girl Resources Inc., December 1, 1988; Starr, C.C. (1926): Report on Old English & French Mine)

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE171**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOUNDARY FALLS (L.889)**, TUNNELL (L.888), M 431 (L.2374),
TUNNEL, GLORY HOLE, NO. 1

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 03 03 N
LONGITUDE: 118 42 25 W
ELEVATION: 876 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Glory Hole adit, 1 kilometre west from Boundary Falls, 5 kilometres south-southwest from the town of Greenwood (Assessment Report 6067).

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5434510
EASTING: 375279

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Galena Tetrahedrite Sphalerite Chalcopyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Pennsylvan.-Permian	Knob Hill	Undefined Formation	Unnamed/Unknown Informal
Tertiary			Unnamed/Unknown Informal
Cretaceous			Unnamed/Unknown Informal

LITHOLOGY: Mica Schist
Diorite
Monzodiorite
Marble
Amphibolite Schist
Gneiss

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: Pre-mineralization GRADE: Amphibolite

INVENTORY

ORE ZONE: GLORY HOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1975
SAMPLE TYPE: Drill Core
COMMODITY
Silver 34.6200 Grams per tonne
Gold 8.2200 Grams per tonne
REFERENCE: Assessment Report 6067.

ORE ZONE: NO. 1 VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1975
SAMPLE TYPE: Drill Core
COMMODITY
Silver 325.6600 Grams per tonne
Gold 10.5500 Grams per tonne
REFERENCE: Assessment Report 6067.

CAPSULE GEOLOGY

The area is underlain by a wide ranging section of Tertiary, Mesozoic and Upper Paleozoic rocks which have undergone several episodes of deformation and are intruded by diorite-monzodiorite and granodiorite.
The Boundary Falls property is underlain by Permo-Carboniferous basement complex Knob Hill Group mica schist, marble, amphibolitic schist and gneiss. Several intrusions are evident and consist of a

CAPSULE GEOLOGY

predominant Tertiary diorite-monzodiorite and Cretaceous granodiorite. The units are metamorphosed and sheared in a northwest direction. A quartz vein system labelled the Glory Hole strikes northwest and dips 75 degrees southwest and appears to be hosted in a shear zone in Permo-Carboniferous Knob Hill Group mica schist close to the contact with a Tertiary diorite-monzodiorite intrusion. The vein is highly shattered and ranges from a few centimetres to 1.5 metres in width. Some stringer veins disperse into the wallrock. Limonite occurs as an oxidation product along fracture planes within the quartz vein. The vein is offset along strike by subparallel fault movements.

Approximately two hundred and seventy metres south-southeast a massive quartz vein 0.6 metres wide, labelled the No. 1 Vein, strikes northeast and dips steeply northwest.

Mineralization consists of pyrite, galena, tetrahedrite, sphalerite and chalcopyrite in a gangue of mainly quartz and occasional calcite and also occurs in local silicified zones. Gold and silver values are associated with the sulphide mineralization.

Past development consisted of adits.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
- EMPR AR 1896-582; *1897-582,587; 1898-1125,1195,1196
- EMPR ASS RPT 5618, *6067
- EMPR EXPL 1975-E13,E14; 1976-E19,E20; 1978-E17,E18
- EMPR MAP *59
- EMPR MR MAP 6 (1932)
- EMPR OF 1990-25
- EMPR P 1986-2
- EMPR PF (082ESE171); (Sookochoff, L. (1987): Report on the Geological, Geophysical and Geochemical Exploration of the Set Claims, Prospectus of Ossa Resources Inc., June 15, 1987)
- EMPR PRELIM MAP 59
- GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
- GSC MEM 38, Part III, Map 83A
- GSC OF 481; 637; 1969
- GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE172**

NATIONAL MINERAL INVENTORY: 082E2 Cu3

NAME(S): **IVA LENORE (L.1262)**, GOLDEN FLEECE (L.1529), TAM O'SHANTER, GOTCHA, RAINBOW

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 05 12 N
LONGITUDE: 118 43 22 W
ELEVATION: 1200 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5438519
EASTING: 374213

LOCATION ACCURACY: Within 500M

COMMENTS: The property is located 3.5 kilometres west-southwest from Greenwood, south of Buckhorn Creek, on the ridge between Ingram Ridge and Motherlode Creek. Elevations range from 1100 metres on the Iva Lenore claim to 1280 metres on the Golden Fleece claim. Access to the property is from Greenwood via the road to the Mother Lode mine (082ESE034). The claims can be reached either from a road branching west just south of the Deadwood area from Motherlode, or via an old logging road that heads south off the Motherlode road near kilometre 6. Numerous ranch and logging roads provide ancillary access around the property. See Tam O'Shanter (082ESE130).

COMMODITIES: Copper

Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Copper Pyrite Pyrrhotite

ASSOCIATED: Quartz Pyrite Pyrrhotite

ALTERATION: Epidote Chlorite Sericite Calcite

COMMENTS: Retrograde alteration.

MINERALIZATION AGE: Triassic

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Upper Paleozoic
Jurassic

GROUP

Knob Hill

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions

LITHOLOGY:

Greenstone
Chert
Microdiorite
Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

The Iva Lenore (L.1262) and Golden Fleece (L.1529) claims are part of a large group of leased and located claims in the western part of the Greenwood mining camp. The Iva Lenore claim was staked about 1896 and Crown granted to I.H. Hallett in 1906. Development work completed in this period includes a 10-metre deep shaft. The Golden Fleece workings dating from the same period consist of several old trenches and a shaft developed in a diorite intrusion and greenstones. See Tam O'Shanter (082ESE130) for work on the claims during the 1960's.

The property is situated 3.5 kilometres west-southwest from Greenwood on the ridge between Ingram Ridge and Motherlode Creek. Elevations range from 1100 metres on the Iva Lenore claim to 1280 metres on the Golden Fleece claim. Access to the property is from Greenwood via the road to the Mother Lode mine (082ESE034). The claims can be reached either from a road branching west just south of the Deadwood area from Motherlode, or via an old logging road that heads south off the Motherlode road near kilometre 6. Numerous ranch and logging roads provide ancillary access around the property.

The area is underlain by Knob Hill Group chert and greenstone units (Paleozoic), microdiorite (Mesozoic) and Pentiction Group volcanic and sedimentary rock (Tertiary). The Knob Hill Group

CAPSULE GEOLOGY

consists mainly of grey chert and greenstones overlain (unconformably) by chert pebble conglomerate and sandstones. These rocks are intruded by a microdiorite stock (Jurassic Nelson Intrusions). The stock is exposed on the Golden Fleece claim, and outcrops 4 kilometres to the east and 0.5 kilometre to the north. The Penticton Group is located west of the northeast trending Deadwood fault that is the east bounding fault of the Toroda Creek graben.

The principal mineralization occurs in the epidotized and chloritized greenstones and consists of disseminated pyrite, pyrrhotite and chalcopryrite and quartz stringers containing, hematite, molybdenite, native copper and chalcopryrite. The intrusives are grey medium-grained crystalline rocks composed chiefly of secondary minerals that include talc, sericite, cordierite, calcite, chlorite, zoisite and quartz. Mineralization is mainly pyrite and less commonly, chalcopryrite.

BIBLIOGRAPHY

EMPR PF (In 082ESE130: Property description by G.O.M Stewart, 1976)
EMPR AR 1896-577; 1897-587; 1906-H253; *1964-111; 1965-168; 1966-193;
1967-226
EMPR GEM 1969-307; 1971-381; 1973-37,38; 1974-33
EMPR ASS RPT 1878, 4125, 5023, 8795, *18798, 18917, 20588, 22914
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC OF 481; 1969
GSC P 67-42; 79-29
GSC MAP 6-1957; 10-1967; 1500A; 1736A
EMR MP CORPFILE (Silver Dome Mines Ltd.; Crown Silver Development Ltd.)

DATE CODED: 1985/07/24
DATE REVISED: 1996/12/06

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE173**

NATIONAL MINERAL INVENTORY:

NAME(S): **LILLIE JAMES (L.1724)**, DOMINION (L.1723), SET

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 47 N
LONGITUDE: 118 36 52 W
ELEVATION: 1500 Metres

NORTHING: 5433868
EASTING: 382027

LOCATION ACCURACY: Within 500M

COMMENTS: The Lillie James and adjoining Dominion claims are located about 7 kilometres southeast of Greenwood on the southern slope of Mount Attwood. Access to the property is by the McCarren Creek road to the Lone Star-Phoenix haulage road then west about 600 metres on an old road to the property.

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Arsenopyrite
ASSOCIATED: Quartz
ALTERATION: Epidote Silica Chlorite Carbonate
ALTERATION TYPE: Epidote Silicific'n Chloritic Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Undefined Group	Unnamed/Unknown Formation	
Permian	Knob Hill	Undefined Formation	

LITHOLOGY: Microdiorite
Greenstone
Granodiorite
Listwanite
Serpentinite

HOSTROCK COMMENTS: Eholt Formation, Brooklyn Group.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Lillie James (L.1724) and adjoining Dominion (L.1723) claims are located about 7 kilometres southeast of Greenwood, on the southern slope of Mount Attwood. Access to the property is by the McCarren Creek road to the Lone Star-Phoenix haulage, road then west about 600 metres on an old road to the property.

The terrain in the area is moderate with elevations ranging from 1400 metres in the southern part of the claim to about 1525 metres to the north.

Little is known about the early history of the property other than the Lillie James (L.1724) claim was given Crown grant status to C.H. Tye in 1905 and the Dominion (L.1723) claim Crown granted to J.P. Shannon in 1902. Several pits and adits are the only record of previous work. However, exploration from 1983 to 1987 was completed by Quadex Resources Ltd. and Ossa Resources Ltd. on the surrounding Set claims. The main target was a large east-northeast trending gold soil anomaly that strikes through the centre of Lillie James, coincident with a fault zone.

The oldest rocks recognized on the property are listwanites associated with serpentinites that are thought to belong to the Permian Knob Hill Group. Throughout the Greenwood area these rocks are associated with major thrust faults. Only one listwanite was observed on the property and this is believed to mark the position of such a thrust.

The remainder of the property appears to be underlain by Permian and/or Triassic greenstones and microdiorite (Eholt Formation, Brooklyn Group). These rocks were observed both above and below the inferred thrust fault. Adjacent to the fault the rocks are

CAPSULE GEOLOGY

carbonate altered and contain finely disseminated pyrite. Quartz veining is relatively common in the vicinity of the fault. Several short adits and old blast pits were observed in this area. Elsewhere on the property, the microdiorite may be silicified, epidotized or chloritized. Disseminated pyrite is not uncommon. In several places on the claims and adjoining ground, evidence of substantial bulldozer work occurs over areas of altered microdiorite.

A few hundred metres northeast of the northern claim boundary, several outcrops of coarse granodiorite were observed. Quartz stringers and pyrite mineralization are common in this unit and a significant amount of bulldozer trenching has been done in the area.

Regional mapping shows the Mount Attwood fault to be parallel to the fault defined by the listwanite outcrop, but located several hundred metres to the north. The Triassic rocks appear to be restricted to the lower thrust slice on the Attwood fault but this is not the case on the Lillie James claim.

In 1991, a brief geological mapping and rock sampling program was done on the Lillie James property by Kettle River Resources. Mapping revealed the claim to be underlain almost entirely by Triassic microdiorite which is locally altered (epidotized, silicified, chloritized or carbonated). Disseminated pyrite mineralization is relatively common. An east-west trending, moderately north dipping fault was interpreted on the property which appears to control mineralization. Anomalous gold, silver, copper and arsenic values occur in carbonated pyritic microdiorite immediately below the fault. A large gold soil anomaly is also known to coincide with the fault.

BIBLIOGRAPHY

EMPR AR 1902-304, 1905-255
EMPR ASS RPT 11423, 13137, 16829, *21387
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC OF 481; 1969
GSC P 67-42; 79-29
GSC MAP 6-1957; 10-1967; 1500A; 1736A
GCNL #170 (Sept.) 1987

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/24

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE174**

NATIONAL MINERAL INVENTORY:

NAME(S): **OVERLANDER FR. (L.1686), SET**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 48 N
LONGITUDE: 118 35 29 W
ELEVATION: 1380 Metres

NORTHING: 5433863
EASTING: 383713

LOCATION ACCURACY: Within 500M

COMMENTS: The Overlander Fr. is located about 7 kilometres southeast of Greenwood on the southern slope of Mount Attwood. Access to the property is by the McCarren Creek road to the Lone Star-Phoenix haulage road.

COMMODITIES: Gold Copper Molybdenum Zinc Lead

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Bornite Pyrite Sphalerite
Galena Molybdenite
ASSOCIATED: Quartz Malachite
ALTERATION: Epidote Carbonate Garnet Apatite
ALTERATION TYPE: Epidote Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Skarn
TYPE: I01 Au-quartz veins K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Undefined Group	Unnamed/Unknown Formation	
Jurassic			Nelson Intrusions

LITHOLOGY: Cherty Argillite
Greenstone
Microdiorite
Granodiorite

HOSTROCK COMMENTS: Eholt Formation, Brooklyn Group.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Quesnel

CAPSULE GEOLOGY

The Overlander Fr. (L.1686) claim is located about 7 kilometres southeast of Greenwood, on the southern slope of Mount Attwood. Access to the property is by the McCarren Creek road to the Lone Star-Phoenix haulage road.

Little is known about the early history of the property. Development work, likely in the 1950s, consisted of short adits and shallow shafts. In 1986, Ossa Resources Ltd. conducted sampling and geophysics in the area.

The property is underlain by Permian and/or Triassic greenstones and microdiorite (Eholt Formation, Brooklyn Group). A pyritized, limonitic, northerly striking, steeply dipping quartz vein, cuts intensely altered cherty-argillite near an intrusive granodiorite stock. The vein strikes for 120 metres and is 0.2 to 0.45 metre in width. A channel sample returned 20.2 grams per tonne gold over 0.4 metre.

At an old adit site, located below the haulage road, skarn mineralization is noted in the dump material. Minerals consist of chalcopyrite, pyrrhotite, malachite, bornite and pyrite, with lesser sphalerite, galena and molybdenite. Gangue minerals are quartz, carbonate, garnet, epidote and possibly apatite.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT *16829
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 662
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR PF (Sookochoff, L. (1987): Report on the Geological, Geophysical
and Geochemical Exploration of the Set Claims, Prospectus of Ossa
Resources Inc., June 15, 1987)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/24

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE175**

NATIONAL MINERAL INVENTORY:

NAME(S): **GUT**, GROUSE

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 30 N
LONGITUDE: 118 56 28 W
ELEVATION: 1500 Metres

NORTHING: 5476514
EASTING: 359238

LOCATION ACCURACY: Within 1 KM
COMMENTS: Located along Crouse Creek.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Devonian-Mississipp.
Eocene
Jurassic

GROUP

Anarchist
Penticton

FORMATION

Undefined Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions

LITHOLOGY: Greenstone
Granodiorite
Diorite
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Gut Claim was located along Crouse Creek by Teck Corporation Limited in 1973. At that time, and in 1975, work consisted of geological, geochemical and geophysical (magnetometer and VLF-EM) surveys and trenching (126 metres).

The claim is underlain by greenstone of the Upper Paleozoic Anarchist Group; granodiorite and diorite of the Jurassic Nelson Intrusions; and andesite of the Eocene Penticton Group. Fractures contain pyrite with low gold values.

BIBLIOGRAPHY

EMPR GEM 1975-E23
EMPR ASS RPT *5805, 14927
EMPR EXPL 1985-C36
EMPR AEROMAG MAP 7686G
GSC MEM 79
GSC OF 481; 637; 1969
GSC MAP 37A; 6-1957; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1996/03/26

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE176**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOU**, KET, RENO

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 23 09 N
LONGITUDE: 118 51 50 W
ELEVATION: 850 Metres

NORTHING: 5472019
EASTING: 364730

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location of gossan zone (Assessment Report 1722).

COMMODITIES: Copper Zinc Silver

MINERALS

SIGNIFICANT:	Pyrite	Pyrrhotite	Malachite	Chalcopyrite	Galena
ALTERATION:	Pyrite	Silica			
ALTERATION TYPE:	Silicific'n	Pyrite			
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Eocene	Penticton	Undefined Formation	
Jurassic			Nelson Intrusions
Upper Cretaceous			Okanagan Batholith

LITHOLOGY: Greenstone
Tuff
Conglomerate
Andesite
Granodiorite
Granite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

In 1968, the Lou claims, which lie east of the Kettle River, covered a pyritic gossan. At the time Rip Van Mining Ltd. conducted geochemical sampling, which resulted in anomalous copper (up to 0.04 per cent), zinc (up to 0.32 per cent) and silver (up to 8 grams per tonne) (Assessment Report 1722). These anomalies are about 1 kilometre southeast of the gossan. A 94-metre hole was drilled in 1969 (results are unknown). In 1975, Tech Corporation Ltd. covered the area west of the Kettle River with the Ket claim. They conducted 2.52 line kilometres of VLF-EM and collected 83 geochemical soil samples. Minor malachite was report in tuffs. In 1977 and 1980, San Antonio Explorations Ltd. conducted geochemical and geological surveys on the Reno claim to the south. They reported pyrite and pyrrhotite, with minor chalcopyrite and galena in trenches (Assessment Report 6899).

The area is underlain by greenstone of the Upper Paleozoic Anarchist Group; granodiorite and diorite of the Jurassic Nelson Intrusions; granite of the Upper Cretaceous Valhalla Intrusions (Okanagan Batholith); and andesite, tuffs and conglomerate of the Eocene Penticton Group.

BIBLIOGRAPHY

EMPR GEM 1969-303
EMPR EXPL 1975-E22
EMPR ASS RPT *1722, 6899, 9079
EMPR AEROMAG MAP 7686G
EMPR PF (San Antonio Explorations Ltd., Prospectus, June 15, 1977)
GSC OF 481; 637; 1969
GSC MEM 79

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 665
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 6-1957; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/03/26

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE177**

NATIONAL MINERAL INVENTORY:

NAME(S): **WSW**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 28 36 N
LONGITUDE: 118 23 16 W
ELEVATION: 1500 Metres

NORTHING: 5481372
EASTING: 399468

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Chalcocite Galena Sphalerite

MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au N01 Carbonatite-hosted deposits

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Anarchist Unnamed/Unknown Formation Coryell Intrusions
Eocene

LITHOLOGY: Greenstone
Limestone
Pulaskite

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

ANARCHIST GP GREENSTONE WITH IMPURE LIMESTONE, GREYWACKE, AND ARGILLITE HAVE BEEN INTRUDED BY NELSON GRANODIORITE AND DIORITE, ALL CUT BY SLIGHTLY RADIOACTIVE Coryell related PULASKITE DYKES. 2 SHOWINGS OF CHALCOPYRITE, BORNITE, CHALCOCITE, PYRITE, GALENA, AND SPHALERITE OCCUR IN QUARTZ-CALCITE VEINLETS IN THE GREENSTONE-LIMESTONE. NATIVE COPPER OCCURS AS SMEARS ALONG JOINT PLANES. SCATTERED PYRITE, PYRRHOTITE AND CHALCOPYRITE.

BIBLIOGRAPHY

EMPR ASS RPT 5535
EMPR GEM 1975-E23

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE178**

NATIONAL MINERAL INVENTORY:

NAME(S): **LJ**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E08W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 54 N
LONGITUDE: 118 22 16 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: ALSO 82E/9W

NORTHING: 5483759
EASTING: 400719

COMMODITIES: Gold Silver Lead Copper Molybdenum
Iron

MINERALS

SIGNIFICANT: Pyrite Galena Chalcopyrite Tourmaline Bornite

MINERALIZATION AGE: Jurassic
Chalcocite Molybdenite

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Nelson Intrusions

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Quesnel
PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

MAGNETITE, PYRITE, GALENA & CHALCOPYRITE OCCUR IN SHATTERED QUARTZ VEINLETS IN NELSON GRANODIORITE. TOURMALINE & FREE GOLD WERE ALSO NOTED IN MAIN SHOWINGS AS WERE BORNITE, CHALCOCITE & MOLYBDENITE IN SOME OF THE SMALLER SHOWINGS SLIGHTLY RADIOACTIVE PULASKITE (?), AND A FEW SMALL PEGMATITE AND APLITE DYKES CUT THE HOST ROCK

BIBLIOGRAPHY

EMPR ASS RPT 5513
EMPR GEM 1975-E24
WWW <http://www.infomine.com/index/properties/LJ.html>

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE179**

NATIONAL MINERAL INVENTORY:

NAME(S): **HEK, HEL, SIMPSON**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 12 00 N
LONGITUDE: 118 27 58 W
ELEVATION: 1500 Metres

NORTHING: 5450724
EASTING: 393197

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Gold Iron

MINERALS

SIGNIFICANT: Gold
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Replacement Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Anarchist	Unnamed/Unknown Formation	

LITHOLOGY: Siliceous Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

IRON SULPHIDES OCCUR AT THE CONTACT BETWEEN NELSON PORPHYRITIC QUARTZ MONZONITE & SILICEOUS SEDIMENTARY ROCKS OF THE ANARCHIST GROUP. GOLD WITH MINOR SILVER AND COPPER IS ASSOCIATED WITH MASSIVE SULPHIDE MINERALIZATION.

BIBLIOGRAPHY

EMPR ASS RPT 6130, 8883
EMPR GEM 1976-E18
EMPR PF (Grand Forks Mines Ltd., Statement of Material Facts, Dec. 11, 1987 in 082ESE032; Attwood Gold Corporation, Filing Statement, May 31, 1989; in 082ESE032; Wares, R. (1985): Report on Hek and Hel Claims)
GCNL #194, #195, 1975; #179, 1976; #35, 1977; #68, 1978; #213, 1979; #37, #40, 1980; #46, #135, 1983; #134, 1984; #65, 1985

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE181**

NATIONAL MINERAL INVENTORY: 082E2 Ag1

NAME(S): **TOP**, BUTCHER BOY (L.1282)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 00 N
LONGITUDE: 118 43 04 W
ELEVATION: 1200 Metres

NORTHING: 5441846
EASTING: 374654

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn

K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP
Triassic Brooklyn

FORMATION
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sharpstone Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

CAPSULE GEOLOGY

CHALCOPYRITE IS DISSEMINATED IN A SKARN.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1968-231
EMPR ASS RPT 1784, 12364
EMPR GEM 1969-307
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE182**

NATIONAL MINERAL INVENTORY:

NAME(S): **B.V.P.K.**, TEX, C.V.

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 12 N
LONGITUDE: 118 34 16 W
ELEVATION: 1100 Metres

NORTHING: 5434574
EASTING: 385210

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Copper Molybdenum Gold Silver

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Disseminated Massive
CLASSIFICATION: Skarn
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic Jurassic	Anarchist	Unnamed/Unknown Formation	Greenwood Pluton

LITHOLOGY: Greenstone
Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1968-235
EMPR ASS RPT 13038
EMPR GEM 1969-309; 1970-432; 1977-E15
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE183**

NATIONAL MINERAL INVENTORY:

NAME(S): **KV**, CALCEDONIA (L.973), MONTE CHRISTO (L.1731),
BLACK BEAR (L.1729), GOLDEN AXE (L.1730)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

MINING DIVISION: Greenwood

LATITUDE: 49 04 06 N
LONGITUDE: 118 30 40 W
ELEVATION: 1300 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5436152
EASTING: 389627

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic

GROUP

Knob Hill

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Chert
Argillite
Greenstone
Limestone
Serpentinite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

NE CLAIM AREA IS UNDERLAIN BY ARGILLITE AND CHERT,
INTRUDED BY DIORITE. ANDESITE FLOWS COVER THE REST
OF THE CLAIM AREA, WITH OCCASIONAL LIMESTONE
WINDOWS. SERPENTINE, WITH ASSOCIATED TALC CARBON-
ACEOUS ROCK OUTCROP NEAR THE SEDIMENTS. WEAK DIS-
SEMINATED PYRITE IN ANDESITE. PYRITE, PYRRHOTITE
AND SOME COPPER SULPHIDES OCCUR IN THE SEDIMENTS.
PROBABLY CHALCOPYRITE.

BIBLIOGRAPHY

EMPR AR 1899-848; 1900-872; 1906-161
EMPR ASS RPT 2716, 2769
EMPR GEM 1970-431

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE184**

NATIONAL MINERAL INVENTORY: 082E2 Ag1

NAME(S): **HOPE**, WET, EAGLE

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 54 N
LONGITUDE: 118 31 58 W
ELEVATION: 1200 Metres

NORTHING: 5433960
EASTING: 387999

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP
Triassic Brooklyn

FORMATION
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone
Limestone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

LIMESTONES AND ARGILLITES INTRUDED WITH DIORITE AND MONZONITE. EXTENSIVE AREAS OF ANDESITE INTERPRETED AS THIN FLOWS OVERLYING THE SEDIMENTS. MINOR PYRITE, PYRRHOTITE, AND CHALCOPYRITE OCCUR IN THE SEDIMENTS.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT 2768
EMPR GEM 1970-432
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE185**

NATIONAL MINERAL INVENTORY: 082E2 Ag1

NAME(S): **COMBINATION (L.1458)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 23 N
LONGITUDE: 118 40 00 W
ELEVATION: 800 Metres

NORTHING: 5442473
EASTING: 378399

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Gold Silver
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Knob Hill Unnamed/Unknown Formation

LITHOLOGY: Biotite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

A NARROW HIGH GRADE VEIN CARRYING GALENA, PYRITE,
SPHALERITE, GOLD AND SILVER OCCURS IN VERY FINE-
GRAINED DARK GREEN BIOTITE-SCHIST INTRUDED BY
NARROW PORPHYRY DYKES.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1896-577; 1898-1124; 1899-848; 1903-167; 1904-213;
1922-176; 1923-180; 1924-167; 1925-197; 1938-D39
EMPR GEM 1969-305, 1970-430
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (Greenwood Area, Galloway, 1927)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE186**

NATIONAL MINERAL INVENTORY: 082E2 Ag1

NAME(S): **JULY CREEK, PP**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 42 N
LONGITUDE: 118 32 22 W
ELEVATION: 1200 Metres

NORTHING: 5437305
EASTING: 387580

LOCATION ACCURACY: Within 1 KM

COMMENTS: The July Creek claim is located 7 kilometres northwest of Grand Forks.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Triassic

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Syngenetic

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP
Triassic Brooklyn

FORMATION
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone
Meta Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Thin pyritic beds within the Brooklyn succession is the only visible evidence of mineralization on the property. In 1965 geochemical and geophysical anomalies were drilled and yielded negative results for copper mineralization.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1965-172
EMPR ASS RPT 703, 704, 705, 706, 13038
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE187**

NATIONAL MINERAL INVENTORY:

NAME(S): **SENATOR**, PACK RAT, PACKRAT,
NO. 37, BG, PR,
THIRTY SEVEN (L.1335), VICTOR (L.1336), FREEMONT,
THIMBLE MOUNTAIN, SUMMIT CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 08 48 N
LONGITUDE: 118 30 22 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5444852
EASTING: 390165

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Pyrrhotite Chalcopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic
Jurassic-Cretaceous
Eocene

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Wallace Creek Batholith
Coryell Intrusions

LITHOLOGY: Limestone
Greenstone
Volcanic Breccia
Granodiorite
Alkali Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock

YEAR: 1991

COMMODITY

GRADE

Silver	6.2000	Grams per tonne
Gold	1.2000	Grams per tonne
Copper	0.3000	Per cent

COMMENTS: Rock sample of massive pyrrhotite.
REFERENCE: Assessment Report 22105.

CAPSULE GEOLOGY

The Senator past producer is located 3 kilometres east of Eholt, west of Rathmullen Creek. It is 2 kilometres northeast of the B.C. (Lot 882) claim (082ESE060).

The Senator Mine was operated by the Granby Consolidated Mining, Smelting and Power Company Ltd. between 1903 and 1905. Production during this time was 5178 tonnes of ore, yielding 10,618 kilograms of copper, 22,674 grams of silver and 9984 grams of gold. Adjacent claims included the Thirty Seven (Lot 1335), which was referred to as the No. 37, and Victor (Lot 1336). These were Crown granted in 1899 to J.B. Henderson.

In 1969 and 1970, Bayland Mines Ltd., at the request of H. Hoehn, conducted geophysical surveys and geological examination of the area. At the old shaft, referred to as the 'Pack Rat Mine', an irregular shaped body, up to 6 metres in width, of massive pyrite contains pyrrhotite and chalcopyrite. A sample assayed 0.22 per cent copper and 3.4 grams per tonne silver (Assessment Report 2716).

In 1991, Pan Orvana Resources Inc. conducted mapping and

CAPSULE GEOLOGY

geochemical and rock sampling in the area. A rock sample of massive pyrrhotite in the area of the shaft assayed 0.30 per cent copper, 1.2 grams per tonne gold and 6.2 grams per tonne silver (Assessment Report 22105).

The area is underlain by limestone and greenstone of the Triassic Brooklyn Group; these rocks are cut by granodiorite of the Jurassic Nelson Intrusions and alkali syenite of the Eocene Coryell Intrusions.

BIBLIOGRAPHY

EMPR AR 1899-850; 1901-1064; 1903-171,172; 1904-209,219,*221-222;
1905-183
EMPR GEM 1969-304; 1970-431
EMPR ASS RPT 1960, 2707, *2716, 2717, 22105
EMPR BC METAL MM00907; *MM00926
EMPR INDEX 3-207,212
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR AEROMAG MAP 8497G
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/04/30

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE188**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUEBELL (L.2136)**, SIMPSON MINE, BLUE BELL,
BRAYFOGLE (L.1491), BREY FOGLE, SUMMIT CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 07 51 N
LONGITUDE: 118 32 04 W
ELEVATION: 1066 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5443134
EASTING: 388063

LOCATION ACCURACY: Within 500M

COMMENTS: The Bluebell (Lot 2136) is located 1 kilometre south of Wilgress Lake and 1 kilometre east of the Emma (Lot 591) claim (082ESE062).

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz Epidote Garnet Bismuthinite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn Replacement
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic
Eocene

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Coryell Intrusions

LITHOLOGY: Limestone
Greenstone
Garnetite
Skarn
Alkali Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Bluebell (Lot 2136) is located 1 kilometre south of Wilgress Lake and 1 kilometre east of the Emma (Lot 591) claim (082ESE062).

Turn of the century work on the property consisted of a 40-metre shaft, with 27 metres of drifting at the 30-metre level and 9 metres of drifting at the bottom. The claim was Crown granted in 1903 to W. Shaw and T.W. Stack.

In 1921, M. Blufontein rehabilitated the old shaft and drove an 8-metre drift. A 1-metre wide mineralized zone, with small lenses of chalcopyrite and pyrite, occurs in limestone near a contact with greenstone (Triassic Brooklyn Group). Epidote and garnet was observed. Alkalic syenite cuts the rocks (Eocene Coryell Intrusions).

In 1937, F. Simpson drove a short drift, 15 metres below the surface, from a 40-metre shaft. In 1939, L. Hanley developed the property with 87 metres of drifting, 113 metres of crosscutting, 3 metres of sinking and 2 metres of raising. Production in 1938 and 1939 totalled 353 tonnes, yielding 8055 grams of gold, 3795 grams of silver and 422 kilograms of copper.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1900-870; 1901-1064; 1903-246; *1921-186; 1926-447; 1937-D33;
1938-A33; 1939-36,91
EMPR ASS RPT 178, 5356, 21329, 25423
EMPR BC METAL MM00824
EMPR GEOLOGY 1976, pp. 1-13
EMPR INDEX 3-190
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2

BIBLIOGRAPHY

EMPR PRELIM MAP 59
EMPR PF (Statement of Material Facts, Consolidated Boundary
Exploration Limited, July 16, 1976)
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 65-1, pp. 56-60; 67-42; 79-29
CIM Transactions Vol. 5 (1902), pp. 365-378
WWW
[http://www.infomine.com/index/properties/BLUEBELL_\(ORO_DENERO\).html](http://www.infomine.com/index/properties/BLUEBELL_(ORO_DENERO).html)

DATE CODED: 1985/07/24
DATE REVISED: 1997/07/02

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE189**

NATIONAL MINERAL INVENTORY:

NAME(S): **YANKEE GIRL (L.1558)**, YANKEE BOY (L.1559), BELL (L.1560)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E 082E01W
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 01 59 N
LONGITUDE: 118 30 22 W
ELEVATION: 1200 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5432223
EASTING: 389914

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Gold Silver Lead

MINERALS

SIGNIFICANT: Chalcopyrite Malachite Galena Pyrite Sphalerite
Gold Silver Argentite Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic Anarchist Unnamed/Unknown Formation

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

CHALCOPYRITE, MALACHITE, GALENA AND PYRITE ARE ASSOCIATED WITH NORTH-WESTERLY DIPPING, IRREGULAR QUARTZ VEINS WHICH OCCUPY SHEAR ZONES CUTTING GREENSTONE OF THE ANARCHIST GROUP.

BIBLIOGRAPHY

EMPR AR 1900-872,993; 1901-1065; 1905-185; 1919-163; 1920-155;
*1924-165-166; 1925-194; 1930-228; 1931-121; 1934-D1;
1935-A25,D11,G52; 1936-D56; 1937-A36,D32; 1938-A33; 1939-36,91;
1940-24,77; 1941-25,62; 1942-26,59
EMPR ASS RPT 10879, 13038
EMPR BULL 1-84(1932)

DATE CODED: 1985/07/24
DATE REVISED: 1999/12/31

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE190**

NATIONAL MINERAL INVENTORY: 082E2 Ag1

NAME(S): **SIL**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 00 N
LONGITUDE: 118 38 04 W
ELEVATION: 1100 Metres

NORTHING: 5432448
EASTING: 380535

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Silica

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Industrial Min.
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: GROUP
Upper Paleozoic Knob Hill

FORMATION: FORMATION
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

A small impure body of quartz occurs in phyllite near a diorite dyke.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1967-320
EMPR ASS RPT 3917, 4795
EMPR GEM 1973-564
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE191**

NATIONAL MINERAL INVENTORY: 082E2 Cu14

NAME(S): **RICHMOND (L.2918)**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 12 N
LONGITUDE: 118 35 40 W
ELEVATION: 1333 Metres

NORTHING: 5429051
EASTING: 383388

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Copper
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Disseminated Massive
CLASSIFICATION: Unknown
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Paleozoic
Lower Jurassic

GROUP

Knob Hill

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Lexington Intrusion

LITHOLOGY: Siliceous Rock
Serpentinite
Quartz Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The property is located at the International Boundary on the east side of Goosmus Creek, 10 kilometres south-southeast of Greenwood. Access to the property is mainly by a network of farm, logging and old mining roads connected to the Phoenix to Lone Star haulage road that passes through the property.

The deposits are at the head of the valley of Goosmus Creek, a southeasterly flowing tributary of the Kettle River in Ferry County, Washington State. The important mineral exposures are on the southerly and southwesterly facing slopes overlooking Goosmus Creek. Elevations in the area range from 1,000 metres on the creek to 1,500 metres on surrounding ridges. Outcrops are relatively scarce and glacial till is as much as 75 metres thick in places. Geological knowledge from surface work is augmented by abundant information from diamond drilling.

The copper-gold bearing Lexington quartz porphyry and associated veins have been explored since 1890 by numerous adits, shafts and drill holes on both sides of the Canada - U.S.A. border. In 1900, development at the City of Paris mine, above what is now known as the Lexington Main zone, yielded 1,900 tonnes of ore grading 13.7 grams per tonne gold, 71 grams per tonne silver and 3.12 per cent copper. In a similar geological setting, the Lone Star mine in Washington State produced 5,900 tonnes of ore from 1890 to 1920 that yielded 1.1 grams per tonne gold, 6.5 grams per tonne silver and 2.6 per cent copper. An additional 360,000 tonnes was mined from the Lone Star open-pit by Granby Mining and Smelting Company in 1977-78. United States Borax and Chemical Corporation and Ryan Exploration Company Limited continued exploration, including diamond drilling, from 1989 to 1992. In 1993, Britannia Gold Corporation acquired ownership of the mineralized zones on both sides of the boundary. To the end of 1993, 474 drill holes representing a total of 31,720 metres of drilling, were completed. Britannia Gold Corporation's 1993 Work Program Review reports "an extensive and detailed geological and geophysical program" and "13 B.Q. Drill Holes - 1862.2 metres" indicating good results including "a

CAPSULE GEOLOGY

significant copper-gold intercept in B-93-6 with 11.8 grams per tonne gold and 1.094 per cent copper over 14.3 metres."

The upper valley of Goosmus Creek, at the northern extremity of the Republic graben, is underlain by a southeasterly striking belt of pre-Permian to early Mesozoic rocks, comprising gneiss, schist, chert, argillite, limestone and metavolcanic rocks. These units are cut by a wide variety of intrusions including Jurassic to Tertiary felsic stocks and dikes, and several large fault bounded serpentinite bodies.

The most important structure is a southeast trending fault zone that hosts the principal mineral deposits and separates Permian rocks (Attwood Group) on the southwest from the predominantly pre-Permian rocks (Knob Hill Group) on the northeast. This fault zone is part of a regional northeasterly dipping thrust system into which ultramafic rocks have been emplaced before intrusion of the Lexington porphyry.

The inferred location of the Bacon Creek fault is the western boundary of the Republic graben. Although this northerly trending fault is of regional importance, movement is Tertiary age and related to the pulaskite and other relatively young crosscutting dikes that clearly post-date the principal copper-gold mineralizing event at Lexington and Lone Star. Copper is not an important constituent of the epithermal gold-quartz fissure veins associated with the Bacon Creek Fault at Republic or other mineralized localities in the Republic graben.

The oldest rocks are assigned to the Knob Hill Group. This group comprises a great thickness of highly deformed Devonian-Carboniferous ribbon cherts, phyllites, thin limestone lenses and some greenstone. These rocks are east of, and form the hangingwall of the serpentinite and Lexington quartz porphyry. The Attwood Group, composed mainly of black argillite, sandstone and andesites, occurs west of the serpentinite and Lexington quartz porphyry. The 'Anarchist Series' comprises a poorly defined mainly Paleozoic assemblage that includes Knob Hill and Attwood rocks.

Serpentinite underlies much of the headwater area of Goosmus Creek. This unit is believed to be part of a dismembered ophiolite of probable Paleozoic age that was emplaced prior to the Lexington quartz porphyry. In the map-area the unit comprises two subparallel easterly-dipping lenses, each several kilometres in length, following Goosmus Creek valley. The westerly (footwall) lens is suspected to merge with the north end of the Bacon Creek fault. The easterly (hangingwall) lens follows a separate fault strand that lies immediately east of the Lone Star and City of Paris mines. Alteration consists mainly of talc and carbonate (listwanite) in lenses and seams associated with the principal faults and fissures. Magnetite is concentrated locally, possibly by metasomatic processes, at the contacts of the Lexington quartz porphyry.

The Lexington intrusion is an elongate quartz porphyry emplaced in a shear zone that extends at least three kilometres southeast from the source area of Goosmus Creek, through the City of Paris mine, across the International Boundary to the Lone Star mine. The intrusion follows the serpentinite and is postulated to be cogenic with the relatively undeformed larger quartz feldspar porphyry body exposed one to two kilometres to the west and similar rocks in the vicinity of the Midway mine 14 kilometres further west. These bodies intrude various Paleozoic units including chert, schist, argillite, limestone and greenstone of the Knob Hill and Mount Attwood groups (rocks that also occurs as xenoliths and screens within the intrusion). The Lexington quartz porphyry contains subhedral quartz phenocrysts and composite quartz eyes set in a matrix of small polygonal plagioclase crystals (mostly altered to clay), chloritized biotite and interstitial fine-grained quartz and feldspar. Where strongly altered such as in the Lone Star pit the unit has been transformed locally into a quartz-sericite or chlorite schist. Quartz comprises 35 per cent of the rock and the chemical analysis shows SiO₂ 72 per cent and Al₂O₃ 16 per cent. Mylonitization has commonly destroyed or reduced the size of phenocrysts, and because of this some cataclastic facies resemble fine-grained felsic volcanic rock but without the embayed quartz and fresh, zoned feldspar phenocrysts typical of the Tertiary rhyolite and dacite in the region.

A series of small dikes, stocks and sills, petrologically

CAPSULE GEOLOGY

similar to the Coryell Intrusions, Shasket Creek alkalic intrusions and lavas of the Marron Formation occur throughout the area. These are relatively fresh and undeformed and thought to be early Tertiary age. An unusually high concentration of diorite and pulaskite dikes of this suite is found on Mount McLaren and Rusty Mountain. The dikes commonly trend northerly parallel to a prominent set of cross joints that are generally associated with the tension fractures of the Republic graben. Northeast of Goosmus Creek they coalesce to form irregular-shaped bodies adjacent to the serpentinite.

The age of the Lexington quartz porphyry was previously thought to be Cretaceous or early Tertiary; however, determination of U/Pb isotope ratios on accessory zircon from diamond-drill core from the City of Paris area gives an Early Jurassic and a Precambrian age. The lower concordia intercept (200 Ma) indicates the age of intrusion; the upper concordia intercept (2445 Ma) is believed to be the result of a relict zircon fraction assimilated from early Proterozoic basement rocks.

The Lexington-Lone Star copper-gold deposits are spatially and temporally related to the Lexington quartz

The copper-gold mineralization on the Richmond property and at the Lone Star mine is confined to two bodies: the Pit zone and the Northwest zone. The Pit zone mineralization at the Lone Star mine is characterized by disseminated and stockwork sulphides that generally comprise several per cent of the rock grading > 0.3 per cent copper. Weak molybdenite mineralization (mostly on slip surfaces) is also scattered throughout the Pit zone. Walls in the pit are altered to green chloritic rocks. Pit zone mineralization occurred at the same time or soon after the emplacement of the quartz porphyry along the principal northwest trending shear zone, possibly with some later remobilization into limbs of a northerly plunging arch delineated by structure contours at the top of the footwall serpentinite.

Northwest zone mineralization on the Richmond property, occurs predominantly within the top portion of the footwall serpentinite. Although this zone is known only from drilling through overburden, the foliated textures in the core indicate the mineralization may be controlled by a gently-dipping thrust at the contact of the footwall serpentinite and the quartz porphyry. Furthermore, some of the best intercepts in the Northwest zone appear to coincide roughly with the axis of the northerly-plunging arch which marks the top of the footwall serpentinite in the pit area.

Exploration on the Lexington claims has focussed on gold and silver bearing quartz veins and stockworks; low grade sulphide disseminations and fillings on fractures and shear zones. The most widespread mineralization is pyrite (1 to 5 per cent) and chalcopyrite occurring as disseminations and fillings on lacy fractures in the Lexington quartz porphyry. The general tenor of this low grade mineralization is shown by analyses of 120 core samples which assayed from 0.1 to 0.3 per cent copper and 0.05 to 0.25 gram per tonne gold. The rock is commonly leached at surface with fractures being coated with limonite and malachite or black manganese oxide. Fractures are well developed locally within the quartz porphyry and the intensity of mineralization appears to be proportional to this development. Pyrite disseminations occur most commonly near the margins of the intrusion. The higher concentrations of copper mineralization are confined mostly to the upper and lower margins of the quartz porphyry and within about 30 metres of the enclosing serpentinite. However, detailed diamond drill cross sections indicate as many as three separate zones.

Workers at the City of Paris mine explored and developed a system of discontinuous quartz veins extending for about 300 metres along the upper contact of the Lexington quartz porphyry and in the overlying serpentinite. The accessory minerals in these veins include pyrite, chalcopyrite, galena, sphalerite and, less commonly, tetrahedrite. Up until 1969, the hangingwall of the quartz porphyry was thought to be the best locus for concentrations of chalcopyrite but later drilling by Lexington Mines Ltd. has shown that the footwall is also favourable. Of the 28 diamond drill holes and 18 percussion holes completed in the vicinity of the City of Paris workings, 13 intersected mineralization that appears to lie in a continuous zone, known as the Lexington Main zone. Abundant copper mineralization has also been discovered in the

CAPSULE GEOLOGY

serpentinite adjacent to the Lexington quartz porphyry. For example, the footwall serpentinite exposed immediately west of the Lexington portal on Goosmus Creek contains pyrite, magnetite and chalcopyrite impregnations within talc alteration in shear zones with copper grades ranging from 0.36 to 0.76 per cent.

The Lexington Main zone is a gently plunging, sinuous deposit 365 metres long, enriched in pyrite, chalcopyrite and hematite that lies near the footwall of the Lexington quartz porphyry below the City of Paris portal. At the west end, the Lexington Main zone projects to surface. At the southeast end it is cut off by a pulaskite dike. Possible mineralized offsets have been found in isolated drill holes further south. A diamond drill hole in the middle of the zone returned an assay result of 15.3 grams per tonne gold and 2.0 per cent copper across 11.6 metres. However, the average grade of 4.5 grams per tonne gold, 4.1 grams per tonne silver and 0.93 per cent copper reported by Phendler (1974) is probably more representative of the reserve. Microprobe analyses of relatively fresh, slightly fractured ore shows that the gold is associated with pyrite occurring as discrete inclusions and along grain boundaries. No gold has been observed on fractures or associated with chalcopyrite.

The age of mineralization is mainly older than the Tertiary dikes that cut across the ore and younger than the listwanite alteration associated with thrusting and probably about the same age as the Lexington quartz porphyry. In the Midway mine area, 16 kilometres to the west, reports that sills and dikes, correlative with the Lexington quartz porphyry, intrude the serpentinite and a slightly older microdiorite body.

Very commonly, these intrusives are altered, with saussuritized feldspars, pervasive clay and quartz-pyrite-sericite alteration, and less often, silicification. The very strong correlation between this alteration and the presence of the quartz-feldspar porphyry, not only at this location but elsewhere on the grid and in the Greenwood Camp, suggests that the emplacement of the intrusion was responsible for the alteration.

Pyritic lenses and concentrations of magnetite near the contacts of the porphyry are believed to be related to the intrusive event.

Reserves in the mineralized zones, reported by Ebisch (1991), are as follows:

Zone (grams per tonne)	Tonnes	Copper (per cent)	Gold
Lone Star Pit	17.60 million	0.52	0.3
Northwest (Border)	0.95 million	1.04	1.0
Lexington	1.10 million	0.93	4.5

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
 EMPR AR 1899-849; 1903-248; 1905-254; 1907-219; 1967-226; 1968-228
 EMPR GEM 1970-425
 EMPR MR MAP 6 (1932)
 EMPR OF 1990-25
 EMPR P 1986-2
 EMPR PRELIM MAP 59
 GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
 GSC OF 481; 637; 1969
 GSC P 67-42; 79-29

DATE CODED: 1985/07/24
 DATE REVISED: 1985/07/24

CODED BY: GSB
 REVISED BY: GSB

FIELD CHECK: N
 FIELD CHECK: N

MINFILE NUMBER: **082ESE192**

NATIONAL MINERAL INVENTORY:

NAME(S): **KENO (L.1319)**, OPHIR (L.1066), BOMBINI,
 KEYSTONE (L.1155), EVENING STAR (L.1681), WELLINGTON CAMP

STATUS: Past Producer
 REGIONS: British Columbia
 NTS MAP: 082E02E
 BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 03 58 N
 LONGITUDE: 118 35 26 W
 ELEVATION: 1350 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5436024
 EASTING: 383819

LOCATION ACCURACY: Within 500M

COMMENTS: The adjoining Keno and Orphir claims are centred on a low ridge just east of the Lone Star haulage road, 3.9 kilometres south of Phoenix and 6.8 kilometres southeast of Greenwood.

COMMODITIES: Silver Gold Copper Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Sphalerite Gold Silver
 Pyrrhotite Magnetite
 ASSOCIATED: Quartz Magnetite
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
 CLASSIFICATION: Mesothermal Epigenetic Skarn
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au K01 Cu skarn
 COMMENTS: Fissure fillings.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Attwood	Undefined Formation	
Upper Paleozoic	Knob Hill	Undefined Formation	
Jurassic			Nelson Intrusions

LITHOLOGY: Greenstone
 Limestone
 Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
 TERRANE: Slide Mountain
 METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1979
 SAMPLE TYPE: Trench

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	8.2000	Grams per tonne
Gold	20.0000	Grams per tonne

COMMENTS: Sampling on the Ophir vein, across 0.64, along a 55-metre length.
 REFERENCE: Christopher, 1986 in Skyhawk Resources Inc., Prospectus, Nov.26, 1987.

CAPSULE GEOLOGY

The adjoining Keno and Orphir claims are centred on a low ridge just east of the Lone Star haulage road, 3.9 kilometres south of Phoenix and 6.8 kilometres southeast of Greenwood.

Production from 1935 to 1940 was 294 tonnes of ore yielding 1.2 kilograms of gold, 101 kilograms of silver, 2.7 tonnes of lead, and 0.3 tonne of zinc.

Upper Paleozoic rocks on the Keno and Ophir claims consist of volcanics and metasediments of the Attwood Group and greenstones of the Knob Hill Group. These are cut by granodiorites of the Jurassic Nelson Intrusions.

By 1933, development on the property consist of an 11-metre deep shaft on a banded quartz vein (Keno vein) varying from 8 centimetres to 0.9 metre in width and striking 023 degrees northeast. The vein has been traced up for 250 metres and contains pyrite, galena, sphalerite, gold, and silver. Chalcopyrite, pyrite, pyrrhotite and magnetite are also disseminated in limestones. About 46 metres south of this shaft, a crosscut was started with the idea of

CAPSULE GEOLOGY

intersecting the shaft vein about 46 metres south and 8 metres lower in elevation. A second steeply dipping quartz vein intersects the first striking diagonally, at about 110 degrees, across to the shaft. This vein is 15 to 50 centimetres wide and 200 metres in length.

Additional geophysical and geochemical work, sampling, trenching and drilling were done intermittently from 1963 to 1986. Sampling in 1979, on the 310-degree striking Ophir vein averages 20 grams per tonne gold and 8.2 grams per tonne silver across 0.64 metre, along a 55-metre length (Christopher, 1986).

BIBLIOGRAPHY

- EMPR AR 1894-756, map after 758; 1899-849; 1900-991; 1925-197, 449; 1928-242; *1933-161; 1935-A25; 1936-D57; 1938-A34; 1940-24; 1967-231
- EMPR PF (*Christopher, P.A. (1986): Geochemical, Geological and Geophysical Report on the Bombini property, in Skyhawk Resources Inc., Prospectus, November 26, 1987; Kim, H.(1987): Report on the Preliminary Geological, Geophysical and Geochemical Exploration of the Winner Claim Group, in Silver Lady Resources Inc., Prospectus, March 1987, in 082ESE163)
- EMPR ASS RPT 1618, 8985, 12017, 19672
- EMPR BC METAL MM00876
- EMPR INDEX 3-202
- EMPR P *1986-1, p.37
- EMPR OF 1990-25
- EMPR MR MAP 6 (1932)
- EMPR PRELIM MAP 59
- EMPR AEROMAG MAP 8497G
- GSC OF 481; 637; 1969
- GSC P 67-42; 79-29
- GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A
- GCNL #133, 1985

DATE CODED: 1985/07/24
DATE REVISED: 1996/06/05

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE193**

NATIONAL MINERAL INVENTORY: 082E2 Cu14

NAME(S): **COLLEEN**, SIBLEY (L.2223)

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 30 N
LONGITUDE: 118 36 04 W
ELEVATION: 1400 Metres

NORTHING: 5435175
EASTING: 383030

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP
Permian Attwood

FORMATION
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1967-231
EMPR ASS RPT 1618
EMPR GEM 1969-308
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 690
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 2770, 22707, 24666, 24768, 25423
EMPR GEM 1967-233, 1968-235; 1970-431
EMPR OF 1990-25
EMPR P 1986-2
EMPR PF (Kettle River Resources Ltd. Website (Nov.1999): Greenwood
Area, 1 p.)
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
PR REL Kettle River Resources Ltd., June 28, July 11, 1996
WWW <http://www.kettleriver.com>

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/15

CODED BY: GSB
REVISED BY: TGS

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE195**

NATIONAL MINERAL INVENTORY:

NAME(S): **SD 8**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 20 N
LONGITUDE: 118 23 04 W
ELEVATION: 1220 Metres

NORTHING: 5441966
EASTING: 398988

LOCATION ACCURACY: Within 500M

COMMENTS: Showing #3, Map #3 (Assessment Report 3172); #3 Showing (Assessment Report 7621).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Uraninite

ASSOCIATED: Quartz Biotite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated

CLASSIFICATION: Magmatic Pegmatite

TYPE: O02 Rare element pegmatite - NYF family

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Upper Proterozoic
Tertiary

Grand Forks Gneiss
Unnamed/Unknown Informal

LITHOLOGY: Pegmatite
Biotite Gneiss
Granite
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP:

GRADE: Amphibolite

CAPSULE GEOLOGY

The area is underlain by the Upper Proterozoic Grand Forks Gneiss, a raised fault block of high grade metamorphic rocks which are part of the Monashee gneiss Complex. The rocks consist of biotite, amphibole, and pyroxene schists and gneisses, interlayered with pegmatites and leucogranite, with minor quartzites and calcareous rocks. These rocks are cut by north trending quartz monzonite dykes and stocks and dykes and small stocks of biotite-hornblende diorite and quartz diorite with minor amphibolite and pyroxenite. Regional foliation of the gneisses strikes northwest and dips 20 to 50 degrees southwest.

Principal host rocks for the uranium mineralization are quartz-rich pegmatites which are interlayered with the biotite gneisses and schists. Uraninite is associated with biotite clots in the pegmatite. A radiometric anomaly measuring 30 by 10 metres is associated with several pegmatite lenses in biotite gneiss. A SRAT SPP2 scintillometer gave readings up to 4000 counts per second (background is 80-100 counts per second) (Assessment Report 5585).

BIBLIOGRAPHY

EMPR ASS RPT *3172, *5585, 5964, 6536, 7621
EMPR EXPL 1975-11; 1976-18; 1977-12,13
EMPR GEM 1971-374
CIM BULL Aug. 1980, p. 100
GSC MAP 6-1957
GSC OF 1969
GSC P 69-22

DATE CODED: 1987/03/05
DATE REVISED: 1988/01/08

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE197**

NATIONAL MINERAL INVENTORY: 082E2 Cu14

NAME(S): **MAY ALICE**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 36 N
LONGITUDE: 118 45 34 W
ELEVATION: 1233 Metres

NORTHING: 5441175
EASTING: 371596

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Replacement
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic
Eocene

GROUP

Brooklyn
Penticton

FORMATION

Unnamed/Unknown Formation
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sharpstone Conglomerate
Volcanic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

COPPER MINERALIZATION IN SKARN.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1967-227
EMPR ASS RPT 7919
EMPR EXPL 1979-18
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE198**

NATIONAL MINERAL INVENTORY: 082E2 Cu14

NAME(S): **LOIS**, BRUCE (L.918)

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 24 N
LONGITUDE: 118 49 58 W
ELEVATION: 1067 Metres

NORTHING: 5431668
EASTING: 366012

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Brooklyn	Unnamed/Unknown Formation	

LITHOLOGY: Sharpstone Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

PYRITE, MAGNETITE, AND CHALCOPYRITE OCCUR AS DISSEMINATIONS, COARSE CLOTS AND FRACTURE FILLINGS IN CALC-SILICATE SKARNS. OPEN, GENTLY FOLDED ANARCHIST SHARPSTONE CONGLOMERATES AND SKARNS ARE CUT BY TERTIARY DYKES.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1966-243, 1967-225, 1968-227
EMPR ASS RPT 809, 2049, 11535
EMPR GEM 1969-350
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE199**

NATIONAL MINERAL INVENTORY: 082E2 Cu14

NAME(S): **RIFF**, FIR

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 42 N
LONGITUDE: 118 59 10 W
ELEVATION: 833 Metres

NORTHING: 5438064
EASTING: 354963

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Copper Nickel

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Paleozoic

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP
Upper Paleozoic Anarchist

FORMATION
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Serpentinite
Greenstone
Phyllitic Schist
Chert
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

NO GEOLOGICAL DESCRIPTION AVAILABLE.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT 2882, 12006
EMPR GEM 1970-411
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE200**

NATIONAL MINERAL INVENTORY: 082E2 Mg1

NAME(S): **ROCK CREEK**, ROCK CREEK DOLOMITE, DOLO,
MIGHTY WHITE DOLOMITE, DOLOWHITE

STATUS: Producer
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:
LATITUDE: 49 01 13 N
LONGITUDE: 118 58 01 W
ELEVATION: 1003 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location centred on quarry, 4.5 kilometres southeast of Rock
Creek.

Open Pit

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5431574
EASTING: 356195

COMMODITIES: Dolomite

MINERALS

SIGNIFICANT: Dolomite
ASSOCIATED: Quartz Talc Antigorite
MINERALIZATION AGE: Paleozoic
ISOTOPIC AGE: DATING METHOD: Fossil MATERIAL DATED: Bryozoa/corals

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R10 Dolomite
DIMENSION: 100 x 100 Metres STRIKE/DIP: 157/80 TREND/PLUNGE:
COMMENTS: Bedding in vicinity of quarry.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Paleozoic GROUP: Knob Hill FORMATION: Undefined Formation IGNEOUS/METAMORPHIC/OTHER:
DATING METHOD: Fossil
MATERIAL DATED: Bryozoa/corals

LITHOLOGY: Dolomite
Hornblende Gneiss
Amphibolite
Talc Chlorite Schist

HOSTROCK COMMENTS: Fossils indicate Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: QUARRY REPORT ON: Y
CATEGORY: Indicated YEAR: 1972
QUANTITY: 9000000 Tonnes
COMMODITY: Dolomite GRADE: 94.0000 Per cent
COMMENTS: Probable reserves.
REFERENCE: Financial Post Survey of Mines 1972, page 214.

ORE ZONE: QUARRY REPORT ON: Y
CATEGORY: Measured YEAR: 1972
QUANTITY: 15400000 Tonnes
COMMODITY: Dolomite GRADE: 94.0000 Per cent
COMMENTS: Proven reserves.
REFERENCE: Financial Post Survey of Mines 1972, page 214.

CAPSULE GEOLOGY

A dolomite lens in altered metasediments and volcanics of the Carboniferous or Permian Knob Hill Group outcrops over a 100 by 100 metre area along the top of a knoll on the southeast portion of Lot 446S, 4.5 kilometres south-southeast of the community of Rock Creek. The lens is embedded largely in hornblende gneiss (amphibolite). An irregular band of talc-chlorite schist lies along the hanging wall contact. Bedding strikes 157 to 180 degrees and dips 40 to 80

CAPSULE GEOLOGY

degrees east. A schistosity strikes 150 degrees and dips 30 to 50 degrees west.

The lens contains massive, fine to very fine-grained, white dolomite with scattered grains, patches and veinlets of quartz and a trace of talc. A 2 to 10 metre thick band of gneiss lies within the deposit. Two samples of crushed dolomite taken from a stockpile averaged 30.73 per cent CaO, 18.16 per cent MgO, 6.55 per cent insolubles, 0.32 per cent R2O3, 0.135 per cent Fe2O3, 0.01 per cent MnO, 0.0025 per cent P2O5, 0.015 per cent SO3 and 44.04 per cent ignition loss (Geology, Exploration and Mining in British Columbia 1971, page 456). A sample of dolomite quarried in 1987 contained 30.90 per cent CaO, 19.30 per cent MgO, 5.90 per cent SiO2, 0.26 per cent Al2O3, 0.13 per cent Fe2O3, 0.02 per cent MnO, 0.05 per cent P2O5, 0.02 per cent TiO2, 0.10 per cent K2O, 0.02 per cent Na2O and 41 per cent ignition loss (P. Chaput, personal communication, 1989). In 1972, the deposit was estimated to contain 15.4 million tonnes of proven (measured geological) reserves and 9.0 million tonnes of probable (indicated reserves) (Financial Post Review of Mines 1972, page 214; Open File 1992-1).

The property was first operated on an intermittent basis by New Dolomite Mines Ltd. between 1972 and 1977. Dolowhite Mines Ltd. continued quarrying dolomite from 1978 to 1982. Mighty White Dolomite Ltd. currently operates the quarry, producing crushed dolomite for agricultural, landscaping and decorative purposes. Between 1972 and 1988, 60,000 tonnes of dolomite were quarried.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR EXPL 1978-285,286; 1985-A48; 1996-A14
EMPR GEM 1970-411; *1971-456; 1972-586
EMPR INF CIRC 1984-1, p. 37; 1985-1, p. 46; 1996-1, p. 10; 1997-1, p. 13; 1998-1, p. 15
EMPR MINING 1981-1985 p. 58; 1986-1987 p. 85; 1988 p. 84
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1992-1; 1992-9; 1992-18, p. 116; 1994-1
EMPR P 1986-2
EMPR PRELIM MAP 59
EMR MP CORPFILE (New Dolomite White Mining Ltd.)
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1550A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29, pp. 11,12
FIN POST Survey of Mines 1972, p. 214
PERS COMM, Z.D. Hora, 1978

DATE CODED: 1985/07/24
DATE REVISED: 1989/09/11

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE201**

NATIONAL MINERAL INVENTORY:

NAME(S): **BUBAR**, RUBARB

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 18 N
LONGITUDE: 118 54 10 W
ELEVATION: 1067 Metres

NORTHING: 5437166
EASTING: 361029

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Copper Nickel

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP
Upper Paleozoic Knob Hill

FORMATION Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone
Chert
Serpentinite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

LEAD AND ZINC ANOMALIES FOUND IN GREENSTONE AND
ULTRABASIC ROCKS; NICKEL ANOMALIES IN GREENSTONE-
TUFF, SERPENTINE, CHERT AND LIMESTONE.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT 2950, 12502
EMPR GEM 1970-411
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE202**

NATIONAL MINERAL INVENTORY:

NAME(S): **WIND, FALL**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 13 18 N
LONGITUDE: 118 50 46 W
ELEVATION: 1200 Metres

NORTHING: 5453738
EASTING: 365574

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Molybdenum Zinc

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Nelson Intrusions

LITHOLOGY: Granitic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

NELSON GRANITES, QUARTZ-DIORITE AND DIORITE INTRUDE VALHALLA GNEISS AND GREENSTONES, ALL CUT BY PULASKITE OF TERTIARY AGE. GEOCHEMICAL ANOMALIES SUGGEST THAT AN ERODED PENDANT OF ANARCHIST SEDIMENTS ONCE EXISTED, AND CARRIED COPPER, MOLYBDENUM, AND ZINC.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT 2949
EMPR GEM 1970-412, 1971-382
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE203**

NATIONAL MINERAL INVENTORY:

NAME(S): **MABEL-JENNY**, JENNY, MABEL,
TYEE, WHALES, CORONATION,
NORTH COPPER CAMP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:
LATITUDE: 49 07 49 N
LONGITUDE: 118 50 07 W
ELEVATION: 1420 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of shaft from Assessment Report 21787.

Open Pit

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5443560
EASTING: 366117

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Arsenopyrite
ASSOCIATED: Quartz
ALTERATION: Silicate
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein Shear Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	
Triassic	Brooklyn	Undefined Formation	
Middle Jurassic			Nelson Intrusions
Eocene			Coryell Intrusions

LITHOLOGY: Greenstone
Quartz Diorite
Chert Hornfelsed Breccia
Siliceous Hornfels
Granodiorite
Limestone
Syenite
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional Contact
PLUTONIC BELT: Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Okanagan Highland
GRADE: Greenschist Hornfels

CAPSULE GEOLOGY

The Mabel-Jenny is about 12 kilometres west of Greenwood and 4 kilometres west of Copper Mountain. Access to the property is by gravel road from Highway 3, along the Ingram Creek drainage. The Prince of Wales showing (082ESE255) lies about 1 kilometre to the west and the Pen showing (082ESE118) lies about 3 kilometres to the northeast.

The claims were owned by D. Spooner and associates in 1935. Development then or before consisted of a shaft and several open-cuts. Between 1972 and 1977, Westbridge Mining Company Ltd trenched the area. In 1988, Interwest Resources Inc. carried out a soil survey. In 1990 and 1991, Canamax Resources Inc. conducted geological mapping, soil sampling and rock chip sampling.

The claims are underlain by Upper Paleozoic Knob Hill Group argillite, greenstone and chert. The Knob Hill is locally overlain by the sharpstone conglomerate and limestone of the Triassic Brooklyn Group and arkose and tuffs of the Eocene Kettle River Formation (Penticton Group). Intrusive rocks include granodiorite on the Middle Jurassic Nelson Batholith and syenite and diorite of the Eocene Coryell Intrusives.

Two zones of disseminated and shear-related, veined pyrrhotite-pyrite mineralization occur in Knob Hill metasediments. A 900 by 200 metre, northeast trending zone occurs just west of a northeasterly-striking fault, in the area of the open-cuts. Another

CAPSULE GEOLOGY

400 by 250 metre area occurs 900 metres to the north. Samples contained up to 2.28 grams per tonne gold (Assessment Report 21767). Pyrite-arsenopyrite, gold-bearing quartz veins also occur in quartz diorite and greenstones. A sample taken near the Coronation shaft contained up to 9.2 grams per tonne gold (Assessment Report 21767).

BIBLIOGRAPHY

EMPR AR *1935-D5-D7
EMPR ASS RPT 21377, *21767, 22581
EMPR GEM 1972-38
EMPR EXPL 1976-E22-E23; 1977-E18
EMPR FIELDWORK 1975-19; 1988-11-18
EMPR OF 1990-25
EMPR AEROMAG MAP 8497G
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC MAP 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/03/03

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE204**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRAND FORKS CLAY**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 06 N
LONGITUDE: 118 29 58 W
ELEVATION: 1167 Metres

NORTHING: 5434282
EASTING: 390442

LOCATION ACCURACY: Within 5 KM

COMMENTS:

COMMODITIES: Clay

MINERALS

SIGNIFICANT: Clay
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform	Massive	Unconsolidated
CLASSIFICATION: Industrial Min.	Residual	
TYPE: B06 Fireclay		E07 Sedimentary kaolin

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Recent			Unnamed/Unknown Informal

LITHOLOGY: Clay

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Okanagan Highland

BIBLIOGRAPHY

EMPR BULL 30-51

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE205**

NATIONAL MINERAL INVENTORY:

NAME(S): **KIWI**, RADAR 3

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 25 N
LONGITUDE: 118 24 24 W
ELEVATION: 1120 Metres

NORTHING: 5442150
EASTING: 397369

LOCATION ACCURACY: Within 500M
COMMENTS: Kiwi showing (Assessment Report 7621).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT:	Uraninite	Uranophane	Autunite	Carnotite
ASSOCIATED:	Quartz	Biotite		
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Magmatic Pegmatite
TYPE: O02 Rare element pegmatite - NYF family

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic			Grand Forks Gneiss
Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Pegmatite
Biotite Gneiss
Biotite Schist
Quartz Monzonite
Diorite
Amphibolite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks	
METAMORPHIC TYPE: Regional	RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: DRILLHOLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1978
SAMPLE TYPE: Drill Core	
COMMODITY	GRADE
Uranium	0.0300 Per cent
COMMENTS: Sample over 1.0 metre.	
REFERENCE: Assessment Report 7621.	

CAPSULE GEOLOGY

The area is underlain by the Upper Proterozoic Grand Forks Gneiss, a raised fault block of high grade metamorphic rocks which are part of the Shuswap Metamorphic Complex. The rocks consist of biotite, amphibole, and pyroxene schists and gneisses, interlayered with pegmatites and leucogranite, with minor quartzites and calcareous rocks. These rocks are cut by north trending quartz monzonite dykes and stocks and dykes and small stocks of biotite-hornblende diorite and quartz diorite with minor amphibolite and pyroxenite. Regional foliation of the gneisses strikes northwest and dips 20 to 50 degrees southwest.

Principal host rocks for the uranium mineralization are quartz-rich pegmatites which are interlayered with the biotite gneisses and schists. Uraninite is associated with biotite clots in the pegmatite and uranophane and autunite occur along fractures and joints in the pegmatite and biotite gneiss. Distribution of the uranium is erratic within the pegmatites, which seldom exceed 2.0 metres in thickness. Two north trending radioactive areas, 200 metres apart were drilled with the best intersection being 0.03 per cent uranium over 3.0 metres (Assessment Report 7621).

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 704
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *6449, 6536, *7621
EMPR Dist. Geol. Monthly Report, May 1976-2
EMPR EXPL 1977-12,13
EMPR OF 1990-32, p. 21
GSC MAP 6-1957
GSC OF 1969
GSC P 69-22
CIM BULL Aug. 1980, p. 100

DATE CODED: 1985/07/24
DATE REVISED: 1987/03/05

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE206**

NATIONAL MINERAL INVENTORY:

NAME(S): **WOLFARD (L.1702)**, ST. LAWRENCE (L.9635), SILVERTON (L.9625),
V.A. (L.964), KATE FR. (L.1701)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 00 N
LONGITUDE: 118 33 06 W
ELEVATION: 965 Metres

NORTHING: 5434174
EASTING: 386623

LOCATION ACCURACY: Within 500M
COMMENTS: Adits on Map 2 in Assessment Report 6199.

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Pyrrhotite Chalcopyrite
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Replacement Epithermal

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Tertiary	Knob Hill	Kettle River	

LITHOLOGY: Volcanic Wacke
Tuffaceous Argillite
Limestone
Andesite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The claim group is underlain by a Tertiary sedimentary sequence that is similar to the sequence of the Phoenix mine area. Intruding these sediments are dykes and small plugs of Tertiary diorite. A large area on the western side and along the southeast side of the claims is covered by thin overburden.

BIBLIOGRAPHY

EMPR AR 1900-991,993; *1905-184-185; 1906-161; 1910-248
EMPR ASS RPT *6199, 13038

DATE CODED: 1985/07/24
DATE REVISED: 1985/07/24

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE207**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAP, JOHN**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 06 N
LONGITUDE: 118 26 34 W
ELEVATION: 1433 Metres

NORTHING: 5447171
EASTING: 394829

LOCATION ACCURACY: Within 500M
COMMENTS: RED ORE, ASS. RPT. 6432

COMMODITIES: Ochre

MINERALS

SIGNIFICANT: Ochre
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Industrial Min. Residual

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Map and adjoining John claims are located just east of the Granby River, 16 kilometres north of Grand Forks. The principal activity on this property in 1976 was the investigation of red earth for decorative and/or agricultural purposes. The property is accessed directly by paved road from Grand Forks.

The red earth appears to be the result of weathering of pyritiferous volcanic rocks in the form of boulders and cobbles intermixed with other slopewash debris along the southwest base of Volcanic Mountain. The red ochre soil is the matrix to coarse clastic debris (mainly pyritiferous greenstone), in the approximate ratio of 5:1, underlying a 400 x 200 metre area in the southwest corner of the Map claim. The remainder of the Map and adjoining John claims is underlain by glacial till and alluvial deposits.

BIBLIOGRAPHY

EMPR ASS RPT 6432, 7941
EMPR GEM 1977-252

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE209**

NATIONAL MINERAL INVENTORY:

NAME(S): **W.S., CARLTON**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 24 N
LONGITUDE: 118 06 22 W
ELEVATION: 1000 Metres

NORTHING: 5447314
EASTING: 419378

LOCATION ACCURACY: Within 500M
COMMENTS: Within 500 metres of Coryell.

COMMODITIES: Lead Zinc Gold Silver Copper

MINERALS

SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Skarn Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au K02 Pb-Zn skarn
COMMENTS: Primarily fracture fillings, with minor replacements.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Unnamed/Unknown Group Mount Roberts

LITHOLOGY: Limestone
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Slide Mountain

CAPSULE GEOLOGY

There are two adits on polymetallic veins following irregular fractures in limestone and lime schist with some accompanying chloritization.

BIBLIOGRAPHY

EMPR AR 1917-449; 1925-445; *1949-156; 1950-40; 1952-141;
*1953-111-112;
1954-48,122
EMPR BC METAL MM00945 (included with W.S., 082ESW063 in error)
EMPR INDEX 3-218; 4-126
GSC MAP 6-1957

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/07

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE210**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIDWAY LIMESTONE-WEST LENSE**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 30 N
LONGITUDE: 118 51 25 W
ELEVATION: 625 Metres

NORTHING: 5431896
EASTING: 364250

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location centered on sample site Number 1, on Highway 3 (Minister of Mines Annual Report 1960, page 140).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
MINERALIZATION AGE: Middle Triassic
ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Microfossils

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary

Massive
Industrial Min.

TYPE: R09 Limestone

SHAPE: Regular

DIMENSION: 700 x 600 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Bedding generally strikes northwest, dips northeast.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Triassic

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

DATING METHOD: Fossil

MATERIAL DATED: Microfossils

LITHOLOGY:

Limestone
Chert
Greywacke
Argillite
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: ROADCUT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1960

SAMPLE TYPE: Bulk Sample

COMMODITY

GRADE

Limestone

52.1000

Per cent

COMMENTS: Across 4.3 metres of limestone. Grade given for calcium oxide.

Grade is in per cent.

REFERENCE: Minister of Mines Annual Report 1960, page 143, Sample 1.

CAPSULE GEOLOGY

A limestone lens of the Middle Triassic Brooklyn Formation outcrops on the Kettle River 6.5 kilometres west-northwest of Midway and continues northeastward up the west slope of a hill for approximately 700 metres, where it becomes overlain by conglomerate. Exposures along Highway 3 and the Canadian Pacific Railway reveal an east-west width of 600 metres. Bedding generally strikes northwest and dips northeast despite some folding and faulting.

The lens is comprised of mixed, medium grained, light grey to white limestone and fine grained, black limestone with some interbedded greywacke, argillite and light grey chert. The limestone is cut by numerous fractures along which the limestone is commonly bleached white. Numerous dykes have intruded the limestone. A chip sample taken along 4.3 metres of limestone exposed in a road cut along Highway 3 contained 52.10 per cent CaO, 0.37 per cent MgO, 6.70 per cent insolubles, 0.52 per cent R2O3, 0.80 per cent Fe2O3, 0.07 per cent MnO, 0.18 per cent sulphur and 40.12 per cent ignition loss

CAPSULE GEOLOGY

(Minister of Mines Annual Report 1960, p. 143, Sample 1).

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR *1960-140,143
EMPR FIELDWORK 1988, pp. 11-17
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1992-18, pp. 120, 121
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29, pp. 14-17
CANMET RPT *811, Part 5, pp. 193,202

DATE CODED: 1985/07/24
DATE REVISED: 1989/09/11

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE211**

NATIONAL MINERAL INVENTORY:

NAME(S): **BROADWATER**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E08E
BC MAP:

Open Pit

MINING DIVISION: Nelson
Trail Creek
UTM ZONE: 11 (NAD 83)

LATITUDE: 49 28 02 N
LONGITUDE: 118 05 11 W
ELEVATION: 427 Metres

NORTHING: 5479964
EASTING: 421285

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location centered on lakeshore outcrop, 0.8 kilometres south of the Broadwater Post Office (Minister of Mines Annual Report 1959, page 174).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Silicate Pyrite
MINERALIZATION AGE: Paleozoic
ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Various Fossils

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R09 Limestone
DIMENSION: 400 x 150 Metres
COMMENTS: Bedding attitude at lakeshore exposure of limestone.

STRIKE/DIP: 065/55S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP
Pennsylvan.-Permian Undefined Group
DATING METHOD: Fossil
MATERIAL DATED: Various fossils

FORMATION
Mount Roberts

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Argillite
Dike

HOSTROCK COMMENTS: The Geological Survey of Canada (Open File 1969) correlates the limestone with an unnamed Ordovician to Devonian unit.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Selkirk Mountains

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1959
SAMPLE TYPE: Chip
COMMODITY Limestone GRADE
51.5500 Per cent

COMMENTS: Taken across entire lakeshore exposure. Grade given for calcium oxide.

REFERENCE: Minister of Mines Annual Report 1959, page 173, Sample 7.

CAPSULE GEOLOGY

A band of limestone outcrops on the east side of Lower Arrow Lake, 0.8 kilometres south of the Broadwater Post Office. The limestone has been correlated with the Pennsylvanian to Permian Mount Roberts Formation or (according to the Geological Survey of Canada Open File 1969) an unnamed Ordovician to Devonian unit. The band continues eastward up the mountain side for at least 400 metres and possibly up to 8 kilometres. The band is 150 metres wide on the lake. Bedding strikes 065 degrees and dips 55 degrees southeast.

The band consists of medium to coarse grained, grey and white thin bedded limestone containing some silicates and pyrite. Argillite interbeds occur on the south side of the deposit. Numerous randomly orientated dykes intrude the limestone on the north side. A sample taken across the entire lake side exposure contained 51.55 per cent CaO, 0.35 per cent MgO, 6.62 per cent insolubles, 0.26 per cent R2O3, 0.20 per cent Fe2O3, 0.045 per cent MnO, 0.016 per cent P2O5,

CAPSULE GEOLOGY

0.03 per cent sulphur, 41.06 per cent ignition loss and 0.13 per cent water (Minister of Mines Annual Report 1959, p. 173, Sample 7).

A small quarry was opened up on the deposit near the lakeshore, 46 metres from the southern edge of the limestone band. The limestone was used to manufacture lime sometime earlier this century but no production figures are available.

BIBLIOGRAPHY

EMPR AR *1959-173,174
EMPR OF 1992-18, pp. 116, 117
GSC MAP 1736A, 6-1957
GSC OF 1969
CANMET RPT 811, pp. 206-207

DATE CODED: 1985/07/24
DATE REVISED: 1989/09/11

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE212**

NATIONAL MINERAL INVENTORY:

NAME(S): **DEFIANCE (L.758)**, SKYLARK CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 06 10 N
LONGITUDE: 118 39 47 W
ELEVATION: 1050 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5440213
EASTING: 378613

LOCATION ACCURACY: Within 500M

COMMENTS: The Defiance (Lot 758) is located at an elevation of 1050 metres, northeast of Greenwood and adjacent to the Strathmore claim (082ESE215).

COMMODITIES: Silver Gold Lead

MINERALS

SIGNIFICANT: Galena Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Brooklyn	Unnamed/Unknown Formation	Greenwood Pluton
Jurassic-Cretaceous			

LITHOLOGY: Granodiorite
Volcaniclastic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Slide Mountain
PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Defiance (Lot 758) is located at an elevation of 1050 metres, northeast of Greenwood and adjacent to the Strathmore claim (082ESE215).

The claim was Crown Granted to H.J. Cole and G.F. Steele in 1898. R. Lee developed the claim in 1924 with open cuts, shafts and cross-cuts. Production in 1893 and 1924 totalled 4 tonnes, resulting in 48,054 grams of silver, 187 grams of gold and 122 kilograms of lead.

A quartz vein occurs in granodiorite of the Jurassic-Cretaceous Greenwood Stock; it is mineralized with galena, pyrite, gold and silver. Ore extraction is difficult due to flat-lying faults. Volcaniclastics of the Triassic Brooklyn Formation lie east of the granodiorite.

BIBLIOGRAPHY

EMPR AR 1894-755; 1898-1195; 1903-167; 1913-141; *1924-167
EMPR INDEX 3-194
EMPR BC METAL MM00929 (included with Skomac, 082ESE045)
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC OF 481; 1969
GSC P 67-42; 79-29
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1997/03/05
DATE REVISED: 1997/03/05

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE213**

NATIONAL MINERAL INVENTORY:

NAME(S): **CORYELL**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:

Open Pit

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 09 21 N
LONGITUDE: 118 05 36 W
ELEVATION: 975 Metres

NORTHING: 5445355
EASTING: 420281

LOCATION ACCURACY: Within 500M

COMMENTS: Quarry located on east side of Canadian Pacific Railway, 14 kilometres northeast of the south end of Christina Lake (Parks, 1917, Figure 2).

COMMODITIES: Granite Dimension Stone Building Stone

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Commodity is granite.
ASSOCIATED: Augite Biotite Hornblende Orthoclase Andesine
 Perthite Diopside Magnetite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Magmatic Industrial Min.
TYPE: R03 Dimension stone - granite
DIMENSION: 30 x 15 Metres
COMMENTS: Dimensions given for quarry up to 1914.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Eocene Coryell Intrusions

LITHOLOGY: Coarse Grained Augite Hornblende Monzonite
Black Granite
Coarse Grained Hornblende Biotite Pulaskite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Selkirk Mountains

CAPSULE GEOLOGY

Black granite was quarried for building stone on the Canadian Pacific Railway near Coryell, 14 kilometres northeast of the south end of Christina Lake.

The quarry is developed in the Middle Eocene Coryell batholith near its northwestern margin. This intrusive body is comprised of a core of light reddish to brownish pink, medium to coarse grained hornblende-biotite pulaskite that is enclosed in a more mafic marginal phase.

The stone is described as a coarse grained augite-biotite-hornblende monzonite that exhibits white minerals up to 12 millimetres in diameter together with jet black and greenish minerals arranged in a gneissic manner. In thin section the rock consists of orthoclase, andesine, microperthite, biotite, diopside partly altered to greenish hornblende and a few grains of magnetite. Overall the stone is of fairly uniform grain size and displays a dark speckled appearance on cut surfaces. The stone is occasionally feldspar porphyritic and sometimes marred by fine light stringers.

Jointing at the quarry is extensive. An ill-defined and discontinuous sheeting, dipping 30 degrees west, towards the railway tracks, is cut by a vertical dipping joint set striking 020 degrees and numerous other irregular cross joints. Large blocks of stone can still be recovered in places at the quarry despite the stone being so badly shattered. Physical properties are as follows (Parks, 1917, page 121):

Specific gravity	2,901
Crushing strength (dry) (lbs/sq.in.)	23,291
Transverse strength (lbs/sq.in.)	2,278
Shearing strength (lbs/sq.in.)	2,752

The quarry was operated by the Canadian Pacific Railway in the early 1900's, supplying building stone for the construction of

CAPSULE GEOLOGY

retaining walls, culverts, tunnels and bridge piers along the railway between Midway and Nelson. The stone was also used for structural purposes in Grand Forks and Greenwood, such as in the Greenwood Post Office. No production figures are available.

BIBLIOGRAPHY

EMPR OF 1990-25
GSC MEM 38
GSC BULL 239, p. 141
GSC MAP 6-1957
GSC OF 481, 1969
Parks, W.A. (1917): *Report on the Building and Ornamental Stones of Canada; Canada Department of Mines, Mines Branch, Report 452, Vol. 5., pages 120-122.
Carr, G.F. (1955): *The Granite Industry of Canada; Canada Department of Mines and Technical Surveys, Mines Branch, Report 846, pages 179-180.

DATE CODED: 1987/04/24
DATE REVISED: 1991/03/04

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE214**

NATIONAL MINERAL INVENTORY:

NAME(S): **GABE**

MINING DIVISION: Greenwood

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E07E 082E07W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 28 00 N
LONGITUDE: 118 35 04 W
ELEVATION: Metres

NORTHING: 5480542
EASTING: 385199

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located 8 kilometres east of Gable Mountain about 75 kilometres north of Grand Forks (Fieldwork 1996).

COMMODITIES: Granite Dimension Stone Building Stone

MINERALS

SIGNIFICANT: Orthoclase Plagioclase Quartz
ASSOCIATED: Biotite Magnetite Pyrite Apatite Zircon
 Clinozoisite
ALTERATION: Chlorite
ALTERATION TYPE: Chloritic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Magmatic Industrial Min.
TYPE: R03 Dimension stone - granite

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary			Okanagan Batholith

LITHOLOGY: Quartz Syenite
Granite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Gabe prospect is located 8 kilometres east of Gable Mountain and 75 kilometres north of Grand Forks.

The prospect is owned and operated by J. Kemp and D. Hairsine.

The rose pink rock occurs in a boulder field approximately 1 by 2 kilometres and an outcrop about 30 by 50 metres across. The stone is uniform, pink quartz syenite of the Cretaceous-Tertiary Okanagan Batholith suite and has no inclusions or inhomogeneities. Part of the area is underlain by porphyritic rock. No exfoliation features, joints or microfracturing have been observed.

The stone is a light pink, fine to medium-grained quartz syenite. The texture is fairly uniform and even with no large phenocrysts. Major constituents are orthoclase, plagioclase and quartz. Minor constituents are biotite, chlorite, magnetite, pyrite (less than 0.5 per cent), apatite, zircon and clinozoisite. The rock shows no staining and only a little alteration in the form of green dots of chlorite after biotite. There are a few short (less than 2 centimetre), tight cracks scattered in the rock.

BIBLIOGRAPHY

EMPR EXPL 1992, pp. 107-116
EMPR FIELDWORK 1994, pp. 365-369; *1996, pp. 301-306
GSC MAP 1736A; 1957-6
GSC OF 481; 1969
GSC P 89-1E
Focus on Industrial Minerals, Vol. 3, Issue 1
Streckeisen, A. (1976): To Each Plutonic Rock its Proper Name; Earth and Science Reviews, Volume 12, pages 1-33.

DATE CODED: 1995/12/14
DATE REVISED: 1997/02/05

CODED BY: GO
REVISED BY: ZDH

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE215**

NATIONAL MINERAL INVENTORY:

NAME(S): **STRATHMORE (L.1018)**, SAN BERNARD

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 15 N
LONGITUDE: 118 40 04 W
ELEVATION: 910 Metres

NORTHING: 5440375
EASTING: 378272

LOCATION ACCURACY: Within 500M

COMMENTS: The Strathmore claim (Lot 1018) is centered 1.7 kilometres northeast of the Greenwood post office and 0.5 kilometre east of Highway 3 at 910 metres elevation. Access is directly from Greenwood municipality.

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Arsenopyrite Galena Pyrite Stibnite Gold
Silver

ASSOCIATED: Quartz

COMMENTS: Clay alteration present.

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epigenetic
COMMENTS: Fissure filling.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic-Cretaceous			Greenwood Pluton

LITHOLOGY: Granodiorite
Granite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Strathmore claim (Lot 1018) is centred 1.7 kilometres northeast of the Greenwood post office and 0.5 kilometre east of Highway 3 at 910 metres (3000 feet) elevation. Access is directly from Greenwood municipality.

Production from this property between 1898 and 1925 amounted to 198 tonnes of ore containing gold, 4.8 kilograms; silver, 533 kilograms; and lead, 4.1 tonnes. The property was mined about 1900 and some ore shipped. The claim was Crown Granted in 1906.

The old workings consist of a tunnel, shaft, several drifts on the vein, and crosscuts. Development work consisted of 91 metres of drifting, a 12-metre shaft, and 14 metres of open cutting and trenching. The vein varies in size from 2.5 centimetres to 0.3 metre and is mineralized with galena, pyrite, zinc, gold, and silver in a gangue of quartz. The country rock is granite and diorite of the Jurassic-Cretaceous Greenwood Stock.

A few metres to the north of the old workings the vein has been faulted in an easterly direction, throwing it up hill. The ore lying to the north of the fault was discovered in 1924 and subsequently mined. After the upper part of the vein was stoped out, a crosscut was driven below to develop the vein at a greater depth. Considerable difficulty was experienced owing to the lead being pinched to such an extent that it was unrecognizable from several other mineralized fissures. After crosscutting for about 18 metres, the miners decided to follow the first vein cut. At about 30 metres from the crosscut the fracture opened into an ore shoot grading 7 to 57 grams per tonne gold, 4 to 5.5 kilograms per tonne silver and 1.95 to 7.15 per cent lead.

In the period 1909 to 1913, a long tunnel (915 metres) known as the 'Greenwood - Phoenix Tramway Bore' was driven eastward under the Strathmore claim from the Nelson claim. A vein was cut 518 metres from the portal which was undoubtedly the Strathmore vein, although it was further into the hill than expected.

CAPSULE GEOLOGY

No work has been completed on the property in recent years and there is no indication of any ore reserves.

BIBLIOGRAPHY

EMPR AR 1894-map after 758; 1896-577; 1897-581,582,588;
1898-1124; 1902-181; 1903-167; 1904-213; 1905-181,183,256;
1907-109,215; 1913-141; 1914-334; 1915-446; *1924-167;
1925-197,445
EMPR BC METAL MM00934
EMPR INDEX 3-215
EMPR P *1986-2, p. 54
EMPR OF 1990-25
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC OF 481; 1969
GSC P 45-20; 67-42; 79-29
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1986/02/20
DATE REVISED: 1997/03/07

CODED BY: BNC
REVISED BY: BNC

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082ESE216**

NATIONAL MINERAL INVENTORY: 082E2 Ag 3

NAME(S): **LAST CHANCE (L.753)**, SKYLARK CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 40 N
LONGITUDE: 118 39 22 W
ELEVATION: 1050 Metres

NORTHING: 5439276
EASTING: 379099

LOCATION ACCURACY: Within 500M

COMMENTS: The Last Chance claim (Lot 753) is on the road to Phoenix and centred 1.6 kilometres northeast of the Greenwood post office. This Last Chance should not be confused with the Last Chance (Lot 644) associated with the Skomac Mine (082ESE045), which lies 5.5 kilometres to the southwest, northwest of Boundary Falls. There is also another Last Chance (Lot 660) located near the Copper Queen (082ESE054), on Copper Mountain, 10 kilometres to the east-northwest.

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Tetrahedrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Talc
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Attwood	Undefined Formation	
Jurassic-Cretaceous			Greenwood Pluton

LITHOLOGY: Serpentinite
Granodiorite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
COMMENTS: Lenses.

PHYSIOGRAPHIC AREA: Okanagan Highland
Plutonic Rocks

CAPSULE GEOLOGY

The Last Chance claim (Lot 753) is on the road to Phoenix and centred 1.6 kilometres northeast of the Greenwood post office at an elevation of about 1050 metres. This Last Chance should not be confused with the Last Chance (Lot 644) associated with the Skomac mine (082ESE045), which lies 5.5 kilometres to the southwest, northwest of Boundary Falls. There is also another Last Chance (Lot 660) located near the Copper Queen (082ESE054), on Copper Mountain, 10 kilometres to the east-northwest.

Production in 1904, 1905, 1920 and 1935 totalled 704 tonnes, resulting in 4665 grams of gold and 3,026,166 grams of silver.

The claim was staked in 1894 by George Cook and associates, at which time a 12-metre deep shaft was sunk. In 1898, a two-compartment shaft was developed to 30 metres without intersecting ore and the property was abandoned. The mine was operated by the Spokane boundary Mining Co. (D. McVicar) in 1904 and 1905. A crosscut was driven from the 30-foot level in the shaft and production occurred in those two years. In 1920, the claim was Crown Granted to James Poggie and some ore from the dump was shipped; by 1921 the workings were flooded. A sample from the dump assayed 15.8 grams per tonne gold, 2784 grams per tonne silver, 2 per cent lead, and 5 per cent zinc. W.E. McArthur did minor development in 1935 and shipped a small amount of ore.

The Last Chance and adjacent claims were held in 1969 as part of Mineral Lease ML 277. Work by Sarco Investments Ltd. was confined mainly to the Skylark (082ESE011). In 1974, H.H. Shear held the Last Chance and Skylark; work was confined to the Skylark. The lease lapsed and the Last Chance was optioned from J.A. MacLean by Greenwood Explorations Ltd. in 1975.

CAPSULE GEOLOGY

Mineralization consists of pyrite, galena, sphalerite and tetrahedrite in irregular quartz and carbonate veins and lenses in a sheared talc-carbonate alteration zone of an ultrabasic intrusion (sepenitine). This intrusion follows the contact locally between the Jurassic-Cretaceous Greenwood granodiorite pluton on the west and metamorphosed Permo-Carboniferous Attwood Group rocks (limestone) on the east.

Ore reserve estimates are unavailable.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1894-756-map after 758; 1896-582; 1897-576,582,591;
1898-1124; 1905-180,181; 1913-141; 1920-156,350; 1921-182;
1935-A25
EMPR ASS RPT 542, 1819, 5181, 5925, 8396, 8422
EMPR BC METAL MM00948 (also includes other claims)
EMPR BULL 1 (1932), p. 84
EMPR EXPL 1976-E20
EMPR GEM 1969-306; 1974-33
EMPR INDEX 3-202
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR *P 1986-2, pp. 37,39
EMPR PRELIM MAP 59
EMR MP CORPFILE (Greenwood Explorations Ltd.)
Jury, Ray G. (1975): Skylark Property: in Greenwood Explorations
Ltd., Statement of Material Facts, Dec. 1975.
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1986/05/16
DATE REVISED: 1997/03/07

CODED BY: BNC
REVISED BY: BNC

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082ESE217**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUEJAY**, RUSTY, BLUE JAY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 24 27 N
LONGITUDE: 118 55 12 W
ELEVATION: 1310 Metres

NORTHING: 5474530
EASTING: 360720

LOCATION ACCURACY: Within 500M

COMMENTS: The Bluejay property is located 38 kilometres north of Rock Creek and 12 kilometres southeast of Beaverdell. The claims are between 1250 and 1350 metres elevation on the southern part of Kloof Ridge, 1 kilometre east of Crouse Creek. Access to the property from Westbridge on Highway 33 is north via the Christian Valley road for 29.0 kilometres, then westerly 6.7 kilometres on old logging roads to the centre of the property. The Main Zone was located from Assessment Report 14456.

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite Arsenopyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
COMMENTS: Fracture fillings.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	Nelson Intrusions
Jurassic			

LITHOLOGY: Greenstone
Porphyritic Andesite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Bluejay property is located 38 kilometres north of Rock Creek and 12 kilometres southeast of Beaverdell. The claims are between 1250 and 1350 metres elevation on the southern part of Kloof Ridge, 1 kilometre east of Crouse Creek. Access to the property from Westbridge on Highway 33 is north via the Christian Valley road for 29.0 kilometres, then westerly 6.7 kilometres on old logging roads to the centre of the property.

This area has been explored intermittently since the first influx of prospectors in 1878. Surface programs consisting of panning, lode prospecting and trenching led to the discovery of silver, gold and copper in the region in 1896. However, up to the 1960's there are few written records of exploration on Kloof Ridge. In 1968, R. Rutherglen staked the Rusty claims, to cover a series of old workings, and in the same year Amax Exploration Ltd. carried out a soil and rock chip geochemical program for molybdenum, copper and nickel.

In 1981, F. McNeill and R. Rutherglen staked the Bluejay claims in the same area and, in 1983, Titan Resources optioned the property to explore the 'Bluejay Shear Zone' that comprised the old workings. A series of pits and shafts were excavated along the gossanous shear. Reported assays of samples from the workings, on a 200-metre segment of the shear, range from 0.7 to 37 grams per tonne gold. In 1985 the property was optioned to Valar Resources Ltd. Gewargis Geological Consulting Inc. was then hired to conduct an exploration program which included a survey grid, geological mapping, blasting, geochemical sampling and geophysical surveys (magnetic and VLF-EM).

MINFILE NUMBER: **082ESE217**

CAPSULE GEOLOGY

In 1986, the same company completed a diamond drill program (4 holes, 235.6 metres) that produced disappointing results. In 1990, the claims were optioned to Lucky 7 Exploration Ltd. that did an experimental biogeochemical survey of the property using Lodgepole pine twigs. (The survey yielded up to 15 part per million silver in ashed samples.)

The traditional geological maps show that much of Kloof Ridge, the wedge-shaped area between Crouse Creek and the east fork of the Kettle River is underlain by volcanic and metasedimentary rocks of the Upper Paleozoic Anarchist Group. However, detailed mapping of the property shows that the Anarchist rocks occur as scattered roof pendants in the Jurassic Nelson dioritic batholith.

The main mineralized structure on the property is a discordant shear zone in fine- to medium-grained porphyritic andesite (Anarchist Group). The volcanic rocks trend northwest and dip moderately southwest. The shear zone, up to 2 metres wide, strikes approximately 150 degrees and dips 45 to 70 degrees southwest, cutting obliquely across the geological contacts. A number of late, steeply dipping cross-fractures have caused several 1- to 15-metre offsets in the main shear zone.

Andesitic rocks within the shear zone have been silicified, brecciated and mended with later silica. Silica has also flooded the surrounding country rocks forming 'cherty andesite'. The brecciated and silicified part of the shear zone is 250 metres long, but the best developed sulphide-enriched sections (marked by a series of pits) occur within the central 160-metre segment. An examination of the pits reveals that some of the sulphide mineralization occurs in the narrow cross-fractures for distances of 3 to 6 metres from the main shear zone. Massive pyrite and pyrrhotite (up to 50 per cent), and lesser chalcopyrite and arsenopyrite (trace to 1 per cent) have filled the late openings. The best gold values (up to 35 grams per tonne) appear to be associated with the late chalcopyrite and arsenopyrite mineralization. Drill hole intersections indicate that the extent of sulphide mineralization and gold is less than that observed on surface - the best gold intercepts were 2.6 grams per tonne over 0.6 metre and 1.7 grams per tonne over 1.3 metre from hole DDH 86-3 (Assessment Report 14456).

BIBLIOGRAPHY

EMPR ASS RPT 13496, *14456, 21385
EMPR EXPL 1985-C26; 1986-C35
EMPR AEROMAG MAP 7686G
GSC OF 481; 637; 1969
GSC MEM 79
GSC MAP 37A; 6-1957; 1500A; 1736A

DATE CODED: 1985/12/06
DATE REVISED: 1996/09/03

CODED BY: AFW
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE218**

NATIONAL MINERAL INVENTORY:

NAME(S): **PBE 14**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 55 N
LONGITUDE: 118 26 59 W
ELEVATION: 600 Metres

NORTHING: 5439430
EASTING: 394175

LOCATION ACCURACY: Within 500M

COMMENTS: Showing #7a, Map #3 (Assessment Report 3172).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Uranophane
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic
TYPE: I15 Classical U veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Tertiary			Coryell Intrusions

LITHOLOGY: Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Uranophane is reported to occur in syenite, probably of the Tertiary Coryell Intrusion. The northerly trending Granby Fault lies to the east.

BIBLIOGRAPHY

EMPR ASS RPT *3172
EMPR GEM 1971-374
GSC P 69-22
GSC MAP 6-1957
GSC OF 1969
EMPR OF 1990-25

DATE CODED: 1987/03/06
DATE REVISED: / /

CODED BY: LDJ
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE219**

NATIONAL MINERAL INVENTORY:

NAME(S): **PBE 18**, U 2

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 10 N
LONGITUDE: 118 26 54 W
ELEVATION: 770 Metres

NORTHING: 5438039
EASTING: 394250

LOCATION ACCURACY: Within 500M

COMMENTS: Showing No. 6, Map #3 (Assessment Report 3172).

COMMODITIES: Uranium Tungsten

MINERALS

SIGNIFICANT: Uranophane
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Epigenetic
TYPE: I15 Classical U veins I12 W veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic
Tertiary

GROUP

Undefined Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Coryell Intrusions

LITHOLOGY: Conglomerate
Siltstone
Limestone
Monzonite
Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1977

SAMPLE TYPE: Grab

COMMODITY

GRADE

Uranium

0.0490

Per cent

REFERENCE: Assessment Report 6695.

CAPSULE GEOLOGY

A unit consisting of sharpstone conglomerate, siltstone, and limestone of the Triassic Brooklyn Formation is overlain by Tertiary andesites (Marron Formation, Penticton Group). These are cut by syenite and monzonite (Coryell Intrusions) and are sheared parallel to the northerly trending Granby River Fault, which lies to the east.

A seven metre long rusty zone in the sharpstone conglomerate is radioactive. Uranophane is likely the uranium mineral present. A grab sample assayed 0.049 per cent uranium (Assessment Report 6695).

About 250 metres to the southwest, a quartz vein in syenite contained 11.4 per cent W₃ (Assessment Report 3172).

BIBLIOGRAPHY

EMPR ASS RPT *3172, *5585, *6695, 7235
EMPR GEM 1971-374
EMPR EXPL 1978-15; 1979-14
GSC P 69-22
GSC MAP 6-1957
GSC OF 1969
EMPR OF 1990-25; 1991-17

DATE CODED: 1987/03/06
DATE REVISED: / /

CODED BY: LDJ
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE220**

NATIONAL MINERAL INVENTORY:

NAME(S): **HO 16**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 10 N
LONGITUDE: 118 25 04 W
ELEVATION: 950 Metres

NORTHING: 5434291
EASTING: 396411

LOCATION ACCURACY: Within 500M
COMMENTS: Showing #10, Map #3 (Assessment Report 3172).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Uraninite
ASSOCIATED: Quartz Biotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Magmatic Pegmatite
TYPE: O02 Rare element pegmatite - NYF family

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic			Grand Forks Gneiss

LITHOLOGY: Pegmatite
Quartz
Hornblende Gneiss

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP:

GRADE: Amphibolite

CAPSULE GEOLOGY

Uraninite apparently occurs in pegmatites within interlayered quartzite and hornblende-rich gneisses of the Upper Paleozoic Grand Forks Gneiss.

BIBLIOGRAPHY

EMPR ASS RPT *3172, 6534
EMPR GEM 1971-374
GSC P 69-22
GSC MAP 6-1957
GSC OF 1969

DATE CODED: 1987/03/06
DATE REVISED: / /

CODED BY: LDJ
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE221**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT ATTWOOD**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 07 N
LONGITUDE: 118 37 24 W
ELEVATION: 1575 Metres

NORTHING: 5434499
EASTING: 381391

LOCATION ACCURACY: Within 500M
COMMENTS: Southwest slope of Mount Attwood.

COMMODITIES: Talc

MINERALS

SIGNIFICANT: Talc
ASSOCIATED: Magnetite
ALTERATION TYPE: Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Epigenetic Hydrothermal Industrial Min.
TYPE: M07 Ultramafic-hosted talc-magnesite
COMMENTS: 15-25 centimetre long streaks and lenses of "pure" talc.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic Cretaceous	Knob Hill	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Serpentinite
Ultramafic Rock
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Talc is found southwest of Mount Attwood, on both sides of two large 'knockers' of Permo-carboniferous chert of the Knob Hill Group, which are contained within a Cretaceous serpentinitized ultramafite body. The talc forms a three metre high bluff and generally contains disseminated magnetite, but with streaks and lenses 15 to 25 centimetres long, of pure talc (Church, 1986).

BIBLIOGRAPHY

EMPR GEM *1970-413-425
EMPR P 1986-2
GSC P 79-29
MINES BRANCH RPT *803-61
GSC EG SERIES #2, pp. 49-50
EMPR OF 1988-19

DATE CODED: 1988/01/13
DATE REVISED: / /

CODED BY: MM
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE222**

NATIONAL MINERAL INVENTORY:

NAME(S): **HAAS CREEK**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 20 N
LONGITUDE: 118 41 54 W
ELEVATION: 990 Metres

NORTHING: 5436874
EASTING: 375962

LOCATION ACCURACY: Within 500M

COMMENTS: On south bank of Haas Creek, about one kilometre north of Skomac mine,
1.5 kilometres southwest of Greenwood.

COMMODITIES: Talc

MINERALS

SIGNIFICANT: Talc
ASSOCIATED: Carbonate
ALTERATION: Serpentine
ALTERATION TYPE: Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Epigenetic Hydrothermal Industrial Min.
TYPE: M07 Ultramafic-hosted talc-magnesite

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Attwood	Undefined Formation	

LITHOLOGY: Serpentinite
Serpentinized Ultramafic
Diorite
Talc Carbonate Schist
Meta Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Haas Creek prospect is located on the south side of Haas Creek 1.5 kilometres southwest of Greenwood. The property is accessed from a series of interconnected old logging roads leading from the Deadwood area to the north and from the Skomac mine 1 kilometre to the south. The target of exploration (a minor amount of drilling and trenching), dating from the early 1980s, is a series of talc lenses hosted in a band of serpentinite intruding a fault zone that follows the lower course of Haas Creek to Boundary Creek. The fault and serpentinite is at the contact between the 'Old Diorite' unit (Upper Paleozoic) and Permo-Carboniferous metavolcanics of the Attwood Group. The sheared marginal phases of the serpentinite are commonly altered to talc and talc-carbonate schist.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR GEM *1970-413-425
EMPR INF CIRC 1985-1, p. 48
EMPR MR MAP 6 (1932)
EMPR OF 1988-19, 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
MINES BRANCH RPT *803-61
GSC EG SERIES #2, pp. 49-50
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1988/01/13
DATE REVISED: / /

CODED BY: MM
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE223**

NATIONAL MINERAL INVENTORY:

NAME(S): **MABEL**, MOUNT WRIGHT

MINING DIVISION: Greenwood

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 20 N
LONGITUDE: 118 37 29 W
ELEVATION: 1425 Metres

NORTHING: 5431198
EASTING: 381219

LOCATION ACCURACY: Within 500M

COMMENTS: On the southwest slope of Mount Wright (Property File - McCammon, 1967).

COMMODITIES: Talc Soapstone

MINERALS

SIGNIFICANT: Talc
COMMENTS: Blue massive talc.
ALTERATION: Serpentine Talc Carbonate
ALTERATION TYPE: Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Hydrothermal Replacement Industrial Min.
TYPE: M07 Ultramafic-hosted talc-magnesite

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Carboniferous	Anarchist	Unnamed/Unknown Formation	

LITHOLOGY: Serpentinite
Soapstone

HOSTROCK COMMENTS: Anarchist Group is Carboniferous or older in age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel Kootenay
PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

McCammon, in 1967, reported several occurrences of talc-carbonate alteration in slips in serpentinite, outcropping on the southwest slope of Mount Wright.
These occurrences are hosted in a band of serpentinite of the Carboniferous or older Anarchist Group that extends northwestward from the United States border across Mount Wright to McCarren Creek for 5 kilometres. On the Mabel property, a trench cut through serpentinite exposed a distinctive blue massive talc (N. Church, personal communication, 1970).

BIBLIOGRAPHY

EMPR GEM *1970-413-425
EMPR PF (McCammon, J.W. (1967): Field notes on Mount Wright Area)
EMPR P 1986-2
EMPR OF 1988-19
EMPR MAP 59
GSC MEM 21
GSC P 45-20; 79-29
GSC OF 481; 1969
GSC MAP 6-1957; 828; 45-20A; 1500A; 1736A
GSC EC GEOL #2, pp. 49-50
EMR MINES BRANCH RPT #803-61 (Spence, 1940)

DATE CODED: 1988/01/13
DATE REVISED: 1988/01/13

CODED BY: MM
REVISED BY: MM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE224**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOONLIGHT**

MINING DIVISION: Greenwood

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 22 N
LONGITUDE: 118 37 18 W
ELEVATION: 1676 Metres

NORTHING: 5449782
EASTING: 381840

LOCATION ACCURACY: Within 1 KM

COMMENTS: Open cuts and shallow shafts developed on a northern extension of a quartz vein from the Roderick Dhu claim (L.598, Minfile 082ESE125). 750 metres south-southwest from the summit of Mount Roderick Dhu, west of Jewel Lake, 11.75 kilometres north-northeast from the town of Greenwood (Minister of Mines, Annual Report 1921-G184; Assessment Report 1814).

COMMODITIES: Silver Gold Lead

MINERALS

SIGNIFICANT: Galena Pyrite Telluride
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H08 Alkalic intrusion-associated Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Carboniferous Anarchist Undefined Formation

LITHOLOGY: Schistose Quartz Wacke
Schistose Lithic Wacke

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Undivided Metamorphic Assembl. Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1921
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 137.1000 Grams per tonne
Gold 3.4000 Grams per tonne

REFERENCE: Minister of Mines Annual Report 1921, page G184.

CAPSULE GEOLOGY

The Jewel Lake area is underlain by a complex of metamorphic rocks mostly of sedimentary and volcanic origin correlative with the Carboniferous or older Anarchist Group, and a large granodiorite intrusion correlative to the Juro-Cretaceous Nelson Plutonic Rocks. Small dykes and sill-like bodies, feeders to nearby Tertiary lavas, pervade these units.

Locally the metamorphosed volcanic and sedimentary rocks are not always distinguishable, both being fine-grained and medium or dark coloured with primary structures such as bedding and flow banding being confused with foliation or gneissosity. Generally the sedimentary rocks are brittle and quartz-rich, however, compositions vary and some biotitic varieties have the same competence as the amphibole-rich volcanic rocks. These rocks are locally called quartzites but few are true quartzites and more appropriate terms would be quartz wacke or lithic wacke. The massive character of the volcanic rocks is due to a combination of intense regional metamorphism and primary structures. Field and petrographic data indicate that at least some of the original rock formed as a result of massive accumulations of lava flows and pillow lava. Crosscutting feeder dykes and sills are significant and contribute to the massive aspect of the volcanic rocks. The metamorphosed schistose volcanic rocks are compositionally

CAPSULE GEOLOGY

basalts. These metasedimentary and metavolcanic rocks form part of the Carboniferous (Pennsylvanian-Mississippian) or older Anarchist Group.

Igneous intrusions in the Jewel Lake camp include a large Lower Cretaceous granodiorite pluton and a host of younger pulaskite and lamprophyre dykes. The granodiorite is correlative with Nelson Plutonic Rocks. It is a homogeneous medium-grained grey body which intrudes the metavolcanic rocks along a northwest trending contact in the southwest part of the camp. The intrusive has produced little effect in both the metavolcanic and metasedimentary rocks. Granodiorite dykes occur and are compositionally similar to the main granodiorite body and are probably offshoots from it. Pulaskite dykes are numerically most important. Several types are evident including both quartz-bearing and undersaturated types. Post-vein lamprophyre dykes as well as the pulaskite dykes are of probable Lower Tertiary age and cut all other major geological units.

The Moonlight claim (former Crown Grant) adjoined the Roderick Dhu claim (L.598, 082ESE125) to the north. A quartz fissure-vein is hosted in north-northeast striking and east dipping metasedimentary rocks of the Carboniferous (Pennsylvanian-Mississippian) or older Anarchist Group and are comprised of schistose quartz wackes or lithic wackes. The quartz vein appears to be in a fracture zone that roughly parallels the bedding/foliation planes of the host metasedimentary rocks. Open cuts and adits expose a quartz vein ranging in width from 25 to 61 centimetres sparsely mineralized with galena, pyrite and telluride.

BIBLIOGRAPHY

EMPR AR 1903-H247; *1921-G184
GSC MAP 6-1957; 10-1967; 828
GSC P 79-29
GSC OF 1969

DATE CODED: 1989/02/23
DATE REVISED: / /

CODED BY: GO
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE225**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALICE (L.698)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 03 N
LONGITUDE: 118 37 36 W
ELEVATION: 1554 Metres

NORTHING: 5449203
EASTING: 381463

LOCATION ACCURACY: Within 500M

COMMENTS: Northern extension of quartz vein from the adjoining Amandy claim (L.2795, Minfile 082ESE126). 1.6 kilometres south-southwest from the summit of Mount Roderick Dhu, west of Jewel Lake, 11 kilometres north-northeast from the town of Greenwood (Minister of Mines, Annual Report 1935-D2; Assessment Report 1814).

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Telluride Sylvanite

ASSOCIATED: Quartz Pyrrhotite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H08 Alkaline intrusion-associated Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Carboniferous	Anarchist	Undefined Formation	Unnamed/Unknown Informal
Tertiary			Nelson Intrusions
Jurassic-Cretaceous			

LITHOLOGY: Schistose Quartz Wacke
Schistose Lithic Wacke
Pulaskite Dike
Granodiorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Slide Mountain

Plutonic Rocks

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Jewel Lake area is underlain by a complex of metamorphic rocks mostly of sedimentary and volcanic origin correlative with the Carboniferous or older Anarchist Group, and a large granodiorite intrusion correlative to the Juro-Cretaceous Nelson Plutonic Rocks. Small dykes and sill-like bodies, feeders to nearby Tertiary lavas, pervade these units.

Locally the metamorphosed volcanic and sedimentary rocks are not always distinguishable, both being fine-grained and medium or dark coloured with primary structures such as bedding and flow banding being confused with foliation or gneissosity. Generally the sedimentary rocks are brittle and quartz-rich, however, compositions vary and some biotitic varieties have the same competence as the amphibole-rich volcanic rocks. These rocks are locally called quartzites but few are true quartzites and more appropriate terms would be quartz wacke or lithic wacke. The massive character of the volcanic rocks is due to a combination of intense regional metamorphism and primary structures. Field and petrographic data indicate that at least some of the original rock formed as a result of massive accumulations of lava flows and pillow lava. Crosscutting feeder dykes and sills are significant and contribute to the massive aspect of the volcanic rocks. The metamorphosed schistose volcanic rocks are compositionally basalts. These metasedimentary and metavolcanic rocks form part of the Carboniferous (Pennsylvanian-Mississippian) or older Anarchist Group.

Igneous intrusions in the Jewel Lake camp include a large Lower Cretaceous granodiorite pluton and a host of younger pulaskite and lamprophyre dykes. The granodiorite is correlative with Nelson Plutonic Rocks. It is a homogeneous medium-grained grey body which intrudes the metavolcanic rocks along a northwest trending contact in

CAPSULE GEOLOGY

the southwest part of the camp. The intrusive has produced little effect in both the metavolcanic and metasedimentary rocks. Granodiorite dykes occur and are compositionally similar to the main granodiorite body and are probably offshoots from it. Pulaskite dykes are numerically most important. Several types are evident including both quartz-bearing and undersaturated types. Post-vein lamprophyre dykes as well as the pulaskite dykes are of probable Lower Tertiary age and cut all other major geological units.

The Alice claim (L.698) adjoins the Amandy claim (L.2795, 082ESE126) in the north. North striking fractured and sheared metasedimentary rocks of the Carboniferous (Pennsylvanian-Mississippian) or older Anarchist Group dip 30 to 60 degrees east. The rocks are schistose quartz wackes or lithic wackes and are intruded by Lower Tertiary pulaskite dykes and Lower Cretaceous granodiorite dykes.

Quartz fissure-veins have a tendency to occur in fracture zones that roughly parallel the bedding/foliation planes of the metasedimentary rocks. The quartz vein on the Alice claim is a northern extension of the vein on the Amandy claim. One the Alice claim the vein ranges from 30 to 46 centimetres in width and has been traced on surface for 61 metres. Mineralization consists of galena, pyrite, pyrrhotite, sphalerite and tellurides (possibly sylvanite).

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1897-590; 1947-A156
EMPR ASS RPT 1814, 11464
EMPR EXPL 1983-20
EMPR GEM 1969-304
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1989/02/24
DATE REVISED: / /

CODED BY: GO
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE226**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOUNDARY FALLS LIMESTONE**

STATUS: Past Producer Open Pit

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E02E

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 49 03 08 N

NORTHING: 5434634

LONGITUDE: 118 41 17 W

EASTING: 376663

ELEVATION: 823 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on outcrop 0.8 kilometres northeast of Boundary Falls (Minister of Mines Annual Report 1960, page 140).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite

MINERALIZATION AGE: Paleozoic

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.

TYPE: R09 Limestone

DIMENSION: 107 x 40 Metres

STRIKE/DIP: 060/58N

TREND/PLUNGE:

COMMENTS: Limestone lens.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic

GROUP

Anarchist/Kobau

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Greywacke

HOSTROCK COMMENTS: Unit PM 1 (Geological Survey of Canada Map 1500A), Anarchist Group is Carboniferous or older (Geological Survey of Canada Open File 1969).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: LENS

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1960

SAMPLE TYPE: Chip

COMMODITY

GRADE

Limestone

55.1500 Per cent

COMMENTS: Across 30 metre width near centre of lens. Grade given for calcium oxide.

REFERENCE: Minister of Mines Annual Report 1960, page 143, sample 3.

CAPSULE GEOLOGY

A 107 metre long limestone lens up to 40 metres thick outcrops on a hillside 0.8 kilometres northeast of Boundary Falls, about 90 metres above the town. The lens is enclosed in sheared greywacke of the Carboniferous or older Anarchist Group. The limestone strikes 060 degrees and dips 58 degrees northeast.

The deposit is comprised of white and bluish grey streaked, medium grained limestone. A sample of chips, taken across a 30 metre width near the centre of the lens, contained 55.15 per cent CaO, 0.23 per cent MgO, 0.68 per cent insolubles, 0.16 per cent R2O3, 0.14 per cent Fe2O3, 0.01 per cent MnO, 0.13 per cent P2O5, 0.01 per cent sulphur and 43.55 per cent ignition loss (Minister of Mines Annual Report 1960, page 143, Sample 3).

A small quarry was opened up on the southwest side of the deposit. The limestone was burnt in an adjacent kiln for lime earlier this century. No production figures are available.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR *1960-140,141,143
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1992-18, p. 113

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 734
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29, p. 7
CANMET RPT 811, part 5, p. 193

DATE CODED: 1989/09/12
DATE REVISED: / /

CODED BY: PSF
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE227**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOUNDARY FALLS DOLOMITE**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Open Pit

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 47 N
LONGITUDE: 118 41 51 W
ELEVATION: 732 Metres

NORTHING: 5434001
EASTING: 375958

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on outcrop 15 metres west of railway, 180 metres north of sawmill (Minister of Mines Annual Report 1960, page 140).

COMMODITIES: Dolomite

MINERALS

SIGNIFICANT: Dolomite
MINERALIZATION AGE: Paleozoic

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: R10 Dolomite
DIMENSION: 52 x 18

Massive
Evaporite
Metres

Industrial Min.

R09 Limestone

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Anarchist/Kobau	Undefined Formation	

LITHOLOGY: Dolomite
Greenstone

HOSTROCK COMMENTS: Deposit hosted in unit PM 1 (GSC Map 1500A). Anarchist group carboniferous or older (GSC Open File 1969).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

A lens of fine grained, cream to pale blue, mottled and streaked dolomite forms a small elongate hill, 15 metres west of the Canadian Pacific Railway 180 metres north of the saw mill at Boundary Falls. The lens is enclosed in greenstone of the Carboniferous or older Anarchist Group. The deposit is 52 metres long and 18 metres wide.

A small quarry is situated in the south end of the deposit. The dolomite was burnt in an adjacent lime kiln sometime earlier this century.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1960-140,143
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1992-18, p. 114
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29, p. 7
CANMET RPT 811, Part 5, p. 193

DATE CODED: 1989/09/12
DATE REVISED: / /

CODED BY: PSF
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE228**

NATIONAL MINERAL INVENTORY:

NAME(S): **DEADWOOD CREEK LIMESTONE**, MOTHER LODE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 06 46 N
LONGITUDE: 118 43 04 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Location centred on main limestone outcrop north of Mother Lode mine (Geological Survey of Canada Map 1500A).

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5441414
EASTING: 374644

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Silica Actinolite Garnet Epidote Pyrite
ALTERATION: Actinolite Garnet Epidote
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Middle Triassic
ISOTOPIC AGE: DATING METHOD: Fossil MATERIAL DATED: Microfossils

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R09 Limestone
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION: 1000 x 400 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Limestone trends north-northwest.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Middle Triassic
GROUP: Brooklyn
DATING METHOD: Fossil
MATERIAL DATED: Microfossils
FORMATION: Unnamed/Unknown Formation
IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Limestone
Sharpstone Conglomerate
Chert
Conglomerate
Granodiorite
Calc-silicate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: UNDERGROUND REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1913
SAMPLE TYPE: Grab
COMMODITY: Limestone GRADE: 96.3500 Per cent
COMMENTS: Sample of white limestone from Mother Lode mine. Grade given for calcium carbonate. Grade is in per cent.
REFERENCE: Geological Survey of Canada Memoir 19, page 19, sample 2.

CAPSULE GEOLOGY

A steeply dipping limestone mass of the Middle Triassic Brooklyn Formation outcrops north of the Mother Lode Mine (82ESE 034), 3.5 kilometres northwest of Greenwood. The limestone extends north-northwest from Deadwood Creek for 1100 metres and varies up to 400 metres in width. Massive chert of the Permo-Carboniferous Knob Hill Group outcrops to the east. Conglomerate of the Brooklyn Formation underlies the limestone to the west. A small stock of the Middle Jurassic Nelson Intrusions cuts the limestone mass near its south end.

The deposits consist of massive, irregularly jointed, medium to fine grained, grey to white limestone, that is cut by numerous white

CAPSULE GEOLOGY

calcite veinlets. Rounded, light to dark grey chert nodules and thin beds of cherty "jasperoid" are sometimes present. Pyrite occurs in trace amounts. Actinolite, garnet, epidote and other calcium silicates replace some of the limestone near its south end in the vicinity of the Mother Lode Mine. A sample of white, crystalline limestone from the 200 foot level of the Mother Lode Mine contained 96.35 per cent CaCO₃, 1.43 per cent MgCO₃, 0.60 per cent insolubles, 0.20 per cent Al₂O₃+Fe₂O₃ and 1.32 per cent undetermined compounds (water, etc.) (Geological Survey of Canada Memoir 19, p. 19, Sample 2).

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1992-18, pp. 120, 121
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC MEM *19, pp. 17-19
GSC OF 481; 637; 1969
GSC P 67-42; 79-29, pp. 14-17

DATE CODED: 1989/09/14
DATE REVISED: / /

CODED BY: PSF
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE229**

NATIONAL MINERAL INVENTORY:

NAME(S): **EHOLT LIMESTONE**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 08 13 N
LONGITUDE: 118 32 48 W
ELEVATION: 1204 Metres

NORTHING: 5443831
EASTING: 387185

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location centred on outcrop of northern limestone lens, 2 kilometres south of Eholt (Geological Survey of Canada Map 1500A).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Silica
MINERALIZATION AGE: Middle Triassic
ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Microfossils

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: R09 Limestone
DIMENSION: 600 x 150 Metres
COMMENTS: Northern lens strikes north-northeast, dips nearly vertical.

Massive
Industrial Min.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Middle Triassic
GROUP: Brooklyn
DATING METHOD: Fossil
MATERIAL DATED: Microfossils

FORMATION: Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Chert
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: OUTCROP

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY: Limestone

YEAR: 1944

GRADE: 54.2700 Per cent

COMMENTS: Taken across pure limestone band. Grade given for calcium oxide. Grade is in per cent.

REFERENCE: CANMET Report 811, Part 5, page 202, sample 61.

CAPSULE GEOLOGY

A limestone lens of the Upper Triassic Brooklyn Formation forms a 120 metre high hill, 2 kilometres due south of Eholt. The lens strikes north-northeast for 600 metres and dips nearly vertical. Exposed widths vary up to 150 metres. The limestone is bounded to the west by granodiorite of the Middle Jurassic Nelson Intrusions.

The lens consists of coarse grained, white to pale blue, thick bedded, high calcium limestone that becomes siliceous and cherty towards the margins of the deposit. A few dykes intrude the limestone. A sample across a pure limestone bed on the south face of the hill contained 54.27 per cent CaO, 0.18 per cent MgO, 2.58 per cent SiO₂, 0.04 per cent Al₂O₃, 0.38 per cent Fe₂O₃ and 0.01 per cent sulphur (Canada Bureau of Mines Report 811, p. 202, Sample 61).

A second lens of light grey, medium grained limestone forms a steep, 90 metre high bluff 200 metres west of Highway 3, 2.5 kilometres south of Eholt. Local concentrations of chert and other impurities are present. A sample of chips collected randomly across the top of the cliff contained 52.40 per cent CaO, 0.38 per cent MgO, 4.94 per cent insolubles, 0.38 per cent R₂O₃, 0.32 per cent Fe₂O₃, 0.03 per cent MnO, 0.04 per cent P₂O₅, 0.03 per cent sulphur and

CAPSULE GEOLOGY

41.75 per cent ignition loss (Minister of Mines Annual Report 1960, p. 143, Sample 4).

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1960-141,143
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1992-18, pp. 120, 122
EMPR P 1986-2
EMPR PF (Map of limestone lenses northwest of Grand Forks - in
General File)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29, pp. 14-17
CANMET RPT 811, Part 5, pp. 194,202

DATE CODED: 1989/09/12
DATE REVISED: / /

CODED BY: PSF
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE230**

NATIONAL MINERAL INVENTORY:

NAME(S): **HARDY CREEK LIMESTONE**, GOAT MOUNTAIN, EAGLE MOUNTAIN

STATUS: Past Producer Open Pit

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E01W 082E02E

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 49 03 01 N

NORTHING: 5434114

LONGITUDE: 118 29 24 W

EASTING: 391129

ELEVATION: 671 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on quarry on south side of Hardy Creek, (Minister of Mines Annual Report 1960, page 142).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite

ASSOCIATED: Silica

MINERALIZATION AGE: Middle Triassic

ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Microfossils

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.

TYPE: R09 Limestone

SHAPE: Regular

MODIFIER: Fractured

COMMENTS: Limestone trends north-northwest to west.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Triassic

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

DATING METHOD: Fossil

MATERIAL DATED: Microfossils

LITHOLOGY: Limestone

Chert

Breccia

Mafic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1960

SAMPLE TYPE: Chip

COMMODITY

GRADE

Limestone

51.9400

Per cent

COMMENTS: Across 60 metres, 800 metres southwest of Hardy Creek. Grade given for calcium oxide.

REFERENCE: Minister of Mines Annual Report 1960, page 143, sample 12.

CAPSULE GEOLOGY

A mass of limestone of the Upper Triassic Brooklyn Formation outcrops as a "V" on Eagle and Goat Mountains, with the apex on Hardy Creek, 4 kilometres northwest of Grand Forks. One leg extends north-northwest for 1.8 kilometres towards the peak of Goat Mountain. The other leg extends westward for 2.2 kilometres along the south flank of Eagle Mountain.

The deposit on Eagle Mountain consists of uniform, dark grey to black, fine grained limestone with siliceous and argillaceous inclusions. Numerous white calcite veinlets cut the limestone. On Goat Mountain the limestone is well fractured and brecciated, with white calcite healing fractures. Chert occurs as angular fragments and as discontinuous, irregular seams 2.5 to 7.5 centimetres thick. Abundant mafic dykes intrude this portion of the deposit. A sample taken across 60 metres of limestone, 800 metres southwest of Hardy Creek, contained 51.94 per cent CaO, 0.49 per cent MgO, 5.34 per cent insolubles, 0.44 per cent R2O3, 0.33 per cent Fe2O3, 0.03 per cent MnO, 0.20 per cent P2O5, 0.03 per cent sulphur and 41.81 per cent

CAPSULE GEOLOGY

ignition loss (Minister of Mines Annual Report 1960, p. 143, Sample 12).

A small quarry was excavated on the south side of Hardy Creek, 750 metres west of the Canadian Pacific Railway, sometime earlier this century. No production figures are available.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR *1960-142,143
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1992-18, p. 120
EMPR P 1986-2
EMPR PF (Map of limestone lenses northwest of Grand Forks - in General File)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29, pp. 14-17
CANMET RPT 811, Part 5, pp. 195,202

DATE CODED: 1989/09/13
DATE REVISED: / /

CODED BY: PSF
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE231**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARGUERITE LIMESTONE**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:
LATITUDE: 49 07 13 N
LONGITUDE: 118 42 08 W
ELEVATION: 1058 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Limestone outcrop north of Marguerite mine, 3 kilometres northwest of Greenwood (Geological Survey of Canada Map 1500A).

Open Pit

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5442222
EASTING: 375798

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Silica
COMMENTS: As chert nodules and beds.
MINERALIZATION AGE: Middle Triassic
ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Microfossils

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: R09 Limestone
DIMENSION: 1500 x 800
COMMENTS: Limestone lens trends north.

Massive
Industrial Min.

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Triassic

DATING METHOD: Fossil
MATERIAL DATED: Microfossils

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Chert
Conglomerate
Syenite
Quartz Monzonite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY

YEAR: 1913

Limestone
GRADE
97.6700 Per cent

COMMENTS: Sample of grey limestone from Marguerite mine. Grade given for calcium carbonate.

REFERENCE: Geological Survey of Canada Memoir 19, page 19, sample 3.

CAPSULE GEOLOGY

Limestone of the Middle Triassic Brooklyn Formation outcrops north of the Marguerite mine, 2 kilometres due north of Deadwood, 3 kilometres northwest of Greenwood. The mass trends northward for 1500 metres with a width of up to 800 metres. The Greyhound Creek fault truncates the limestone to the east. Underlying conglomerate of the Brooklyn Formation outcrops to the west. A few north-northeast trending syenite and quartz monzonite dykes intrude the limestone deposit near its south end.

The limestone is massive, medium to fine grained and grey to white in colour. An intricate network of white calcite veinlets cuts the rock. Rounded, light to dark grey chert nodules and thin beds of cherty "jasperoid" are sometimes present. Two samples of limestone from the Marguerite Mine analyzed as follows (Geological Survey of Canada Memoir 19, p. 19, Samples 1, 3):

CAPSULE GEOLOGY

Sample	CaO	CaCO3	MgCO3	Insolubles	Al2O3+Fe2O3	Undetermined
1	53.71	95.86	1.36	0.32	0.10	2.46
3	54.72	97.67	1.40	0.40	0.20	0.33

Sample 1 is of white, crystalline limestone and while Sample 3 is of grey, crystalline limestone.

This limestone was burnt in a kiln located 50 metres northeast of the entrance of the mine in the early part of this century. No production figures are available.

BIBLIOGRAPHY

- EMPR AEROMAG MAP 8497G
- EMPR MR MAP 6 (1932)
- EMPR OF 1990-25; 1992-18, p. 120
- EMPR P 1986-2
- EMPR PRELIM MAP 59
- GSC MAP 828; 45-20A; 6-1957; 10-1967; 30A; 1500A; 1736A
- GSC MEM *19, pp. 17-19
- GSC OF 481; 637; 1969
- GSC P 67-42; 79-29, pp. 14-17

DATE CODED: 1989/09/14
DATE REVISED: 1989/09/14

CODED BY: PSF
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE232**

NATIONAL MINERAL INVENTORY:

NAME(S): **ORO DENORO LIMESTONE**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 19 N
LONGITUDE: 118 32 42 W
ELEVATION: 1035 Metres

NORTHING: 5442161
EASTING: 387273

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on site of sample 60 along railroad, 0.8 kilometres south of Oro Denoro mine (CANMET Report 811, page 194).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Silica
COMMENTS: As cherty beds.

MINERALIZATION AGE: Middle Triassic

ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Microfossils

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary

Massive
Industrial Min.

TYPE: R09 Limestone

DIMENSION: 1750

Metres

STRIKE/DIP: 002/65E

TREND/PLUNGE:

COMMENTS: Attitude of limestone at north end of east lens.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Middle Triassic

GROUP

Brooklyn

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

DATING METHOD: Fossil

MATERIAL DATED: Microfossils

LITHOLOGY: Limestone
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: LENS

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1944

SAMPLE TYPE: Grab

COMMODITY

GRADE

Limestone

51.3900

Per cent

COMMENTS: Taken from exposure along railroad. Grade given for calcium oxide.

Grade is in per cent.

REFERENCE: CANMET Report 811, page 202, sample 60.

CAPSULE GEOLOGY

A limestone lens of the Middle Triassic Brooklyn Formation outcrops on Highway 3, 3.5 kilometres due south of Eholt and continues south-southwest for 1.75 kilometres to the Phoenix Road, 1.6 kilometres west-northwest of the road's conjunction with the highway. The limestone strikes 002 degrees and dips 65 degrees east at the highway outcrop on the north end of the deposit.

The lens is comprised mostly of light grey to white, fine grained limestone with some black to dark grey limestone. Scattered thin, cherty and argillaceous beds occur within the limestone. Streaks of disseminated pyrite are sometimes present. The limestone is intruded by numerous sills and dykes. A sample from an exposure along an old railroad, 800 metres south of the Oro Denoro Mine (82ESE 063), just west of the highway, contained 51.39 per cent CaO, 0.67 per cent MgO, 5.70 per cent SiO₂, 0.42 per cent Al₂O₃, 0.39 per cent Fe₂O₃ and 0.04 per cent sulphur (Canmet Report 811, p. 202, Sample 60).

A second, 2 kilometre long, subparallel lens of mostly white, medium grained limestone outcrops 500 to 900 metres west of the first lens. Some chert beds and dykes are present within this lens. A

CAPSULE GEOLOGY

sample of chips taken across 90 metres on top of a knoll, 2.5 kilometres northwest of the Phoenix Road-Highway 3 conjunction, contained 48.47 per cent CaO, 0.70 per cent MgO, 11.20 per cent insolubles, 1.04 per cent R2O3, 0.74 per cent Fe2O3, 0.04 per cent MnO, 0.13 per cent P2O5, 0.02 per cent sulphur 38.69 per cent ignition loss and 0.28 per cent water (Minister of Mines Annual Report 1960, p. 143, Sample 6).

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1960-141,143
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1992-18, pp. 120, 121
EMPR P 1986-2
EMPR PF (Map of limestone lenses northwest of Grand Forks - in General File)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29, pp. 14-17
CANMET RPT 811, Part 5, pp. 194,202

DATE CODED: 1989/09/12
DATE REVISED: / /

CODED BY: PSF
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE233**

NATIONAL MINERAL INVENTORY:

NAME(S): **THIMBLE MOUNTAIN - EAST LENS**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 22 N
LONGITUDE: 118 31 18 W
ELEVATION: 1128 Metres

NORTHING: 5442219
EASTING: 388977

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location centred on site of sample 7, south of west peak of Thimble Mountain (Minister of Mines Annual Report 1960, page 141).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
MINERALIZATION AGE: Middle Triassic
ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Microfossils

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: R09 Limestone
DIMENSION: 1200 x 400 Metres
COMMENTS: Limestone lens trends northeast.

Massive
Industrial Min.

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Middle Triassic
GROUP: Brooklyn
DATING METHOD: Fossil
MATERIAL DATED: Microfossil

FORMATION: Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Limestone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: LENS

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY: Limestone
GRADE: 38.2900 Per cent

YEAR: 1960

COMMENTS: Grade given for calcium oxide. Grade is in per cent.
REFERENCE: Minister of Mines Annual Report 1960, page 143, sample 7.

CAPSULE GEOLOGY

A limestone lens of the Middle Triassic Brooklyn Formation is exposed along the Thimble Mountain side road, 2.25 kilometres east-northeast of the road's conjunction with Highway 3, 2.5 kilometres southeast of Eholt. The lens continues southwestward across the west peak of Hardy Mountain for 1.2 kilometres. The deposit varies up to 400 metres in width.

The lens consists mostly of light grey, medium grained, well fractured limestone. Beds of cherty argillite occur in the limestone near the eastern margin of the deposit. A sample of chips taken at 3.0 metre intervals across the south end of the lens contained 38.29 per cent CaO, 0.91 per cent MgO, 25.62 per cent insolubles, 2.18 per cent R2O3, 1.76 per cent Fe2O3, 0.04 per cent MnO, 0.06 per cent P2O5, 0.04 per cent sulphur, 31.23 per cent ignition loss and 0.12 per cent water (Minister of Mines Annual Report 1960, p. 143, Sample 7).

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1960-141,143
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1992-18, p. 137
EMPR P 1986-2

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 747
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR PF (Map of limestone lenses northwest of Grand Forks -
in General File)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29, pp. 14-17

DATE CODED: 1989/09/13
DATE REVISED: / /

CODED BY: PSF
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE234**

NATIONAL MINERAL INVENTORY:

NAME(S): **THIMBLE MOUNTAIN - WEST LENS**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 55 N
LONGITUDE: 118 32 06 W
ELEVATION: 1064 Metres

NORTHING: 5443258
EASTING: 388025

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on road exposure, 2.75 kilometres south-southeast of Eholt (Minister of Mines Annual Report 1960, page 141).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite

MINERALIZATION AGE: Middle Triassic

ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Microfossils

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary

Massive
Industrial Min.

TYPE: R09 Limestone

DIMENSION: 800 x 60 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Limestone lens trends north.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Middle Triassic

Brooklyn

Unnamed/Unknown Formation

DATING METHOD: Fossil

MATERIAL DATED: Microfossil

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

A lens of coarse grained, light grey, thick bedded limestone of the Middle Triassic Brooklyn Formation outcrops along the Thimble Mountain side road, 600 metres east-northeast of the road's conjunction with Highway 3, 2.75 kilometres south-southeast of Eholt. The lens continues southward for 800 metres with a width of between 30 and 60 metres.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1969-141
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1992-18, p. 137
EMPR P 1986-2
EMPR PF (Map of limestone lenses northwest of Grand Forks - in General File)
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29, pp. 14-17

DATE CODED: 1989/09/13
DATE REVISED: / /

CODED BY: PSF
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE235**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIDWAY LIMESTONE - EAST LENS**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 11 N
LONGITUDE: 118 50 17 W
ELEVATION: 93 Metres

NORTHING: 5431276
EASTING: 365616

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location centred on limestone outcrop 4.5 kilometres west-northwest of Midway (Geological Survey of Canada Map 1500A, Unit Tri 1).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
MINERALIZATION AGE: Middle Triassic
ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Microfossils

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: R09 Limestone
DIMENSION: 700 Metres
COMMENTS: Lens trend north-northeast.

Massive
Industrial Min.

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Middle Triassic
GROUP: Brooklyn
DATING METHOD: Fossil
MATERIAL DATED: Microfossils

FORMATION: Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: LENS

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY: Limestone
GRADE: 54.0400 Per cent

YEAR: 1960

COMMENTS: Grade given for calcium oxide. Grade is in per cent.
REFERENCE: Minister of Mines Annual Report 1960, page 143, sample 2.

CAPSULE GEOLOGY

A lens of limestone of the Middle Triassic Brooklyn Formation outcrops on the south slope of a hill between 760 and 975 metres elevation, 4.5 kilometres west-northwest of Midway and 500 metres north of Highway 3. The lens trends north-northeast for approximately 700 metres.

The deposit consists of medium to fine grained, light grey limestone with many argillaceous inclusions. A sample of randomly collected chips contained 54.04 per cent CaO, 0.25 per cent MgO, 2.30 per cent insolubles, 0.30 per cent R2O3, 0.16 per cent Fe2O3, 0.01 per cent MnO, 0.07 per cent P2O5, 0.01 per cent sulphur, 42.85 per cent ignition loss and 0.10 per cent water (Minister of Mines Annual Report 1960, p. 143, Sample 2).

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR *1960-140,143
EMPR FIELDWORK 1988, pp. 11-17
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1992-18, pp. 120, 121
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 750
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 481; 637; 1969
GSC P 67-42; 79-29, pp. 14-17
CANMET RPT *811, Part 5, pp. 193,202

DATE CODED: 1989/09/11
DATE REVISED: / /

CODED BY: PSF
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESE236**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRAND FORKS QUARTZITE** V.T.S. QUARRY, RAMSHEAD QUARRIES

STATUS: Past Producer Open Pit

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E01W

BC MAP:

LATITUDE: 49 01 53 N

LONGITUDE: 118 22 26 W

ELEVATION: 616 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Quarry, 200 metres north of Highway 3 (Industrial Mineral File - Map 082E01W).

UTM ZONE: 11 (NAD 83)

NORTHING: 5431854

EASTING: 399575

COMMODITIES: Quartzite Dimension Stone Building Stone Silica

MINERALS

SIGNIFICANT: Unknown

COMMENTS: Commodity is quartzite.

ASSOCIATED: Quartz Hematite Pyrite Feldspar Sericite
Biotite Chlorite Garnet

ALTERATION: Hematite

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Proterozoic

DEPOSIT

CHARACTER: Stratiform

CLASSIFICATION: Metamorphic

TYPE: R07 Silica sandstone

COMMENTS: Beds strike northwest and dip approximately 70 degrees southwest.

Massive

Sedimentary

Industrial Min.

R06

Dimension stone - sandstone

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Proterozoic

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Grand Forks Gneiss

LITHOLOGY:

Quartzite
Biotite Schist
Micaceous Gneiss
Pegmatitic Gneiss
Alaskite

HOSTROCK COMMENTS: Proterozoic and possibly Paleozoic Grand Forks Gneiss.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: Post-mineralization

GRADE:

INVENTORY

ORE ZONE: QUARRY

REPORT ON: Y

CATEGORY: Unclassified

YEAR: 1984

QUANTITY: 4500000 Tonnes

COMMODITY

GRADE

Silica

100.0000 Per cent

COMMENTS: Grade not given; the commodity is quartzite in the immediate vicinity of the quarry.

REFERENCE: Assessment Report 13176, page 41.

CAPSULE GEOLOGY

A silica quarry is situated 200 metres north of Highway 3, 1 kilometre east of Morrissey Creek, some 4.5 kilometres east of Grand Forks. Quartzite has been periodically quarried here since 1969.

The quarry exposes 3 layers of quartzite interbedded with micaceous gneiss (biotite schist) of the Proterozoic and possibly Paleozoic Grand Forks Gneiss. These beds strike northwest and dip approximately 70 degrees southwest. The sequence is intruded by bodies of pegmatitic gneiss (alaskite).

The quartzite is coarse grained and white to golden in colour. The rock is comprised of clear, glassy quartz grains up to 6 millimetres in diameter with scattered grains of feldspar, sericite, biotite, chlorite, garnet and pyrite. The pyrite is commonly altered to hematite, giving the rock its distinctive golden colour. The deposit is estimated to contain 4.5 million tonnes of quartzite in the immediate vicinity of the quarry (Assessment Report 13176, p. 4).

CAPSULE GEOLOGY

The quartzite was quarried by Ramshead Quarries Ltd. and Sebac Enterprises Ltd. between 1969 and 1971 for building stone but no production figures are available. V.T.S. Quarry Ltd. carried out some mapping in 1984.

BIBLIOGRAPHY

EMPR ASS RPT *13176
EMPR GEM 1969-384; *1970-490,491; 1971-455
GSC MAP 6-1957; 1736A
GSC OF 481; 1969
GSC P 69-22, p. 8

DATE CODED: 1989/09/20
DATE REVISED: 1989/09/20

CODED BY: PSF
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE237**

NATIONAL MINERAL INVENTORY:

NAME(S): **LIME CREEK**, THIMBLE MOUNTAIN

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

Open Pit

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 08 57 N
LONGITUDE: 118 27 34 W
ELEVATION: 549 Metres

NORTHING: 5445064
EASTING: 393573

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location centred on site of sample 9, along road west of Granby River (Minister of Mines Annual Report 1960, page 142).

COMMODITIES: Limestone Marble

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Silica
COMMENTS: As chert nodules.
MINERALIZATION AGE: Paleozoic

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R09 Limestone
DIMENSION: 3170 x 1000 Metres
COMMENTS: Limestone lens trends north-northeast.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Anarchist	Undefined Formation	

LITHOLOGY: Limestone
Volcanic
Chert

HOSTROCK COMMENTS: Anarchist is carboniferous or older in age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: LENS

REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1960
SAMPLE TYPE: Chip

COMMODITY	GRADE
Limestone	48.7600 Per cent

COMMENTS: Taken across 213 metres on north end of lens. Grade given for calcium oxide. Grade is in per cent.

REFERENCE: Minister of Mines Annual Report 1960, page 143, sample 9.

CAPSULE GEOLOGY

A mass of limestone of the Carboniferous or older Anarchist Group lies on the northeast slope of Thimble Mountain 10.7 to 13.9 kilometres north of Grand Forks. The lens outcrops on the road west of the Granby River and continues south-southwest up the mountain side for 3.17 kilometres. Exposed widths vary up to 1000 metres.

The deposit is comprised mostly of dark bluish grey to light grey, fine grained, thin bedded limestone containing chert nodules. The limestone is cut by numerous white calcite stringers and frequently intruded by dykes. Near the dykes the rock is recrystallized to medium grained marble. Some discontinuous layers and lenses of volcanics are present within the limestone. A sample of chips taken randomly along 213 metres of limestone in a road cut on the north end of the lens contained 48.76 per cent CaO, 0.88 per cent MgO, 10.16 per cent insolubles, 0.62 per cent R2O3, 0.56 per cent Fe2O3, 0.05 per cent MnO, 0.14 per cent P2O5, 0.04 per cent sulphur and 39.41 per cent ignition loss (Minister of Mines Annual Report 1960, p. 143, Sample 9).

A small quarry is situated west of the road, 180 metres south of Lime Creek at an elevation of 698 metres. The quarry was operated sometime earlier this century as a source of marble.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 754
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1960-141-143
EMPR OF 1992-18, p. 113
EMPR PF (Map of limestone lenses northwest of Grand Forks - in
General File)
GSC MAP 6-1957; 10-1967
GSC OF 481; 1969
CANMET RPT 811, Part 5, pp. 194,202

DATE CODED: 1989/09/13
DATE REVISED: 1989/09/13

CODED BY: PSF
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE238**

NATIONAL MINERAL INVENTORY:

NAME(S): **FIFE LIMESTONE**, CHRISTINA LAKE, GRAND FORKS

STATUS: Past Producer Open Pit

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E01E

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 49 04 18 N

NORTHING: 5436124

LONGITUDE: 118 12 25 W

EASTING: 411849

ELEVATION: 671 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Largest quarry on the east side of the railway (National Topographic System Map 082E01E).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite

ASSOCIATED: Silica

COMMENTS: As chert nodules and siliceous limestone lenses.

MINERALIZATION AGE: Paleozoic

ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Various fossils

DEPOSIT

CHARACTER: Stratiform

Massive

CLASSIFICATION: Sedimentary

Industrial Min.

TYPE: R09 Limestone

SHAPE: Regular

MODIFIER: Fractured

Sheared

DIMENSION: 240 x 3

Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Limestone strikes north-northeast and dips vertically.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Pennsylvan.-Permian

Undefined Group

Mount Roberts

DATING METHOD: Fossil

MATERIAL DATED: Various Fossils

LITHOLOGY: Limestone

Chert

Mafic Dike

Volcanic

HOSTROCK COMMENTS: Geological Survey of Canada (Open File 1969) correlates the limestone with an unnamed Ordovician to Devonian unit.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Selkirk Mountains

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE:

INVENTORY

ORE ZONE: QUARRY

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1959

SAMPLE TYPE: Chip

COMMODITY

GRADE

Limestone

52.7800

Per cent

COMMENTS: Across 27.4 metres from the quarry, east of the railway. Grade given for calcium oxide.

REFERENCE: Minister of Mines Annual Report 1959, page 73, sample 6.

CAPSULE GEOLOGY

A vertically dipping bed of limestone outcrops along Highway 3 on Christina Lake, 0.8 kilometres north of the Fife cut off road and continues north-northeast up the hillside for at least 3.2 kilometres. The limestone has been correlated with the Pennsylvanian to Permian Mount Roberts Formation or (according to the Geological Survey of Canada Open File 1969) an Ordovician to Devonian unnamed unit. The bed thickens from 27 metres along the highway to 240 metres, 1.5 kilometres northeast.

The bed contains medium to fine grained, bluish grey to white, banded limestone that is intensely fractured and sheared. Nodules and lenses of blue chert and streaks of rusty and siliceous limestone contaminate this deposit. The siliceous limestone is more common

CAPSULE GEOLOGY

near the contacts with the enclosing volcanics. Contorted mafic dykes intrude the limestone. Two samples analyzed as follows (in per cent):

	Sample A	Sample B
CaO	52.78	51.0
MgO	0.30	0.3
Insolubles	4.64	-
SiO2	-	6.5
R2O3	0.20	-
Al2O3	-	0.1
Fe2O3	0.17	0.3
MnO	0.02	-
P2O5	0.016	-
Sulphur	0.02	-
Ig. Loss	41.94	41.5

Sample A was taken across a 27.4 metre wide face of the southern quarry on the east side of the C.P. Railway track (Minister of Mines Annual Report 1959, p. 173, Sample 6). Sample B is a representative analysis of the limestone quarried in the early 1940's (CANMET Report 811, p. 197).

Limestone was produced from four major quarries and several smaller quarries and glory holes on both sides of the C.P. Railway, 0.8 to 1.6 kilometres north of Fife, between 1911 and 1957. A total of 1.6 million tonnes of limestone were quarried during this time. The limestone was used entirely for flux at Cominco's smelter in Trail.

BIBLIOGRAPHY

EMPR AR 1913-27; 1914-28; 1915-33; 1916-31; 1918-205; 1919-163; 1920-155; 1921-180; 1922-171; 1923-180; 1924-164; 1925-194; 1926-206; 1927-226; 1928-236; 1930-228,423; 1931-239; 1932-286; 1935-G52; 1936-D58; 1938-D41; 1939-A112; 1940-A98; 1941-A93; 1942-A91; 1943-A86; 1944-A82; 1945-132; 1946-206; 1947-218; 1948-189; 1949-257; 1950-225; 1951-222; 1952-260; 1953-192; 1954-182; 1955-94; 1956-152; 1957-87; *1959-173
EMPR OF 1992-18, pp. 116, 117
GSC MAP 6-1957
GSC OF 481; 1969
CANMET RPT 452, Vol. 5, p. 148,149; *811, Part 5, pp. 196-197

DATE CODED: 1989/09/16
DATE REVISED: 1989/09/16

CODED BY: PSF
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE239**

NATIONAL MINERAL INVENTORY:

NAME(S): **EHOLT, DEAD HONDA, RAMBLER (L.792S),
EHOLT MOUNTAIN, BROWN CREEK, ORIENT (L.1438S),
DELAMAR (L.1346), PRINCESS LOUISE (L.1224), COLORADO BOY (L.781S),
LIVINGSTON (L.1563), BEAR-CUB**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 09 58 N
LONGITUDE: 118 33 04 W
ELEVATION: 1067 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5447080
EASTING: 386928

LOCATION ACCURACY: Within 500M

COMMENTS: The Eholt property includes the Princess Louise (Lot 1124),
Delamar (Lot 1346) and Orient (Lot 1438) reverted Crown grants,
located in the headwater area between the west flowing Eholt Creek
and east flowing Brown and Pass creeks, 11 kilometres northeast of
Greenwood and 16 kilometres northwest of Grand Forks. Access to the
property is from several logging roads and the abandoned Kettle
Valley Railway from the settlement of Eholt located just north of
Highway 3. Location is of shafts and dumps. This location is
referred to as the Dead Honda showing in Assessment Report 22933.

COMMODITIES: Copper

Gold

Silver

Molybdenum

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite Molybdenite
COMMENTS: Trace molybdenite.
ASSOCIATED: Garnet Pyroxene Calcite Epidote Tremolite
Quartz Chlorite Gypsum
ALTERATION: Garnet Pyroxene Calcite Epidote Tremolite
Quartz Chlorite Gypsum
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Shear
CLASSIFICATION: Skarn Hydrothermal
TYPE: K01 Cu skarn K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Triassic	Brooklyn	Unnamed/Unknown Formation	
Upper Paleozoic	Knob Hill	Undefined Formation	
Jurassic			Nelson Intrusions
Eocene			Coryell Intrusions

LITHOLOGY: Limestone
Limy Sediment/Sedimentary
Chert
Quartzite
Meta Argillite
Greenstone
Amphibolite
Volcanic Breccia
Granodiorite
Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Okanagan Highland
GRADE:

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1988

COMMODITY	GRADE	Units
Gold	1.4700	Grams per tonne
Copper	0.1400	Per cent

COMMENTS: A 4.8-metre interval.
REFERENCE: Assessment Report 21080.

CAPSULE GEOLOGY

The Eholt property includes the Princess Louise (Lot 1124), Delamar (Lot 1346) and Orient (Lot 1438) reverted Crown grants, located in the headwater area between the west flowing Eholt Creek and east flowing Brown and Pass creeks, 11 km northeast of Greenwood and 16 km northwest of Grand Forks. Access to the property is from several logging roads and the abandoned Kettle Valley Railway from the settlement of Eholt located just north of Highway 3.

Although the Eholt property contains numerous old pits, shallow shafts, trenches and short adit on old Crown granted claims, there is little reference in government publications to the early work which was probably done during the first decade after 1900 or just before this time. The earliest written record of activity on the property is in 1909 when the Princess Louise claim, adjacent to the settlement of Eholt, was Crown granted to Samuel McOrmond. Assessment reports indicate that geophysical and geochemical work was done by Granby Mining Company between 1959 and 1966, west of the Eholt property near Boldue Lake. In the same period Rayore Mines Ltd. did geophysical work at the head of South Pass Creek near the Orient claim.

In 1980, an assessment was made and one hole drilled for Geokor Energy Holdings Ltd. north of the settlement of Eholt. The hole encountered 10.16 metres of pyrrhotite mineralization but no significant copper, gold or silver as previously reported. The drill hole was on a north-south alignment of old workings that consisted of 6 shallow shafts and 5 short trenches at an elevation of 1113 metres. All of the trenches were caved and several of the shafts contained water; the deepest shaft was about 3.6 metres.

Recent documented exploration on the Eholt property was conducted by Kettle River Resources Ltd. from 1982 to 1984, and Golden Kootenay Resources Inc. during the period May 1987 to January 1989. The work by Kettle River Resources Ltd. was mainly geological mapping. The investigation of Golden Kootenay included grid cutting, soil geochemistry and diamond drilling (3 holes). VLF-EM was run over the grid, and a magnetometer survey was done on part of this area. During the period October 1991 to March 1992, Orvana Minerals Corp. re-established the old grid and installed a new grid over which a ground magnetometer survey was run. Results of this program demonstrated significant magnetic relief over the surveyed area and demonstrated the potential presence of skarn deposits. In 1996 Orvana Minerals Corp. and Teck Corp. entered into a 40/60 joint venture to further explore skarn discoveries.

The Eholt property is underlain by moderately deformed Paleozoic and Mesozoic volcanic and sedimentary rocks and somewhat tilted but relatively fresh Tertiary beds. The rocks are cut by a few granodiorite/diorite offshoots of the Wallace Creek pluton (Jurassic/Cretaceous) and numerous small syenite and monzodiorite bodies related to the nearby Coryell batholith (Eocene).

The oldest beds occur on the west side of the property and belong to the Knob Hill Group (Devonian to Permo-Carboniferous?). The rocks consists of quartzite (metachert), phyllite, schist and amphibolite. The amphibolites are aphanitic to very fine grained, dark green rocks which generally are massive but locally display some schistosity and gneissic foliation. The quartzites are white to buff and dark grey, rusty weathering rocks with blocky fractures aligned with bedding. Transitional zones of interbedded quartzite and amphibolite contain lenses of crystalline limestone and marble. The formations of the Knob Hill Group generally trend northwest but swing west near Eholt, dipping at moderate angles to the north. No evidence has been found suggesting repetition of the stratigraphy by folding or faulting. Minor open and tight folds plunge at low to moderate angles to the north and northwest. Tertiary faults trend north and northeast, offsetting the formations in the Boldue and South Pass creeks area.

The Eholt property is bisected by a narrow finger of Brooklyn rocks (Triassic) that extends north from the Oro Denoro (082ESE063) and Emma (082ESE062) mines. The basal formation of the Brooklyn Group is sharpstone conglomerate, that is well exposed west of the Emma mine and on the railway grade south of Eholt. South of Eholt, the unit is buff to grey weathered and consists of angular fragments of light coloured chert, quartz, jasper volcanic rocks and rarely limestone. The clasts are mainly less than 3 centimetres across and are set in a dark grey siliceous matrix containing metamorphic biotite and amphibole. Bedding is rarely visible but at a few localities the strike is to the north and the dip is nearly vertical.

Northeast of Eholt, the sharpstone conglomerate is found only in one rock cut on the old Jewel Lake road. It is east (and south) of a single outcrop of siliceous argillite/chert (Knob Hill Group) and beneath a bluff of marble to the east. While the evidence is

CAPSULE GEOLOGY

minimal, the sequence and position of these outcrops is distinctive enough to be reasonably sure that the Brooklyn Group continues northward to the head of South Pass Creek.

The Brooklyn limestone that overlies the sharpstone conglomerate in the Eholt area is normally massive, light grey to white, fine to medium grained. Locally the unit is grey and well banded and on the bluffs north of Eholt it is white, coarsely crystalline, siliceous marble containing well cleaved blades of a white silicate (tremolite or wollastonite). No limestone is exposed on Eholt Ridge, north of Eholt settlement, but the sharpstone conglomerate has a calcareous matrix in this area.

A volcanic complex (the Eholt formation) consisting of greenstone and/or microdiorite lies above the Brooklyn limestone on Eholt Mountain. These rocks are generally fine grained and massive although plagioclase and amphibole microlites are commonly seen with a hand lens. Weathered surfaces are often mottled and fragmental facies can be distinguished in some places. A prominent fragmental facies is well exposed on the open slopes of Eholt Mountain where it forms a northwesterly-trending, steeply dipping layer as much as 100 metres thick, grading laterally into massive greenstone. The unit contains subangular fragments of greenstone up to 10 centimetres across in a matrix of the same rock with a crushed appearance. A second conspicuous facies is a volcanic breccia with both rounded and angular fragments of porphyritic greenstone clasts mixed locally with limestone clasts 5-10 centimetres across. The western contact of these greenstone formations with the Brooklyn limestone appears to be partly transgressive and partly intrusive.

Easterly dipping beds of the Thimble Mountain Tertiary basin occur on the east side of the Eholt property. These rocks comprise the Penticton Group (Eocene) that consists of Kettle River 'arkose' at the base and a variety of Marron lavas above. The Kettle River beds are well exposed near Wilgress Lake and on the north part of the property. The arkose is a light buff and light grey sandstone and conglomerate composed of poorly cemented subangular fragments of rhyolite, feldspar and quartz in a fine grained clay/quartz matrix. These rocks are disconformably overlain by a large thickness of lavas and volcanoclastics and cut by feeder dikes, sills and stocks - some of which appear to be related to the Coryell batholith.

Two types of mineralization occur on the Eholt property. These are (1) massive sulphide and/or magnetite replacements within or associated with skarn occurrences, and (2) sulphide stringers and disseminations within the metavolcanics and sharpstone conglomerate beds. The principal deposits are the massive sulphide skarn occurrences. These are the 'Dead Honda' showing on the Orient claim (Rambler area), the 'Eholt Mountain' (Pt. Eholt) showing on the Delamar claim, and the Brown Creek showing on the Princess Louise claim. Shallow workings at these localities expose garnet (+/- epidote, pyroxene) replacements in the Brooklyn limestone/volcanic rocks, containing pyrrhotite, pyrite, magnetite and chalcopyrite in varying ratios and abundance. The Dead Honda zone trends east-west.

Skarn is crosscut by light-blue coloured chalcedony +/- jasper veins which may be related to the younger Tertiary extensional (graben) event and/or intrusion of the Middle Eocene Coryell Intrusions.

A grab sample from a shaft dump (Dead Honda showing) assayed 0.53 per cent copper, 10.3 grams per tonne silver and 19.5 grams per tonne gold (Assessment Report 17488). Diamond drilling in 1988 yielded a 4.8-metre interval grading 0.14 per cent copper and 1.47 grams per tonne gold (Assessment Report 21080).

In 1995, Orvana Minerals Corp. completed 3100 metres of diamond drilling on the Dead Honda showing and on the east flank of Eholt Mountain. At Dead Honda, 7 holes tested a northerly elongated belt 1.5 kilometres long by 200 to 300 metres wide. The drilling intersected a 210-metre long sulphide-bearing garnet-pyroxene skarn zone intruded by numerous Coryell related dikes. DDH E-95-4 returned a 27.8-metre interval of core grading 2.7 grams per tonne gold and 0.28 per cent copper; and DDH E-95-6 returned a 5.5-metre interval grading 5.1 grams per tonne gold, in addition to copper credits (George Cross Newsletter, Jan. 15, 1996).

Disseminated pyrrhotite, up to 2 per cent, occurs in tremolite altered Brooklyn sharpstone conglomerate on the southwest slopes of Eholt Mountain. Also, disseminated pyrite in concentrations up to 3 per cent, with traces of gold and copper, is common in fragmental metavolcanic rocks in the area south and east of Eholt Mountain.

Subsequent igneous intrusions, including numerous Tertiary feeder dikes and sills, emplaced on an intricate fault and fissure system, may have afforded the development of contact metamorphism and the skarn mineralization, although causative evidence such as intrusive contacts are not readily apparent.

CAPSULE GEOLOGY

In 1996, Teck Corporation, under a joint venture agreement with Orvana Minerals Corp., drilled 12 holes totalling about 1930 metres in an area between the Dead Honda showing and northwest of the Rambler showing (old shafts). Teck trenched in 1997.

The Phoenix deposit (082ESE020), 9.7 kilometres to the south, (30 million tonnes grading 0.8 per cent copper and 1.0 grams per tonne gold), is used as an analogy/target model.

BIBLIOGRAPHY

EM EXPL 1996-E3; 1997-48
EMPR Aeromag Map 8497G
EMPR AR 1900-990; 1909-277
EMPR ASS RPT 8812, 11845, 13411, *17488, 21080, 22116, 22403,
*22933, 23777, 24407, 24456, 24915
EMPR INF CIRC 1993-13, p. 19; 1994-1, p. 20; 1995-9, p. 25; 1996-1,
p. 25
EMPR MR MAP 6 (1932)
EMPR OF 1990-25; 1994-1
EMPR PF (82E General File - Mineral Reference Map; 82ESE General
File - Airborne magnetometer survey map, Eholt area, Noranda
Mines Limited; White, W.H. and Seraphim, R.H. (1951): Geological,
Geochemical and Geophysical Report on Attwood Claims)
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A
GSC OF 409; 481; 736; 1969
GSC P 67-42; 79-29
GCNL #10 (Jan.15), 1996
N MINER July 3, 1995; May 4, 1998
WWW <http://www.infomine.com/>

DATE CODED: 1993/12/08
DATE REVISED: 1996/07/12

CODED BY: GO
REVISED BY: TGS

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE240**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAN PEDRO QUARRY, BLACK GOLD, SAN PEDRO BLACK, GARIBALDI GRANITE, PEDRO BLACK**

STATUS: Producer Open Pit
REGIONS: British Columbia

MINING DIVISION: Greenwood

NTS MAP: 082E07E

UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 49 19 30 N

NORTHING: 5464806

LONGITUDE: 118 35 34 W

EASTING: 384262

ELEVATION: 1740 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: On Almond Creek about 3 kilometres northeast of Almond Mountain and 33 kilometres north of the community of Grand Forks (Fieldwork 1996).

COMMODITIES: Granite Dimension Stone Building Stone

MINERALS

SIGNIFICANT: Plagioclase Augite Biotite
ASSOCIATED: Orthoclase Apatite Magnetite Pyrite
ALTERATION: Chlorite Albite
ALTERATION TYPE: Chloritic Albitic
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Magmatic Industrial Min.
TYPE: R03 Dimension stone - granite
DIMENSION: 50 x 30 Metres
COMMENTS: Black granite. Area of stripping.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Nelson Intrusions
Eocene			Coryell Intrusions

LITHOLOGY: Biotite Gabbro
Syenite
Black Granite

HOSTROCK COMMENTS: Hosted in a pendant of Nelson Intrusions in the Coryell Intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The San Pedro Quarry is accessed by taking the North Forks road from the community of Grand Forks to the Brown Creek road. Then travel 23.5 kilometres up the Pass Creek Road and turn left (west) on a spur road for 2 kilometres.

The gabbro was discovered in 1992. In 1993, Western Canadian Quartzite Ltd. and San Pedro Stone Inc. requested 5 diamond drill holes, totalling 121.9 metres. The 1995 proposed work includes trenching and fresh rock sampling by benching of a rock outcrop area. The stone is being shipped to Korea (Information Circular 1996-1, page 10). A new (1996) plant in Squamish, operated by Garibaldi Granite Group and Pender Capital Corporation, will process stone from this quarry.

A small group of outcrops, of coarse-grained gabbro, along a logging road lead to stripping and test quarrying which has exposed the gabbro over a 30 by 50 metre area. The stone has a moderate, irregular fracture pattern which allows quarrying of commercial sized blocks with estimated waste of up to 50 percent. The stone is uniform without any foreign rock inclusions. It may be part of a Jurassic Nelson Plutonic suite pendant in a Eocene Coryell Intrusion syenite pluton.

The stone is a uniform, dark black with a slight greenish cast, medium-grained gabbro. Major constituents are plagioclase, clinopyroxene (augite) and biotite. Minor constituents are orthoclase, chlorite, apatite, magnetite and pyrite (1 per cent). The mafic minerals are slightly altered to chlorite, plagioclase is slightly albitized and pyrite is fresh. There is no quartz. The rock takes an excellent, bright, glassy, polish (9/10) with very minor pitting at mafic minerals. The rock looks fresh with no

CAPSULE GEOLOGY

visible alteration, staining or fabric. There are a few, tight cracks, typically 1 to 3 centimetres long.
San Pedro Stone Inc., a subsidiary of Garibaldi Granite, produces Pedro Black from this quarry.

BIBLIOGRAPHY

EMPR AEROMAG MAP 7686G
EMPR ASS RPT *22970
EMPR EXPL 1992, pp.107-116; 1996-A13; 1997-51
EMPR FIELDWORK 1994, pp.365-369; *1996, pp.301-306
EMPR INF CIRC 1995-9, p.10; 1996-1, p.10; 1997-1, p. 13; 1998-1, p. 15
EMPR PF (NOW form on Black Gold)
GSC MAP 6-1957; 1736A
GSC OF 481; 637; 1969
GSC P 89-1E
EI Focus on Industrial Minerals, Vol. 3, Issue 1, p. 4
Streckeisen, A. (1976): To Each Plutonic Rock its Proper Name; Earth and Science Reviews, Volume 12, pages 1-33.

DATE CODED: 1995/12/14
DATE REVISED: 1997/02/05

CODED BY: GO
REVISED BY: ZDH

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESE241**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLEARCUT RHODONITE**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 12 00 N
LONGITUDE: 118 37 04 W
ELEVATION: 1675 Metres

NORTHING: 5450949
EASTING: 382148

LOCATION ACCURACY: Within 500M

COMMENTS: The Clearcut Rhodonite prospect is on the road leading to the microwave tower on Mount Roderick Dhu, 13 kilometres northeast of Greenwood.

COMMODITIES: Rhodonite

MINERALS

SIGNIFICANT: Rhodonite Garnet Manganite Pyroxene
ASSOCIATED: Quartz Garnet Epidote Calcite Mica
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Layered Stratabound
CLASSIFICATION: Metamorphic Sedimentary Epigenetic Industrial Min.
TYPE: G02 Volcanogenic Mn
DIMENSION: 10 x 1 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Knob Hill Unnamed/Unknown Formation

LITHOLOGY: Chert Schistose Greenstone
Amphibolite
Quartz Mica Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

The Clearcut Rhodonite prospect is on the road leading to the microwave tower on Mount Roderick Dhu, 13 kilometres northeast of Greenwood.

The main exposure is a 10-metre long roadcut that displays pink pyroxmanganite and rhodonite coated with black manganese oxide. This rock has a sugary texture and grades into quartz-rich rock containing spessartine garnet and light coloured mica.

The host rocks are part of the Upper Paleozoic Knob Hill Group that outcrops in an southeast trending belt extending from the lower course of Clement Creek to Jewel Lake and thence to the area northwest of Mount Roderick Dhu. The Knob Hill Group consists of a variety of volcanic and sedimentary rocks converted to amphibolite and quartz-mica schists by regional metamorphism. The rocks are medium to fine grained, medium to dark coloured. Primary structures, such as bedding, are often confused with foliation and gneissosity. The metasedimentary rocks consist of quartz (15 to 90 per cent), plagioclase, biotite and some garnet and magnetite, and less commonly amphibole, chlorite, muscovite and occasionally andalusite. Because of recrystallization, metaquartzites and metacherts cannot be distinguished. The amphibolites generally occur as massive lenses - possibly derived from basaltic lava flows and pyroclastic rocks. Typically the amphibolites consist of 40 to 70 per cent green amphibole, and smaller amounts of plagioclase, quartz, magnetite and titanite. Epidote, calcite and quartz are present in abundance associated with small veins and fissures.

The Clearcut pyroxmanganite/rhodonite occurrence is a stratabound deposit associated with what appears to be the metamorphic equivalent of volcanic rocks and siliceous and pelitic sediments. The absence of the primary detrital textures within the silica-rich host rocks is consistent with a chemical precipitate protolith, either of sedimentary or hydrothermal origin. Many similar manganese deposits are considered distal equivalents of volcanogenic massive sulphide deposits.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 764
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR *FIELDWORK 1995, pp. 219-222
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1996/04/20
DATE REVISED: 1997/02/07

CODED BY: BNC
REVISED BY: BNC

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082ESE242**

NATIONAL MINERAL INVENTORY:

NAME(S): **PICTURE ROCK**, MURRAY 90, ANNEX

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 18 N
LONGITUDE: 118 47 52 W
ELEVATION: 970 Metres

NORTHING: 5433274
EASTING: 368610

LOCATION ACCURACY: Within 500M

COMMENTS: Located 4.5 kilometres northwest of Midway between Bauer and Ingram creeks, directly under a major hydroelectric power line. Access is by a dirt road to the power line from the former railway crossing on Highway 3, west of Midway.

COMMODITIES: Gemstones Agate

MINERALS

SIGNIFICANT: Chalcedony Chrysoprase
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epithermal Hydrothermal Epigenetic Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Unnamed/Unknown Group	Unnamed/Unknown Formation	Ultramafic Intrusions
Unknown			

LITHOLOGY: Listwanite
Serpentinite
Feldspar Porphyry Dike
Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Picture Rock quarry is 4.5 kilometres northwest of Midway between Bauer and Ingram creeks, directly under a major hydroelectric power line. Access is by a dirt road to the power line from the former railway crossing on Highway 3, west of Midway. The quarry is 500 metres south of the Midway mine (082ESE128), from which about 19 tonnes of silver and gold ore with lead and zinc credits were shipped in the late 1960's and early 1970's.

The Rainbow claims covering the area have been explored for large tonnage precious metal potential by Dentonia Resources and Kettle River Resources in 1983, Kerr Addison Mines Ltd. in 1984, BP Resources Canada Ltd. from 1987 to 1989 and Minnova Inc. in 1989 and 1990. Through this period to present, ornamental chalcedony has been obtained from the Picture Rock locality for lapidary purposes.

At the Picture Rock Quarry, epithermal chalcedonic veins cut altered serpentinite (listwanite) and feldspar porphyry dikes. The quarry is actually a group of small detached and interconnected pits developed over a radius of several tens of metres on the crest of a low ridge. The veins are generally narrow (up to 50 centimetres wide) and mostly shallow dipping to the east and northeast. Typically the veins are delicately banded in white, grey, light blue and blue-green layers that are developed parallel to the veins walls or around listwanitic breccia clasts. Except for the largest veins, seen by the floor of the main pit, which has a hanging wall composed mostly of dickite several centimetres thick, walls are a little altered by the veining. The veins have epithermal gold, silver, arsenic, antimony signatures, with anomalous but subeconomic precious metal values.

The Picture Rock chaledonic quartz has proven attractive for the manufacture of clock faces and ornaments by local artisans. The bluish-green colour of some of the chalcedony was thought to be due to the presence of nickel, as chrysoprase, derived from the ultramafic and listwanitic host rocks. However, analysis of a sample of the bluish vein material yielded only 15 ppm nickel. Other elements, possibly contributing to the colour, include 71 ppm cobalt,

MINFILE NUMBER: **082ESE242**

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 766
REPORT: RGEN0100

CAPSULE GEOLOGY

94 ppm manganese, 0.46 per cent iron, 538 ppm strontium, 96 ppm chromium, 100 ppm niobium, and 641 ppm tungsten.

BIBLIOGRAPHY

EMPR EXPL *1995-127-129
EMPR ASS RPT 20536
EMPR AEROMAG MAP 8497G
GSC P 67-42; 79-29
GSC OF 481; 637; 1969
GSC MEM 38
GSC MAP 83A; 828; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1996/04/20
DATE REVISED: 1996/06/06

CODED BY: BNC
REVISED BY: BNC

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082ESE243**

NATIONAL MINERAL INVENTORY:

NAME(S): **MYERS CREEK**, KPJ, ROCK CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02W
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 30 N
LONGITUDE: 118 59 44 W
ELEVATION: 762 Metres

NORTHING: 5432153
EASTING: 354117

LOCATION ACCURACY: Within 500M

COMMENTS: Rock sample site along an abandoned railway grade along Myers Creek, about 4 kilometres south of the community of Rock Creek (Assessment Report 23650).

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Pyrite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Shear Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L03 Alkaic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Carboniferous	Anarchist	Undefined Formation	Unnamed/Unknown Informal
Jurassic-Cretaceous			

LITHOLOGY: Chlorite Quartz Calcite Schist
Granodiorite
Dolomite
Quartzite
Meta Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP:
GRADE:

INVENTORY

ORE ZONE: SHEAR
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY: Gold
GRADE: 2.4000 Grams per tonne
REFERENCE: Assessment Report 23650.

CAPSULE GEOLOGY

The Myers Creek property is underlain by the Carboniferous or older Anarchist Group and a Cretaceous/Jurassic granodiorite body. Dolomite is underlain by variably metamorphosed sediments and volcanics (schist unit) that become increasingly limy west of the dolomite. This suite is in part underlain by quartzite. A band of meta-andesite separates the schist unit and the granodiorite. Rock chip samples collected across a gossanous shear striking 352 degrees and dipping 58 degrees east analysed up to 2.4 grams per tonne gold. The shear is hosted by chlorite-quartz-calcite schist. In the southwest part of the property a number of pits and short tunnels are driven in quartz vein zones in granodiorite. Disseminated pyrite, locally to 30 per cent, minor chalcopyrite and malachite are found within granodiorite and quartz veins. A rock sample taken from a quartz vein with malachite staining along a selvage analysed 0.15 per cent copper (Assessment Report 23650).

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR ASS RPT *23650

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 768
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 83A; 1500A; 1736A
GSC MEM 38
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1996/07/09
DATE REVISED: 1996/07/09

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE244**

NATIONAL MINERAL INVENTORY:

NAME(S): **KINGSTON (L.2300)**, HOUSTON (L.2302), BOSTON (L.2301),
PAN POT, KETTLE,
SUPERIOR (L.2786), JEWEL (L.2785), BARNATO,
CRICK, CLEAVER, BEAVER,
WARD

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:

Open Pit

MINING DIVISION: Greenwood

LATITUDE: 49 27 42 N
LONGITUDE: 118 54 17 W
ELEVATION: 1325 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5480523
EASTING: 361980

LOCATION ACCURACY: Within 500M

COMMENTS: The Kingston (Lot 2300), Boston (Lot 2301) and Houston (Lot 2302) claims are about 13 kilometres east of Beaverdell and 48 kilometres north of Rock Creek. The claims are southeast of the O.K. (082ESE067), in the Triple Lakes area -- the headwater basin of Canyon Creek. Access to the property is by logging roads from either the main Kettle Valley road to the east or from Beaverdell to the west. The Barnato (082ESE109) lies 2 kilometres to the northeast. Location is of adits on the Boston claim (Assessment Report 20122).

COMMODITIES: Gold

Silver

Copper

Zinc

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Arsenopyrite Chalcopyrite Sphalerite
ASSOCIATED: Quartz Magnetite
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
COMMENTS: Fracture fillings.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Jurassic			Westkettle Batholith

LITHOLOGY: Quartz Diorite
Granodiorite
Andesite
Breccia

HOSTROCK COMMENTS: Westkettle is part of the Nelson Intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Kingston (Lot 2300), Boston (Lot 2301) and Houston (Lot 2302) claims are about 13 kilometres east of Beaverdell and 48 kilometres north of Rock Creek. The claims are southeast of the O.K. (082ESE067), at about 1325 metres elevation, in the Triple Lakes area -- the headwater basin of Canyon Creek. The area has been extensively logged resulting in a network of four wheel drive roads. Access to the property is by logging roads from either the main Kettle Valley road to the east or from Beaverdell to the west. The Barnato (082ESE109) lies 2 kilometres to the northeast.

The Lake Ridge (Horseshoe Mountain) area has been explored intermittently since 1878, when there was a first influx of prospectors to the Kettle River area. Surface programs consisting simply of prospecting, panning and trenching led to the discovery of gold in 1896, but by 1901 activity waned and not much attention was focused on the area for many years. The Kingston, Boston and Houston claims were Crown granted to Vancouver & Boundary Creek Development and Mining Co. in 1906.

In 1938, Consolidated Mining and Smelting Company of Canada Ltd. (Cominco) optioned much of the ground in the area and completed an exploration program consisting of mapping, prospecting, test pitting and drilling. This showed that many of the veins were erratic along strike and diminished in thickness and grade with

CAPSULE GEOLOGY

depth. During the period 1965 to 1966, Amcana Gold Mines Ltd. conducted a program of road construction, claim surveying, trenching and diamond drilling (4 short holes) in the area of the main Barnato workings. In 1977, Camnor Resources Ltd. acquired the property from G. Bleiler. Subsequently, the company completed several programs consisting of ground and air geophysical surveys, soil and rock chip sampling, mapping, trenching, prospecting and limited diamond drilling (5 NQ holes, totalling 302.9 metres). In 1979, Carmac Resources Ltd. acquired the property and over the following years did additional exploratory work. Golden Seal Resources Ltd. optioned the property in 1986 and completed a small percussion drill program. Because of poor results Golden Seal terminated the option. Following this, limited soil and rock chip sampling and mapping programs were done by Camnor Resources Ltd. Between June 1991 and May 1992 work was completed by Teck Exploration Ltd. to evaluate areas of known gold mineralization by further sampling the geochemical anomalies.

In 1994, Phelps Corporation of Canada, Limited conducted 40-line kilometres of soil sampling in the area. In 1995, Phelps drilled 3 holes to the east of these occurrences. The best intersection was 5.4 grams per tonne gold over 1 metre (Assessment Report 24307).

Bedrock exposure on the property is locally in excess of 15 per cent. Trenching and pitting is widespread throughout the area. Two main rock types underlie the property. Upper Paleozoic volcanic rocks (andesite) of the Anarchist Group. The Anarchist rocks are intruded by quartz diorite and granodiorite bodies related to the Jurassic Westkettle pluton (Nelson Intrusions).

Mineralization consisting of pyrite, pyrrhotite, minor magnetite, arsenopyrite and chalcopyrite with some gold occurs in quartz veins, fracture fillings and as disseminations within both quartz diorite and the volcanic rocks. The mineralization appears, in part, to be localized along the contact between the intrusive rocks and host rocks.

Prospecting by Teck located an old showing near the western boundary of the Houston claim. The showing consists of a small gossanous breccia zone in quartz diorite. Two grab samples of the breccia assayed 38 and 45 grams per tonne gold and a nearby quartz veins ranged to 6.6 grams per tonne gold across 20 centimetres.

Further north, towards the Kingston claim, a small pit was located in a heavily oxidized shear zone within quartz diorite. A 0.9-metre sample taken across the shear assayed 3.5 grams per tonne gold, while a grab sample of pyrrhotite/pyrite rich material taken from the dump assayed 8.2 grams per tonne gold. (Assessment Report 22396).

About 1 kilometre to the south, on the Jewel claim, a quartz vein in a trench sampled by Phelps in 1994, assayed 38.7 grams per tonne gold and 0.48 per cent zinc (Assessment Report 23835).

BIBLIOGRAPHY

EM EXPL 2002-51-62
EMPR AEROMAG MAP 7686G
EMPR AR 1905-256; 1906-253; 1938-D18
EMPR ASS RPT 2951, 8703, 10098, 10456, 17421, 18178, *20122, *22396,
22929, 23835, *24307
GSC MAP 37A; 6-1957; 1736A
GSC MEM 79
GSC OF 481; 637; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE245**

NATIONAL MINERAL INVENTORY:

NAME(S): **HIGHLAND MARY (L.1462)**, MOUNTAIN VIEW (L.1542)

STATUS: Showing Open Pit

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E07W

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 49 28 48 N

NORTHING: 5482526

LONGITUDE: 118 53 08 W

EASTING: 363420

ELEVATION: 1250 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The Highland Mary (Lot 1462) claim is 15.5 kilometres east of Beaverdell and 48 km north of Rock Creek. It lies just northeast of the Barnato claim (L. 2848) (082ESE109). The claim is northeast of the headwater area of Stewartson Creek, on the east slope of Lake Ridge. Access to the property is by logging roads from either the main Kettle Valley road to the east or from Beaverdell to the west. Location is of a trench (Assessment Report 20122).

COMMODITIES: Gold Silver Arsenic

MINERALS

SIGNIFICANT: Arsenopyrite Pyrrhotite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I01 Au-quartz veins

DIMENSION: 75 x 1 Metres STRIKE/DIP: 025/65E TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	Westkettle Batholith
Jurassic			

LITHOLOGY: Quartz Diorite
Sediment/Sedimentary
Porphyritic Dike

HOSTROCK COMMENTS: Westkettle is part of the Nelson Intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1990

SAMPLE TYPE: Trench

COMMODITY

GRADE

Arsenic

28.8400

Per cent

Gold

18.5000

Grams per tonne

COMMENTS: Sample width of 30 centimetres.

REFERENCE: Assessment Report 20122.

CAPSULE GEOLOGY

The Highland Mary (Lot 1462) claim is 15.5 kilometres east of Beaverdell and 48 km north of Rock Creek. It lies at the elevation of about 1250 metres, just northeast of the Barnato claim (L. 2848) (082ESE109). The claim is northeast of the headwater area of Stewartson Creek, on the east slope of Lake Ridge. The area has been extensively logged resulting in a network of four wheel drive roads. Access to the property is by logging roads from either the main Kettle Valley road to the east or from Beaverdell to the west.

The first work on the Highland Mary claim was reported in 1898, which noted the occurrence of gold in the area associated with quartz veins. The claim was Crown granted to Sydney Johnson in 1904. In 1917 it was observed that no work had been done in the area for some time and that many of the old workings had caved.

In 1938, production from the Barnato claim resulted renewed activity throughout the area. At this time, Cominco optioned the property and completed an exploration program consisting of mapping,

CAPSULE GEOLOGY

prospecting, test pitting and drilling. This showed that the veins in the vicinity of the main Barnato workings were erratic along strike and diminished in thickness and grade with depth. During the period 1965 to 1966, Amcana Gold Mines conducted a program of road construction, claim surveying, trenching and diamond drilling (4 short holes) in the area of the main Barnato workings. In 1977, Camnor Resources Ltd. acquired the property from G. Bleiler. Subsequently, the company completed several programs consisting of ground and air geophysical surveys, soil and rock chip sampling, mapping, trenching, prospecting and limited diamond drilling (5 NQ holes, totalling 302.9 metres). Golden Seal Resources optioned the property in 1986 and completed a small percussion drill program totalling 202.4 metres in 4 holes. Because of poor results Golden Seal terminated the option. Following this, limited soil and rock chip sampling and mapping programs were completed by Camnor Resources Ltd. and Carmac Resources Ltd. in 1989.

The Highland Mary claim adjoins the Mountain View claim (Lot 1542) on the northeast, on a tongue of Jurassic Westkettle quartz diorite (Nelson Intrusions), with Anarchist sedimentary rocks to the east and west. There are many porphyritic dikes of andestic and syenitic composition which appear to be younger than the mineralization. The original showings are just within adjacent corners of the two claims at the elevation of about 1250 metres; there are 3 open cuts in line up the hillside and, below this, 2 pits at the ends of a 9-metre open cut.

The uppermost open cut is targeted on a 130-centimetre wide vein, striking 025 degrees and dipping 65 degrees southeast, composed of almost solid arsenopyrite. To the north of this in the same cut, there are several narrow stringers of arsenopyrite. In the middle cut, a rusty band 5 centimetres wide dips 60 degrees northwest. In the third cut, an arsenopyrite bearing quartz vein, 65 centimetres wide and traceable northeast for 9 metres, is cut off by a dike. A sample across this vein assayed only a trace of gold and silver.

The pit at the west end of the lowest cut exposes a vertical arsenopyrite-, pyrrhotite-, pyrite-bearing quartz vein, 0.6 metre wide, striking 040 degrees. The pit 9 metres to the east, contains a similar but narrower, 23-centimetre wide vein, that dips 75 degrees southeast. A sample from the latter locality assayed 17 grams per tonne gold and 10 grams per tonne silver.

The latter, believed to be the original Highland Mary vein, was re-sampled by Carmac in 1989 and the new results showed 11.9 grams per tonne gold across a width of 2 metres. Sampling and mapping by Carmac in 1990 show the Highland Mary vein to range in width from 20 to 140 centimetres with grades ranging up to 9.5 grams per tonne gold and 31 per cent arsenic. A parallel vein 15 metres to the west of the southernmost exposure, near the south corner of the Highland Mary claim, assayed 18.5 grams per tonne gold and 28.84 per cent arsenic over a sampling width 30 centimetres. Both veins remain open along strike and the area between them is largely covered with overburden. (Sampling and details from Assessment Report 20122.)

BIBLIOGRAPHY

EMPR AR 1898-1119; 1904-299; *1938-D18,D21
EMPR ASS RPT 10456, 19526, *20122, 24307
EMPR AEROMAG MAP 7686G
GSC MEM 79
GSC MAP 37A; 6-1957; 1736A
GSC OF 481; 637; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/09/03

CODED BY: GSB
REVISED BY: BNC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE246**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAYBE**, TRAPPER (L.1467)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 27 34 N
LONGITUDE: 118 52 10 W
ELEVATION: 790 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5480212
EASTING: 364530

LOCATION ACCURACY: Within 500M

COMMENTS: The Maybe is located on the south side of Crick Creek, west of the Kettle River Road. The Barnato (082ESE109) lies 2.2 kilometres to the northwest.

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Arsenopyrite Chalcopyrite Sphalerite
ASSOCIATED: Quartz
ALTERATION: Limonite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres STRIKE/DIP: 010/55E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Anarchist Undefined Formation

LITHOLOGY: Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Slide Mountain

CAPSULE GEOLOGY

The Maybe is located at an elevation of about 800 metres, on the south side of Crick Creek, west of the Kettle River Road. The Barnato (082ESE109) lies 2.2 kilometres to the northwest.

In 1938, S. Berglund and L. Clery developed the property with 30 metres of stripping, a 6-metre adit and 37 metres of drifting. In 1939, the property was optioned to Bayonne Consolidated Mines. Limited, who conducted diamond drilling. In 1940, it was optioned to Canadian Exploration, Limited; development consisted of 24 metres of drifting. Production from 1938 to 1940 totalled 443 tonnes, resulting in 9798 grams of gold, 17,075 grams of silver, 118 kilograms of copper and 39 kilograms of lead.

A mineralized northerly striking, 50-degree, east dipping quartz vein occurs in Upper Paleozoic volcanic rocks of the Anarchist Group. The rocks are locally brecciated. Mineralization consists of pyrite, pyrrhotite, arsenopyrite, sphalerite and minor chalcopyrite.

In 1994, Phelps Corporation of Canada, Limited conducted 40-line kilometres of soil sampling in the area.

BIBLIOGRAPHY

EMPR AR 1903-248; 1919-169; *1938-A34,D22-D23,D36; 1939-36,77;
1940-24,62
EMPR INDEX 3-205
EMPR BC METAL MM00947 (1938-1940)
EMPR ASS RPT 20215, 23835, 23407
EMPR AEROMAG MAP 7686G
GSC MEM 79
GSC MAP 37A; 6-1957; 1736A
GSC OF 481; 637; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1997/03/20

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE247**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAVIS (L.2877)**, SKYLARK CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 03 N
LONGITUDE: 118 39 12 W

NORTHING: 5438129
EASTING: 379277

ELEVATION: 1125 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The Mavis (Lot 2877) is located east of Greenwood, immediately south of the Bay Fr. (Lot 3285)(082ESE005).

COMMODITIES: Silver Gold

MINERALS

SIGNIFICANT: Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Mesothermal Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous			Greenwood Pluton

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Mavis (Lot 2877) is located at an elevation of 1125 metres, east of Greenwood and immediately south of the Bay Fr. (Lot 3285)(082ESE005).

In 1906, a 3-metre drift was run from a point 10 metres down in the shaft. From 29 tonnes, 591 grams of gold and 1742 grams of silver were produced. The claim was Crown Granted to T.T. Wickwire in 1909.

A quartz vein with values in gold and silver likely occurs in granodiorite of the Jurassic-Cretaceous Greenwood Stock.

BIBLIOGRAPHY

EMPR AR 1905-181,183; *1906-159,250; 1909-277
EMPR INDEX 3-205
EMPR BC METAL MM00948 (includes other claims)
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
EMPR ASS RPT 12815
GSC OF 481; 1969
GSC P 67-42; 79-29
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1997/03/05
DATE REVISED: 1997/03/05

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE248**

NATIONAL MINERAL INVENTORY:

NAME(S): **DON PEDRO (L.2458)**, SKYLARK CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 24 N
LONGITUDE: 118 39 12 W
ELEVATION: 1220 Metres

NORTHING: 5440630
EASTING: 379332

LOCATION ACCURACY: Within 500M

COMMENTS: The Don Pedro (Lot 2458) is located 1.5 kilometres east of Greenwood, immediately west of the Creston (Lot 1711)(082ESE012).

COMMODITIES: Silver Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Attwood	Unnamed/Unknown Formation	

LITHOLOGY: Argillite
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Don Pedro (Lot 2458) is located 1.5 kilometres east of Greenwood, immediately west of the Creston (Lot 1711)(082ESE012). Shipments in 1906 and 1919 totalled 27 tonnes, resulting in 186 grams of gold and 70,635 grams of silver. The claim was Crown Granted to N. Kulmen in 1902. A quartz vein with values in gold and silver likely occurs in argillite and conglomerate of the Upper Paleozoic Attwood Group.

BIBLIOGRAPHY

EMPR AR 1902-304; 1903-167; 1905-181,183; 1906-250; 1913-141;
*1918-221
EMPR INDEX 3-194
EMPR BC METAL MM00948 (includes other claims)
EMPR ASS RPT 12815
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC OF 481; 1969
GSC P 67-42; 79-29
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1997/03/05
DATE REVISED: 1997/03/05

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE249**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRESTON (L.69S)**, SKYLARK CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 55 N
LONGITUDE: 118 38 52 W
ELEVATION: 1160 Metres

NORTHING: 5439725
EASTING: 379718

LOCATION ACCURACY: Within 500M

COMMENTS: The Preston (Lot 69s) is located 2 kilometres east of Greenwood, immediately south of the Creston (Lot 1711)(082ESE012).

COMMODITIES: Silver Gold Lead

MINERALS

SIGNIFICANT: Pyrite Galena

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Mesothermal Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Attwood	Unnamed/Unknown Formation	

LITHOLOGY: Argillite
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Slide Mountain

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Preston (Lot 69s) is located 2 kilometres east of Greenwood, immediately south of the Creston (Lot 1711)(082ESE012).

In 1905, the Preston Mining Company developed the property with a 35-metre shaft, 80 metres of drifts and cross-cuts, and surface stripping. In 1906, ore was shipped and the claim Crown Granted to L.T. Dickason. A small shipment was also made by E.A. Wanke in 1923. Production for the two years totalled 16 tonnes, resulting in 62 grams of gold, 18,444 grams of silver and 306 kilograms of lead.

A quartz vein with values in gold and silver likely occurs in argillite and conglomerate of the Upper Paleozoic Attwood Group.

BIBLIOGRAPHY

EMPR AR 1905-180; 1906-159,250,254; 1923-184
EMPR INDEX 3-209
EMPR BC METAL MM00948 (includes other claims)
EMPR ASS RPT 12815
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC OF 481; 1969
GSC P 67-42; 79-29
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1997/03/05
DATE REVISED: 1997/03/05

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE250**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRINCE HENRY (L.2636)**, SKYLARK CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 28 N
LONGITUDE: 118 39 45 W

NORTHING: 5438915
EASTING: 378625

ELEVATION: 1000 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The Prince Henry (Lot 2636) is located east of Greenwood and west of the Last Chance (Lot 753)(082ESE216).

COMMODITIES: Silver Gold Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Mesothermal Epigenetic Hydrothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous			Greenwood Pluton

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Prince Henry (Lot 2636) is located east of Greenwood and west of the Last Chance (Lot 753)(082ESE216).

In 1906, the claim was Crown Granted and development by the Prince Henry Mining Co. Development consisted of a 34-metre shaft and 20 metres of drifting. Shipments in 1906, 1917 and 1925 totalled 19 tonnes, resulting in 404 grams of gold, 40,060 grams of silver and 1130 kilograms of lead.

A 45-centimetre quartz vein with values in gold, silver and lead occurs in granodiorite of the Jurassic-Cretaceous Greenwood Stock.

BIBLIOGRAPHY

EMPR AR 1905-180; 1906-159,250,254; 1914-334; 1917-203; 1924-168; 1925-197

EMPR INDEX 3-209

EMPR BC METAL MM00948 (includes other claims)

EMPR ASS RPT 12815

EMPR OF 1990-25

EMPR P 1986-2

EMPR MR MAP 6 (1932)

EMPR PRELIM MAP 59

EMPR AEROMAG MAP 8497G

GSC OF 481; 1969

GSC P 67-42; 79-29

GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1997/03/05
DATE REVISED: 1997/03/05

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE251**

NATIONAL MINERAL INVENTORY:

NAME(S): **TWIN (L.819)**, SKYLARK CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 15 N
LONGITUDE: 118 40 12 W

NORTHING: 5438526
EASTING: 378069

ELEVATION: 850 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The Twin (Lot 819) is located immediately east of the Greenwood municipal boundary, northeast of the Barbara (Lot 817)(082ESE007) and northwest of the Goldfinch (Lot 820)(082ESE004).

COMMODITIES: Silver Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Paleozoic
Jurassic-Cretaceous

GROUP

Knob Hill

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Greenwood Pluton

LITHOLOGY: Granodiorite
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

Slide Mountain
RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Okanagan Highland

GRADE: Greenschist

CAPSULE GEOLOGY

The Twin (Lot 819) is immediately east of Greenwood municipal boundary.

The claim was Crown Granted to J.W.H. Wood in 1898. In 1922, J. Drum extended the adit to 34 metres from the portal and shipped 2 tonnes, resulting in 933 grams of silver and 528 kilograms of lead.

A north-trending, 45-degree east dipping quartz vein occurs in granodiorite of the Jurassic-Cretaceous Greenwood Stock and argillite of the Upper Paleozoic Knob Hill Group. The vein varies in width from 2.5 to 46 centimetres and carries galena, chalcopyrite and pyrite. The vein is likely a continuation of the vein on the Barbara (082ESE007).

BIBLIOGRAPHY

EMPR AR 1898-1196; *1922-174
EMPR INDEX 3-216
EMPR BC METAL MM00042 (includes Skylark (083ESE011) data)
EMPR ASS RPT 12815
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC OF 481; 1969
GSC P 67-42; 79-29
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1997/03/05
DATE REVISED: 1997/03/05

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

arsenopyrite.

In 1980, R. Kregosky staked the showings as the H-K claims and relocated and sampled the old workings. In 1981, soil sampling, prospecting, geological mapping, and electromagnetic surveying were conducted on the claims. A 45-centimetre chip sample of a quartz vein located in an adit assayed 1.2 per cent zinc, 0.3 per cent lead, 0.04 per cent copper and 33.6 grams per tonne silver (Assessment Report 10470).

In 1987, the showings were restaked as the Volcano group by R. Hart and G. Houllind. In 1988, showings were sampled and magnetometer and geochemical surveys were conducted.

The area is underlain by Upper Paleozoic Anarchist Group rocks, consisting of quartzite, greenstone, and limestone. Granodiorite and diorite of the Jurassic Nelson Intrusions lie to the south. Crystal Butte consists of trachyte and andesite of the Eocene Penticton Group. Mineralized quartz veins occur in quartzites and skarn development is seen in the limestones. The veins are irregular and discontinuous.

BIBLIOGRAPHY

EMPR AR 1925-208; *1926-210; 1928-254; 1936-D55
EMPR ASS RPT 2951, 9238, *10470, 16475, *17789
EMPR EXPL 1980-37; 1981-301
EMPR AEROMAG MAP 7686G
GSC MEM 79
GSC OF 481; 637; 1969
GSC MAP 37A; 6-1957; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/03/25

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE253**

NATIONAL MINERAL INVENTORY:

NAME(S): **RIVERSIDE (L.1256)**, HARD TO BEAT (L.2846), GLOBE (L.2402)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 28 11 N
LONGITUDE: 118 52 27 W
ELEVATION: 980 Metres

NORTHING: 5481363
EASTING: 364216

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Gold Silver Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Arsenopyrite Sphalerite Chalcopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Paleozoic
Jurassic

GROUP

Anarchist

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions

LITHOLOGY: Andesite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Northwest-trending quartz veins, mineralized with pyrite, pyrrhotite, arsenopyrite, sphalerite and chalcopyrite, occur in veins in andesite of the Upper Paleozoic Anarchist Group. These are intruded by granites and syenites of the Jurassic Nelson Intrusions.

BIBLIOGRAPHY

EMPR AR 1904-299; *1938-D18,D23
EMPR AEROMAG MAP 7686G
GSC OF 481; 637; 1969
GSC MEM 79
GSC MAP 37A; 6-1957; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1996/03/25

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE254**

NATIONAL MINERAL INVENTORY:

NAME(S): **RCJV 24**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:

Open Pit Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 22 31 N
LONGITUDE: 118 54 57 W
ELEVATION: 850 Metres

NORTHING: 5470940
EASTING: 360931

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit, west of Crouse Creek (Assessment Report 1722).
Assess is by Crouse Creek Road, which leaves the Christian Valley
Road, about 19 kilometres northeast of Westbridge.

COMMODITIES: Copper Zinc Silver Lead Magnetite

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Malachite Azurite Galena
Sphalerite Magnetite
ASSOCIATED: Quartz
ALTERATION: Pyrite Silica Chlorite
ALTERATION TYPE: Silicific'n Pyrite Chloritic
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein Disseminated Massive Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Anarchist	Undefined Formation	
Eocene	Penticton	Undefined Formation	
Jurassic			Nelson Intrusions
Upper Cretaceous			Okanagan Batholith

LITHOLOGY: Greenstone
Andesite
Granodiorite
Granite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

In 1981, Rock Creek Joint Venture located a 30-metre adit, two shafts and several trenches on the west side of Crouse Creek. Work at the time consisted of soil sampling, geological mapping and prospecting.

The area is underlain by greenstone of the Upper Paleozoic Anarchist Group; granodiorite and diorite of the Jurassic Nelson Intrusions; granite of the Upper Cretaceous Valhalla Intrusions (Okanagan Batholith); and andesite, tuffs and conglomerate of the Eocene Penticton Group.

Fracture-filled and disseminated mineralization occurs as scattered occurrences, primarily in the greenstones. Minerals are pyrite, chalcopyrite, minor galena and sphalerite, and malachite-azurite staining. A massive magnetite body associated with the greenstone, occurs in the adit. Minor copper mineralization was observed in the granodiorites and diorites.

A grab sample from a vein above the adit assayed 7.8 grams per tonne gold, 0.52 per cent copper, 0.215 per cent zinc, and 0.047 per cent lead. A 1-metre sample from a shaft assayed 29.6 grams per tonne gold, 0.58 per cent copper, 0.14 per cent zinc, and 0.125 per cent lead (Assessment Report 9806).

BIBLIOGRAPHY

EMPR ASS RPT *9806
EMPR AEROMAG MAP 7686G
GSC OF 481; 637; 1969
GSC MEM 79

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 783
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 6-1957; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/04/01

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE255**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRINCE OF WALES (L.3681)**, PRINCESS LOUISE (L.3680), LOUISE 87

STATUS: Showing Open Pit MINING DIVISION: Greenwood
REGIONS: British Columbia UTM ZONE: 11 (NAD 83)
NTS MAP: 082E02W NORTHING: 5443836
BC MAP: EASTING: 364927
LATITUDE: 49 07 57 N
LONGITUDE: 118 51 06 W
ELEVATION: 1320 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of centre of Prince of Wales (Lot 3681).

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Arsenopyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Silica Pyrite Jarosite Hematite Limonite
Ankerite
ALTERATION TYPE: Silicific'n Pyrite Argillic Carbonate
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
COMMENTS: Fissure fillings.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	
Triassic	Brooklyn	Undefined Formation	
Middle Jurassic			Nelson Intrusions
Eocene			Coryell Intrusions

LITHOLOGY: Argillite
Greenstone
Quartz Diorite
Chert
Siliceous Hornfels
Granodiorite
Limestone
Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel
METAMORPHIC TYPE: Regional Contact
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Plutonic Rocks
GRADE: Greenschist Hornfels

CAPSULE GEOLOGY

The Prince of Wales (Lot 3681) and Princess Louise (Lot 3680) claims are about 14 kilometres west of Greenwood and 5 kilometres west of Copper Mountain. Access to the property is by gravel road from Highway 3, along the Ingram Creek drainage. The Mabel-Jenny showing (082ESE203) lies about 1 kilometre to the east.

The claims were Crown granted in 1906 and development shortly after consisted of a 9-metre shaft and several open-cuts on the Prince of Wales and a shallow shaft and open cuts on the Princess Louise. About 1 kilometre to the southwest of the shaft, a quartz vein occurs with pyrite and values in gold (Coronation adit, see Mabel-Jenny).

In 1987, Pricam Explorations Inc. conducted a geochemical survey. In 1992, Crown Resources conducted rock chip and soil sampling.

The claims are underlain by Upper Paleozoic Knob Hill Group argillite, greenstone and chert. The Knob Hill is locally overlain by the sharpstone conglomerate and limestone of the Triassic Brooklyn Group and arkose and tuffs of the Eocene Kettle River Formation (Penticton Group). Intrusive rocks include granodiorite on the Middle Jurassic Nelson Batholith and syenite and diorite of the Eocene Coryell Intrusives.

Mineralization occurs as fissure fillings and veins in altered argillite, greenstone and chert. The rocks are argillized,

CAPSULE GEOLOGY

silicified, pyritized and carbonatized. Alteration minerals are jarosite, hematite, limonite and ankerite. Sulphides include pyrite, pyrrhotite, arsenopyrite and possibly chalcopyrite.

BIBLIOGRAPHY

EMPR AR 1898-1125; 1906-254; *1928-251; 1935-D5
EMPR ASS RPT *17549, 22581
EMPR FIELDWORK 1975-19; 1988-11-18
EMPR OF 1990-25
EMPR MR MAP 6 (1932)
EMPR AEROMAG MAP 8497G
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC MAP 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/03/03

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE256**

NATIONAL MINERAL INVENTORY:

NAME(S): **CRYSTAL**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E07W
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 50 N
LONGITUDE: 118 59 03 W

NORTHING: 5477213
EASTING: 356132

ELEVATION: 1370 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The showing lies on the west side of Crystal Mountain. Access is along Beaverdell Creek Road and then Crystal Lake Road.

COMMODITIES: Fluorite Molybdenum Silver

MINERALS

SIGNIFICANT: Fluorite Molybdenite Pyrite
ASSOCIATED: Quartz
ALTERATION: Pyrite Silica Sericite Clay
ALTERATION TYPE: Pyrite Silicific'n Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I11 Barite-fluorite veins
DIMENSION: 40 x 2 Metres

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian-Mississipp.	Anarchist	Undefined Formation	Beaverdell Porphyry Westkettle Batholith
Eocene			
Jurassic			

LITHOLOGY: Quartz Monzonite
Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Slide Mountain
PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Rock
COMMODITY GRADE
Silver 2.8000 Grams per tonne
Fluorite 19.0000 Per cent
Molybdenum 0.0170 Per cent

COMMENTS: Sample over 1.5 metres.
REFERENCE: Assessment Report 19768.

CAPSULE GEOLOGY

The showing lies on the west side of Crystal Mountain. Access is along Beaverdell Creek Road and then Crystal Lake Road.

Teck Explorations Ltd. conducted geological mapping and geochemical sampling of the area in 1989.

The area is underlain by Upper Paleozoic Anarchist Group rocks, consisting of quartzite, greenstone, and limestone. These rocks are intruded by Jurassic Westkettle quartz diorite and Eocene Beaverdell quartz monzonite. A zone of alteration with fluorite mineralization occurs along a fault zone in the quartz monzonite.

Silica, pyrite, clay and sericite alteration, with purple and green fluorite veining is associated with a major fault within the Beaverdell quartz monzonite. The zone contains molybdenite along slickensided shear planes. A 40-metre long section averages 11.1 per cent fluorine over an average width of 2.2 metres. A 1.5-metre sample assayed 19 per cent fluorine, 0.017 per cent molybdenum and 2.8 grams per tonne silver (Assessment Report 19768).

BIBLIOGRAPHY

EMPR ASS RPT *19768

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 787
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AEROMAG MAP 7686G
GSC MEM 79
GSC OF 481; 637; 1969
GSC MAP 37A; 6-1957; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/04/17

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE257**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOKYO**, MAMMOTH (L.1410), SUMMIT CAMP

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082E02E
 BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 36 N
 LONGITUDE: 118 30 39 W
 ELEVATION: 1150 Metres

NORTHING: 5442636
 EASTING: 389776

LOCATION ACCURACY: Within 500M

COMMENTS: The Tokyo showing, which occurs on the old Crown granted Mammoth (Lot 1410) claim, is located on the northwest slope of Thimble Mountain, 1 kilometre east of the B.C. (Lot 882) claim (082ESE060).

COMMODITIES: Copper Silver Gold Zinc

MINERALS

SIGNIFICANT: Pyrrhotite Chalcopyrite Pyrite Sphalerite
 ASSOCIATED: Quartz Calcite
 ALTERATION: Malachite Hematite
 MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein Disseminated
 CLASSIFICATION: Epigenetic Skarn Hydrothermal
 TYPE: I06 Cu±Ag quartz veins K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Brooklyn	Unnamed/Unknown Formation	Nelson Intrusions
Jurassic			Coryell Intrusions
Eocene			

LITHOLOGY: Limestone
 Greenstone
 Marble
 Granodiorite
 Alkali Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Quesnel
 Plutonic Rocks
 PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1970
 SAMPLE TYPE: Drill Core
 COMMODITY GRADE
 Silver 13.7000 Grams per tonne
 Copper 0.8700 Per cent
 COMMENTS: Average assay over 7.6 metres.
 REFERENCE: Assessment Report 2716.

ORE ZONE: SAMPLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1992
 SAMPLE TYPE: Rock
 COMMODITY GRADE
 Silver 25.4000 Grams per tonne
 Gold 1.0700 Grams per tonne
 Copper 1.0000 Per cent
 Zinc 1.0000 Per cent
 REFERENCE: Assessment Report 22707.

CAPSULE GEOLOGY

The Tokyo showing, which occurs on the old Crown granted Mammoth (Lot 1410) claim, is located on the northwest slope of Thimble Mountain, 1 kilometre east of the B.C. (Lot 882) claim (082ESE060).

The showing is near turn of the century workings, consisting of old shafts and trenches. (The Mammoth was Crown granted in 1900.) In 1992, H. Hoehn commissioned Crownex Resources Ltd. to conduct a

CAPSULE GEOLOGY

geophysical survey and geochemical sampling. Hoehn previously drilled the area and encountered chalcopyrite bearing skarn. Mineralization near the old 8-metre shaft consists of pyrrhotite, chalcopyrite, pyrite, sphalerite and hematite within quartz and calcite veins; mineralized pods in a skarn zone occur along an intrusive and limestone contact. A sample assayed over 1.0 per cent copper, 25.4 grams per tonne silver, 1.07 grams per tonne gold and over 1.0 per cent zinc (Assessment Report 22707).

The area is underlain by limestone and marble of the Triassic Brooklyn Group; these rocks are cut by granodiorite of the Jurassic Nelson Intrusions and alkaline syenite of the Eocene Coryell Intrusions.

BIBLIOGRAPHY

EMPR AR 1900-992
EMPR ASS RPT 2707, *2716, 5802, *22707
EMPR GEM 1970-431
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR AEROMAG MAP 8497G
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/04/30

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE258**

NATIONAL MINERAL INVENTORY:

NAME(S): **GREAT LAXEY (L.1425S)**, TWIN MINE (L.1426S)

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 55 N
LONGITUDE: 118 34 59 W
ELEVATION: 975 Metres

NORTHING: 5443330
EASTING: 384520

LOCATION ACCURACY: Within 500M

COMMENTS: The Great Laxey is located south of Eholt Creek, 4 kilometres southwest of Eholt.

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	
Jurassic-Cretaceous			Wallace Creek Batholith
Eocene			Coryell Intrusions

LITHOLOGY: Greenstone
Limestone
Marble
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Great Laxey is located south of Eholt Creek, 4 kilometres southwest of Eholt.

The large body of quartz, carrying copper, gold and silver was reported discovered on the Great Laxey in 1898. The Great Laxey (Lot 1425s) and adjacent Twin Mine (Lot 1426s) claims were Crown granted in 1912 to A. Hamilton.

The area is underlain by greenstone and marble of the Upper Paleozoic Knob Hill Group. These rocks are cut by granodiorites of the Jurassic-Cretaceous Wallace Creek Pluton.

BIBLIOGRAPHY

EMPR AR 1911-291; 1912-326
EMPR OF 1990-25
EMPR P 1986-2
EMPR GEOLOGY 1979, pp. 1-13
EMPR MR MAP 6 (1932)
EMPR AEROMAG MAP 8497G
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A
Basque, Garnet (1992): Ghost Towns & Mining Camps of the Boundary Country; Sunfire Publications Limited, p. 116.

DATE CODED: 1985/07/24
DATE REVISED: 1997/04/30

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE259**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEAD KING (L.2071)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 50 N
LONGITUDE: 118 40 26 W
ELEVATION: 1036 Metres

NORTHING: 5435908
EASTING: 377727

LOCATION ACCURACY: Within 500M

COMMENTS: The Lead King (Lot 2071) claim is located on the lower slopes of Mount Attwood, 3 kilometres south of Greenwood. Access to the area is from Highway 3 via the Lind Valley road and an old logging road that skirts the northwest spur of Mount Attwood. A mine symbol is shown on 82E/2 topo map.

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

COMMENTS: Minerals are assumed from production recoveries.

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Attwood	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
Greenstone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Slide Mountain

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The Lead King (Lot 2071) claim is located on the lower slopes of Mount Attwood, 3 kilometres south of Greenwood. Access to the area is from Highway 3 via the Lind Valley road and an old logging road that skirts the northwest spur of Mount Attwood.

The area is underlain by limestone, greenstone and argillite of the Permian Attwood Group. Several surface cuts made in 1894 exposed a 300 by 3 metre vein carrying values in silver and lead. The claim was Crown granted in 1903 and a shipment of 304 tonnes was reported in 1904. In 1950, W. McArthur produced 7 tonnes, yielding 9020 grams of silver, 9612 kilograms of lead and 1877 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR *1894-756, map after 758; 1902-305; 1904-219; 1950-A40, 118
EMPR ASS RPT 1648, 2054
EMPR BC METAL *MM00888
EMPR INDEX 3-203
EMPR OF 1990-25
EMPR P 1986-2
EMPR MR MAP 6 (1932)
EMPR PRELIM MAP 59
EMPR AEROMAG MAP 8497G
GSC OF 481; 637; 1969
GSC P 67-42; 79-29
GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A

DATE CODED: 1985/07/24
DATE REVISED: 1997/05/16

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE260**

NATIONAL MINERAL INVENTORY:

NAME(S): **SURPRISE NO. 3 (L.1776)**, SKYLARK CAMP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 59 N
LONGITUDE: 118 37 46 W
ELEVATION: 1280 Metres

NORTHING: 5437967
EASTING: 381019

LOCATION ACCURACY: Within 500M

COMMENTS: The Surprise No. 3 (Lot 1776) claim is located on the south-western slope of Knob Hill, 3.5 kilometres east of Greenwood. Access to the area is from Highway 3 via the Lind Valley road. See Skylark (082ESE011).

COMMODITIES: Copper Silver Gold Lead

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Molybdenite
COMMENTS: Trace molybdenite.
ASSOCIATED: Quartz
ALTERATION: Silicate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Replacement
TYPE: I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Permian Attwood Unnamed/Unknown Formation

LITHOLOGY: Limestone
Greenstone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Surprise No. 3 (Lot 1776) claim is located on the south-western slope of Knob Hill, 3.5 kilometres east of Greenwood. Access to the area is from Highway 3 via the Lind Valley road.

The Surprise claim was Crown granted to F.W. Groves in 1908. In 1917, under lease to M. Kane, J. Cunningham and A. Gustafson, development consisted of a 15-metre shaft, a 9-metre drift and trenching. The shaft was sunk on a vertical, 1.2-metre wide vein with chalcopyrite, pyrite and trace molybdenite. Wallrocks are limestone. A sample assayed 7.4 per cent copper and 34.3 grams per tonne silver (Annual Report 1917, page 203). In 1918, under lease to J.E. Thompson, development consisted of deepening the shaft to 23 metres and driving an 18-metre drift. Shipments in 1917 and 1918 totalled 87 tonnes, yielding 3717 kilograms of copper and 2457 grams of silver. J. Cunningham and Sartoine worked the property in 1921. In 1926, R. Forshaw shipped ore (6 tonnes), which is included with the Brooklyn (082ESE013), from this property.

The area is underlain by limestone, argillite and greenstone of the Permian Attwood Group. See Skylark (082ESE011) for additional geology and development in the area.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1908-251; *1917-203,213,449; *1918-210,470; 1921-188;
1926-215
EMPR BC METAL *MM00042 (included with Skylark (082ESE011))
EMPR INDEX 3-215
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 793
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 828; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1985/07/24
DATE REVISED: 1997/07/15

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE261**

NATIONAL MINERAL INVENTORY:

NAME(S): **BETTS (L.3056)**, HESPERUS FR. (L.3057), IRON CHIEF (L.1314S),
IRON CHIEF FR. (L.1315S), LANCASTER (L.3076), TENNESSEE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

MINING DIVISION: Greenwood

LATITUDE: 49 03 26 N
LONGITUDE: 118 32 15 W
ELEVATION: 1066 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5434955
EASTING: 387674

LOCATION ACCURACY: Within 500M

COMMENTS: The Betts (Lot 3056) and Hesperus (Lot 3057) claims are located
on the west slopes of Eagle Mountain, 5 kilometres northwest of Grand
Forks and east of Highway 3.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Massive
CLASSIFICATION: Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Permian

GROUP

Attwood

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite
Limestone
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Betts (Lot 3056) and Hesperus (Lot 3057) claims are located
on the west slopes of Eagle Mountain, 5 kilometres northwest of Grand
Forks and east of Highway 3.

The area is underlain by limestone, greenstone and argillite of
the Permian Attwood Group and sharpstone conglomerate and limestone
of the Triassic Brooklyn Group.

The claims were located in 1896 by E.E. Alexander. In 1903,
the claims were held by the Betts & Hesperus Mining Co. The company
drove a 250-metre adit with crosscuts and drilled over 900 metres.
The workings encountered massive pyrrhotite 120 metres below the
surface showings.

On the adjacent Iron Chief claim is a quartz vein with gold.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR AR 1900-870; 1903-172,174,246; 1904-221; *1905-184,255;
1906-161; 1911-291; 1921-347
EMPR MR MAP 6 (1932)
EMPR OF 1990-25
EMPR P 1986-2
EMPR PRELIM MAP 59
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 67-42; 79-29

DATE CODED: 1997/05/21
DATE REVISED: 1999/10/07

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE262**

NATIONAL MINERAL INVENTORY:

NAME(S): **PHOENIX TAILINGS**, TREMBLAY TAILINGS, PAC

MINING DIVISION: Greenwood

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E02E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 10 N
LONGITUDE: 118 33 24 W
ELEVATION: 1160 Metres

NORTHING: 5440048
EASTING: 386378

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Mine Waste on 1:50,000 topography map, about 3.5 kilometres east of the Phoenix Mine (082ESE020).

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite

ASSOCIATED: Magnetite Garnet

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: T01 Tailings

HOST ROCK

DOMINANT HOSTROCK: Unknown

STRATIGRAPHIC AGE

Unknown

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Unknown

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: TAILINGS

REPORT ON: Y

CATEGORY: Indicated
QUANTITY: 4170000 Tonnes

YEAR: 1977

COMMODITY

GRADE

	0.1510	Per cent
Copper	0.3400	Grams per tonne
Gold	3.4000	Grams per tonne
Silver		

COMMENTS: Granby Mining Corporation.
REFERENCE: Assessment Report 25364.

CAPSULE GEOLOGY

During the early mining period (1896-1919) direct smelting copper-gold ore was mined from underground and glory hole workings. After a period of inactivity, the Granby Mining Corporation operated the Phoenix as an open pit min from 1956 to 1978. During this time, the mill treated approximately 13.4 million tonnes of copper-gold-silver ore in a flotation plant. Gold and silver in the free state were not recovered by the flotation process and the lack of regrinding capacity and the presence of oxidized copper minerals resulted in low metal recoveries. The Tremblay tailings represents the waste from the early years of operation and has the highest contained metal grades. Granby tailings records (1977) indicate that the Tremblay tailings contain an estimated 4.17 million tonnes of material at a grade of 0.151 per cent copper, 0.34 gram per tonne gold and 3.4 grams per tonne silver (Assessment Report 25364).

In 1985, Kettle River Resources Ltd. and Noranda Explorations Company Limited began a program to evaluate grade and recovery methods on 4,145,835 tonnes of tailings from past production of the Phoenix pit (082ESE020).

In 1995, with support from the Explore B.C. Program, Kettle River Resources Ltd. carried out a limited program of sonic drilling and sampling of the Phoenix mine tailings to assess their gold content and determine the economics of re-processing. In all, 42 metres of drilling was done in two holes which were fully sampled. The gold content was found to be 20 per cent lower than previously reported. Metallurgical studies on the sampled material determined

CAPSULE GEOLOGY

that re-grinding and cleaner flotation would produce a concentrate grading approximately 18 per cent copper and 207 grams per tonne gold (Assessment Report 25364).

BIBLIOGRAPHY

EMPR ASS RPT 15058, *25364
WWW <http://www.kettleriver.com>

DATE CODED: 1999/06/15
DATE REVISED: 1999/06/23

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE263**

NATIONAL MINERAL INVENTORY:

NAME(S): **EAST ST. THOMAS**, NUGGET, GRANVILLE MOUNTAIN,
BIG SHEEP CREEK, SHEEP CREEK, MAGNETITE,
ST. THOMAS

MINING DIVISION: Trail Creek
UTM ZONE: 11 (NAD 83)
NORTHING: 5447751
EASTING: 423394

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E01E
BC MAP:
LATITUDE: 49 10 40 N
LONGITUDE: 118 03 04 W
ELEVATION: 1750 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of East St. Thomas vein, Assessment Report 14773.

COMMODITIES: Gold Silver Copper Lead

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite
ASSOCIATED: Quartz Epidote Calcite Garnet Magnetite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Skarn
TYPE: K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Pennsylvan.-Permian Unnamed/Unknown Group Mount Roberts

LITHOLOGY: Limestone
Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Granitic rocks of the Nelson Intrusions intrude volcanics, limestones and greenstones of the Carboniferous-Permian Mount Roberts Formation. These are cut by porphyritic syenites of the Eocene Coryell Intrusives. Skarn-related mineralization contains minor gold and silver values. A 20-centimetre sample of the East St. Thomas vein assayed 1.4 grams per tonne gold and 0.01 per cent copper; and 450 metres to the southeast an 80-centimetre sample from the Magnetite adit assayed 7.5 grams per tonne gold, 7.9 grams per tonne silver, 0.24 per cent lead (Assessment Report (14733)).

Prominent Resources Corporation conducted surveys and sampling in 1985. In 1992, Crown Resources Corp. conducted an airborne geophysics, ground magnetometry, soil sampling rock chip sampling and reverse circulation drilling.

BIBLIOGRAPHY

EMPR ASS RPT *14733, 22580, *22944

DATE CODED: 1999/10/06
DATE REVISED: / /

CODED BY: LDJ
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE264**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRAND FORKS SLAG**, PACIFIC ABRASIVES

STATUS: Producer
REGIONS: British Columbia
NTS MAP: 082E01W
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 02 52 N
LONGITUDE: 118 26 37 W
ELEVATION: Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5433771
EASTING: 394513

LOCATION ACCURACY: Within 500M

COMMENTS: Located 500 metres north of Grand Forks.

COMMODITIES: Slag Silica

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: T01 Tailings

HOST ROCK

DOMINANT HOSTROCK: Unknown

STRATIGRAPHIC AGE GROUP
Unknown Unnamed/Unknown Group

FORMATION
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Unknown

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

Pacific Abrasives & Supply Inc. is producing and processing slag from the Grand Forks dumps for a variety of applications but mainly for sandblasting purposes of major shipyards and for roofing granules.

BIBLIOGRAPHY

EM INF CIRC 2000-1, p. 12

DATE CODED: 1999/12/31
DATE REVISED: 1999/12/31

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESE265**

NATIONAL MINERAL INVENTORY:

NAME(S): **WINNER QUARRY**, ROXUL, RANGER

STATUS: Producer Open Pit

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E02E

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 49 04 21 N

NORTHING: 5436736

LONGITUDE: 118 35 08 W

EASTING: 384193

ELEVATION: 1320 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Located 7.3 kilometres southeast of Greenwood.

COMMODITIES: Mineral/Rock Wool

MINERALS

SIGNIFICANT: Laboradorite Plagioclase

ASSOCIATED: Magnetite Ilmenite Pyroxene Amphibole

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Unknown			Old Diorite

LITHOLOGY: Gabbro
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The Winner quarry is located 7.3 kilometres southeast of Greenwood, 2.8 kilometres south-southeast of the Phoenix pit. Gabbro, referred to locally as the "Old Diorite", is quarried from an open cut, crushed and then trucked to Roxul Incorporated Grand Forks plant. Here it is blended with other mineral material and processed into mineral wool. A 10,000-tonne bulk sample was taken in 2000 and production of 17,000 tonnes and 50,000 tonnes occurred in 2001 and 2002 respectively.

The gabbro contains 1 to 2 per cent magnetite and ilmenite, 33 to 47 per cent pyroxene and amphibole, and 51 to 65 per cent plagioclase. The composition of the plagioclase ranges from labradorite to bytownite and yields the required composition of less than 50 per cent silicon dioxide and more than 15 percent aluminum trioxide.

BIBLIOGRAPHY

EMPR AEROMAG MAP 8497G
EMPR OF 1986-2
GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A
GSC OF 481; 637; 1969
GSC P 45-20; 67-42; 79-29
Church, B.N. (2001): Prospectors Assistance Program, Report on Results, British Columbia Ministry of Energy and Mines, PAP 01-39
Cummings, J.M (1937): Possibilities for the Manufacture of Mineral Wool in British Columbia, British Columbia Department of Mines, 37 pages

DATE CODED: 2003/02/24
DATE REVISED: / /

CODED BY: ICLW
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW001**

NATIONAL MINERAL INVENTORY: 082E3,4 Au2

NAME(S): **DIVIDEND-LAKEVIEW**, LAKEVIEW (L.1899), DIVIDEND (L.1589),
 GEM (L.3311S), DIVIDEND FRACTION (L.1590)

STATUS: Past Producer	Underground	MINING DIVISION: Osoyoos
REGIONS: British Columbia		UTM ZONE: 11 (NAD 83)
NTS MAP: 082E03W 082E04E		NORTHING: 5431766
BC MAP:		EASTING: 317134
LATITUDE: 49 00 42 N		
LONGITUDE: 119 30 03 W		
ELEVATION: 0550 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: The approximate location of the main adit portal on the Lakeview (Lot 1899) Reverted Crown grant (Assessment Report 658).		

COMMODITIES: Gold	Silver	Copper	Lead	Zinc
Bismuth	Cobalt			

MINERALS

SIGNIFICANT: Gold	Chalcopyrite	Arsenopyrite	Pyrrhotite	Pyrite
Bismuth				
ASSOCIATED: Garnet	Epidote	Chlorite	Actinolite	Wollastonite
Quartz	Calcite	Magnetite		
ALTERATION: Silica	Garnet	Epidote	Amphibole	Diopside
Wollastonite	Chlorite	Carbonate		
ALTERATION TYPE: Silicific'n	Skarn	Carbonate	Chloritic	
MINERALIZATION AGE: Unknown				

DEPOSIT

CHARACTER: Disseminated	Massive	Stratabound	Shear
CLASSIFICATION: Replacement	Skarn	Hydrothermal	Epigenetic
TYPE: K04 Au skarn		J01	Polymetallic manto Ag-Pb-Zn
DIMENSION: 105 Polymetallic veins	Ag-Pb-Zn±Au		
15 x 2 Metres		STRIKE/DIP:	TREND/PLUNGE: /
COMMENTS: The trend of ore structures on the Lakeview claim are southeast and dip southwest. Ore shoots, up to 15 metres long and 2 metres wide, rake to the southwest along dragfold structures.			

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Carboniferous	Kobau	Undefined Formation	Similkameen Intrusions
Middle Jurassic			

LITHOLOGY: Limestone
 Skarn
 Greenstone
 Diorite
 Quartz Diorite
 Micaceous Quartzite
 Chlorite Schist
 Andesitic Flow
 Basaltic Flow
 Andesite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Other intrusions include the Fairview and Kruger intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan	Plutonic Rocks
METAMORPHIC TYPE: Regional	RELATIONSHIP: Pre-mineralization
	GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1980
SAMPLE TYPE: Drill Core	
COMMODITY	GRADE
Silver	6.1700 Grams per tonne
Gold	0.2700 Grams per tonne
Copper	0.1700 Per cent
COMMENTS: The 0.61-metre interval between 55.79 and 56.49 metres in drillhole LV 1-80, on the Lakeview claim.	
REFERENCE: Assessment Report 9180.	

CAPSULE GEOLOGY

ore shoot is described as being hosted in a quartz vein structure in a sericitized and chloritized contact phase of metavolcanics and quartz diorite and diorite intrusion (Assessment Report 9180). Within the property, there are also andesitic to basaltic flows, which are propylitically altered to epidote, calcite, chlorite and pyrite. At the main Dividend-Lakeview workings, greenstone contains a 1 to 3 metre thick marble lens. The greenstone has a weak to moderate developed schistosity, which is overprinted by epidote stockwork and intense chlorite-carbonate alteration. Quartz-calcite veins with pyrite, chalcopyrite with minor malachite and azurite cut sheared volcanics and extend well beyond the limits of skarn overprinting. The trend of the ore structure is southeast and dips southwest. The ore shoots rake to the southwest along dragfold structures. Ore shoots were up to 15 metres long and 2 metres width.

Skarn mineralization at the Dividend-Lakeview occurrence consists of massive pyrrhotite, pyrite, chalcopyrite and arsenopyrite which preferentially replaces marble. Skarn in the surrounding greenstone contains garnet, epidote, chlorite, ferro-hastingsite, actinolite, quartz, calcite, magnetite and wollastonite. Massive magnetite with minor chalcopyrite associated with dark brown garnet occurs in a mine pillar at the limestone-volcanic contact. Elsewhere the garnet is pale amber, euhedral, anisotropic, fine to medium grained and contains concentric growth rings. Electron microprobe analysis of garnets identify them as grandites. Other minerals present in variable amounts include sericite, sphene and clay. Opaque minerals identified include magnetite, ilmenite, pyrrhotite, pyrite, marcasite, hedleyite, native gold and bismuth. Skarn mineralization has been traced over a considerable distance along a westerly strike from the Dividend-Lakeview pit. The linear trend of mineralization and association with intense shearing indicates a structural control.

Drillhole LV 1-80, one of three holes drilled in 1980 below the Lakeview workings, intersected significant mineralization. The 0.61-metre interval between 55.79 and 56.49 metres yielded 0.27 gram per tonne gold, 6.17 grams per tonne silver and 0.15 per cent copper (Assessment Report 9180). The arithmetic average of 9 samples over 6.4 metres between 50.99 and 65.40 metres was 1.47 grams per tonne gold (Assessment Report 9180). Core recovery over this interval was 74 per cent. In 1987, two of three grab samples taken from the Dividend dump by Markus Resources yielded anomalous results. Sample G-87-037 yielded 1.2 per cent copper, 1.4 grams per tonne gold and 7.1 grams per tonne silver (Assessment Report 16074). The sample was composed of chloritized metavolcanics with visible disseminations and veinlets of pyrite and quartz. Sample G-87-039 yielded 0.86 per cent copper, 1.4 grams per tonne gold and 10.3 grams per tonne silver (Assessment Report 16074). A sample of banded pyrite-magnetite replacing light green silicified marble assayed 43.0 grams per tonne gold, 1.0 gram per tonne silver and 0.21 per cent copper (Paper 1989-3, Appendix 7).

Over its intermittent mine life the Dividend-Lakeview occurrence produced 111,252 tonnes of ore. Recovery included 87,244 grams of silver, 504,396 grams of gold, 73,351 kilograms of copper, 71 kilograms of lead and 71 kilograms of zinc.

BIBLIOGRAPHY

- EMPR AR 1900-990; 1901-1074,1158,1229; 1902-185; 1903-176; 1906-165, 168; 1907-118,215; 1908-117,248; 1910-125; 1912-182,323; 1913-172-174,177,322,421; 1914-356,419,511; 1915-202,446; 1916-518; 1917-215; 1919-170; 1927-237; 1930-218; 1931-135; 1932-134; 1933-164; 1934-D13; 1935-D12; 1936-D55; 1939-75; 1938-D34; 1942-77; 1963-65; 1964-109; 1966-244
- EMPR ASS RPT *658, 808, 1182, 2922, 8188, *9180, 11924, 14877, *16074, 21634, 22987, 23381, 24508
- EMPR BC METAL MM0338
- EMPR BULL 1 (1932), p. 88; 20 (1945, Part III), p. 18; 101, pp. 57, 212, Appendix 4c,b
- EMPR FIELDWORK *1987, p. 272
- EMPR INDEX 3-194
- EMPR MR MAP 7 (1934)
- EMPR OF 1989-2; 1989-5
- EMPR P 1989-3, pp. 12,100, Appendix 7
- EMPR PF (Report by J.S. Stevenson, 1943; Claim map; Report by D.W. Tully, 1972)
- EMR MP CORPFILE (Osyoos Mines of Canada Ltd.)
- GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
- GSC MEM 38, pp. 425-478; 179, p. 20
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21, pp. 37-40
- GSC SUM RPT 1912, p. 211

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 803
REPORT: RGEN0100

BIBLIOGRAPHY

CANMET IR 639; 771
Wilson, G.C. (1990): Geology of the Dividend-Lakeview Claim Group,
Unpublished report by Turnstone Geological Services Ltd., for
Golden Dividend Resources Corp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW002**

NATIONAL MINERAL INVENTORY: 082E4 Ag1

NAME(S): **HORN SILVER (L.1928)**, DANKOE, UTICA,
SILVER BELL (L.2393S), BRITISH (L.3064S), ANNEX,
SILVER PLATE, GOLDEN HORN, WOODROW,
SILVER GLANCE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 03 25 N
LONGITUDE: 119 41 24 W
ELEVATION: 0799 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5437272
EASTING: 303481

LOCATION ACCURACY: Within 500M

COMMENTS: Location of 2622 portal, on the west slope of Richter Mountain, 1 kilometre east of Highway 3, 19 kilometres south-southeast from the town of Keremeos (Minister of Mines Annual Report 1960, Figure 7).

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Argentite Silver Cerargyrite Pyrite Galena
Sphalerite Tetrahedrite Chalcopyrite Pyrrargyrite Acanthite
ASSOCIATED: Quartz Calcite
ALTERATION: Chlorite Carbonate Sericite Hematite K-Feldspar
ALTERATION TYPE: Propylitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Cylindrical
MODIFIER: Faulted
DIMENSION: Metres STRIKE/DIP: 120/35S TREND/PLUNGE:
COMMENTS: Lenticular quartz veins occupying tension fractures along subsidiary shearing.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Kruger Syenite
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Monzonite
Syenite Dike
Syenite
Granodiorite Porphyry Dike
Pyroxenite Dike
Granodiorite Porphyry
Pyroxenite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1967
SAMPLE TYPE: Unknown
COMMODITY GRADE
Silver 1714.2800 Grams per tonne
COMMENTS: The first 46 metres of the H vein discovered on the 1700 level.
REFERENCE: Minister of Mines Annual Report 1967, page 220.

ORE ZONE: ADIT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1967
SAMPLE TYPE: Unknown
COMMODITY GRADE
Silver 9999.9999 Grams per tonne
COMMENTS: Silver grades of up to 20,571.42 grams per tonne were reported from the B vein.
REFERENCE: Minister of Mines Annual Report, page 220.

CAPSULE GEOLOGY

The former Horn Silver mine is located on the west slopes of Richter Mountain. The mill and other mine infrastructure are located 300 metres east of Highway 3, 26 kilometres southeast of Keremeos and 35 kilometres northwest of Osoyoos. The upper mine workings are located 3.5 kilometres to the northeast.

The Horn Silver was first staked in 1901 by J. Hunter, which was transferred a short time later to I.W. Powell. In 1909, the Horn Silver (Lot 1928) and Silver Bell (Lot 2393s) claims were Crown granted to I.W. Powell. Development commenced in 1914 and mining in 1915, under the direction of the Condit brothers, and continued until 1922. Management was transferred to P.W. Powell when liens for unpaid wages were placed against the property. The property now consisted of the Horn Silver 1-3, Annex, Silver Plate, Golden Horn and Silver Bell claims. In 1924, the property was optioned to Alaskan interests under the name British American Mining Corp. The company name was changed in 1925 to Horn Silver Mining Corp. A 20-tonne per day mill operated in 1926. Property ownership was transferred to Nighthawk Mines Ltd. in 1927, which changed names to Big Horn Silver Mines Ltd. and then to Big Horn Mines Ltd. The company also held the adjacent Woodrow and Silver Glimmer claims. By 1929, Canada Radium Corp. Ltd. optioned the Horn Silver (Lot 1928), Silver Bell (Lot 2393s) and the Silver Bell 1-5 and 7-8 claims from G.F. Ramsey, V. Tishhasuer and H. Graham. The company name was changed in 1963 to Santos Silver Mines Ltd. Utica Mines Ltd. acquired a controlling interest in 1964 and expanded the property to 43 claims. A 272-tonne per day mill was erected in 1967 and capacity increased to 363-tonnes per day in the same year. Mining ceased in 1970. The company name was changed in 1971 to Dankoe Mines Ltd. and production resumed in 1974 at 113 to 159-tonnes per day, including ore from the Dusty Mac (082ESW078). Operations were again temporarily suspended in 1981 and the mine closed in October 1984.

Total underground development consisted of four main levels, designated the 2400, 2600, 2800 and 3000 levels and sublevels totalling over 2.29 kilometres. The 2600 level was the main operating level, where the A vein was mined. The 2800 level was an old adit at the west end of the structure. The A vein and N vein were mined on the 2570 sublevels. The earliest mining was conducted on the H vein. The 3000 level (adit) is at the east end of the Horn Silver No. 2 claim. Post-1975 development consisted of a new 1220-metre 1750 level drift, and levels established between the 1700 and 2200 levels and an inclined shaft between the 1900 and 2100 levels. The vein discovered on the 1700 level was named the H vein. The 3000 and 4000 levels were explored with work continuing on the 1900 and 2200 levels in 1981.

The Horn Silver mine is regionally underlain by metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. Quartzite, commonly micaceous or graphitic, schist, chlorite schist, greenstone, amphibolite and minor marble comprise lithologies. This metasedimentary and metavolcanic sequence has been intruded by the Jurassic-Cretaceous Fairview, and Jurassic Kruger and Similkameen intrusions. The Fairview and Similkameen intrusions vary in composition from granite to diorite with granodiorite and quartz diorite most common. The Kruger batholith is a syenitic intrusion.

The Horn Silver mine lies in Kruger syenite which is composed of biotite-hornblende granodiorite and hornblende syenite. The area is bordered to the north by Kobau Group metasediments and metavolcanics and in the east by Similkameen plutonic rocks and Kobau Group rocks. The Horn Silver deposit consists of mineralized quartz veins which occupy shear zones in a monzonite phase of the Kruger intrusion. The monzonite is cut by pre-mineral dikes of granodiorite porphyry, pyroxenite and syenite. Structural relationships indicate the syenite to be the youngest of the dikes. A postmineral syenite dike has also been recognized.

The controlling structure at the mine is a shear zone 24 metres wide which strikes 095 degrees and dips 40 degrees south. Updip, the main shear structure intersects a chloritized shear striking subparallel and dipping 10 degrees north. This shear contains potassium feldspar and carbonate and argentiferous sulphide mineralization in two sets of fractures. A subsidiary shearing visible within the main shear zone and in minor vein directions strikes 070 degrees and dips 55 degrees south. Lenticular quartz veins striking 120 degrees and dipping 35 degrees south occupy tension fractures in this shear zone. Ore shoots controlled by this shear zone have a flat westerly plunge of 10 degrees. These pre-mineral shear zones contain two sets of fractures; one set strikes 360 degrees and dips 55 degrees west, the other strikes 035 degrees and dips 65 degrees west. Tension fractures striking 015 degrees and dipping 70 degrees west are occupied by syenite dikes. Displacement on the north-striking fractures is to the right and on

CAPSULE GEOLOGY

the other set of fractures, to the left. Displacements range from a few centimetres to a few metres and chop the veins into short segments.

Mineralization occurs in discontinuous, narrow east and southeast striking quartz veins within the weakly developed easterly striking shear zones. Near surface sulphide mineralization is extremely oxidized. The quartz veins range from a few centimetres to 1.8 metres in width and are often sheeted. Locally the veins are a soft, crumbly quartz gouge. Discontinuous quartz veining also occurs in pre-mineral syenite dikes. Mineralization consists of argentite, native silver, cerargyrite, pyrite, galena, sphalerite, tetrahedrite, chalcopyrite, pyrargyrite and acanthite and occurs in a gangue of mainly quartz with fragments of wallrock and occasional calcite. The mineralization occurs as irregular seams and bands, disseminations and patches in the quartz but commonly occurs in bands near the wallrock contact. The H vein was reported to contain 1714.28 grams per tonne silver over the first 46 metres of the 1700 level (Minister of Mines Annual Report 1967, page 220). The B vein was reported to contain silver grades of up to 20,571.42 grams per tonne silver (Minister of Mines Annual Report 1967, page 220). High gold values are evident where pyrite is predominant. In 1928, a sample of mill ore yielded 27.91 grams per tonne gold, 4808.91 grams per tonne silver, 3 per cent lead and 1 per cent zinc (Minister of Mines Annual Report 1928, page C258). Chlorite, carbonate and sericite alteration extends for a few centimetres into the wallrock. Hematite occurs as thin coatings along fracture plane surfaces.

Over its 70-year intermittent mine life, between 1915 and 1984, 433,177 tonnes ore was mined from the Horn Silver mine. Milled ore was 433,396 tonnes from which 127,194,850 grams of silver, 332,992 grams of gold, 30,034 kilograms of copper, 328,458 kilograms of lead and 371,863 kilograms of zinc were recovered. These figures do not include ore milled from the Dusty Mac (082ESW078) between August 1975 and June 1976.

BIBLIOGRAPHY

- EMPR AR 1909-K278; 1915-K202,K205,K446; 1916-K259,K260,K518; *1917-F207,F215; 1918-K211; *1919-N169; 1920-N156,N157,N351; 1921-G178, G267; *1922-N164; 1923-A187; 1924-B170; 1925-A209; *1926-A215-A217; 1927-C237; *1928-C258,C259,C433; 1929-C268; 1930-A219; 1933-A167; 1937-A29; 1943-A38; *1958-A45,32; 1959-56; *1960-58-60; 1963-65; *1964-102,103,290,291; *1965-162,163,376,416; *1966-190; *1967-A54,219-221; 1968-A54,221; 1969-A55; 1970-A54; 1974-A120; 1975-A94; 1976-A103; 1977-115; 1978-127; 1979-129
- EMPR INDEX 3-200; 4-122
- EMPR ASS RPT 5293, 16629, *18378, 20609
- EMPR BC METAL MM00025
- EMPR ENG INSP (Mine plans)
- EMPR EXPL 1987-C26
- EMPR FIELDWORK 1983, p. 258
- EMPR GEM 1969-297,428; 1970-394,395; 1973-43; 1974-53
- EMPR IR 1984-2, pp. 99,102; 1984-3, pp. 105-106; 1984-4, p 121; 1984-5, pp. 113,115; 1986-1, pp. 109,111
- EMPR MINING 1975, Volume 1, pp. 27,28; 1981-1985, pp. 20,45
- EMPR OF 1998-10
- EMPR PF (R.E.C. Richards (1965): Utica Mines Ltd. Report; Utica Mines Ltd. (1965); claim map; Utica Mines Ltd. (1965); Workings and surface map; Dankoe Mines Ltd. (1975): Annual Report; Dankoe Mines Ltd. (1978): Letter)
- EMR MIN BULL MR 166
- EMR MP CORPFILE (Big Horn Mines Ltd.; Santos Silver Mines Ltd.; Dankoe Mines Ltd.)
- GSC MAP 85A; 15-1961; 539A; 538A; 341A
- GSC OF 1969
- GSC P 37-21
- GSC SUM RPT *1927, Part A, pp. 47A-52A
- GSC MEM 38, pp. 425-478
- GCNL #104(May 29), #111(June 7), 1973; #20(Jan.29), 1975; #112, 1976; #202, #236(Dec.8), 1977; #126(June 30), 1978; #161(July 21), 1979; #49(Mar.10), #98(May 5), #164(July 25), 1980; #37(Feb.21), 1982
- CMJ Vol.102, No.10, Oct., 1981
- N MINER May 6, 1976; April 6, July 6, 1978; March 1, 1979; Jan. 7, 1982
- W MINER August 1967, pp. 39-48; June 1977, pp. 20-22
- EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW003**

NATIONAL MINERAL INVENTORY: 082E4 Cu1

NAME(S): **KING EDWARD (L.542S)**, NIGHT HAWK, WESTMORLAND,
JOHNNY BULL, TIP TOP, VV & E,
WOODLAND, KENDALL, BANK OF FAIRVIEW,
SUSAP SHOWING, DON SHOWING, SUP,
SUSAP (L.550S), TOM, GAR

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082E04W
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 06 26 N
LONGITUDE: 119 48 43 W
ELEVATION: 1280 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5443183
EASTING: 294781

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the Susap showing abandoned adit
(Assessment Report 7535).

COMMODITIES: Copper Molybdenum Silver

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Bornite Pyrite Arsenopyrite
COMMENTS: Minor bornite and pyrite. Arsenopyrite is sparse.
ASSOCIATED: Quartz
ALTERATION: Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Porphyry Syngenetic
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Tabular
DIMENSION: 910 Metres STRIKE/DIP: 067/30S
COMMENTS: Porphyry-style mineralization is almost entirely confined to fractures
striking 067 degrees and dipping 30 to 60 degrees southeast. Drill
core and underground workings indicate a steeply dipping tabular body.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Old Tom	
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Middle Jurassic			Similkameen Intrusions
Jurassic			Kruger Syenite

LITHOLOGY: Quartz Monzonite
Augite Syenite

HOSTROCK COMMENTS: The Shoemaker and Old Tom formations are of Carboniferous to Triassic
age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau
Okanagan
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SOUTH REPORT ON: Y

CATEGORY: Indicated YEAR: 1989
QUANTITY: 1500000 Tonnes

COMMODITY	GRADE
Copper	0.1580 Per cent
Molybdenum	0.0450 Per cent

COMMENTS: Approximate reserves from diamond-drillholes and extensive surface
and underground sampling, over 8 to 30 metres true width. Molybdenum
calculated from 0.075 per cent MoS₂.

REFERENCE: Assessment Report 19336.

INVENTORY

ORE ZONE: NORTH

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1990

SAMPLE TYPE: Channel

COMMODITY

GRADE

Silver 18.8600 Grams per tonne

Copper 0.5600 Per cent

Molybdenum 0.0750 Per cent

COMMENTS: Average grades obtained from samples, including samples from two abandoned adits, on the Don showing near Hunter Creek. The mineralized zone is 70 by 8 to 10 metres with an indicated depth of 40 metres. Molybdenum is calculated from 0.075 per cent MoS₂.

REFERENCE: Assessment Report 20315.

CAPSULE GEOLOGY

The King Edward prospect is located about 11.5 kilometres south of Keremeos, between the Susap and Hunter creeks on the west side of the Similkameen River. The prospect consists of the Susap and Don showings.

The property was originally explored between 1903 and 1925. Exploration in 1903 was conducted by King Edward Mines Ltd. The property then consisted of the Night Hawk, King Edward, Westmorland, Johnny Bull, Tip Top, VV & E, Woodland, Kendall and Bank of Fairview claims, which were subsequently Crown granted (Lots 541s to 549s) to R. H. Parkison in 1908. In 1918, the Susap showing was re-examined as a source of molybdenum for wartime needs. More recent work in 1962, 1967 and 1970 to 1973 has included more than 900 metres of diamond drilling. Friday Mines Ltd. was owner and operator in 1962. Noranda Exploration Co. Ltd. optioned the property in 1967. Between 1970 and 1973 ownership included Scurry-Rainbow Oil Ltd. and Canadian Occidental Petroleum Ltd. In 1979, six diamond-drill holes were completed, totalling 662 metres. The drilling was conducted by United Hearne Resources Ltd. for Cro-Mur Mining and Exploration Co. Ltd. Most drilling has been completed on the Susap showing. Most recently, the prospect has been explored under option to Aurora Gold Ltd.

The King Edward prospect straddles the northern contact between the Middle Jurassic Similkameen intrusion and older rocks of the Carboniferous to Triassic Shoemaker and Old Tom formations. Chert, argillite, tuff and volcanics comprise lithologies of the Shoemaker Formation. The overlying Old Tom Formation consists of greenstone, breccia and intrusions.

Copper, molybdenum and precious metal mineralization appears to be best developed and closely associated with late stage felsic intrusions and silicified zones along the contact between a coarse grained phase and a fine grained augite-bearing syenite border phase, known as the Jurassic Kruger intrusion. The zone is characterized by sub-horizontal open fracture sets within both intrusive phases.

Quartz vein hosted sulphides are almost entirely confined to a fracture set striking 067 degrees and dipping 30 to 60 degrees to the southeast. Primary mineralization consists of chalcopyrite, molybdenite with minor bornite, pyrite and arsenopyrite.

The main showing (Susap showing) is on the former King Edward Crown grant (Lot 542s). The 1979 drill program intersected significant copper and molybdenum mineralization. The best intersections were near the top of drillholes 79-1 and 79-3, collared in the main hillside trench. Section A, a 11.58 metre section between 2.74 and 14.32 metres in drillhole 79-1, yielded 0.316 per cent copper and 0.10 per cent molybdenum (0.168 per cent molybdenite) (Assessment Report 7535). From drillhole 79-3, the 6.09 metre section between 3.05 to 9.14 metres intersected 0.365 per cent copper and 0.169 per cent molybdenum (0.282 per cent molybdenite) (Assessment Report 7535). Channel sampling from the old underground workings in 1979 yielded 0.163 per cent copper and 0.169 per cent molybdenum across 23.5 metres, including 10 metres of 0.34 per cent copper and 0.225 per cent molybdenum (Assessment Report 7535). Trace gold has also been detected.

Drilling 700 metres to the east of the main showing has intersected similar mineralization grading 0.132 per cent copper and 0.006 per cent molybdenum (0.010 per cent MoS₂) over 9 metres true width (Assessment Report 19336). About 1500 metres to the east-northeast, a second showing (Don showing) is located near Hunter Creek on the Gar (formerly the Don) claims. Sampling of this mineralized zone, including two abandoned adits, yielded average values of 0.56 per cent copper, 0.045 per cent molybdenum (0.075 per cent MoS₂), 18.86 grams per tonne silver and 0.07 gram per tonne gold over 70 metres by 8 to 10 metres with an indicated vertical depth of 40 metres (Assessment Report 20315). The mineralized zone is

CAPSULE GEOLOGY

apparently open towards the Susap showing. All three mineralized zones appear to be located along a similar mineralized trend. The mineralized zone has a strike length of at least 910 metres.

Diamond drilling coupling with extensive surface and underground sampling has outlined indicated reserves of 1.5 million tonnes grading 0.158 per cent copper, 0.045 per cent molybdenum (0.075 per cent MoS₂) across 8 to 30 metres true width at the main Susap showing (Assessment Report 19336).

Regional aeromagnetic data suggests the presence of a buried late stage pluton beneath the King Edward prospect. An induced polarization survey in 1991 showed increased chargeability over the Susap showing and increased chargeability with depth to the east towards the Don showing (Assessment Report 21801).

BIBLIOGRAPHY

EMPR AR 1903-175; 1908-251; 1921-178; 1962-64; 1963-65; 1967-221;
1968-274
EMPR ASS RPT 1578, 7356, *7535, *19336, *20315, *21801
EMPR EXPL 1979-22
EMPR GEM 1970-395; 1971-384; 1972-39; 1973-45
EMPR OF 1989-5
EMPR PF (G.E. Leonard (1963): Review of an exploration program
conducted on the King Edward property)
EMR MP CORPFILE (Friday Mines Ltd.)
EMR MIN BULL MR 189 (1983) B.C. 11, p. 208; 223 (1989) B.C. 13
EMR MRI 80/7 (1980) B.C. 11, p. 189
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179, p. 20
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40
GCNL #100(May 24), #121(June 22), 1979
N MINER Dec.7, 1979

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

grant. A group of Crown grants were originally staked between 1900 and 1904. In 1904, the Eclipse Mining and Milling Co. sunk a 24.4-metre winze on the Buller claim which intersected 'good' ore. Later, a 7.6-metre tunnel (lower adit) was reported to intersect a 1.2 to 1.5-metre wide quartz vein with high gold values. The property was operated until 1928 by Eclipse Mining and Milling Co., when Tiger Gold Syndicate was formed by Eclipse Mining and Milling Co. and claim owners. In 1931, the property was overtaken by Mak Siccar Gold Mines Ltd. and operated until 1938. In 1938, ownership was transferred to Whitehead and Davidoff. In 1966, the Buller, Bobbs, Eclipse and Kitchener claims were optioned to Iago Mines Ltd. who constructed a road to the upper adits. Between 1960 and 1986 the area was designated a military reserve with plans to build an observatory on Mount Kobau. The plans were cancelled, however, and the observatory was built in Hawaii. In 1986, Shangri-La Minerals Ltd. conducted wide-spaced geophysical and geochemical surveys and limited geological mapping on behalf of Chelik Resources Inc. In 1990, the property was acquired by Mount Kobau Mining Ltd. who retained Azimuth Geological Inc. to conduct limited soil geochemical, magnetometer and electromagnetic surveys and geological mapping.

Regionally, the Mak Siccar deposit is hosted by polydeformed regionally metamorphosed sedimentary and volcanic rocks of the Carboniferous to Permian Kobau Group. The areal distribution of Kobau Group rocks is restricted by the Similkameen River to the west and the Okanagan fault to the east. Intruding these rocks are small granodiorite plugs of the Middle Jurassic Similkameen intrusion, lying along the Manery Creek fault. A pluton of the Similkameen intrusion is located 1.5 kilometres to the southwest. Post-Middle Jurassic pyroxenite is also found at the Mak Siccar deposit.

The Kobau Group rocks have been subdivided into up to nine units. However, these generally consist of chlorite schist, foliated greenstone and lesser quartz sericite schist. The Kobau Group rocks have a northwest trending schistosity as well as a major northwest trending fold axis. Shears cut these rocks in three directions: north-south on the eastern portion of the property, and northeast and northwest to the west.

The northeast-trending shear is the locale of gold and copper mineralization and development. This shear strikes 030 degrees, dips 60 degrees west, following the course of Manery Creek. A quartz and locally carbonate stockwork up to 40 metres wide is best observed between the middle and upper adit portals. The stockwork contains quartz veins which vary in width from 0.02 to 1.4 metres. The shear-hosted stockwork lies within a small stock of granodiorite 600 by 500 metres in size and intrudes foliated greenstone. The veins strike 213, 240 and 280 degrees with dips ranging from 52 degrees northwest to vertical. Some of the quartz veins above the upper portal are flat lying and lensoidal in shape.

Auriferous quartz veins generally carry chalcopyrite, fine to coarse crystalline pyrite, trace tourmaline and minor malachite and azurite staining, which occur up to 300 metres laterally and greater than 150 metres vertically as determined by the 3 adits driven at 1128, 1250, and 1280 metres respectively. Hydrothermal wallrock alteration occurs along the vein edge in either the hangingwall of the upper adit or the footwalls of the middle and lower adits. The alteration zone ranges from 1 to several decimetres wide. Silicification is most prevalent in the shear zone and typically 10 to 20 centimetres wide, occasionally widening to 1 metre or more over short sections. Sericite alteration is common along with sparse masses of carbonate. Propylitic alteration is characterized by massive chlorite in 1 to several metre wide sections of the shear zone in the lower adit. Minor limonite is also found.

Samples taken in 1986 from the three adits analysed as follows. In the upper adit, sample MSUC-19 yielded 13.8 grams per tonne gold and 6.1 grams per tonne silver over 20 centimetres (Assessment Report 15920). A second sample, MSUC-22, yielded 3.3 grams per tonne gold and 2.0 grams per tonne silver over 30 centimetres (Assessment Report 15920). Sample 90MS-004, taken in 1990 near the upper adit, yield 231.5 grams per tonne gold, 86.4 grams per tonne silver and 0.03 per cent copper (Assessment Report 20115). The sample was composed of quartz vein with minor pyrite and trace chalcopyrite. Sample 90MS-002 yielded 5.11 grams per tonne gold, 9.9 grams per tonne silver and 2.27 per cent copper (Assessment Report 20115).

From the middle adit, sample MSD-26 taken in 1986, yielded 1.53 grams per tonne gold and 0.7 gram per tonne silver (Assessment Report 15920). The sample was taken over 1.4 metres from the offset of the main vein. In 1990, 1.1-metre chip sample 90MS-007 yielded 0.23 gram per tonne gold and 0.40 gram per tonne gold (Assessment Report 20115).

In the lower adit, mineralization is associated with

CAPSULE GEOLOGY

intermediate development of quartz stringers. In 1986, sample MSL-31 yielded 1.89 grams per tonne gold and 1.6 grams per tonne silver over 0.30 metre of gouge (Assessment Report 15920). A 1990 sample, 90MS-013, yielded 3.54 grams per tonne gold and 1.6 grams per tonne silver (Assessment Report 20115). Sample 105689, a lower adit dump grab, yielded 6.31 grams per tonne gold (Assessment Report 20638).

Production between the years 1934 to 1939 yielded 4012 grams of gold and 1960 grams of silver from 189 tonnes mined.

BIBLIOGRAPHY

- EMPR AR 1904-225,299; 1907-220; 1927-238; 1928-260; 1929-268;
1930-219; 1931-136; 1933-166; 1934-A25,D15; 1935-A25,D13,G47;
1938-A35; 1939-37; 1966-190
EMPR INDEX 3-204
EMPR ASS RPT 8996, *15920, *20115, *20638
EMPR BC METAL MM00356
EMPR EXPL 1987, pp. B7-15
EMPR FIELDWORK 1983; 1988, pp. 19-25; 355-363
EMPR OF 1989-5
EMPR PF (Starr, C.C. (1936): Geological Report on the Mak Siccar Mine, 9 p.; Map of Assays and Geology, 1936; Map of Surface Geology, 1936; Chelik Resources Inc. (1987): Prospectus)
EMPR MR MAP 7 (1934)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79; 179, pp. 20-26
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CIM Vol. 61, pp. 1326-1334
CJES Vol. 10, p. 1508
GSA Special Paper 218, pp. 55-91
Okulitch, A.V. (1969): Geology of Mount Kobau, unpublished Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/01

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW005**

NATIONAL MINERAL INVENTORY:

NAME(S): **TINHORN (L.726)**, TINHORN 83, TINHORN 300,
TINHORN 400, FORTUNE (L.940), BIG HORN,
TINHORN MINE, TINHORN VEIN, TIN HORN

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 09 05 N
LONGITUDE: 119 36 28 W

UTM ZONE: 11 (NAD 83)

NORTHING: 5447560
EASTING: 309849

ELEVATION: 0650 Metres
LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the former Tinhorn mine (Assessment Report 12189).

COMMODITIES: Gold Silver Lead Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Gold Telluride
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 1 Metres STRIKE/DIP: 090/75S TREND/PLUNGE:
COMMENTS: Quartz veins, 10 to 100 centimetres wide, strike east and dip steeply south.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Jurassic-Cretaceous			Fairview Intrusion
Jurassic			Oliver Plutonic Complex

ISOTOPIC AGE: 111 +/-5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Quartzite
Phyllite
Mafic Schist

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Refer to Fieldwork 1988, pages 19-25 for age dates.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1988

COMMODITY	GRADE	
Silver	17.2000	Grams per tonne
Gold	15.3600	Grams per tonne

COMMENTS: Chip sample JDK 306, across the entrance to the No. 5 adit.
REFERENCE: Yuriko Resources Corp. (1988): Prospectus.

CAPSULE GEOLOGY

The Tinhorn occurrence is located on the north side of Tinhorn Creek, 5 kilometres southwest of Oliver, British Columbia. It lies along the southern edge of the historic Fairview mining camp. The Tinhorn, Big Horn and Fortune claims were first staked on a quartz vein in quartzites of the Kobau Group in 1896. The claims

CAPSULE GEOLOGY

were owned and operated by the Tinhorn Quartz Mining Co. Ltd. The Tinhorn workings were mostly completed by 1897. Development includes five adits driven into the veins on the former Tinhorn and Fortune Crown grants. The main adit was driven sixty metres west and included a 19.5-metre shaft and an 8.0-metre raise. Another adit, located approximately 120 metres northeast, was driven to the west 25 metres in length. To the north, three shorter adits are driven on similar east striking quartz veins. In 1942, K.G. Ewers and I.A. McKay acquired ownership and operated the Tinhorn mine. Lawrence Mining Corp. conducted a soil sampling program over the Tinhorn underground workings in 1984. Gold anomalies up to 3 parts per million were identified. The former Tinhorn mine was restaked as part of the Joe Dandy Group in 1987 by Shangri-La Minerals and work carried out under option to Yuriko Resources Corp. An extensive program of prospecting, surface and underground rock sampling, soil sampling, geological mapping and magmatic and electromagnetic surveys was conducted. Limited geological mapping was also conducted in 1989.

The Tinhorn occurrence lies within the Okanagan Terrane of the Intermontane tectonic belt. Polydeformed and regionally metamorphosed rocks of the Carboniferous to Permian Kobau Group dominantly underlie the area. Highly deformed, low grade metamorphic quartzite, phyllite, schist, greenstone and marble comprise the main units of a 1900-metre structural succession. Three phases of fold have been identified in the Kobau Group rocks. The initial phase of folding was coincident with pre-Jurassic regional metamorphism, whereas later phases of folding are related to intrusive activity. The main intrusions in the Fairview camp are the Jurassic Oliver granite and the Jurassic to Cretaceous Fairview granodiorite. The Oliver pluton is heterogeneous and is composed of biotite-hornblende granite, porphyritic biotite granite, garnet-muscovite granite, porphyritic quartz monzonite and syenite. Other intrusive phases cutting the Kobau Group metasediments and volcanics include aplite dikes, granitic, dioritic and mafic stocks, auriferous quartz veins related to Jurassic intrusions and Tertiary northeast-trending mafic dikes.

The Tinhorn occurrence is hosted within quartzite (KQ1) of the Carboniferous to Permian Kobau Group (Fieldwork 1988, pages 19-25). The unit is composed of quartzite layers 1 to 5 centimetres thick separated by biotite-rich layers, some biotite-rich sections and lenses of mafic schist.

East striking, steeply south dipping, parallel quartz veins 10 centimetres to 1 metre wide host the mineralization. The veins conform to the schistosity of the wallrock and contain pyrite, galena, sphalerite, free gold and telluride. Malachite staining is also present. North striking, west dipping faults 5 to 10 metres apart are reported to displace the quartz veins to the right a few metres. However, underground workings failed to find the extension of the vein system beyond one fault. An outcrop 200 metres higher in elevation along strike may be the extension.

There is little evidence of attempts to locate the vein in the 200 metre gap between the upper and lower adits. Soil sampling in 1983 located several gold anomalies on surface on unexplored ground to the north of the upper adit. Twelve rock samples were taken. Sample 11 yielded 0.99 gram per tonne gold and sample 12 yielded 1.10 grams per tonne (Assessment Report 12189). Rock chip sample JDK 306 yielded 15.36 grams per tonne gold and 17.2 grams per tonne silver, in 1988 (Yuriko Resources Corp. (1988): Prospectus). The sample was taken across the entrance to the No. 5 adit, from a blue-grey quartz vein hosted in oxidized and sheared phyllite.

Preliminary lead isotope studies indicate the mineralization is associated with quartz veins is younger than or as young as the Oliver pluton (circa 155 Ma) (Fieldwork 1988, pages 19-25).

Recorded production from the former Tinhorn mine totals 274 tonnes from which 1400 grams of gold and 467 grams of silver were recovered. Most the gold was recovered in 1898 from 181 tonnes mined. The remaining ore was recovered in 1942, probably from the old stamp mill tailings.

BIBLIOGRAPHY

- EMPR AR 1896-574; 1897-601,619; 1898-1115,1196; 1901-1154,1155; 1942-26
- EMPR INDEX 3-216
- EMPR ASS RPT *12189, 19561, 19947
- EMPR BC METAL MM00368
- EMPR FIELDWORK *1988, pp. 19-25
- EMPR MR MAP 7 (1934)
- EMPR OF 1989-5
- EMPR PF (*Yuriko Resources Corp. (1988): Prospectus)

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 815
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW006**

NATIONAL MINERAL INVENTORY: 082E4 Au4

NAME(S): **MORNING STAR (L.443)**, MORNING STAR MINE, MORNING STAR GROUP,
MORNING STAR FR., EVENING STAR (L.543), EVENING STAR FR.,
AUGUST (L.1050), BLACK DIAMOND (L.578), DUCHESS,
OCEAN WAVE (L.854), STAR, PRINCESS,
SILVER CROWN (L.442), FAIRVIEW, OLIVER,
ONTARIO

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:
LATITUDE: 49 11 26 N
LONGITUDE: 119 36 54 W
ELEVATION: 0700 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location of the Main shaft on the Morning Star (Lot 443) Crown
grant (Property File - Plan of underground workings (1934)). See
also Fairview (082ESW008) and Stemwinder (082ESW007). Silica
production is included with the Fairview.

Underground
MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5451931
EASTING: 309473

COMMODITIES: Gold Silica Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Gold Pyrite Galena Sphalerite
ASSOCIATED: Quartz
ALTERATION: Graphite Sericite Chlorite
COMMENTS: Iron oxide
ALTERATION TYPE: Oxidation Sericitic Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant
CLASSIFICATION: Mesothermal Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au
I07 Silica veins
SHAPE: Bladed
MODIFIER: Fractured Faulted
DIMENSION: 76 x 9 Metres STRIKE/DIP: 315/45N TREND/PLUNGE:
COMMENTS: The main (West) vein is up to 9.1 metres wide and has been traced over
76 metres on surface and in underground workings. The vein strikes
315 degrees and dips 45 to 55 degrees northeast.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Jurassic-Cretaceous			Fairview Intrusion
Jurassic			Oliver Plutonic Complex

ISOTOPIC AGE: 111 +/-5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite
ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Quartzite
Chloritic Mica Schist
Dacite Porphyry Dike
Granodiorite
Granite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.
Refer to Fieldwork 1988, pages 19-25 for age dates.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Plutonic Rocks
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel

YEAR: 1934

COMMODITY

GRADE

Gold

21.6000

Grams per tonne

COMMENTS: The average grade of the first ore shoot, 44 metres long and averaging 1.4 metres wide.

REFERENCE: Minister of Mines Annual Report 1934, page D13.

CAPSULE GEOLOGY

The former Morning Star mine is located 1.75 kilometres south of Burnell Lake and 4.5 kilometres west of Oliver, British Columbia.

The Morning Star occurrence is part of the Fairview mining camp, one of the oldest in British Columbia. The earliest lode vein discoveries were made in the late 1880s with the earliest claims staked prior to 1891. By 1933, the Morning Star claim group consisted of 10 claims: Morning Star (Lot 443), Morning Star Fraction, Evening Star (Lot 543), Evening Star Fraction, August (Lot 1050), Black Diamond (Lot 578), Duchess, Ocean Wave (Lot 854), Star and Princess. The Reco and Quartz Queen claims are associated with the Morning Star occurrence and were reported to have been explored by 15-metre tunnels in 1896.

This claim was one of the first to be developed in the Fairview mining camp. The earliest work is believed to have been conducted on the South vein. The Morning Star occurrence occurs at the lowest elevation in the Fairview mining camp, the main shaft collar being 244 metres lower than the adits at the Stenwinder occurrence (082ESW007).

The Morning Star occurrence lies within the Okanagan Terrane of the Intermontane tectonic belt. Polydeformed and regionally metamorphosed rocks of the Carboniferous to Permian Kobau Group dominantly underlie the area. Highly deformed, low grade metamorphic quartzite, phyllite, schist, greenstone and marble comprise the main units of a 1900-metre structure succession. Three phases of fold have been identified in the Kobau Group rocks. The initial phase of folding was coincident with pre-Jurassic regional metamorphism, whereas later phases of folding are related to intrusive activity. The main intrusions in the Fairview camp are the Jurassic Oliver granite and the Jurassic to Cretaceous Fairview granodiorite. The Oliver pluton is heterogeneous and is composed of biotite-hornblende granite, porphyritic biotite granite, garnet-muscovite granite, porphyritic quartz monzonite and syenite. Other intrusive phases cutting the Kobau Group metasediments and volcanics include aplite dikes, granitic, dioritic and mafic stocks, auriferous quartz veins related to Jurassic intrusions and Tertiary northeast-trending mafic dikes.

Auriferous quartz veins occur along a strike length of 4 kilometres within the Fairview mining camp, with three main areas being mined between 1895 and 1961. The veins are hosted in all rock types but are thickest and most continuous where they occur in the quartzites of the Kobau Group. Some significant veining also occurs within the intrusive bodies. Tertiary faults crosscut all lithologies including the quartz veins.

The Morning Star mine area is underlain by a northwest trending sequence of quartzite layers separated by biotite-rich layers overlain by a mafic unit consisting of chloritic mica schists with minor interbedded quartzose layers. A series of dacite porphyry dikes and sills occur parallel to foliation. The stratigraphy is tightly squeezed and strongly foliated at 100 to 130 degrees between the Oliver Plutonic Complex granite to the north and the Fairview intrusion granodiorite to the south-southwest. Dips are to the northeast at 50 to 65 degrees. Regional foliation (S1) trends 130 degrees and parallels the quartz veins. A later fracture cleavage (S2), trends 000 degrees to 020 degrees and dips 50 to 70 degrees west. Faulting of at least two separate ages is common throughout the area. The oldest faults parallel the regional foliation. They are commonly graphitic, usually filled with clay and/or sand gouge and often have associated caving. Direction of movement has not been determined. A large number of younger faults, possibly Tertiary in age, are also common.

Mineralization is confined to a quartz vein system which is generally conformable to penetrative fabrics developed in the Kobau Group hostrocks and display a variety of early ductile and later brittle deformation features. The vein system has been traced over 4 kilometres from the Morning Star northwest to the former Stenwinder mine (082ESW007) and the former Fairview mine (082ESW008). The veining consists of two dominant veins, often with a third or fourth present. They occur in the quartzite sequence, usually near the Fairview intrusion granodiorite contact. Individual veins reach up to 9.1 metres thick and pinch and swell both along strike and

CAPSULE GEOLOGY

downdip. The East vein was found to be faulted above the No. 1 level.

Fluid inclusion and stable isotope studies at the Morning Star occurrence indicate mesothermal fluids were responsible for mineralization events. The fluids are characterized by a high carbon dioxide content, temperatures of 280 to 330 degrees Celsius, salinities of 4 to 6 weight per cent NaCl and oxygen del 18 values of 4 to 6 per mil (relative to standard mean ocean water). The mineralization occurred at depths of 3 to 4 kilometres.

At the former Morning Star mine two quartz veins, the West (Main) vein and East vein, are 27 to 61 metres apart and occur locally concordant to the regional foliation but cut lithologic contacts at very low angles. The veins are fractured and irregular with quartz stringers and iron oxide staining in opencuts and outcrop. The principal vein, the West vein, strikes 315 degrees and dips 45 to 55 degrees northeast and outcrops just west of the main shaft. It has a maximum width of 9.1 metres and has been traced over about 76 metres on surface and in underground workings. The East vein is northeast of and parallel to the West vein and has been traced over 427 metres on surface and in underground workings. The vein width is considerably variable; the maximum being about 4.2 metres. Locally it consists of several quartz stringers comprising a zone 0.6 metre wide.

Mineralization includes pyrite, visible gold, sphalerite and galena in a gangue of blue quartz. Gold and silver values are closely associated with the presence of galena and sphalerite and appear to increase with depth. However, spectacular gold values were reported near surface in 1930 (Minister of Mines Annual Report 1930, page A219). For the most part, the highest gold and silver values occur in the hangingwall parts of the veins associated with bunches and narrow bands of galena and sphalerite over widths of 1.2 to 1.5 metres, although significant values have been obtained throughout the vein. Elsewhere, mineralization is disseminated.

In 1930, rough general sampling across 38 to 152 centimetres from underground workings were reported to yield from 2.74 grams per tonne gold and 43.88 grams per tonne silver to 24.00 grams per tonne gold and 153.60 grams per tonne silver (Minister of Mines Annual Report 1930, page A219). In 1933, several samples were taken from the 200 level of the West shaft area on the East vein. The average yield of these samples was 9.86 grams per tonne gold and 40.11 grams per tonne silver over the width of the drift and along 54.9 metres length (Minister of Mines Annual Report 1933, page A165).

By 1934, 6 ore shoots had been discovered. The first orebody commences 15 metres north of the main shaft on the 101 level and extended 44 metres along a 1.4-metre wide drift. The average grade, based on ore shipped, was 21.60 grams per tonne gold (Minister of Mines Annual Report 1934, page D13). The second shoot was located 19.8 metres south of the main shaft, was 22.86 metres long and averaged 1.16 metres wide. The ore averaged 22.28 grams per tonne gold (Minister of Mines Annual Report 1934, page D13). The third shoot occurred 97.5 metres north of the main shaft, was 3.65 metres long and averaged 1.5 metres wide. The average gold grade of this ore shoot was 8.57 grams per tonne gold (Minister of Mines Annual Report 1934, page D13). The fourth shoot was 164.6 metres north of the main shaft. The shoot was 13.40 metres long and averaged 3.96 metres wide, producing gold values averaging 12.68 grams per tonne gold (Minister of Mines Annual Report 1934, page D13). The sixth ore shoot was discovered in 1934 and its length is unknown. The average width was 1.8 metres and face samples yielded 39.77 grams per tonne gold (Minister of Mines Annual Report 1934, page D13). A composite of 6 channel samples across 10.05 metres of quartz vein on No. 1 level assayed 11.07 grams per tonne gold and 30.50 grams per tonne silver (Property File - plan map of underground sampling). The date this sample was taken is uncertain, but estimated to be the late 1930s.

In 1991, a diamond-drill hole was completed as part of a 21 drillhole program by Fairview Gold Corp. The hole was drilled to test the continuity of gold mineralization along the Fairview vein system. Both the footwall and main veins were intersected but the hole was stopped short of the hangingwall vein. The footwall vein is interpreted to host high grade gold mineralization at the Morning Star occurrence. The main and hangingwall veins are barren. However, the highest drillhole intersection was over the 4.71 metre interval between 107.49 and 112.2 metres yielding 0.17 gram per tonne gold and 1.71 grams per tonne silver (Assessment Report 21501). The vein was interpreted to correlate with the main vein in underground workings.

A sample taken near the collar of the Black Diamond shaft in 1923 yielded 11.66 grams per tonne gold and 102.86 grams per tonne

CAPSULE GEOLOGY

silver (Minister of Mines Annual Report 1923, page A185). Preliminary lead isotope studies indicate the mineralization is associated with quartz veins is younger than or as young as the Oliver pluton (circa 155 Ma) (Fieldwork 1988, pages 19-25). Early production records for the former Morning Star mine are conflicting. However in 1892, 349 tonnes of ore from the Morning Star was tested in the Strathyre mill. The owners of the Morning Star occurrence were Mangott, McEachern and Leferve. The mill was leased in the following year and another 907 tonnes of ore produced 7.25 tonnes of concentrate that was sent to the Tacoma smelter. In 1895, 1814 tonnes was mined and produced 18 tonnes of concentrate. The provincial records report 2450 tonnes of ore milled between 1892 and 1895 (Minister of Mines Annual Report 1897, page 600). In 1898, another 272 tonnes is reported milled at the Joe Dandy mill. By 1923 a 12-metre shaft had been excavated on the Black Diamond claim. In 1932, R. Clothier acquired a three-quarter interest in the Morning Star property. Morning Star (Fairview) Gold Mines, Ltd. acquired the Morning Star claim group and the neighbouring Ontario and Rattler Fraction claims. Several hundred tonnes of gold-rich ore was mined from vein outcrops near the workings. Development work in 1933 included the northwest extension of the drift on the West vein and a crosscut near the face of this northwest drift. The crosscut intersected a 9-metre wide vein. Ore mined from stopes in 1933 was 1439 tonnes which was shipped to smelter. A total of 2406 tonnes of ore was reported milled and shipped in 1934. By 1934, 6 main ore shoots had been discovered. Total underground development work on the East vein consisted of 335 metres of raises and 168 metres of crosscutting. About 5131 tonnes of ore are reported mined in 1935. Another 11,757 tonnes of ore are reported mined and milled in 1936. In 1936, The Morning Star and Fairview mines were amalgamated under Fairview Amalgamated Gold Mines Ltd. Mining and milling continued from 1937 until 1939, when milling was suspended. In 1940 and 1941 mining continued with ore shipments made from the Morning Star and Black Diamond. Production from 1937 to 1939 was from the Fairview. Consolidated Mining and Smelting Company of Canada acquired the property in 1947 and resumed mining of the veins as a source of silica flux for the Trail smelter. Mining ceased in 1961, as the silica flux stockpile at the Trail smelter was sufficient. Silica production is included with the Fairview. Minor gold and silver were recovered from the silica flux. Limited further exploration work was conducted in 1960 by Consolidated Mining and Smelting Company of Canada. Oliver Gold Corp. optioned the former Morning Star mine from Cominco Ltd. in 1986. Recorded production between 1893 and 1941 from the former Morning Star mine includes 24,975 tonnes mined from which 965,530 grams of silver, 252,687 grams of gold, 926 kilograms of copper, 13,218 kilograms of lead and 1894 kilograms of zinc were recovered. Minor production occurred in 1940 and 1941. The amount of gold recovered between 1893 and 1898 is 103,800 grams; this may include silver recovery.

BIBLIOGRAPHY

EMPR AR 1892-543; 1893-1074-1076; 1894-753, (sketch map); 1895-704; 1896-563,574; *1897-576-600; 1898-1115; 1901-1155; 1902-H187; 1903-H175; 1904-G225; 1908-J117; 1920-N157; 1921-G179; 1923-A185; 1924-B169; 1927-C238; 1930-A219; 1932-A134; *1933-A164,A165; *1934-A24,A29,D13; 1935-A25,A30,D12,G47; *1936-A34,D54,D55; 1937-D31; *1938-A34,D34,D35; 1939-A76; 1940-A24; 1941-A25; 1944-A58; 1949-A41; *1956-74; *1957-34; 1960-62
EMPR ASS RPT 12646, 16723, 16779, 21501, *23404
EMPR BC METAL MM00349
EMPR BULL 1 (1932), pp. 87,88
EMPR ENG INSP (Surface, underground plan maps - No.61052-61056)
EMPR FIELDWORK *1988, pp. 19-25
EMPR INDEX 3-206
EMPR MR MAP 7 (1934)
EMPR OF *1989-2; 1989-5; 1998-10
EMPR PF (*Various maps-mine plans, claims, assay plans (undated); *McDougall, B.W.W. (1933): A Report on the Mining Property of Fairview Amalgamated Gold Mines Ltd.; Starr, C.C. (1934): Geological Report on the Morning Star Mine, 9 p.; Surface Geology, Morning Star (Fairview) Gold Mines, 1934; Silver Crown Tunnel Geology, Morning Star Mine, 1934; Mine Geology, Morning Star Mines, 1934; The Valhalla Gold Group Corporation (Aug.15, 1988): Prospectus; The Valhalla Gold Group Brochure; 082ESW007; Yuriko Resources Corp. (May 20, 1988): Prospectus)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; *179, pp. 1-9
GSC OF 481; 637; 1505A; 1565; 1969

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 820
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW007**

NATIONAL MINERAL INVENTORY: 082E4 Au3

NAME(S): **STEMWINDER (L.384)**, FAIRVIEW-STEMWINDER, OLIVER,
OLIVER GOLD, STEMWINDER MINE, FAIRVIEW EXTENSION,
BROWN BEAR (L.385), LITTLE JOE, WYNN M (L.554),
STEMSET (L.215), GUNSITE (L.255)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 11 46 N
LONGITUDE: 119 37 42 W
ELEVATION: 0750 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5452582
EASTING: 308523

LOCATION ACCURACY: Within 500M

COMMENTS: The location of the Stemwinder headframe on the Stemwinder Crown
grant (Lot 384) (Assessment Report 16779). See also Morning Star
(082ESW006) and Fairview (082ESW008).

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Gold Pyrite Galena Sphalerite Chalcopyrite

COMMENTS: Native gold was reported during its mine life.

ASSOCIATED: Quartz Pyrrhotite

COMMENTS: Pyrrhotite is rare.

ALTERATION: Graphite Sericite Chlorite Biotite

COMMENTS: Fracture-fillings alteration minerals associated with mineralization.

ALTERATION TYPE: Sericitic Chloritic Biotite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant
CLASSIFICATION: Mesothermal Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Irregular

MODIFIER: Folded Fractured
DIMENSION: 671 x 9 Metres

STRIKE/DIP: 130/50N

TREND/PLUNGE:

COMMENTS: Combined total strike length of the Fairview Extension, Stemwinder and
Brown Bear zones is 671 metres. The veins are conformable with the
regional (S1) foliation. Maximum vein width is 9 metres.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Jurassic-Cretaceous			Fairview Intrusion
Jurassic			Oliver Plutonic Complex

ISOTOPIC AGE: 111 +/-5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Quartzite
Chloritic Argillite
Greenstone
Granodiorite
Granite
Felsic Dike
Intermediate Dike

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.
Refer to Fieldwork 1988, pages 19-25 for age dates.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Thompson Plateau

GRADE: Greenschist

INVENTORY

ORE ZONE: MAIN VEIN REPORT ON: Y
 CATEGORY: Indicated YEAR: 1984
 QUANTITY: 640000 Tonnes
 COMMODITY GRADE
 Silver 51.4000 Grams per tonne
 Gold 3.8000 Grams per tonne
 REFERENCE: Mineral Exploration Review 1986, page 63.

ORE ZONE: NORTH VEIN REPORT ON: Y
 CATEGORY: Indicated YEAR: 1984
 QUANTITY: 185000 Tonnes
 COMMODITY GRADE
 Silver 103.0000 Grams per tonne
 Gold 9.2000 Grams per tonne
 REFERENCE: Mineral Exploration Review 1986, page 63.

ORE ZONE: STEMWINDER REPORT ON: Y
 CATEGORY: Combined YEAR: 1987
 QUANTITY: 816000 Tonnes
 COMMODITY GRADE
 Gold 3.7700 Grams per tonne
 COMMENTS: Reserve estimates by Cominco Ltd. (1982) included 635,000 tonnes from the Fairview Extension zone grading 3.43 grams per tonne gold and 181,000 tonnes from the Stemwinder zone grading 4.11 grams per tonne gold.
 REFERENCE: Property File - Cooke (1987): Report on the Stemwinder Mine property.

CAPSULE GEOLOGY

The former Stemwinder mine is located 1 kilometre west of Burnell Lake and 6 kilometres west-northwest of Oliver, British Columbia.

Regionally, the area is underlain by a northwest trending, narrow elongate belt of complexly deformed, regionally metamorphosed Carboniferous to Permian Kobau Group metasedimentary and metavolcanic rocks which separate two large intrusive bodies; the Jurassic Oliver Plutonic Complex granite to the northeast and the Jurassic to Cretaceous Fairview intrusion granodiorite to the southwest. Both plutons cut the lithologies and structures of the Kobau Group. The Kobau Group rocks comprise banded and foliated quartzitic lithologies with minor mafic schists, and thick, compositionally layered mafic schist units with intercalated quartzite bands. Minor meta-carbonates and mafic metavolcanic flows or sills occur within the quartzites and schists which have undergone at least three phases of folding and later brittle faulting. The metasedimentary-volcanic package is cut by aplite dikes, small granitic, dioritic and mafic stocks, and Tertiary northeast trending mafic dikes. Dacite dikes occur in swarms and are parallel to the regional compositional layering within the Kobau Group rocks east of the Fairview intrusion. Auriferous quartz veins occur in all lithologies but are thickest and most continuous where they occur in the quartzites. Some significant veining also occurs in the intrusive bodies. Tertiary faults crosscut all lithologies including the quartz veins.

The Stemwinder mine area is underlain by a northwest trending sequence of three distinct lithologic units: an upper 'green argillite' primarily composed of chlorite with variable amounts of biotite and narrow quartzite laminations; an underlying central grey quartzite that varies from cherty quartzite to banded quartzite, laminated with fine and coarse biotite; and a lower, 'dark argillite' that is essentially a massive greenstone. A series of intermediate to felsic dikes parallel to foliation occur in this sequence.

The stratigraphy is tightly squeezed and strongly foliated at 100 to 130 degrees between Oliver Plutonic Complex granite to the north and Fairview intrusion granodiorite to the south. Dips are to the northeast at 50 to 65 degrees. Small scale isoclinal folding can be seen in the sedimentary and volcanic units as well as the quartz veins. Regional foliation (S1) which trends 130 degrees, parallels both the quartz veins and the sericite-biotite-graphite-sulphide-filled fractures commonly found within the veins. These vein fractures may represent axial planar cleavage related to the small scale isoclinal folding and regional foliation developed during emplacement of the Fairview granodiorite. A later fracture cleavage (S2), trends 000 degrees to 020 degrees and dips 50 to 70 degrees west. It is especially evident in quartz veins and is possibly related to late faulting.

Faulting of at least two separate ages is common throughout the Stemwinder mine area. The oldest faults parallel the regional

CAPSULE GEOLOGY

foliation and are best developed in the area of quartz veining where they are located on both the top and bottom of the quartz veins. They are commonly graphitic, usually filled with clay and/or sand gouge and often have associated caving. Slickensides on fault planes within the quartz veins typically have a southeast plunge at 30 to 40 degrees. Direction of movement has not been determined. A large number of younger faults, possibly Tertiary in age, are common throughout the mine workings. Many of the larger faults are left-lateral reverse faults that offset the quartz veins approximately 18 metres horizontally. The vertical component of movement is unknown. The faults, like the quartz veins, have a considerable roll, often flattening substantially over short distances. Normal faults which seem to be about the same age or slightly younger than the reverse faults occur throughout the mine and may reflect a 'relaxing' of compressional forces.

Mineralization is confined to a quartz vein system which is generally conformable to penetrative fabrics developed in the Kobau Group hostrocks and display a variety of early ductile and later brittle deformation features. The vein system has been traced over 4 kilometres from the Morning Star mine (082ESW006) in the southeast through the Stemwinder to the Fairview mine (082ESW008) in the northwest. The veining consists of two dominant veins often with a third or fourth present. They occur in the middle quartzite sequence, usually within 60 metres of the Fairview granodiorite contact. Veins intersected in drillholes usually occur within grey laminated quartzite. Individual veins range from 0.30 up to 9 metres in thickness and pinch and swell rapidly along short distances, both along strike and downdip. The quartz is white and either massive or fractured and ribbon-textured. The vein system is composed of the principal Main vein, the HW vein (Hangingwall or North vein) and the FW vein (Footwall or South vein) and is evident at the Fairview mine and continues through to the Stemwinder mine in the southeast. Several high-grade shoots occur within these veins.

Fluid inclusion and stable isotope studies at the Stemwinder occurrence indicate mesothermal fluids were responsible for mineralization events. The fluids are characterized by a high carbon dioxide content, temperatures of 280 to 330 degrees Celsius, salinities of 4 to 6 weight per cent NaCl and oxygen del 18 values of 4 to 6 per mil (relative to standard mean ocean water). The mineralization occurred at depths of 3 to 4 kilometres.

Gold and silver values occur in portions of the vein that contain pyrite, sphalerite, galena and chalcopryite, which occur along ribbon-textured fractures or as disseminations in quartz. Precious metal grades show little preference for the hangingwall or footwall of the veins. Strong fracturing parallel to foliation with graphite, sericite, chlorite and biotite fracture-fillings accompanies the mineralized zones. Faulting parallel to the quartz vein zone may account for the rapid thickening and thinning of the veins.

Gold and silver values are closely associated with the presence of galena with or without chalcopryite, sphalerite or pyrite. Galena, chalcopryite, sphalerite and rare pyrrhotite are fracture-controlled with most occurring along S1 fractures in quartz veins. A very small percentage also occur along S2 fractures. For the most part, the best galena-chalcopryite-sphalerite mineralization and highest gold and silver values occur in the hangingwall parts of the veins, although significant values have been obtained throughout the vein. Gold values are higher where the vein has well-developed S1 fractures lined with sericite-biotite-chlorite-graphite and sulphides.

Three high-grade gold zones or shoots have been discovered within the complex vein system. The Fairview Extension zone is located at the common boundary between the Fairview and Stemwinder mines, namely on the Wynn M claim (Lot 554); the Stemwinder zone is located on the east edge of the Stemwinder workings, namely the Stemwinder claim (Lot 384); and the Brown Bear zone located in the north drift near the centre adit on the Brown Bear claim (Lot 385). These high-grade gold zones are thought to plunge 60 degrees to the east on the Stemwinder property.

Drilling on the Fairview Extension zone over 427 metres strike length suggests it is an eastward and downward extension of the Fairview ore zone. The zone appears to plunge eastward 20 to 30 degrees. Diamond drilling in 1982 on the Fairview Extension zone yielded 4.79 grams per tonne gold, 44.22 grams per tonne silver across 1.37 metres (Main vein) and 1.64 grams per tonne gold, 25.02 grams per tonne silver across 1.06 metres (HW vein) (Property File - Cooke, D.L. (1987): Report on the Stemwinder Mine Property).

The Stemwinder zone was intersected by drillholes to the east of the 200 level of the Stemwinder workings. The zone is poorly defined

CAPSULE GEOLOGY

due to faulting but has a defined strike length of 152 to 183 metres. The average grade of seven drill intersections yielded 4.04 grams per tonne gold and 45.60 grams per tonne silver (Cooke D.L., 1987). A channel sample across 0.97 metre of quartz vein assayed 7.02 grams per tonne gold and 10.62 grams per tonne silver (Assessment Report 16779). Channel samples from the Main vein and the HW vein in the Stemwinder zone assayed 5.89 grams per tonne gold, 114.15 grams per tonne silver across 1.0 metre (true width) and 10.28 grams per tonne gold, 185.11 grams per tonne silver across 0.87 metre, respectively (Assessment Report 16779).

The Brown Bear zone (Centre adit) differs somewhat from the other mineralized zones in that there is a lack of dikes or sills and biotite is absent in hangingwall and footwall quartzites and along S1 fractures in quartz veins where sericite is more prevalent. Graphite is also less prevalent in S1 fractures and there is little folding evident in the quartz veining. The major left-lateral reverse fault has apparent horizontal strike-slip offset of 110 metres. In 1982, three intersections from two drillholes approximately 61 metres apart yielded an average of 3.33 grams per tonne gold and 29.48 grams per tonne silver (Cooke, D.L., 1987). The results of the 1991 drill program were as follows. On the Main vein, the average of six intersections in six drillholes was 0.48 gram per tonne gold and 3.43 grams per tonne silver over an average true thickness of 3.07 metres (Assessment Report 21501). On the HW vein, the average of 14 intersections from 13 drillholes was 0.99 gram per tonne gold and 6.17 grams per tonne silver over a true thickness of 3.74 metres (Assessment Report 21501). The results of three drillholes in 1994 yielded an average of 2.67 grams per tonne gold and 10.97 grams per tonne silver over an average true thickness of 1.83 metres on the HW vein. Intersections on the Main vein yielded 1.37 grams per tonne gold and 4.11 grams per tonne over a true thickness of 0.91 metre (Assessment Report 23404).

The Stemwinder claim group was discovered and staked in 1888. The claim group, owned by G. Sheehan and associates, was composed of the Stemset Fr. (Lot 21s), Gunsite (Lot 25s), Stemwinder (Lot 384), and Brown Bear (Lot 385) and the Wynn M. (Lot 554) owned by E.D. Reynolds. Claims owned by Sheehan were Crown granted in 1892, 1896 and 1906. The Wynn M. was Crown granted in 1894. A small amount of ore were mined and milled in a small 5-stamp mill on Reed Creek and owned by Strathyre Mining Co. Ltd. Mill operations were expanded in 1896 to a 10-stamp mill and the Brown Bear and Wynn M. claims were purchased. These claims were held until 1907. The Stemwinder claim was purchased by the Fairview Consolidated Gold Mines Co. in 1897. Underground development up to 1901 totalled about 1220 metres. The Tinhorn (082ESW005) and Joe Dandy (082ESW161) stamp mills were purchased and installed on the Stemwinder. The mill was expanded to 46 stamps in 1902. In 1903, a cyanide recovery plant was installed to increase gold recovery. Operations ceased in 1904. In 1906, the Stemwinder Gold and Coal Mining Co. Ltd. acquired the Stemwinder property and further development work was carried out. The Brown Bear and Wynn M. claims were also purchased from Strathyre Mining Co. Ltd. in 1906 and operations on these claims ceased in 1908. By 1930, the claims were owned by Federal Mining Co. Morning Star (Fairview) Gold Mines, Ltd. optioned the property in 1934. The old workings were dewatered to the 500 level and sampled. The option was subsequently dropped. Fairview Gold Mines Ltd. acquired the property.

In 1960, Cominco Ltd. acquired a 10 year lease with a potential 10 year extension on the Stemwinder. A total of 352 metres of diamond drilling was conducted in 6 holes. The lease was dropped in 1972. Cominco Ltd obtained a second option on the Stemwinder property from Fairview Mining Co. Ltd., a subsidiary of Asarco Inc. Between 1982 to 1984, 27 diamond-drill holes totalling 4155 metres were drilled, exploring the Stemwinder vein system over a strike length of 1341 metres. In 1985, Highland Valley Resources Ltd. optioned the Stemwinder claim group. Exploration included drifting from the Central adit and Brown Bear claim. Solomon Gold Corp. acquired an agreement with Highland Valley Resources Ltd. to acquire a 50 per cent interest in the property in 1988. In 1991 and 1994 Oliver Gold Corp. conducted exploration drilling on veins on the Brown Bear and Silver Crown claims. The 1991 drill program consisted of 1472 metres in 21 holes approximately 100 metres apart. Fifteen of these drillholes were on the Brown Bear zone, the remaining on the Silver Crown and Morning Star claims (082ESW005). The 1994 program consisted of 13 drillholes totalling 1083 metres to test the HW and Main veins in the vicinity of the Brown Bear and Silver Crown adits.

Drilling by Cominco Ltd. and Asarco Exploration Company of Canada Ltd. between 1982 and 1984 outlined reserves of 640,000 tonnes of ore from the Main vein grading 3.8 grams per tonne gold and 51.4

CAPSULE GEOLOGY

grams per tonne silver (Mineral Exploration Review 1986, page 63). The North vein was estimated to contain reserves of 185,000 tonnes of ore grading 9.2 grams per tonne gold and 103 grams per tonne silver (Mineral Exploration Review 1986, page 63). In 1982, Cominco estimated 635,000 tonnes of reserves grading 3.43 grams per tonne gold in the Fairview Extension zone. The Stemwinder zone was estimated to contain 181,000 tonnes of ore grading 4.11 grams per tonne gold (Cooke, D.L., 1987).

Total recorded production between 1893 and 1956 from the former Stemwinder mine includes 27,947 tonnes mined and 27,666 tonnes milled from which 100,310 grams of gold, 532,797 grams of silver, 3670 kilograms of lead and 249 kilograms of zinc were reported recovered. The amount of gold recovered in 1893 and 1894 is calculated.

BIBLIOGRAPHY

EMPR AR 1890-379; 1892-543; 1893-1074,1085; 1894-753,754,(sketch map); 1895-704; 1896-562,563,574; *1897-photo after 576,597-601; 1898-1115; 1899-603,774,775; 1900-882; *1901-1073,1074,1154,1155; 1902-H186,H187; 1903-H175; 1904-G28,G225; 1905-J188,J190; 1906-H165,H254; 1907-L116,L117; 1920-N157; 1921-G179; 1923-A185; 1934-D13,D14; 1938-A31; 1949-A41; 1956-A49; 1961-62
EMPR ASS RPT 10205, 11364, 12646, *15770, *16779, *21501, *23404, 23899
EMPR BC METAL MM00344
EMPR BULL 1 (1932), pp. 87,88
EMPR EXPL 1982-30; 1983-32; 1984-15; *1986-A65
EMPR FIELDWORK *1988, pp. 19-25
EMPR INDEX 3-190,215; 4-123
EMPR MAP 65 (1989)
EMPR MER *1986, pp. 23,63
EMPR MR MAP 7 (1934)
EMPR OF *1989-2; 1992-1; 1998-10
EMPR PF (*Cooke, D.L. (1987): Report on the Stemwinder Mine Property; Solomon Gold Corp. Application for Listing, 67/89)
EMR MIN BULL MR 223 (1989) B.C. 12
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; *179, pp. 1-9
GSC OF 481; 637; 1505A; 1565; 1969; 2167, pp. 49-50
GSC P 37-21
GCNL #244, 1986; #43, 1987; #173, 1988; #97(May 18), 1990; #49(March 11), 1991; #104(June 1), #223(Nov.22), 1994
WWW http://www.infomine.com/index/properties/STEMWINDER_FAIRVIEW.html

DATE CODED: 1985/07/24
DATE REVISED: 1997/07/24

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW008**

NATIONAL MINERAL INVENTORY: 082E4 Au5

NAME(S): **FAIRVIEW (L.556S)**, FAIRVIEW MINE, KITCHNER (L.552S),
BULLER (L.554S), ROBERTS (L.555S), HALIGONIAN (L.557S),
WESTERN GIRL (L.574), COMET (L.624), RICHLAND FR. (L.702S),
RANDOLPH (L.731), SHAMROCK (L.770), GOLD BUG (L.934),
WESTERN HILL (L.1085), FLORA (L.1086), VIRGINIA (L.1087),
ORO BASTANTE (L.2055)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:
LATITUDE: 49 12 12 N
LONGITUDE: 119 38 15 W
ELEVATION: 0950 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location of the Level 6 portal on the former Oro Bastante Crown
grant (Lot 2055) (Assessment Report 16723). See also Morning Star
(082ESW006) and Stemwinder (082ESW007).

Underground
MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5453408
EASTING: 307883

COMMODITIES: Gold Silver Lead Copper Zinc
Silica

MINERALS

SIGNIFICANT: Gold Pyrite Galena Sphalerite Chalcopyrite
Quartz
ASSOCIATED: Quartz Pyrrhotite
COMMENTS: Pyrrhotite is rare.
ALTERATION: Graphite Sericite Chlorite Biotite
COMMENTS: Fracture-filling alteration minerals associated with mineralization.
ALTERATION TYPE: Sericitic Chloritic Biotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant
CLASSIFICATION: Mesothermal Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au
I07 Silica veins
SHAPE: Irregular
MODIFIER: Folded Fractured
DIMENSION: 82 x 2 Metres STRIKE/DIP: 290/45 TREND/PLUNGE:
COMMENTS: The veins strike 290 to 315 degrees and dip 45 to 55 degrees. An ore
shoot on the No. 6 level is 82 metres long by 2 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Jurassic-Cretaceous			Fairview Intrusion
Jurassic			Oliver Plutonic Complex

ISOTOPIC AGE: 111 +/-5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite
ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Micaceous Quartzite
Chloritic Mica Schist
Granodiorite
Granite
Felsic Dike
Intermediate Dike
Basalt Dike

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.
Refer to Fieldwork 1988, pages 19-25 for age dates.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: FAIRVIEW

REPORT ON: Y

CATEGORY:	Combined	YEAR:	1988
QUANTITY:	762000 Tonnes		
COMMODITY		GRADE	
Silver		41.1400	Grams per tonne
Gold		3.7700	Grams per tonne

COMMENTS: Undiluted combined ore reserves estimated by Cominco Ltd. consisting of 38 per cent measured, 11 per cent indicated and 50 per cent inferred.

REFERENCE: Property File - Valhalla Gold Corp. (1988): Prospectus.

CAPSULE GEOLOGY

The former Fairview mine is located 1.5 kilometres west of Burnell Lake and 6.5 kilometres west-northwest of Oliver, British Columbia. The claims (most former Crown grants) comprising the Fairview mine have changed considerably over time but have included the Buller (Lot 554s), Roberts (Lot 555s), Fairview (Lot 556s), Haligonian (Lot 557s), Western Girl (Lot 574), Comet (Lot 624), Richland Fr. (Lot 702s), Randolph (Lot 731), Shamrock (Lot 770), Gold Bug (Lot 934), Western Hill (Lot 1085), Flora (Lot 1086), Virginia (Lot 1087), Oro Basante (Lot 2055), May Queen (Lot 6895), Dalton Fr., Gold Dust Fr., Homestake Fr., Stenwinder Fr. No. 1, Stenwinder Fr. No. 2, Stenwinder Fr. No. 3, Baden Powell, Ness, John Fr., Wynn Fr., Dominion, Ada, Texas Fr. and Black Hawk.

Regionally, the area is underlain by a northwest trending, narrow elongate belt of complexly deformed, regionally metamorphosed Carboniferous to Permian Kobau Group metasedimentary and metavolcanic rocks which separate two large intrusive bodies; the Jurassic Oliver Plutonic Complex granite to the northeast and the Jurassic to Cretaceous Fairview intrusion granodiorite to the southwest. Both plutons cut the lithologies and structures of the Kobau Group. The Kobau Group rocks comprise banded and foliated quartzitic lithologies with minor mafic schists, and thick, compositionally layered mafic schist units with intercalated quartzite bands. Minor meta-carbonates and mafic metavolcanic flows or sills occur within the quartzites and schists which have undergone at least three phases of folding and later brittle faulting. The metasedimentary-volcanic package is cut by aplite dikes, small granitic, dioritic and mafic stocks, and Tertiary northeast trending mafic dikes. Dacite dikes occur in swarms and are parallel to the regional compositional layering within the Kobau Group rocks east of the Fairview intrusion. Auriferous quartz veins occur in all lithologies but are thickest and most continuous where they occur in the quartzites. Some significant veining also occurs in the intrusive bodies. Tertiary faults crosscut all lithologies including the quartz veins.

The Fairview mine area is underlain by a northwest trending sequence of brownish and greenish grey, impure micaceous quartzite layers separated by biotite-rich layers, overlain by a mafic unit consisting of chloritic quartz-feldspar-mica schists with minor interbedded quartzose layers. A series of intermediate to felsic dikes parallel to foliation occur throughout the lower quartzite unit. Late, non-foliated Tertiary basalt-andesite dikes cut all units. The stratigraphy is tightly squeezed and strongly foliated at 100 to 130 degrees between the Oliver Plutonic Complex granite to the north and the Fairview intrusion granodiorite to the south. Dips are to the northeast at 50 to 65 degrees. Small scale isoclinal folding can be seen in the sedimentary and volcanic units as well as the quartz veins. Regional foliation (S1) which trends 130 degrees, parallels both the quartz veins and the sericite-biotite-graphite-sulphide-filled fractures commonly found within the veins. These vein fractures may represent axial planar cleavage related to the small scale isoclinal folding and regional foliation developed during emplacement of the Fairview granodiorite. A later fracture cleavage (S2), trends 000 degrees to 020 degrees and dips 50 to 70 degrees west. It is especially evident in quartz veins and is possibly related to late faulting.

Faulting of at least two separate ages is common throughout the mine area. The oldest faults parallel the regional foliation and are best developed in the area of quartz veining where they are located on both the top and bottom of the quartz veins. They are commonly graphitic, usually filled with clay and/or sand gouge and often have associated caving. Slickensides on fault planes within the quartz veins typically have a southeast plunge at 30 to 40 degrees. Direction of movement has not been determined. A large number of younger faults, possibly Tertiary in age, are common throughout the mine workings. Many of the larger faults are left-lateral reverse faults that offset the quartz veins approximately 18 metres horizontally. The vertical component of movement is unknown. The faults, like the quartz veins, have a considerable roll, often

CAPSULE GEOLOGY

flattening substantially over short distances. Normal faults which seem to be about the same age or slightly younger than the reverse faults occur throughout the mine and may reflect a 'relaxing' of compressional forces.

Mineralization is confined to a quartz vein system which is generally conformable to penetrative fabrics developed in the Kobau Group hostrocks and display a variety of early ductile and later brittle deformation features. The vein system has been traced over 4 kilometres from the Morning Star mine (082ESW006) in the southeast through the Stemwinder mine (082ESW007) to the Fairview. The veining consists of two dominant veins often with a third or fourth present. They occur in the lower quartzite sequence, usually within 60 metres of the Fairview granodiorite contact. Individual veins reach up to 15 metres thick and pinch and swell both along strike and down-dip.

Fluid inclusion and stable isotope studies at the Fairview occurrence indicate mesothermal fluids were responsible for mineralization events. The fluids are characterized by a high carbon dioxide content, temperatures of 280 to 330 degrees Celsius, salinities of 4 to 6 weight per cent NaCl and oxygen del 18 values of 4 to 6 per mil (relative to standard mean ocean water). The mineralization occurred at depths of 3 to 4 kilometres.

Three veins occur on the Fairview property and are reported as the North, Main and South veins. The veins strike 290 to 315 degrees and appear to be closer together in the southeast.

The South vein outcrops in the southeast corner of the Comet, extending across the Flora and Western Hill claims and is believed to persist across the Virginia, Buller and Fairview claims. The vein has been developed by approximately 496 metres of underground and surface development.

The Main vein enters the Comet claim from the neighbouring Stemwinder property (082ESW007) and extends 60 metres or more into the northeast corner of the Comet claim and further to the northwest into the Western Girl and Wynn Fr. claims.

The north vein traverses the Brown Bear, Stemwinder, Tenas Fr. Wynn M. claims (082ESW007), Wynn Fr. and Oro Basante claims.

On Level 6, in the Fairview mine, two quartz veins are exposed; the Hangingwall vein (HW vein and/or North vein) averages 2.5 metres and the Main vein (MV) averages 2.0 metres. The veins are roughly parallel, strike northwest and dip 45 to 55 degrees to the northeast and are separated by 10 to 15 metres of foliated quartzite. Several high-grade shoots occur within these veins. Gold and silver values occur in portions of the vein that contain up to 2 per cent which include pyrite, sphalerite, galena and chalcopyrite. Strong fracturing parallel to foliation with graphite, sericite, chlorite and biotite fracture-fillings accompanies the mineralized zones. Faulting parallel to the quartz vein zone may account for the rapid thickening and thinning of the veins. Within the sulphide enriched area, ore shoots up to 82 metres long and 1.8 metres wide have been identified.

Gold and silver values are closely associated with the presence of galena with or without chalcopyrite, sphalerite or pyrite. Sulphide mineralization appears to be of two ages and three styles. Galena, chalcopyrite, sphalerite and rare pyrrhotite are fracture-controlled with most occurring along S1 fractures in quartz veins. A very small percentage also occurs along S2 fractures. In places, massive pyrite or galena forms irregular clots up to 20 centimetres across. For the most part, the best galena-chalcopyrite-sphalerite mineralization and highest gold and silver values occur in the hangingwall parts of the veins, although significant values have been obtained throughout the vein. Gold values are higher where the vein has well developed S1 fractures lined with sericite-biotite-chlorite-graphite and sulphides.

Preliminary lead isotope studies indicate the mineralization is associated with quartz veins is younger than or as young as the Oliver pluton (circa 155 Ma) (Fieldwork, 1988, pages 19-25). The following mineralizing sequence has been proposed: emplacement of the Oliver Plutonic Complex in Late Jurassic producing local penetrative fabric and a contact metamorphic aureole, emplacement of the Fairview pluton in Cretaceous resulting in the tight folding of Kobau Group stratigraphy producing a well developed foliation and small-scale isoclinal folding, shearing along the upper contact of the Fairview pluton, continued movement along shears and mobilization of metals along late vein-parallel fractures, and Tertiary faults cutting and offsetting mineralized quartz veins.

Past and present work consists of extensive underground development which commenced in 1888 by the Dominion Consolidated Mines Co. Ltd. By 1900, the workings included a 366-metre adit and 30 metres of shafts and drifts. Mill tests on ore were carried out at the Stemwinder mill (082ESW007) in 1903. The property was

CAPSULE GEOLOGY

acquired by Fairview Amalgamated Gold Mines, Ltd. in 1933. The Flora lower adit and No. 1 adit were developed by over 305 metres of drifts, crosscuts and raises between 1933 and 1935. In 1936, the Fairview and Morning Star properties were amalgamated and ore was milled at a new mill on the Morning Star property (082ESW006). All work ceased in September 1939.

Kelowna Exploration Co. Ltd. held an option on the property in 1944 and carried out an assessment of the property. In 1946, the Consolidated Mining and Smelting Co. of Canada Ltd. purchased the property and resumed mining of the quartz veins as a source of flux for the Trail smelter. Mining from the No. 6 Level was continuous until 1961. The majority of mine workings were developed on the Comet, Western Girl, Flora, Western Hill, Oro Basante, Virginia and Fairview claims. In 1986, Oliver Gold Corp. optioned the Fairview and Morning Star (082ESW006) properties from Cominco Ltd. In the following year, an extensive exploration program was concentrated on the workings of the former Fairview mine. The Nos. 3, 5 and 6 levels were re-opened and underground diamond drilling, sampling and geological mapping were carried out. A preliminary feasibility assessment was made and metallurgical testing was initiated.

Past production data for the former Fairview mines is incomplete. It is reported that 440,109 tonnes of ore were mined between 1892 and 1961 from the Western Girl (Lot 574), Western Hill (Lot 1085), Flora (Lot 1086), Virginia (Lot 1087) and Oro Basante (Lot 2055) claims with an average grade of 3.84 grams per tonne gold and 48.00 grams per tonne silver (Valhalla Gold Corporation (1988): Prospectus). These production figures could not be confirmed. Ministry production records indicate production from 1937 to 1939 totalled 88,640 tonnes, resulting in 3,774,816 grams of silver, 285,215 grams of gold, 9087 kilograms of copper and 75,221 kilograms of lead recovered. From 1946 to 1961, when mining ceased, the veins were mined as a source of silica flux for the Trail smelter. A total of about 333,607 tonnes of silica were produced.

An ore reserve estimate by Cominco on the Fairview property was 762,000 tonnes of undiluted combined ore reserves (measured (38 per cent), indicated (11 per cent), and inferred (50 per cent)), grading 3.77 grams per tonne gold and 41.14 grams per tonne silver (Valhalla Gold Corporation (1988): Prospectus). Several higher grade ore shoots were outlined by Oliver Gold Corp., extending from the No. 3 level downward over 183 metres elevation to the No. 6 level. The two high-grade zones contain a possible 100,000 tonnes of ore with grades better than 10.28 grams per tonne gold 68.57 grams per tonne silver (Valhalla Gold Corporation (1987): Prospectus). Drilling also established the continuity of ore underneath the No. 6 level, ranging from 3.08 to 3.77 grams per tonne gold (Valhalla Gold Corporation (1987): Prospectus). The widest intersection was over a true width of 12 metres.

BIBLIOGRAPHY

- EMPR AR *1897-597-599; 1899-775,848; 1900-882; 1901-1156; 1907-L220; 1921-G179; *1933-A166; *1934-A30,D14; 1935-A31,D12; *1936-D54,D55; 1937-A36,A41,D31; *1938-A34,A39,D34,D35; 1939-A37,A42,A76; 1944-A58; 1946-A132; *1947-A152,A153; 1948-A124,A125; 1949-A41,A138; 1950-A115; 1951-A42,A132; 1952-A41,A138; 1953-A44,A108; 1954-A118; 1955-A47,44; 1956-A49,74; 1957-A45,34; 1958-A45,32,33; 1959-A47,56; 1960-A53,61; 1961-A48,62
MEPR INDEX 3-206; 4-121
EMPR ASS RPT 10205, *16723, 16779, 21501, 23404
EMPR BC METAL MM00349; (Flux production fiche)
EMPR BULL 1 (1932), pp. 87,88
EMPR EXPL 1982-30; *1987-B7-B15
EMPR FIELDWORK 1981, p. 9; *1988, pp. 19-25;
EMPR MAP 65 (1989)
EMPR MR MAP 7 (1934)
EMPR OF 1987-15; *1989-2; 1989-5; 1992-1; 1998-10
EMPR PF (*McDougall, B.W.W. (1933): A Report on the Mining Property of Fairview Amalgamated Gold Mines Ltd.; Underground assay plan map (1934); *Oliver Gold Corporation (1987): Annual Report; Valhalla Energy Corporation (1987): Annual Report; *The Valhalla Gold Group Corporation (Aug.15,1988): Prospectus; *The Valhalla Gold Group Brochure; Yuriko Resources Corp. (May 20,1988): Prospectus)
EMR MIN BULL MR 223 (1989) B.C. 11
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; *179, pp. 1-9
GSC OF 481; 637; 1505A; 1565; 1969; 2167, pp. 49-50
GSC P 37-21
GCNL #124, 1981; #236, 1988; #97(May 18),#138(Jul.18), 1990;

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 830
REPORT: RGEN0100

BIBLIOGRAPHY

#6 (Jan. 9), #49 (Mar. 11), 1991

DATE CODED: 1985/07/24
DATE REVISED: 1997/07/24

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW009**

NATIONAL MINERAL INVENTORY: 082E5 Mn2

NAME(S): **MO RHODONITE** OROFINO CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E05E
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 15 48 N
LONGITUDE: 119 37 04 W
ELEVATION: 0633 Metres

NORTHING: 5460028
EASTING: 309550

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of workings 30 metres above an old road along the north bank of Orofino Creek, 9 kilometres south-southwest of Okanagan Falls, British Columbia (Geological Survey of Canada Paper 72-53, page 57).

COMMODITIES: Rhodonite Gemstones

MINERALS

SIGNIFICANT: Rhodonite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Metamorphic Industrial Min.
TYPE: Q02 Rhodonite F01 Sedimentary Mn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Paleozoic-Mesozoic	Undefined Group	Old Tom	

LITHOLOGY: Chert
Tuff
Greenstone
Limestone
Diorite

HOSTROCK COMMENTS: The Shoemaker and Old Tom formations are of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Mo rhodonite occurrence is located 5 kilometres east-northeast of the peak of Orofino Mountain, 18 kilometres northeast of Keremeos, British Columbia and 10 kilometres southeast of Twin Lakes.

The Mo Rhodonite occurrence is located within the Intermontane Belt near its eastern boundary with the Omineca Belt. The Mo occurrence is underlain primarily by a west to northwest striking and 70 to 80 degree southwest dipping sequence of chert and greenstone of the Carboniferous to Triassic Old Tom and Shoemaker formations. The Old Tom rocks include basaltic and andesitic (greenstone) flows dipping steeply to the north, and minor related diorite. The Shoemaker Formation consists of chert, with small amounts of tuff, greenstone, and limestone. To the south and west, these rocks are intruded by Middle Jurassic to Cretaceous gabbroic to granitic rocks of the Nelson and Oliver plutonic complexes and the Fairview pluton. To the north, Eocene Marron Formation basalts are faulted against the older rocks by the easterly trending McCaig Creek fault.

Rhodonite occurs in cherts of the Shoemaker Formation at the Mo occurrence. The rhodonite has been explored by old workings of unknown age. Further to the west at the Orofino Mountain occurrence (082ESW113), rhodonite occurs with quartz as irregular replacement zones in the Shoemaker Formation. The largest lens is 75 metres long by up to 1 metre wide.

BIBLIOGRAPHY

EMPR OF 1989-5
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 832
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 37-21; 72-53, p. 58
GCNL #18, 1985
Canadian Rockhound Feb., 1966, page 9

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW010**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRANDORO**, ORO FINO (L.1448), INDEPENDENCE (L.1449),
OROFINO, GRANDORO (L.3109S), KING,
JOHN, B.E.

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E05E
BC MAP:
LATITUDE: 49 15 44 N
LONGITUDE: 119 40 53 W
ELEVATION: 1490 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of the Upper Independence adit (Assessment Report 9933). See also Twin Lakes (082ESW011) and Orofino Mountain (082ESW113).

Underground
MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5460066
EASTING: 304919

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Gold Galena Sphalerite
ASSOCIATED: Quartz
ALTERATION: Chlorite
ALTERATION TYPE: Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Mesothermal Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 2 Metres STRIKE/DIP: 105/50W TREND/PLUNGE:
COMMENTS: Veins at the Grandoro occurrence vary from 0.3 to 2.0 metres width.
In the Orofino adit the vein strikes 105 degrees and dips 50 degrees southwest.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic Undefined Group Shoemaker
Middle Jurassic Nelson Intrusions
Jurassic Oliver Plutonic Complex
ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Hornblende Gabbro
Biotite Hornblende Diorite
Biotite Schist
Granite
Granodiorite
Quartzite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.
The Shoemaker Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Unknown
COMMODITY GRADE
Gold 3.8400 Grams per tonne
COMMENTS: Sample 15631, from the Upper Independence adit.
REFERENCE: Property File - Brightwork Resources Inc. (1988): Prospectus.

CAPSULE GEOLOGY

The Grandoro occurrence is located 1.5 kilometres north of the peak of Orofino Mountain, 13 kilometres northeast of Keremeos, British Columbia. It is one of three main occurrences forming the

CAPSULE GEOLOGY

historic Orofino Mountain gold camp.

Orofino Mountain gold camp activity began shortly after the Fairview camp was discovered in the 1880s. Prospecting began in the area in the 1890s. In 1896, Watkin and Winkler trenched and excavated a 3.6-metre shaft on the Oro Fino claim. By 1898, Oro Fino Mines Ltd. had acquired the Oro Fino (Lot 1448) and Independence (Lot 1449) claims and carried out more than 122 metres of development work. A 3-stamp mill was erected and a small amount of ore was tested. The claims were Crown granted in 1900. Oro Fino Mining Co. Ltd. was formed in 1930 and the property was optioned to Somerville and associates. Opencuts and a new adit on the Independence claim intersected some high-grade ore. Grandoro Mining and Milling Co. Ltd. acquired the property in 1931. The new adit was extended and a winze sunk 73 metres. A lower adit was driven 91 metres. A small amount of ore was tested at the neighbouring Twin Lakes property (082ESW011). Grandoro Mines Ltd. acquired the property in 1934 and a winze was sunk 45.7 metres on the Oro Fino claim. A 76.2-metre west drift and a 61.0-metre east drift were driven. Ore was mined in 1934 and tested at the Twin Lakes mill in 1935. Gold Standard Fairview Mining Co. Ltd. leased the property in 1936, with additional ore milled. The property was leased again from 1938 to 1941 with ore shipped in the latter two years. Drifting intersected ore in 1941 and 15-metre section of ore was stoped. The claims, owned by M. Hatfield, and the surrounding Orofino Mountain property, owned by G. Crooker, were optioned by Brightwork Resources Inc. in 1988.

The Grandoro property is located within the Intermontane Belt near its eastern boundary with the Omineca Belt. The property is underlain by complexly deformed metamorphic rocks of the Carboniferous to Permian Kobau Group, and west and northwest trending sequences of quartzite, chert and greenstone belonging to the Carboniferous to Triassic Shoemaker and Old Tom formations. These are intruded by gabbroic to granitic rocks of the Middle Jurassic Nelson plutonic complex and Similkameen batholith, Jurassic Oliver plutonic complex and Jurassic to Cretaceous Fairview intrusion. Eocene vesicular basalts of the Marron Formation, Penticton Group are block-faulted against older rocks on the north and west sides of the property.

On the northwestern slopes of Orofino Mountain, the oldest rocks are quartzite of the Kobau Group. Light grey, massive to thinly bedded quartzites of the Shoemaker Formation form two relatively narrow bands which strike west and northwest, and dip mainly to the southwest at 70 to 80 degrees. These rocks are adjacent to altered dioritic rocks, varying from massive coarse-grained hornblende gabbros and biotite diorite, to fine-grained biotite schist. Near the quartzite-diorite contact, mineralized quartz veins strike north to northeast and dip moderately to steeply to the southeast or steeply to the west.

The best mineralized veins in the Orofino Mountain gold camp appear to strike north to northeast and dip 45 degrees southeast to near vertical. Trenching and drilling in 1987 have revealed a complex fault pattern which displaces veins left laterally by steep northeast faults or shallow faults. The intersection of these faults with veins appears to structurally control gold values.

Fluid inclusion and stable isotope studies at the Grandoro occurrence indicate mesothermal fluids were responsible for mineralization events. The fluids are characterized by a high carbon dioxide content, temperatures of 280 to 330 degrees Celsius, salinities of 4 to 6 weight per cent NaCl and oxygen del 18 values of 4 to 6 per mil (relative to standard mean ocean water). The mineralization occurred at depths of 3 to 4 kilometres.

In the 1930s, two underground workings, the Orofino adit and the Lower and Upper Independence adits, were developed. They exposed two northeasterly trending quartz veins within chloritized hornblende-rich gabbro and diorite, and fine-grained biotite schist. In the Upper Independence adit, one vein strikes 160 degrees and dips 45 degrees southwest and the other strikes 208 degrees and dips 30 degrees northwest. A shear at the south end of the adit strikes 030 degrees and dips 60 degrees southeast. In the Orofino inclined adit the quartz vein strikes 105 degrees and dips 50 degrees southwest. The vein width is variable, from 30 to 50 centimetres where exposed in the adit, but appears to pinch out in either direction. Veins are reportedly highly fractured and lenticular, varying in width from 30 centimetres to 2.0 metres. Mineralization consists of pyrite, lesser amounts of galena, and occasional rich pockets of free gold.

In 1988, six trenches were excavated near the Upper Independence adit to trace the vein along strike. Quartz veins were observed in trenches 1 and 16. The vein in Trench 16 was shear hosted and was oriented different than other veins. Samples from Trench 1 yielded the best results. Sample 16701 yielded 1.78 grams per tonne gold

CAPSULE GEOLOGY

from a 1.0-metre channel sample of barren quartz. Sample 16702 yielded 71.86 grams per tonne gold (Property File - Brightwork Resources Inc. (1988): Prospectus). This sample, a 0.7-metre chip sample, was taken from the same location as sample K-31 in 1981 which yielded 37.71 grams per tonne gold (Property File - Brightwork Resources Inc. (1988): Prospectus). The remaining samples yielded up to 0.24 gram per tonne gold (Property File - Brightwork Resources Inc. (1988): Prospectus). Three trenches were excavated on a small quartz vein near the Orofino adit. Gold values obtained from trench samples ranged up to 0.03 gram per tonne (Property File - Brightwork Resources Inc. (1988): Prospectus). Samples from several other trenches on the property yielded values ranging from 1.06 grams per tonne gold (Property File - Brightwork Resources Inc. (1988): Prospectus).

Five samples were taken from the portal of the Lower Independence adit in 1988. The best results were from sample 16895, which yielded 1.10 grams per tonne gold (Property File - Brightwork Resources Inc. (1988): Prospectus). The sample was taken across a 10-centimetre barren quartz vein, striking 124 degrees and dipping 10 degrees southwest. The vein is intersected by a shear striking 035 degrees and dipping 10 degrees southeast. A total of 8 samples were taken from the Upper Independence adit in 1988. Three of these samples yielded significant gold values. Sample 15630 yielded 0.89 gram per tonne gold, sample 15631 yielded 3.84 grams per tonne gold and sample 15601 yielded 25.23 grams per tonne gold. Eight samples were taken from the Orofino adit in 1988. The highest gold values were from four samples taken from the northwest face of the adit. Sample 15607 yielded 4.35 grams per tonne. Sample 15623 yielded 3.02 grams per tonne; sample 15625, 7.30 grams per tonne and sample 15626, 6.99 grams per tonne (Property File - Brightwork Resources Inc. (1988): Prospectus).

Eight samples were taken from the Grandoro property in 1981. Chip sample K-31 over 0.70 metre yielded 37.71 grams per tonne gold and 3.8 grams per tonne silver (Assessment Report 9933).

Ore mined and shipped to the Trail smelter in 1933 averaged 60.68 grams per tonne gold (Minister of Mines Annual Report 1933, page 168).

Intermittent total recorded production for the Grandoro occurrence between 1899 and 1941 was 12,048 tonnes mined and 10,228 tonne milled. From this, 37,853 grams of silver, 123,698 grams of gold, 79 kilograms of lead and 5 kilograms of zinc were recovered.

BIBLIOGRAPHY

EMPR AR 1896-575; 1898-1116; 1900-992; 1916-260; 1923-186; 1930-218; 1932-138; *1933-168; 1934-A24,A29,D15; 1935-A25,A30,D13; 1936-A34; 1937-A36; 1938-A35; 1939-A37; 1940-A24; 1941-25,60; 1942-A26
EMPR INDEX 3-198,208
EMPR ASS RPT *9933, 11480, 12705, 13576, 15078, 16159
EMPR BC METAL MM00345
EMPR BULL 20, Part III, p. 19
EMPR EXPL 1981-159; 1983-33; 1984-15; 1985-C15; 1986-C24
EMPR GEM 1973-46
EMPR MR MAP 7 (1934)
EMPR PF (see Orofino Mountain (082ESW113) - *Brightwork Resources Inc. (1989): Prospectus)
GSC MAP 341A; 538A; 539A; 541A; *15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
GCNL #44(Mar.2),#106(June 1),#121(June 22),#134(July 12), 1990

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

4 to 6 per mil (relative to standard mean ocean water). The mineralization occurred at depths of 3 to 4 kilometres.

The Summit shaft developed the vein for a length of 80 metres and the veins have a depth of at least 25 metres. Extensions along strike are unknown and down-dip are possibly 35 to 60 metres, based on old records.

The Peak adits are 50 metres higher than the Summit shaft area and 200 metres to the west. In this zone, quartz veins have been exposed intermittently over a strike length of 150 metres and 50 metres width. The veins in the Summit shaft and Peak zones are flat lying.

The Alice adit has exposed a 1.5-metre thick quartz vein dipping 30 to 45 degrees into the slope of the hill along a strike length of 10 metres. At the Alice adit portal, two smaller quartz veins occur in the hangingwall. The footwall is highly altered and oxidized diorite with manganese alteration.

The veins in the 'East' workings strike southwest and dip gently to the north. The vein system has been traced for 200 metres.

In 1933, a sample from the Juniper No. 2 dump, from a long open-cut, yielded 30.17 grams per tonne gold (Minister of Mines Annual Report 1924, page 169). Other samples from the Huntsman claim yielded from trace gold and silver to 109.71 grams per tonne gold and 34.28 grams per tonne silver (Minister of Mines Annual Report 1924, page 169). Two samples taken by B.E. Mining Co. in 1929 from the newly driven crosscut adit, yielded 23.31 grams per tonne gold and 4.11 grams per tonne silver, and 17.14 grams per tonne gold and 3.43 grams per tonne silver, respectively (Minister of Mines Annual Report 1929, page 269). The two samples were chip samples taken across 33 centimetres. Sampling from the 'Eastern' inclined shaft on the Summit claim in 1932 yielded some high-grade gold and silver values. Sample No. 3, the lowest, yielded 2.74 grams per tonne gold and 0.68 gram per tonne silver (Minister of Mines Annual Report 1932, page 137). Sample No. 6, the highest, yielded 143.99 grams per tonne gold and 27.43 grams per tonne silver (Minister of Mines Annual Report 1932, page 137). Sampling from the Twin Lakes crosscut adit in 1933 yielded 171.42 grams per tonne gold across 2.1 metres (Minister of Mines Annual Report 1933, page 169). In 1984, grab sample 14903 from the Summit shaft assayed 12.3 grams per tonne gold and 2.4 grams per tonne silver (Assessment Report 13219). Eighteen samples of various veins were taken in 1987. The results indicate gold values ranging from 0.07 to 394.63 grams per tonne gold and 0.34 to 38.39 grams per tonne silver (Property File - Brenna Resources (1987): Prospectus).

Total recorded production from the Twin Lakes occurrence is 7265 tonnes mined and 9654 tonnes milled intermittently between 1926 and 1942. Recovery included 151,471 grams of silver and 36,608 grams of gold.

BIBLIOGRAPHY

- EMPR AR 1924-169; 1928-260; *1929-269; 1930-218; 1931-134; *1932-25, 136; *1933-169; 1934-A25,A29,D16; 1935-D13; 1936-A34,D54; 1937-A37; 1938-A35,D35; 1939-A37; 1940-A24; 1941-A25
EMPR INDEX 3-215-216
EMPR ASS RPT 4604, 8585, *13219
EMPR BC METAL MM0366
EMPR BULL 20, Part III, p. 19
EMPR EXPL 1980-32; 1984-19
EMPR OF 1989-2; 1989-5
EMPR PF (*Brenna Resources Ltd. (1987): Prospectus;
Sookochoff, L. (1973): Geological Report on the Twin Lakes Property)
GSC MAP 341A; 538A; 539A; 541A; *15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
GCNL #232(Dec.4), 1989

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW012**

NATIONAL MINERAL INVENTORY:

NAME(S): **DOLPHIN (L.978S)**, SPAR FRACTION, BLUEBIRD

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04W 082E05W
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 14 54 N
LONGITUDE: 119 48 40 W
ELEVATION: 900 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5458866
EASTING: 295424

LOCATION ACCURACY: Within 1 KM

COMMENTS: The approximate location of the workings of the Dolphin occurrence (Minister of Mines Annual Report 1922, page 162).

COMMODITIES: Copper Silver Gold Lead Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Galena Molybdenite
ASSOCIATED: Quartz Calcite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic Undefined Group Shoemaker

LITHOLOGY: Chert
Tuff
Argillite
Gossan

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Dolphin occurrence is located at about 900 metres elevation, east of Highway 3A and 5 kilometres north of Keremeos, British Columbia.

Work began on the Dolphin occurrence as early as 1903, when it was reported that a large gold-copper orebody was discovered. In 1904, opencuts and tunnel development were initiated through a thick gossan cap. By 1906, workings consisted of 4 tunnels and 7 opencuts and pits, totalling 123 metres. Development work was continued in 1907. The showing was held by three claims in 1908; the Dolphin, Spar Fraction and Bluebird and a total of 427 metres of development work was completed. In 1916, the first shipment of copper and silver ore was made from the Dolphin occurrence by C.W. Jordan. Additional shipments were made in 1917 and 1918.

The Dolphin showing is hosted within a faulted package of Carboniferous to Triassic Shoemaker and Old Tom formations and younger volcanic and sedimentary strata of the Eocene Penticton Group. To the immediate east of the showing is polymictic conglomerate of the Springbrook Formation overlain by pyroxene-rich mafic phonolite lava of the Yellow Lake Member of the Marron Formation.

This showing is underlain by chert, and argillite with minor tuff and chert of the Shoemaker Formation and the overlying greenstone, volcanic flows and breccias of the Old Tom Formation.

The Dolphin occurrence is a quartz vein mineralized with pyrite and chalcopyrite carrying silver and gold values. Chalcopyrite and pyrite occur as small segregations in fractures within the quartz vein. The vein is crushed and faulted in underground workings. The vein is capped by a gossan zone. Ore shipments are reported to have averaged 6.2 per cent copper and 51.43 grams per tonne silver (Minister of Mines Annual Report 1922, page 162).

Several caved adits were discovered to the northeast of the

CAPSULE GEOLOGY

Dolphin showing in 1986. Adit E is 3 metres long and is connected to a 9-metre opencut. The workings have exposed a 8 to 12 centimetre wide quartz vein, striking 192 degrees and dipping 52 degrees northeast. The vein contains up to 0.5 per cent pyrite with trace malachite (Assessment Report 14767). The second adit, Adit F, is 31 metres long and follows a shear-hosted quartz vein, striking 110 degrees and dipping steeply north. The vein is 1 to 25 centimetres wide and is composed of quartz, calcite with up to 2 per cent pyrite and traces of galena, chalcopyrite, molybdenite and malachite (Assessment Report 14767). Grab sample JB-R17, from these adits, yielded 0.35 gram per tonne gold and 10.6 grams per tonne silver over 0.25 metre (Assessment Report 14767). Another sample, JB-R16, yielded 0.04 gram per tonne gold, 8.5 grams per tonne silver and 0.14 per cent copper over 0.10 metre (Assessment Report 14767).

Between 1916 and 1918, a total of 145 tonnes was mined from the Dolphin from which 6314 grams of silver and 7225 kilograms of copper were recovered.

BIBLIOGRAPHY

EMPR AR 1903-176; 1904-226; 1906-170; 1907-117; 1908-117; 1910-124;
1911-292; 1916-260,518; 1917-207,215; 1918-211; *1922-162
EMPR INDEX 3-194
EMPR ASS RPT 11241, 12088, 12116, *14767, 17300, 19963, 22256
EMPR BC METAL MM0340
EMPR OF 1989-2; *1989-5
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

elevation. The Nos. 1 and 2 adits are on the Bullion Fraction Crown grant and the No. 3 adit is on the Nelly No. 1 Crown Grant. The most significant gold-bearing skarn mineralization was discovered in the No. 1 adit. The No. 2 adit did not intersect significant mineralization and No. 3 was not driven far enough to intersect the mineralized zone. The West Tunnel is located 200 metres west of the No. 1 adit at about 700 metres elevation. During the period between 1980 and 1990, the area has been explored by G. Crooker. Exploration consisted of prospecting, geological mapping, geochemical sampling and geophysical surveys. Several skarn zones, shear zones, and narrow quartz veins hosting anomalous gold and silver values, were found.

The Bullion showing is located near the ultramafic to alkaline Middle Jurassic Olalla intrusion. This intrusion has intruded a sequence of oceanic sediments and volcanics of the Carboniferous to Triassic Shoemaker Formation and Old Tom Formation. Black to green chert, light grey quartzite and minor limestone lenses comprise the dominant lithologies. The Shoemaker and Old Tom formations form a broadly folded, east-dipping sequence in the area. It consists of five major lithologies: massive and bedded chert, greenstone, chert breccia, argillite and limestone. The Olalla intrusion consists of a magnetite-bearing pyroxenite peripheral zone to a diorite and syenite core. The pyroxenite is composed primarily of augite with lesser magnetite. Biotite alteration occurs within the pyroxenite. The syenite is fine grained, light grey to buff to pink. Coarse grained syenite dikes occur at the contact with the peripheral pyroxenite zone. Metasomatic deposits have formed along the contact of the Olalla intrusion with Shoemaker sediments. Mineralization is related to skarns, shearing and quartz veining. Mineralization consists mainly of auriferous and argentiferous pyrite and pyrrhotite with minor chalcopyrite, malachite, azurite and tetrahedrite.

The Bullion occurrence contains quartz veins, brecciation and skarn mineralization. The most significant gold values are associated with skarn. Skarn mineralization is developed near the contact between diorite and limestone and limy sediments of the Shoemaker Formation. The most significant skarn mineralization occurs near the No. 1 adit, where numerous workings have exposed garnet skarns mineralization with pyrite, pyrrhotite, magnetite and chalcopyrite. Up to 102.86 grams per tonne gold and 23.99 grams per tonne silver are reported over 1.4 metres (Assessment Report 22256). Other significant intersections include two taken by Friday Mines Ltd. in 1962. The first 0.91-metre intersection yielded 30.17 grams per tonne gold and the second 0.99-metre intersection yielded 10.97 grams per tonne gold (Assessment Report 22256). In 1928, an emerald green nickel carbonate, possibly zaratorite, was observed in fractures (Minister of Mines Annual Report 1928, page 261). However, samples yielded less than 1 per cent nickel.

In 1990, exploration around the West tunnel by G. Crooker revealed considerable skarn mineralization near the portal. Weak to moderate silicification also occurs within the skarn but mineralization is sparse. A large opencut about 50 metres south also showed skarn mineralization. Sampling from the West tunnel in 1934 yielded 1.37 grams per tonne gold and 11.66 grams per tonne silver over 1.07 metres of skarn mineralization (Assessment Report 22256).

It was reported that a shipment of copper was made around 1926, but no official records were found (Minister of Mines Annual Report 1928, page 261).

BIBLIOGRAPHY

- EMPR AR 1894-Map; 1897-57; 1899-775; 1900-884; 1901-1074,1156; 1902-184; 1903-175; 1904-225; 1906-170,254; 1908-117; 1928-261; 1962-74
EMPR ASS RPT 11241, 12088, 12116, 14767, 17300, 19963, *22256
EMPR OF 1989-2; 1989-5
EMPR PF (Starr, C.C. (1934): Report on the Geology of the Bullion Group, 21 p.; Principal workings, Bullion Group, 1934; Friday Mines Ltd. (1962): Property working plans and drill sections)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW014**

NATIONAL MINERAL INVENTORY: 082E4 Au1

NAME(S): **SOMETHING GOOD (L.1451)**, GOLD VALLEY, GREAT EASTERN (L.3437),
SILENT FRIEND (L.3439), LISEY D FRACTION (L.3441), AC FRACTIONAL,
CLIFF

STATUS: Prospect
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E04W
BC MAP:
LATITUDE: 49 14 48 N
LONGITUDE: 119 50 04 W
ELEVATION: 0775 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of the No. 1 (Something Good) adit
(Assessment Report 22257). See also Sunrise (082ESW015).

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

NORTHING: 5458744
EASTING: 293720

COMMODITIES: Gold Silver Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
COMMENTS: Chalcopyrite, malachite and azurite noted on the Great Eastern claim.
ASSOCIATED: Calcite Quartz
COMMENTS: Quartz is minor as veinlets.
ALTERATION: Graphite Malachite Azurite
COMMENTS: Graphite occurs in a fault gouge near the face of the No. 1 adit.
A hornfels zone occurs along the contact between pyroxenite and
metasediments of the Old Tom Formation.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia Shear Disseminated
CLASSIFICATION: Magmatic Igneous-contact
TYPE: I06 Cu±Ag quartz veins L01 Subvolcanic Cu-Ag-Au (As-Sb)
DIMENSION: Metres STRIKE/DIP: 235/
COMMENTS: The breccia zone is 1.2 to 4.8 metres wide and strikes 235 to 255
degrees. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Middle Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Pyroxenite
Argillite
Chert
Quartzite
Limestone

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age. Olalla
alkalic complex.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1993
SAMPLE TYPE: Grab
COMMODITY GRADE
Gold 1.7100 Grams per tonne
Copper 0.0700 Per cent
COMMENTS: Grab sample 92C-10 from rusty fault gouge in the breccia zone.
REFERENCE: Assessment Report 22882.

CAPSULE GEOLOGY

attempt to intersect the breccia zone at depth. The hole intersected mainly argillite and quartzite with minor limestone and pyroxenite. No anomalous gold intersections were found.

A hornfels zone was discovered on the south-central portion of the Great Western claim in 1986. The hornfels occurs along the sheared contact between pyroxenite of the Olalla stock and metasediments of the Old Tom Formation. Chalcopyrite, pyrite, malachite and azurite were observed in the hornfelsed zone. Grab sample C-88-4 from this zone yielded 0.01 gram per tonne gold, 12.1 grams per tonne silver, 0.99 per cent copper and 0.11 per cent zinc (Assessment Report 17648).

A sample taken across 0.84 metre of the vein assayed 21.98 grams per tonne gold and 9.00 grams per tonne silver (George Cross News Letter No.84, 1997).

BIBLIOGRAPHY

EMPR AR 1899-776; 1900-992; 1906-255; 1925-449; *1932-138; 1936-D13, D14; 1937-D17-D21; 1939-75; 1945-92; 1946-126-130
EMPR ASS RPT 12116, 15992, *17648, 19611, 22257, *22882
EMPR OF 1989-2; *1989-5
EMPR PF (Gold Valley Mines Ltd. (1937): Plan map of No. 1 (Something Good) Tunnel; *Hedley, M.S. (1937): Summary Report on Gold Valley Mines Ltd.; Goldcliff Resources Corp. (1988): Prospectus)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
Sturdevant, J.A. (1963): Petrography of the Olalla stock, Okanagan Mountains, British Columbia, unpublished M.Sc. Thesis, University of New Mexico
GCNL #55(Mar.19), #84(May 1), 1997

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW015**

NATIONAL MINERAL INVENTORY: 082E5 Au2

NAME(S): **SUNRISE (L.18S)**, NO. 2 FRACTIONAL, CLIFF,
SWEETNER, SHEPERD, POWDER,
HEDLEY MONARCH

STATUS: Past Producer
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:
LATITUDE: 49 15 36 N
LONGITUDE: 119 49 58 W
ELEVATION: 0700 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of the Sunrise adit (Assessment Report 22257). See also Something Good (082ESW014).

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

NORTHING: 5460221
EASTING: 293896

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Gold Chalcopyrite Galena Sphalerite Tetrahedrite
Pyrite
ASSOCIATED: Quartz Calcite
COMMENTS: Calcite is minor.
ALTERATION: Biotite Orthoclase Calcite Quartz
ALTERATION TYPE: Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia Shear Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au 106 Cu±Ag quartz veins
DIMENSION: Metres STRIKE/DIP: 270/80N TREND/PLUNGE: /
COMMENTS: The Sweetner quartz vein is 2.5 to 10 centimetres wide and strikes 270 degrees, dipping 80 to 90 degrees north.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Syenite
Pyroxenite
Andesite Dike
Chert
Quartzite
Argillite

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age. Olalla alkalic complex.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau
Okanagan
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: BRECCIA REPORT ON: Y

CATEGORY: Inferred YEAR: 1961
QUANTITY: 2177 Tonnes
COMMODITY GRADE
Silver 33.9400 Grams per tonne
Gold 85.7100 Grams per tonne

COMMENTS: Based on a drilling program by Friday Mines Ltd. in 1961 on a gold-bearing siliceous breccia zone approximately 150 metres west of the Sheperd Tunnel.

REFERENCE: Assessment Report 19963.

CAPSULE GEOLOGY

tonne silver over 63.5 centimetres (Minister of Mines Annual Report 1946, page 126).

The remaining showing (adits) consisted mainly of barren quartz with calcite and locally sparsely disseminated pyrite and galena.

The Sunrise and Sheperd veins appear to occupy parallel or conjugate fractures. The veins are both younger than the Sweetner vein.

During drilling on the quartz veins in 1961, a gold-bearing siliceous breccia zone was discovered, 167 metres west of the Sheperd Tunnel. Significant intersections from four drillholes on the breccia zone include the following. Drillhole H-5 intersected 11.92 metres yielding 1.92 grams per tonne gold and 4.80 grams per tonne silver. Drillhole H-8 yielded 11.31 grams per tonne gold and 37.03 grams per tonne silver (Assessment Report 19963).

The drilling work has indicated ore reserves of 2177 tonnes grading 33.94 grams per tonne silver and 85.71 grams per tonne gold (Assessment Report 19963).

Production in 1948 was 231 tonnes mined from which 3763 grams of silver, 4261 grams of gold and 209 kilograms of copper were recovered.

BIBLIOGRAPHY

- EMPR AR 1900-885; 1908-251; 1931-136; 1934-D17; 1936-D14; 1937-D17; 1939-75; 1945-92; *1946-126-130; 1947-151; 1948-124; *1961-59-61
EMPR ASS RPT 12116, 15992, *19963, 22257, 22882
EMPR BC METAL MM00352
EMPR INDEX 3-199
EMPR OF 1989-2; *1989-5; 1998-10
EMPR PF (*Hedley, M.S. (1937): Summary Report on Gold Valley Mines Ltd.; General Plan showing Underground and Surface, Hedley Monarch Gold Mines Ltd. (1:3600), 1946; Plan showing Diamond Drilling Program - Sunrise Area, Hedley Monarch Gold Mines (1:240), 1946; Underground Plan of Something Good Workings and Dimaond Drill Holes (1:240), 1946; Contour Map of Sunrise M.C. showing Underground and Surface Workings, (1:1200), 1946; Plan of Underground Drilling on Something Good M.C., Hedley Monarch Gold Mines (1:120), 1946; Sections through D.D.S. 1,2 and 3 (1:240), Hedley Monarch Gold Mines, 1946; Section through Sweetener Vein, Sunrise M.C. (1:240), Hedley Monarch Gold Mines, 1946; Golconda Sketches (1:480), 1946; Ollala Properties Aerial Geologic Plan (1:480), Friday Mines Ltd., 1961)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
GCNL #141, 1973; #96(May 17), 1990; #137(July 19), 1994; #55(Mar.19), 1997
PR REL Goldcliff Resource Corporation, June 14, 2002
WWW <http://www.goldcliff.com/home.htm>
Sturdevant, J.A. (1963): Petrography of the Olalla stock, Okanagan Mountains, British Columbia, unpublished M.Sc. Thesis, University of New Mexico

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW016**

NATIONAL MINERAL INVENTORY: 082E5 Cu1

NAME(S): **GOLCONDA**, COPPER KING, TROUT FR.,
WRIGHT FR., NORTH STAR FR.

STATUS: Past Producer
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 15 45 N
LONGITUDE: 119 50 37 W
ELEVATION: 0760 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5460529
EASTING: 293119

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the No. 1 adit (Assesment Report 22257).
See Copper King (082ESW258) also.

COMMODITIES: Copper Lead Molybdenum Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Galena Pyrite Molybdenite
COMMENTS: Mineralized lenses occur in a gangue of quartz, carbonate and
brecciated wallrock.

ASSOCIATED: Quartz Carbonate

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Breccia Disseminated
CLASSIFICATION: Magmatic Igneous-contact
TYPE: 106 Cu±Ag quartz veins 105 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 11 x 4 Metres STRIKE/DIP: 304/68N TREND/PLUNGE: /
COMMENTS: The shear zone strikes 308 degrees and dips 68 degrees northeast,
overall. The No. 4 lens in the No. 2 adit is 10.7 by 3.6 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Pyroxenite
Schist
Limestone
Tuff
Diorite
Syenite

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age. Olalla
alkalic complex.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau
Okanagan
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: LENS

REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1946
SAMPLE TYPE:	Chip		
COMMODITY	GRADE		
Silver	37.7100	Grams per tonne	
Gold	0.3400	Grams per tonne	
Copper	1.6400	Per cent	
Molybdenum	1.1200	Per cent	

COMMENTS: A chip sample across 1.45 metres from the No. 4 lens, measuring 10.7
by 3.6 metres.

REFERENCE: Minister of Mines Annual Report 1946, page 126.

CAPSULE GEOLOGY

1946 yielded 0.34 gram per tonne gold, 37.71 grams per tonne silver, 1.64 per cent copper and 1.12 per cent molybdenum (Minister of Mines Annual Report 1946, page 126). From the No. 5 lens, a 40.6-centimetre chip sample yielded 0.34 gram per tonne gold, 37.71 grams per tonne silver, 9.20 per cent copper and 1.53 per cent molybdenum (Minister of Mines Annual Report 1946, page 126). Two samples from the No. 2 adit in 1927 yielded trace gold, 34.28 to 68.57 grams per tonne silver, 7.0 to 14.1 per cent copper and 0.4 to 1.0 per cent molybdenum (Minister of Mines Annual Report 1927, page 239).

The No. 1 level, at 776 metres elevation and 57.6 metres to the southeast of the No. 2 adit, consists of 68.5 metres of crosscutting and drifting, of which about 43 metres is along the shear. The mineralization is similar and about the same grade as found in the No. 2 adit (Minister of Mines Annual Report 1946, page 126).

Level No. 5 was developed in 1967 by Mollycot Mines Ltd. The portal is at about 654 metres elevation. A total of 387 metres of underground development was carried out with only a small amount along the shear. A number of stopes, ore passes and manways connect the levels.

Diamond drilling has been conducted during three separate companies at different times. In 1961, Friday Mines Ltd. drilled seven drillholes. Then in 1969, Trent Resources drilled 10 drillholes, totalling 1193 metres. The drill results of these two programs are unknown. In 1978, Brenda Mines Ltd. drilled four holes totalling 892 metres. The continuity of the breccia zone was proven at depth but gold values were reported to be low grade (Assessment Report 22882).

A reserve calculation was made on the Golconda occurrence in 1970. Combined (visible, probable and obtainable) ore reserves of 54,248 tonnes were determined, grading 1.64 per cent copper and 0.97 per cent molybdenum (Assessment Report 22882).

Limited production occurred from this property and a small mill that was operated intermittently. In 1917, 1991 kilograms molybdenite were mined from a small lens and shipped to Ottawa where 204 kilograms molybdenum were recovered. A 1.81-tonne shipment of copper ore was also shipped and reported to yield 19 per cent copper (Minister of Mines Annual Report 1917, page 206). In 1918, a 9-tonne shipment of ore to the Trail smelter yielded 18.6 per cent copper and 58.28 grams per tonne silver (Minister of Mines Annual Report 1918, page 213). In 1960, 1361 tonnes of ore were milled and produced 62 grams gold, 14,307 grams silver, 27,696 kilograms copper, 638 kilograms lead and 2456 kilograms molybdenum (Assessment Report 22882). Total recorded production from the Golconda occurrence was 1421 tonnes mined from which 30,200 grams of silver, 218 grams of gold, 38,068 kilograms of copper, 2660 kilograms of molybdenum and 765 kilograms of lead were recovered.

BIBLIOGRAPHY

- EMPR AR 1899-776; 1900-885; 1902-185; 1904-226; 1910-124; *1917-206;
*1918-213; 1919-169; 1920-157; 1922-162; 1923-186; *1927-239;
1928-260; 1929-269; 1930-218; 1931-136; 1933-161; *1946-126-130;
1957-34; 1959-56; 1960-A53,61; 1961-59-62; 1967-221
EMPR ASS RPT *7039, 12116, 15992, *19963, *22257, 22882
EMPR BC METAL MM00335
EMPR BULL 9-90
EMPR EXPL 1978-E25
EMPR GEM 1969-297,428; 1970-395,481; 1971-385, 1972-40
EMPR INDEX 3-197
EMPR PF (McDougall, B.W.W. (1946): Plan showing No. 2 tunnel and section of the vein; Claim map; Underground geology maps)
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 36-37
CANMET IR No. 592 (Molybdenum), 1925, p. 43; No. 711, 1928, pp. 24-26
N MINER Jan.19, 1961, p. 2; Dec.10, 1970, p. 24
WWW <http://www.infomine.com/>
Sturdevant, J.A. (1963): Petrography of the Olalla stock, Okanagan Mountains, British Columbia, unpublished M.Sc. Thesis, University of New Mexico
War Metals Advisory Committee File 7/7

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW017**

NATIONAL MINERAL INVENTORY: 082E5 Mn1

NAME(S): **DIEF**, DIEF 1-12, OLALLA,
OLALLA MANGANESE, IRON KING, PETE,
JERRY, DONNY GROUP, OL

STATUS: Past Producer
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:
LATITUDE: 49 16 31 N
LONGITUDE: 119 52 31 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location of an adit on the former Dief No. 2 claim (Assessment Report 406).

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

NORTHING: 5462036
EASTING: 290869

COMMODITIES: Manganese Rhodonite Gemstones

MINERALS

SIGNIFICANT: Rhodochrosite Braunite
ASSOCIATED: Jasper
ALTERATION: Hematite Pyrolusite
COMMENTS: Secondary manganese oxides also occur in fractures.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F01 Sedimentary Mn
DIMENSION: 152 x 12 Metres
COMMENTS: A 12-metre wide mineralized zone occurs near the top of a 31-metre wide jasper unit. A conglomerate bed within the jasper unit, hosting manganese mineralization, strikes 320 degrees and dips 47 degrees.

Q02 Rhodonite
STRIKE/DIP: 320/47N

TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Conglomerate
Jasper
Chert
Tuff
Pyroclastic

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age. Olalla alkalic complex.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau

RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Dief occurrence is located at 1200 metres elevation on a western tributary of Olalla Creek, 3.5 kilometres west-northwest of Olalla, British Columbia.

Old trenches and claim posts were observed by Cockfield in 1942, indicating previous exploration activity on the property. In the spring of 1942, D.J. McRae restaked the occurrences as the Pete and Jerry claims. In late 1942, Olalla Manganese Mining Company acquired the property. The ground was restaked again in 1949 as the Iron King and 2 claims by S.J. Fairclough. The old trenches were cleaned out. The occurrence was restaked again in 1950 by T. McQuillan, as the Donny Group. The Olalla 1 to 8 claims were staked over the occurrence by W.W. Gemwinder in 1955. Olalla Mines Ltd. was then incorporated to develop the property. A 60-metre adit was driven and bulk samples were shipped for test purposes. Cominco Ltd. held the property between 1961 and 1962 as the Dief 1 and 2 claims. Property work included geological mapping and 150 metres of diamond drilling in 5 holes. Lacana Mining Corporation held the occurrence in 1986 as the OL 2 and 3 claims and a geochemical soil survey was conducted.

The Dief occurrence is underlain by the Carboniferous to Triassic Shoemaker Formation, northwest of the ultramafic to alkaline Middle Jurassic Olalla intrusion. This intrusion has intruded a

CAPSULE GEOLOGY

sequence of oceanic sediments and volcanics of the Carboniferous to Triassic Shoemaker and Old Tom formations. Black to green chert, light grey quartzite and minor limestone lenses comprise the dominant lithologies. The Shoemaker and Old Tom formations form a broadly folded, east-dipping sequence in the area. The Olalla intrusion consists of a magnetite-bearing pyroxenite peripheral zone to a diorite and syenite core. The pyroxenite is composed primarily of augite with lesser magnetite. Coarse grained syenite dikes occur at the contact with the peripheral pyroxenite zone.

In the vicinity of the Dief occurrence, jasper and thin to massive bedded cherts. Massive acidic to intermediate pyroclastics of the Old Tom Formation, striking northerly and dipping shallowly to the west, outcrop 300 metres to the west. Thin Bedded cherts, argillite and quartzite with fracturing and minor folding occur 457 metres to the east. Folds plunge 10 to 30 degrees towards 015 degrees.

Mineralization is hosted in a 12-metre wide conglomerate bed within a top (east) side of a massive jasper unit. Pebbles within the conglomerate are up to 4 centimetres diameter and are replaced by chert. The bed strikes 320 degrees and dips 47 degrees northeast. The Jasper bed in approximately 31 metres wide and occurs near the top of a massive light grey chert unit. To the east, the jasper bed terminates abruptly against a fault. Thin bedded, dark green tuffs and cherts containing numerous shears, faults and folds occur to the east of the fault. The western edge of the jasper unit is not well defined, but appears to consist of sporadic jasper development within massive chert.

The upper 3 to 12 metres of the jasper unit contains lenses and layers of braunite and/or composite layers of braunite, rhodochrosite up to several tens of centimetres thick. Numerous beds of hematite, 1 to 5 centimetres thick, also occur in jasper. Secondary manganese oxide commonly occurs on fracture surfaces of tuffs and cherts away from the occurrence. Primary manganese mineralization appears to be associated with massive jasper.

The hangingwall of the jasper bed has been explored for over 152 metres along strike on the claims but extends well beyond the claims to the northwest. Primary manganese mineralization is not found southeast of a small adit on the Dief No. 2 claim.

Bulk samples shipped in 1956 for testing totalled 36 tonnes from which 14,515 kilograms of manganese were recovered (National Mineral Inventory 082E5 Mn1).

BIBLIOGRAPHY

- EMPR AR 1949-A132; 1955-42; 1956-73; 1961-59; 1962-63,130
EMPR ASS RPT *406, 413, 14455, 17648, 19611
EMPR PF (Geology report by J.T. Fyles, 1955; Cockfield, W.E. (1942):
Olalla Creek Manganese Deposit; Geology plan maps)
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 64-37, p. 20; 72-53, p. 56
The Canadian Rockhound Feb., 1966, page 9
Manganese in B.C., Sargent, H. (1956): Mexico
W MINER Vol.22, No.6, June 1949, p. 59; Vol.24, No.3, March 1951,
p. 47

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

Annual Report 1899, page 603). The vein was abandoned and then in 1929 dewatered but no further work was reported. In 1933, the property was amalgamated with the Cariboo-Amelia (082ESW020) by Cariboo-McKinney Gold Mines. No further work was reported until 1987. In 1987, Bravo Resources Inc. carried out an exploration program consisting of electromagnetic and magnetometer geophysical surveys and a soil geochemical survey. Numerous pits, trenches and shafts were encountered during their exploration program.

The Camp McKinney area is underlain by a complex interlayered succession of metamorphosed sediments and volcanics of the Carboniferous to Permian Anarchist Group. The group consists mainly of metabasalt and andesite flows and tuffs, greenstone (locally calcareous), minor marble, altered and argillaceous quartzite (locally micaceous), greywacke, limestone and locally micaceous quartzite and calcareous and biotite schist.

Granite and granodiorite of the Middle Jurassic Nelson intrusions have intruded the Anarchist Group to the west and south as small stocks and plugs. Along the contacts of these intrusions the Anarchist rocks have been deformed and hydrothermally altered. Younger dikes of felsic and mafic composition intrude both stratified and granitic rocks and may have been associated with faults related to these granitic intrusions. Intense deformation and hydrothermal alteration comprising silicification and carbonatization is evident in the hostrocks. To the north are Cretaceous granites and granodiorites of the Okanagan batholith. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies of the Anarchist Group to the east.

Complexly folded and faulted metasediments and metavolcanics have a regional northwest strike with moderate to steep northeast dips. Surface mapping has outlined a northwest plunging recumbent synform. The limbs dip moderately to steeply to the northeast. The major regional structural feature in the vicinity of the Fontenoy occurrence is a northeast trending fault zone 5 kilometres to the east. The fault follows Conkle Creek, Conkle Lake and Jolly Creek. Faulting in the Cariboo-Amelia (082ESW020) mine area is postmineral and widespread. Major east dipping, low angle thrust faults in the central portion of the mine have displaced the hangingwall to the northwest by about 122 metres. An east-dipping fault has also moved the hangingwall south by about 91 metres. The complexly faulted and folded rocks are predominantly north.

The primary hostrock of the Fontenoy vein is siliceous argillite of the Anarchist Group, striking northwest and dipping northeast. Several intercalated silicified greenstone beds are locally hosted in argillite. To the east of the occurrence, a major north-trending fault is expressed by a deep gully.

Mineralization is confined to a northwest striking quartz vein dipping 45 to 55 degrees northeast. The 1.5-metre vein is confined to a shear zone within the argillaceous quartzite and greenstone. Minerals within the vein include: sphalerite, galena, massive pyrite, and gold. Dump samples of the wallrock have been reported to contain graphitic slickensides, pyritization and some alteration.

Past production from the Fontenoy occurrence is uncertain and production records could have been combined with production from the Cariboo-Amelia occurrence (082ESW020).

BIBLIOGRAPHY

EM EXPL 1998-65-75
EMPR AR 1894-745, map after 758; 1895-705; 1897-575, 604, 607; 1898-1118; *1899-603, 774, 1903-169; 1929-259; 1933-A156
EMPR ASS RPT 8928, 13768, *16325, 17236, 22643, 23041, 23494, 23833
EMPR BULL 6, p. 21
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
EMPR PF (*Bravo Resources Inc. (1988): Prospectus)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 179, pp. 11-19
GSC OF 481; 637; 1505; 1565; 1969
WWW <http://www.infomine.com/>
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp, pp. 12-22.
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW019**

NATIONAL MINERAL INVENTORY:

NAME(S): **WATERLOO**, WATERLOO FR. (L.2814), WATERLOO CONSOLIDATED FRACTION,
CARAMELIA

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 07 02 N
LONGITUDE: 119 10 26 W
ELEVATION: 1311 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5442763
EASTING: 341375

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of four abandoned shafts on the forfeited
(February 13, 1996) Waterloo Fr. Crown grant (Bulletin 6, Figure 2).
See also Cariboo-Amelia occurrence (082ESW020).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold

COMMENTS: Blue quartz.

ASSOCIATED: Quartz Amphibole

COMMENTS: Host greenstones are composed primarily of shredded amphibole.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic Mesothermal

TYPE: I01 Au-quartz veins

DIMENSION: 1 Metres STRIKE/DIP: 292/85N

TREND/PLUNGE:

COMMENTS: Quartz vein strikes east-southeast and dips 85 degrees north to
vertical. The vein is up to 1.22 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic Middle Jurassic	Anarchist	Undefined Formation	Nelson Intrusions

LITHOLOGY: Greenstone
Quartzite
Greywacke
Limestone
Biotite Schist
Andesitic Flow
Basaltic Flow
Granite
Granodiorite
Basalt

HOSTROCK COMMENTS: The Anarchist Group is of Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Waterloo occurrence is located at 1311 metres elevation on the southeastern slopes of Baldy Mountain, 750 metres east-southeast of the Cariboo-Amelia occurrence (082ESW020). The occurrence is part of the historic Camp McKinney, located 9 kilometres north-northwest of Bridesville, British Columbia.

A five-stamp mill was erected at the Waterloo occurrence in 1899 by the Waterloo Consolidated Mining and Milling Company. The mill operated for only a month in that year and intermittently in the following year. There was renewed interest in the Waterloo occurrence in 1902 but failed to keep the mill operating. The Waterloo shaft was dewatered in 1929 by C.F. Law but no further work was done. A forest fire in 1929 destroyed all abandoned structures in the McKinney camp. The main shaft was 79 metres deep from which there was a substantial amount of drifting. Another shaft 104 metres west of the main shaft is on an offset continuation of the vein. During the early 1960s the occurrence was owned as part of a claim group by McKinney Gold Mines Ltd. but no work was reported.

The Camp McKinney area is underlain by a complex interbanded sequence of Carboniferous to Permian Anarchist Group metamorphosed

CAPSULE GEOLOGY

sediments and volcanics. The group is mainly sedimentary and consists of greenstone, locally calcareous, altered quartzite and argillaceous quartzite, greywacke, limestone and locally micaceous quartzite and calcareous biotite schist. The minor volcanics are described as mainly altered andesitic and basaltic flows.

Granite and granodiorite of the Middle Jurassic Nelson intrusions have intruded the Anarchist Group to the west and south as small stocks and plugs. Along the contacts of these intrusions the Anarchist rocks have been deformed and hydrothermally altered. Younger dikes of felsic and mafic composition intrude both stratified and granitic rocks and may have been associated with faults related to these granitic intrusions.

To the north lie Cretaceous granitic and granodioritic rocks of the Okanagan batholith. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies of the Anarchist Group to the east.

The major regional structural feature in the vicinity of the Cariboo-Amelia occurrence is a northeast trending fault zone 5 kilometres to the east. The fault follows Conkle Creek, Conkle Lake and Jolly Creek.

Faulting in the Cariboo-Amelia mine area is postmineral and widespread. Major east dipping, low angle thrust faults in the central portion of the mine have displaced the hangingwall to the northwest by about 122 metres. An east-dipping fault has also moved the hangingwall south by about 91 metres. The complexly faulted and folded rocks are predominantly northwest striking and steeply to moderately northeast dipping.

Greenstones at the Waterloo occurrence are composed largely of shreddy secondary amphibole, possibly representing metamorphism of impure calcareous sediments. Calcite is absent.

Mineralization is confined to a vein zone striking east-southeast, dipping 85 degrees north and having a width of 1.22 metres. It consists of a number of bluish quartz stringers occurring in sheared greenstone. Free gold is reported from this zone. Stripping and opencutting in greenstone near the shaft exposed 30.5 metres of vein striking east-southeast and dipping 85 degrees north. The vein is 50 to 76 centimetres wide and largely barren.

Past production from the Waterloo occurrence is uncertain and production records could have been combined with production from the Cariboo-Amelia occurrence (082ESW020).

BIBLIOGRAPHY

- EMPR AR 1898-1118; 1899-603; 1900-880; *1902-181; 1903-168; 1929-259;
*1932-130; 1933-A156,A157; 1950-116; 1960-62; 1961-63
EMPR ASS RPT 8928, 13768, 16325, 17236
EMPR BULL *6, pp. 1-15,20-21
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961, 1736A
GSC MEM *179, pp. 17-18
GSC OF 481; 637; 1505A; 1565; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp,
pp. 12-22

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

Underground mining began soon after the discovery of the Cariboo vein in 1887. G. McAuley and Associates formed the Cariboo-Mining and Milling Company and erected the first 10-stamp mill in 1894. By 1898, the Cariboo McKinney Mining and Milling Company Limited was formed to take over the operation and milling capacity was increased by 10 stamps. At the end of 1903, mining ceased as exploration failed to find the eastern extension, beyond a north-striking fault. The workings at this time consisted of 110-metre vertical shaft to the No. 4 level and a winze to the No. 6 level.

The Consolidated Mining and Smelting Company optioned 29 claims of the McKinney camp and limited surface exploration was conducted. In 1934, the Bralco Development and Investment Company optioned the Cariboo-Amelia claim group. An effort was made to discover the western extension of the Cariboo vein with 5 diamond-drill holes. Pioneer Gold Mines of B.C. Ltd. optioned the property in 1939. Underground drilling from the Nos. 4 and 5 levels and surface diamond drilling to the north explored the eastern extension. Results were poor and the option dropped. In the following year, G. Boag and Associated mined pillars and stoped remnants above the tunnel level. In 1941, Highland-Bell Ltd. explored the Wiarton claim, mined ore and developed 61 metres of drifts and crosscuts above the tunnel level. The lease reverted by the end of the year, however. From 1942 to 1946, E. Wanke and Associates dewatered the mine to the No. 2 level and resumed mining.

In 1957, the eastern extension of the Cariboo vein was discovered by surface diamond drilling under option to W.E. McArthur. R. Hunstone and Associates (H. & W. Mining Co. Ltd.) optioned the property in 1958. After dewatering the main shaft, a crosscut was driven 73 metres into the hangingwall of the vein on the No. 5 level. The faulted portion of the vein was intersected and drifted for 18 metres. Under option to McKinney Gold Mines Ltd., a new shaft was completed to 152 metres depth and new Nos. 5 and 6 levels were developed for 229 metres and 305 metres, respectively. By 1962, the No. 6 level was extended 137 metres east but 792 metres of diamond drilling failed to locate additional ore.

From 1983 to 1986 the property was under option to Zuni Energy Corp., who conducted exploration work consisting of geological and geophysical surveys, trenching and rock sampling. In 1987, Ark Energy Ltd. conducted a 600-metre, surface diamond drilling program near the east-section of the mine but failed to intersect the east extension. Three holes drilled on the Wiarton Crown grant intersected the vein at about 24 metres vertical depth. The mine was dewatered in 1987 and sampling was conducted on the east end of the Nos. 5 and 6 levels. Ark Energy Ltd. optioned the property to Gold Power Resources Ltd. and Lemming Resources Ltd. in 1989. Under option, a surface drill program totalling 872 metres and surface trenching was conducted on the Wiarton Crown grant. Two holes intersected the Cariboo vein 70 and 128 metres east of the 1960 shaft. Current exploration (1997) is being conducted by Gold City Resources, with a 100 per cent interest in 1150 hectares covering Camp McKinney and including the Cariboo-Amelia occurrence.

The Camp McKinney area is underlain by interbanded and intergrading Carboniferous to Permian Anarchist Group metamorphosed sediments and volcanics. The group is mainly sedimentary and consists of greenstone, locally calcareous, altered quartzite and argillaceous quartzite, greywacke, limestone and locally micaceous quartzite and calcareous biotite schist. The minor volcanics are described as mainly altered andesitic and basaltic flows.

Granite and granodiorite of the Middle Jurassic Nelson intrusions have intruded the Anarchist Group to the west and south as small stocks and plugs. Along the contacts of these intrusions the Anarchist rocks have been deformed and hydrothermally altered. Younger dikes of felsic and mafic composition intrude both stratified and granitic rocks and may have been associated with faults related to these granitic intrusions.

The major regional structural feature in the vicinity of the Cariboo-Amelia occurrence is a northeast trending fault zone 5 kilometres to the east. The fault follows Conkle Creek, Conkle Lake and Jolly Creek.

Faulting in the Cariboo-Amelia mine area is postmineral and widespread. Major east dipping, low angle thrust faults in the central portion of the mine have displaced the hanging wall to the northwest by about 122 metres. An east-dipping fault has also moved the hangingwall south by about 91 metres. The complexly faulted and folded rocks are predominantly northwest striking and steeply to moderately northeast dipping.

At the Cariboo-Amelia mine, the main quartz vein, commonly referred to as the Cariboo or McKinney vein, is hosted by a complex interlayered succession of metabasalt flows, tuffs and minor marble

CAPSULE GEOLOGY

of the Anarchist Group. The rocks appear to be metamorphosed to upper greenschist or amphibolite facies. Metabasalts are sheared and altered to sericite, carbonate and quartz along vein walls. Plagioclase, amphibole, biotite, chlorite, carbonate, quartz and pyrrhotite comprise metavolcanics. Marble forms a 9-metre thick band striking northwest through the Amelia claim. Other thin marble bands are found within metasediments. Metasedimentary rocks include successions of interbedded quartzite and argillite. Intense deformation and hydrothermal alteration comprising silicification and carbonatization is evident in the hostrocks. Complexly folded and faulted metasediments and metavolcanics have a regional northwest strike with moderate to steep northeast dips. Surface mapping has outlined a northwest plunging recumbent synform. The limbs dip moderately to steeply to the northeast.

The Cariboo/McKinney vein crosscuts all rock types (except the mafic dikes), commonly at a high angle to bedding. The vein is more regular where it crosscuts competent metabasalts and irregular with offshoots where it crosscuts quartzite and other metasediments. The vein itself is offset by numerous faults having a variety of orientations which include low angle thrust faults with displacements of up to 120 metres.

The Cariboo/McKinney vein strikes 090 degrees and dips vertically with local steep south dips. It has been mined over a strike length of 754 metres, and to a depth of 107 metres in the west section of the No. 4 level and 171 metres in the east sections of the Nos. 5 and 6 levels. The total surface trace of the vein is 1630 metres long on the Crown grants, and an additional 780 metres east and west. The vein width is quite variable over short distances along strike and dip. Widths vary from 0.25 up to 3.5 metres.

The Cariboo/McKinney vein is composed of white quartz and pyrite with lesser sphalerite, galena, chalcopryrite and rare tetrahedrite and pyrrhotite. Visible native gold is locally prominent. Higher gold grades occur where the vein hosts narrow massive sulphide bands (up to 3 to 5 per cent) or higher sphalerite and galena concentrations (Assessment Report 20668). Locally the quartz appears bluish and chalcedonic, and contains free gold (Bulletin 6). The vein has been classified as a mesothermal vein based on its: (1) strike length, (2) the character of the quartz and sulphides and (3) its similarity to mesothermal veins of the nearby Fairview Camp (Assessment Report 20668).

The Cariboo-Amelia occurrence has been the most significant mineral deposit and mineral producer from Camp McKinney. It was British Columbia's first dividend paying lode gold mine (Assessment Report 20668) with an average recovered grade of 24.68 grams per tonne gold (Gold City Mining Corp. (1996): Geological/Mineral Deposit Field Trip Report). Over its intermittent 68 year mine life, from 1894 to 1962, the Cariboo-Amelia produced 124,452 tonnes ore of which 112,254 tonnes is reported milled on-site. Recovery included 2,538,101 grams of gold, 1,008,979 grams of silver, 51,393 kilograms of lead and 89,875 kilograms of zinc, with lead and zinc recovered since 1940. The ore (about 10,243 tonnes) from 1960 to 1962, was also used as a siliceous flux in the Trail smelter.

In 1998, Blackfoot Resources Ltd. optioned the property from Consolidated Gold City Mining Corp. and conducted drilling.

BIBLIOGRAPHY

- EM EXPL 1998-65-75
- EMPR AR 1894-754; 1897-605,606; 1898-1116,1117; 1899-773; 1900-879, 880; 1901-1149,1150; 1902-H181; 1903-H168; 1918-K211; 1932-A130, A131; 1939-A76; 1940-A62; 1941-A24; 1943-A63; 1944-A59; 1945-A94; 1946-A132; 1958-33,34; 1959-56,57; 1960-62; 1961-A47,63; 1962-A47, 66,67
- EMPR INDEX 3-191; 4-120
- EMPR ASS RPT 16775, *20668, *22643, 23041, 23494, 23833
- EMPR BC METAL *MM00834
- EMPR BULL *6
- EMPR FIELDWORK 1988, p. 359
- EMPR MAP 41; 65 (1989)
- EMPR MR MAP 7 (1934)
- EMPR OF 1989-5
- EMPR PF (Chisholm, E.O. (1975): Geological Report on the Camp McKinney Property; Newspaper article - The Province, Sat.15, 1958; Pioneer Gold Mines (1939): Mine plan maps of various levels and Longitudinal projection of mine (1"=40'); Lustre Gold Mines Inc. (1975): Prospectus; Schroeter T. (June,1994): Monthly Report; Gold City Mining Corporation (1996): Geological/Mineral Deposit Field Trip Report in 082ESW210)
- EMR MP CORPFILE (McKinney Gold Mines Limited)
- GSC BULL 5, p. 23

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 861
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 538A; 539A; 15-1961, 1736A
GSC MEM 38, pp. 389-393
GSC OF 481; 637; 1505; 1969
GSC P 89-1E, pp. 51-60
GCNL #196(Oct.10), 1990; #18(Jan.27), 1997; #78 (Apr.23), 1998
WWW <http://infomine.com/>
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp,
pp. 12-22
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1997/07/24

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESW021**

NATIONAL MINERAL INVENTORY:

NAME(S): **VICTORIA (L.218)**, OLD ENGLAND (L.658), LEMON (L.760),
SNOWDON (L.583), PEERLESS, CALIFORNIA,
AH-CH, AH 1-15, CH 1-6,
JOLLY CREEK

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 06 39 N
LONGITUDE: 119 08 16 W
ELEVATION: 1036 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5441977
EASTING: 343990

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the Victoria adit (Nesbitt, B.I. (1948):
Report of the Old England Group).

COMMODITIES: Gold Silver Lead Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Chalcopyrite

COMMENTS: Chalcopyrite is present at the Old England vein only.

ASSOCIATED: Quartz Calcite Dolomite Feldspar

COMMENTS: Old England veins are quartz-calcite or quartz-dolomite.

ALTERATION: Talc Carbonate Quartz Mariposite Sericite
Clay

COMMENTS: Talc, carbonate, clay and quartz occur in the footwall gouge of the
Old England main vein.

ALTERATION TYPE: Talc Silicific'n Quartz-Carb. Sericitic Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic Mesothermal
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: Metres STRIKE/DIP: 170/60E TREND/PLUNGE:

COMMENTS: The Victoria vein is 4 to 50 centimetres wide, strikes 170 degrees and
dips 60 degrees east. The Old England shear zone strikes 010 degrees
and dips 72 degrees southeast. The zone is up to 6 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	Okanagan Batholith
Cretaceous-Tertiary			Grand Forks Gneiss
Proterozoic			

LITHOLOGY: Calcareous Greenstone
Foliated Diorite
Argillite
Chert
Limestone
Dacite
Rhyodacite
Talcose Schist
Granite
Granodiorite

HOSTROCK COMMENTS: The Anarchist Group is of Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	16.1100	Grams per tonne
Gold	3.7700	Grams per tonne

COMMENTS: The 1.2-metre drill core interval from 8.2 to 9.4 metres in drillhole
86-1.

REFERENCE: Assessment Report 15256.

CAPSULE GEOLOGY

The Victoria occurrence is located at 1036 metres elevation west of Jolly (Rock) Creek, 3.5 kilometres east of the Cariboo-Amelia (082ESW020) of the historic Camp McKinney. Bridesville, British Columbia lies 8.5 kilometres to the south-southwest.

The Victoria (Lot 218) and Old England (Lot 658) were the two producing Crown-granted claims of the former Old England claim group. The Lemon (Lot 760, 082ESW223) and Snowdon (Lot 583) Crown grants were also part of the former Old England claim group. The initial discovery of gold in the vicinity of the McKinney camp was made on the Victoria occurrence in 1884.

The Victoria occurrence is hosted by a sequence of metavolcanic and metasedimentary rocks of the Carboniferous to Permian Anarchist Group. To the north are granite and granodiorite of the Okanagan batholith. Granite of the Middle Jurassic Nelson intrusions occurs to the southwest. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies to the east.

Recent geological mapping has described the hostrocks of the Victoria occurrence are fine grained foliated diorite, which is difficult to distinguish from mafic volcanics (Assessment Report 19476). The diorite is in fault contact with mafic volcanics, argillite, chert and minor limestone of the Anarchist Group. Immediately to the northeast is Proterozoic Grand Forks gneiss. Both units have been intruded to the northwest by diorite of the Cretaceous to Tertiary Okanagan Batholith.

At the Victoria occurrence, mineralization is confined to a 4 to 50 centimetre quartz vein striking 170 degrees and dipping 60 degrees east. Below the vein is a light green, fine grained diabasic (diorite) rock. Pyrite, sphalerite and auriferous galena occur in this vein. The vein is hosted by a fault zone which cuts gently dipping greenstone. The hostrock is calcareous greenstone which also contains lenses of black argillite. With depth, a sequence of dacite and rhyodacite volcanics, light grey to green in colour, are present. Alteration consists of carbonate and silicification with minor green micas, talc and sericite.

At the adjoining Old England, mineralization is associated with a shear zone 25 metres wide in greenstone. The shear zone strikes 010 degrees and dips 72 degrees to the southeast. It contains three parallel quartz-calcite or quartz-dolomite veins 0.6 to 6 metres wide which strike north and have an easterly dip. The veins, traceable over the entire length of the claim, host galena, sphalerite, pyrite and chalcopyrite. At 22 metres depth, the centre or main vein was composed of 25 to 45 centimetres of talc fault gouge in the hangingwall, followed by 61 to 91 metres of ore. The hangingwall is composed of talc, carbonate, clay and quartz intermixed with sulphides and auriferous galena. The east vein is exposed in outcrop over 15 metres strike length and is exposed to the north on the former neighbouring Homestake claim. Host greenstones are brecciated in both the hangingwall and footwall and contain disseminated pyrite. In 1981, three quartz, pyrite and galena veins were intersected at 39.17, 39.87 and 41.25 metres below the main vein, respectively in drillhole 81-01. The zone of veins occurred 12.87 metres below the expected projection of the main vein while drillhole 81-02 intersected the zone 5 metres above. The west vein is up to 1.2 metres wide and carries galena and other sulphides. Other quartz and feldspar veins 2 to 3 centimetres wide occur throughout the greenstone but are reported unmineralized. Randomly oriented calcite veins less than one millimetre in width associated with pyrite mineralization also occur locally.

On the Victoria, development consists of two tunnels driven along the footwall from which drifts and raises are run. Tunnel No. 1 was 41 metres long. The second tunnel (No. 2) was 213 metres to the north, near the Victoria-Old England claim boundary. The tunnel was driven for about 31 metres. Total underground work is reported to be 360 metres. In 1894, a 33-metre inclined adit had been sunk on the Victoria, from which some very rich ore is said to have been taken. A 544-kilogram and a second 45-kilogram shipment are reported to have been made to Selby Smelting Works of San Francisco (Minister of Mines Annual Report 1894, page 754). A trial shipment of 22.6 tonnes sorted ore in 1897, graded 73.7 grams per tonne gold and 178.2 grams per tonne silver (Minister of Mines Annual Report 1897, page 607).

Development on the Old England consists of a series of opencuts and tunnels. One major incline has been sunk at the footwall to a depth of 21 metres. The incline was sunk to intersect a telluride, gold, silver ore chute hosted in talcose schist.

On the opposite side of the creek and downstream from the adit, a short adit has been driven in on a shear zone for 15 metres. The zone is about 61 centimetres wide, strikes north and dips 70 to 80

CAPSULE GEOLOGY

degrees east. Only narrow quartz stringers and kidney quartz were found along the shear. The zone appears to be parallel with the vein zone of the Old England and Victoria. The hostrock was calcareous greenstone.

The occurrence has received considerable exploration interest since 1979. At that time, the property was owned by A. Hook and C. Heady, later under Conkle Lake Mines Ltd. In 1981, Norwest Resource Consultants conducted an exploration program for Cheshire Exploration, on the Victoria occurrence. The program included four diamond-drill holes. Additional exploration was conducted by Durfeld Geological Management Co., in 1983. Work included underground development on the No. 2 Tunnel, limited surface mapping, trenching and diamond drilling. In 1986, an additional two drillholes were drilled, totalling 62.8 metres. Drillhole 86-1 intersected 1.2 metres of 3.77 grams per tonne gold and 16.11 grams per tonne silver (Assessment Report 15256) from 8.2 to 9.4 metres depth. A geophysical exploration program was conducted in 1988. In 1989 and 1992, diamond drilling was conducted on the Old England and Victoria claims. A total of 14 holes and 1396.5 metres were drilled. In 1989, drillhole JOL-03 in the vicinity of the Victoria adit, yielded 1.8 grams per tonne gold, 5.4 grams per tonne gold, 0.99 per cent zinc and 1.02 per cent lead (Assessment Report 19476). In 1992, a new shear zone hosting quartz veins was drilled on the Old England claim. The best results from drilling on this new shear zone were 1.54 grams per tonne gold over 1.07 metres to 64.28 grams per tonne gold over 15 centimetres (Assessment Report 22323). Intersections were over 6.10 to 15.24 metres depth on mineralized quartz veins.

BIBLIOGRAPHY

- EMPR AR 1894-754; 1895-705; *1896-575,583; 1897-576,604,607;
1898-1118; 1899-603,774; 1926-447; 1930-221; 1933-157; 1938-D27;
1960-62
EMPR ASS RPT 6512, 7636, *9498, 14154, *15256, 16653, 18186, *19476,
*22323
EMPR EXPL 1979-18
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
EMPR PF (*Nesbitt, B.I. (1948): Report of the Old England Group;
Brican Resources Ltd. (1989): News Release; Brican Resources Ltd.
(1988): Statement of Material Facts; Memorandum from J.T. Fyles,
1960)
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC MEM 179, p. 18
GSC OF 481; 637; 1505A; 1565; 1969
GCNL #28(Feb.10), #99(May 22),1992
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp,
pp. 12-22

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/22

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW022**

NATIONAL MINERAL INVENTORY:

NAME(S): **DAYTON**, DAYTON FR. (L.1953), DATUN,
DAYTON CAMP, DAYTON GROUP, GVS,
GEM, SR, RICE GROUP,
HAG 3, ROCK CREEK, ADMIRAL DEWEY (L.1952),
MYRTLE (L.1654), DAISY FR. (L.1881)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:
LATITUDE: 49 05 00 N
LONGITUDE: 119 08 10 W
ELEVATION: 1098 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Approximate location of drillhole DC-9 on the former Dayton Fraction (Lot 1953) Crown grant. See also Homestake (082ESW119).

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5438917
EASTING: 344025

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Gold Pyrite Pyrrhotite Arsenopyrite Chalcopyrite
Galena Sphalerite
ASSOCIATED: Garnet Epidote Ankerite
ALTERATION: Pyrite Silica Ankerite Carbonate Malachite
COMMENTS: Shear zones impregnated with ankeritic carbonate. Pyritization, silicification and propylitization are associated with calcsilicate and skarn horizons.

ALTERATION TYPE: Pyrite Silicific'n Propylitic Carbonate Leaching
Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Vein Shear
CLASSIFICATION: Replacement Hydrothermal Epigenetic
TYPE: K04 Au skarn K01 Skarn
I01 Au-quartz veins I05 Cu skarn
DIMENSION: 100 Metres STRIKE/DIP: 340/ Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Oxidized dike containing sulphides; no dip available. Drilling in 1996 has intersected calcsilicate and skarn mineralization horizons over 100 metres thickness. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Anarchist Undefined Formation Nelson Intrusions
Middle Jurassic

LITHOLOGY: Greenstone
Rhyolite Dike
Skarn
Mafic Volcanic
Dacite
Andesite
Argillite
Diorite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan
METAMORPHIC TYPE: Contact Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization
Syn-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Gold 3.3500 Grams per tonne
COMMENTS: The best assay results from the interval 30 to 40 metres in percussion-drill hole DC-9.
REFERENCE: Assessment Report 22565.

INVENTORY

ORE ZONE: SKARN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1996

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Gold

0.3400

Grams per tonne

COMMENTS: The 98.45-metre interval from 3.96 to 102.41 metres in drillhole 96-1.

REFERENCE: Gold City Mining Corp. et al., (1996): Field Trip Report.

CAPSULE GEOLOGY

The Dayton occurrence is located on the former Dayton Fraction (Lot 1953) Crown grant. The occurrence is on the eastern slopes of Rice Creek, 3.5 kilometres northeast of the confluence of Rice Creek with McKinney Creek. Bridesville, British Columbia lies 5.5 kilometres to the southwest.

Mineral exploration in the area surrounding the Dayton occurrence began near the turn of the century. The Rock Creek Placer (082ESW026) occurrence was first discovered in 1850. Eight tonnes of hand-sorted ore is reported mined from the Dayton occurrence in 1916. Recovery included 93 grams of silver, 684 grams of gold and 68 kilograms of copper (BC METAL MM00843). Development of this property consisted of a 14-metre shaft and a 3-metre crosscut. It is reported that ore was never found in the shaft and the mineralized dike was never intersected. Faulting has most likely offset the dike (Minister of Mines Annual Report 1901, page 1153). Work in the early 1990s was conducted by Crownex Resources. Currently the property is under exploration by Winslow Gold Corp. and Northwind Ventures Ltd.

The oldest rocks in the vicinity of the Dayton occurrence belong to the Carboniferous to Permian Kobau and Anarchist groups. Amphibolite, greenstone, quartzite, chert, chlorite schist and minor marble comprise the Kobau Group and amphibolite, greenstone, quartz chlorite schist, quartz biotite schist and minor serpentinitized peridotite comprise lithologies of the Anarchist Group. Eocene Penticton Group lithologies outcrop to the east while Middle Jurassic Nelson porphyritic granite, granodiorite and monzonite intrusions are found to the immediate north. Smaller plugs, dikes and sills of biotite granodiorite, quartz diorite and granite of Middle Jurassic to Cretaceous age intrude the Anarchist Group rocks. Greenschist regional metamorphism is common in Anarchist Group rocks. Contact metasomatism is also locally observed along the contact between Anarchist Group rocks and Middle Jurassic intrusions.

The Dayton occurrence is situated in greenstone metavolcanic and metasedimentary rocks of the Anarchist Group. To the north are Middle Jurassic and Cretaceous granites and granodiorites. Nelson granites occur to the southwest. Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies of the Anarchist Group to the immediate east. The northeast trending Rock Creek fault zone lies to the north. Minor east trending faulting has also occurred. Tight folds occur in Anarchist Group rocks along major faults. Mylonitic fabrics and lesser breccia are observed adjacent to predominant faults.

Mineralization at the Dayton occurrence consists of: (1) gold-bearing quartz veins hosted in shears associated with a rhyolite dike and (2) gold-copper skarn. The 0.9 to 1.2 metre wide shear zone has a variable strike and dip, and contains considerable amounts of ankerite. Abundant pyrite is disseminated throughout the greenstone in the vicinity. The rhyolite dike strikes north-northwest and is largely composed of oxidized iron sulphides. Mineralization includes pyrite, galena, sphalerite, native gold and chalcopyrite. The dike material is shattered, highly altered and is cut by a fault. The fault strikes southeast and is probably dipping southwest. The total displacement of the fault is unknown. Iron oxide within the dike is reportedly banded, 61 to 91.0 centimetres wide and high in native gold.

Exploration by Crownex Resources in 1990 included 154 rock geochemistry samples and percussion drilling in five holes totalling 231 metres. Several rock samples yielded good gold values. Sample 90CM-509R yielded 4.58 grams per tonne gold from a grab of gouge in argillite (Assessment Report 22565). A second grab of propylitically altered diorite with chalcopyrite, pyrite and copper oxides yielded 1.03 grams per tonne gold. Several reverse circulation-drill holes identified gold skarn and gold-enriched shear zone targets. The best assay results from the percussion-drill holes was from drillhole DC-9. The 10-metre interval from 30 to 40 metres yielded 3.35 grams per tonne gold (Assessment Report 22565). The hole was collared near the old 30-metre deep Dayton Fraction shaft.

Winslow Gold Corp. and Northwind Ventures Ltd. began an exploration program on the property in 1993. Three of four

CAPSULE GEOLOGY

drillholes from their initial drill program intersected significant sulphides over 18 metres thickness at or near the contact between altered intrusions and metasediment-metavolcanics. Drillhole 93-DCP-7 intersected elevated gold over 56.39 metres (Gold City Mining Corp., Phoenix Gold Resources Inc. and Orion International Minerals Corp. (1996): Geological/Mineral Deposit Field Trip Report). Drillhole 93-DC2-8 intersected a structurally controlled garnet-epidote skarn. The best intersection from this drillhole yielded 13.44 grams per tonne gold over the 1.5-metre interval from 36.6 to 38.1 metres (Gold City Mining Corp., Phoenix Gold Resources Inc. and Orion International Minerals Corp., (1996): Geological/Mineral Deposit Field Trip Report).

In 1996, three drillholes were drilled to test strong coincident induced polarization and soil anomalies along fault structures. Over a 100 metres thickness of pyrite, pyrrhotite, arsenopyrite and minor chalcopyrite mineralization was intersected in calcsilicate and skarn horizons in drillholes 96-1 and 96-2. Drillhole 96-3 intersected mineralized feldspar-rich dacite, on surface, and propylitized andesite and mafic volcanics at depth. Drillhole 96-1 yielded 0.34 gram per tonne gold over the 98.45-metre interval from 3.96 to 102.41 metres (Gold City Mining Corp., Phoenix Gold Resources Inc. and Orion International Minerals Corp. (1996): Geological/Mineral Deposit Field Trip Report).

BIBLIOGRAPHY

EMPR AR 1901-1153; 1903-168; 1916-518; 1933-157; 1934-D9; 1938-D33
EMPR ASS RPT 2359, 5408, 5795, 6133, 12368, 13563, 14514, 17176,
*22565, 23355, 23326, 23330, 23355
EMPR BC METAL MM00843
EMPR BULL 9, p. 81
EMPR EXPL 1976-E24
EMPR GEM 1974-51,52; 1975-E17
EMPR INDEX 3-193
EMPR MR MAP 7 (1934)
EMPR PF (*Phoenix Gold Resources, Orion International Minerals Corp.,
(1996): Geological/Mineral Deposit Field Trip Report in 082ESW210)
GSC MAP 37-21; 539A; 51-1961
GSC MEM 179, p. 19
GSC OF 1565; 1505A; 1989-5; 1969
GCNL #34(Feb.16), #49(Mar.8), #59(Mar.22), #60(Mar.25), 1996
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/22

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

Rock Creek Gold Trend Venture, with partners Phoenix Gold Resources Ltd., Orion International Minerals Inc. and Gold City Mining Corp.

The oldest rocks in the vicinity of the War Eagle occurrence belong to the Carboniferous to Permian Kobau and Anarchist groups. Amphibolite, greenstone, quartzite, chert, chlorite schist and minor marble comprise the Kobau Group and amphibolite, greenstone, quartz chlorite schist, quartz biotite schist and minor serpentinitized peridotite comprise lithologies of the Anarchist Group. Eocene Penticton Group lithologies outcrop to the east while Middle Jurassic porphyritic granite, granodiorite and monzonite intrusions are found to the immediate north. Smaller plugs, dikes and sills of biotite granodiorite, quartz diorite and granite of Middle Jurassic to Cretaceous age intrude the Anarchist Group rocks. Greenschist regional metamorphism is common in Anarchist Group rocks. Contact metamorphism is also locally observed along the contact between Anarchist Group rocks and Middle Jurassic intrusions.

The War Eagle occurrence is situated in greenstone metavolcanic and metasedimentary rocks of the Anarchist Group. To the north are Middle Jurassic and Cretaceous granites and granodiorites. Middle Jurassic granites occur to the southwest. Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies of the Anarchist Group to the immediate east. The northeast trending Conkle Lake-Rock Creek fault structure lies to the north. Minor east trending faulting has also occurred. Tight folds occur in Anarchist Group rocks along major faults. Mylonitic fabrics and lesser breccia are observed adjacent to predominant faults.

The War Eagle occurrence occurs on a contact between the greenstone metavolcanic and metasedimentary rocks of the Anarchist Group and granitic and granodioritic rocks. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies to the east and probably on the property (Open File 1989-5).

Surface mineralization is within a shear zone of highly siliceous tuff and includes oxidized pyrrhotite carrying native gold, pyrite and some malachite. The shear zone is likely a splay of the Rock Creek fault zone. The tuff is in contact with granitic and granodioritic rocks. With depth, a considerable amount of chalcopyrite, pyrite and minor pyrrhotite mixed with felsic dike material is reported. These minerals along with the dike are shattered and show evidence of movement. The dike is 61 to 92 centimetres wide. The ore zone is heavily oxidized over 18.5 square metres, strikes 110 degrees and dips 65 degrees east. Chloritic carbonate and intense clay alteration occurs within the area of the shear zone along with minor amounts of native gold. In 1996, a skarn zone was discovered along the contact between Anarchist Group metavolcanics and metasediments and Nelson granite.

In 1996, discovery diamond-drill hole 96-LW-1C intersected 16.76 metres of mineralized skarn, grading 0.93 per cent copper and 37.71 grams per tonne silver (Northern Miner - Feb.26,1996). The strike length of the skarn is projected to extend 500 metres west and 450 metres east of the discovery hole, based on known outcrop geology, previous geophysics and an on-going pulse electromagnetic survey. A 100-metre stepout drillhole to the east intersected another 7.62 metres of sulphide-bearing skarn.

Previous sampling has yielded the following results. A sample taken from the bottom of the 3.6-metre shaft in 1926 yielded 0.68 gram per tonne gold, 151 grams per tonne silver and 4 per cent copper (Minister of Mines Annual Report 1926, page 211). Later in 1984 several other samples yielded good grades. Sample GW-CR-09 yielded 0.052 gram per tonne gold, 63 grams per tonne silver and 2.1 per cent copper (Assessment Report 13563). Sample JD-CR-07 analysed 0.044 gram per tonne gold, 58 grams per tonne silver and 1.52 per cent copper.

BIBLIOGRAPHY

- EMPR AR 1896-576; 1897-604,607; 1898-1118; 1901-1153,1230; 1926-211; 1928-256; 1929-259; 1930-221; 1933-157; 1934-D9
EMPR ASS RPT 5408, 5795, 6133, 12368, 13563, 14514, 17176, *23355
EMPR GEM 1974-51,52; 1975-E17; 1976-E24
EMPR MR MAP 7 (1934)
EMPR PF (Phoenix Gold Resources Ltd. (1995): Prospectus; *Gold City Mining Corp., Phoenix Gold Resources, Orion International Minerals Corp. (1996): Geological/Mineral Deposit Field Trip Report in 082ESW210)
GSC MAP 539A; 15-1961
GSC MEM 179, p. 19
GSC OF 1505A; 1565; 1989-5; 1969
GCNL #19(Jan.19); *#26(Feb.6); #60(Mar.25), 1996

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 870
REPORT: RGEN0100

BIBLIOGRAPHY

N MINER *Feb.26, 1996

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/22

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW024**

NATIONAL MINERAL INVENTORY: 082E3 Cr1

NAME(S): **ANARCHIST CHROME** TU 1, TU 2,
THREE SISTERS 1-8, PACIFIC 1-12, RS 1-8,
AA, CHROME BELL

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:
LATITUDE: 49 01 22 N
LONGITUDE: 119 12 19 W
ELEVATION: 1310 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Approximate centre of Tu 1 claim near old workings (Assessment Report 17924 and Eastwood, P. (1960?): map and airphotos).

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5432331
EASTING: 338780

COMMODITIES: Chromium

MINERALS

SIGNIFICANT: Chromite
ALTERATION: Antigorite Calcite Carbonate
ALTERATION TYPE: Quartz-Carb.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Massive
CLASSIFICATION: Magmatic Industrial Min.
TYPE: M03 Podiform chromite
SHAPE: Irregular
MODIFIER: Folded
DIMENSION: 15 x 5 Metres STRIKE/DIP:
COMMENTS: One large exposed chromitite pod (Whittaker, P.J., 1983). TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Anarchist	Undefined Formation	

LITHOLOGY: Serpentinite
Listwanite
Amphibolite
Limestone
Schist
Chert
Meta Volcanic
Chromitite

HOSTROCK COMMENTS: Carbonate altered ultramafic (listwanite) with residual chromite in Permian to Carboniferous Anarchist Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCHES REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1957
SAMPLE TYPE: Rock
COMMODITY: Chromium GRADE: 26.7000 Per cent
COMMENTS: Typical chromite sample. Chromium to iron ratio = 3.15.
REFERENCE: Minister of Mines Annual Report 1957, page 35.

ORE ZONE: TOTAL REPORT ON: Y
CATEGORY: Unclassified YEAR: 1957
QUANTITY: 99790 Tonnes
COMMODITY: Chromium GRADE: 26.7000 Per cent
COMMENTS: The grade is likely chromium with a Cr:Fe ratio of 3.15.
REFERENCE: Western Canada Mining News, Sept.13, 1957 and CMH 1985-1986, p. 295.

CAPSULE GEOLOGY

The Anarchist Chrome chromite prospect is located 3.6 kilometres

CAPSULE GEOLOGY

southwest of Bridesville and 600 metres north of Highway 3 at Anarchist Summit. A small road leads from the highway to the workings.

In the early 1950s, two chromium occurrences were located and explored in the Bridesville area; the Anarchist Chrome and the Chrome Bell properties. The chromite showings were originally staked in 1956 by the Anarchist Chrome Company Ltd. A total of 74 claims were staked on the south-side of a 1518-metre high peak, 2.5 kilometres west-southwest of Bridesville. Initial work between 1956 and 1958 consisted of some stripping, ground magnetometer surveying and diamond drilling but the results were not published. A few hundred tonnes of ore were sorted for shipment. The AA anomaly was estimated to contain reserves of 99,790 tonnes (Western Canada Mining News, September 13, 1957). The claims were allowed to lapse and the ground was restaked by Pacific Chrome Alloys Ltd. in 1961, at which time more magnetometer surveys and diamond drilling were done. Again the claims were allowed to lapse. Later the area was covered by claims staked in association with exploration of the Old Nick (082ESW055) nickel prospect, but no work was done on the chromite showings. From 1982 to 1984, New Minex Resources Ltd. held the Anarchist Chrome property. The Canadian Mines Handbook 1985-1986, page 295 reports 99,790 tonnes at 26% per cent chromium. In 1985, Rough River Petroleum Corp. optioned the property from L. Simon. Most recently, Tu Tahl Petro Inc. optioned the Tu 1 and Tu 2 claims in 1987 and did a ground magnetometer survey across the showings. No further work has been recorded at the showings.

Hostrocks to the deposit are amphibolites, schists, cherts and metavolcanic rocks of the Permian to Carboniferous Anarchist Group. They have a general strike of 290 to 310 degrees and dip steeply, but many local variations are present. These rocks are intensely folded with vertical to west verging axial planes. The general trend of the fold axes and layering is 350 degrees. Chevron folding has been identified in greenstones north of the chromitite showings (Sutherland-Brown, A., 1957; Whittaker, P., 1983).

The chromite showings are atypical of most chromite deposits. Massive chromite is entirely surrounded by fine grained, grey carbonate material. The chromite is massive and coarsely crystalline. Microscopically, the chromite grains are fractured and shattered but not sheared. The chromite pods are small, angular and very irregularly shaped. Small calcite filled fractures crosscut the massive chromitite. Antigorite forms up to 35 per cent of the chromitite, but is only inside the masses and only chromite is in contact with the grey carbonate. This material has been previously mapped as a 'chromite dike in limestone' (Sutherland-Brown, A., 1957; Whittaker, P., 1983). However, this is inconsistent with known models for chromite genesis. Complete alteration of the surrounding ultramafic rock to carbonate material, akin to listwanite type alteration, could account for the unusual occurrence of the chromite. Chromite once formed is very stable and could form an impenetrable casing to hydrothermal-type fluids around contained dunite? thus allowing antigorite to be formed inside the massive chromite (C. Ash, personal communication, 1990). One large exposed pod is 15 by 5 metres in size.

Sampling of the massive chromitite has yielded an average grade of 26.7 per cent chromium with a Cr:Fe ratio of 3.15 (Sutherland-Brown, A., 1957). Geochemical sampling in the area of the old workings failed to target any significant anomalies of gold, silver or platinum (Assessment Report 17924). A chromite rock sample taken from the pit on the Tu 1 claim in 1988 yielded 0.71 per cent chromium (Assessment Report 17924). Inductively coupled plasma was used to determine the chromium content.

BIBLIOGRAPHY

- EMPR ASS RPT 252, 1243, *17924
- EMPR AR *1957-35; 1961-62
- EMPR OF 1989-5; 1990-27
- EMPR PF (Tu-Tahl Petro Inc. (1988): Vancouver Stock Exchange Filing Statement #126/88; Property description; Geology sketch map; Air photos and claim map)
- GSC P 89-1E
- GSC MAP 84A; 538A; 539A; 37-21; 15-1961; 1738A
- GSC MEM 38, pp. 389-423
- GSC OF 481; 637; 1505A; 1565; 1969
- Canadian Mineralogist (1964): Vol. 8, Part 1, p. 116
- *Whittaker, P. (1983): Chromite in Alpine-Type Peridotites, unpublished Ph.D. Thesis, Carleton University, Ontario, pp. 17-20
- EMR MRI 80/7 (1980) B.C. 9
- EMR MIN BULL MR 198 (1983) B.C. 9; 223 (1989) B.C. 9
- Western Canadian Mining News, Sept.13, 1957

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 873
REPORT: RGEN0100

BIBLIOGRAPHY

CMH 1985-86, p. 295

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW025**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRIDON**, RAY 1-4, DON 1-8,
JOLLY/ROCK CREEK, BELAIR, BELCHROME

MINING DIVISION: Osoyoos

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 00 N
LONGITUDE: 119 13 03 W
ELEVATION: 1830 Metres

NORTHING: 5450203
EASTING: 338408

LOCATION ACCURACY: Within 500M

COMMENTS: Approximate centre of Ray 1-4 claims (Assessment Report 17109).

COMMODITIES: Chromium

MINERALS

SIGNIFICANT: Chromite
ALTERATION: Serpentinite Chlorite Talc
ALTERATION TYPE: Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Disseminated Stratabound
CLASSIFICATION: Magmatic Industrial Min.
TYPE: M03 Podiform chromite
SHAPE: Irregular
MODIFIER: Sheared Folded
DIMENSION: 1000 x 75 Metres STRIKE/DIP: 150/90 TREND/PLUNGE:
COMMENTS: The serpentinite body strikes 150 degrees and dips vertical. On the surface the body measures 1000 by 75 metres and contains 7 identified chromite lenses from 8 to 30 metres long.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic Cretaceous-Tertiary	Anarchist	Undefined Formation	Okanagan Batholith

LITHOLOGY: Serpentinite
Dunite
Meta Quartzite
Hornblende Schist
Limestone
Marble
Plagioclase Porphyritic Granodiorite
Chromitite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCHES
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY: Chromium
GRADE: 19.8400 Per cent
COMMENTS: Average of 7 zones is 29 per cent Cr2O3. Chromite to iron ratio = 1.80.
REFERENCE: Whittaker, P. (1983): Ph.D. Thesis, 22 pages.

CAPSULE GEOLOGY

The Bridon chromite showings are located on a ridge crest at the head of Rock Creek, about 17.5 kilometres north of Bridesville. The showings and trenches follow a northwest-trending ridge at elevations between 1889 and 1981 metres. This ground is presently staked as the Ray 1-4 claims.

The showings were first staked in 1939 as the Don Nos. 1 to 8 claims and a small amount of hand trenching was done at that time. The property was further examined by Stevenson (1941) and the claims were apparently allowed to lapse. In 1957, the Belair Mining Corp.

CAPSULE GEOLOGY

Ltd. restaked the ground as the Bridon Group. The company did extensive amounts of trenching, stripping, mapping, geophysical surveys and diamond drilled several holes totalling 487 metres of core (Assessment Reports 16172, 17109). Seven large chromitite lenses were uncovered but the claims were allowed to lapse. In 1986, Granges Exploration Ltd. optioned the Ray 1-4 claims which presently cover the showings. Again extensive geophysical surveys, geological mapping, sampling and 741 metres of diamond drilling in 16 holes were done. This work increased the number of known chromitite lenses and also tested for platinum, gold and palladium mineralization. Specific results have not been made public but the chromite values were considered good and the precious metals values were not encouraging (Assessment Reports 16172, 17109). In 1989, the claims were owned by A. Dupras and associates. Since 1987, no further work has been recorded.

The chromite is hosted in a long, thin serpentinite body emplaced in metasediments of the Carboniferous to Permian Anarchist Group near granodiorites of the Cretaceous to Tertiary Okanagan batholith. Locally the Anarchist Group rocks consist of hornblende schists, metaquartzites and limestones with zones of marble. Well developed, penetrative vertical foliation trends northwest in the metasediments and parallels the shearing and sharp boundaries of the serpentinite (Assessment Report 16172; Whittaker, 1983). Other similar serpentinite bodies have been mapped in the Greenwood area by J. Fyles. These are described as thrust slices of oceanic crust associated with the Cache Creek Terrane (J. Fyles, personal communication, 1989). Adjacent to the property, around the northern boundary, plagioclase porphyritic granodiorite of the Okanagan batholith truncates the metasediments of the Anarchist Group.

The serpentinite is a narrow body about 1000 metres long and 75 to 100 metres wide at surface. The protolith is dunite, not completely serpentinitized, with only rare grains of olivine preserved. The serpentinite is sheared parallel to the regional northwest subvertical foliation. Chromite mineralization is restricted to the serpentinite and is found as short, disseminated stringers and long, narrow aggregates of crystals. The chromite is fine to medium grained and the lenses pinch and swell along their length. Extensive trenching by Belair Mining Corp. Ltd. in 1957 exposed 7 large lenses of chromite about 1 metre wide and ranging from 8 to 30 metres long. Some of the lenses have been openly folded leading to a structural thickening of chromite in the fold noses and thinning of the arms. An average grade across one lens is 20 per cent Cr₂O₃ (Stevenson, 1941) and higher grades of up to 29 per cent Cr₂O₃, with Cr:Fe ratios of 1.84 have been reported (Minister of Mines Annual Report 1957). A sample of cleaned, high-grade chromite yielded the following results in per cent (Stevenson, 1941):

Cr ₂ O ₃	48.90
Al ₂ O ₃	10.30
CaO	0.40
MgO	11.90
MnO	0.34
TiO ₂	1.36
SiO ₂	1.38
FeO	22.00

Sampling for platinum and palladium has yielded results of 3 to 100 parts per billion. Platinum values were generally a few tens of parts per billion and palladium values were consistently lower (Assessment Report 16172).

BIBLIOGRAPHY

- EMPR AR *1957-35-36; 1958-34
- EMPR ASS RPT *16172, *17709
- EMPR BULL (*Stevenson, J.S. (1941); unpublished)
- EMPR PF (Tregilges, J.A. (1958): Magnetometer and Geological Survey Progress Report; see Mastadon (082ESE091) for excerpt from thesis; Property description)
- EMPR OF 1990-27
- GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
- GSC OF 481; 637; 1505A; 1565; 1969
- *Whittaker, P. (1983): Chromite in Alpine-Type Peridotites, unpublished Ph.D. Thesis, Carleton University, Ontario, pp. 17-20
- WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW026**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROCK CREEK PLACER**, JOLLY CREEK PLACER

STATUS: Past Producer Open Pit Underground

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E03E

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 49 04 19 N

NORTHING: 5437611

LONGITUDE: 119 06 59 W

EASTING: 345430

ELEVATION: 0869 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate centre of placer leases on Rock Creek (Minister of Mines Annual Report 1926, page A127).

COMMODITIES: Gold Platinum

MINERALS

SIGNIFICANT: Gold Platinum

MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Unconsolidated

CLASSIFICATION: Placer

TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Quaternary			Glacial/Fluvial Gravels
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Unconsolidated Sediment/Sedimentary

Gravel

Sand

Chlorite Schist

Greenstone

Limestone

Chert

Ultramafic

Granodiorite

Granite

HOSTROCK COMMENTS: Anarchist Group is Carboniferous to Permian in age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Syn-mineralization
Post-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Rock Creek Placer occurrence is located along Rock Creek at about 868 metres elevation, about 2 kilometres north of its confluence with McKinney Creek. Bridesville, British Columbia lies 5 kilometres to the southwest.

Placer gold was first discovered on Rock Creek in 1860. The first recorded production occurred in 1875 but a considerable amount was mined prior to this date. The creek produced well for a few years but work almost ceased entirely by 1900. There was a small resurgence of work from 1930 to 1935. In 1930, activity is reported for the Frank Wilson lease on a north fork of Rock Creek. Work was done from two open pits about 61 by 152 metres. Fine colours of gold were panned from certain parts but no continuous strata were found. Most of the gold was coarse and rusty. Occasional lemon-yellow nuggets were found. Gold was mined in Rock Creek below this lease in former years. In total, 152,905 grams of gold were recorded produced between 1874 and 1945 (Bulletin 28, page 37).

Placer gold was recovered from the bed and small benches of Rock Creek. A little drifting was done to explored abandoned stream channels with little success. Some platinum was recovered with the gold. As of 1931, the Quaternary stratigraphy of Rock Creek was determined to consist of recent gravels, followed by about 1.2 metres of slum, 0.61 to 2.4 metres of sand, 0.61 to 1.8 metres of cemented gravel, followed by variable widths of pay gravel on bedrock. Bedrock was gneissic or schistose rock of the Carboniferous to Permian Anarchist Group and Middle Jurassic granodiorite and granite

MINFILE NUMBER: **082ESW026**

CAPSULE GEOLOGY

of the Nelson intrusions. Chlorite schist, greenstone, limestone, chert and minor ultramafics comprise the main lithologies of the Anarchist Group. A total depth of 10.66 to 12.20 metres was estimated. Rim rock along the creek was also found to contain good pay, at about 45.7 metres above the 1931 creek level.

Progressing upstream, gold became coarser and more jagged suggesting the source was not far. For an excellent summary of the Rock Creek Placer refer to Minister of Mines Annual Report 1938, pages D26 to D33.

BIBLIOGRAPHY

EM FIELDWORK 2001, pp. 303-312
EM GEOFILE 2000-2, 2000-5
EMPR AR 1930-222; *1931-126; 1932-131; 1934-D12; 1935-D15; *1938-D26-D33
EMPR BULL 21, p. 23; 28, pp. 36,37
EMPR MR MAP 7 (1934)
EMPR PF (Meyer, W. (1975): Geophysical and Geochemical Survey on Placer Leases)
GSC MAP 538A; 539A; 1736A; 15-1961
GSC MEM *179, p. 19
GSC P 37-21, pp. 12-14
GSC SUM RPT 1877, p. 156; 1893, p. 14B

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/22

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW027**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALLEGRO**

STATUS: Showing
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 18 52 N
LONGITUDE: 119 55 25 W
ELEVATION: 1890 Metres

NORTHING: 5466524
EASTING: 287523

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of an abandoned adit, 500 metres west of the Star of Hope shaft (082ESW051) (Assessment Report 8145).

COMMODITIES: Gold Silver Molybdenum Tungsten

MINERALS

SIGNIFICANT: Pyrite Molybdenite Powellite
ALTERATION: Silica Biotite Garnet Albite
COMMENTS: Garnet, quartz and albite alteration occurs as lenses within biotite hornfels.
ALTERATION TYPE: Silicific'n Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Stratabound Disseminated
CLASSIFICATION: Porphyry Skarn
TYPE: L05 Porphyry Mo (Low F- type) L02 Porphyry-related Au
K07 Mo skarn
DIMENSION: Metres STRIKE/DIP: 270/27N TREND/PLUNGE:
COMMENTS: Molybdenite and powellite occurs in a dominant fracture, striking 270 degrees and dipping 27 to 33 degrees.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Triassic	Undefined Group	Independence	
Jurassic			Okanagan Intrusions

LITHOLOGY: Biotite Pyrite Hornfels
Quartzite
Meta Chert
Skarn
Diorite
Biotite Hornblende Granodiorite

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional Contact
PLUTONIC ROCKS: Plutonic Rocks
RELATIONSHIP: Pre-mineralization Syn-mineralization
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist Hornfels

INVENTORY

ORE ZONE: ADIT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Chip
COMMODITY: Silver 12.6800 Grams per tonne
Gold 1.0600 Grams per tonne
COMMENTS: A 1-metre chip sample across a zone of silicification and pyritized hornfels.
REFERENCE: Assessment Report 8145.

CAPSULE GEOLOGY

The Allegro showing is located approximately 500 metres west of the Star of Hope prospect (082ESW051) at the headwaters of Bradshaw Creek, 9 kilometres northwest of Olalla, British Columbia.
The Allegro claims were staked in 1979 by Newmont Exploration of Canada Ltd. to cover the ground lying between and surrounding the Yuniman (082ESW180) occurrence, to the west, and the Star of Hope (082ESW051) occurrence, to the east. During property exploration an old adit was discovered in silicified and pyritized hornfels. The

CAPSULE GEOLOGY

adit probably dates back to the turn of the century.

The regional geology of the area consists of a series of Carboniferous to Triassic volcanic and sedimentary rocks that have been intruded by granitic Okanagan intrusions. Larger intrusions are composed of granite and granodiorite, while smaller stocks are composed of diorite and gabbro. Numerous sills, dikes and apophyses are associated. Carboniferous to Triassic rocks are assigned to the Shoemaker and Old Tom formations. These rocks form the eastern limb of a large anticlinal fold with fold axes striking roughly north. The Shoemaker consists of cherts, greenstone and minor argillite. The cherts of the Shoemaker Formation are commonly lighter coloured (buff, pink, grey, grey-green) and commonly show a saccharoidal texture. The overlying Upper Triassic Independence Formation consists of interbedded, dark grey to black chert (commonly rusty or red stained), chert breccia, and siliceous greenstone containing disseminated pyrite and pyrrhotite or pyrite and arsenopyrite.

At the Allegro showing, biotite hornfels, quartzites, metachert and minor skarn of the Independence and Shoemaker formations is intruded by fine to medium grained hornblende diorite and medium to coarse-grained biotite hornblende granodiorite of the Okanagan intrusions. Minor aplite, granite and quartz-feldspar porphyry dikes locally intrude metasediments.

Several types of mineralization occur at the Allegro showing. A 1-metre wide zone of silicification and pyritized hornfels is exposed in an old caved-in adit. The alteration is in contact with a quartz-feldspar porphyry dike. A 1-metre chip sample across this zone yielded 1.06 grams per tonne gold and 12.68 grams per tonne silver (Assessment Report 8145). Several small lenses of garnet-quartz-albite skarn occur within biotite hornfels.

Molybdenite and powellite were observed in a prominently veined fracture set, striking 270 degrees and dipping 27 to 33 degrees north. The veining distribution is erratic with some areas consisting of crosscutting or parallel veins. Vein density varies from 10s of centimetres to several metres apart, with vein thickness varying from a millimetre to several centimetres. A rock sample of this material yielded only 0.05 per cent molybdenum, 0.02 per cent tungsten and 0.01 gram per tonne gold (Assessment Report 8145).

BIBLIOGRAPHY

EMPR ASS RPT 7429, *8145, 14059, 14530, 14580, 14651, 15222, 15843
EMPR OF 1989-5
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW028**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOE 7**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 23 N
LONGITUDE: 119 35 34 W
ELEVATION: 1160 Metres

NORTHING: 5435110
EASTING: 310518

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of a copper showing which outcrops on the former Joe 7 claim (Assessment Report 970).

COMMODITIES: Silver Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Pyrite Molybdenite

ASSOCIATED: Quartz Calcite Magnetite

COMMENTS: Mineralization occurs in quartz and calcite veinlets in Similkameen intrusions and Kobau rocks.

ALTERATION: Malachite Silica Chlorite Epidote Carbonate

K-Feldspar

COMMENTS: Malachite staining was noted in three old pits on the Joe 5 and 7 claims.

ALTERATION TYPE: Oxidation Silicific'n Propylitic Potassic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated

Shear

CLASSIFICATION: Porphyry

Hydrothermal

Epigenetic

TYPE: L04 Porphyry Cu ± Mo ± Au

106

Cu±Ag quartz veins

COMMENTS: Mineralization occurs in veinlets up to 5 millimetres wide hosted in shear zones.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Similkameen Intrusions
Jurassic			Kruger Syenite

LITHOLOGY: Quartzite
Phyllite
Quartz Mica Schist
Greenstone
Granodiorite
Quartz Diorite
Syenite
Nepheline Syenite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

Plutonic Rocks

RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Thompson Plateau

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1967

SAMPLE TYPE: Unknown

COMMODITY

GRADE

Silver

17.1400

Grams per tonne

Copper

0.3730

Per cent

Molybdenum

0.0040

Per cent

COMMENTS: A typical sample.

REFERENCE: Assessment Report 970.

CAPSULE GEOLOGY

The Joe 7 showing is located at 1160 metres elevation along a prominent northwest-trending ridge, 2 kilometres west of Blue Lake (Assessment Report 970).

The southern two-thirds of the property are underlain by Jurassic Kruger syenite and nepheline syenite. To the north are

CAPSULE GEOLOGY

granodiorite and quartz diorite of the Middle Jurassic Similkameen intrusion. Jointly, these have intruded a northwest-trending roof pendant of Carboniferous to Permian Kobau Group metasediments and metavolcanics. Quartzite, phyllite, quartz-mica schist and greenstone are the dominant lithologies surrounding the showing. Alteration consists primarily of silicification with minor carbonate alteration. The greenstone has been more intensely propylitic altered to chlorite, epidote, carbonate, and potassic altered to potassium feldspar.

Low grade copper mineralization occurs in all rock types except syenite and nepheline syenite. Disseminated chalcopyrite and bornite with pyrite and magnetite comprise sulphides which appear to have been hydrothermally introduced in quartz and calcite veinlets up to 5 millimetres thickness. Malachite stains are also present in an abandoned pit at the Joe 7 showing. Copper mineralization appears associated with regional northwest-trending shears. A typical sample from one of these shear zones is reported to yield 17.14 grams per tonne silver, 0.373 per cent copper and 0.004 per cent molybdenum

BIBLIOGRAPHY

EMPR AR 1968-21
EMPR ASS RPT *970, 1228, 2027, 3701, 4423, *4919
EMPR GEM 1969-298; 1971-384; 1972-39; 1973-45
EMPR OF 1989-5
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW029**

NATIONAL MINERAL INVENTORY: 082E6 Au1

NAME(S): **CARMI (L.2352)**, B.A. FR. (L.2357)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 30 N
LONGITUDE: 119 07 34 W

NORTHING: 5484287
EASTING: 346033

ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the Carmi shaft on the Carmi Crown grant (Lot 2352). See also Butcher Boy (082ESW132).

COMMODITIES: Gold Silver Zinc Lead Copper
Molybdenum

MINERALS

SIGNIFICANT: Pyrite Sphalerite Galena Chalcopyrite Molybdenite
COMMENTS: Sphalerite and galena carry gold and silver values. Chalcopyrite and molybdenite are minor.

ASSOCIATED: Quartz Ankerite Calcite K-Feldspar

ALTERATION: Sericite

COMMENTS: In some places the vein contains intensely sericite altered dike material.

ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au L05 Porphyry Mo (Low F- type)

SHAPE: Bladed

MODIFIER: Faulted

DIMENSION: 549 x 2 Metres

STRIKE/DIP: 090/45S

TREND/PLUNGE: /

COMMENTS: The shear hosted Carmi vein strikes 090 degrees and dips 45 to 60 degrees south. It has been traced for a minimum strike length of 549 metres and maximum width of 2.13 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Anarchist	Wallace	Westkettle Batholith
Jurassic			Unnamed/Unknown Informal
Cretaceous-Tertiary			

LITHOLOGY: Granodiorite
Quartz Diorite
Quartz Monzonite
Diorite
Quartz Monzonite Dike
Quartz K-Feldspar Dike
Andesitic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1981

COMMODITY

GRADE

COMMODITY	GRADE	Units
Silver	9.1000	Grams per tonne
Gold	1.0000	Grams per tonne
Zinc	0.1900	Per cent

COMMENTS: Sample 2199, from drillhole K-81-7 over the 1.7-metre interval between 94.7 and 95.1 metres.

REFERENCE: Assessment Report 9174.

CAPSULE GEOLOGY

The Carmi past producer is located immediately south of Carmi, British Columbia, on the Carmi (Lot 2352) and B. A. Fraction (Lot

CAPSULE GEOLOGY

2357) Crown grants. The Crown grants lie on the west side of the West Kettle River.

The Carmi claim was first staked in 1896 by J.C. Dale. Development work initially consisted of opencuts and a shallow shaft. The claim was sold in 1900 to London, England interests, who conducted further work under Carmi Mining Co. The B.A. Fraction claim was located in the same year. The Carmi and B.A. Fraction claims were Crown granted to E.H. Thurston and associates in 1901, the same year as the first production. In 1904, a 5-stamp mill was erected and had a capacity of 20 short tons per day. In 1913, the claims were leased to A. Robinson from F. J. Finnucane. Further work was done and ore shipments made between 1913 and 1915. The mine closed briefly in 1916 and 1917. Further work was resumed by new owners and lessees in 1918 and 1919. Construction of a new oil flotation concentrator was started. In 1922, optioning interests formed Carmi Gold Mining Co. Work ceased in 1928. Canadian-American Mines Ltd. acquired the Carmi, Butcher Boy (082ESW132) and 18 other claims in 1932. The underground workings were extended between 1932 and 1933, with several ore shipments made. Canadian-American Mines Ltd. assets were taken over by Carmi Gold Mines Ltd. in 1934 and further underground development work was completed. Between 1935 and 1937, lessees J. Kerr and R. Legiest made additional ore shipments. Highland-Bell Ltd. leased the property in 1939. A small amount of development work was done and the lease given up. The former lessees resumed work and made a final ore shipment in 1940. Since this time, the Carmi and B.A. Fraction claims have been acquired by J.V. Hinks and J.A. Olinger. Options have been held by International Minerals and Chemical Corp. (Canada) Ltd in 1970 and by Husky Oil and G.V. Lloyd Exploration Ltd. in 1970 and 1971. Vestor Explorations Ltd. optioned the property in 1974. In 1981, Kelvin Energy Ltd. was owner of the Carmi claims, surrounding the Carmi occurrence. An 8-hole diamond drill program was conducted, three of which tested for the Carmi veins below the old workings.

The Carmi is hosted by granodiorite of the Jurassic Westkettle batholith and an irregular body of Permian Wallace Formation approximately 2.56 square kilometres. The Westkettle batholith varies in composition from granodiorite to quartz diorite to diorite. The granodiorite phase is medium grained, grey to pink with chlorite or occasionally biotite-altered mafics. Local epidote and minor potassic alteration also occur. The quartz diorite phase is commonly foliated and porphyritic. These phases are intruded by quartz monzonite, quartz-k-feldspar and andesitic dikes. Veins are composed of quartz, quartz and k-feldspar or quartz-calcite plus or minus pyrite. The veins are commonly associated with a clay-rich fault gouge.

The Carmi and Butcher Boy workings appear to be on the same faulted vein, following a shear zone in fine-grained granodiorite. The shear zone strikes 090 degrees and dips 45 to 60 degrees southward. It has been traced for over 549 metres strike length, despite minor fault displacement. The vein varies from 5 to 213 centimetres width. One mineralized ore shoot near the surface was reported to be 76.2 metres long.

Mineralization consists of pyrite with lesser sphalerite and galena carrying gold and silver values. Minor chalcopyrite and molybdenite are also present. The gangue is quartz and ankerite and in places intensely sericitized andesitic dike.

In 1981, two drillholes (81-6 and 7) intersected vein-hosted mineralization at deeper levels than previously worked in the Carmi mine area. The more significant intersections were from drillhole K-81-7. The 1.4-metre interval between 90.5 and 91.9 metres (Sample 2197) intersected 0.07 gram per tonne gold, 1.4 grams per tonne silver and 0.017 per cent zinc (Assessment Report 9174). Sample 2199, a 1.7-metre interval between 94.7 and 95.1 metres, intersected 1.0 gram per tonne gold, 9.1 grams per tonne silver and 0.19 per cent zinc (Assessment Report 9174).

The Carmi has produced 4780 tonnes of ore intermittently between 1901 and 1915, then annually between 1932 and 1940. Recovery included 279,585 grams of silver, 87,929 grams of gold, 3179 kilograms of lead and 7303 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR 1898-1119, 1900-878, 1901-1051,1058,1139,1229, 1902-176,182, 1903-168, 1904-216, 1905-183, 1906-250, 1913-154,156,162, 1914-335,511, 1915-201, 1916-256, 1917-212, 1918-221, 1919-167,174, 1920-156, 1922-173, 1932-126, 1933-154, 1934-D10,A25,29, 1935-A25,D14,G52, 1936-D55, 1937-A36,D31, 1938-A34, 1939-77, 1940-23, 63
EMPR ASS RPT 3740, 8867, *9174
EMPR BC METAL MM00835

BIBLIOGRAPHY

EMPR BULL 1, p. 86; 20 (1945, Part III), pp. 16-17
EMPR GEM 1970-408, 1971-386, 1972-44, 1973-50
EMPR INDEX 3-191
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79, pp. 6,84,89,115,126
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
GCNL (Nov.19),1975; (Jan.20), (Apr.20,22), (July 5), (Oct.19),
(Dec.14), 1976; (Feb.2), 1979; #171, 1980
N MINER Sept.9, 1976; May 3, 1979

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW030**

NATIONAL MINERAL INVENTORY: 082E6 Ag1

NAME(S): **BEAVERDELL**, BEAVERDELL MINE, HIGHLAND-BELL,
HIGHLAND LASS (L.2341), BELL (L.2343), TECH,
LASS

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:
LATITUDE: 49 25 50 N
LONGITUDE: 119 02 46 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The lower mine workings (2900 level) projected to surface occur approximately in the centre of the Idaho No. 1 (Lot 3960s) Crown-granted claim, located 1.25 kilometres northwest of Mount Wallace and 3 kilometres east of Beaverdell (Assessment Report 15704). See also the Highland Lass (082ESW133).

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5477333
EASTING: 351641

COMMODITIES: Silver Lead Zinc Gold Cadmium
Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Tetrahedrite Pyrargyrite
Chalcopyrite Polybasite Acanthite Silver Arsenopyrite
Pyrrhotite
ASSOCIATED: Quartz Calcite Fluorite
ALTERATION: Chlorite Clay Calcite
ALTERATION TYPE: Propylitic Argillic
MINERALIZATION AGE: Eocene
ISOTOPIC AGE: 50 Ma DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Bladed
MODIFIER: Faulted
DIMENSION: 150 x 1 Metres STRIKE/DIP: 045/50S TREND/PLUNGE:
COMMENTS: Ore shoots up to 150 metres long were intersected. The Bell vein averages 0.9 metre and the Lass vein averages 1.5 metres width. Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1276.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Anarchist	Wallace	Westkettle Batholith
Jurassic			Unnamed/Unknown Informal
Eocene			

ISOTOPIC AGE: 50.6 +/- 1.5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Whole rock

LITHOLOGY: Granodiorite
Quartz Latite Dike
Andesitic Tuff
Andesitic Lava
Hornblende Diorite Porphyry
Olivine Gabbro
Hornblendite

HOSTROCK COMMENTS: A quartz latite (Idaho-type) dike has been dated as Eocene age (Canadian Journal of Earth Sciences, Vol. 19, No. 6, page 1267).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland
Harper Ranch
RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The former Beaverdell mine on the Bell (Lot 2343) Crown grant, is located 1.25 kilometres northwest of the summit of Mount Wallace and 3.00 kilometres east of Beaverdell, British Columbia (Assessment Report 15704).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were

CAPSULE GEOLOGY

the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area. Production commenced on the Highland Lass in 1922. In 1930, R.B. Staples and associates obtained control of the Bell and Highland Lass, however production was recorded separately until the purchase was complete in 1936. Production continued under the amalgamated Highland-Bell mine owned by Highland-Bell Ltd. Highland-Bell Ltd. was purchased by Leitch Gold Mines Ltd. in 1946 but operations continued as the Highland-Bell mine. In 1953, a down-faulted section of the Lass vein system was found 229 metres vertically lower and developed by a 1600-metre adit. Teck Corp. assumed control of the mine in 1970. In 1986 and 1987, property exploration by Teck Corp. located an eastward ore extension with increased gold content on the lower (2900) level. This included an ore block containing 5442 tonnes grading 1371 grams per tonne silver (Assessment Report 15790). Production ceased in 1991.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Beaverdell porphyry. These have been dated by potassium-argon methods as Eocene (Watson, P.H. (1981): Genesis and zoning of silver-gold veins in the Beaverdell area, south-central British Columbia; Leary, G.M. (1970): Petrology and structure of the Tuzo Creek molybdenite prospect near Penticton, British Columbia and Exploration in British Columbia 1995, pages 124-126. The Westkettle batholith has been correlated with the Nelson intrusions that has been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper sections of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east.

A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine-grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. One of these was dated by potassium-argon methods at 61.6 +/- 2.2 Ma (Watson, P.H., 1981). Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization. One of these has given a potassium-argon age of 50.6 +/- 1.5 Ma (Watson, P.H., 1981).

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. Five distinctly separate quartz vein systems are arranged roughly en echelon in this structural zone. The west-half contains the Wellington (Lot 2621), Sally (082ESW075, Lot 2092) and Rob Roy (Lot 2093, also part of Sally) systems which all strike east and dip from 70 degrees south to vertical. The Wellington and Sally each comprise two separate veins and the Rob Roy three. In the central part of the zone, the Bell (082ESW030, Lot 2343) comprises two veins which strike east to northeast and dip south to southeast. The eastern part of the zone contains the upper and lower sections of the Lass (082ESW133) and Highland Lass (Lot 2341, also part of the Bell) vein which strikes northeast and dips 50 degrees southeast.

In general, quartz breccia veins and stockworks are so complex that continuous mineralized sections are a maximum of a few metres before being faulted or disrupted. Nevertheless, some mineralized zones have been found that extend up to 150 metres horizontally. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship: (1) high angle, north striking normal faults, (2) low angle, north trending strike-slip faults, (3) northeast-striking, high angle normal faults (terminal faults), (4) northeast-trending 'slice' faults and (5) crossfaults. The northeast-striking, high angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite,

CAPSULE GEOLOGY

tetrahedrite, pyrrhotite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite. 'Ore ground' has been described as propylitic altered granodiorite, quartz diorite and quartz monzonite of the Westkettle batholith, up to 15 metres wide. These zones are characterized by sericite, clay minerals, chlorite, calcite, epidote and hematite. The fault-bounded veins commonly have a banded texture defined by outer, crudely parallel sulphide stringers. The wallrocks are brecciated and sheared over 30 to 150 centimetres width adjacent to veins. Weak sericite alteration of feldspars is pervasive in the Westkettle batholith.

The interpretation of galena lead-lead isotope age data coupled with geometrical and age relationships between dikes and veins suggests mineralization was formed around 50 Ma, coeval with Eocene stocks (Canadian Journal of Earth Sciences, Vol. 19, No. 6, pages 1264-1274, 1982).

The Beaverdell mine is composed of the Highland Lass (Lot 2341) past producer (082ESW133) and Bell (Lot 2343) where the Upper and Lower Lass vein system were mined and which have accounted for the majority of production. Most of the veins are hosted in granodiorite of the Westkettle batholith. Some mineralization locally extends for short distances into Wallace Formation rocks which overlie the batholith at the eastern end of the mine area, although the mineralized structures tend to horsetail and disperse.

The mineralized quartz veins occupy fissures along east-trending faults in the western part of the mine area and along northeast-trending faults in the eastern portion of the system (part of Bell, Upper Lass, Lower Lass). Towards the east the veins generally exhibit progressive increases in width, and intensity and extent of wallrock alteration. Propylitic alteration is found in the wallrock up to 8 metres from the veins. Thin section studies show amphiboles almost entirely converted to chlorite and feldspars replaced by clay and calcite. The Bell and Lass veins average 0.9 and 1.5 metres wide respectively, but are rarely continuous for more than 5 to 10 metres without offset.

A series of widely spaced, north to northeast striking, southeast-dipping faults divide the mineralized system into large blocks, often with up to 100 metres of vertical displacement between them. The West Terminal fault separates the Bell and Upper Lass veins and the East Terminal fault separates the Upper and Lower Lass vein. The East Terminal fault has displaced downwards the eastern-half of the Lass vein (Lower Lass) by 213 metres. The veins are chopped into small segments by northeast striking, closely spaced normal faults which flatten the dip to the northwest and generally show less than a metre displacement.

Major metallic minerals in the quartz veins are galena, native silver and pyrrhotite. The gangue material is mainly quartz with some altered wallrock fragments included in the vein and small concentrations of calcite and occasional fluorite. Some supergene silver mineralization is present, chiefly as native silver wires and plates. Native silver is especially abundant close to fault intersections. However, most of the mineralization is of hypogene origin.

Two zones of distinctive mineralization are recognized in the Lass vein system. The boundary between these two zones trends north and lies within the Lower Lass, about 120 metres east of the East Terminal fault. In contrast to the lower eastern part (Lower Lass), the upper western portion (Upper Lass) of the vein system is characterized by high silver and moderate zinc and lead values, more gangue, and thinner veins within multiple vein and stringer zones. The lower east end of the Lower Lass however, contains high gold, moderate to high zinc and lead values and low silver values. Silver associates with galena, sphalerite and antimony sulphosalts and gold associates with pyrite and chalcopyrite.

Reserve figures are not computed at the Beaverdell mine due to the extensively faulted vein, but in 1989 approximately 3400 tonnes of ore was milled per month.

The Beaverdell mine was the longest producing mine in the area; almost continuously between 1913 and 1991. Over this period, 1,198,829 tonnes of ore were mined from which 1,076,005,759 grams of silver, 520,197 grams of gold, 11,598,238 kilograms of lead, 13,900,078 kilograms of zinc and 58,171 kilograms of cadmium were recovered.

BIBLIOGRAPHY

EMPR AR 1901-1058; 1902-H182,H303; 1903-H247; 1906-H253; 1913-K156; 1916-K255,K517; 1917-F204,F212,F449; 1918-K210,K220; 1919-N168, N174; 1920-N155; 1921-G185,G188; 1922-N172; 1923-A184,A301; 1924-

BIBLIOGRAPHY

B19,B168; 1925-A47,A202-A206; 1926-A12,A206-A208,A210; 1927-C11,
C232,C233; 1928-C11,C252-C254; 1929-C12,C260-C262; 1930-A11,A219;
1931-A11,A123; 1932-A12,A125,A126; 1933-A14,A153; 1934-A7,D9,D10,
A25,A29; 1935-A7,A25,A30,D14,G52; 1936-A34,D56; 1937-A29,A31,A36,
A41,D34; 1938-A27,A29,A34,D39,D40; 1939-A29,A42,A93,A94; 1940-A24,
A78,A79; 1941-A19,A25,A73,A74; 1942-A21,A23,A26,A70,A71;
1943-A38,A40,A45,A70; 1944-A68; 1945-A94,A95; 1946-A35,A133; 1947-
A153,A275; 1948-A125; *1949-A138-A143,A145-A148; 1950-A116,A117,
A291; 1951-A41,A132,A133,A308,A309; 1952-A41,A138,A139,A331; 1953-
A43,A108,A215,A270; 1954-A12,A48,A78,A118,A203,A258; 1955-A47,44,
45,172; 1956-A48,74,182; 1957-A44,3,37,38,151; 1958-A44,35; 1959-
A46,57; 1960-A53,62,63; 1961-A47,63,278; 1962-A48,67,283; 1963-A47,
67,68,270; 1964-A53,109; 1965-A53,166; 1966-191; 1967-A52,223,224;
1968-A52,224; 1969-A53; 1970-A52; 1971-A52; 1972-A52; 1973-A52;
1974-A119; 1975-A93; 1976-A102; 1977-114; 1978-126; 1979-127
EMPR INDEX 3-189,199; 4-122
EMPR ASS RPT 18, *15704, 15790, 16771
EMPR BC METAL MM00002
EMPR GEM 1969-301; 1970-409; 1971-385; 1972-42,43; 1973-22,48;
1974-24,57,58
EMPR GEOLOGY 1975-G30-G33
EMPR ENG INSP (Mine Plans); Annual Report 1989; 1990
EMPR MAP 65 (1989)
EMPR MINING 1975-1980, Vol.I, p. 8; 1981-1985, pp. 6,33; 1986-1987,
pp. 49-50; 1988, Vol. 1, pp. 46
EMPR FIELDWORK 1975, pp. 27-29; 1976, p. 15; *1982, pp. 227-249;
1988, pp. 360, 361
EMPR INF CIRC 1984-1, p. 25; 1985-1, p. 42; 1986-1, p. 47; 1987-1,
p. 30; 1988-1, p. 68; 1989-1, p. 30; 1990-1, p. 46; 1991-1, p. 58
EMPR IR 1984-2, pp. 99-100; 1984-3; pp. 105-106; 1984-5, pp. 113-114;
1986-1, pp. 109-110
EMPR OF 1989-5; 1992-1; 1998-10
EMPR MIN STATS 1985, p. 48; 1987, pp. 35,37,65-66; 1990, pp. 25,29,
32,68-70
EMPR PF (Description of claims (1974) and sketch map; Verzosa, R.S.
and Goetting, B. (1972): Geology and History of the Highland
Bell Mines; Production figures; Mines inspection report; Northern
Miner, April 10th, 1952; Geological notes; Geological report by
P.A. Christopher; Surface geology map, 1972)
EMR MP RESFILE (Highland-Bell Mine Res.)
EMR MIN BULL MR 166
EMR MP CORPFILE (Highland-Bell Mines Ltd.; Highland Lass Ltd.;
Mastadon-Highland Bell Mines Ltd.; Leitch Mines Ltd.; Beaver
Silver Mines Ltd.; Sally Mines Ltd.; Teck Corp.)
GSC EC GEOL 1928, Vol. 23, pp. 434-441
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, pp. 89,92,120-122
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CANMET IR 1947-2268; 1950-MC2640; 1951-MD2748; 1968-68-72)
CIM *Volume II, 1957: Structural Geology of Canadian Ore Deposits,
pp. 136-141
CJES Vol. 19, No. 6, pp. 1264-1274, 1982; Vol.23 (1986)
GCNL #233(Oct.24), 1969; #51(Mar.14), 1989; #206(Oct.24), 1990
MIN REV Nov/Dec 1981, pp. 23,24; May/June 1989, p. 27;
N MINER Oct.20, 1983; Oct.29, 1990
W MINER 1946, Vol. 19, May, pp. 38-43, Jun., pp. 54-58; 1948, Vol. 21,
Dec., pp. 158,159
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the
Beaverdell Area, South-central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pp.
CMH 1988-89, p. 434; 1989-90, pp. 437,438
FIN POST Survey of Mines 1975, pp. 150,151
N MINER MAG May 1987, p. 56

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

Sheritt-Lee Mines Ltd., 1963 - Ruby Silver Mines Ltd., 1971 - Copper Bounty Mines Ltd. and 1983 - Walmont Precious Metals Corp. The occurrence is currently owned by IGF Metals Inc.

For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

The Kokomo Fr. (Lot 3067) adjoins the Tiger claim (082ESW067) in the southeast and the Sally mine (082ESW073) in the northwest. The property is underlain by chloritic granodiorite of the Westkettle batholith. Some zones of clay alteration and bleaching within the granodiorite are evident. Mineralized quartz veins occur in a shear zone striking 220 degrees and dipping 40 degrees northwest (Minister of Mines Annual Report 1967, page 224). The shear zone is 6 to 7.5 metres wide and has been intruded by fine grained, dark green massive dioritic rock, parallel to subparallel to the shear zone, most evident where brecciation is more intense. Other shears strike southeast and dip southwest 50 degrees to vertical. The shear zone hosting the veins is locally silicified, highly faulted and fractured. The veins strike 135 degrees and dip steeply southwest. Two branching veins are cut and offset by two parallel northeast-striking, northwest-dipping faults. Offset is right-lateral approximately 15 metres. Potassium feldspar flooding is locally exhibited. Oxidation mineralogy consisting of limonite and pyrolusite occurs within fractures in the quartz veins. Mineralization consists of sometimes massive sphalerite, galena, pyrite, tetrahedrite and minor native silver in a gangue of mainly quartz and lesser calcite.

Extensive work by MPH Consulting in 1969 outlined eleven vein, veinsets and mineralized zones including three on the Kokomo and Tiger (082ESW067) claims; (1) Kokomo-Tiger north vein, (2) Kokomo-Tiger central vein set and (3) Kokomo-Tiger south vein set (Assessment Report 16772). Drilling in 1987 has defined an oreshoot correlating with ore indications on the adjoining Rob Roy (082ESW073). Drillhole 87-2 intersected 0.76 metre of quartz ore consisting of quartz hosting massive sphalerite with galena and pyrite. Samples yielded 1.03 grams per tonne gold, 2466 grams per tonne silver, 2.19 per cent zinc and 5.88 per cent lead (Assessment Report 16772). Drillhole 87-3 intersected 0.55 metre true width of massive pyrite with galena and sphalerite. Samples yielded 0.68 gram per tonne gold, 1348 grams silver, 0.49 per cent lead and 1.99 per cent zinc (Assessment Report 16772).

Total recorded production between 1916 and 1921 for the Kokomo occurrence was 56 tonnes, from which 358,680 grams of silver and 5939 kilograms of lead was recovered. Ore was sent to both the Trail and Granby smelters.

BIBLIOGRAPHY

- EMPR AR 1915-K203; 1916-K255,K518; 1917-F203,F212,F449; 1918-K210; 1920-N163; 1921-G185,G188; 1927-C481; 1928-C253; 1949-A138-A143; 1966-191; 1967-224
EMPR INDEX 3-202
EMPR ASS RPT 16771, *16772
EMPR BC METAL MM00883
EMPR GEOLOGY 1975, Figure G-17
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, pp. 90,125-126
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW032**

NATIONAL MINERAL INVENTORY:

NAME(S): **DUNCAN (L.2605)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 12 N
LONGITUDE: 119 04 12 W
ELEVATION: 1300 Metres

NORTHING: 5476207
EASTING: 349877

LOCATION ACCURACY: Within 500M

COMMENTS: Shaft and two adits located 3.0 kilometres west from the summit of Mount Wallace and 2.0 kilometres south-southeast of Beaverdell (Assessment Report 16772).

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Tetrahedrite Galena Sphalerite Pyrite Silver
ASSOCIATED: Quartz Calcite
ALTERATION: Hematite Limonite Silica
ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE: Eocene
ISOTOPIC AGE: 50 Ma
DATING METHOD: Lead/Lead
MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1264.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Westkettle Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Harper Ranch
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Channel
COMMODITY GRADE
Silver 220.1100 Grams per tonne
COMMENTS: Sample #18 of quartz vein from a pit near 2 adits and a shaft on the south boundary of the Duncan claim.
REFERENCE: Assessment Report 16772.

CAPSULE GEOLOGY

The Duncan (Lot 2605) past producer is located 3.0 kilometres west of the summit of Mount Wallace and 2.0 kilometres east-southeast of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area.

Past development on the Duncan began in 1901 when galena was discovered in a small quartz vein. In 1904, the Duncan claim was Crown granted to R. Wood and associates. From 1904 to 1911 the Wallace Mountain Mining Co. did most of the development work under the direction of T. Henderson. By 1909, development work included 5 small shafts, the deepest being 30 metres, 104 metres drifting, and some stoping. Since 1949, work has been intermittent and ownership has changed several times: 1947 - Silver Bounty Mines Ltd., 1958 - Sheritt-Lee Mines Ltd., 1963 - Ruby Silver Mines Ltd., 1971 - Copper Bounty Mines Ltd. and 1983 - Walmont Precious Metals Corp. The occurrence is currently owned by IGF Metals Inc. Recent property

CAPSULE GEOLOGY

work by IGF Metals Inc. has renewed interest in the Duncan south-Bounty Fr. veins.

For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

The Duncan Crown grant (Lot 2605) adjoins the Bounty Fr. claim (082ESW066) in the south-southeast. The property is underlain by Westkettle Batholith granodiorite. Mineralized quartz veins occupy a faulted, east trending shear zone. The shears are 30 to 120 centimetres wide, sometimes branching into two. The veins strike 090 degrees, dipping 60 degrees north to vertical and vary from a few to 35 centimetres in width. North-striking faults with moderate to steep dips to the northwest have offset the vein repeatedly.

Mineralization consists of tetrahedrite, galena, sphalerite, pyrite and native silver in a gangue of mainly quartz and occasional calcite. Some hematite is also present and may indicate oxidation. Channel sample #18 taken of quartz vein material yielded 220 grams per tonne silver and 0.03 gram per tonne gold over 0.40 metre (Assessment Report 16772). The sample was taken in 1987 from a pit exposing a shear zone with iron staining, intense silicification and brecciation, near two abandoned adits and a shaft near the south claim boundary of the Duncan claim. Channel sample #14 was taken over 0.15 metre from the central part of an exposed shear zone with minor galena and intense limonitic and siliceous alteration. It yielded 494 grams per tonne silver and 0.03 gram per tonne gold (Assessment Report 16772).

Total recorded production from 1919 to 1930 for the Duncan is 39 tonnes from which 120,463 grams of silver and 1481 kilograms of lead were recovered.

BIBLIOGRAPHY

- EMPR AR 1901-1144; 1904-G299; 1906-H160,H250; 1918-K210; *1919-N168;
1925-A206; 1926-A209; 1930-A220; 1938-D3; 1946-A134; 1949-A138-
A143
EMPR ASS RPT *16772
EMPR BC METAL MM00844
EMPR OF 1989-5
EMPR INDEX 3-194
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, pp. 122-124
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the
Beaverdell Area, south-central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW033**

NATIONAL MINERAL INVENTORY: 082E6 Ag2

NAME(S): **BOUNTY (L.2348)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 13 N
LONGITUDE: 119 03 37 W
ELEVATION: 1380 Metres

NORTHING: 5476219
EASTING: 350583

LOCATION ACCURACY: Within 500M

COMMENTS: A shaft located 2.25 kilometres west from the summit of Mount Wallace and 2.5 kilometres south-southeast of Beaverdell (Assessment Report 16772).

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Sphalerite Pyrite Galena Pyrargyrite Tetrahedrite

COMMENTS: Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1264.

ASSOCIATED: Quartz

MINERALIZATION AGE: Eocene

ISOTOPIC AGE: 50 Ma DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Irregular

MODIFIER: Faulted Fractured
DIMENSION: 27 Metres

STRIKE/DIP: 110/65S TREND/PLUNGE:

COMMENTS: Irregular, fractured and faulted quartz veins occupy a shear zone 2 to 20 centimetres wide, striking 110 degrees and dipping 65 degrees south. In 1926, the shear zone was stoped over 27 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver 66.1700 Grams per tonne

Gold 0.0300 Grams per tonne

COMMENTS: Sample #94 of quartz vein material containing minor galena, sphalerite and pyrite from a dump.

REFERENCE: Assessment Report 16772, Figure 363-10.

CAPSULE GEOLOGY

The Bounty (Lot 2348) past producer is located 2.25 kilometres west of the summit of Mount Wallace and 2.5 kilometres south-southeast of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area.

Past development on the Duncan began in 1903. By 1904, 30 metres of tunnelling had been done along a vein with exceptionally high-grade ore. The Bounty claim was Crown granted to S.M. Johnson and P.D.S. Stanhope in 1910. Work, including an ore shipment, was conducted by the Phoenix Mining, Smelting and Development Co. Ltd. in 1913. In 1925, under lease and bond to Federal Mining and Smelting

CAPSULE GEOLOGY

Co., high-grade ore was encountered along shear zones discovered by surface trenching and shipped. From 1926 to 1929 the ground was leased to A. McPhee with the discovery of further ore underground. Beaverdell-Wellington Syndicate Ltd. became the owner and operator from 1938 to 1939. In 1940, O. Houllind acquired ownership. Since 1946, work has been intermittent and ownership has changed several times: 1946 - Silver Bounty Mines Ltd., 1958 - Sheritt-Lee Mines Ltd., 1963 - Ruby Silver Mines Ltd., 1971 - Copper Bounty Mines Ltd. and 1983 - Walmont Precious Metals Corp. The occurrence is currently owned by IGF Metals Inc. Past development included a minimum of two crosscuts, a 96-metre drift along the vein, a 30-metre winze, a 15-metre raise, 43 metres of diamond drilling and numerous surface trenches and opencuts. Stopping occurred primarily above the lower (main) crosscut and a drift.

For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

The Bounty claim (Lot 2348) is located one kilometre south of the Beaverdell mine (082ESW030) and is underlain by granodiorite of the Westkettle batholith. An irregularly broken quartz vein occupies a 2 to 20 centimetre wide shear zone that strikes 110 degrees and dips 65 degrees south. Mineralization consists of sphalerite, pyrite, galena, pyrargyrite and tetrahedrite in a gangue of mainly quartz. Northeast-striking, high angle normal faults have moved the western portion of the vein to the north and flat faults have moved the higher portions of the vein into the footwall. The quartz vein has not been picked up beyond two faults on the eastern end. Renewed interest has been expressed by IGF Metals Inc. on the 'Logan-Bounty Fr.' and 'Bounty South' veins. A grab sample (Sample #94) from a dump yielded 66.17 grams per tonne silver and 0.03 gram per tonne gold (Assessment Report 16772). The sample was composed of quartz vein with minor galena, sphalerite and pyrite.

Total recorded production from the Bounty past producer was 200 tonnes, mined intermittently between 1925 and 1942, from which 1,099,086 grams of silver, 93 grams of gold, 12,861 kilograms of lead and 13,901 kilograms of zinc were recovered.

BIBLIOGRAPHY

- EMPR AR 1901-1058; 1902-H182; 1903-H168; 1904-G216; 1910-K248;
1913-K421; 1919-N174; *1925-A200-A205; *1926-A209; 1927-C233;
1928-C253; 1929-C263; 1930-A220; 1934-D9; 1935-D14,G52; 1938-D3,
D40; 1939-A93; 1941-A24; 1942-A26; 1946-A134; 1947-A153; 1948-
A126; *1949-A138-A145; 1959-57; 1960-63; 1965-167; 1967-224
EMPR AR *1936, Part D, Special Report by M.S. Hedley
EMPR INDEX 3-190
EMPR ASS RPT 16772
EMPR BC METAL MM00826
EMPR OF 1989-5
EMR MP CORPFILE (Silver Bounty Mines Ltd.; Ruby Silver Mines Ltd.)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, pp. 80,84,92,125
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the
Beaverdell Area, south-central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW034**

NATIONAL MINERAL INVENTORY: 082E6 Ag3

NAME(S): **RAMBLER (L.2797)**, FRAN HIGHLAND SILVER,
CRANBERRY CREEK, RAMBLER

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 24 54 N
LONGITUDE: 119 03 37 W
ELEVATION: 1351 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5475632
EASTING: 350567

LOCATION ACCURACY: Within 500M

COMMENTS: The easternmost of two adits located 3.25 kilometres west from the summit of Goat Peak and 3.0 kilometres south-southeast from the village of Beaverdell (Assessment Report 12734).

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Pyrite Sphalerite Tetrahedrite Pyrargyrite

Chalcopyrite

COMMENTS: Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1264.
Pyrargyrite is associated with galena and pyrite.

ASSOCIATED: Quartz Calcite

COMMENTS: Calcite is minor.

ALTERATION: Chlorite Epidote Clay K-Feldspar

ALTERATION TYPE: Silicific'n Chloritic Propylitic

Argillic

Potassic

MINERALIZATION AGE: Eocene

ISOTOPIC AGE: 50 Ma

DATING METHOD: Lead/Lead

MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Bladed

MODIFIER: Faulted

DIMENSION: Metres

STRIKE/DIP: 093/70S

TREND/PLUNGE:

COMMENTS: Shear hosted quartz veins strike 090 to 093 degrees and dip 70 to 90 degrees south. Short segments of the veins have been repeated by faults which dip in the same direction as the veins.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Granodiorite
Aplite Dike
Aplite
Andesite
Andesite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1983

SAMPLE TYPE: Grab

COMMODITY

GRADE

COMMODITY	GRADE	UNIT
Silver	2960.4000	Grams per tonne
Gold	0.8000	Grams per tonne
Copper	0.0700	Per cent
Lead	1.6300	Per cent
Zinc	1.6700	Per cent

COMMENTS: Sample 110 (47258) from ore dump material of the east adit.

REFERENCE: Assessment Report 12734.

CAPSULE GEOLOGY

The Rambler (Lot 2797) past producer is located 2.5 kilometres west of the summit of Mount Wallace and 1.75 kilometres

CAPSULE GEOLOGY

east-southeast of Beaverdell, British Columbia (Assessment Report 16772). The Reverted Crown grant was forfeited February 15, 1994.

The Rambler occurrence was first discovered and actively developed by 1901. At this time two or three carloads of ore were already waiting to be hauled out to a local smelter. The vein discovered was reported to be identical to the Sally vein (082ESW073) to the north. The claim was Crown granted to F.J. Finncane in 1903. Further development work of several shallow shafts was steady up to 1906. By 1913, three veins were partially developed; the main vein by a 26-metre shaft. A crosscut, started to intersect the tap the main vein, struck a smaller vein 46 metres from the portal. In 1916, W. H. Rambo became owner and operator. Intermittent development work and ore shipments were made between 1916 and 1945. In 1946, work was carried out by Highland Silver Mines Ltd. Between 1946 and 1968 development work and ore shipments have been made by Highland Silver Mines Ltd. and various lessees. The last recorded ore shipment was in 1950 by leasers operating under the name Cranberry Creek Gold Mining Co. Ltd. Ajax Mercury Mines Ltd. conducted diamond drilling and surface stripping on the Rambler in 1968. Total development work consists of 30 metres of crosscut, 8 metres of drifting with 427 metres of underground diamond drilling. The most recent interest in the Rambler property has been by Canstat Petroleum Resources Corp. in 1983.

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area. For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

The Rambler (Lot 2797) adjoins the Standard Fraction claim (082ESW035) in the northwest and the Bounty Fraction claim (082ESW066) in the southeast. The claim is underlain by Westkettle granodiorite which is cut by aplite and andesite (Wellington-type) dikes. The host granodiorite exhibits propylitic, chloritic, argillic and potassic alteration mineralogy. Pervasive chlorite varies from weak to locally intense zones, epidote occurs occasionally as veinlets and is locally pervasive, and minor potassium feldspar is also evident. Argillic alteration is essentially feldspars altered to clay. Silicification is common in the shear zone.

Three mineralized quartz veins occur in an east trending shear/fault zone. The veins strike 090 to 093 degrees and dip 70 to 90 degrees south. Low angle, north trending strike-slip faults with flat dips (10 to 15 degrees) to the northwest occur. The two main veins may have been originally one and were displaced by this type of fault. Short segments of the veins are repeated and may be due to northeast trending 'slice' faults. The 'slice' faults dip in the same direction of the vein and where the dip of these faults are a little greater than that of the vein, the effect is to repeat the vein.

Mineralization consists of pyrrargyrite associated with argentiferous galena, pyrite, sphalerite, possibly tetrahedrite and weak disseminations of chalcopyrite in a gangue of mainly quartz with minor calcite. Some ore shoots are 15 to 35 centimetres in width. In 1915, ore had been mined from a triangular-shaped area lying between the most southerly inclined shaft and a west dipping fault plane, the upper side approximately 12 metres wide. The silver content was found to increase crossing the fault.

Ore samples taken in 1901 yielded trace gold, 1899 grams per tonne silver and 25.1 per cent lead (Minister of Mines Annual Report 1901, page 1144). Sample 110 (47258), a grab sample of ore dump material from the easternmost adit in 1983 by Canstat Petroleum Resources Ltd., yielded 2960.4 grams per tonne silver, 0.8 gram per tonne gold, 1.67 per cent zinc and 1.63 per cent lead (Assessment Report 12734). Sample 105 (50346), taken from an east-trending trench near the south adit yielded 1.09 grams per tonne gold, 787.9 grams per tonne silver, 0.87 per cent lead and 0.63 per cent zinc (Assessment Report 12734). Drillholes 83-9, 10 and 11 were drilled to test mineralized quartz veins below mined levels but only intersected granodiorite with weak to intense chlorite alteration and silicification.

Total recorded past production from the Rambler consists of 149 tonnes from which 690,704 grams of silver, 62 grams of gold, 7014 kilograms of lead and 4237 kilograms of zinc were recovered.

BIBLIOGRAPHY

EMPR AR 1901-1058,1144; 1902-H182,H305; 1903-H168; 1905-J181; 1906-H160,H250; 1913-K155,K156,K162; 1916-K256; 1917-F204,F449; 1918-

BIBLIOGRAPHY

K203,K210,K220; 1920-N155,N163; 1923-A183; 1924-B168,B169; 1925-A202-A204,A206,A367; 1927-C233; 1934-D9; 1935-D14,G52; 1938-D40; 1946-A134; 1947-A154; 1948-A126; *1949-A138-A143,A148; 1950-A117; 1968-224,225
EMPR INDEX 3-193, 210
EMPR ASS RPT *12734
EMPR BC METAL MM00913
EMPR EXPL 1983-41,42
EMPR GEM 1969-301
EMPR OF 1898-5
EMR MP CORPFILE (Highland Silver Mines Ltd.)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, pp. 89, 92, 120-122
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, 58 pp.
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
GCNL #144, 1969
*Watson, P.H., (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW035**

NATIONAL MINERAL INVENTORY: 082E6 Ag3

NAME(S): **STANDARD FR. (L.3297S)**, FRAN PROPERTY, HIGHLAND SILVER

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 24 48 N
LONGITUDE: 119 03 23 W
ELEVATION: 1402 Metres

NORTHING: 5475439
EASTING: 350844

LOCATION ACCURACY: Within 500M

COMMENTS: Adits located 3.0 kilometres west from the summit of Goat Peak and 3.25 kilometres south-southeast of Beaverdell (Assessment Report 12734).

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Pyrite Sphalerite Tetrahedrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Eocene
ISOTOPIC AGE: 50 Ma

DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres STRIKE/DIP: 093/90S
COMMENTS: Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1264.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Westkettle Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Harper Ranch
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 8.9000 Grams per tonne
Gold 0.1000 Grams per tonne
Lead 0.0400 Per cent
COMMENTS: Sample #115 (47261) from a quartz vein in an adit near the claim boundary with the Buster claim (082ESW036).
REFERENCE: Assessment Report 12734.

CAPSULE GEOLOGY

The Standard Fraction (Lot 3297) is a past producer, located 3.0 kilometres west of the summit of Goat Peak and 3.25 kilometres south-southeast of Beaverdell, British Columbia (Assessment Report 16772). The Reverted Crown grant was forfeited February 15, 1994. The Standard Fraction occurrence was first discovered and actively developed by 1903. Further development work of several shallow opencuts and a shafts was done by 1916 by W.H. Rambo, the owner. Fifty sacks of ore were reported taken out. Intermittent development work and ore shipments were made between 1914 and 1947 by W.H. Rambo and various lessees. The Buster vein was developed by three tunnels: the No. 1, 3.6 metres; No. 2, 9.1 metres; and No. 3, 9.1 metres long. The Standard vein was developed by two raises, both 9.1 metres, in addition to 45.7 metres of drifting and opencuts. In 1946, work was carried out by Highland Silver Mines Ltd. Between 1946 and 1958 development work and ore shipments have been made by Highland Silver Mines Ltd. and various lessees. In 1947 the '46-77' drift was extended from 21.5 to 97.5 metres length on the Standard

CAPSULE GEOLOGY

Fraction claim and continued onto the Buster claim, for total extended length of 181.8 metres. The last recorded ore shipment was in 1949 by leasers operating under the name Cranberry Creek Gold Mining Co. Ltd. Some underground drilling was done from a caved adit near the main campsite on the Standard Fraction, under lease to A.E. Horne. Sherritt-Lee Mines Ltd. was owner in 1959 and 1960. The most recent interest in the Standard Fraction property has been by Canstat Petroleum Resources Corp. in 1983.

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area. For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

The Standard Fraction adjoins the Rambler claim (082ESW034) in the northwest and the Buster claim (082ESW036) in the southeast. The property is underlain by granodiorite of the Westkettle batholith. A mineralized quartz vein occurs in an east trending shear/fault zone. The vein strikes 093 degrees and dips 90 degrees south. Northeast striking, high angle normal faults are numerous and closely spaced and chop the vein into short segments.

Mineralization consists of galena, pyrite, sphalerite, tetrahedrite and possibly chalcopyrite in a gangue of mainly quartz. Canstat Petroleum Corp. sampled the old abandoned workings as part of an exploration program in 1983. Sample #115 (47261) taken from a quartz vein in an adit yielded 8.9 grams per tonne silver, 0.1 gram per tonne gold and 0.04 per cent lead (Assessment Report 12734). Another sample (47260) was taken from a 15-centimetre quartz vein with 2 centimetres of massive galena in a silicified shear zone, exposed in a caved trench. The sample yielded 100.8 grams per tonne silver, 0.17 gram per tonne gold, 0.15 per cent lead and 0.31 per cent zinc (Assessment Report 12734).

The Standard Fraction has produced 161 tonnes of ore from which 531,892 grams of silver, 31 grams of gold, 2776 kilograms of lead and 2263 kilograms of zinc were recovered. Production was intermittent between 1914 and 1949.

BIBLIOGRAPHY

- EMPR AR 1916-K256; 1917-F212,F449; 1918-K210; 1919-N169; 1922-N173;
1923-A183; 1924-B168; 1925-A206; 1926-A209; 1927-C233; 1934-D9;
1935-D14; 1947-A154; 1948-A126; *1949-A138-A154; 1959-57; 1960-63
EMPR INDEX 3-200, 214
EMPR ASS RPT *12734
EMPR BC METAL MM00933
EMPR EXPL 1983-41,42
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, pp. 89, 92, 125
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
GCNL #144, 1969
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

Crown grant was forfeited February 15, 1994.

The Buster occurrence was Crown granted to J.P. Kelly and K.T. McKenzie in 1909. By 1913, an incorporated company (Alaska Mining Co.) took ownership but no work was done. Prior development consisted of a 27.4-metre shaft that had exposed a vein. In 1918, a 22.9-metre tunnel and open-cut and surface work was carried out by J. P. Kelly and associates. Ore shipments were made in this and the following year. Penticton interests acquired the property in 1934 and carried out further development work in 1935 and 1936. In 1946, work was carried out by Highland Silver Mines Ltd. In 1947, the '46-77' drift was extended from 21.5 to 97.5 metres length on the Standard Fraction claim and continued onto the Buster claim, for total extended length of 181.8 metres. A short section of ore was found at the end of this tunnel in the Buster vein on the Buster claim. The vein, however, was faulted off in the back of the tunnel. Silver Bell Mining Syndicate took over the property in 1949. The most recent interest in the Buster property has been by Canstat Petroleum Resources Corp. in 1983.

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area. For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

The Buster claim adjoins the Buster claim (082ESW035) to the southeast. The property is underlain by Westkettle granodiorite and Permian Wallace Formation metavolcanic and metasedimentary rocks. An east trending silicified shear/fault zone in chloritic granodiorite hosts a mineralized quartz vein that strikes 100 degrees and dips 60 degrees south. In the east, the vein locally extends into quartz porphyry of the Wallace Formation where it becomes a shattered zone. The quartz vein varies from a few centimetres to 1.2 metres in width.

Mineralization consists of tetrahedrite, galena, sphalerite, pyrite, native silver and minor chalcopyrite in a gangue of banded quartz and sericite. Tetrahedrite, discovered in the Buster shaft, is intergrown with argentiferous galena and sphalerite. A grab sample (#011/50349) taken by Canstat Petroleum Corp. in 1983 from the Buster adit yielded 1386.9 grams per tonne silver, 0.3 gram per tonne gold, 10.3 per cent zinc, 3.2 per cent lead and 0.17 per cent copper (Assessment Report 12734).

Total recorded production from the Buster claim was 7 tonnes in 1919. From this ore, 19,719 grams of silver, 225 kilograms of lead and 813 kilograms of zinc were recovered. Five tonnes of sorted ore was stacked at the portal of the Buster tunnel in 1918 but it is not known whether this ore was ever shipped.

BIBLIOGRAPHY

- EMPR AR 1909-K277; 1913-K156; 1918-K220; 1919-N168; 1934-D9; 1935-D14,G52; 1947-A154; 1948-A126; *1949-A138-A143
EMPR INDEX 3-191
EMPR ASS RPT *12734
EMPR BC METAL MM00831
EMPR EXPL 1983-41,42
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, pp. 84, 88-89, 92, 124
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
GCNL #144, 1969
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW037**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOE 5, OLD**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 14 N
LONGITUDE: 119 35 18 W
ELEVATION: 1120 Metres

NORTHING: 5434821
EASTING: 310833

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of a copper showing which outcrops on the former Joe 5 claim (Assessment Report 970).

COMMODITIES: Silver Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Pyrite
ASSOCIATED: Magnetite Quartz Calcite
COMMENTS: Mineralization occurs in quartz and calcite veinlets in Similkameen intrusions and Kobau rocks.

ALTERATION: Malachite Silica Chlorite Epidote Carbonate
K-Feldspar

COMMENTS: Malachite staining was noted in three old pits on the former Joe 5 and 7 claims.

ALTERATION TYPE: Oxidation Silicific'n Propylitic Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Shear
CLASSIFICATION: Porphyry Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au 106 Cu±Ag quartz veins
COMMENTS: Mineralization occurs in veinlets up to 5 millimetres wide hosted in shear zones.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Similkameen Intrusions
Jurassic			Kruger Syenite

LITHOLOGY: Quartzite
Phyllite
Quartz Mica Schist
Greenstone
Granodiorite
Quartz Diorite
Syenite
Nepheline Syenite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
Plutonic Rocks PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1967
SAMPLE TYPE: Unknown
COMMODITY GRADE
Silver 17.1400 Grams per tonne
Copper 0.3730 Per cent
Molybdenum 0.0040 Per cent
COMMENTS: A typical sample.
REFERENCE: Assessment Report 970.

CAPSULE GEOLOGY

The Joe 5 showing is located at 1120 metres elevation along a prominent northwest-trending ridge, 2 kilometres west of the southern end of Blue Lake (Assessment Report 970).

The southern two-thirds of the property are underlain by Jurassic Kruger syenite and nepheline syenite. To the north are

CAPSULE GEOLOGY

granodiorite and quartz diorite of the Middle Jurassic Similkameen intrusion. Jointly, these have intruded a northwest-trending roof pendant of Carboniferous to Permian Kobau Group metasediments and metavolcanics. Quartzite, phyllite, quartz-mica schist and greenstone are the dominant lithologies surrounding the showing. Alteration consists primarily of silicification with minor carbonate alteration. The greenstone has been more intensely propylitic altered to chlorite, epidote, carbonate, and potassic altered to potassium feldspar.

Low grade copper mineralization occurs in all rock types except syenite and nepheline syenite. Disseminated chalcopyrite and bornite with pyrite and magnetite comprise sulphides which appear to have been hydrothermally introduced in quartz and calcite veinlets up to 5 millimetres thickness. Malachite stains are also present in an abandoned pit at the Joe 7 showing. Copper mineralization appears associated with regional northwest-trending shears. A typical sample from one of these shear zones is reported to yield 17.14 grams per tonne silver, 0.373 per cent copper and 0.004 per cent molybdenum (Assessment Report 970).

BIBLIOGRAPHY

EMPR AR 1968-217
EMPR ASS RPT *970, 1228, 2027, 3701, 4423, *4919
EMPR GEM 1969-298; 1971-384; 1972-39; 1973-45
EMPR OF 1989-5
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW038**

NATIONAL MINERAL INVENTORY:

NAME(S): **NEPANEE**, NEPANEE FR., COBALT FR.,
NAPANEE, NEVADA, NEVADA FR.,
ROCCO PLATA

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:
LATITUDE: 49 24 30 N
LONGITUDE: 119 02 35 W
ELEVATION: 1493 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: A shaft located approximately 2.0 kilometres west from the summit of Goat Peak and 4.5 kilometres south-southeast of Beaverdell (Geological Survey of Canada Memoir 79, Figure 1).

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5474857
EASTING: 351796

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Eocene
ISOTOPIC AGE: 50 Ma
DATING METHOD: Lead/Lead
MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Faulted Fractured
DIMENSION: Metres
COMMENTS: Mineralized quartz veins strike 110 degrees and dip 43 to 45 degrees north. The veins vary from 12 to 61 centimetres width.
Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1267.

STRIKE/DIP: 110/45N
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Anarchist	Wallace	Westkettle Batholith
Jurassic			

LITHOLOGY: Hornblende Porphyritic Diorite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

Harper Ranch
RELATIONSHIP: Pre-mineralization
PHYSIOGRAPHIC AREA: Okanagan Highland
GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY

Silver	4594.0000	Grams per tonne
Lead	34.0000	Per cent
Zinc	14.0000	Per cent

COMMENTS: Sample from picked ore on the Cobalt claim.
REFERENCE: Minister of Mines Annual Report 1928, page C253.

CAPSULE GEOLOGY

The Napanee is a past producer, located 2.0 kilometres west of the summit of Goat Peak and 4.5 kilometres south-southeast of Beaverdell, British Columbia (Assessment Report 16772). The Napanee group consisted of the Napanee, Napanee Fraction, Cobalt Fraction, Nevada and Nevada Fraction claims in 1916. This ground was later restaked as the Rocco Plata and Van claims.

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area.

CAPSULE GEOLOGY

Two veins were opened up on the Napanee in 1904. The Napanee claim group was owned by E.P. Cummings and M.D. Schenck in 1916, with development work confined largely to the Napanee and Cobalt Fraction claims. Development consisted of a 21-metre shaft, a 23-metre crosscut and a 32-metre tunnel. In 1917, a new 9.1-metre inclined shaft, two opencuts and some drifting was done 91 metres northwest of the main shaft. In the following year, a 15-metre tunnel, 46 metres of trenching and opencut work were completed. In 1919, the first indications of ore were found in float boulders in 3 metres of gravel outwash, near the mouth of the crosscut. The boulders contained slabs of high-grade silver-lead ore. An ore shipment was made in this and the following year, on a newly discovered vein hosted in a east dipping fault plane. In 1928, development work, consisting of two crosscuts, was carried out on the Cobalt Fraction close to the boundary with the Alaska claim (082ESW191). One was driven 31 metres along a bearing of 070 degrees at 1531 metres elevation and the other driven 34 metres to the northwest. The two crosscuts were 9 metres apart. A third tunnel was driven 18 metres northwest at 1526 metres elevation and in which a shear-hosted vein was discovered 13 metres from the portal. Further work was carried out in 1930, 1933 and 1949. In 1949, 5 diamond-drill holes were drilled from a short adit and 2 shipments of clean-p ore were made. Red Rock Mines Ltd. restaked the ground as the Rocco Plata and Van claims in 1964. Considerable surface exploration was conducted under option to Minex Development Ltd. Red Rock Mines Ltd. conducted a 324-metre drill program in the following year. The most recent interest in the Buster property has been by Canstat Petroleum Resources Corp. in 1982 and 1983.

For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

The Napanee property adjoined the Buster claim (082ESW036) in the west but most of the historical workings occur on the Cobalt claim near the eastern boundary of the Alaska claim (082ESW191). The property is underlain by hornblende porphyritic diorite of the Wallace Formation close to the contact with Westkettle granodiorite.

A mineralized quartz vein system generally striking 110 degrees and dipping 42 to 45 degrees north, occurs in a highly shattered and faulted, east-dipping shear zone. The hangingwall is generally well defined but the footwall is shattered. Quartz vein widths vary from 12 to 61 centimetres. One section was step-faulted in a northwest direction.

Mineralization consists of pyrite and arsenopyrite in a gangue of mainly quartz. Historical 'silver-lead-zinc' ore carried gold and copper values. A sample taken in 1921 of the vein yielded 6.8 grams per tonne gold, 1097 grams per tonne silver, 7 per cent lead and 14 per cent zinc (Minister of Mines Annual Report 1921, page G185). A picked ore sample taken in 1928 from the Cobalt claim yielded trace gold, 4594 grams per tonne silver, 34 per cent lead and 14 per cent zinc (Minister of Mines Annual Report 1928, page C253).

Total recorded past production in 1919 and 1920 from the Napanee occurrence is 2 tonnes from which 6594 grams of silver, 93 grams of gold and 202 kilograms of lead were recovered. Two shipments of clean-up ore are reported made from the Cobalt claim in 1949 (Minister of Mines Annual Report 1949, page A148) but no records could be found to verify this.

BIBLIOGRAPHY

- EMPR AR 1904-G216; 1916-K255,K256; *1917-F204,F212; *1918-K220; *1919-N168; 1920-N163; *1921-G185; 1922-N173; 1923-A183; *1925-A207,A208; *1928-C253; 1930-A220; 1933-A153,A154; 1935-D14; 1949-A138-A143,A148; 1964-109; 1965-167
- EMPR INDEX 3-206
- EMPR ASS RPT 1927, 12734
- EMPR BC METAL MM00901
- EMPR GEM 1969-302
- EMPR OF 1989-5
- GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
- GSC MEM *79, pp. 84, 88-89, 92
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21
- CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
- *Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW039**

NATIONAL MINERAL INVENTORY:

NAME(S): **WASHINGTON (L.2363)**, IDAHO (L.2362), BEAVER (L.2342),
BEAVERDELL, HIGHLAND-BELL

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 25 49 N
LONGITUDE: 119 03 05 W

UTM ZONE: 11 (NAD 83)
NORTHING: 5477313
EASTING: 351258

ELEVATION: 1463 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Idaho shaft, 1.75 kilometres west-northwest from the summit of Mount Wallace, 2.5 kilometres east of the village of Beaverdell (Geological Survey of Canada Memoir 79, Figure 1).

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Galena Pyrite Arsenopyrite
COMMENTS: Refer to Beaverdell (082ESW030) for age of mineralization data.

ASSOCIATED: Quartz

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Irregular

MODIFIER: Faulted Fractured

DIMENSION: 91 Metres STRIKE/DIP: 160/90

TREND/PLUNGE:

COMMENTS: A dike striking 160 degrees and dipping vertical is associated with quartz veins 5 to 15 centimetres wide in a shear/breccia zone 0.9 to 2.0 metres wide and 91 metres long.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Anarchist	Wallace	Westkettle Batholith
Jurassic			Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Granodiorite
Meta Volcanic Rock
Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1901

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

274.2000

Grams per tonne

Lead

19.5000

Per cent

COMMENTS: A rough sample from a paystreak.

REFERENCE: Minister of Mines Annual Report 1901, page 1145.

CAPSULE GEOLOGY

The Washington prospect is located 1.75 kilometres west-northwest of the summit of Mount Wallace and 2.5 kilometres south of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area. Mineralization was first discovered on the Washington Crown-granted claim as early as 1901. A 33-metre shaft was sunk on the middle of a prominent dike. A second 10.7-metre deep

CAPSULE GEOLOGY

shaft with 4.6-metre crosscut and a 3-metre deep opencut were developed 122 metres from the first shaft. The claim was Crown granted to Boundary and Beaverton Management Co. Ltd. in 1902. The claim was Crown granted a second time to R. Forshaw in 1924. The property was acquired by Highland-Bell Ltd. In 1946, owner of the Beaverdell mine. In 1970, ownership was transferred to Teck Corp. The Beaverdell mine operated until 1991.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Eocene Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Eocene Beaverdell porphyry. The Westkettle batholith has been correlated with the Nelson intrusions that have been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper (Permian) section of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east.

A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine-grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization.

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. The mineralized veins are fissure-hosted, formed along east-trending faults in the west portion of the Beaverdell camp and northeast-trending faults in the east portion of the camp. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship. The northeast-striking, high angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite.

The Washington claim (Lot 2363) and Idaho claim (Lot 2362) overlap one another and are directly east and adjoin the Beaver mine (Lot 2342, 082ESW040). These claims are underlain by Westkettle granodiorite near the contact with north striking, steeply west dipping Wallace Formation metavolcanic rocks. A dike 20 metres in width cuts the granodiorite with a sheared and brecciated zone 0.9 to 2.0 metres wide occurring on either side of the dike. The dike strikes 160 degrees and dips vertical.

Masses and veins of quartz carrying pyrite, galena and occasional specks of arsenopyrite occur in this zone. Surface veins vary from 5 to 15 centimetres wide and are badly shattered, faulted and oxidized. This mineralized zone is 91 metres long.

BIBLIOGRAPHY

- EMPR AR 1900-878,879; *1901-1058,1145,1231; 1902-H182; 1924-B368;
*1925-A207
EMPR ASS RPT 18
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, p. 88
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES Vol. 19, No. 6, pp. 1264-1274, 1984
Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

MINFILE NUMBER: **082ESW040**

NATIONAL MINERAL INVENTORY: 082E6 Ag1

NAME(S): **BEAVER (L.2342)**, HIGHLAND-BELL, BEAVERDELL

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 45 N
LONGITUDE: 119 03 44 W
ELEVATION: 1311 Metres

NORTHING: 5477210
EASTING: 350469

LOCATION ACCURACY: Within 500M

COMMENTS: The west inclined shaft located 2.5 kilometres west-northwest from the summit of Mount Wallace and 2.0 kilometres east-southeast from Beaverdell (Geology 1975, Figure G-17).

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Argentite Silver

Arsenopyrite

COMMENTS: Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1267.
Other silver sulphides have also been reported.

ASSOCIATED: Quartz Calcite

ALTERATION: Chlorite Calcite Clay

ALTERATION TYPE: Propylitic Argillic

MINERALIZATION AGE: Eocene

ISOTOPIC AGE: 50 Ma

DATING METHOD: Lead/Lead

MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Bladed

MODIFIER: Faulted

DIMENSION: 152 x 11 x 1 Metres

STRIKE/DIP: 055/90

TREND/PLUNGE:

COMMENTS: An orebody lying within a fault both strike 055 degrees and dip vertically. Mineralization has been traced for 152 metres, with the largest ore shoot 11 by 1 metres discovered in the east shaft.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Permian
Jurassic

GROUP

Anarchist

FORMATION

Wallace

IGNEOUS/METAMORPHIC/OTHER

Westkettle Batholith

LITHOLOGY: Granodiorite
Lava
Volcanic Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SHAFT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1928

SAMPLE TYPE: Unknown

COMMODITY

Silver

GRADE

3086.0000

Grams per tonne

COMMENTS: A 1.8-metre sample of the main orebody in the east shaft.

REFERENCE: Minister of Mines Annual Report 1928, page C254.

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Chip

COMMODITY

Silver

GRADE

2.4000

Grams per tonne

Gold

0.3000

Grams per tonne

COMMENTS: Sample from quartz zone southeast of shaft.

REFERENCE: Assessment Report 16771.

CAPSULE GEOLOGY

The Beaver (Lot 2342) past producer is located 2.5 kilometres west-northwest of the summit of Mount Wallace and 2.0 kilometres east-southeast of Beaverdell, British Columbia (Assessment Report 16772). The claim was amalgamated with the Highland-Bell (Beaverdell) mine in 1938. The Beaver mine (082ESW030) was one of the few occurrences hosted in the Wallace Formation with sufficient volume and grade of mineralization to support extensive mining.

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area.

A high-grade orebody was first discovered in a 4.5 by 3.0 by 1.8 metre deep opencut on the Beaver claim in 1901. In 1903, the claim was Crown granted to J.T. Bell and D. Murray. By 1917, the property was owned by J. Sutherland who discovered a second vein in a 15-metre tunnel and a 3 by 3 metre opencut. The veins lie along the projected strike of veins on the adjacent Rob Roy claim (082ESW073). In 1925, the claim was leased and bonded to R. Clothier and associates, who began systematic mining along shear-hosted veins. The claim was leased and bonded to Beaver Silver Mines Ltd. from the Hallet estate and associates in 1926 and 1927. Work was suspended in 1932 due to a failure to find faulted extensions of mineralized veins. More mineralization was discovered in the Sutherland tunnel in 1933 and the 15-metre level was extended. By 1938, control of the claim was taken over by Highland-Bell Ltd. while operated by H.S. Nordman and associates under a two year lease. A lease was given to C. Staples on the dumps in 1939. Operation was intermittent until 1949 when the old Beaver shaft was rehabilitated and diamond drilling was done from the bottom of the No. 3 tunnel. In 1968, a new 116-metre drift was tunnelled under the old Beaver workings. Past development included a 16.3 metres west inclined shaft trending 030 degrees, an east 47.2-metre shaft trending 068 degrees, 376 metres of drifts and crosscuts, 50.2 metres of raises, opencuts and trenches up to 24 metres long and 3.6 metres deep, downslope in a south direction until faulting displaced mineralized veins. The main No. 3 tunnel trends southeast and intersected a faulted shear zone and was tunnelled to within 1.2 metres of the Bell claim (082ESW030). An upraise also cut the shear zone with high-grade ore below the Sutherland tunnel. The Beaverdell mine (082ESW030) which adjoins the Beaver mine to the north, has extended its underground workings to the Beaver claim.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Beaverdell porphyry. These have been dated by potassium-argon methods as Eocene (Watson, P.H., 1981): Genesis and zoning of silver-gold veins in the Beaverdell area, south-central British Columbia; Leary, G.M., 1970): Petrology and structure of the Tuzo Creek molybdenite prospect near Penticton, British Columbia and Exploration in British Columbia 1995, pages 124-126. The Westkettle batholith has been correlated with the Nelson intrusions that has been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper sections of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east.

A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine-grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. One of these was dated by potassium-argon methods at 61.6 +/- 2.2 Ma (Watson, P.H., 1981). Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization. One of these has given a potassium-argon age of 50.6 +/- 1.5 Ma (Watson, P.H., 1981).

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. The mineralized veins are fissure-hosted, formed along east-trending faults in the west portion of the Beaverdell camp, and northeast-

CAPSULE GEOLOGY

trending faults in the east portion of the camp. In general, quartz breccia veins and stockworks are so complex that continuous mineralized sections are a maximum of a few metres before being faulted or disrupted. Nevertheless, some mineralized zones have been found that extend up to 150 metres horizontally. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship: (1) high angle, north-striking normal faults, (2) low angle, north-trending strike-slip faults, (3) northeast-striking, high angle normal faults (terminal faults), (4) northeast-trending 'slice' faults and (5) crossfaults. The northeast-striking, high angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite. 'Ore ground' has been described as propylitic altered granodiorite, quartz diorite and quartz monzonite of the Westkettle batholith, up to 15 metres wide. These zones are characterized by sericite, clay minerals, chlorite, calcite, epidote and hematite. The fault-bounded veins commonly have a banded texture defined by outer, crudely parallel sulphide stringers. The wallrocks are brecciated and sheared over 30 to 150 centimetres width adjacent to veins. Weak sericite alteration of feldspars is pervasive in the Westkettle batholith.

The interpretation of galena lead-lead isotope age data coupled with geometrical and age relationships between dikes and veins suggests mineralization was formed around 50 Ma, coeval with Eocene stocks (Canadian Journal of Earth Sciences, Vol. 19, No. 6, pages 1264-1274, 1982).

The Beaver mine (Lot 2342) adjoins the Beaverdell mine (082ESW030) on the south and the Sally mine (082ESW073) on the west. Mineralized quartz veins up to 2.1 metres in width occupy a shear zone along a fault in Westkettle granodiorite and in the northeast portion of the claim, lavas and volcanic tuffs of the Wallace Formation. The fault strikes 055 degrees with steep to vertical dips to the south. Propylitic alteration is found in the wallrock up to 8 metres from the vein. Thin section studies show amphiboles almost entirely converted to chlorite and feldspars replaced by clay and calcite. The main vein is rarely continuous due to closely spaced north striking, west dipping normal faults that chop the vein into short segments.

Mineralization consists of segregations of galena, sphalerite, pyrite, argentite, native silver, arsenopyrite and occasional other silver sulphides in a gangue of mainly quartz with minor calcite. Segregations are up to 1.8 metres long and have been traced by opencuts and trenches for 152 metres. Mineralization hosted in the Wallace Formation was considered low-grade, although high-grade ore was found in the drag of the fault and along a flat-lying fault near the face of the east shaft. Here, the ore zone was 1.02 metres wide by approximately 11.0 metres long. The zone hosted four pay streaks, two of which were 30 centimetres long and one which was 15 centimetres wide. A 1.8 metre (chip/channel?) sample taken in 1928 yielded 3086 grams per tonne silver (Minister of Mines Annual Report 1928, page C254). High-grade ore pinches to 15 centimetres near the centre of the stoped area but widens to 6.1 metres at the northeast end. The orebody followed the host fault, striking 055 degrees and dipping vertical or steeply northwest or southeast.

Most ore was mined from the upper workings, including surface opencuts and trenches. Total recorded production from the Beaver mine was 1008 tonnes intermittently between 1925 and 1939. Recovery totalled 5,286,110 grams of silver, 1088 grams of gold, 55,134 kilograms of lead and 85,275 kilograms of zinc.

BIBLIOGRAPHY

- EMPR AR 1901-1143; 1903-H246; 1917-F204; 1925-A206,A207; *1926-A206-A208; 1927-C232; *1928-C253,C254; 1929-C262; 1932-A126; 1933-A153; 1934-A25,A29; 1935-A25,D14; 1937-A36,D34; 1938-D40; 1939-A36,A93, A94; 1940-A79; 1943-A38; *1949-A138-A148; 1968-224
EMPR INDEX 3-189
EMPR ASS RPT 16771, 16772
EMPR BC METAL MM00821
EMPR GEM 1974-57,58
EMPR GEOLOGY 1975, p. G30, Fig.G-17
EMPR OF 1989-5

BIBLIOGRAPHY

EMP MP CORPFILE (Highland-Bell Mines Ltd.; Highland Lass Ltd.;
Mastadon-Highland Bell Mines Ltd.; Leitch Mines Ltd.; Beaver Silver
Mines Ltd.; Sally Mines Ltd.; Teck Corp.)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, 178 pp.
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the
Beaverdell Area, south-central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW041**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD DROP (L.1195S)**, GOLD DROP FR. (L.3154), GOLD DROP NO. 2 (L.1196S),
 GOLD DROP GROUP, HOMESTAKE (L.1197S), JIM GROUP

STATUS: Past Producer
 REGIONS: British Columbia
 NTS MAP: 082E06E
 BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 24 06 N
 LONGITUDE: 119 03 23 W
 ELEVATION: 1372 Metres

UTM ZONE: 11 (NAD 83)
 NORTHING: 5474142
 EASTING: 350809

LOCATION ACCURACY: Within 500M

COMMENTS: An adit located 3 kilometres south-southwest from the summit of Mount
 Wallace and 4.5 kilometres south-southeast of Beaverdell (Assessment
 Report 12734).

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Chalcopyrite Tetrahedrite
 Silver
 ASSOCIATED: Quartz Barite Calcite Chlorite
 ALTERATION: Chlorite Malachite
 ALTERATION TYPE: Chloritic
 MINERALIZATION AGE: Eocene
 ISOTOPIC AGE: 50 Ma DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
 COMMENTS: Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1264.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic			Westkettle Batholith
Eocene			Unnamed/Unknown Informal

ISOTOPIC AGE: 50.6 +/- 1.5 Ma
 DATING METHOD: Potassium/Argon
 MATERIAL DATED: Whole rock

LITHOLOGY: Granodiorite
 Quartz Latite
 Quartz Latite Dike

HOSTROCK COMMENTS: A quartz latite (Idaho-type) dike is also hosted in the shear zone
 (Canadian Journal of Earth Sciences, Vol. 19, No. 6, page 1267).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
 TERRANE: Plutonic Rocks Harper Ranch
 METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1983
 SAMPLE TYPE: Channel

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	634.2000	Grams per tonne
Copper	0.1400	Per cent
Lead	0.2700	Per cent
Zinc	0.1600	Per cent

COMMENTS: Sample 47156c, a channel sample over 0.09 metre of a series of
 quartz veins within intensely altered granodiorite, from an adit.
 REFERENCE: Assessment Report 12734.

CAPSULE GEOLOGY

The Gold Drop property (Lot 2937) past producer is located 3.0 kilometres west of the summit of Mount Wallace and 4.5 kilometres south-southeast of Beaverdell, British Columbia (Assessment Report 16772). The Gold Drop group consisted of the Gold Drop (Lot 1195s), Gold Drop Fraction (Lot 3154) and Gold Drop Fraction No. 2 (Lot 1196s). The Gold Drop remains a Reverted Crown grant and the latter two have been forfeited as of February 15, 1994.

CAPSULE GEOLOGY

A 6-metre tunnel was driven along a high-grade vein on the Gold Drop claim in 1904. The Gold Drop and Gold Drop No. 2 Fraction were Crown granted to K.C.B. Frith and associates in 1911. In 1925, the claims were leased and bonded to Kettle River Mining Co. Opencuts were cleaned and a vein was traced by trenching. The Gold Drop Fraction was Crown granted in 1925 to R. Forshaw. A shaft was sunk at 1469 metres elevation and a 12-metre tunnel was driven 21 metres lower in elevation. A 1.5-metre winze was sunk from the end of this tunnel. Numerous opencuts continue downhill to an elevation of 1414 metres where a lower tunnel was driven 53.5 metres along a 1.2-metre wide vein. In 1927, the Gold Drop group, consisting of the Gold Drop, Homestake (Lot 11197s), Alaska Fraction (Lot 2938), Gold Drop Fraction and the Gold Drop No. 2 Fraction, were leased to a Killarney syndicate. Considerable surface development was done, including trenches, opencuts and extension of the lowest tunnel 18 metres on the vein extension below the shaft, by Kelowna interests in 1929. Sixty-one metres northwest of the main shaft another vein was exposed by shallow shafts and opencuts. In 1947, Highland Silver Mines Ltd. acquired the property. The Cranberry Creek Gold Mining Co. Ltd. leased the property in 1950. A new 91-metre adit was driven and two partly caved shafts were reconditioned. Ore from the old surface dumps was hand sorted and a shipment was made to the Trail smelter. The most recent interest in the Buster property has been by Canstat Petroleum Resources Corp. in 1983.

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area. For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

The Gold Drop property adjoins the Alaska claim (082ESW191) in the northeast and is one kilometre north-northeast of the Fran property (082ESW071). The area is underlain by Westkettle granodiorite. Mineralized quartz veins occupy an east trending shear zone dipping vertical. This zone is badly crushed and faulted and also hosts a quartz latite (Idaho-type) dike which locally cuts off the mineralized zone. The quartz veins range from 5 centimetres to 1.5 metres in width and in one area split and dip in different directions.

Mineralization consists of varying proportions of pyrite, galena, sphalerite, chalcopyrite, tetrahedrite and native silver in a gangue of mainly quartz with lesser brecciated granodiorite hostrock and occasional barite, calcite and chlorite. These commonly occur in widely separated irregular lenses up to 15 centimetres wide or as disseminations in quartz. Malachite occurs as an oxidation product. In 1926, a sample from the main shaft sunk in the same year yielded 51.4 grams per tonne gold and 377.1 grams per tonne silver (Minister of Mines Annual Report 1926, page A210). A sample from the lower tunnel yielded 54.9 grams per tonne gold and 104.5 grams per tonne silver (Minister of Mines Annual Report 1926, page A210). A 0.09-metre channel sample (47156c) taken in 1983 yielded 634.2 grams per tonne silver, 0.27 per cent lead, 0.16 per cent zinc and 0.14 per cent copper (Assessment Report 12734).

Total recorded production from the Gold Drop occurrence was 10 tonnes in 1950 and 1951 from old surface dumps on the Gold Drop Fraction. A total of 8305 grams of silver, 31 grams of gold, 517 kilograms of lead and 430 kilograms of zinc were recovered.

BIBLIOGRAPHY

- EMPR AR 1904-G216; 1911-K291; 1925-A200-A204,A207,A449; *1926-A209, A210; *1927-C233; *1929-C263; 1947-A154; 1948-A126; 1949-A138-A143; 1950-A39,A117; 1951-A41
EMPR INDEX 3-197 (year should read 1950-1951)
EMPR ASS RPT 8526, 9988, 10979, *12734
EMPR BC METAL MM00887
EMPR EXPL 1980-35; 1981-174; 1982-33,34; 1983-41,42
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, pp. 78, 92, 126
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
GCNL #144, 1969
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis,

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 914
REPORT: RGEN0100

BIBLIOGRAPHY

University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW042**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN ZONE (L.904S)**, SILVER BELL (L.905S), B.C. (L.903S),
IRISH BOY (L.902S), NICKEL, HEDLEY,
GOLD

STATUS: Prospect
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:
LATITUDE: 49 27 00 N
LONGITUDE: 119 58 58 W
ELEVATION: 1650 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of B shaft (Assessment Report 15072).

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

NORTHING: 5481760
EASTING: 283819

COMMODITIES: Gold Silver Zinc Copper Arsenic

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Arsenopyrite
ASSOCIATED: Quartz Pyrite Pyrrhotite
ALTERATION: Diopside Tremolite Garnet
ALTERATION TYPE: Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 300 x 1 Metres STRIKE/DIP:
COMMENTS: The shear-hosted vein has been traced by underground and surface workings over 300 metres. The vein width varies from 60 to 120 centimetres. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Nicola	Undefined Formation	Okanagan Intrusions
Jurassic			Nelson Intrusions
Middle Jurassic			

LITHOLOGY: Andesitic Tuff
Quartzite
Limestone
Hornblende Biotite Fine Grained Granite
Coarse Grained Granite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Drill Core
COMMODITY

Silver	184.1100	Grams per tonne
Gold	14.1900	Grams per tonne

COMMENTS: A 1.5-metre drill intersection interval between 18.2 and 19.7 metres.
REFERENCE: Assessment Report 15072.

CAPSULE GEOLOGY

The Golden Zone occurrence lies near the headwaters of Twenty Mile Creek, about 17.5 kilometres from Hedley, British Columbia. The showing was first discovered and staked in 1900 by Murphy, Brodhegan and Marks. Four claims were staked and later Crown granted; Golden Zone (Lot 904s), Silver Bell (Lot 905s), B.C. (Lot 903s) and Irish Boy (Lot 902s). Development work was carried out on the property until 1908. In 1907 a 5-stamp mill was erected on the property but only ran for a short time owing to a water shortage. Development consisted of a 35-metre shaft, a 76-metre shaft and numerous opencuts, pits and trenches. The property lay dormant until the 1930s when further exploration and development was carried out by Golden Zone Mines Ltd. Earlier underground workings were extended

CAPSULE GEOLOGY

and a new 35-metre adit (No. 1 Level) collared 168 metres west of the B shaft. In 1936, a new company developed a No. 2 Level, 58 metres below the No. 1 Level. In 1980, Agur Logging Co. Ltd. acquired the Crown grants. Exploration was carried out on the property by Midland Energy Corp. in 1982 and 1983. In 1985 and 1986, R.B. Stewart acquired the property and began exploration of the ground surrounding the Crown grants. Redding Gold Corp. optioned the property in 1986 and conducted exploration in 1986 and 1987.

Hostocks of the Golden Zone occurrence are limestone, quartzite and minor altered andesite tuff comprising a 1.62 by 6.5 kilometre roof pendant of Triassic Nicola Group. These are intruded by fine-grained, biotite hornblende granite of the Jurassic Okanagan intrusions and to the south by a coarse-grained, pink granite of the Middle Jurassic Nelson Plutonic Suite. The pink granite appears to be older than the fine-grained granite. These are cut by late granite porphyry dikes.

The claims were staked on a persistent quartz vein that can be traced east-west for over 300 metres. The vein occupies a strong shear in granite. The shear is 60 to 120 centimetres wide. The vein appears to branch into 4 or 5 smaller veins upon entering the andesite tuff. The vein shows a well-defined banded texture in the host granite, where clean walls frequently show slickensides. Strong oxidation has occurred at the granite-tuff contact. Pyrite, pyrrhotite, arsenopyrite, sphalerite and chalcopyrite occur in a gangue of quartz. The tuff has been altered to diopside and tremolite with plagioclase veinlets. Garnet occurs locally in some thin discontinuous quartz veinlets.

Preliminary surface samples in 1983 yielded up to 19.47 grams per tonne gold and 224.91 grams per tonne silver (Assessment Report 15072). In the following year, a 1.5-metre drill intersection between 18.2 and 19.7 metres yielded 14.19 grams per tonne gold and 184.11 grams per tonne silver (Assessment Report 15072). A sample (B), taken from a pit immediately south of the B.C. Crown grant in 1985, yielded 0.79 gram per tonne gold, 175.4 grams per tonne silver and 1.32 per cent arsenic (Assessment Report 15072). Grab sample 838, from the B shaft in 1937, yielded 216.68 grams per tonne gold and 154.28 grams per tonne silver (Property File - Golden Zone Mines Ltd. (1937): Level 1 Plan).

BIBLIOGRAPHY

- EMPR AR 1901-1163; 1905-190; 1906-166; 1907-120; 1908-119; 1909-136, 278; 1910-125; 1912-181; 1913-177; 1930-216; 1931-133; 1932-139; 1937-142, D14
EMPR ASS RPT *11514, 11687, 14283, *15072
EMPR PF (Golden Zone Mines Ltd. (1937): Composite Plan Map and Assay and Geological Plan (Level 1); Midland Gold Corp. (1988): Filing Statement-Vancouver Stock Exchange; Redding Gold Corp. (1989): Prospectus)
GSC MAP 4A; 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 2, p. 204-206; 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, p. 24; 72-53
GSC SUM RPT 1908, pp. 62-63

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW043**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD HILL**, GOLD HILL NO. 4, GOLD HILL NOS. 1-4,
DOLPHIN, LITTLE BILLY, PAYSTREAK NOS. 1-2,
ALLAN, MARY, DOUGLAS,
EVELYN, GEORGE HURST, GEO HURST,
BELLVUE FR., BELLRINGER NO. 1, BILLIE,
LITTLE CARIBOO

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:
LATITUDE: 49 06 57 N
LONGITUDE: 119 12 07 W
ELEVATION: 1372 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of the Dolphin adit and vein (Assessment Report 16168).

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5442667
EASTING: 339324

COMMODITIES: Gold Lead Zinc Silver

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Pyrrhotite Gold
COMMENTS: Free gold is reported associated with galena.
ASSOCIATED: Quartz
COMMENTS: Quartz is locally bluish chalcedonic quartz similar to the Cariboo-Amelia (082ESW020).
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic Mesothermal
SHAPE: Irregular
MODIFIER: Fractured
DIMENSION: 305 x 2 Metres STRIKE/DIP: 125/55W TREND/PLUNGE:
COMMENTS: The quartz vein on the Gold Hill No. 4 strikes 125 degrees, dips 55 degrees southwest and is 2.1 metres wide underground and traceable for 305 metres on surface. Other veins have different attitudes.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Middle Jurassic	Anarchist	Undefined Formation	Nelson Intrusions

LITHOLOGY: Argillaceous Quartzite
Calcareous Greenstone
Feldspar Porphyry Dike
Greywacke
Limestone
Micaceous Quartzite
Calcareous Biotite Schist
Granite
Granodiorite

HOSTROCK COMMENTS: The Anarchist Group is of Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Gold Hill occurrence is located at 1372 metres elevation on the southeastern slopes of Baldy Mountain. The occurrence is part of the historic Camp McKinney, located 9 kilometres north-northwest of Bridesville, British Columbia.

In 1935, the Gold Hill property consisted of the Gold Hill Nos. 1 to 4, Little Billy, Paystreak Nos. 1 and 2, Allan, Mary, Douglas and Evelyn; the result of a partial restaking of the original eight claims which included the George Hurst (Geo Hurst) (Lot 1456), Dolphin, Bellevue Fr. (Lot 1268) and Bellringer No. 1 claims. During this time the property was developed by Camp McKinney Gold Hill Mining Co. Ltd. and J. Carmichael. Many of the above claims and Crown-granted claims have lapsed and have been restaked more recently as the Billie, Lou and Doreen claims.

The Camp McKinney area is underlain by interbanded and

CAPSULE GEOLOGY

intergrading Carboniferous to Permian Anarchist Group metamorphosed sediments and volcanics. The group is mainly sedimentary and consists of greenstone, locally calcareous, altered quartzite and argillaceous quartzite, greywacke, limestone and locally micaceous quartzite and calcareous biotite schist. The minor volcanics are described as mainly altered andesitic and basaltic flows.

Granite and granodiorite of the Middle Jurassic Nelson intrusions have intruded the Anarchist Group to the west and south as small stocks and plugs. Along the contacts of these intrusions the Anarchist rocks have been deformed and hydrothermally altered. Younger dikes of felsic and mafic composition intrude both stratified and granitic rocks and may have been associated with faults related to these granitic intrusions. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies to the east. For a more detailed description of the geology of the area refer to the Cariboo-Amelia (082ESW020).

Mineralization on the property is confined to four or more bluish quartz veins, varying in attitude and size. Minerals within the veins include galena, sphalerite, pyrite and pyrrhotite. Free gold is associated with galena. The veins are hosted mainly by argillaceous quartzite and lesser calcareous greenstone. Feldspar porphyry dikes are reported halfway between the two main workings on the claim. The relationship between the dikes and veins, however, is unknown.

Development on the Gold Hill No. 4 claim consisted of two adits. The first adit was an 18-metre shaft at 1463 metres elevation with 4.5 to 6.1 metres crosscutting from the bottom. The shaft is sunk 15 to 18 metres deep on a 2.1-metre wide quartz vein striking 120 degrees and dipping 55 degrees southwest. On surface the vein is 1.8 metres wide and is traceable for over 305 metres. A crosscut driven south from the bottom of the shaft intersected three quartz veins of a different structure from the main vein. Mineralization consists of pyrite occurring in small bunches and along fractures in bluish quartz of similar character to the Cariboo-Amelia (082ESW020). The vein is well jointed parallel to the strike and dip of the host sheared quartzites.

Another adit was encountered to the north of the main Gold Hill adit. This adit was driven 40 metres with an average trend of 333 degrees. The adit was exploratory. No vein material or mineralization is reported. About 183 metres southeast along the strike of the Gold Hill vein and 45 metres lower in elevation the second 104-metre adit has been sunk on a quartz vein. At the adit entrance the vein is 1.5 metres wide, strikes 310 degrees and dips 60 to 85 degrees northeast. It consists of white to bluish chalcadonic quartz with scant mineralization. With depth the vein continually narrows, eventually pinching out at 18.0 metres. Pyrite, galena and sphalerite comprise mineralization; some short sections of quartz vein up to 25 centimetres wide with sheared host rock occur. The innermost 40 metres of the adit follows a slip that strikes 302 degrees and dips 70 degrees northeast. In the footwall of this slip there is a narrow and discontinuous quartz stringer.

The Dolphin showing is claimed to consist of three veins: (1) a 46 to 240 centimetre wide quartz vein striking 060 degrees was intersected in the Dolphin adit, (2) to the west, a band of mineralized quartzite explored by an 18-metre tunnel in quartzose schists and (3) near the western boundary, a 91 to 150 centimetre wide quartz vein striking 290 degrees and traceable on surface for 304 metres. Pyrite and galena comprise mineralization of the first vein.

One hundred and fifty-two metres east of the Dolphin adit and 53-metres southwest of the north neighbouring Edward VII claim, are a series of pits and opencuts which explore a 61 metre length of quartz vein striking 075 degrees and dipping 75 degrees south. The vein is as narrow as 22 centimetres and is hosted in the footwall of a 50 to 90 centimetre wide shear zone. In this vicinity mineralization consists of shattered pyrite masses veined with quartz.

Production records indicate that the Gold Hill occurrence produced 110 tonnes of ore in 1932 and 1935 with the recovery of 529 grams of silver, 435 grams of gold, 111 kilograms of lead and 96 kilograms of zinc. The work was done by Camp McKinney Gold Hill Mining Co. Ltd. and J. Carmichael.

BIBLIOGRAPHY

- EMPR AR 1894-map after 758; 1897-696; 1898-1117; 1932-130; 1933-157; 1935-A26,D16
- EMPR INDEX 3-197
- EMPR ASS RPT 12389, 15519, *16168
- EMPR BC METAL MM00857
- EMPR BULL *6, pp. 6,16

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 919
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC MEM *179, pp. 11-20
GSC OF 481; 637; 1505A; 1565A; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp,
pp. 12-22

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/25

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW044**

NATIONAL MINERAL INVENTORY:

NAME(S): **EUREKA (L.242)**, EUREKA FRACTION

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 04 N
LONGITUDE: 119 12 02 W
ELEVATION: 1394 Metres

NORTHING: 5442881
EASTING: 339431

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the main shaft on the Eureka claim (Assessment Report 16168).

COMMODITIES: Gold Silver Lead Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena
ASSOCIATED: Quartz
ALTERATION: Quartz Carbonate Mariposite
ALTERATION TYPE: Quartz-Carb.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic Mesothermal
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 76 x 2 Metres STRIKE/DIP: 110/82S TREND/PLUNGE:
COMMENTS: The Eureka vein is of variable width ranging from 0.30 to 2.74 metres. On the west side of the Eureka claim the vein strikes 110 degrees and dips 82 degrees southwest.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE: Upper Paleozoic
GROUP: Anarchist
FORMATION: Undefined Formation
IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Greenstone
Argillaceous Quartzite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Unknown
COMMODITY: Gold
GRADE: 4.5900 Grams per tonne
COMMENTS: The average of nine samples taken from the main Eureka dump.
REFERENCE: Assessment Report 16168.

CAPSULE GEOLOGY

The Eureka occurrence is located at approximately 1394 metres elevation on the southeast slopes of Baldy Mountain, 1.25 kilometres west-northwest of the Cariboo-Amelia occurrence (082ESW020). Bridesville, British Columbia lies 9.5 kilometres to the south-southeast.

The Eureka occurrence lies in a complex sequence of volcanic and metasedimentary rocks of the Carboniferous to Permian Anarchist Group. To the north are Cretaceous granitic and granodioritic rocks of the Okanagan batholith. Middle Jurassic granitic rocks of the Nelson intrusions occur to the southwest. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies of the Anarchist Group to the east. For a more detailed description of the regional geology of the McKinney camp refer to the Cariboo-Amelia occurrence (082ESW020).

Two shafts exist on what is known as the Eureka vein on the Eureka claim. The first main shaft was sunk in 1899, to a depth of

CAPSULE GEOLOGY

49 metres with a 34-metre drift at 26 metres depth. The second shaft is 30 metres east of the main shaft and is 5 metres deep.

On the west side of the claim the quartz vein is up to 2.74 metres wide, striking 110 degrees and dipping 82 degrees south. Flat faults have displaced the lower sections of the vein to the south. Opencuts and a 6.1-metre deep shaft have traced the vein 76 metres along a strike of 112 degrees. In the northwest section of these workings the vein is 1.2 to 1.8 metres wide while in the southeast section, it is 30 to 91 centimetres wide. The vein is hosted predominantly in greenstone. Wallrocks consist of argillic quartzites and greenstone. Carbonate alteration occurs within a few centimetres of this vein.

Mineralization in the vein is reported to consist of pyrite, chalcopyrite, galena and mariposite. The dump from the main shaft consists of quartz with pyrite and minor chalcopyrite. The dump is estimated to contain 1814 tonnes of variably mineralized quartz. Nine samples from this dump were assayed in 1986 yielding values ranging from 0.03 to 12.31 grams per tonne gold and an average of 4.59 grams per tonne gold (Assessment Report 16168). The smaller shaft dump is reported to yield 9.05 grams per tonne gold (Assessment Report 16168).

Development work on the Eureka Fraction consisted of several trenches and shafts. The deepest shaft is reported to be 4.6 metres deep.

On the Eureka Fraction the vein is 1.2 to 1.8 metres wide and strikes 280 degrees. The vein can be traced for 46 metres on surface and consists of pyrite and chalcopyrite containing gold and silver in a quartz gangue.

While physical evidence indicates the removal of a considerable amount of vein material from the Eureka occurrence, there are no known production records. It is uncertain whether this vein represents the western continuation of the Maple Leaf and Cariboo/McKinney veins.

BIBLIOGRAPHY

EMPR AR 1894-754, map after 758; 1896-562, 583; 1897-604; 1898-1117;
1925-208
EMPR ASS RPT 9840, 12389, 15519, *16168
EMPR BULL *6, pp. 17, 18
EMPR OF 1898-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp,
pp. 12-22

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/26

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESW045**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAILOR (L.766)**, SAILOR FRACTION (L.2523), BILLIE,
LOU, CARAMELIA, CAMP MCKINNEY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:
LATITUDE: 49 06 45 N
LONGITUDE: 119 11 47 W
ELEVATION: 1336 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of the Sailor shaft (Bulletin 6, Figure 2).

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5442285
EASTING: 339718

COMMODITIES: Gold Silver Lead Zinc Copper
Chromium Nickel

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite Gold
Arsenopyrite Chromite
COMMENTS: Sphalerite is minor; chalcopyrite is rare. Anomalous nickel and chromium values are associated with quartz-carbonate alteration in dump samples.
ASSOCIATED: Quartz Graphite
ALTERATION: Quartz Ankerite Mariposite Chlorite Sericite
Annabergite
COMMENTS: Wallrock consists of greenstone heavily altered to ankeritic carbonate and chlorite. Mariposite and anabergite are reported in the Sailor dump.
ALTERATION TYPE: Quartz-Carb. Carbonate Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Mesothermal Magmatic Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn
DIMENSION: Metres STRIKE/DIP: 045/ TREND/PLUNGE:
COMMENTS: Quartz veins on the Sailor and Sailor Fr. Reverted Crown grants strike 045 and 090 degrees, respectively. The Sailor vein is brecciated in the lower sections. The Sailor Fraction vein is faulted.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	

LITHOLOGY: Calcareous Greenstone
Quartzite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY
Silver 19.7000 Grams per tonne
Gold 2.4900 Grams per tonne
Lead 0.9500 Per cent
Zinc 0.1600 Per cent
COMMENTS: Sample CM8807, a representative chip sample from the quartz dump at the Sailor shaft.
REFERENCE: Assessment Report 17815.

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1940

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

13.7000

Grams per tonne

Gold

2.0500

Grams per tonne

COMMENTS: Vein on the Sailor Reverted Crown grant.
REFERENCE: Bulletin 6, page 19.

CAPSULE GEOLOGY

The Sailor occurrence is located at 1336 metres elevation on the southeastern slopes of Baldy Mountain, 600 metres southwest of the Cariboo-Amelia occurrence (082ESW020). The occurrence is part of the historic Camp McKinney, located 9 kilometres north-northwest of Bridesville, British Columbia.

The Sailor occurrence is located on the Sailor (Lot 766) and Sailor Fraction (Lot 2523) of the former Sailor Claim Group held by Sailor Consolidated Mining and Milling Co. (circa 1901). At this time the claim group consisted of the Minnie-Ha-Ha (Lot 680), Cariboo Fraction, Golden Crown Fraction (Lot 924), Sailor (Lot 766), Rover Fraction (Lot 769), Alice Fraction, Bellevue (Lot 1268), Bellevue Fraction (Lot 1652), Snowshoe (Lot 1269), Diamond (Lot 1455) and Toledo (Lot 1270) claims, most of which were Crown granted.

The Sailor occurrence lies in a complex sequence of volcanic and metasedimentary rocks of the Carboniferous to Permian Anarchist Group. To the north are Cretaceous granitic and granodioritic rocks of the Okanagan batholith. Middle Jurassic granitic rocks of the Nelson intrusions occur to the southwest. Eocene Pentiction Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies of the Anarchist Group to the east. For a more detailed description of the regional geology of the McKinney camp refer to the Cariboo-Amelia occurrence (082ESW020).

Development of the Sailor was via a 53-metre shaft with levels at 23, 30, and 46 metres, respectively. The shaft, sunk in 1899, is located on flat ground and is now caved. On the Sailor Fraction, development is through a shaft about 4.5 metres deep. It is also inaccessible.

Mineralization on the Sailor and Sailor fraction is hosted in quartz veins up to 1 metre wide with accessory calcite in veinlets and chloritic partings. Quartz-carbonate, sericite and chlorite alteration are closely associated with these veins. Galena, chalcopryrite, sphalerite and native gold comprise vein mineralogy and occur as fine grained disseminations comprising less than 1 per cent of the veins. Traces of arsenopyrite are reported associated with quartz-carbonate alteration surrounding the veins. Most quartz specimens with high grade gold and silver contain 1 to 2 per cent galena and sphalerite, and 2 to 5 per cent pyrite. Native gold occurs as fine specks in quartz (Assessment Report 17815). In the Sailor dump, there are considerable quantities of carbonate altered rock bearing mariposite and possibly annabergite. This contains anomalous quantities of nickel and chromium (Assessment Report 17815).

At the Sailor shaft, mineralization is confined to a 1 to 2 metre wide quartz vein which strikes 045 degrees. The wall rock consists of greenstone heavily altered to ankeritic carbonate, bright green chlorite and quartzite. On the lower level the vein is reportedly very broken up. Material taken from the dump indicates that minerals present consist of galena, sphalerite, pyrite some of which is shattered and veined with quartz, and rarely chalcopryrite. Grab sample 42974, taken during prospecting in 1987, of galena-bearing quartz from the Sailor dump assayed 15.10 grams per tonne gold and 34.0 grams per tonne silver (Assessment Report 15519). Sampling in 1988 yielded similar values. Sample CM8807 yielded 2.49 grams per tonne gold, 19.7 grams per tonne silver, 0.95 per cent lead and 0.16 per cent zinc (Assessment Report 17815).

On the Sailor Fraction, just north of the Sailor corner post and west of the Sailor shaft, a quartz mass 2.1 by 1.5 metres trends east. Here, sparse pyrite and rare chalcopryrite are the only mineralization indicated in dump samples. Flat lying faults have displaced the lower segment of the vein to the south. West of this massive quartz vein on a small creek, another vein is reported. It is about 21 metres in length, strikes 110 degrees and dips near vertical. The vein is up to 1.5 metres wide and consists of white-coarsely crystalline to bluish quartz containing pyrite and sparse chalcopryrite, near its eastern end. A sample of this material from a dump yielded 2.05 grams per tonne gold and 13.7 grams per tonne silver (Bulletin 6, page 18). A dump sample, taken during an

CAPSULE GEOLOGY

exploration program by the Gold Hill Syndicate in 1986, from the best mineralized quartz yielded 8.9 grams per tonne gold and 27.4 grams per tonne silver (Assessment Report 16168).

A series of surface strippings, opencuts and trenches extend from the Sailor shaft for 61 metres along a strike of 112 degrees and then an additional 15 metres along a strike of 135 degrees. The vein is hosted in greenstone and varies from 1.2 to 1.8 metres wide along the northwestern section and 0.3 to 0.9 metres wide along the southeastern section.

BIBLIOGRAPHY

EMPR AR 1894-map after 758; 1897-604,606; 1898-1117,1196; 1899-603, 772; 1900-880; 1901-1151; 1904-301; 1933-157; 1934-D9
EMPR ASS RPT 8153, 9840, *15519, *16168, *17815, 20668, 23494, 23833
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC BULL *6, pp. 1-15,17-19
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *179, p. 17
GSC OF 481; 637; 1505A; 1565; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp, pp. 12-22
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/17

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW046**

NATIONAL MINERAL INVENTORY:

NAME(S): **MINNIE-HA-HA (L.680)**, MINNIE-HA-HA, SAILOR (L.766),
 GOLDEN CROWN FR. (L.924), CARIBOO FR., CAMELIA,
 CAMP MCKINNEY

STATUS: Prospect	Underground	MINING DIVISION: Greenwood
REGIONS: British Columbia		
NTS MAP: 082E03E		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 49 06 45 N		NORTHING: 5442273
LONGITUDE: 119 11 27 W		EASTING: 340124
ELEVATION: 1318 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: The location of the Minnie-Ha-Ha shaft (Bulletin 6, Figure 2).		

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite	Galena	Sphalerite	Chalcopyrite	Gold
ASSOCIATED: Quartz	Feldspar			
COMMENTS: Blue quartz.				
ALTERATION: Ankerite	Calcite	Sericite	Quartz	
ALTERATION TYPE: Carbonate		Sericitic	Silicific'n	
MINERALIZATION AGE: Unknown				

DEPOSIT

CHARACTER: Vein	Shear		
CLASSIFICATION: Hydrothermal	Epigenetic	Mesothermal	
TYPE: I01 Au-quartz veins			
DIMENSION: 15 x 1	Metres	STRIKE/DIP: 280/80N	TREND/PLUNGE:
COMMENTS: The Minnie-Ha-Ha quartz vein is 15 to 137 centimetres wide and has been traced for 15 metres on surface. It strikes 280 degrees and dips 80 degrees northeast.			

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Calcareous Greenstone

HOSTROCK COMMENTS: The Anarchist Group is of Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane	PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan	
METAMORPHIC TYPE: Regional	RELATIONSHIP: Pre-mineralization
	GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1988
SAMPLE TYPE: Chip	
COMMODITY	GRADE
Silver	3.3000 Grams per tonne
Gold	4.6000 Grams per tonne
Copper	0.0100 Per cent
Lead	0.0300 Per cent
Zinc	0.0700 Per cent

COMMENTS: Sample CM8806, a 30-centimetre chip sample, taken from the Minnie-Ha-Ha shaft.

REFERENCE: Assessment Report 17815.

CAPSULE GEOLOGY

The Minnie-Ha-Ha occurrence is located at 1318 metres elevation on the southeastern slopes of Baldy Mountain, 600 metres southwest of the Cariboo-Amelia occurrence (082ESW020). The occurrence is part of the historic Camp McKinney, located 9 kilometres north-northwest of Bridesville, British Columbia.

In 1901, the Sailor and Minnie-Ha-Ha claims were amalgamated under the ownership of Minnie-Ha-Ha Gold Mining Co. Little exploration has been done on the Minnie-Ha-Ha since this time. Jan Resources Ltd. conducted an exploration program on the Teaser (Lot 1625), Minnie-Ha-Ha, Pandre (Lot 1740), Alma (Lot 1741), Sneezzer (Lot 2772) and Mitch (Lot 3589) Crown and Reverted Crown grants. The

CAPSULE GEOLOGY

program consisted of soil geochemistry and prospecting. In 1980, the Minnie-Ha-Ha claim was acquired by Nexus Resource Corporation as part of the Sailor Group. An electromagnetic and magnetometer geophysical survey were conducted in that year. In 1981, geochemical soil and geological mapping were conducted. Then in 1988, another more detailed soil and rock geochemical program was conducted.

The Minnie-Ha-Ha occurrence was developed by a 61-metre shaft with drifting at 30, 36, and 61 metre levels totalling 183 metres. On the east side of the shaft the vein is reportedly 15 to 30 centimetres wide. The west side of the shaft contains a narrow shear zone with a few quartz stringers within the footwall. The shaft is now caved and inaccessible. Other veins were discovered on the Minnie-Ha-Ha claim but only prospected.

The Minnie Ha-Ha occurrence lies in greenstone metavolcanic and metasedimentary rocks of the Carboniferous to Permian Anarchist Group. To the north are 'Valhalla' Jurassic-Cretaceous granitic and granodioritic rocks. Middle Jurassic granitic rocks occur to the southwest. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies of the Anarchist Group to the east. For a more detailed description of the regional geology of the McKinney camp refer to the Cariboo-Amelia occurrence (082ESW020).

The Minnie-Ha-Ha occurrence is hosted by calcareous greenstone crosscut by quartz feldspar veinlets. Hostrocks are strongly bleached near the vein walls and altered to sericite, calcite and ankerite with minor secondary quartz and disseminated pyrite. Silicification of the hostrocks is also common.

Mineralization consists of minor pyrite and galena within a 15 centimetre to 1.37 metre wide quartz vein striking 280 degrees and dipping 80 degrees north. Trace chalcopyrite, sphalerite and free gold were found in dump samples in 1988. The vein is reported traceable for 15 metres on surface. Several samples taken from the Minnie-Ha-Ha dump in 1988 yielded anomalous results. The best sample, Sample CM8803, yielded 11.9 grams per tonne gold, 30.0 grams per tonne silver, 0.63 per cent lead, 0.16 per cent zinc and 0.04 per cent copper (Assessment Report 178155). Sample CM8806, a 30-centimetre chip sample taken from the Minnie-Ha-Ha shaft, yielded 4.7 grams per tonne gold, 3.3 grams per tonne silver, 0.07 per cent zinc, 0.03 per cent lead and 0.01 per cent copper (Assessment Report 178155). The vein width was 30-centimetres with a strike of 116 degrees and a dip of 81 degrees northwest. The footwall consisted of white bull quartz. The hangingwall contained chloritic partings with 5 per cent disseminated pyrite, 0.5 per cent sphalerite, trace galena and chalcopyrite.

A five stamp mill was erected and ran for three weeks during March 1900. No production records could be found. The property was abandoned later that same year. It is questionable whether pay ore was ever found (Minister of Mines Annual Report 1901, page 1151).

BIBLIOGRAPHY

- EMPR AR 1894-map after 758; *1897-606; 1899-773; 1901-1151
- EMPR ASS RPT *9840, *17815, 20668, 23833
- EMPR MR MAP 7 (1934)
- EMPR OF 1989-5
- EMPR PF (Letter and maps of work by D.W. Tully, 1979)
- GSC BULL *6, pp. 1-15,18-19
- GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
- GSC MEM 179, p. 17
- GSC OF 481; 637; 1505A; 1565; 1969
- Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp, pp. 12-22
- Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/17

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

surrounding area. These showing have been intermittently explored on the Apex claim group consisting of the Independence (Lot 256s), former White Grouse (Lot 551s), Apex (Lot 659s), Australian (Lot 690s), former Alpha (Lot 691), Utopia (Lot 692s), Acacia (Lot 694s), Acadia (Lot 695s), Goldsmith (Lot 1101s), Nelson (Lot 1102s), Nelson Fraction (Lot 1103s) Reverted Crown grants and the Nighthawk, Keystone, Standard and Deanna claims.

The first recorded work occurred on the Acacia occurrence in 1902, under the ownership of McMillan and associates. Small surface cuts were made. In 1903, further cuts were made and a 6-metre shaft sunk. Between 1905 and 1906, B.C. Copper Co. sunk an 18-metre shaft. This is thought to be the No. 2 inclined shaft on the Acacia (Lot 694s) Reverted Crown grant, from which production occurred later in 1945. The property was obtained by Pickard, Rogers and Shatford in 1912. A drift tunnel (100 level) was developed from the bottom of the No. 2 shaft in 1913. Between 1921 and 1922, a 1.5-metre shaft and 10.7-metre adit were completed on the Nelson claim. Hedley Gold Mining Co. optioned the property between 1926 and 1928. A 12-metre shaft was completed but stopped where mineralization ended. The owner, J. McNulty, drove an adit in the vicinity of the shaft in 1928. Between 1938 and 1939, Kelowna Exploration Co. Ltd. held the property and drove the Main adit for 487 metres on the Nelson claim, to test the underground continuity of surface gold-bearing showings. The property was optioned to Hunston and McLeod in 1945. Ninety-nine tonnes of ore was stoped from the No. 2 adit and 100 level. Apex Exploration and Mining Co. obtained the property in 1966. Property exploration included several underground drillholes from the Main adit. In 1979, Union Carbide optioned the property from owner, G. Willis, who later sold the claims to S. Brewer. Between 1980 and 1982, Union Carbide conducted a comprehensive exploration program on the property and surrounding area. The option was dropped and Cominco Ltd. acquired an option on the property in 1983. Further property exploration was conducted until 1985.

The area between Nickel Plate Lake and Keremeos, contains a sequence of Triassic volcanic and sedimentary rocks that have been intruded by granitic Okanagan intrusions. Larger intrusions are composed of granite and granodiorite, while smaller stocks are composed of diorite and gabbro. Numerous sills, dikes and apophyses are associated. Triassic rocks are assigned to the Nicola Group, which have been subdivided in the Apex Mountain area into the Triassic Shoemaker Formation, the Old Tom Formation of the Apex Mountain Complex and the Upper Triassic Independence Formation. These rocks form the eastern limb of a large anticlinal fold with fold axes striking roughly north. The Independence Formation consists of interbedded, dark grey to black chert (commonly rusty or red stained), chert breccia, and siliceous greenstone containing disseminated pyrite and pyrrhotite or pyrite and arsenopyrite. The Shoemaker consists of cherts, greenstone and minor argillite. The cherts of the Shoemaker Formation are commonly lighter coloured (buff, pink, grey, grey-green) and commonly show a saccharoidal texture. The area contains numerous stratabound gold-bearing, pyrrhotite skarn-type mineralization.

The Australian showing is underlain by rocks of the Independence Formation. Within this area, rhyolite to dacite tuffs and interbedded black, graphitic cherts containing up to 5 per cent disseminated pyrrhotite. They are overlain by a fine grained, unmineralized marble unit but locally metasomatically altered to quartz-calcite-pyroxene skarn. The marble unit is about 8 metres thick. Fine grained, dark grey, barren basalt and black cherts overlie the marble unit. Basalt flows range from 7 to 15 metres thickness. This stratigraphic sequence strikes northeast and dips 30 to 60 degrees southeast. A weak metamorphic foliation is developed parallel to bedding.

Within the skarn, mineralization consists of up to 15 per cent disseminated pyrrhotite, 2 per cent chalcopyrite and minor scheelite. The skarn appears to be best developed near the marble-felsic tuff, chert contact, ranging up to 6 metres thickness. Rhyolite and dacite tuffs also contain up to 5 per cent disseminated pyrrhotite with minor pyrite and chalcopyrite.

During property exploration by Cominco Ltd. in 1984, geological mapping and rock chip sampling was carried out around the Nos. 2 and 3 adits on the Acacia (Lot 694s) Reverted Crown grant. Of 35 rock chip samples collected within and near the No. 2 adit, three underground chip samples contained gold higher than 3.08 grams per tonne (Assessment Report 11934). Sample R83-C12 yielded 11.18 grams per tonne gold and 0.27 per cent copper (Assessment Report 12783). The sample was taken across 1 metre of skarn down the east wall of the 100 level, 14 metres from the shaft. Sample R83-E8 yielded 6.31 grams per tonne gold (Assessment Report 12783). The sample was taken

CAPSULE GEOLOGY

across 2.25 metres of marble down the west wall of the 100 level, 34 metres from the shaft. Sample R83-F11 yielded 6.03 grams per tonne gold and 0.10 per cent copper (Assessment Report 12783). The sample was taken horizontally across 3.75 metres of skarn and marble, 28 metres from the shaft.

A select sample taken in 1902 yielded 7.7 per cent copper, 96.00 grams per tonne silver and 96.00 grams per tonne gold (Minister of Mines Annual Report 1902, page 185). A sample obtained from the 1.5-metre shaft on the Nelson claim yielded 107.66 grams per tonne gold, 30.86 grams per tonne silver and 0.22 per cent copper (Minister of Mines Annual Report 1922, page 163).

Of 118 trench samples taken in 1984 on the White Grouse claim, the mean values were 0.09 gram per tonne gold, 4.0 grams per tonne silver and 0.07 per cent copper (Assessment Report 12783).

The Acacia occurrence produced 99 tonnes of ore in 1945, from which 5754 grams of gold, 1680 grams of silver and 689 kilograms of copper were recovered. The ore was reported shipped to a Tacoma smelter.

BIBLIOGRAPHY

- EMPR AR 1900-885; 1901-1158; 1902-185; 1903-177; 1904-227; 1908-251;
1911-179; 1912-326; 1919; 170; 1922-163; 1926-448; 1945-43,92;
*1967-217-219
EMPR ASS RPT 9473, 10926, *11934, *12583, *12783, 18204
EMPR BC METAL MM00331
EMPR BULL 101, p. 212
EMPR GEM 1969-352
EMPR INDEX 3-188
EMPR PF (Apex Exploration and Mining Co. Ltd. (1967): Annual Report;
Apex Exploration and Mining Co. Ltd. (1967): Prospectus; Magnetic
map with geology, 1966)
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53
Starr, C.C. (1936): Report of Examination of the Nelson Group
including the Independence (6 pages); Sketch of claims.

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW048**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN PLUG**

MINING DIVISION: Osoyoos

STATUS: Showing
 REGIONS: Kootenay Region, British Columbia
 NTS MAP: 082E05W
 BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 18 10 N
 LONGITUDE: 119 46 13 W
 ELEVATION: 0850 Metres

NORTHING: 5464807
 EASTING: 298618

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of diamond-drill hole 88-2 on the Golden Plug claim (Assessment Report 17843). Former 082ESW048 (Australian) is included with Acacia (082ESW047).

COMMODITIES: Silver Zinc Copper Lead

MINERALS

SIGNIFICANT: Pyrite Sphalerite Chalcopyrite Galena
 ASSOCIATED: Quartz Calcite
 ALTERATION: Clay
 ALTERATION TYPE: Argillic
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein Disseminated
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	
Eocene	Undefined Group	Springbrook	

LITHOLOGY: Polymictic Conglomerate
 Pyroxene Phonolite Lava
 Trachyandesite Flow
 Pyroxene Basaltic Andesite

HOSTROCK COMMENTS: Lithologies are for the Springbrook Formation and Kitley, Yellow Lake and Kearn Creek members of the Marron Formation, respectively.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
 TERRANE: Overlap Assemblage
 METAMORPHIC TYPE: Regional Okanagan RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1988
 SAMPLE TYPE: Drill Core
 COMMODITY GRADE
 Silver 2.3000 Grams per tonne
 Copper 0.0100 Per cent
 Lead 0.0700 Per cent
 Zinc 0.1500 Per cent

COMMENTS: Sample 7959A over 1 metre between 193 to 194 metres from drillhole 88-2.

REFERENCE: Assessment Report 17843.

CAPSULE GEOLOGY

The Golden Plug showing is located 2 kilometres southwest of Twin Lakes, 6 kilometres north-northeast of Olalla, British Columbia.

No exploration record prior to 1977 could be found for the Golden Plug showing. During 1977 and 1978, Union Oil Co. of Canada Ltd. conducted exploration consisting of induced polarization surveys, scintillometer surveys and limited geological mapping for uranium in the area. A geochemical soil survey was conducted on part of the Golden Plug showing in 1985. During 1987 and 1988, a limited diamond drilling program was conducted to examine the source of an induced polarization anomaly.

The Golden Plug showing lies along the western margin of a fault-bound basin of Eocene Penticton Group volcanic rocks. At the base of this volcanic succession lies the Springbrook Formation that

CAPSULE GEOLOGY

consists of massive, unsorted, polymictic conglomerate and breccia with lesser sandstone and tuff. The matrix of the conglomerate and breccia is silty and green. Clasts are dominantly volcanics (45 per cent) and chert (35 per cent) with lesser metamorphic rocks (10 per cent), sediments (5 per cent) and intrusions (5 per cent). The lowest member of the overlying Marron Formation is the Yellow Lake Member. At the Golden Plug, the Yellow Lake Member consists dominantly of pyroxene-rich mafic phonolite lava with well developed anorthoclase phenocrysts. This is overlain by trachyandesite flows with conspicuous glomerophenocrystic clots of feldspar of the Kitley Lake Member. Highly vesicular, pyroxene-rich basaltic andesite of the Kearns Creek Member overlies the Kitley Lake Member to the east near Twin Lakes. The Olalla rhyolite of the Marama Formation overlies members of the Marron Formation to the immediate north.

In 1986 and 1988, a drill program was initiated to test an induced polarization anomaly and for epithermal precious and base metal mineralization in the Springbrook Formation. However, the Springbrook Formation was never reached. An intense fracture zone of clay alteration containing quartz and calcite with pyrite, galena, sphalerite and chalcopyrite mineralization was determined to be the cause of the induced polarization anomaly.

Drillhole 88-2 intersected the basal volcanic breccia and lahar unit of the Yellow Lake Member at 287 metres depth. Argillic alteration was locally strong in Olalla rhyolite. Weak to moderate, fracture-controlled carbonate alteration was also present. Three sections from drillhole 88-2 yielded weakly anomalous silver and zinc values. Sample 7952A, over 1 metre at 187 metres, yielded 1.4 grams per tonne silver, 0.10 per cent zinc, 0.03 per cent copper and 0.03 per cent lead (Assessment Report 17843). Sample 7959A, over 1 metre at 193 metres, yielded 2.3 grams per tonne silver, 0.15 per cent zinc, 0.01 per cent copper and 0.07 per cent lead (Assessment Report 17843). Sample 7964A, over 1 metre at 198 metres, yielded 2.1 grams per tonne silver and 0.26 per cent zinc (Assessment Report 17843).

BIBLIOGRAPHY

EMPR ASS RPT 13611, *15517, *17843
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

The Shoemaker consists of cherts, greenstone and minor argillite. The cherts of the Shoemaker Formation are commonly lighter coloured (buff, pink, grey, grey-green) and commonly show a saccharoidal texture. The overlying Upper Triassic Independence Formation consists of interbedded, dark grey to black chert (commonly rusty or red stained), chert breccia, and siliceous greenstone containing disseminated pyrite and pyrrhotite or pyrite and arsenopyrite.

At the Papex showing, the Shoemaker Formation is composed of dark grey, sillimanite hornfels. In thin section, this rock is composed of sillimanite-rich aggregates that enclose or are interbanded with quartz-feldspar masses. The sillimanite is associated with cordierite, orthoclase, urallite, quartz, hematite and a few grains of forsterite and some apatite. The sillimanite hornfels has been replaced by silica so that the present rock is composed of embayed and serrated inclusions of hornfels in a mosaic of anhedral secondary quartz. Pyrite commonly occurs as fracture fillings and chalcopyrite is scarce. Magnetite is locally present.

The Old Tom Formation consists of propylitically altered, dark grey to green, fine grained, massive greenstone (andesite?) with an amygdaloidal texture. In thin section the matrix consists of epidote, zoisite and fibrous amphibole with some minor quartz and albite. Amygdules are commonly composed of optically positive, non-fibrous zeolite. In places the matrix has been partially replaced by quartz. The greenstone carries pyrite and in places appreciable chalcopyrite. Magnetite is generally absent. White, fine grained, crystalline limestone with sporadic dark patches is locally present within the greenstone at the Kopr showing (082ESW050). Skarn is also associated with greenstone at the Papex and Kopr showings. Brown garnet, calcite, quartz and akermanite with pyrite and chalcopyrite comprise skarn mineralization at the Papex showing.

Syenite forms the hangingwall of a fault striking 260 degrees, at its eastern exposure. Hornblende monzonite occurs in the footwall. Saussurite and urallite alteration are equally developed in these intrusions.

A short adit was driven along the hangingwall of a fault striking 020 degrees and dipping 80 degrees southeast. Above the adit, the fault zone has been exposed over 24.38 to 30.48 metres width in two trenches, 36.58 metres horizontally and 30.48 metres in elevation apart. The hostrock is Shoemaker Formation hornfels and the fault is a subsidiary fault of a main fault striking 315 degrees and dipping 75 to 80 degrees northwest. The adit has exposed silicified greenstone of the Old Tom Formation and skarn mineralized with pyrite and chalcopyrite over 2.4 to 3.0 metres width. The west side of the skarn is bound by a fracture zone in silicified hornfels of the Shoemaker Formation. The fracture zone is 45 centimetres wide, striking 185 degrees and dipping 80 degrees west. The fracture zone contains magnetite, pyrite and chalcopyrite. The east side of the skarn is also bound by silicified hornfels. The main fault striking 020 degrees is well developed and contains blocks of greenstone.

Topper Gold Corp. and Grand National Resources Inc. drilled on the Nugget claims in 1998. See also Kero (082ESW209).

BIBLIOGRAPHY

- EMPR AR *1966-188-189; *1967-217-219
- EMPR ASS RPT 1803, 24804
- EMPR GEM 1969-352
- EMPR PF (see Acacia (082ESW047) - Apex Exploration and Mining Company Ltd. (1967): Prospectus; Apex Exploration and Mining Company Ltd. (1967): Annual Report)
- GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
- GSC MEM 38; 179
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 72-53
- GCNL #191 (Oct.5), 1998
- Neugebauer, H.E.O. (1965): Lithology and Structure of the Late Paleozoic rocks of the Apex Mountain area, British Columbia, unpublished M.A. Thesis, University of Oregon
- Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

consists of interbedded, dark grey to black chert (commonly rusty or red stained), chert breccia, and siliceous greenstone containing disseminated pyrite and pyrrhotite or pyrite and arsenopyrite.

Grey, medium-grained diorite with hornblende phenocrysts occurs in the fault zone at the Kopr showing. The diorite shows no shearing or fracturing and hosts coarse, disseminated pyrrhotite grains.

At the Kopr showing, the Shoemaker Formation is composed of dark grey, sillimanite hornfels. In thin section, this rock is composed of sillimanite-rich aggregates that enclose or are interbanded with quartz-feldspar masses. The sillimanite is associated with cordierite, orthoclase, uraalite, quartz, hematite and a few grains of forsterite and some apatite. The sillimanite hornfels has been replaced by silica so that the present rock is composed of embayed and serrated inclusions of hornfels in a mosaic of anhedral secondary quartz. Pyrite commonly occurs as fracture fillings and chalcopyrite is scarce. Magnetite is locally present.

The Old Tom Formation consists of propylitically altered, dark grey to green, fine grained, massive greenstone (andesite?) with an amygdaloidal texture. In thin section the matrix consists of epidote, zoisite and fibrous amphibole with some minor quartz and albite. Amygdules are commonly composed of optically positive, non-fibrous zeolite. In places the matrix has been partially replaced by quartz. The greenstone carries pyrite and in places appreciable chalcopyrite. Magnetite is generally absent. White, fine grained, crystalline limestone with sporadic dark patches is locally present within the greenstone at the Kopr showing. Skarn is also associated with greenstone at the Papex (082ESW049) and Kopr showings. Brown garnet, calcite, quartz and akermanite with pyrite and chalcopyrite comprise skarn mineralization at the Papex showing.

At the Kopr showing pyrite and chalcopyrite occur in the footwall of a 12-metre wide fault, striking 260 degrees and dipping 75 degrees north. The hangingwall and footwall are hosted by hornfels of the Shoemaker Formation. An adit was driven 15 metres below the surface expression of the fault, on the footwall side. The hostrock is Shoemaker hornfels at the adit but dump material consists of skarn composed of garnet, calcite and quartz with pyrite and chalcopyrite.

Topper Gold Corp. and Grand National Resources Inc. drilled on the Nugget claims in 1998. See also Kero (082ESW209).

BIBLIOGRAPHY

- EMPR AR *1966-188-189; *1967-217-219
- EMPR ASS RPT 1803, 24804
- EMPR GEM 1969-352
- EMPR PF (see Acacia (082ESW047) - Apex Exploration and Mining Company Ltd. (1967): Prospectus; Apex Exploration and Mining Company Ltd. (1967): Annual Report)
- GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
- GSC MEM 38; 179
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 72-53
- GCNL #190(Oct.5), 1998
- Neugebauer, H.E.O. (1965): Lithology and Structure of the Late Paleozoic rocks of the Apex Mountain area, British Columbia, unpublished M.A. Thesis, University of Oregon
- Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW051**

NATIONAL MINERAL INVENTORY:

NAME(S): **STAR OF HOPE (L.2671)**, ECLIPSE (L.2670), STAR OF HOPE GROUP,
(L.1918), (L.1919), (L.1921),
(L.2473)

STATUS: Prospect
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:
LATITUDE: 49 18 57 N
LONGITUDE: 119 55 05 W
ELEVATION: 1910 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of trenches on the Star of Hope Reverted
Crown grant (Lot 2671) (Assessment Report 15222).

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

NORTHING: 5466663
EASTING: 287933

COMMODITIES: Gold Silver Lead Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite Pyrrhotite Galena Chalcopyrite
COMMENTS: Veins and shears are mineralized with pyrite, arsenopyrite. Host
volcanics are mineralized with pyrrhotite, chalcopyrite and galena.
ASSOCIATED: Quartz Calcite
ALTERATION: Limonite Hematite Silica
ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Disseminated Stockwork
CLASSIFICATION: Hydrothermal Epigenetic Porphyry
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au L02 Porphyry-related Au
DIMENSION: Metres STRIKE/DIP: 078/65S TREND/PLUNGE:
COMMENTS: The vein intersected in the Star of Hope shaft strikes 078 degrees and
dips 65 degrees south at the western end. The vein is 10 centimetres
wide. A 1-metre wide shear occurs along the south side of the vein.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Triassic	Undefined Group	Independence	

LITHOLOGY: Greenstone
Chert
Argillite
Chert Breccia
Basalt
Plagioclase Porphyry Dike
Greenstone
Andesite

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
COMMODITY: Silver 1.4000 Grams per tonne
Gold 2.0500 Grams per tonne
COMMENTS: Sample 4301 from diamond-drill hole E86-2 over 0.61 metre from a
plagioclase porphyry dike.
REFERENCE: Property File (Maximus Resources Inc. (1987): Prospectus).

INVENTORY

ORE ZONE: SHAFT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1985

SAMPLE TYPE: Chip

COMMODITY

	GRADE	
Silver	43.5400	Grams per tonne
Gold	12.8900	Grams per tonne
Lead	0.4800	Per cent

COMMENTS: Chip sample YU29 from the Star of Hope shaft.

REFERENCE: Assessment Report 14580.

CAPSULE GEOLOGY

The Star of Hope (Lot 2671) prospect is located near a pass separating the headwaters of Bradshaw Creek to the west and Cedar Creek to the east. The occurrence was originally covered by the Star of Hope claim group consisting of (Lot 1918), (Lot 1919), (Lot 1921), (Lot 2473), Eclipse (Lot 2670) and Star of Hope (Lot 2671) Crown grants. The latter two are now Reverted Crown grants.

The regional geology of the area consists of a series of Carboniferous to Triassic volcanic and sedimentary rocks that have been intruded by granitic Okanagan intrusions. Larger intrusions are composed of granite and granodiorite, while smaller stocks are composed of diorite and gabbro. Numerous sills, dikes and apophyses are associated. Carboniferous to Triassic rocks are assigned to the Shoemaker and Old Tom formations. These rocks form the eastern limb of a large anticlinal fold with fold axes striking roughly north. The Shoemaker consists of cherts, greenstone and minor argillite. The cherts of the Shoemaker Formation are commonly lighter coloured (buff, pink, grey, grey-green) and commonly show a saccharoidal texture. The overlying Upper Triassic Independence Formation consists of interbedded, dark grey to black chert (commonly rusty or red stained), chert breccia, and siliceous greenstone containing disseminated pyrite and pyrrhotite or pyrite and arsenopyrite.

The predominant rock type in the claim area is a dark brown, grey to white, fine grained, massive, competent chert. Occasional thin beds up to 0.3 metre thick are identified by layers of chert pebble tuff or silt. The age of these chert beds is uncertain but based on colour and texture most likely belong to the Shoemaker Formation. The cherts form contorted beds 2 to 50 millimetres thick and are in fault contact with andesitic volcanic rocks of the Old Tom Formation. The presence of rounded quartz grains suggests they are recrystallized and silicified detrital rocks. Jurassic diorite and gabbro intrusions cut the cherts and andesites. A pervasive quartz-calcite alteration affects both the andesitic rocks and the diorite intrusion. The four main rock types at the occurrence are argillaceous chert, dark green andesite, buff chert and chert breccia, and biotite-hornblende diorite. The Old Tom Formation consists mainly of basalt with minor andesite and chert. A number of narrow, north-trending post-mineral andesite dikes and porphyritic trachyte dikes are also present.

Three separate mineralized zones occur on the Eclipse and Star of Hope claims. They consist of a series of three small shear zones (Zones A, B, and C) aligned linearly along a northeastern trend. Zone A (Bush Rat shear zone) consists of four, 30 to 100 centimetre wide shear zones hosted in volcanics on the Eclipse claim. Three of the shears are 3 metres apart in along a north trend. The fourth lies 13 metres to the east. Mineralization consists of pyrite and arsenopyrite. Host volcanic rocks contain pyrite, arsenopyrite and chalcopyrite. Four chip samples (YU 57, 58, 59 and 61) taken across these shears yielded up to 1.58 grams per tonne gold, 6.4 grams per tonne silver and 0.12 per cent zinc (Assessment Report 14580). A northeast trending zone of old workings may have tried to follow this zone. The workings are centred around an adit driven through iron-stained cherts and greenstones of the Shoemaker Formation. A weak shear strikes 232 degrees and dips 85 degrees west. Samples from this adit and surrounding trenches yielded negligible gold values (Assessment Report 14580).

Zone B consists of shear zones in close proximity to a porphyritic trachyte dike, exposed over a strike length of 1.3 kilometres. An adit was driven on a 1-metre wide shear along this zone. The shear strikes 065 degrees and dips 80 degrees south. The Star of Hope shaft was sunk on a 10-centimetre wide quartz vein (Star of Hope vein) containing 5 to 20 per cent pyrite, arsenopyrite and galena. The vein has a variable orientation, striking 078 degrees and dipping 65 degrees south at its western end and striking 042 degrees and dipping 75 degrees south on the east wall of the shaft. At the shaft, a 1-metre wide shear, striking 038 degrees and dipping 68 degrees south, occurs on the south side of the vein. Chip

CAPSULE GEOLOGY

sample YU29 across the vein yielded 12.89 grams per tonne gold, 43.54 grams per tonne silver and 0.48 per cent lead (Assessment Report 14580). The vein was intersected under the shaft by drillhole E86-1 at 32.7 metres depth. Sample 4276 yielded 0.64 gram per tonne gold and 0.39 per cent arsenic over 0.21 metre (Maximus Resources Inc. (1987); Prospectus). Several samples from a plagioclase porphyry dike also yielded significant gold values. In diamond-drill hole E86-2, sample 4301 yielded 2.05 grams per tonne gold and 1.4 grams per tonne silver over 0.61 metre. Sample 4304 yielded 5.10 grams per tonne gold and 3.5 grams per tonne silver over 0.20 metre (Maximus Resources Inc. (1987); Prospectus). A dump sample yielded 41.83 grams per tonne gold and 281.15 grams per tonne silver (Assessment Report 14580). The highest silver and lowest gold values are associated with pyrite-arsenopyrite mineralization.

Several pits were blasted at other points along this shear zone in 1985. In the first pit, quartz stringers hosting pyrite and arsenopyrite yielding anomalous gold and silver values were exposed in a shear zone striking 082 degrees and dipping 55 degrees south. In the second pit, quartz stringers with pyrite and arsenopyrite occurring a shear striking 095 degrees and dipping 75 degrees south. Diamond drilling on the Star of Hope vein in 1986 revealed that the vein was faulted at depth.

Zone C consists of pyrrhotite and pyrite in silicified greenstones of the Independence Formation, adjacent to a north-trending plagioclase porphyry dike.

BIBLIOGRAPHY

EMPR AR 1904-226; 1906-169,254; 1933-171
EMPR ASS RPT 14530, *14580, *15222
EMPR EXPL 1985-C26
EMPR OF 1989-5
EMPR PF (Di Spirito, F. (Oct.,1985): Reconnaissance Surveys of the Star of Hope Group of mineral claims for Echo Mountain Resources Ltd.; Maximus Resources Inc. (July 22,1987): Prospectus)
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53
IPDM Dec., 1985, pp. 19-20

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW052**

NATIONAL MINERAL INVENTORY:

NAME(S): **PANORAMA RIDGE** YORK, SPAR,
N, SKAR, WINTERS

MINING DIVISION: Osoyoos

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 22 29 N
LONGITUDE: 119 58 24 W
ELEVATION: 1800 Metres

NORTHING: 5473380
EASTING: 284175

LOCATION ACCURACY: Within 500M
COMMENTS: UTM location of York showing as given by Goldcliff Resource Corporation (News Release, November 14, 2000).

COMMODITIES: Gold Copper Cobalt

MINERALS

SIGNIFICANT: Pyrrhotite Chalcopyrite Pyrite
ALTERATION: Epidote Scapolite Garnet
ALTERATION TYPE: Skarn
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stratabound Disseminated Vein Massive
CLASSIFICATION: Skarn
TYPE: K04 Au skarn
DIMENSION: Metres STRIKE/DIP: K01 Cu skarn TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Nicola	Undefined Formation	
Upper Triassic	Nicola	Hedley	
Lower Jurassic			Hedley Intrusions

LITHOLOGY: Andesite Tuff
Diorite
Limestone
Skarn

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 2001
SAMPLE TYPE: Grab
COMMODITY: Gold GRADE: 18.0500 Grams per tonne
COMMENTS: A sample from the Spar showing yielded this high value.
REFERENCE: Goldcliff Resource Corporation, New Release, January 22, 2001.

CAPSULE GEOLOGY

The Panorama Ridge prospect (York and Spar showings) showing is located between Cahill and Winters creeks, 2.25 kilometres south of Nickel Plate Lake and approximately 18 kilometres east of Hedley, British Columbia.

The Hedley area has been heavily prospected and explored since the discovery of the Hedley Mascott mine (092HSE036) at the turn of the century. Little of significance was done in the area until 1984 when Primont Resources Ltd staked a large area surrounding Nickel Plate Lake. Placer Development Ltd. conducted exploration on the claims in 1984 and Lacana Mining Corp. in 1987.

Previous exploration on the Panorama Ridge property consisted of hand pitting in the 1940s and systematic exploration in the 1980s. Trenching (1985) on the York prospect by Placer Development Limited (Placer Dome Inc.) obtained significant gold values in bedrock in four trenches, ranging from 0.27 grams to 1.50 grams gold per tonne (Goldcliff Resource Corp, News Release, January 22, 2001). All the trenches are anomalous in gold and copper, with the exception of trench 1, which contains anomalous arsenic and silver.

CAPSULE GEOLOGY

The York showing is situated on the western slope of Panorama Ridge, approximately 50 metres down slope from its crest, in the Cahill Creek drainage basin. As of the end of October 2001, a new logging road had exposed 500 metres of gossan and sulphide mineralization along with skarn float. The exposure is around the 1820 metre level and trends in a northeast-southwest direction. The zone appears to continue to the southwest where more logging activity is taking place. The showing is exposed over a vertical distance of 200 metres in a southeast to northwest direction from elevation 1800 to 1880 metres.

The showing contains strong gossan development (rusty zone or iron hat) containing pervasive and fracture related pyrite-pyrrhotite-chalcopyrite sulphide mineralization. Skarn alteration occurs in outcrop and in float within the showing.

Outcrops consist of Upper Triassic Nicola Group, Whistle Formation (Nicola Group) tuffs and Hedley Formation sediments that have been altered and intruded by diorite dykes of the Early Jurassic Hedley Intrusions. Limestone fragmental rocks, some altered, along with calcareous sediments are present.

Skarn alteration consists of scapolite, garnet, epidote, iron-rich pyroxene and calc-silicate minerals. Massive pyrite-pyrrhotite boulder float is exposed and associated with the skarns. Hand trenches possibly dating back to the early 1900s have been located. The trenching conducted by Placer Development Limited (Placer Dome Inc.) in 1985 are well exposed and in good shape. Samples have been taken from various outcrops.

Significant assays from the York range from 0.18 to 2.44 gram per tonne gold (Goldcliff Resource Corporation, News Release, May 23, 2001).

The Spar showing, about 400 metres northeast of the York, was discovered in 2000 off a new logging area. The Spar yielded a high gold-skarn value of 18.05 grams per tonne gold along with highly anomalous amounts of arsenic (+10,000 ppm), cobalt (2,640 ppm), nickel (194 ppm), bismuth (94 ppm) and antimony (46 ppm) (Goldcliff Resource Corporation News Release, May 23, 2001).

The Skar showing is located about 1 kilometre southwest of the York. Sampling over 2 metres returned 14.57 grams per tonne gold (Goldcliff Resource Corporation, News Release, January 23, 2002). See also Nordic 082ESW259.

BIBLIOGRAPHY

EMPR ASS RPT 15739
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 72-53
PR REL Goldcliff Resource Corporation, Oct.19, Nov.3,14, 2000;
*Jan.22, *May 23, July 2, 23, Aug.13, Nov.22, 2001; Jan.23,
Feb.27, June 14, Oct.22, Nov.19, Dec.12, 2002; Jan.17,27, 2003
*WWW <http://www.goldcliff.com/home.htm>; WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 2001/09/06

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW053**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOOKOUT**, MOUNTAIN VIEW, GREEN MOUNTAIN,
ACE, DUCE, NOVA

STATUS: Showing
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:
LATITUDE: 49 23 54 N
LONGITUDE: 119 51 58 W
ELEVATION: 1980 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of a tunnel and shaft on the former Lookout claim (Minister of Mines Annual Report 1931, page 134).

Underground
MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5475689
EASTING: 292055

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Arsenopyrite Gold
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Stratabound Disseminated
CLASSIFICATION: Hydrothermal Epigenetic Skarn Replacement
TYPE: I06 Cu±Ag quartz veins K01 Cu skarn
K05 W skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Upper Triassic	Undefined Group	Independence	
Jurassic			Okanagan Intrusions

LITHOLOGY: Limestone
Skarn
Argillite
Diorite

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Chip
COMMODITY
Silver 1.0300 Grams per tonne
Gold 0.0300 Grams per tonne
Copper 0.1100 Per cent
COMMENTS: Chip sample 40488 over 1.5 metres.
REFERENCE: Assessment Report 10092.

CAPSULE GEOLOGY

The Lookout showing is located at 1980 metres elevation near the summit of Green Mountain, 15 kilometres north of Olalla, British Columbia.

The showing was first reported discovered in 1901. In 1911, the Lookout and Mountain View claims were Crown granted to L. Patten and F. Stone. By 1926, the claims were owned by E. Mills, W.R. Mure, Chas Cotterill and P. Bromley. Development work consisted of a series of opencuts and a shaft over 12 vertical metres and 61 metres along strike. In 1931, a 33-metre tunnel was driven, 13 metres below the shaft collar. In 1972, the property was explored by Lantern Oil and Gas Co. Ltd. as the Karen 1-16 claims. Later in 1987, L. Reichert examined the Keremeos claim on Green Mountain.

The area between Nickel Plate Lake and Keremeos contains a sequence of Carboniferous to Triassic volcanic and sedimentary rocks

CAPSULE GEOLOGY

that have been intruded by granitic Okanagan intrusions. Larger intrusions are composed of granite and granodiorite, while smaller stocks are composed of diorite and gabbro. Numerous sills, dikes and apophyses are associated. Carboniferous to Triassic rocks are assigned to the Shoemaker and Old Tom formations. These rocks form the eastern limb of a large anticlinal fold with fold axes striking roughly north. The Shoemaker consists of cherts, greenstone and minor argillite. The cherts of the Shoemaker Formation are commonly lighter coloured (buff, pink, grey, grey-green) and commonly show a saccharoidal texture. The overlying Upper Triassic Independence Formation consists of interbedded, dark grey to black chert (commonly rusty or red stained), chert breccia, and siliceous greenstone containing disseminated pyrite and pyrrhotite or pyrite and arsenopyrite. The area contains numerous stratabound gold bearing, pyrrhotite, skarn-type mineralization.

A 21 to 31 centimetre wide quartz vein was discovered in close contact with a fine-grained diorite and silicified grey limestone, in the shaft. Quartz stringers and breccia fragments were intersected in a fault, 3.6 metres from the tunnel portal. Native gold, chalcopyrite, arsenopyrite and pyrite were reported found in silicified limestone and in the quartz stringers. The hostrocks were dominantly intensely fractured and faulted argillite.

Samples taken in 1987 from the Keremeos claim on Green Mountain yielded significant copper values. Grab sample 40489 yielded 0.21 per cent copper, 1.03 grams per tonne silver and 0.03 per cent tungsten (Assessment Report 10092). Chip sample 40488, over 1.5 metres, yielded 0.11 per cent copper, 1.03 grams per tonne silver and 0.03 gram per tonne gold (Assessment Report 10092).

BIBLIOGRAPHY

EMPR AR 1901-1163; 1911-292; 1923-186; 1931-134
EMPR ASS RPT 1803, *3918, 5574, *10092, 14687, 15181
EMPR GEM 1972-41, 1977-E25
EMPR PF (Lantern Gas and Oil Ltd. (1972): Prospectus; Lantern Gas and Oil Ltd. (1972): Report on the Karen claims, Green Mountain)
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW054**

NATIONAL MINERAL INVENTORY:

NAME(S): **OLD 9**, BUL 19

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 46 N
LONGITUDE: 119 35 20 W
ELEVATION: 0880 Metres

NORTHING: 5435811
EASTING: 310826

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of a copper showing which outcrops on the former Old 9 claim (Assessment Report 4919).

COMMODITIES: Silver Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Pyrite
ASSOCIATED: Magnetite Quartz Calcite
COMMENTS: Mineralization occur in quartz and calcite veinlets in Similkameen intrusions and Kobau rocks.

ALTERATION: Malachite Silica Chlorite Epidote Carbonate
K-Feldspar

COMMENTS: Malachite staining was noted in three old pits on the former Joe 5 and 7 claims.

ALTERATION TYPE: Oxidation Silicific'n Propylitic Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Shear
CLASSIFICATION: Porphyry Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au 106 Cu±Ag quartz veins
COMMENTS: Mineralization occurs in veinlets up to 5 millimetres wide hosted in shear zones.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Similkameen Intrusions
Jurassic			Kruger Syenite

LITHOLOGY: Quartzite
Phyllite
Quartz Mica Schist
Greenstone
Granodiorite
Quartz Diorite
Syenite
Nepheline Syenite

HOSTROCK COMMENTS: The Kobau Group is Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1967
SAMPLE TYPE: Unknown
COMMODITY GRADE
Silver 17.1400 Grams per tonne
Copper 0.3730 Per cent
Molybdenum 0.0040 Per cent
COMMENTS: A typical sample.
REFERENCE: Assessment Report 970.

CAPSULE GEOLOGY

The Old 9 showing is located at 880 metres elevation along a prominent northwest-trending ridge, 2 kilometres west of the northern end of Blue Lake (Assessment Report 970).

The southern two-thirds of the property are underlain by Jurassic Kruger syenite and nepheline syenite. To the north are

CAPSULE GEOLOGY

granodiorite and quartz diorite of the Middle Jurassic Similkameen intrusion. Jointly, these have intruded a northwest-trending roof pendant of Carboniferous to Permian Kobau Group metasediments and metavolcanics. Quartzite, phyllite, quartz-mica schist and greenstone are the dominant lithologies surrounding the showing. Alteration consists primarily of silicification with minor carbonate alteration. The greenstone has been more intensely propylitic altered to chlorite, epidote, carbonate, and potassic altered to potassium feldspar.

Low grade copper mineralization occurs in all rock types except syenite and nepheline syenite. Disseminated chalcopyrite and bornite with pyrite and magnetite comprise sulphides which appear to have been hydrothermally introduced in quartz and calcite veinlets up to 5 millimetres thickness. Malachite stains are also present in an abandoned pit at the Joe 7 showing. Copper mineralization appears associated with regional northwest-trending shears. A typical sample from one of these shear zones is reported to yield 17.14 grams per tonne silver, 0.373 per cent copper and 0.004 per cent molybdenum (Assessment Report 970).

BIBLIOGRAPHY

EMPR ASS RPT *970, 1228, 2027, 3701, 4423, *4919
EMPR GEM 1969-298; 1971-384; 1972-39; 1973-45
EMPR OF 1989-5
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW055**

NATIONAL MINERAL INVENTORY: 082E3 Ni1

NAME(S): **OLD NICK**, OLD NICK GROUP, OLD NICK 1-4,
NICKEL, UR CLAIM GROUP, MISSION 1,
NICKEL RIDGE

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:
LATITUDE: 49 02 30 N
LONGITUDE: 119 06 14 W
ELEVATION: 0930 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Approximate centre of workings (Assessment Report 1243).

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5434220

EASTING: 346249

COMMODITIES: Nickel Cobalt Copper Gold Molybdenum
Chromium

MINERALS

SIGNIFICANT: Pentlandite Pyrrhotite Chalcopyrite Pyrite Mackinawite
Valleriite Chromite Molybdenite
COMMENTS: Mackinawite in small amounts and valleriite in trace amounts.
ASSOCIATED: Quartz Calcite Dolomite Asbestos Mica
Olivine Amphibole Tremolite
COMMENTS: Chrome mica (chromium-bearing phengite).
ALTERATION: Biotite Chlorite Tourmaline Sericite Talc
Serpentine Goethite Ilmenite
COMMENTS: Hematite also present.
ALTERATION TYPE: Serpentin/zn Biotite Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stratabound
CLASSIFICATION: Magmatic
TYPE: M02 Tholeiitic intrusion-hosted Ni-Cu M03 Podiform chromite
SHAPE: Irregular
DIMENSION: 792 x 122 Metres STRIKE/DIP: 070/30S TREND/PLUNGE:
COMMENTS: Approximate dimensions and orientation; mineralization is not well delineated.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Anarchist Undefined Formation Ultramafic Intrusions
Unknown

LITHOLOGY: Serpentinized Dunite
Serpentinized Dunitic Dike
Serpentinite
Meta Sediment/Sedimentary
Greenstone
Quartzite
Biotite Quartzite
Biotite Schist

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Cache Creek
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Greenschist
Post-mineralization

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1968
SAMPLE TYPE: Drill Core
COMMODITY Nickel GRADE 0.2000 Per cent
COMMENTS: Average/typical nickel (pentlandite) mineralization in quartzite.
REFERENCE: Assessment Report 1243.

INVENTORY

ORE ZONE: TOTAL REPORT ON: Y
CATEGORY: Indicated YEAR: 1996
QUANTITY: 30000000 Tonnes
COMMODITY GRADE
Cobalt 0.0150 Per cent
Nickel 0.2200 Per cent
COMMENTS: Drill indicated resource.
REFERENCE: George Cross News Letter No.31, February 13, 1996.

ORE ZONE: TOTAL REPORT ON: Y
CATEGORY: Unclassified YEAR: 1967
QUANTITY: 90710000 Tonnes
COMMODITY GRADE
Nickel 0.2200 Per cent
COMMENTS: A mineral inventory identified circa 1967.
REFERENCE: Schroeter, T., 1994; CANMET IR 71-34 (see EMR MRI 80/7).

CAPSULE GEOLOGY

The Old Nick nickel prospect is located 4 kilometres east-northeast of Bridesville, between Baker (Rock) Creek and the old Great Northern Railway grade. The prospect has been prospected for nickel and precious metals with exploration including trenching, shallow shafts and diamond drilling.

Exploration of the Old Nick showings has been ongoing for many years. The claims were originally staked in 1955 and prospected for several years. The claims were allowed to lapse and the ground was restaked in 1966 as the Old Nick Group (120 claims) by Utica Mines Ltd. Later that year Copper Mines Limited was granted a one-half interest option. Aggressive programs of diamond drilling (35 percussion holes totalling 1267 metres and 5 diamond-drill holes totalling 887 metres), trenching, mapping, geochemical and geophysical surveys were executed by Utica Mines Ltd. In March 1967, Copica Mines Ltd. was formed to hold the property and in May the name was changed to Nickel Ridge Mines Ltd. In 1968, Newmont Mining Corp. of Canada Ltd. carried out further property exploration. The property was acquired by Arctic Gold and Silver Mines Limited in 1969. The British Columbia Research Council conducted bacterial leach tests on sample material. The Old Nick and UR groups were held by Northern Deep Level Mines Ltd. in 1972, with geochemical and magnetometer surveys conducted. Ownership was transferred to Ayerok Petroleum Ltd. in 1979. In 1980 and 1982, airborne and ground magnetometer and electromagnetic surveys, and geochemical soil surveys were conducted. British Challenger Mining Corporation held and operated the property as the Mission 1 claim from 1984 to 1985. Geochemical solid and rock sampling were carried out. Inconclusive results were obtained from geophysical surveys conducted by Nickling Resources Inc. in 1986. More recently (1996), the prospect have been staked as the Nickel and the Mission I claims on ground covering the Old Nick occurrence by Gold City Mining Corporation, Sway Resources Inc., Orion International Mineral Corp. and Phoenix Gold Resources Ltd. An aggressive exploration and development program has included geochemical, geophysical and radiometric surveys as well as extensive prospecting and initial bench scale agitated leach tests.

The showings occur in rocks of the Permian to Carboniferous Anarchist Group. Seven east-northeast trending map units within the Anarchist Group have been identified. They are described as follows. The first unit is a fine to medium grained biotite schist with quartzite layers forming up to 15 per cent of the rock. Quartzite layers are either 2 to 30 centimetres or 3 to 4 metres thick. The mineral assemblage of the biotite schist includes biotite, quartz, plagioclase with minor hornblende, tourmaline and sphene. The second is a metasediment unit with minor layers of epidote and zoisite. The whole unit is estimated to be 122 metres thick. The metasediment is composed of predominantly massive tremolite with remnant pyroxene and includes minor amounts of sericite, chlorite and chrome mica (chromium-bearing phengite) and 1 to 2 per cent disseminated pyrite, locally occurring in zones of up to 20 per cent. This unit contains most of the nickel mineralization. The third is a quartzite-schist unit similar to the first unit, however, here the quartzite forms 60 per cent of the rock. The fourth unit is a massive greenstone that is probably metavolcanic rock. The fifth unit is a banded quartzite that contains thin layers of biotite and chlorite. Finally, there are two associated, altered ultramafic units. They are both composed of antigorite with accessory talc, anthophyllite and tremolite. The protolith of these units has been identified as dunite. The rock is

CAPSULE GEOLOGY

massive and contains some disseminated pyrite, pyrrhotite and pentlandite. The serpentinite has been subdivided into sills or dikes based on crosscutting relationships. The dikes follow northwest trending interconnected fracture/fault zones that cross stratigraphy and the property. The serpentinite occurs as zones 0.10 to 10.00 metres thick. These serpentinites may actually be thin fault slices of ultramafic material, due to their structural control as described below. This would be more consistent with the regional occurrence of serpentinite in the area.

The layered rocks are folded into a subhorizontal antiform with the axial plane trending east-northeast and dipping about 30 degrees south. Minor folds are open with a 1/3 to 1/2 metre wavelength and superimposed centimetre-scale crenules indicating upright tops. Subvertical faults transect the property. The major set strikes west-northwest, controlling the serpentinite emplacement. A second, minor set strikes northeast and offsets the earlier major faults and serpentinite.

Nickel mineralization is associated with pyrrhotite and pentlandite, found as widely spread disseminations within the serpentinite units and the major metasediment unit. Microscopic grains of pentlandite have been identified as intergrowths with pyrrhotite and pyrite. There is no correlation between pyrite and nickel mineralization. Diamond-drill hole core assay results show a range of 0.01 to 0.15 per cent nickel content in the serpentinite. Assay results from the metasediment unit range from 0.07 to 0.26 per cent nickel. The nickel mineralization is fairly uniform throughout the area examined, having an average range of 0.15 to 0.20 per cent. The mineralized area examined is approximately 800 by 120 metres, following the metasediment unit and a further 670 metres east along strike of a serpentinitized dunite dike. The dike is up to 76 metres wide. Metallurgical testing of the metasediment in 1968 yielded nickel recoveries of 56 per cent. At that time, Newmont Exploration Ltd. decided the property was uneconomic and dropped its option. One rock chip sample taken by British Challenger Mining Corporation in 1984-85 assayed 3.08 grams per tonne gold (National Mineral Inventory 082E3 Nil).

Early development work outlined a potential low grade nickel mineral reserve. A mineral inventory of approximately 90,710,000 tonnes grading 0.22 per cent nickel has been identified (Property File - Schroeter T. (June, 1994): Monthly Report and CANMET IR 71-34). In 1996, an updated estimate of 30,000,000 drill indicated tonnes grading 0.22 per cent nickel and 0.015 per cent cobalt was reported by Gold City Mining Corporation, Orion International Mineral Corp. and Phoenix Gold Resources Ltd. (George Cross News Letter No. 31 - February 13, 1996). There is further potential for additional reserves downdip and along strike of the existing reserves.

The results of initial bench scale agitation metallurgical leach tests on three samples from the Old Nick prospect are given in the following table (George Cross News Letter No. 212 - November 3, 1995).

SAMPLE#	NICKEL %	COBALT %	PARTICLE SIZE (%-75 MESH)	RETENTION (HOURS)	NICKEL (%EXT)	COBALT (%EXT)
ON-1	0.15	0.02	75	25	81	80
ON-2	0.16	0.01	91	48	92	60
ON-3	0.22	0.01	81	48	87	76

Notes:

ON-1/2 = quartzite, ON-3 = dunite; EXT = extraction

In 1998, AM Technologies Ltd. optioned the property from Consolidated Gold City Mining Corp. and plan bio heap leach tests.

BIBLIOGRAPHY

EMPR AR 1966-192-193; 1967-224-225; *1968-225-226
 EMPR ASS RPT *1243, 3677, 8087, 8390, 9296, 10547, 13412, 13803, 14863
 EMPR EXPL 1982-29; 1985-C13; 1996-E4
 EMPR GEM 1972-38
 EMPR OF 1989-5, 1990-27
 EMPR PF (Air photos and map from G.E.P. Eastwood's files; see Mastadon (082ESE091) - excerpt from thesis; *Gold City Mining Corp., Phoenix Gold Resources, Orion International Minerals Corp. (1996): Geological/Mineral Deposit Field Trip Report in 082ESW210)
 EMR MIN BULL MR 198 (1983) B.C. 10, p. 208
 EMR MRI 80/7 (1980) B.C. 10, p. 188
 GSC MAP 84A; 538A; 539A; 15-1961; 1736A
 GSC MEM 38, pp. 389-423
 GSC OF 1505; 1969
 GSC P 37-21

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 948
REPORT: RGEN0100

BIBLIOGRAPHY

CANMET IR 71-34
GCNL #44, 1981; #185(Sept.26), #212(Nov.3), 1995; #31(Feb13),
#32(Feb.14), #164(Aug.23), 1996; #7(Jan.10), #216(Nov.10),
#249(Dec.30), 1997; #78 (Apr.23), 1998
N MINER Feb.26, 1996
WWW <http://www.infomine.com/>
Gerhard E.S. (1971): The Old Nick., M.Sc. Thesis, University of
Manitoba, Manitoba

DATE CODED: 1985/07/24
DATE REVISED: 1997/10/08

CODED BY: GSB
REVISED BY: KDH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW056**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTHWESTERN QUARRIES**

STATUS: Past Producer
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:
LATITUDE: 49 18 18 N
LONGITUDE: 119 45 40 W
ELEVATION: 0930 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location (Geological Survey of Canada Map 15-1961).

Open Pit

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

NORTHING: 5465030
EASTING: 299293

COMMODITIES: Andesite Dimension Stone Building Stone

MINERALS

SIGNIFICANT: Pyroxene
COMMENTS: Pyroxene-rich basaltic andesite of the Kearn Creek Member.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Industrial Min.
TYPE: R05 Dimension stone - andesite

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	
Eocene	Undefined Group	Springbrook	

LITHOLOGY: Pyroxene Basaltic Andesite
Polymictic Conglomerate
Pyroxene Phonolite Lava
Trachyandesite Flow

HOSTROCK COMMENTS: Lithologies are for the Springbrook Formation and Kitley, Yellow Lake and Kearn Creek members of the Marron Formation, respectively.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau
Okanagan
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Northwestern Quarries showing is located 1 kilometre southwest of Twin Lakes, 6 kilometres north-northeast of Olalla, British Columbia.

No exploration record prior to 1977 could be found for the Northwestern Quarries area. During 1977 and 1978, Union Oil Co. of Canada Ltd. conducted exploration consisting of induced polarization surveys, scintillometer surveys and limited geological mapping for uranium in the area.

The Northwestern Quarries showing lies along the western margin of a fault-bound basin of Eocene Penticton Group volcanic rocks. At the base of this volcanic succession, lies the Springbrook Formation that consists of massive, unsorted, polymictic conglomerate and breccia with lesser sandstone and tuff. The matrix of the conglomerate and breccia is silty and green. Clasts are dominantly volcanics (45 per cent) and chert (35 per cent) with lesser metamorphic rocks (10 per cent), sediments (5 per cent) and intrusions (5 per cent). The lowest member of the overlying Marron Formation is the Yellow Lake Member. At the Northwestern Quarries, the Yellow Lake Member consists dominantly of pyroxene-rich mafic phonolite lava with well developed anorthoclase phenocrysts. This is overlain by trachyandesite flows with conspicuous glomerophenocrystic clots of feldspar of the Kitley Lake Member. Highly vesicular, pyroxene-rich basaltic andesite of the Kearns Creek Member overlies the Kitley Lake Member to the east near Twin Lakes. The Olalla rhyolite of the Marama Formation overlies members of the Marron Formation to the immediate north.

Andesite of the Kearns Creek Member of the Marron Formation was reported quarried for dimension stone from the Northwestern Quarries.

BIBLIOGRAPHY

EMPR ASS RPT 13611, 15517, 17843

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 950
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 341A; 538A; 539A; 541A; 628A; *15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53

DATE CODED: 1985/07/24
DATE REVISED: 1997/10/08

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW057**

NATIONAL MINERAL INVENTORY:

NAME(S): **WHITE KNIGHT (L.1081)**, SILVER CROWN, SUBMARINE,
SILVER LEAF, NORTH POLE, LP,
CANEX, LONE PINE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:
LATITUDE: 49 00 02 N
LONGITUDE: 119 35 04 W
ELEVATION: 0780 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location of an abandoned adit on the Canada-United States
boundary (Assessment Report 19823).

Underground
MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5430736
EASTING: 310978

COMMODITIES: Silver Gold Lead Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena Argentite Tetrahedrite
COMMENTS: Argentite and tetrahedrite are minor.
ASSOCIATED: Quartz
ALTERATION: Kaolinite Chlorite Calcite
ALTERATION TYPE: Greisen Chloritic Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres STRIKE/DIP: 045/13S TREND/PLUNGE:
COMMENTS: Quartz veins strike approximately 005 degrees and dip 15 degrees
southeast. Vein widths vary from 0.15 to 4.6 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Kobau Undefined Formation
Jurassic Kruger Syenite

LITHOLOGY: Pyroxenite
Syenite Dike
Quartzite
Gneiss
Greenstone

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 58.5000 Grams per tonne
Gold 5.1000 Grams per tonne
Lead 3.6000 Per cent
COMMENTS: Galena-rich sample LP-005.
REFERENCE: Assessment Report 19823.

ORE ZONE: ADIT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1920
SAMPLE TYPE: Grab
COMMODITY GRADE
Gold 17.0000 Grams per tonne
COMMENTS: From a 6.0-metre tunnel. The sample also carried high silver.
REFERENCE: Minister of Mines Annual Report 1920, page 158.

CAPSULE GEOLOGY

The White Knight showing is located on the Canada-United States

CAPSULE GEOLOGY

boundary, 3.25 kilometres southwest of Kilpoola Lake. Osoyoos, British Columbia lies 9.5 kilometres to the east-northeast.

The White Knight claim was originally staked and Crown granted in 1901 to F.H. Wollaston. Gold and silver mineralization were discovered prior to 1901 when a precious metal vein was discovered to the south on the adjoining Submarine claim in the United States of America. In 1920, the ground was staked as the Silver Crown claim, part of the Silver Crown Group consisting of the Silver Crown, Silver Leaf and North Pole in Canada and the Submarine in the United States of America. The claim group was owned by A. Hagelberg and P. Nelson. By 1921, three tunnels (27, 29 and 30 metres long respectively) had been developed on the Silver Crown. In 1922, the claims were optioned to London Exploration Co. The above ground has been owned and explored intermittently since then. The ground was held in 1965 under Mineral Lease M39. Anuk River Mines Ltd. owned the ground in 1965 as the White Knight and Lone Pine claims. In 1980, the claims were owned by J. Wishart and purchased in the same year by Kaaba Resources Inc. Most recently the ground has been staked as the LP claims and explored by T. Parsons.

The White Knight occurrence is hosted by pyroxenite, gneiss, greenstone and quartzite of the Carboniferous to Permian Kobau Group along the eastern contact of the Jurassic Kruger intrusion. At the White Knight showing, the Kruger syenite consists of a complex of syenite dikes striking 120 degrees, dipping 85 degrees northwest or striking 090 degrees, dipping 70 degrees north.

The showing consists of numerous connected and highly fractured and brecciated quartz veins. Vein widths vary from 0.15 to 4.6 metres true width. Development includes three exploratory adits 25 to 35 metres long driven into the veins. The main crosscut adit intersected three successive quartz veins, all striking 005 degrees and dipping 15 degrees southeast. The main adit starts along a bearing of 355 degrees for 30 metres then curves northward. Chloritic, carbonate, and greisen alteration occur adjacent to the quartz veins except where the vein is brecciated.

The veins are erratically mineralized with fine grained and disseminated pyrite, chalcopyrite, galena and trace amounts of argentite and tetrahedrite. These minerals also occur as streaks and fracture coatings. A sample taken from one of the adits in 1920 carried high values in silver and 17.0 grams per tonne gold (Minister of Mines Annual Report 1920, page 158). Several samples taken from the adit area in 1990 yielded significant values. Sample LP-002 yielded 3.45 per cent lead, 32.5 grams per tonne silver and 0.69 gram per tonne gold (Assessment Report 19823). Similarly, sample LP-003 yielded 0.48 per cent lead, 33.5 grams per tonne silver and 0.39 gram per tonne gold (Assessment Report 19823). Galena-rich sample LP-005 yielded 3.6 per cent lead, 58.5 grams per tonne silver and 5.1 grams per tonne gold (Assessment Report 19823).

The White Knight vein system is thought to be a continuation of quartz veins that occur in the former Submarine mine. This mine borders the White Knight to the south and is in the United States. Quartz veins here are hosted by syenite and are erratically mineralized with pyrite, chalcopyrite, galena and argentite.

BIBLIOGRAPHY

EMPR AR 1901-1231; *1920-158; *1921-178; *1922-166; 1965-165; 1968-274
EMPR ASS RPT 1159, *11295, 14352, 16267, *19823
EMPR OF 1989-5
EMPR PF (Pentland, W.S. (1965): Report on the Sumbmarine - Lone Pine Showings, Osoyoos, B.C.)
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW058**

NATIONAL MINERAL INVENTORY: 082E6 Mo1

NAME(S): **MO, MATT, TUZO CREEK**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:
LATITUDE: 49 22 20 N
LONGITUDE: 119 07 54 W
ELEVATION: 1432 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate centre of the former Mo 1-36 claims (Assessment Report 654).

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5471021
EASTING: 345255

COMMODITIES: Molybdenum Zinc Lead Copper

MINERALS

SIGNIFICANT: Molybdenite Sphalerite Galena Chalcopyrite
ASSOCIATED: Quartz Specularite Magnetite Pyrite Calcite
ALTERATION: Mica K-Feldspar Albite Sericite Chlorite
 Quartz Epidote Hematite
ALTERATION TYPE: Argillic Potassic Albitic Propylitic Silicific'n
 Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia Shear Disseminated
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Irregular
MODIFIER: Faulted Sheared
DIMENSION: 1219 x 320 x 305 Metres STRIKE/DIP:
COMMENTS: The molybdenite zone is elongate ellipsoid-shaped. The width on surface varies from 244 to 305 metres, increasing to 549 metres at depth. The zone and associated alteration shell trend northeast. TREND/PLUNGE: 045/

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary _____ _____ Okanagan Batholith
Eocene _____ _____ Tuzo Creek Stock

ISOTOPIC AGE: 49.4 +/- 0.7 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Porphyritic Biotite Quartz Monzonite
 Quartz Albite Sanidine Porphyry
 Hornblende Granodiorite
 Quartz Porphyry
 Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Harper Ranch
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: MO REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1970
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Molybdenum 0.0400 Per cent
COMMENTS: Drillhole #4, Table XIII.
REFERENCE: Leary, G.M. (1967): unpublished M.Sc. thesis, UBC, 141 pp.

CAPSULE GEOLOGY

The Mo property is located at approximately 1432 metres elevation on the west side of West Kettle River, between Tuzo and Big Goat creeks, 7.5 kilometres south-southwest of Beaverdell. The area of principal interest lies on the former Mo 6, 8, 17, 18, 19 and 20 claims.

The occurrence was first staked on the Matt 1 to 75 claims, held by Kennco Explorations (Western) Ltd. in 1961 and 1962. An

CAPSULE GEOLOGY

exploration program consisting of geochemical and induced potential geophysical surveys, geological mapping and trenching failed to identify any significant mineralization and the property was dropped. In 1964, Amax Exploration Inc. acquired the Mo 1 to 36 claims covering the Mo occurrence. A geochemical survey and 57.3 metres of diamond drilling in three holes were completed in that year. Mineralized areas of potential interest were extensively drilled in 1966 but the program results were not reported. In 1981, E & B Explorations Ltd. carried out 756 metres of diamond drilling in 1 hole. In 1982, Canamax Resources Inc. held a 100 per cent interest in the property. The occurrence was part of a Master thesis study by G.M. Leary at the University of British Columbia in 1970. The following description is summarized from his work.

Hostrocks of the Mo occurrence are intrusions including hornblende granodiorite of the Middle Jurassic Nelson intrusions which encloses a porphyritic biotite quartz monzonite stock of the Cretaceous to Tertiary Okanagan batholith. The stock is roughly circular and 2.4 kilometres diameter and hosts most of the molybdenite mineralization. The quartz monzonite is medium grained, porphyritic with prominent quartz phenocrysts and a pink colour due to secondary k-feldspar. A fine grained border phase called white (quartz) porphyry is seen in drill core. These granitic intrusions have been intruded by a younger Eocene quartz, albite, sanidine porphyry, known as the Tuzo Creek porphyry stock. Large pink sanidine phenocrysts (up to 7.6 centimetres long), variable coloured albite, clear to smoky quartz and chlorite altered biotite occur in a pale greenish-grey groundmass. The porphyry shows a strong similarity to the Eocene other Coryell intrusions such as the Shingle Creek porphyry and the recently described Beaverdell porphyry. A potassium-argon age date yielded an age of 49.5 +/- 2 Ma from biotite (Leary, 1967). This pre-mineralization porphyry is thought to be a gently east dipping, inverted saucer-shaped intrusive mass up to 107 metres thick that was conformably and forcefully intruded between granodiorite and the top eastern flanks of the quartz monzonite stock. It is referred to as a roof-sill. Intra and post-mineralization porphyries are of similar composition. Pre and post-mineralization porphyry dikes crosscut all the these intrusive phases. Younger dikes include alkaline quartz gabbro, composite alkaline basalt to augite trachyte and altered latite compositions.

Three phases of shear and breccia zones have been delineated based on crosscutting relationships. These zones are typically up to 3 metres wide, strike 235 degrees and dip 55 to 90 degrees northwest. They are characterized by variable intergranular shearing of angular to rounded fragments with variable degrees of hydrothermal alteration. Phase one structures controlled period one hydrothermal alteration and associated molybdenite mineralization, which occurred intermittent to porphyry emplacement.

Two periods of hydrothermal alteration were controlled by fractures, and shear and breccia zones. The first period has resulted in widespread wallrock alteration, quartz veining and mineralization throughout most of the quartz monzonite stock but also affected the hornblende granodiorite and porphyry roof-sill. The alteration halo is ellipsoid-shaped in a northeast-southwest orientation and is up to 2865 metres long by 2103 metres wide. Pervasive argillic, potassic, albitic, propylitic and silicic alteration with sulphide and/or oxide mineralization occur on a large scale throughout the alteration halo. A zone of low-grade molybdenite mineralization occurs in an inner zone of more intense wallrock alteration, containing quartz stockworks with pyrite. This halo has been divided into peripheral (weak to moderate alteration) and central (intense alteration) shells (zones). The Central zone is an elongate, ellipsoidal shape and is vertical or steeply southeast dipping. The zone is up to 1646 metres long by 518 metres wide, widening at depth to 701 metres. It has a maximum vertical depth of 320 metres. The upper part has been divided into a quartz-hydromica subzone while the lower part a quartz-potassium feldspar zone. The upper subzone is up to 122 metres thick and characterized by widespread quartz veining while the lower subzone contains only local quartz veining. The two zones locally overlap as much as 46 metres. The peripheral shell consists mainly of argillic alteration of feldspars and mafics, increasing in intensity towards the Central shell. Minor propylitic alteration of mafics consists of chlorite and epidote. Minor fluorite, calcite, hematite, magnetite and pyrite are also associated. The second phase of hydrothermal activity occurred more locally and involved the development of sericite and quartz with associated sphalerite, galena, chalcopyrite, pyrite and molybdenite, and calcite and fluorite along fractures and in adjacent wallrock. It is largely confined to intra-mineralization dikes and sills at depth.

The Mo occurrence is a low-grade molybdenum deposit in a

CAPSULE GEOLOGY

northeast trending altered shear zone. Mineralization (including oxides) consists of specular hematite, magnetite, molybdenite and minor sphalerite, galena and chalcopyrite in order of decreasing abundance. The molybdenite zone is confined to the western and east-central portions of the Central alteration shell. The zone is roughly 1219 metres long in a northeast direction and 244 to 305 metres width. At depth the zone widens to 549 metres with a maximum depth of 320 metres. A value of 0.04 per cent molybdenum has been used to defined deposit dimensions. Mineralization occurs mainly along fractures (80 per cent), and lesser in quartz veins, shear and breccia zones and as disseminations. Molybdenite occurs as coatings along planar fractures and around rock fragments in breccias and shear zones, seams and disseminations in banded discontinuous quartz veins and disseminations in discontinuous to continuous massive quartz veins and adjacent wallrocks. A foliated shear zone, largely in the porphyry roof-sill below quartz monzonite, directed hydrothermal and mineralizing fluids upwards, predominantly along fractures.

Grades range from 0.06 to 0.28 per cent molybdenum in zones 3 to 16 metres wide and with grades locally reaching 0.47 per cent molybdenum. The grade is variable due to an increase in the molybdenite content and not an increase in fracture intensity. The following table summarizes average molybdenum grades from drillholes in the molybdenum zone.

DDH	% Mo	Length to Base of Molybdenite Zone
1	0.08	227 metres*
2	0.02	168 metres*
3	0.03	161 metres**
4	0.04	313 metres**

* to base of the sulphide field
** to base of the quartz-k-feldspar subzone

BIBLIOGRAPHY

EMPR AR 1961-63,114, 1962-67,130, 1965-167, 1966-192
EMPR ASS RPT 386, *654, 9369
EMPR EXPL 1995 (in press)
EMPR FIELDWORK 1975, pp. 27-31
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
CIM *Special Volume 15, 1976, Table 1, No.3 - Characteristics of Some Canadian Cordilleran Porphyry deposits, in pocket
*Leary, G.M. (1970): Petrology and Structure of the Tuzo Creek Molybdenite Prospect near Penticton, British Columbia, unpublished M.Sc thesis, University of British Columbia, 141 pp.
EMR MIN BULL MR 223 (1989) B.C. 14

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW059**

NATIONAL MINERAL INVENTORY: 082E6 Ag6

NAME(S): **INYO-ACKWORTH**, INYO, ACKWORTH,
ESTER, INYO EXTENSION, GACHAIN,
DOLLAR, CRANBERRY RIDGE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:
LATITUDE: 49 27 30 N
LONGITUDE: 119 07 02 W
ELEVATION: 1173 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The approximate location of abandoned workings (Assessment Report 7358).

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5480563
EASTING: 346572

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite Silver Chalcopyrite
ASSOCIATED: Quartz Calcite Sericite Pyrite
ALTERATION: Sericite Kaolin
ALTERATION TYPE: Sericitic Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 300 x 2 Metres STRIKE/DIP: 080/
COMMENTS: A 2-metre wide shear zone hosting a mineralized quartz vein has been traced for over 300 metres. The shear zone strikes 080 degrees. TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Anarchist	Wallace	Westkettle Batholith
Jurassic			

LITHOLOGY: Granodiorite
Quartz Diorite
Diorite
Greenstone
Meta Sediment/Sedimentary
Meta Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional
Harper Ranch
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SHAFT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1925
SAMPLE TYPE: Unknown
COMMODITY GRADE
Silver 274.2800 Grams per tonne
Gold 3.4300 Grams per tonne
Lead 22.0000 Per cent
COMMENTS: A sample of sorted lead ore from the main shaft.
REFERENCE: Minister of Mines Annual Report 1925, page 199.

ORE ZONE: DUMP REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1979
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 10.2800 Grams per tonne
Gold 0.7200 Grams per tonne
COMMENTS: Sample W5 from the lower adit dump.
REFERENCE: Assessment Report 7358.

CAPSULE GEOLOGY

The Inyo-Ackworth past producer is located at about 1173 metres

CAPSULE GEOLOGY

elevation on the eastern slopes of Cranberry Ridge, 3.75 kilometres northwest of Beaverdell, British Columbia.

The Inyo-Ackworth property originally consisted of Inyo, Inyo Fraction, Ackworth and Annex claims in 1916, owned by C.H. Kinzett, F.O. Evans and associates. In 1917, the claims were leased to Hennessey and Thadich and ore was shipped. No further work is recorded until 1924, when Dollar Mining Co. Ltd. optioned the property. Extensive new development work was conducted with one adit intersecting an extension of the vein. An ore shipment was reported made to the Trail smelter in 1925. Prairie Mining Co. Ltd. leased the property in 1926 but no work was reported. Inyo-Ackworth Mines Ltd. made an ore shipment in 1927. Braemar Mining Co. Ltd. acquired the property in 1930. Development work was carried out in 1930, 1931 and 1935. Braemar Mining Co. Ltd. lapsed in 1937. Boundary Exploration Ltd. staked ground covering the Inyo-Ackworth occurrence. Exploration work included trenching, reopening old adit and three diamond-drill holes. Since 1979 the property has been owned and explored by M. Morrison.

Locally, the Inyo occurrence is hosted by granodiorite of the Jurassic Westkettle batholith. The granodiorite is generally massive and fresh but is increasingly saussuritized near the shear zone hosting the Inyo occurrence.

The geology of Cranberry Ridge, immediately west of Beaverdell, is similar to that underlying Mount Wallace to the west. Granodiorite of the Westkettle batholith, grading to quartz diorite and diorite, underlies most of Cranberry Ridge. To the immediate north, the Westkettle batholith has intruded Permian Wallace Formation metavolcanics and metasediments, now present as roof pendants. Younger Eocene intrusions and dikes have intruded both Westkettle granodiorite and Wallace Formation rocks.

The granodiorite is cut by a strong shear zone that has been exposed by surface and underground workings at the Inyo occurrence. The average width of the shear zone is 2 metres and is well defined by a rusty fault gouge, vuggy quartz and manganese staining. The shear zone strikes 080 degrees and is exposed over 300 metres in the old workings. A vuggy quartz-calcite vein, 5 to 15 centimetres wide, carries pyrite, galena, sphalerite, tetrahedrite and native silver mineralization. Strong sericitic alteration and kaolin are also associated with mineralization. There is some indication that high silver values are associated with galena near surface and gold values are associated with sphalerite at depth (Assessment Report 20922).

Several samples were taken in 1925. A sample of sorted lead ore from the main shaft yielded 3.43 grams per tonne gold, 274.28 grams per tonne silver, and 22 per cent lead (Minister of Mines Annual Report 1925, page 199). Another sample of sorted ore from a 21-metre opencut yielded 17.14 grams per tonne gold, 274.28 grams per tonne silver, 4 per cent lead and 20 per cent zinc (Minister of Mines Annual Report 1925, page 199). Resampling of the old workings in 1979 yielded the following results: sample W5 from the lower dump adit yielded 4.11 grams per tonne gold and 78.17 grams per tonne silver (Assessment Report 7358); sample W7, from the upper opencut, yielded 0.72 gram per tonne gold and 10.78 grams per tonne silver (Assessment Report 7358).

Recorded production from the Inyo-Ackworth occurrence included 13 tonnes in 1918 and 1927. From this ore, 3639 grams of silver, 62 grams of gold, 1158 kilograms of lead and 1171 kilograms of zinc were recovered. Another 12.7 tonnes was reported shipped to the Trail smelter in 1925 (Minister of Mines Annual Report 1925, page 199).

In 1997, St. Elias Mines Ltd., drilled 9 holes totalling 590 metres on the Cranberry Ridge property. Earlier trench samples assayed up to 93.2 grams per tonne gold, 428 grams per tonne silver and 2.2 per cent copper (Exploration in BC 1997, page 49).

BIBLIOGRAPHY

- EMPR AR 1916-256; 1917-212; 1923-184; 1924-169; *1925-199; 1928-251; 1930-220; 1931-124; 1933-154; 1935-D14; *1937-Part D (Special Report by M.S. Hedley); 1966-191
EMPR ASS RPT 3740, *7358, 12795, 15190, 16314, 18481, 19111, 20922, 24465
EMPR BC METAL MM00873
EMPR EXPL 1979-27-28, 1996-E4, 1997-49
EMPR INDEX 3-201
EMPR OF 1989-5
EMPR PF (*Report by M.S. Hedley)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
GCNL #152(Aug.8), 1997

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 958
REPORT: RGEN0100

BIBLIOGRAPHY

WWW http://www.infomine.com/index/properties/CRANBERRY_RIDGE.html

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW060**

NATIONAL MINERAL INVENTORY:

NAME(S): **LYNX**, LATE, TAMMY,
PINE, CAM, FOX,
MOON, DICK, ALLENDALE,
POWER, POWER GROUP, ANTLER,
TESSA, SPOON, ROAD

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06W
BC MAP:

LATITUDE: 49 23 18 N
LONGITUDE: 119 20 16 W
ELEVATION: 1570 Metres

LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of the Main showing of the Lynx occurrence (Assessment Report 20132).

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5473254
EASTING: 330349

COMMODITIES: Copper Silver Molybdenum Palladium Platinum
Gold

MINERALS

SIGNIFICANT: Chalcopyrite Chalcocite Bornite Pyrite Tetrahedrite
Molybdenite Merenskyite Digenite Gold Kottulskite
Telluropalladinite

COMMENTS: Xenoliths in the Coryell stock are well-mineralized with copper sulphide replacement.

ALTERATION: Malachite Azurite Biotite Epidote Chlorite
ALTERATION TYPE: Leaching Biotite Propylitic
MINERALIZATION AGE: Eocene
ISOTOPIC AGE: 52.4 +/- 1.8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Disseminated Shear Stratabound
CLASSIFICATION: Magmatic Replacement
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Eocene Coryell Intrusions

ISOTOPIC AGE: 54.9 +/- 1.9 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Hornblende

Eocene Unnamed/Unknown Informal

LITHOLOGY: Syenite
Monzonite
Shonkinite
Granite
Gneiss
Pegmatite Dike

HOSTROCK COMMENTS: The age date of the Allendale Lake stock of the Coryell intrusions. Cretaceous-Tertiary Okanagan batholith granite occurs to the east.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1971
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 6.8500 Grams per tonne
Copper 0.4800 Per cent

COMMENTS: A typical well-mineralized sample of porphyry style, disseminated copper sulphides.

REFERENCE: Geology, Exploration and Mining, page 386.

CAPSULE GEOLOGY

The Lynx occurrence is located 1.5 kilometres west of Allendale Lake, 18 kilometres east-northeast of Okanagan Falls.

CAPSULE GEOLOGY

The Lynx occurrence, consisting of porphyry style copper mineralization, was first discovered on the Lynx and Late claims, and staked in 1966 by K.G. Ewers and R.W. McLean, on a hilltop 1.25 kilometres west of Allendale Lake. The claims have since been explored sporadically. In that same year, under option to General Resources Ltd., geological and geochemical surveys were conducted on 8 claims. A total of 2365 metres of bulldozer trenching and another 244 metres of blast trenching was also conducted. In 1968, Gunnex Ltd. optioned the property. Electromagnetic, magnetic geophysical and soil geochemical surveys were done. In 1971, at least two drillholes were completed by Selco. Allendale Resources Ltd. acquired an interest in the property in 1982 and completed five diamond-drill holes. This was followed-up by a comprehensive exploration program of soil geochemical, magnetic and induced polarization geophysical surveys in 1983. Five new anomalies were defined. In 1986, Noranda Exploration Co. Ltd. acquired an option on the Nora claims. The results of their soil geochemical survey were poor and the option was dropped. Yukon Minerals acquired an option on all the claims in the area in 1989 and completed limited geological mapping, geophysical surveys and a diamond drill program.

The occurrence is underlain by a small oval-shaped stock of the Eocene Coryell intrusions, informally referred to as the Allendale Lake stock. This stock is roughly 2.5 kilometres diameter (8 square kilometres) and occurs at the intersection of the Eocene hornblende granodiorite to the west, the Okanagan Gneiss to the southwest and northwest, and granite of the Cretaceous Okanagan batholith.

The Allendale Lake stock consists of three phases. The main phase is biotite pyroxene monzonite. The rock is typically porphyritic with a spongy framework of smoky grey, perthitic textured high temperature orthoclase and orthoclase-anorthoclase phenocrysts, 1 to 2 centimetres diameter with interstitial diopsidic augite and biotite. These mafic minerals occur either as individual grains or as clusters with apatite, magnetite and sphene.

The syenite phase is hosted in small pockets in the monzonite phase. Rhomb-shaped anorthoclase phenocrysts are distinctive. Apatite and magnetite are also locally abundant. The syenite is weakly propylitic altered in isolated fracture zones. Epidote and calcite veins comprise alteration minerals. Local zones of strong secondary biotite replacement occur adjacent to pegmatite dikes. Argillic alteration of feldspars is very weak. Partially assimilated aplite xenoliths are common within the syenite; they range from less than 1.5 to 6 metres length. However, angular fragments of gneiss are also present.

A shonkinitic border phase is exposed along the west and southwest margins of the stock where it forms a continuous zone ranging from 50 to 300 metres wide. The phase is relatively mafic-rich and probably is a basic differentiate of the monzonite. The fine to medium grained rock is composed of intermixed anorthoclase and orthoclase perthite (80 per cent) and pyroxene (15 per cent). The pyroxene contains accessory biotite and hornblende in clots with apatite and magnetite or as poikilitic inclusions in large augite grains. Small, partly altered nepheline grains, one-half to one millimetre diameter, are sparingly disseminated throughout the rock.

Pegmatite dikes crosscut the syenite and monzonite phases in the north, east-central and south parts of the stock. The pegmatites are quartz-rich and feldspars consist of very coarse albite. Biotite and actinolite comprise mafic minerals. Sphene, allanite and magnetite comprise accessory minerals.

The main fractures within this Coryell stock have a mean strike of 035 degrees and dip 80 degrees southeast. Strong subsidiary fractures strike 245 degrees dipping 80 degrees northwest. Two weaker sets strike 190 degrees dipping 55 degrees northwest and 135 degrees dipping vertical.

Mineralization at the Lynx occurrence consists of several styles. The Main showing is an example of the most common mineralization style; sulphide replacements in xenoliths. Bornite and chalcocite comprise the sulphide mineralogy. The more digested the xenolith the better the mineralization. It is believed the early migration of volatiles within the intrusion resulted in the sulphide mineralization.

Most of the property exploration has been directed towards a large tonnage disseminated copper sulphide deposit. Locally, pyrite, chalcopyrite and bornite comprise 2 to 3 per cent disseminated sulphides. Chalcopyrite is locally associated with magnetite and occurs as inclusions in mafic silicates and large feldspar phenocrysts. Some fracture controlled copper mineralization also occurs. Trace molybdenite has also been found. The Moon showing is

CAPSULE GEOLOGY

an example of this mineralization style. A typical well-mineralized sample of this type taken in 1971 east of the Moon showing yielded 0.48 per cent copper and 6.85 grams per tonne silver (Geology, Exploration and Mining 1971, page 386). In 1989, drillhole 89-4 intersected minor copper mineralization between 50.93 and 76.15 metres. The best drillhole intersections were 0.04 per cent copper (Assessment Report 20132).

The Antler and Tessa showings are composed of zones of moderate to intense secondary biotite development, marginal to the shonkinitic border phase. Grab sample 80954 from the Tessa showing yielded 0.06 per cent copper and 1.03 grams per tonne silver (Assessment Report 20132). At the Antler showing, grab sample 80953 yielded 0.06 per cent copper and 1.71 grams per tonne silver (Assessment Report 20132).

The Spoon showing is composed of a series of widely spaced (3 to 5 metres) shears mineralized with chalcopyrite, bornite and tetrahedrite. The shears strike 262 degrees and dip 26 degrees north. The mineralization is spotty and limited but a selected grab sample yielded 13.77 per cent copper, 4.4 grams per tonne gold and 180.0 grams per tonne silver (Assessment Report 20132).

The Road showing is also a mineralized shear zone along the contact between the shonkinitic and syenite phases of the stock. Mineralization consists of disseminated chalcopyrite and trace tetrahedrite in shonkinite (east wall) and bornite in syenite (west wall). Sample 66201, a 2.65 continuous chip sample from the east wall, yielded 0.44 per cent copper and 2.4 grams per tonne silver (Assessment Report 20132). From the west wall, grab sample 66203 yielded 0.90 per cent copper (Assessment Report 20132). Several drillholes were drilled on this zone in 1989. In drillhole 89-2, 1.22 metres grading 0.68 per cent copper and 3.8 grams per tonne silver was intersected (Assessment Report 20132). In drillhole 89-3, three pyritic zones were intersected. The best assay results for each is as follows: the upper yielded 0.19 per cent copper and 0.9 gram per tonne silver over 2.65 metres, the middle yielded 0.61 per cent copper and 0.3 gram per tonne silver over 0.8 metre and the lower yielded 0.24 per cent copper and 1.5 grams per tonne silver over 0.42 metre (Assessment Report 20132).

A private report on the Lynx property reported one rock sample as assaying 4.39 grams per tonne gold, 180.00 grams per tonne silver, 13.77 per cent copper, 1.65 grams per tonne platinum and 0.51 grams per tonne palladium (Report on Assays, 1989 - Property File). The same report indicated another sample yielded 0.48 per cent copper, 5.0 grams per tonne silver, 0.08 grams per tonne gold, 1.16 grams per tonne palladium and no values in platinum.

Detailed mineralogy shows the presence of kotulskite (PdTe), merenskyite (PdTe₂) and telluropalladinite (Pd₉Te₄) (Geofile 2002-2).

BIBLIOGRAPHY

EM GEOFILE 2002-2
EMPR AR 1966-190; 1968-217
EMPR ASS RPT *1741, 2363, 3481, 10517, 10772, *12290, 15466, 18821, *20132
EMPR GEM 1969-351; *1971-386-396; 1972-41
EMPR PF (*Private report with several assays (no title), 1989; Yukon Minerals Corp. (1989): Press Release)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC OF 481; 637; 1505A; 1565; 1969
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW061**

NATIONAL MINERAL INVENTORY:

NAME(S): **ENTERPRISE (L.1449S)**, TERESA FRACTION (L.869S), RICHELIEU (L.942),
COLBY 1 (L.1088S), COLBY 2, COLBY SECTOR

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 15 26 N
LONGITUDE: 119 02 46 W
ELEVATION: 1000 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5458065
EASTING: 351119

LOCATION ACCURACY: Within 500M

COMMENTS: The location of three adits on the Enterprise (Lot 1449s) Reverted
Crown grant (Assessment Report 8611). Located 4.5 kilometres
northwest of Rhone.

COMMODITIES: Gold Silver Tellurium Copper Lead
Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Telluride Galena
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 42 x 1 Metres STRIKE/DIP: 045/
COMMENTS: Mineralized shear zones strike northeast and dip steeply. Veins are
up to 1 metre wide and 42 metres long. The Colby Sector was a gold
and telluride lens 7.6 metres long by 3.0 metres high in Adit 1. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Middle Jurassic			Nelson Intrusions
Cretaceous-Tertiary			Okanagan Batholith

LITHOLOGY: Granite
Granodiorite
Rhyolite Porphyry
Diabase Dike
Quartz Diorite
Quartzite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1933
SAMPLE TYPE: Grab
COMMODITY GRADE
Gold 406.0000 Grams per tonne
Tellurium 0.3000 Per cent
COMMENTS: One of two samples taken from dump material of high grade lens
material from the Colby Sector.
REFERENCE: Minister of Mines Annual Report 1933, page 154.

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1981

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

56.6000

Grams per tonne

Gold

7.0000

Grams per tonne

COMMENTS: The average of nine chip samples taken across an average width of 26.4 centimetres of vein from the portal of Adit 1.

REFERENCE: Assessment Report 8611.

CAPSULE GEOLOGY

The Enterprise occurrence is located on the north side of Nelse Creek, 400 metres north of the confluence of Kamloops Creek with Nelse Creek. The occurrence is part of three Reverted Crown grants; Enterprise (Lot 1449s), Teresa Fraction (Lot 869s) and Richelieu (Lot 942).

Development and exploration began on the occurrence in 1901 when the claims were first staked. The Enterprise and Richelieu was owned by S. Ray and associates and the Teresa Fraction by T. Graham. Development continued until 1905. No further work was recorded until 1916 when leased to E. George and T. Sullivan and in 1918 when leased to C. McRae. In 1925 and 1926, the property was operated by J. Dunham and E. Wanke, respectively. Work was again suspended until 1933 when leased to H. Lazier, who formed the Golden Kettle Mines Ltd. By this time development work consisted of three adits. In 1948, O. Johnson shipped 9 tonnes of ore. In 1962, S. Ruzicka shipped 30 tonnes of ore. In 1980, the property was staked by Dayton Creek Silver Mines Ltd. Further exploration work was conducted on the occurrence from 1980 to 1983. The adits and their associated geology, mineralization and assay values are described as follows.

The Enterprise occurrence lies within quartz diorite and granodiorite of the Middle Jurassic Nelson intrusions. To the east is a small outlier of Eocene Penticton sedimentary rocks composed of conglomerate, sandstone and shale. Surrounding the sedimentary and Jurassic plutonic rocks is granite of the Cretaceous to Tertiary Okanagan batholith.

The quartz veins which occur in adits 2 and 3 are reported to be discontinuous and erratic, due to the intrusion of granitic porphyry and diabase dikes.

A small isolated outcrop of quartzite, that is a Carboniferous to Permian Anarchist Group inlier, as well as quartz diorite, granite, granodiorite and diabase dikes are the reported lithologies on the property. Mineralization is confined to northeast striking, steeply dipping silicified shear zones within rhyolite porphyry and lenticular granodiorite bodies. The shear zones are reported to contain quartz veins and stringers, inclusions of country rock, fault gouge, pyrite, chalcopyrite, tellurides and minor galena.

Adit 1 is located a few metres above Nelse Creek. It was driven about 30 metres in a northwest direction for 24.4 metres. A 1.22-metre wide mineralized shear was exposed for most of its length. A 91-centimetre wide, northeast striking quartz vein is well developed at the portal but narrows near the adit face. Pyrite, chalcopyrite and minor galena in quartz comprises mineralization. Several sectors were stoped. The hostrock is granodiorite. A picked sample taken from Adit 1 in 1933 yielded 16.1 grams per tonne gold and 181.7 grams per tonne silver (Assessment Report 8611). A high grade gold and telluride lens (Colby Sector?) was reported mined. The lens was 7.6 metres long by 3.0 metres high. Two samples were reported to carry 406 to 822 grams per tonne gold and 0.30 to 0.70 per cent tellurium. The average assay values of 3 surface chip samples taken in 1981 were 5.1 grams per tonne gold and 33.0 grams per tonne silver (Assessment Report 8611). Similarly, the average of nine samples across an average width of 26.4 centimetres of vein at the portal, yielded 7.0 grams per tonne gold and 56.6 grams per tonne gold (Assessment Report 8611).

Adit 2 is located 30 metres northwest of Adit 1. It follows a quartz vein for 42 metres. The adit follows a 1-metre wide quartz vein which narrows to a stringer 24 metres from the portal but widens to a vein at the portal face. In 1981, the average of 8 adit samples taken across an average width of 50.5 centimetres yielded 2.8 grams per tonne gold and 30.7 grams per tonne silver (Assessment Report 8611). In the following year, an average of 10.2 grams per tonne gold was obtained from chip samples taken across an aggregate of 18 metres (Assessment Report 12006).

Adit 3 is reported to be 15.25 metres long following a silicified shear with negligible mineralization. A 91-centimetre chip sample taken in 1979 yielded 32.6 grams per tonne gold and 203.0

CAPSULE GEOLOGY

grams per tonne silver (Assessment Report 7478). In 1981, the average of 4 adit samples taken across an average width of 87.6 centimetres yielded 1.5 grams per tonne gold and 12.9 grams per tonne silver (Assessment Report 8611).

A total of 87 tonnes production occurred intermittently between 1918 and 1962. From this, 4261 grams of silver, 373 grams of gold, 1542 kilograms of copper, 399 kilograms of lead and 565 kilograms of zinc were recovered.

BIBLIOGRAPHY

EMPR AR 1901-1145; 1904-300; 1905-181; 1913-424; 1916-256;
*1933-154; 1948-38,126; *1962-A47
EMPR INDEX 3-195; 4-121
EMPR ASS RPT *7163, *7478, *8611, *12066
EMPR BC METAL MM00875 (included with Dentonia, 082ESE055)
EMPR EXPL 1979-26
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
GCNL #244, 1980; #12, 1983

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW062**

NATIONAL MINERAL INVENTORY:

NAME(S): **COLBY 1 (L.1088S)**, COLBY 2, DCSM 1-4

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 17 12 N
LONGITUDE: 119 03 30 W
ELEVATION: 0975 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5461362
EASTING: 350319

LOCATION ACCURACY: Within 500M

COMMENTS: The location of the Colby adit on the Colby (Lot 1088s) Reverted Crown grant (Assessment Report 8563).

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite
COMMENTS: A dark blue sulphide is found but unidentified.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 213 x 1 Metres STRIKE/DIP: 200/
COMMENTS: The 30 to 122 centimetre quartz vein strikes 200 to 235 degrees and has been traced for 213 metres on surface.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic Cretaceous-Tertiary Middle Jurassic	Anarchist	Undefined Formation	Okanagan Batholith Nelson Intrusions

LITHOLOGY: Chlorite Schist
Quartzite
Granite
Granodiorite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization
Syn-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: UNDERGROUND REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 123.5000 Grams per tonne
Gold 12.8000 Grams per tonne
COMMENTS: The average of 8 underground samples over an average width of 64.8 centimetres.
REFERENCE: Assessment Report 8563.

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1933
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 195.4000 Grams per tonne
Gold 1.3000 Grams per tonne
COMMENTS: A 61-centimetre chip sample taken 9.1 metres above the adit portal.
REFERENCE: Minister of Mines Annual Report 1933, page 154.

CAPSULE GEOLOGY

The Colby occurrence is located at 975 metres elevation, south of Kelly River and west of Colby Creek, on the Colby (Lot 1088s) Reverted Crown grant.

CAPSULE GEOLOGY

Development of this claim consists of an 18-metre adit bearing 215 degrees which extends along the trace of a vein. Numerous opencuts and shallow shafts are also found in the vicinity. Little is known of exploration or development work prior to 1933, when the Colby 1 and 2 claims were Crown granted to R. Forshaw and associates. In 1962, 44 tonnes ore was mined from the Colby occurrence. Recovery included 1617 grams of silver, 93 grams of gold, 43 kilograms of lead and 43 kilograms of zinc. Since 1979 the property has been owned and explored by Dayton Creek Silver Mines Ltd.

The Colby occurrence occurs in metasedimentary and metavolcanic rocks of the Carboniferous to Permian Anarchist Group. These rocks have been intruded by a small granite to granodiorite stock of the Middle Jurassic Nelson intrusions and by a larger granite to granodiorite stock of the Cretaceous to Tertiary Okanagan batholith. Quartz-pyrite mineralization is hosted in sheared, fractured and faulted quartzite and chlorite schist.

Mineralization on the property is confined to a 30 to 122 centimetre wide quartz vein. The vein strikes 200 to 235 degrees and has reportedly been traced for 213 metres on surface. Mineralization consists of pyrite and an unidentified dark blue mineral. The vein and shear zone truncate against porphyritic granite.

In 1933, a 61-centimetre wide chip sample taken 9.1 metres above the portal yielded 1.3 grams per tonne gold and 195.4 grams per tonne silver (Minister of Mines Annual Report 1933, page 154). Another sample across 1.07 metres at the face of the adit yielded 1.02 grams per tonne gold and 24.0 grams per tonne silver (Minister of Mines Annual Report 1933, page 154). Samples taken in 1981 returned similar values. On surface, the average of 5 chip samples, over an average width of 71.1 centimetres, yielded 8.2 grams per tonne gold and 160.0 grams per tonne silver (Assessment Report 8563). The average of 8 underground samples was 12.8 grams per tonne gold and 123.5 grams per tonne silver (Assessment Report 8563). The average chip width was 64.8 centimetres.

BIBLIOGRAPHY

EMPR AR 1911-291; 1933-154; *1962-A47
EMPR ASS RPT *8563, *12066
EMPR BC METAL *MM00838
EMPR INDEX 4-120
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
GCNL #244, 1980

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

early work, however, was conducted on the Boomerang and W.S. claim. The W.S. Reverted Crown grant (Lot 2281) was Crown granted to E. Galloway in 1907. An 18-metre shaft was sunk on the W.S. Reverted Crown grant in 1914. The first recorded production occurred in 1939 with 30 tonnes of ore mined from this shaft (BC METAL MM00945). This shipment yielded an average grade of 240 grams per tonne gold and 1886 grams per tonne silver (Minister of Mines Annual Report 1939, page 76). Pinecrest Gold Mines Ltd. attempted to develop the property in 1946. In 1962, S. Ruzicka operated the Paddy in this area and shipped 24 tonnes yielding 187 grams of gold, 1462 grams of silver, 24 kilograms of lead and 24 kilograms of zinc.

Since 1974, property work has consisted of geochemical and geophysical surveys, prospecting, sampling the old dumps and workings and surface diamond drilling. Development of this occurrence encompasses a number of trenches and pits along the trend of the quartz veins. One shaft was sunk 18 metres vertically into the vein on the west side of the Boomerang property.

Regionally, hostrocks of the Boomerang occurrence consist of fault blocks of Middle Jurassic Nelson intrusions, Cretaceous to Tertiary Okanagan batholith intrusions and volcanics of the Eocene Pentiction Group. Major faults follow a northeast and east trend.

On the Boomerang property, quartz diorite comprises rocks of the Nelson intrusions. It is medium grained and contains hornblende or biotite. The quartz diorite is most intensely altered adjacent to rhyolite dikes and along shear zones. Alteration consists of silicification as flooding, stockworks and narrow veins. Locally, quartz appears as a breccia cement. Pyritization is also widespread as disseminated pyrite and as fracture filling. The pyrite itself has been strongly oxidized to hematite, locally. Chloritic alteration comprises a regional alteration. Pentiction Group volcanics include rhyolite porphyry with a predominance of plagioclase phenocrysts and locally hornblende or biotite. The rhyolite porphyry is seen as dikes in diorite, locally on the property. Mafic dikes are also present with alteration envelopes up to 10 metres wide.

Mineralization is hosted by two near parallel east trending quartz veins within a pyritic, chloritic and brecciated quartz diorite. The veins have been traced from the northeast corner of the Boomerang claim, southwesterly across the W.S., Eagle Fraction and B.C. claims. The veins which range in width from a few centimetres to two metres, are reported to outcrop over a distance of 600 metres on the Boomerang and W.S., and possibly up to 800 metres more including outcrops on the Eagle Fraction and B.C. The veins strike 030 to 047 degrees.

Mineralization includes pyrite, chalcopyrite and galena. Gold is found in quartz veins along shear zones and in quartz breccia, locally extending into host quartz diorite. Gold content is reported to increase with the galena content of the veins. The ore in general is irregularly disseminated in pockets and shoots.

Rock samples taken during exploration programs have yielded good silver and gold values and are summarized as follows. On the Boomerang claim, dump sample 4006 yielded 51 grams per tonne silver and 5.14 grams per tonne gold (Assessment Report 6286). A 32-centimetre chip sample across the face of the vein returned 97 grams per tonne silver and 5.8 grams per tonne gold (Assessment Report 6286). These samples were taken in 1976. In the same year, sample 4004, taken from the northeast corner of the W.S. claim yielded 34 grams per tonne silver and 3.6 grams per tonne gold (Assessment Report 6286). Trench samples taken on the B.C. claim in 1986 yielded the following values. Sample 2107 returned 3.4 grams per tonne silver and 4.4 grams per tonne silver over 61 centimetres (Assessment Report 16671). On the Iconoclast, the average of three trench samples near the old shaft (Trench G) taken in 1986 were 1.61 grams per tonne gold over 1.7 metres (Assessment Report 16671).

BIBLIOGRAPHY

EMPR AR 1899-818; 1901-1145; 1905-181; 1907-220; 1908-251; *1913-157-158; 1939-A37,76; 1946-133; 1962-A48
EMPR INDEX 3-218; 4-124
EMPR ASS RPT *5621, *6286, 15191, *16671, 21658
EMPR BC METAL *MM00908; MM00945 (included in error with W.S., 082ESE209)
EMPR GEM 1975-E18; 1977-E21
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
EMPR PF (Report by D. Tully)
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 969
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

1897. At this time the Crown Point occurrence was owned by J. Douglas et al. Development consisted of a 7.62-metre shaft on the Crown Point claim and a small opencut on the boundary between the No. 2 and Sophia Sherron claims. E. Williamson shipped 41 tonnes from the Sunnyside claim between 1913 and 1920. In 1921, under lease to J. Kerr, the old shaft was cleaned out and a crosscut driven from the adit for 3 metres. In 1923, minor ore was shipped from the Donkey. In 1934, R. Forshaw shipped from the Sunnyside. In 1947, G.E. White operated the property and in 1948, an opencut 30 metres long by 3.6 metres wide by 6.1 metres deep was excavated 30 metres south of the shaft. O.D. Frith leased the property from G.E. White in 1949, which included the Crown Point and 10 other claims. Small shipments are recorded from 1949 to 1952. In 1951, the property was leased to Caladian Mines Ltd. and included the Crown Point and 14 other claims. In 1968, Tonto Exploration optioned the property from G.E. White. Some bulldozer trenching was done and the option was dropped.

The Crown Point occurrence lies within an inlier of metavolcanic and metasedimentary rocks of the Carboniferous to Permian Anarchist Group. Greenstone, locally tuffaceous and serpentized, is the predominant host lithology. Argillite and quartzite, locally cherty, minor limestone and magnesite with mariposite, and gneiss comprise the remaining hostrocks of the Anarchist Group. To the east is a small stock of Early Jurassic granodiorite and microdiorite of the Okanagan batholith. Eocene volcanic rocks of the Pentiction Group occur to the north and west. These include feldspar porphyries and aplite dikes. The contact between these units is faulted. The greenstone is folded, faulted, and has a variable northwest to north foliation.

Mineralization on the Crown Point claim is confined to a large body of quartz containing stringers and segregations of galena, sphalerite and pyrite within a greenstone and limestone host. Narrow stringers of galena traverse the limestone, but there is no definite trend to the orebody. The mineralization has been interpreted as the result of contact metasomatic replacement associated with the intrusion of mafic dikes and sills into limy horizons. Mineralization is probably the result of hydrothermal fluids associated with the Okanagan batholith. In 1921, an assay yielded 3.4 grams per tonne gold, 206 grams per tonne silver and 4 per cent lead (Minister of Mines Annual Report 1921, page 184).

Other mineralization includes a very narrow galena stringer near the contact between Pentiction volcanics and Anarchist metasediments, on the No. 2 claim. On the boundary between the No. 3 and Sophie Sherron claims an opencut uncovered a 30 to 60 centimetre wide honeycomb quartz vein with coarse-cubed galena. The vein was traceable for a short distance.

The Crown Point occurrence has a recorded production of 480 tonnes from which 129,045 grams of silver, 435 grams of gold, 16,807 kilograms of lead and 16,368 kilograms of zinc were recovered. Mining occurred between 1947 and 1952.

BIBLIOGRAPHY

EMPR AR *1897-596; 1900-879; 1905-181; 1913-154,421; 1918-211,470;
1919-367; 1920-163,347; *1921-184; 1923-184; 1934-A25; 1947-A37,
154; 1948-A38,126; *1949-A40,148-149; 1950-A40; 1951-A41; 1952-
A41,139; 1968-227
EMPR ASS RPT *9909, 10765, 12746, *12759, 13020, 13801, 13839,
*15918, *16290
EMPR BC METAL *MM00947; MM00935
EMPR INDEX 3-193,215,219
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1997/07/24

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW065**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACK DIAMOND (L.1098S)**, STANDARD (L.1099S)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 05 N
LONGITUDE: 119 03 15 W
ELEVATION: 1390 Metres

NORTHING: 5475959
EASTING: 351019

LOCATION ACCURACY: Within 500M

COMMENTS: The location of an inclined shaft, trench and mined-out slot 2.75 kilometres west from the summit of Goat Peak and 3.0 kilometres south-southeast from Beaverdell (Assessment Report 16772).

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Mineralization is assumed similar to the nearby Standard Fr. (082ESW035) containing galena, pyrite, sphalerite, tetrahedrite and chalcopyrite.

ASSOCIATED: Quartz
ALTERATION: Hematite Limonite Clay Pyrolusite

ALTERATION TYPE: Oxidation

Argillic

MINERALIZATION AGE: Eocene

ISOTOPIC AGE: 50 Ma

DATING METHOD: Lead/Lead

MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Irregular

MODIFIER: Fractured

COMMENTS: Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1274.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Westkettle Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

METAMORPHIC TYPE: Regional

Harper Ranch

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Channel

COMMODITY

GRADE

Silver

3.0800

Grams per tonne

Gold

0.0300

Grams per tonne

COMMENTS: Sample #8, a 0.30-metre channel sample and the best of 7 channel samples of quartz veinlets in a shear zone with limonite and clay gouge in altered granodiorite.

REFERENCE: Assessment Report 16772.

CAPSULE GEOLOGY

The Black Diamond (Lot 1098s) past producer is located 2.75 kilometres west of the summit of Goat Peak and 3.0 kilometres south-southeast of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area.

Past development on the Black Diamond began in 1916, under operation by P.J. Kennedy. A shipment of ore was made in 1918. In 1925, a syndicate of Penticton men continued development but failed

CAPSULE GEOLOGY

to find further ore before funds ran out. A new strike was claimed to have been found in 1927 by Kennedy but no ore was mined. Since 1946, work has been intermittent and ownership has changed several times: 1946 - Silver Bounty Mines Ltd., 1958 - Sheritt-Lee Mines Ltd., 1963 - Ruby Silver Mines Ltd., 1971 - Copper Bounty Mines Ltd. and 1983 - Walmont Precious Metals Corp. The occurrence is currently owned by IGF Metals Inc. Past development included a 30-metre crosscut, 3 inclined shafts, the deepest being about 30 metres, and 46 metres of opencuts and drifts.

For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

The Black Diamond (Lot 1098s) and Standard (Lot 1099s) partially overlie one another and adjoin the Standard Fr. claim (082ESW035) in the southwest. The property is underlain by Westkettle batholith granodiorite. An east trending shear zone, possibly a continuation of a shear zone on the adjoining Standard Fr. claim, contains quartz veins and veinlets carrying silver values. The shear zone is highly fractured and oxidized with limonitic and hematitic alteration and manganese staining (pyrolusite). Some clay gouge is also present in the zone.

Mineralization within the quartz veinlets is unknown. Where exposed on the easterly neighbouring Standard Fraction, the vein carries galena, pyrite, sphalerite, tetrahedrite and chalcopyrite. IGF Metals Inc. sampled shears and veins on the Black Diamond in 1987. Sample #8 yielded the best results of 7 channel samples across the main shear zone. This sample contained 3.08 grams per tonne silver and 0.03 gram per tonne gold (Assessment Report 16772).

Production records indicate 2 tonnes of 'silver ore' was shipped in 1918 to the Trail smelter, from which 746 grams of silver were recovered.

BIBLIOGRAPHY

- EMPR AR 1916-K256; 1917-F204,F212; 1918-K210; 1925-A207; 1926-A209, A447; 1927-C233; 1935-G52; *1949-A138-A143,A148; 1959-57; 1960-63
EMPR INDEX 3-189
EMPR ASS RPT *16772
EMPR BC METAL MM00823
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, 178 pp.
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW066**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOUNTY FR. (L.2962)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 06 N
LONGITUDE: 119 03 55 W
ELEVATION: 1260 Metres

NORTHING: 5476012
EASTING: 350214

LOCATION ACCURACY: Within 500M

COMMENTS: The lower adit located 2.5 kilometres west from the summit of Mount Wallace and 2.5 kilometres south-southeast of Beaverdell (Assessment Report 16772, Figure 363-10).

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Sphalerite Pyrite Galena Tetrahedrite
COMMENTS: Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1264.

ASSOCIATED: Quartz
ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Eocene

ISOTOPIC AGE: 50 Ma

DATING METHOD: Lead/Lead

MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Irregular

MODIFIER: Faulted

DIMENSION: 15 x 1 Metres

STRIKE/DIP: 270/90N

TREND/PLUNGE:

COMMENTS: The shear zone hosting a quartz vein strikes 270 degrees and dips 60 to 90 degrees north. The zone is 0.3 to 1.2 metres wide. A 15-metre ore zone was drifted in 1916.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic Paleocene			Westkettle Batholith Unnamed/Unknown Informal

ISOTOPIC AGE: 61.9 +/- 2.2 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Whole rock

LITHOLOGY: Granodiorite
Andesite Dike
Andesite

HOSTROCK COMMENTS: An andesite (Wellington-type) dike has been dated as Paleocene (Canadian Journal of Earth Sciences, Vol. 19, No. 6, page 1267).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel

YEAR: 1987

COMMODITY	GRADE	
Silver	174.5000	Grams per tonne
Gold	0.0300	Grams per tonne

COMMENTS: Sample #95, a 0.16-metre chip sample across a shear zone with iron staining and a quartz vein containing pyrite and minor galena.

REFERENCE: Assessment Report 16772.

CAPSULE GEOLOGY

The Bounty Fraction (Lot 2962) past producer is located 2.5 kilometres west of the summit of Mount Wallace and 2.5 kilometres south-southeast of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines

CAPSULE GEOLOGY

in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area.

Past development on the Bounty Fraction began in 1906, under operation by Wallace Mountain Mining Co. Ltd. The first ore shipment was also made in this year. Additional shipments were made in 1907, 1909, 1910 and 1913 by the owners and various lessees. Work in 1916 under lease to A. Matuskey, I.H. Hallett and associates consisted of drifting along a shear, including 15 metres of ore. Ore shipments were made annually from 1916 to 1919. Since 1946, work has been intermittent and ownership has changed several times: 1946 - Silver Bounty Mines Ltd., 1958 - Sheritt-Lee Mines Ltd., 1963 - Ruby Silver Mines Ltd., 1971 - Copper Bounty Mines Ltd. and 1983 - Walmart Precious Metals Corp. The occurrence is currently owned by IGF Metals Inc. Work in 1961 by Sheritt-Lee Mines Ltd. included some underground drilling and extending of the east drift. More ore shipments were made in 1949, 1959, 1960 and 1961. The main vein was developed by shallow shafts, opencuts and a crosscut tunnel over 61 metres long. Drifting and stoping were started on another small vein but drifting revealed the vein was faulted after a short distance in both directions; 15 and 18 metres respectively. Another crosscut tunnel was started on another small vein but drifting revealed the vein was faulted after a short distance in both directions.

The Bounty Fraction claim (Lot 2962) adjoins the Bounty claim (082ESW033) to the southwest and is 1.5 kilometres south of the Beaverdell mine (082ESW030). The claim is underlain by granodiorite of the Westkettle batholith. A quartz vein occupies a shear zone that strikes 270 degrees and dips 60 to 90 degrees north. The zone varies from 0.3 to 1.2 metres in width. The shear zone is iron stained. Fine grained, grey andesite dikes have intruded along this shear zone. North-striking faults dipping at moderate to steep angles to the northwest offset the vein. Mineralization in the quartz vein consists of sphalerite, pyrite, galena and tetrahedrite. Sample #95, a 0.16-metre channel sample taken from this shear zone, yielded 174.5 grams per tonne silver and 0.03 gram per tonne gold (Assessment Report 16772). Another grab sample yielded 304 grams per tonne silver, 0.3 gram per tonne gold, 1.2 per cent lead and 5.11 per cent zinc (Assessment Report 16772).

For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

The Bounty Fraction past producer has a recorded production of 311 tonnes between 1906 and 1961. Ore was sent to both the Granby and Trail smelters. A total of 1,167,014 grams of silver, 31 grams of gold, 18,335 kilograms of lead and 3705 kilograms of zinc were recovered.

BIBLIOGRAPHY

- EMPR AR 1906-H160,H250,H253; 1907-L214; 1910-K244; 1913-K156;
1916-K256,K517; 1917-F203,F449; 1918-K210; 1922-N173; 1923-A183;
1925-A206; 1926-A209; 1929-C263; 1938-D40; 1939-A93; 1941-A74;
1942-A71; 1946-A134; 1947-A153; 1948-A126; *1949-A138-A145;
1958-36; 1959-A46,57,58; 1960-A52,63; 1961-A47
EMPR INDEX 3-190; 4-119
EMPR ASS RPT *16772
EMPR BC METAL MM00827
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, pp. 89, 122
GSC P 37-21
GSC OF 481; 637; 1505A; 1565; 1969
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the
Beaverdell Area, south-central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW067**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIGER (L.2097)**, WABASH

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 29 N
LONGITUDE: 119 03 42 W
ELEVATION: 1375 Metres

NORTHING: 5476715
EASTING: 350496

LOCATION ACCURACY: Within 500M

COMMENTS: The location of two main adits 2.25 kilometres west from the summit of Mount Wallace and 2.25 kilometres south-southeast from Beaverdell (Assessment Report 16772).

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Tetrahedrite Galena Sphalerite Pyrite Silver
Chalcopyrite

COMMENTS: Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1264.

ASSOCIATED: Quartz

ALTERATION: Limonite Malachite

ALTERATION TYPE: Silicific'n Oxidation

MINERALIZATION AGE: Eocene

ISOTOPIC AGE: 50 Ma DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Irregular

MODIFIER: Fractured

DIMENSION: 6 Metres

STRIKE/DIP: 220/40N

TREND/PLUNGE:

COMMENTS: A 6.0 to 7.6-metre wide shear zone strikes 220 degrees, dips 40 degrees northwest and hosts mineralized quartz veins up to 0.40 metre wide.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith

LITHOLOGY: Granodiorite
Diorite Dike
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SHEAR

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Channel

COMMODITY

GRADE

Silver

1263.8000

Grams per tonne

Gold

0.1400

Grams per tonne

COMMENTS: Sample #87 from an intensely limonitic altered and siliceous shear zone.

REFERENCE: Assessment Report 16772.

CAPSULE GEOLOGY

The Tiger Crown grant (Lot 2097) past producer is located 2.25 kilometres west of the summit of Mount Wallace and 2.25 kilometres south-southeast of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area.

CAPSULE GEOLOGY

Past development on the Tiger began in 1903, when the claim was Crown granted to Wm.M. Law. No further work was recorded until leased and bonded to the Federal Mining and Smelting Co. in 1925. A considerable amount of surface trenching was done on mineralized shear zones and the first recorded ore shipment made to the Trail smelter. Further development work, consisting of surface stripping, sinking and drifting, was conducted in the following year by the Tiger Mining Co. Syndicate. Work was intermittent until 1933. In this year, the old crosscut was extended 27 metres and extension of the surface shear was found. J.L. Nordman and partners leased the property from 1934 to 1946, when ownership was transferred to Silver Bounty Mines Ltd. Production was continuous between 1934 and 1940. Since 1946, work has been intermittent and ownership has changed several times: 1946 - Silver Bounty Mines Ltd., 1958 - Sheritt-Lee Mines Ltd., 1963 - Ruby Silver Mines Ltd., 1971 - Copper Bounty Mines Ltd. and 1983 - Walmont Precious Metals Corp. The occurrence is currently owned by IGF Metals Inc.

The Tiger (Lot 2097) adjoins the Kokomo Fr. claim (082ESW031) in the northwest, the Beaver claim (082ESW040) in the north and the Castor Fr. claim (082ESW069) in the southwest. The property is underlain by granodiorite of the Westkettle batholith.

For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

Mineralized quartz veins occupy northeast trending, moderately northwest dipping fault zones, initially exposed by surface stripping. The 6.0 to 7.6 metre wide zones strike 220 degrees and dip 40 degrees northwest. The shear zones have been intruded by fine-grained, massive diorite dikes subparallel to parallel to the shear zones. Veins are highly fractured, locally silicified, limonite altered and are up to 40 centimetres wide. Three subparallel to parallel mineralized fault structures have been found on the Tiger claim: the south vein set, the central vein set and the north vein. Mineralization consists of tetrahedrite, galena, sphalerite, pyrite, native silver, malachite and possibly chalcocopyrite.

The best assay results from channel samples taken in 1987 of the south vein set across the southeast corner of the Tiger claim was from Sample #73. It yielded 16,839 grams per tonne silver and 0.89 gram per tonne gold over 0.40 metre (Assessment Report 16772). Sample #63 yielded the highest assay values from the central vein set with 1011 grams per tonne silver and 0.14 gram per tonne gold over 0.15 metre (Assessment Report 16772). Sampling from the north vein near the Tiger shaft yielded 1263.8 grams per tonne silver and 0.14 gram per tonne gold from Sample #87 (Assessment Report 16772).

Total recorded production between 1925 and 1940 from the Tiger past producer was 235 tonnes. From this, 1,280,013 grams of silver, 124 grams of gold, 17,256 kilograms of lead and 24,565 kilograms of zinc were recovered.

BIBLIOGRAPHY

- EMPR AR 1903-H248; 1925-A200-A205; 1926-A208; 1927-C232; 1928-C253; 1930-A220; 1933-A153; 1934-A25; 1935-A26,G52; 1936-D57; 1937-A36, D35; 1938-A34,D40; 1939-A37,A94; 1940-A24; 1946-A134; 1947-A153; 1948-A126; 1949-A138-A145; 1965-167; 1966-191; 1967-224
- EMPR INDEX 3-216
- EMPR ASS RPT *16772
- EMPR BC METAL MM00938
- EMPR GEOLOGY *1975, Fig. G-17
- EMPR OF 1989-5
- GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
- GSC MEM *79, p. 125
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21
- CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
- *Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW068**

NATIONAL MINERAL INVENTORY:

NAME(S): **NODAWAY (L.2615)**, HIGHLAND-BELL, BEAVERDELL

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 18 N
LONGITUDE: 119 04 40 W
ELEVATION: 1158 Metres

NORTHING: 5476408
EASTING: 349318

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate centre of the former Nodaway Crown grant (Lot 2615)
(National Topographic System Map 82E6).

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Silver Sphalerite Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Eocene

ISOTOPIC AGE: 50 Ma

DATING METHOD: Lead/Lead

MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

COMMENTS: A shear-hosted quartz vein varies from 20 to 30 centimetres width.
Age date: Canadian Journal of Earth Sciences, Vol. 18, No. 6, p. 1267.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

408.6000

Grams per tonne

Gold

0.7000

Grams per tonne

COMMENTS: Sample from quartz vein on surface.

REFERENCE: Assessment Report 16771.

CAPSULE GEOLOGY

The Nodaway occurrence is located 3.5 kilometres west of the summit of Mount Wallace and 1.5 kilometres south-southwest of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area. The Nodaway claim was first Crown granted to Victoria and Boundary Creek Development and Mining Co. Ltd in 1911. In 1922, the property was leased to J. Cunningham and associates, who developed 36.5 metres of drifts, 6.7 metres of crosscuts and 2.4 metres of winze. Six tonnes of ore were mined and shipped in the following year. In 1923, it was amalgamated with the Sally claim group, consisting of the Sally Fraction, Nodaway, Duncan, Excelsior, Sally, Kid Fraction, Highland Queen, Alice M. Fraction, Hard Times Fraction, Tunnel Fraction, Rob Roy, Pueblo Fraction and Castor Fraction. The claim was leased to Ludlow Ltd. By 1949, the property became part of the ground held by Highland-Bell Ltd., owner of the Highland-Bell (Beaverdell) mine. The Highland-Bell mine produced until 1991.

The Nodaway (Lot 2615) is 500 metres south of the Wellington

CAPSULE GEOLOGY

mine (082ESW072) and Sally mine (082ESW073). The property is underlain by Westkettle granodiorite. A quartz vein occurs in a shear zone and is mineralized with galena, possible tetrahedrite, native silver and sphalerite. The vein varies from 20 to 30 centimetres in width. In 1922, a hand sample of ore assayed 11,897 grams per tonne silver, 25 per cent lead and 11 per cent zinc (Minister of Mines Annual Report 1922, page N173). A chip sample taken in 1987 of a surface vein during property exploration by Teck Corp. yielded 408.6 grams per tonne silver and 0.70 gram per tonne gold (Assessment Report 16771).

Six tonnes of 'silver-lead ore' were shipped in 1923 to the Trail smelter. A total of 22,425 grams of silver and 415 kilograms of lead were recovered.

For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

BIBLIOGRAPHY

- EMPR AR 1901-1144; 1911-K291; 1922-N173; 1923-A184,A383; 1925-A205; 1934-D9; *1949-A138-A143
EMPR INDEX 3-207
EMPR ASS RPT *16771
EMPR BC METAL MM00902
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW069**

NATIONAL MINERAL INVENTORY:

NAME(S): **CASTOR FR. (L.2278)**, HIGHLAND-BELL, BEAVERDELL

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 30 N
LONGITUDE: 119 03 57 W
ELEVATION: 1341 Metres

NORTHING: 5476754
EASTING: 350194

LOCATION ACCURACY: Within 500M

COMMENTS: Adits located 2.5 kilometres west from the summit of Mount Wallace and 2.0 kilometres south-southeast of Beaverdell (Geology 1975, Figure G-17).

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Silver

ASSOCIATED: Quartz

ALTERATION: Hematite

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Eocene

ISOTOPIC AGE: 50 Ma

DATING METHOD: Lead/Lead

MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Irregular

MODIFIER: Faulted Fractured

COMMENTS: Mineralized quartz veins occur in an east-trending shear zone. The shear zone is highly fractured and faulted.
Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1267.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith
Paleocene			Unnamed/Unknown Informal

ISOTOPIC AGE: 61.9 +/- 2.2 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Whole rock

LITHOLOGY: Granodiorite
Andesitic Dike
Quartz Latite Dike
Andesite
Quartz Latite

HOSTROCK COMMENTS: An andesite (Wellington-type) dike has been dated as Paleocene and a quartz latite (Idaho-type) as Eocene (CJES, Vol. 19, No. 6, p. 1267).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

Harper Ranch

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1986

SAMPLE TYPE: Drill Core

COMMODITY

COMMODITY	GRADE	
Silver	626.6000	Grams per tonne
Gold	0.6800	Grams per tonne

COMMENTS: Sample across 0.6 metre of quartz vein material.

REFERENCE: Assessment Report 15704.

CAPSULE GEOLOGY

The Castor Fraction occurrence is located 2.5 kilometres west of the summit of Mount Wallace and 2.0 kilometres south-southeast of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were

CAPSULE GEOLOGY

the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area. The Castor Fraction claim was first Crown granted to Victoria and Boundary Creek Development and Mining Co. Ltd. in 1911. In 1918, the property was leased to R. Perry and associates. Ore shipments were made from 1919 to 1922 from 76 metres of tunnel. In 1925, it was amalgamated with the Sally claim group, consisting of the Sally Fraction, Nodaway, Duncan, Excelsior, Sally, Kid Fraction, Highland Queen, Alice M. Fraction, Hard Times Fraction, Tunnel Fraction, Rob Roy, Pueblo Fraction and Castor Fraction. By 1949, the property became part of the ground held by Highland-Bell Ltd., owner of the Highland-Bell (Beaverdell) mine. The Highland-Bell mine produced until 1991.

The Castor Fraction (Lot 2278) adjoins the Tiger claim (082ESW067) in the northeast, the Bounty claim (082ESW033) in the southeast, the Bounty Fraction claim (082ESW066) in the south, the Duncan claim (082ESW032) in the west and the Kokomo Fraction claim (082ESW031) in the north. The property is underlain by Westkettle granodiorite.

Mineralized quartz veins and veinlets occur in a east trending shear zone. A pre-mineral andesite dike (Wellington-type) occupies the same structural zone and parallels the veins. A syn or post-mineral quartz latite dike (Idaho-type) also occurs. The zone hosting the quartz veining is highly faulted and fractured.

Mineralization consists of pyrite, galena, sphalerite and native silver in a gangue of mainly quartz. Some hematite is also present as an oxidation product. A 0.6-metre drill core sample taken in 1986 during property exploration by Teck Corp. yielded 626.6 grams per tonne silver and 0.68 gram per tonne gold (Assessment Report 15704).

The Castor Fraction occurrence has produced 70 tonnes of ore between 1919 and 1922. Recovery totalled 522,717 grams of silver, 62 grams of gold and 1974 kilograms of lead.

For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

BIBLIOGRAPHY

- EMPR ASS RPT *15704, 16771
- EMPR AR 1911-K291; 1918-K220; 1919-N168; 1920-N156; 1921-G185,G188; 1925-A205; 1949-A138-A143
- EMPR INDEX 3-191
- EMPR BC METAL MM00836
- EMPR GEOL 1975, Fig. G-17
- EMPR OF 1989-5
- GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
- GSC MEM *79
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21
- CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
- *Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW070**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOMESTAKE FR. (L.1094S)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 51 N
LONGITUDE: 119 04 46 W
ELEVATION: 0990 Metres

NORTHING: 5477430
EASTING: 349225

LOCATION ACCURACY: Within 500M

COMMENTS: Adit, 3.75 kilometres west from the summit of Mount Wallace, 750 metres south-southeast from the village of Beaverdell (Geological Survey of Canada Memoir 79, Figure 1).

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Eocene

ISOTOPIC AGE: 50 Ma

DATING METHOD: Lead/Lead

MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Irregular

MODIFIER: Faulted

COMMENTS: A faulted shear zone contains mineralized quartz veins with ore shoots 5 to 20 centimetres wide.
Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1267.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith
Eocene			Unnamed/Unknown Informal

LITHOLOGY: Granodiorite
Quartz Monzonite
Quartz Porphyry Dike
Aplite Dike
Quartz Porphyry
Aplite

HOSTROCK COMMENTS: The Beaverdell stock is of Eocene age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1925
SAMPLE TYPE:	Grab		
COMMODITY		GRADE	
Silver		89.1000	Grams per tonne
Gold		4.8000	Grams per tonne
Lead		6.0000	Per cent
Zinc		9.0000	Per cent

COMMENTS: Sample from sacked ore.

REFERENCE: Minister of Mines Annual Report 1925, page A205.

CAPSULE GEOLOGY

The Homestake Fraction occurrence is located 3.75 kilometres west of the summit of Mount Wallace and 0.75 kilometre south-southeast of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small

CAPSULE GEOLOGY

workings throughout the area. Extensive development work was done on the Homestake Fraction prior to 1925 by individuals and syndicates but no ore was found except in the upper workings area. In 1925, it was amalgamated with the Sally claim group, consisting of the Sally Fraction, Nodaway, Duncan, Excelsior, Sally, Kid Fraction, Highland Queen, Alice M. Fraction, Hard Times Fraction, Tunnel Fraction, Rob Roy, Pueblo Fraction and Castor Fraction. In 1925, the property was developed by S.F. Bradbury and associates. The claims were Crown granted to G.H. Cropley in 1930. By 1949, the property became part of the ground held by Highland-Bell Ltd. owner of the Highland-Bell (Beaverdell) mine. The Highland-Bell mine produced until 1991. Past development included several irregular tunnels which appeared to have followed fault planes within the shear zone.

The Homestake Fraction (Lot 1094s) adjoins the Wellington mine (082ESW072) in the south. The property is underlain by Westkettle granodiorite close to the contact with Beaverdell quartz monzonite. Several quartz porphyry and pink aplite dikes cut granodiorite and are offshoots of the quartz monzonite.

A faulted shear zone contains quartz veins mineralized with galena, sphalerite and pyrite. Ore shoots vary from 5 to 20 centimetres in width. A northerly striking crossfault has displaced the orebody. A sample of sacked ore in 1925 yielded 89.1 grams per tonne silver, 4.8 grams per tonne gold, 6 per cent lead and 9 per cent zinc (Minister of Mines Annual Report 1925, page A205).

For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

BIBLIOGRAPHY

- EMPR AR *1925-A204,A205; 1930-A445; 1949-A138-A143
EMPR GEOLOGY 1975, Fig. G-17
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, p. 17; Map 1530
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW071**

NATIONAL MINERAL INVENTORY: 082E6 Ag5

NAME(S): **SCANDIE, SILVER SCANDIE, SCANDIA, BABE, FRAN, FRAN PROPERTY**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 23 40 N
LONGITUDE: 119 03 56 W
ELEVATION: 1311 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5473357
EASTING: 350122

LOCATION ACCURACY: Within 500M

COMMENTS: An adit located 4 kilometres south-southwest from the summit of Mount Wallace and 5 kilometres south of Beaverdell (Assessment Report 12734).

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Silica Chlorite Epidote Sericite Clay
ALTERATION TYPE: Silicific'n Propylitic Argillic
MINERALIZATION AGE: Eocene
ISOTOPIC AGE: 50 Ma DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres STRIKE/DIP: 090/70N TREND/PLUNGE:
COMMENTS: One set of quartz veins.
Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1267.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Westkettle Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Harper Ranch
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Channel
COMMODITY GRADE
Silver 963.2000 Grams per tonne
Gold 0.1000 Grams per tonne
Copper 0.1300 Per cent
Lead 2.1700 Per cent
Zinc 12.5000 Per cent
COMMENTS: Sample 47285, a channel sample over 0.4 metre of quartz vein in Trench 6.
REFERENCE: Assessment Report 12734.

CAPSULE GEOLOGY

The Fran property is a past producer located 4.0 kilometres west of the summit of Mount Wallace and 5 kilometres south-southeast of Beaverdell, British Columbia (Assessment Report 16772). The property was previously operated by the Silver Scandie Mines Ltd. or known as the Scandie claim group consisting of the Scandie, Scandie 1 to 3 and 5 to 17 claims.

In 1916, M.W. Smith was the owner of the Scandie which was leased and bonded to a Phoenix, British Columbia syndicate. Good silver-lead ore was obtained from a small vein intersected by a tunnel on the property. In the following year development work consisted of a 12-metre tunnel, 3.6-metre winze and numerous opencuts and surface stripping. An additional 27 metres of drifting and considerable opencut work was done in the following year. No further

CAPSULE GEOLOGY

records could be found until 1951, when a three tonnes of ore were shipped by D. Hood. In 1960, Silver Scandie Mines Ltd. held the ground and another 5 tonnes of ore was shipped. The upper adit was driven an additional 27 metres for a total of 57.6 metres length. A new lower adit was driven 47.2 metres. The most recent interest in the Buster property has been by Canstat Petroleum Resources Corp. in 1982 and 1983.

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area. For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

The Fran property is underlain by Westkettle granodiorite. Two sets of mineralized quartz veins have been discovered, one striking 270 degrees and dipping 60 to 70 degrees north, and the second set striking 100 degrees and dipping 70 degrees south. Both occupy a locally silicified east-trending shear zone. An alteration halo consisting of varying amounts of sericite, chlorite, clay minerals and epidote extends up to 15 centimetres or more into the granodiorite wallrock. The quartz veins vary from 20 to 30 centimetres in width.

Mineralization consists of galena, sphalerite, pyrite and chalcopryrite in a gangue of mainly quartz and occasional calcite. Massive sulphides have been found over 2 metres in Trench 6, in 1982. The sulphides are hosted in a siliceous east-trending shear zone. The best chip sample, Sample 35A, taken from this trench in 1982 yielded 5311.2 grams per tonne silver, 0.75 gram per tonne gold, 24 per cent zinc, 10.5 per cent lead and 0.54 per cent copper (Assessment Report 10979). The trench was resampled in the following year. Channel sample 47285, over 0.40 metre, yielded 963.2 grams per tonne silver, 0.10 gram per tonne gold, 12.5 per cent zinc, 2.17 per cent lead and 0.13 per cent zinc (Assessment Report 12734). Diamond-drill hole BB83-8 was drilled to test the shear zone in Trench 6 but failed to intersect further mineralization.

The Fran occurrence has produced a total of 8 tonnes of ore in 1951 and 1960. Recovery included 15,489 grams of silver, 288 kilograms of lead and 585 kilograms of zinc. The property was operated by D. Hood.

BIBLIOGRAPHY

- EMPR AR 1916-K256; 1917-F205; 1918-K220; *1951-A41; 1960-A53,63
- EMPR INDEX 4-125 (listed as not known)
- EMPR ASS RPT 8526, 9988, *10979, *12734
- EMPR BC METAL MM00924
- EMPR EXPL 1980-35; 1981-174; 1982-33,34; 1983-41,42
- EMPR GEM 1974-57
- EMPR OF 1989-5
- GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
- GSC MEM *79, pp. 78,92,124
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21
- CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
- GCNL #248(Dec.29), 1982; #162(Aug.23), #175(Sept.12), 1983
- *Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW072**

NATIONAL MINERAL INVENTORY: 082E6 Ag2

NAME(S): **WELLINGTON (L.2621)**, BEAVERDELL-WELLINGTON, SILVER BOUNTY,
BROACH, AIR RECEIVER, SILVER DOLLAR,
HENDERSON

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:
LATITUDE: 49 25 36 N
LONGITUDE: 119 04 36 W
ELEVATION: 1127 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: A shaft located 3.25 kilometres west from the summit of Mount Wallace and 1.25 kilometres south-southeast of Beaverdell (Geology 1975, Figure G-17; Minister of Mines Annual Report 1949, page A144).

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5476961
EASTING: 349414

COMMODITIES: Silver Lead Zinc Gold

MINERALS

SIGNIFICANT: Pyrite Sphalerite Galena Tetrahedrite Pyrrhotite
Argentite Silver Chalcopyrite Arsenopyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Chlorite Clay Argillic
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Eocene
ISOTOPIC AGE: 50 Ma
DATING METHOD: Lead/Lead
MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Bladed
MODIFIER: Faulted
DIMENSION: Metres
STRIKE/DIP: 090/75S
TREND/PLUNGE:
COMMENTS: The Broach vein strikes 090 degrees and dips steeply south. Veins vary from 20 to 75 centimetres width and are faulted.
Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1267.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith
Paleocene			Unnamed/Unknown Informal

ISOTOPIC AGE: 61.9 +/- 2.2 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Whole rock

LITHOLOGY: Granodiorite
Aplite Dike
Andesitic Dike
Augite Porphyritic Dike
Aplite
Andesite
Augite Porphyry

HOSTROCK COMMENTS: An andesite (Wellington-type) dike has been dated as Paleocene and a quartz latite (Idaho-type) dike as Eocene (CJES Vol.19, No.6, p.1267).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional
Harper Ranch
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: WELLINGTON
REPORT ON: Y
CATEGORY: Measured
QUANTITY: 32211 Tonnes
COMMODITY: Silver
GRADE: 166.2000 Grams per tonne
YEAR: 1983
COMMENTS: Ore dumps on the 500 and 300 levels. Metallurgical testing indicates 83.6 per cent recovery.
REFERENCE: Assessment Report 16772, page 7.

CAPSULE GEOLOGY

The Wellington (Lot 2621) past producer is located 3.25 kilometres west of the summit of Mount Wallace and 1.25 kilometres south-southeast of Beaverdell, British Columbia (Geology 1975, Figure G-17; Minister of Mines Annual Report 1949, page A144).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040) and Bell (082ESW030), with numerous other small workings throughout the area. The Wellington occurrence was first discovered and actively developed by 1901. Past development consisted of substantial underground workings. At depth, the Wellington mine is connected to the Sally mine.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Beaverdell porphyry. These have been dated by potassium-argon methods as Eocene (Watson, P.H. (1981): Genesis and zoning of silver-gold veins in the Beaverdell area, south-central British Columbia; Leary, G.M. (1970): Petrology and structure of the Tuzo Creek molybdenite prospect near Penticton, British Columbia and Exploration in British Columbia 1995, pages 124-126. The Westkettle batholith has been correlated with the Nelson intrusions that has been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper sections of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east.

A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine-grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. One of these was dated by potassium-argon methods at 61.6 +/- 2.2 Ma (Watson, P.H., 1981). Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization. One of these has given a potassium-argon age of 50.6 +/- 1.5 Ma (Watson, P.H., 1981).

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. Five distinctly separate quartz vein systems are arranged roughly en echelon in this structural zone. The west-half contains the Wellington (Lot 2621), Sally (082ESW075, Lot 2092) and Rob Roy (Lot 2093, also part of Sally) systems which all strike east and dip from 70 degrees south to vertical. The Wellington and Sally each comprise two separate veins and the Rob Roy three. In the central part of the zone, the Bell (082ESW030, Lot 2343) comprises two veins which strike east to northeast and dip south to southeast. The eastern part of the zone contains the upper and lower sections of the Lass (082ESW133) and Highland Lass (Lot 2341, also part of the Bell) vein which strikes northeast and dips 50 degrees southeast. In general, quartz breccia veins and stockworks are so complex that continuous mineralized sections are a maximum of a few metres before being faulted or disrupted. Nevertheless, some mineralized zones have been found that extend up to 150 metres horizontally. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship: (1) high angle, north striking normal faults, (2) low angle, north trending strike-slip faults, (3) northeast striking, high angle normal faults (terminal faults), (4) northeast-trending 'slice' faults and (5) crossfaults. The northeast striking, high angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite. 'Ore ground' has been described as propylitic

CAPSULE GEOLOGY

altered granodiorite, quartz diorite and quartz monzonite of the Westkettle batholith, up to 15 metres wide. These zones are characterized by sericite, clay minerals, chlorite, calcite, epidote and hematite. The fault-bound veins commonly have a banded texture defined by outer, crudely parallel sulphide stringers. The wallrocks are brecciated and sheared over 30 to 150 centimetres width adjacent to veins. Weak sericite alteration of feldspars is pervasive in the Westkettle batholith.

The interpretation of galena lead-lead isotope age data coupled with geometrical and age relationships between dikes and veins suggests mineralization was formed around 50 Ma, coeval with Eocene stocks (Canadian Journal of Earth Sciences, Vol. 19, No. 6, pages 1264-1274, 1982).

The Wellington mine (Lot 2621) adjoins the Sally mine on the west. Mineralized quartz veins occur in east striking, moderate to steep south-dipping faults in Westkettle granodiorite. The quartz fissure-veins vary from 20 to 75 centimetres in width with propylitic alteration extending up to 8 metres in the wallrock. Thin section studies show amphiboles almost entirely converted to chlorite and feldspar replaced by clay and calcite. A pre-mineralization andesite (Wellington-type) dike parallels as well as displaces the veins up to 76 centimetres and is in places invaded and mineralized by them. The dike is absent below the No. 4 level. The Wellington-type dike also cut older, pink aplite dikes which occur discontinuously. Augite porphyritic dikes (similar to Idaho-type), are the youngest and cut Wellington-type dikes.

Three quartz veins within 36 metres from each other have been mined in the past. These are the Wellington, Broach and Air Receiver veins. The Broach and Air Receiver veins appear to be terminated by faults and most ore was mined from these veins at ore near the No. 5 level. The Air Receiver vein is cut off by faults at the east and west ends. Drag ore in these faults indicates left-lateral displacement of the ore but attempts to locate the faulted extensions were unsuccessful. The Broach vein strikes 090 degrees and dips steeply south. It has a pronounced west rake due to strike-slip transverse faults. Minute veinlets carry mineralization in the upper fault zone. An augite porphyry dike, similar to nearby Idaho-type dikes, occupies the lower fault zone. Figure 15 in the Minister of Mines Annual Report 1949, page A144 show the location of these veins in the No. 5 level. Other ore was intersected underground from the No. 2 level to below the No. 5 level.

Mineralization consists of pyrite, sphalerite, galena, tetrahedrite, pyrargyrite, argentite, native silver, arsenopyrite and pyrrhotite with a minor amount of chalcopyrite. The gangue material is mainly quartz with altered wallrock fragments and minor concentrations of calcite. At lower elevations in the veins, there appears to be more tetrahedrite present and less pyrargyrite.

Past production from the Wellington was 7261 tonnes, with 46,885,178 grams of silver, 11,321 grams of gold, 435,534 kilograms of lead and 660,409 kilograms of zinc recovered. In 1951, N. Puhaty shipped 583 kilograms of ore for testing from the Silver Dollar, Henderson Group, an adjacent property to the Wellington. In 1988, measured geological reserves at Wellington were 32,211 tonnes grading 166.2 grams per tonne silver (Assessment Report 16772, page 7).

BIBLIOGRAPHY

- EMPR AR 1901-1143,1144; 1904-G216; 1910-K248; 1919-N174; 1920-N155; 1921-G188; 1922-N173; *1925-A200-A204,A206; 1926-A209; 1927-C232, C233; 1928-C254; 1929-C262,C502; 1930-A220; 1931-A123; 1932-A126; 1933-A28,A153; 1934-A25,A29,D9,D10; 1935-A7,A26,A30,D14,G52; 1936-A29,A35,D56,D57; 1937-A29,A31,A36,A41,D34; 1938-A27,A29,A34,A39, D40; 1939-A37,A93; 1940-A17,A24,A79; 1941-A19,A25,A79; 1942-A21; 1943-A38; 1946-A134; 1947-A153,A154; *1948-A126; *1949-A138-A145; 1950-A116,A117; 1951-A41,A133; 1952-A41,A139; 1953-43,A109; 1954-A48,A118; 1965-167; 1966-191; 1967-224
EMPR ASS RPT 16771, *16772
EMPR BC METAL MM00940, MM00928
EMPR GEM 1969-301,302
EMPR GEOLOGY 1975, pp. G31,G33,Fig.G17
EMPR INDEX 3-212,213,218; 4-126
EMPR OF 1989-5; 1998-10
EMPR PF (082ESW General, Underground Plans)
EMR MP CORPFILE (Silver Bounty Mines Ltd.; Ruby Silver Mines Ltd.)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, pp. 89,92,120-122
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CIM *Vol.II, 1957: Structural Geology of Canadian Ore Deposits, pp. 136-141

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 989
REPORT: RGEN0100

BIBLIOGRAPHY

CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold veins in the
Beaverdell area, South-Central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pages

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW073**

NATIONAL MINERAL INVENTORY: 082E6 Ag1

NAME(S): **SALLY (L.2092)**, ROB ROY (L.2093), PUEBLO FR. (L.1205S),
SALLY GROUP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 25 41 N
LONGITUDE: 119 04 21 W
ELEVATION: 1249 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5477107
EASTING: 349720

LOCATION ACCURACY: Within 500M

COMMENTS: The Sally No. 1 tunnel is located 3.0 kilometres west of Mount
Wallace and 1.5 kilometres south-southeast of Beaverdell (Geological
Survey of Canada Memoir 79, Figure 1).

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Argentite Pyrrargyrite Silver Tetrahedrite Galena
Sphalerite Pyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Chlorite Calcite Clay Turgite
ALTERATION TYPE: Propylitic Argillic Oxidation
MINERALIZATION AGE: Eocene
ISOTOPIC AGE: 50 Ma DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Bladed
MODIFIER: Faulted
DIMENSION: Metres STRIKE/DIP: 090/75S TREND/PLUNGE:
COMMENTS: The main vein averages about 76 centimetres width. Vein occupy faults
or shears striking 090 degrees and dipping steeply south.
Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1267.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Westkettle Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Harper Ranch
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 4226.0000 Grams per tonne
Gold 2.0600 Grams per tonne
COMMENTS: Sample 87-6, an 18-centimetre chip sample across a 15-centimetre
shear zone with 0.6 to 2.5 centimetre wide quartz stringers.
REFERENCE: Assessment Report 16772.

ORE ZONE: TUNNEL REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1913
SAMPLE TYPE: Unknown
COMMODITY GRADE
Silver 1070.0000 Grams per tonne
Gold 1.3700 Grams per tonne
COMMENTS: A sample taken across the face of the No. 1 tunnel face on the Rob
Roy claim.
REFERENCE: Minister of Mines Annual Report 1913, page K155.

CAPSULE GEOLOGY

The Sally (Lot 2092) past producer is located 3.0 kilometres

CAPSULE GEOLOGY

west of the summit of Mount Wallace and 1.5 kilometres south-southeast of Beaverdell, British Columbia (Geological Survey of Canada Memoir 79, Figure 1).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040) and Bell (082ESW030), with numerous other small workings throughout the area. The Sally occurrence was first discovered in 1901 and operated from 1901 to 1910 by the Vancouver and Boundary Creek Development and Mining Co. The property was idle in 1911 and 1912. A lease was given to J. Drumm in 1913 with ore shipments made from 1913 to 1918. An option was given to Wallace Mountain Mines Ltd. in 1916. Then in 1925 an option was granted to Federal Mining and Smelting Co. From 1926 to 1929 another option was given to Sally Mines Ltd. from Wallace Mountain Mines Ltd. Highland-Bell Ltd. acquired the property in 1948 and in 1949 conducted geological work and diamond drilling on the Sally No. 2 level. From 1949 to 1991, the property became part of the ground held as part of the Highland-Bell (Beaverdell) mine. The Highland-Bell mine produced until 1991. Past development on the Sally, Rob Roy and Pueblo claims consisted of over 600 metres of underground workings, opencuts and trenches exploring high-grade silver-lead mineralization on two or three main veins on the Sally (Lot 2092), and two or more veins on the Rob Roy (Lot 2093) and Pueblo (Lot 1205s) Crown-granted claims. At depth, the Sally mine is connected to the Wellington mine (082ESW072).

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Beaverdell porphyry. These have been dated by potassium-argon methods as Eocene (Watson, P.H. (1981): Genesis and zoning of silver-gold veins in the Beaverdell area, south-central British Columbia; Leary, G.M. (1970): Petrology and structure of the Tuzo Creek molybdenite prospect near Penticton, British Columbia and Exploration in British Columbia 1995, pages 124-126. The Westkettle batholith has been correlated with the Nelson intrusions that has been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper sections of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblende, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east.

A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. One of these was dated by potassium-argon methods at 61.6 +/- 2.2 Ma (Watson, P.H., 1981). Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization. One of these has given a potassium-argon age of 50.6 +/- 1.5 Ma (Watson, P.H., 1981).

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. Five distinctly separate quartz vein systems are arranged roughly in echelon in this structural zone. The west-half contains the Wellington (Lot 2621), Sally (082ESW075, Lot 2092) and Rob Roy (Lot 2093, also part of Sally) systems which all strike east and dip from 70 degrees south to vertical. The Wellington and Sally each comprise two separate veins and the Rob Roy three. In the central part of the zone, the Bell (082ESW030, Lot 2343) comprises two veins which strike east to northeast and dip south to southeast. The eastern part of the zone contains the upper and lower sections of the Lass (082ESW133) and Highland Lass (Lot 2341, also part of the Bell) vein which strikes northeast and dips 50 degrees southeast. In general, quartz breccia veins and stockworks are so complex that continuous mineralized sections are a maximum of a few metres before being faulted or disrupted. Nevertheless, some mineralized zones have been found that extend up to 150 metres horizontally. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship: (1)

CAPSULE GEOLOGY

high angle, north-striking normal faults, (2) low angle, north trending, strike-slip faults, (3) northeast striking, high angle normal faults (terminal faults), (4) northeast trending, 'slice' faults and (5) crossfaults. The northeast striking, high angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite. 'Ore ground' has been described as propylitic altered granodiorite, quartz diorite and quartz monzonite of the Westkettle batholith, up to 15 metres wide. These zones are characterized by sericite, clay minerals, chlorite, calcite, epidote and hematite. The fault-bounded veins commonly have a banded texture defined by outer, crudely parallel sulphide stringers. The wallrocks are brecciated and sheared over 30 to 150 centimetres width adjacent to veins. Weak sericite alteration of feldspars is pervasive in the Westkettle batholith.

The interpretation of galena lead-lead isotope age data coupled with geometrical and age relationships between dikes and veins suggests mineralization was formed around 50 Ma, coeval with Eocene stocks (Canadian Journal of Earth Sciences, Vol. 19, No. 6, pages 1264-1274, 1982).

The Sally mine is comprised of the Sally (Lot 2092), Rob Roy (Lot 2093) and Pueblo (Lot 1205s) Crown-granted claims where mineralized quartz veins occupy shears along east striking, steeply southward dipping faults in Westkettle granodiorite. The main vein averages 76 centimetres in width with propylitic alteration extending up to 8 metres in the wallrock. The quartz veins have been extensively faulted with the most important type of post-ore faulting being high-angle and normal. These faults strike north to northeast and dip west. The veins are subsequently rarely continuous without offset, however, some ore shoots show only minor offset over larger horizontal distances. Thin-section studies show amphiboles almost entirely altered to chlorite and feldspars replaced by clay and calcite.

Mineralization in the veins consists of argentite, tetrahedrite, pyrargyrite with lesser galena, sphalerite and pyrite in a gangue of quartz with altered wallrock fragments and small concentrations of calcite. Some supergene mineralization is present, chiefly as native silver near fault planes and occurs in a gangue of chlorite, clay, calcite-altered wallrock and turgite (a red fibrous mineral equivalent to hematite with absorbed water). The quartz vein also exhibits slight oxidation. A sample taken from the No. 1 tunnel on the Rob Roy in 1913 yielded 0.68 gram per tonne gold and 1975 grams per tonne silver. Another sample from the No. 2 tunnel yielded 1.37 grams per tonne gold and 1079 grams per tonne silver (Minister of Mines Annual Report 1913, page K155). Samples taken during ongoing property exploration by Teck Corp. in 1987 yielded similarly high silver values. Sample 87-5, taken from a 18-centimetre wide shear zone with 0.6 to 2.5 centimetre wide quartz veins, yielded 2.06 grams per tonne gold and 4226 grams per tonne silver (Assessment Report 16771).

Past production has included 10,413 tonnes of ore from which 60,998,814 grams of silver, 5007 grams of gold, 486,167 kilograms of lead and 215,375 kilograms of zinc were recovered. Production commenced in 1901 and ran continuously between 1904 and 1941, except 1911 and 1912.

BIBLIOGRAPHY

- EMPR AR 1900-878,879; 1901-1058,1144,1145; 1902-H182; 1903-H168; 1904-G216; 1905-J181; 1906-H159,H160,H250; 1907-L109,L215; 1908-J114,J248; 1909-K132,K273; 1910-K118,K244; 1911-K291; *1913-K154, K155,K162,K421; 1914-K336,K511; 1915-K201,K203,K446; 1916-K255, K518; 1917-F204,F212,F449; 1918-K210,K220; 1919-N168,N174; 1920-N155; 1921-G185,G189; 1922-N172; 1923-A183; 1924-B168; *1925-A201-A205; 1926-A209; 1927-C232,C233; 1928-C253,C254; 1929-C261; 1930-A219; 1931-A123; 1932-A126; 1933-A153; *1934-A25,A29,D9,DF10; 1935-A25,A30,D14,G52; 1936-D56,D57; 1937-A36; 1938-A34,D3,D39,D40; 1939-A37,A93; 1940-A24,A79; 1941-A25,A73,A74; 1943-A38; 1946-A133; *1949-A139-A148; 1953-A108
- EMPR INDEX 3-211
EMPR ASS RPT 15704, 15790, 16771, 16772
EMPR BC METAL MM00922
EMPR ENG INSP (Mine plans)

BIBLIOGRAPHY

EMPR GEM 1974-57,58
EMPR GEOLOGY 1975, pp. G30-G33
EMPR OF 1989-5; 1998-10
EMPR PF (082ESW General, Underground Plans; 082ESW030)
EMR MP CORPFILE (Highland-Bell Mines Ltd.; Highland Lass Ltd.;
Mastadon-Highland Bell Mines Ltd.; Leitch Mines Ltd.; Beaver Silver
Mines Ltd.; Sally Mines Ltd.; Teck Corp.)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, pp. 89,92,120-122
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CIM *Vol. II, 1957: Structural Geology of Canadian Ore Deposits,
pp. 136-141
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold veins in the
Beaverdell area, South-Central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

underneath the shaft. Later, a second shaft was reported sunk 6.1 metres and copper sulphides in diorite encountered. In 1903, a drift was run 7.6 metres from the bottom of the first shaft. Native copper and copper sulphide values range from 21 to 30 per cent (Assessment Report 10678). The property lay inactive until 1969 and 1970 when explored by Lucky Strike Mines Ltd. The exploration program consisted of geological mapping, a geochemical survey and an induced polarization survey. Four diamond-drill holes were subsequently drilled. One hole intersected a 36.58 metre interval yielding 0.6 per cent copper (Assessment Report 10678). In 1982, Albury Resources Ltd. optioned the property from G. White and conducted an exploration program on the ground covering the Opulence occurrence. Prospecting was conducted on the Royal Banner and Hardscrabble No. 1 Fraction Reverted Crown grants.

Hostrocks of the Opulence occurrence are pyroxenite, dacite and diorite of the Middle Jurassic Olalla stock that intrude quartzite and argillite of the Carboniferous to Triassic Shoemaker Formation. Aplite dikes frequently cut the diorite. At the Opulence showing, the quartzite is described as fine grained with a grey mottled saccharoidal texture and has been referred to as granular sandstone. Weathered surfaces are often reddish brown with hematitic and limonitic staining. The argillite is fine grained, grey to black, often siliceous or calcareous and contains finely disseminated pyrite.

The diorite is thought to be the most significant rock type with respect to mineralization, with native copper, chalcopyrite and malachite occurring in the diorite of the Olalla stock. The No. 2 (Main) adit was dewatered and cleaned out in 1969 by Lucky Strike Mines Ltd. The shaft is 13.7 metres deep from which a 18 metre adit extends southward. Siliceous and hornfelsed argillite is heavily sheared and contains minor native copper and chalcopyrite with heavy malachite and azurite staining. Samples taken from the shaft by Lucky Strike Mines Ltd. showed decreased copper values with depth. Sample 2-1 from the upper 1.5 metres yielded 2.65 per cent copper (Assessment Report 1901). Sample 2-18 from the lowest 1.5 metres yielded 0.30 per cent copper (Assessment Report 1901). Sample 4760, taken by Albury Resources Ltd. in 1982 yielded trace gold, 14.06 grams per tonne silver, 2.53 per cent copper across 2 metres (Assessment Report 10678).

The No. 1 shaft is located 23 metres south-southwest of the No. 2 shaft. Samples from this shaft yielded copper values ranging from 1.17 per cent over 3 metres (Sample 17801) to 4.08 per cent copper over 1.8 metres (Sample 17802) (Assessment Report 1901).

On the Hardscrabble No. 1 Fraction, an adit was driven along the contact between diorite and quartzite. Porphyry-style mineralization consisting of native copper, chalcopyrite and pyrite was encountered. Sample 4761, taken by Albury Resources Ltd., in 1982 yielded trace gold and silver, and 0.192 per cent copper over 2.5 metres (Assessment Report 10678). Malachite and azurite staining were noted on surface. Several surface samples were taken near the adit by Lucky Strike Mines Ltd. in 1969. Seven samples averaged about 0.35 per cent copper over 3 metres (Assessment Report 1901).

On the Royal Banner, a trench was located which exposed altered pyroxenite cut by aplite dikes and veins with magnetite. Chalcopyrite, pyrite, malachite and azurite were exposed in the trench and is associated with a shear zone striking 048 degrees and dipping 75 degrees southeast. Sample 4762, taken by Albury Resources Ltd., in 1982 yielded trace gold, 22.97 grams per tonne silver and 4.84 per cent copper over 1 metre (Assessment Report 10678).

BIBLIOGRAPHY

EMPR AR 1899-775; 1900-884; 1901-1074,1157,1230; 1902-184; 1903-175;
1904-226; 1906-170
EMPR ASS RPT 1899, 1900, *1901, *10678, 12123, 24415
EMPR GEM 1969-351
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW075**

NATIONAL MINERAL INVENTORY: 082E4 Cu2

NAME(S): **LIBRA**, LOST COPPER

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 12 48 N
LONGITUDE: 119 44 45 W
ELEVATION: 0800 Metres

NORTHING: 5454801
EASTING: 300033

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the former Libra claims (Assessment Report 1697).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Copper Chalcopyrite Bornite Molybdenite
ASSOCIATED: Pyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Volcanogenic
TYPE: G04 Besshi massive sulphide Cu-Zn
DIMENSION: 365 Metres STRIKE/DIP:
COMMENTS: Copper mineralization has been traced over 365 metres strike length in a massive, 90-metre thick andesitic flow. The flow strikes north to northeast and dips steeply.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Old Tom	

LITHOLOGY: Andesitic Flow
Andesite

HOSTROCK COMMENTS: The Old Tom Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PLUTONIC ROCKS RELATIONSHIP: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: PIT REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip YEAR: 1967

COMMODITY	GRADE
Copper	0.1500 Per cent
Molybdenum	0.0100 Per cent

COMMENTS: A 1.5-metre chip sample from the dip face of the blast pit. Trace gold and silver were also detected.

REFERENCE: National Mineral Inventory 082E4 Cu2.

CAPSULE GEOLOGY

The Libra showing is located adjacent to Manuel Creek, 6 kilometres east of Keremeos, British Columbia. The showing was thought to be first discovered and staked in the 1930s. Property exploration and development included opencuts and a 15-metre inclined shaft. It was later restaked as the Libra 1-34 and Lost Copper 1-2 and explored by Libra Mines Ltd in 1967. A small pit was blasted into bedrock at the showing. Prado Explorations Ltd. optioned the property in 1967 and staked the adjoining Libra 35-62 claims.

The Libra showing lies within the Quesnel Terrane of the Intermontane tectonic belt. The Libra showing is hosted within a faulted package of Carboniferous to Permian Kobau and Anarchist groups and the Carboniferous to Triassic Shoemaker and Old Tom formations. These Mesozoic and older strata are overlain by Eocene volcanics of the Pentiction Group.

The Libra showing is hosted in andesitic flows of the Old Tom Formation. The flows are of variable strike and dip in the vicinity,

CAPSULE GEOLOGY

with a general north to northeast strike and steep dips. There is a weak banding in the andesite that appears to strike just east of north and dip 50 degrees to the west. Up to 3 per cent finely disseminated specs and blebs of pyrite, chalcopyrite, bornite and native copper occur in a slightly to well silicified, massive andesitic flow of the Old Tom Formation. The flow is about 90 metres thick. Copper mineralization occurs over a strike length of 365 metres. A select sample taken from the blast pit of Libra Mines Ltd. yielded 0.66 per cent copper, 0.01 per cent molybdenum and trace gold (National Mineral Inventory 082E4 Cu2). A 1.5-metre chip sample across the dip face of the pit yielded 0.15 per cent copper, 0.01 per cent molybdenum, trace gold and trace silver (National Mineral Inventory 082E4 Cu2).

BIBLIOGRAPHY

EMPR AR 1968-273
EMPR ASS RPT 1154, *1697
EMPR OF 1989-5
EMR MP CORPFILE (*Prado Exploration Ltd.)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW076**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROHNE FR. (L.2676)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E03W
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 00 27 N
LONGITUDE: 119 29 11 W
ELEVATION: 0396 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5431268
EASTING: 318174

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of samples G-87-025 to 031 on the Rohne Reverted Crown grant (Lot 2676) (Assessment Report 16074).

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Pyrite
ALTERATION: Chlorite Epidote Malachite Limonite
ALTERATION TYPE: Chloritic Epidote Oxidation Argillic Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic Skarn
TYPE: I06 Cu±Ag quartz veins K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Similkameen Intrusions

LITHOLOGY: Greenstone
Meta Volcanic
Skarn
Limestone
Diorite
Quartzite
Phyllite
Schist
Granodiorite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Other intrusions include the Middle Jurassic Fairview and Kruger intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 4.4000 Grams per tonne
Gold 0.1600 Grams per tonne
Copper 0.5000 Per cent

COMMENTS: Sample G-87-025, a 0.7-metre chip sample from an opencut.
REFERENCE: Assessment Report 16074.

CAPSULE GEOLOGY

The Rohne prospect is located at 396 metres elevation on the eastern slopes of Mount Kruger, 3 kilometres southeast of Osoyoos, British Columbia. The Dividend-Lakeview past producer (082ESW001) lies 1.75 kilometres to the northwest.

Little information is available on the early history of the Rohne (Lot 2676) Reverted Crown grant. Work presumably began before 1903 when the claim was first Crown granted to J. Rink and associates. Little else was done on the property until 1968 by Granby Mining Company Limited. Exploration on the claim consisted of 1858 square metres of bulldozer stripping and drilling 14 percussion-drill holes. In 1986 and 1987, Markus Resources Inc.

CAPSULE GEOLOGY

conducted extensive exploration in the Dividend-Lakeview area, including on the Rohne property.

The regional geology of the Dividend-Lakeview area consists of medium to coarse-grained granodiorite of the composite Middle Jurassic Similkameen batholith. To the west this includes alkali syenite and nepheline syenite of the Kruger intrusion. The Fairview intrusion outcrops to the north. The Similkameen intrusion extends from 10 kilometres north of the Canada-United States border, south into Washington state. The granodiorite is grey-green, medium to coarse grained and dominantly composed of quartz, plagioclase and hornblende. The Similkameen batholith has intruded metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. Intensely folded and metamorphosed quartzite, greenstone, phyllite, chlorite or mica schist with intercalations of dioritic rocks and sparse limestone lenses comprise lithologies. To the west lie a series of highly sheared schists, greenstones and quartzites known informally as the Kruger Schists. The greenstone has been highly sheared in many areas associated with emplacement of the Similkameen intrusion and other intrusions. Shear zones strike southeast and dip moderately to steeply northeast and southwest. Local variations occur however.

Silicification composed of quartz pods, stringers and veins is common throughout the greenstone and in quartzite near the southwest corner of the Gold Hill claim. Minor carbonate is also present.

The Rohne prospect consists of numerous chalcopyrite mineralized quartz veins with malachite staining and epidote-rich skarns hosted in chloritized greenstone.

These veins and skarns were sampled in 1987 with encouraging results. Sample G-87-025, a 0.7-metre chip sample from an opencut yielded 0.50 per cent copper, 0.16 gram per tonne gold and 4.4 grams per tonne silver (Assessment Report 16074). The sample was composed of chlorite and epidote-altered greenstone with malachite and limonite altered quartz veining. Mineralization consisted of minor pyrite. Sample G-87-028, a 1.5-metre discontinuous chip sample, yielded 0.41 per cent copper, 0.26 gram per tonne gold and 3.9 grams per tonne silver (Assessment Report 16074). This sample consisted of quartz veining cutting altered intrusions and greenstone with abundant epidote, minor malachite and a 10-centimetre pyrite lens.

BIBLIOGRAPHY

EMPR AR 1903-248; 1966-244; 1968-221
EMPR ASS RPT 658, 808, 1182, 2922, 8188, 9180, *14877, *16074, 21634, 22987, 23381
EMPR BULL 1 (1932), p. 88; 20 (1945, Part III), p. 18
EMPR GEM 1971-383
EMPR OF 1989-5
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 389-423; 179, p. 20
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40
GSC SUM RPT 1912, p. 211

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW077**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHELL NO.1**, GUSTERSHAW

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03W
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 18 N
LONGITUDE: 119 21 10 W

NORTHING: 5432531
EASTING: 327993

ELEVATION: 1188 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of an abandoned adit on the Shell No.1 claim (Assessment Report 2926).

COMMODITIES: Copper Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Pyrite
ASSOCIATED: Magnetite
ALTERATION: Chlorite Sericite
ALTERATION TYPE: Chloritic Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins 105 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 61 Metres STRIKE/DIP: 330/60N TREND/PLUNGE:
COMMENTS: Mineralization extends over 61 metres width in a shear zone striking 330 degrees and dipping 60 degrees northeast.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Quartz Biotite Chlorite Schist
Greenstone
Meta Quartzite
Phyllite
Foliated Hornblende Granodiorite
Rhyolite Dike

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Shell No.1 occurrence is located at 1188 metres elevation on the southwestern slopes of Anarchist Mountain, 8 kilometres due east of Osoyoos, British Columbia.

The Shell No.1 showing was first discovered at the turn of the century. Property exploration in 1971 by Fourbar Mines Ltd. discovered three old trenches and a caved adit. The property has recently been reinvestigated by Crownex Resources (Canada) Ltd. who own the Ket 18 Group of claims to the immediate east.

The showing is underlain by metaquartzite, chlorite schist, quartz-biotite schist, black phyllite and greenstone of the Carboniferous to Permian Anarchist Group. These metasediments have been highly metamorphosed. Chlorite and sericite alteration are prevalent. Foliated hornblende granodiorite, granite, quartz monzonite and syenite of the Middle Jurassic Nelson intrusions have intruded these Anarchist rocks to the immediate southwest. The main foliation strikes 140 degrees and dips 70 degrees east. Some tight folds were observed.

An opencut has exposed a shear zone striking 330 degrees and dipping 60 degrees to the northeast. The shear zone is hosted in quartz-biotite-chlorite schist which in turn is intruded by a rhyolite dike. Mineralization in this shear zone consists of disseminated pyrite, sphalerite and chalcopyrite over at least 61 metres width. Greenstone is exposed immediately to the east and carry magnetite veinlets following the main foliation. The shear zone appears to terminate to the southwest against the Nelson

CAPSULE GEOLOGY

intrusions.

Rock grab samples taken from this shear zone in 1971 yielded 0.05 per cent zinc, 0.06 to 0.08 per cent copper, trace to 0.2 per cent lead, 0.01 to 0.02 per cent nickel and trace silver and gold (Assessment Report 2926).

BIBLIOGRAPHY

EMPR ASS RPT *2926, *9518, 11815, 12020, 19737, 20734, *22199
EMPR GEM 1971-383
EMPR OF 1989-5
GSC MAP 84A; 538A; 539A; 37-21; 15-1961; 1738A
GSC MEM 38, pp. 389-423
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW078**

NATIONAL MINERAL INVENTORY: 082E5 Au1

NAME(S): **DUSTY MAC**

STATUS: Past Producer
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05E
BC MAP:

Open Pit Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 20 42 N
LONGITUDE: 119 32 45 W

NORTHING: 5468926
EASTING: 315090

ELEVATION: 0457 Metres
LOCATION ACCURACY: Within 500M

COMMENTS: Open pit, 2 kilometres east of the town of Okanagan Falls at the south end of Skaha Lake (Assessment Report 20078).

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Silver Chalcopyrite Galena Sphalerite
 Bornite Tetrahedrite

ASSOCIATED: Quartz
ALTERATION: Silica Chalcedony Fluorite Sericite Clay
 Chlorite Epidote

ALTERATION TYPE: Silicific'n Sericitic Argillic Propylitic Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia Podiform Stockwork Vein
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au H05 Epithermal Au-Ag: low sulphidation

SHAPE: Bladed
MODIFIER: Faulted
DIMENSION: 213 x 48 x 9 Metres STRIKE/DIP: 140/
COMMENTS: The main quartz breccia lens-like body is gently dipping.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	White Lake	
Eocene	Penticton	Marama	

LITHOLOGY: Andesite
Pyroclastic Rock
Feldspathic Andesite
Andesitic Lava
Sandstone
Carbonaceous Shale
Rhyodacite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	7.4000	Grams per tonne
Gold	7.7300	Grams per tonne

COMMENTS: A 1.5-metre sample of drill core from the Chalcedony zone.
REFERENCE: Assessment Report 20078.

CAPSULE GEOLOGY

The Dusty Mac occurrence is located 1.5 kilometres east of Okanagan Falls, British Columbia. Exploration on the Dusty Mac dates back to the turn of the century, as evidenced by four short adits, driven on quartz veins with chalcopyrite and pyrite, and several opencuts near the western side of the property, overlooking Okanagan Falls. Native silver was discovered in veins on the property in 1966 and the property restaked. Dusty Mac Mines Ltd. acquired the property in 1968. As a result of property exploration in 1968 and 1969, 61,485 tonnes of reserves graded 7.88 grams per tonne gold and 170.4 grams per tonne silver (Assessment Report 20078). The property was optioned to

CAPSULE GEOLOGY

Noranda Exploration Ltd. in 1970. In 1974, reserves were estimated to be 120,280 tonnes of ore grading 7.06 grams per tonne gold and 123.4 grams per tonne silver, based on 3319 metres of diamond drilling. An additional 21,521 tonnes grading 4.59 grams per tonne gold and 57.59 grams per tonne silver was indicated. In April 1975, an agreement was reached for custom milling the Dusty Mac ore at the Dankoe mill (082ESW005; Tinhorn). Open pit production started August 1, 1975 and ceased in June 1976. Milling was completed June 9, 1976 and reclamation of the mine area was finished on September 21, 1976. Further exploration was carried out in 1976 by Amadeus Consultants Ltd. Canex Placer Ltd. and Scintrex Ltd. conducted induced polarization surveys in 1976 and 1981 respectively. Esso Minerals conducted exploration in 1985 and 1986. Minnova Inc. optioned the property in 1987 and conducted further property exploration until 1989. Ecstall Mining Corp. optioned the property in May, 2002.

The Dusty Mac property lies within the eastern part of the White Lake basin, a thick accumulation of Eocene Penticton Group volcanic rocks, interlayered with clastic sedimentary rocks which are largely of volcanic derivation. The Eocene rocks rest unconformably on Triassic metavolcanic and metasedimentary rocks of the Independence, Old Tom and Shoemaker formations, and Jurassic granitic intrusions. The White Lake basin forms a topographic low and is truncated by early gravity faults. The units generally dip to the east and are folded and faulted.

The hostrocks at Dusty Mac belong to the Eocene White Lake Formation of the upper part of the Penticton group. This unit consists of light coloured pyroclastic rocks, thick feldspathic andesite lahar deposits, minor andesitic lavas, and minor sandstones and carbonaceous shales. In the immediate area, these overlie older Eocene Marama Formation volcanics, composed mainly of massive rhyodacite lava.

These units are on the south limb of a southeasterly trending syncline. The beds have variable dips ranging from about 30 to 55 degrees northeast. A strong crossfracture system strikes approximately 010 degrees dipping about 80 degrees westerly almost perpendicular to the synclinal axis.

At Dusty Mac, mineralization appears to be largely controlled by an important system of reverse faults. The system trends southeast with interwoven eastern and southern striking segments and splays. The direction and magnitude of movement on these faults are indicated by large thrust slices of Marama lava which have been thrust outward and upward from the core of the syncline through several hundreds of metres of White Lake strata. In the White Lake basin, reverse faulting is thought to be the result of concentric folding and accommodation of the stratigraphic pile to bedding plane slip (Bulletin 61). Quartz veins and gossans are present in or adjacent to most of the main faults. The deposit consists of a lens-like zone of silicified volcanic rocks and sedimentary debris containing minor disseminated pyrite, native silver, chalcopyrite, galena and sphalerite. Also, some quartz veins on the property carry minor bornite and tetrahedrite.

The main mineralized zone is a gently dipping lens of quartz breccia with varying admixtures of crushed andesite. The body is exposed over a length of approximately 213 metres striking roughly 140 degrees with a central cross-section width of about 48 metres and a maximum thickness of 9 metres. A similar large lens of quartz breccia is located approximately 762 metres northwest of the main ore zone. Epithermal fluids from the Dusty Mac had a temperature of about 240 degrees Celsius, a low salinity of about 0.5 weight per cent and an oxygen del 18 value between minus 7 and minus 9 per mil (relative to standard mean ocean water). The mineralization process probably occurred at a depth of more than 380 metres (Zhang, 1986).

In 1989, five areas of mineralized and highly altered fault zones were diamond drilled (A, Adit, Chalcedony, Sawmill and the Pit zones). Alteration consists of a distal propylitic assemblage (chlorite, epidote) and more intense central alteration assemblages consisting of combinations of sericitic, argillic (clay) and potassic alteration. These inner envelopes are generally well foliated and have 2-15 per cent disseminated pyrite present. Various forms of multi-episodic silicification is present in these fault zones. Silicification varies from discrete laminated chalcedony veins to quartz breccia bodies and pervasive wallrock silicification. Commonly silicification contains pyrite, chalcopyrite, galena, sphalerite, tetrahedrite and fluorite.

In the Chalcedony zone, laminated and brecciated chalcedonic quartz veins assayed as high as 7.73 grams per tonne gold and 7.4 grams per tonne silver over 1.5 metres in drill core (Assessment Report 20078).

Total production from the Dusty Mac mine was 93,295 tonnes,

CAPSULE GEOLOGY

grading 6.89 grams per tonne gold and 146.59 grams per tonne silver with 10 per cent dilution (Assessment Report 20078). Recovery included 606,006 grams of gold, 10,552,750 grams of silver, 2432 kilograms of copper, 2313 kilograms of lead and 242 kilograms of zinc.

BIBLIOGRAPHY

EM GEOMAP 2002-05
EMPR AR 1968-217; 1969-A55; 1975-A94; 1976-A103
EMPR ASS RPT 5205, 5782, 6100, 13708, 13823, 14357, *20078
EMPR BC METAL MM00334
EMPR BULL *61, pp. 89-92
EMPR FIELDWORK 1988, pp. 355-363
EMPR GEM 1969-294-296,428; 1970-396-406; 1974-56
EMPR MAP 35; 65 (1989)
EMPR MINING Vol.1 1975-1980, p. 27
EMPR OF 1988-6; 1989-5; 1992-1; 1998-10
EMPR PF (Glass, J.R. (1978): Report on Exploration Program for Dusty Mac Mines Ltd. on Okanagan Falls Gold-Silver Property; Claim map; see 082ESW002 (Horn Silver) - Dankoe Mines Ltd. Annual Report 1975; Mining Inspector Reports - June, Sept. 1975; Memoranda regarding production statistics)
EMR MP CORPFILE (Dusty Mac Mines Ltd.)
GSC BULL 126
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; 637; 1969; 2167
GSC P 77-1A, p. 31; 89-1E
GCNL #191, 1975; #112,#2, 1976;
N MINER July 17, Oct.9, 1975
PR REL Ecstall Mining Corp. May 21, 2002; Jan.16, Feb.20, 2003
STOCKWATCH (Canada) May 21, 2002
W MINER April 1974
*Zhang, Xiaomao (1986): Fluid Inclusion and Stable Isotope Studies of the Gold Deposits in Okanagan Valley, British Columbia; Unpublished M.Sc. Thesis, University of Alberta

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

15-metre drifts extended from the bottom of the shaft. Several surface trenches were also dug but are now backfilled. A trench, in quartzite, was found 305 metres to the southeast. The showing is currently owned by Crownex Resources (Canada) Ltd.

The showing is underlain by metaquartzite, chlorite schist, quartz-biotite schist, black phyllite and greenstone of the Carboniferous to Permian Anarchist Group. These metasediments have been highly metamorphosed. Chlorite and sericite alteration are prevalent. Foliated hornblende granodiorite, granite, quartz monzonite and syenite of the Middle Jurassic Nelson intrusions have intruded these Anarchist rocks to the immediate southwest. The main foliation strikes 140 degrees and dips 70 degrees east. Some tight folds were observed.

The showing consists of a massive sulphide breccia developed adjacent to the contact between granodiorite and siliceous quartzite. It appears to follow the main foliation which strikes 130 degrees and dips 50 degrees southwest. Mineralization consists of massive pyrite, pyrrhotite with minor sphalerite, chalcopyrite and galena banding, interlayered with chlorite and sericite schist. Good silver values are reported associated with massive sulphides (Assessment Report 2926). Dump material indicates massive mineralization to be a minimum of 1.5 metres wide. Widespread banded pyrite mineralization was traced over an area 400 by 700 metres around the shaft. The mineralization suggests the potential for stratiform or volcanogenic massive sulphide type mineralization.

Rock grab samples taken from this shear zone in 1971 yielded 2.23 to 2.36 per cent zinc, 0.10 to 0.12 per cent copper, trace to 0.3 per cent lead, up to 3.4 grams per tonne silver and trace nickel and gold (Assessment Report 2926). Several rock samples taken in 1991 yielded the following results. Sample 91KT14-D39R returned 0.05 gram per tonne gold, 0.20 per cent copper and greater than 1 per cent zinc (Assessment Report 22199). Sample 91KT14-D137R yielded 0.10 gram per tonne gold, 6.0 grams per tonne silver, 0.10 per cent copper and 0.30 per cent zinc (Assessment Report 22199).

BIBLIOGRAPHY

EMPR ASS RPT *2926, 6559, 8553, *9518, 11815, 12020, 19737, 20734,
*22199
EMPR EXPL 1977-E21; 1978-E21; 1979-19
EMPR GEM 1971-383
EMPR OF 1989-5, 2000-22
GSC MAP 84A; 538A; 539A; 37-21; 15-1961; 1738A
GSC MEM 38, pp. 389-423
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW080**

NATIONAL MINERAL INVENTORY:

NAME(S): **YRD, URP**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 00 N
LONGITUDE: 119 55 20 W
ELEVATION: 2100 Metres

NORTHING: 5431571
EASTING: 286274

LOCATION ACCURACY: Within 1 KM

COMMENTS: The approximate location of the YRD and URP claims (Minister of Mines Annual Report 1968, page 220).

COMMODITIES: Molybdenum Copper Lead

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite Galena

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stockwork

CLASSIFICATION: Porphyry

TYPE: L04 Porphyry Cu ± Mo ± Au L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Similkameen Intrusions

LITHOLOGY: Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Thompson Plateau

TERRANE: Plutonic Rocks

Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The YRD showing is location along the International boundary, 16 kilometres west of the Similkameen River and 6.75 kilometres southwest of Snowy Mountain (Minister of Mines Annual Report 1968, page 220).

The YRD and URP claims were staked and explored in 1968 by Phelps Dodge Corp. of Canada Ltd. No assessment work was filed providing information on their exploration program, consisting of geological mapping, and geochemical rock and soil sampling.

The showing is hosted by the Middle Jurassic Similkameen batholith. Molybdenite and minor chalcopyrite and pyrite are hosted in quartz veins and disseminated in fractured quartz monzonite (Minister of Mines Annual Report 1968, page 220).

Molybdenite is widespread elsewhere in the Similkameen batholith. Minor molybdenite, chalcopyrite and galena were found to the northeast near Snowy Mountain on the OK 1 to 14 claims by Cominco in 1980 and 1981 (Assessment Reports 7908, 8579).

BIBLIOGRAPHY

EMPR AR *1968-220
EMPR ASS RPT *7808, *8579, 10097
EMPR OF 1989-5; 1991-17
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW081**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOATS, MONS, HEX 1-8,
PAYCHEX, DEANNA 1-5**

STATUS: Showing
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 17 29 N
LONGITUDE: 119 54 16 W
ELEVATION: 2000 Metres

NORTHING: 5463908
EASTING: 288817

LOCATION ACCURACY: Within 1 KM

COMMENTS: Approximate location (Minister of Mines Annual Report 1968, page 220).

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Paleozoic-Mesozoic
Paleozoic-Mesozoic
Jurassic

GROUP

Undefined Group
Undefined Group

FORMATION

Old Tom
Shoemaker

IGNEOUS/METAMORPHIC/OTHER

Okanagan Intrusions

LITHOLOGY: Basalt
Marble
Chert

HOSTROCK COMMENTS: The Old Tom and Shoemaker formations are of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Goats showing is located 6.5 kilometres northwest of Olalla, British Columbia near the headwaters of Olalla Creek.

The regional geology of the area consists of a series of Carboniferous to Triassic volcanic and sedimentary rocks that have been intruded by Jurassic granitic Okanagan intrusions. Larger intrusions are composed of granite and granodiorite, while smaller stocks are composed of diorite and gabbro. Numerous sills, dikes and apophyses are associated. Carboniferous to Triassic rocks are assigned to the Shoemaker and Old Tom formations. These rocks form the eastern limb of a large anticlinal fold with fold axes striking roughly north and are overlain the Upper Triassic Independence Formation.

The showing is underlain by massive and pillowed basalts of the Old Tom Formation with minor pods or lenses of white to grey recrystallized marble and massive chert.

In 1968, Monarch Metal Mines Ltd. conducted exploration on the Goats 1-6 and Mons 5-18 claims. Exploration consisted of trenching and bulldozer stripping on shear hosted, galena bearing, quartz veins. Cominco Ltd. conducted exploration to the immediate east on the Hex 1-8, Paychex and Deanna 1-5 claims in 1984. The occurrence lies near a contact between Old Tom Formation volcanics and metasediments of the Shoemaker Formation to the east, and near an east-trending fault within the Old Tom Formation.

BIBLIOGRAPHY

EMPR AR *1968-220
EMPR ASS RPT 12918
EMPR OF 1989-5
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1009
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW082**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOUIS, MAG, MAG 1-6,
KEREMEOS**

STATUS: Showing Open Pit

MINING DIVISION: Osoyoos

REGIONS: British Columbia

NTS MAP: 082E04W

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 49 12 48 N

LONGITUDE: 119 52 10 W

ELEVATION: 1000 Metres

NORTHING: 5455135

EASTING: 291032

LOCATION ACCURACY: Within 1 KM

COMMENTS: Approximate rhodonite locality on the north side of Highway 3 at the west end of Keremeos (Geological Survey of Canada Paper 72-53). Includes Keremeos (formerly 082ESW161).

COMMODITIES: Rhodonite Gemstones

MINERALS

SIGNIFICANT: Rhodonite

ASSOCIATED: Jasper

COMMENTS: Manganese oxides are associated.

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Metamorphic Sedimentary Industrial Min.
TYPE: Q02 Rhodonite F01 Sedimentary Mn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Paleozoic-Mesozoic	Undefined Group	Old Tom	

LITHOLOGY: Chert
Greenstone
Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Louis showing is located at about 1000 metres elevation on the mountain on the north side of Highway 3, at the west end of Keremeos.

The Louis showing lies within the Quesnel Terrane of the Intermontaine tectonic belt. The Louis showing is hosted within a faulted package of Carboniferous to Permian Kobau and Anarchist groups. To the immediate west are the Carboniferous to Triassic Shoemaker and Old Tom formations. These strata are overlain by Eocene volcanics of the Penticton Group.

The area surrounding this showing is underlain by chert, and argillite with minor tuff of the Shoemaker Formation and the overlying greenstone, volcanic flows and breccias of the Old Tom Formation.

At the Louis showing, rhodonite occurs in the Shoemaker Formation, near the contact between the Shoemaker and overlying Old Tom formations. The rhodonite is associated with jasper.

The Louis showing was staked in 1968 by Union Carbide Exploration Corp. as the Mag 1 to 6 claims. An extensive exploration program of geological mapping and trenching was conducted. Fifty trench samples were taken, but the primary manganese-silicate (rhodonite?) was found to be sub ore-grade (Minister of Mines Annual Report 1968, page 220). There has been some oxidation to manganese oxides near the surface.

BIBLIOGRAPHY

EMPR AR *1968-220
EMPR OF 1989-5
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1011
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 37, p. 21; *72, p. 56
The Canadian Rockhound *Feb., 1966, page 8

DATE CODED: 1991/12/31
DATE REVISED: 1996/11/30

CODED BY: DEJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW083**

NATIONAL MINERAL INVENTORY:

NAME(S): **CAT FRACTION**, CHUKAR FRACTION

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 58 N
LONGITUDE: 119 29 10 W
ELEVATION: 0366 Metres

NORTHING: 5432225
EASTING: 318226

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the Cat Fraction claim (Assessment Report 658).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Similkameen Intrusions

LITHOLOGY: Granodiorite
Diorite
Granite
Monzonite

HOSTROCK COMMENTS: Informally referred to as Osoyoos granodiorite.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Cat Fraction showing is located at 366 metres elevation on the eastern slopes of Mount Kruger on the east side of the California (Lot 1907s) Reverted Crown grant, 2.25 kilometres southeast of Osoyoos, British Columbia. The Dividend-Lakeview past producer (082ESW001) lies 1.5 kilometres to the northwest.

Little information is available on the early history of the Cat Fraction claim. Previous to 1964, Sheep Creek Mines conducted an unknown amount of drilling on the Cat Fraction. In 1964, work was conducted by Noranda Exploration Co. Ltd. In 1968, Granby Mining Company Limited conducted further exploration in the vicinity. In 1986, and 1987, Markus Resources Inc. conducted extensive exploration in the Dividend-Lakeview area.

The regional geology of the Dividend-Lakeview area consists of medium to coarse-grained granodiorite of the composite Middle Jurassic Similkameen batholith. To the west this includes alkali syenite and nepheline syenite of the Kruger intrusion. The Fairview intrusion outcrops to the north. The Similkameen intrusion extends from 10 kilometres north of the Canada-United States border, south into Washington state. The granodiorite is grey-green, medium to coarse grained and dominantly composed of quartz, plagioclase and hornblende. The Similkameen batholith has intruded metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. Intensely folded and metamorphosed quartzite, greenstone, phyllite, chlorite or mica schist with intercalations of dioritic rocks and sparse limestone lenses comprise lithologies. To the west lie a series of highly sheared schists, greenstones and quartzites known informally as the Kruger schists. The greenstone has been highly sheared in many areas associated with emplacement of the Similkameen intrusion and other intrusions. Shear zones strike southeast and dip moderately to steeply northeast and southwest. Local variations occur however.

The Cat Fraction showing is hosted by Osoyoos granodiorite, a satellite stock of the Similkameen batholith, near its contact with Kobau Group metasediments and metavolcanics. Minor diorite and

CAPSULE GEOLOGY

monzonite are also present.

A drillhole (#12) was reported drilled by Sheep Creek Mines on the Cat Fraction on a weak self potential anomaly. The drillhole intersected altered diorite with minor disseminated sulphides. Visible chalcopryrite and molybdenite were intersected over 15 centimetres at 61.8 metres depth.

BIBLIOGRAPHY

EMPR AR 1903-248; 1966-244; 1968-221
EMPR ASS RPT *658, 808, 1182, 2922, 8188, 9180, 14877, 16074, 21634, 22987, 23381
EMPR BULL 1 (1932), p. 88; 20 (1945, Part III), p. 18
EMPR GEM 1971-383
EMPR OF 1989-5
GSC MAP 84A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 389-423; 179, p. 20
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40
GSC SUM RPT 1912, p. 211

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW084**

NATIONAL MINERAL INVENTORY: 082E4 Sia1

NAME(S): **GYPO (L.3098S)**, BALLARET (L.3099S), OLIVER SILICA,
PACIFIC SILICA

STATUS: Past Producer Open Pit

MINING DIVISION: Osoyoos

REGIONS: British Columbia

NTS MAP: 082E04E

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 49 11 45 N

LONGITUDE: 119 33 34 W

ELEVATION: 350 Metres

NORTHING: 5452379

EASTING: 313540

LOCATION ACCURACY: Within 500M

COMMENTS: Mine located on the west side of Highway 97, on the northern
outskirts of Oliver, British Columbia (Open File 1987-15).

COMMODITIES: Silica Fluorite Mica Gold Silver
Copper Feldspar

MINERALS

SIGNIFICANT: Quartz Fluorite Muscovite Pyrite Chalcopyrite

COMMENTS: Minor pyrite and chalcopyrite occurs in the vein.

ASSOCIATED: Feldspar Calcite

COMMENTS: Manganese staining

ALTERATION: Fluorite Muscovite

ALTERATION TYPE: Greisen

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Vein Podiform
CLASSIFICATION: Pegmatite Magmatic Epigenetic
TYPE: O04 Feldspar-quartz pegmatite Industrial Min.
I06 Cu±Ag quartz veins I02 Muscovite pegmatite
Intrusion-related Au pyrrhotite veins

SHAPE: Cylindrical

DIMENSION: 152 x 85 x 61 Metres

STRIKE/DIP: 090/55S

TREND/PLUNGE:

COMMENTS: Quartz body strikes east and dips south at 55 to 60 degrees. The
pegmatite vein is exposed over 152 metres length by 61 metres width by
85 metres height.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	Oliver Plutonic Complex
Jurassic			

ISOTOPIC AGE: 152 +/-3 Ma

DATING METHOD: Uranium/Lead

MATERIAL DATED: Zircon

LITHOLOGY: Porphyritic Quartz Monzonite
Biotite Hornblende Quartz Monzonite
Garnet Muscovite Quartz Monzonite
Hornblende Diorite
Pegmatite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.
The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks Quesnel PHYSIOGRAPHIC AREA: Okanagan Highland

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1958
SAMPLE TYPE: Unknown
COMMODITY: Silica GRADE: 97.9400 Per cent

COMMENTS: The average of 4 samples.

REFERENCE: Minister of Mines Annual Report 1958, pages 104-106.

CAPSULE GEOLOGY

The Gypo mine is located on the west side of Highway 97 on the
northern outskirts of the town of Oliver. The Gypo Crown Grant (Lot
3098S) was originally staked in 1927 to explore the small amounts of
metallic mineralization associated with the quartz veining.
The Gypo pegmatite quartz body occurs within the Jurassic

CAPSULE GEOLOGY

Oliver Plutonic Complex or Oliver granite. This pluton is composed mainly of medium-grained quartz monzonite occurring in three distinct phases; biotite-hornblende quartz monzonite, garnet-muscovite quartz monzonite and porphyritic quartz monzonite. Large quartz veins and plugs, such as the Gypo quartz body, are restricted to a porphyritic quartz monzonite phase. The veins formed mainly by open-space filling although there is some evidence of wallrock replacement.

The quartz body strikes east and dips south at 55 to 60 degrees. At the quarry it has a known strike length of 152 metres, width of 61 metres and approximate true thickness of 85 metres. To the west, a thinner extension of the main body continues for another 90 metres. The hangingwall is a narrow shear zone while the footwall exhibits greisen alteration, consisting of muscovite and lesser quartz, up to 30 metres from the quartz.

Three stages of quartz mineralization are recognized at the deposit. Stage I consists of grey quartz confined to the country rocks, alteration zones and marginal parts of the orebody. Stage II consists of white quartz comprising up to 95 per cent of the quartz. Where stage II quartz is relatively undeformed, quartz crystals up to 2.0 metres diameter by 0.6 metre length are observed. The deposit is therefore classified as a pegmatite quartz deposit. Stage III quartz occurs as thin delicate boxworks.

A series of irregular pods of colourless or light pink to apple green fluorite, up to 2 metres or more in average diameter, are distributed along a zone that more or less parallels the walls of the quartz body. Impurities include coarse-grained muscovite that is intermixed with quartz near the footwall, small pods of sulphides, small amounts of calcite in thin veinlets, seams and locally filling small drusy cavities, and minor manganese stain. Small amounts of pyrite and chalcopyrite were noted sparsely disseminated in the pegmatite vein.

In 1958, four samples were taken across quarry faces and analysed. The results are as follows (Open File 1987-15):

SiO2	Al2O3	Fe
97.40	0.70	0.03
97.48	0.75	0.04
98.12	0.86	0.03
98.78	0.61	0.02

(values are per cent)

A large portion of the silica was used as stucco dash. Small amounts have also been used as special cements, silica flux and poultry grit.

The Gypo occurrence was originally staked as the Gypo (Lot 3098s) and Ballaret (Lot 3099s) Crown granted claims owned by Oliver interests. The claims were purchased by Consolidated Mining and Smelting Company, Ltd. in 1926. Exploration consisted of diamond drilling and driving an adit. A 230-tonne shipment of silica flux was made from the adit. The claims were Crown granted in 1927. Silica flux shipments continued until work ceased in 1943. In 1941, R. McKay optioned the property and mined mica and gold and silver-bearing ore from the Gypo occurrence. It is reported 39 tonnes of gold and silver-bearing ore was made and 95 tonnes of mica were mined from a lens along side of a large quartz vein on another part of the property. Mining for mica continued until 1944. The quarry was operated intermittently before 1953 by the Interior Contracting Co. Ltd. Between July 1953 and March 1955, Stucco Supply Company operated the quarry and crushed silica to minus 0.6 centimetre; it was used as stucco-dash and in ornamental work. In 1955, Pacific Silica Ltd. acquired an option from Cominco Ltd. and produced silica continuously between 1955 and 1968. Annual production ranged from 2059 tonnes in 1955 to 49,406 tonnes ore in 1960. Much of this production was shipped to Washington and Oregon metallurgical plants where ferro-silicon and silicon carbide were produced. Other uses included flux, stucco-dash, roofing rock and sander grit. In 1968, a rock slide occurred and the quarry was closed. Shipments of ore continued from the stockpile until 1977. Dump material was processed for granules for roof rock, stucco, filter sand, nursery, decoration, landscape and driveway materials between 1978 and 1984. Small amounts of fluorspar were mined and shipped between 1958 and 1968. Small shipments of landscaping chips were made in the early 1980s. Ownership of the property changed in 1985 and further shipments were made of dump material in 1986 and 1987.

Recorded production for the Gypo occurrence includes 630,568 tonnes ore milled from which about 629,342 tonnes of silica, 658 tonnes of mica, 339 tonnes of fluorite and 16 tonnes of feldspar were shipped. The amount of gold and silver recovered from 39 tonnes of ore shipped in 1941 is 187 grams and 2426 grams, respectively.

BIBLIOGRAPHY

EM OF 1999-3
EMPR AR 1926-219; 1927-482; 1941-25; 1947-220,222; 1953-198;
1954-188; 1955-102; 1956-159; 1957-94-95; *1958-104-106; 1959-201;
1960-155; 1961-157; 1962-164; 1963-152; 1964-207; 1965-276; 1966-
276; 1967-321; 1968-300,331
EMPR BC METAL MM00350 (and industrial mineral production fiche for
granules and silica)
EMPR FIELDWORK *1983, pp. 246-259; 1988, p. 479
EMPR GEM 1969-407; 1970-511; 1971-478; 1972-616
EMPR INDEX 3-199
EMPR MAP 65, 1989
EMPR Mineral Market Update July, 1991
EMPR MINING 1975-1980, Vol.1, p. 48; 1981-1985, p. 69; 1986-1987, p.
95
EMPR MR MAP 7 (1934)
EMPR OF *1987-15, pp. 38-40; 1989-2; 1989-5; 1992-1; 1992-9, 1992-16,
1999-3
EMPR PF (Sinclair, A.J., Moore, D. and Reinsbakken, A. (undated copy
- post 1974): Geology of the Gypo Quartz Vein)
GSC MAP 6-1957; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 89-1E
Matsen, B.F. (1960): University of British Columbia, B.Sc. Thesis

DATE CODED: 1985/07/24
DATE REVISED: 1997/07/24

CODED BY: GSB
REVISED BY: GRF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW085**

NATIONAL MINERAL INVENTORY:

NAME(S): **OLALLA CREEK LIMESTONE**, HEX 1-8, PAYCHEX,
DEANNA 1-5

STATUS: Past Producer Open Pit

MINING DIVISION: Osoyoos

REGIONS: British Columbia

NTS MAP: 082E05W

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 49 17 23 N

LONGITUDE: 119 52 55 W

ELEVATION: 1402 Metres

NORTHING: 5463660

EASTING: 290446

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on quarry just north of Olalla Creek (Industrial Mineral File - Geological Survey of Canada Map 628A).

COMMODITIES: Limestone

Marble

Building Stone

MINERALS

SIGNIFICANT: Calcite

ASSOCIATED: Quartz

MINERALIZATION AGE: Triassic

ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Various fossils

DEPOSIT

CHARACTER: Stratiform

Massive

CLASSIFICATION: Sedimentary

Industrial Min.

TYPE: R09 Limestone

R04 Dimension stone - marble

SHAPE: Irregular

MODIFIER: Fractured

DIMENSION: 150 x 60 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Limestone lens trends northwest.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Paleozoic-Mesozoic

Undefined Group

Shoemaker

DATING METHOD: Fossil

MATERIAL DATED: Various fossils

LITHOLOGY: Limestone

Marble

Tuff

Greenstone

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Thompson Plateau

TERRANE: Okanagan

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1968

SAMPLE TYPE: Chip

COMMODITY

GRADE

Limestone

53.1400 Per cent

COMMENTS: Taken along 46 metres of roadcut. Grade given for calcium oxide.

REFERENCE: Minister of Mines Annual Report 1968, page 323.

CAPSULE GEOLOGY

The Olalla Creek Limestone quarry is located along the north branch of Olalla Creek, 5 kilometres northwest of Olalla, British Columbia.

The regional geology of the area consists of a series of Carboniferous to Triassic volcanic and sedimentary rocks that have been intruded by Jurassic granitic Okanagan intrusions. Larger intrusions are composed of granite and granodiorite, while smaller stocks are composed of diorite and gabbro. Numerous sills, dikes and apophyses are associated. Carboniferous to Triassic rocks are assigned to the Shoemaker and Old Tom formations. These rocks form the eastern limb of a large anticlinal fold with fold axes striking roughly north.

A northwest trending lens of limestone (marble) up to 60 metres wide outcrops for 150 metres along the north side of Olalla Creek, 5.1 kilometres northwest of Olalla. The limestone lies in tuff,

CAPSULE GEOLOGY

greenstone and chert of the Shoemaker Formation.
The lens is comprised of medium to coarse grained, white to grey crinoidal limestone (marble), with irregular patches of reddish and brown limestone. The rock is brecciated and well fractured. The closeness of fracturing and irregularity in colouring severely limited its values as a building stone. A thin section of the brown crinoidal limestone contained 20 per cent disseminated quartz grains. A sample of chips taken at 1.5 metre intervals for 46 metres contained 53.14 per cent CaO, 0.16 per cent MgO, 3.65 per cent insolubles, 0.60 per cent R2O3, 0.41 per cent Fe2O3, 0.13 per cent MnO, 0.05 per cent P2O5, 0.008 per cent sulphur and 41.93 per cent ignition loss (Minister of Mines Annual Report 1968, page 323).
In 1968, the deposit was assessed by Apex Exploration & Mining Co. as a source of dimension stone and 604 tonnes of limestone were quarried for Ramshead Quarries Ltd. In 1984, Cominco Ltd. explored the area for precious and base metal mineralization.

BIBLIOGRAPHY

EMPR AR *1968-322,323
EMPR ASS RPT 12918
EMPR OF 1989-5; 1992-18, pp. 94,95
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW086**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER COIN**, LP 2, LP #3,
CANEX

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Open Pit Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 00 02 N
LONGITUDE: 119 35 56 W
ELEVATION: 0700 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5430772
EASTING: 309922

LOCATION ACCURACY: Within 500M

COMMENTS: The location of five abandoned trenches immediately north of the International border and 3.25 kilometres southwest of Kilpoola Lake (Assessment Report 19823).

COMMODITIES: Silver Gold Lead Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena Argentite Tetrahedrite
COMMENTS: The mineralogy is inferred from its similarity to the White Knight (082ESW057) occurrence.

ASSOCIATED: Quartz

ALTERATION: Kaolinite Chlorite Calcite

ALTERATION TYPE: Greisen Chloritic Carbonate

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Jurassic			Kruger Syenite

LITHOLOGY: Alkali Syenite
Nepheline Syenite
Pyroxenite
Quartzite
Syenite Gneiss
Greenstone

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

METAMORPHIC TYPE: Regional

Okanagan

PHYSIOGRAPHIC AREA: Thompson Plateau

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1990

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

2.7400

Grams per tonne

Gold

0.8200

Grams per tonne

COMMENTS: Sample LP3, Adit 2.

REFERENCE: Assessment Report 19823.

CAPSULE GEOLOGY

The Silver Coin showing is located 3.25 kilometres southwest of Kilpoola Lake and immediately north of the International boundary. The White Knight showing (082ESW057) is located 1.0 kilometre to the east.

The immediate area of the Silver Coin showing has a history of limited mining activity dating back to the late 1800s. A number of abandoned trenches, open pits and adits are known at the Silver Coin showing and surrounding area. The main workings appear to be a group of five trenches immediately north of the International boundary and an adit 500 metres to the north. For further details of the history refer to the White Knight showing (082ESW057). Most recently the ground has been staked as the LP claims and explored by

CAPSULE GEOLOGY

T. Parsons.

The claims lie within and along the eastern border of the Jurassic Kruger intrusion, an alkaline border phase of the Middle Jurassic Similkameen batholith. It intrudes quartzite, gneiss, pyroxenite and greenstone of the Carboniferous to Permian Kobau Group. The Kruger pluton consists of alkaline syenite, nepheline syenite and syenitic gneiss.

The showing consists of numerous connected and highly fractured and brecciated quartz veins of similar character as the easterly neighbouring White Knight occurrence (082ESW057). At the White Knight, vein widths vary from 0.15 to 4.6 metres true width, striking 005 degrees and dipping 15 degrees southeast. Chloritic, carbonate and greisen alteration occur adjacent to the quartz veins except where the vein is brecciated.

The veins are erratically mineralized with fine grained and disseminated pyrite, chalcopyrite, galena and trace amounts of argentite and tetrahedrite. These minerals also occurs as streaks and fracture coatings.

Several samples taken from the trenches and adit area in 1990 yielded significant values. Sample LP3 from Adit 2 yielded 319.88 grams per tonne silver and 2.50 grams per tonne gold (Assessment Report 19823). Similarly, sample LP Adit 2 yielded 2.74 grams per tonne silver and 0.82 gram per tonne gold (Assessment Report 19823). Sample LP3 Trench yielded 21.94 grams per tonne silver and 0.21 gram per tonne gold (Assessment Report 19823).

Geochemical soil sampling has also outlined several copper anomalies in Kruger syenite.

BIBLIOGRAPHY

EMPR AR 1966-190; 1967-216; 1968-273
EMPR ASS RPT 1159, *1183, 11295, 14325, 14352, 16267, *19823
EMPR OF 1989-5
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW087**

NATIONAL MINERAL INVENTORY:

NAME(S): **COPPER COIN**, ETHEL GROUP

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 16 N
LONGITUDE: 119 31 16 W
ELEVATION: 0660 Metres

NORTHING: 5434717
EASTING: 315747

LOCATION ACCURACY: Within 1 KM

COMMENTS: The approximate centre of the Copper Coin claims (Assessment Report 1182).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
COMMENTS: Copper minerals are unknown.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins L04 Porphyry Cu ± Mo ± Au
COMMENTS: Veins and small shears carry copper values and one hydrothermally altered zone carries sparse molybdenite.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Similkameen Intrusions

LITHOLOGY: Granodiorite
Granite
Quartzite
Greenstone
Pyroxenite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Informally referred to as Osoyoos granodiorite.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional
Okanagan
RELATIONSHIP: Pre-mineralization
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

CAPSULE GEOLOGY

The Copper Coin showing is located along the southern banks of Strawberry Creek, 3 kilometres east of Blue Lake. The immediate area of the Copper Coin showing has a history of limited mining activity dating back to the late 1800s. A number of abandoned trenches, open pits and adits are known south of the Copper Coin showing and surrounding area. The claims lie within and along the western border of Osoyoos granodiorite, part of the Middle Jurassic Similkameen batholith. The pluton consists of granite and granodiorite. It intrudes quartzite, gneiss, pyroxenite and greenstone of the Carboniferous to Permian Kobau Group. The Kruger pluton outcrop to the south and consists of alkaline syenite, nepheline syenite and syenitic gneiss. The showing consists of veins and small shears carrying copper values and one hydrothermally altered zone carrying sparse molybdenite, found in a creek bottom (Assessment Report 1182). A small surface showing of copper was also found (Assessment Report 1182). An induced polarization anomaly was found on the claims but was not followed up.

BIBLIOGRAPHY

EMPR AR 1966-190; 1967-216; 1968-273
EMPR ASS RPT 1159, *1182, 1183, 11295, 14325, 14352, 16267, 19823
EMPR OF 1989-5
EMPR PF (Report by D.W. Tully, 1972)
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1022
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW088**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOMESTEAD (M47)**, WARRIOR FR. (L.2749), REAR GUARD FR. (L.2750),
HOMESTEAD FR. (L.2061), ELKHORN

STATUS: Showing
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 16 06 N
LONGITUDE: 119 49 58 W
ELEVATION: 0600 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5461148
EASTING: 293931

LOCATION ACCURACY: Within 1 KM

COMMENTS: The approximate location of the Homestead, Warrior and Rear Guard
Fractional Reverted Crown grants (Minister of Mines Annual Report
1928, page 261).

COMMODITIES: Nickel Copper

MINERALS

SIGNIFICANT: Pentlandite Chalcopyrite Pyrrhotite
ASSOCIATED: Quartz Pyrite Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Shear Vein Discordant
CLASSIFICATION: Magmatic Igneous-contact Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins L01 Subvolcanic Cu-Ag-Au (As-Sb)
M02 Tholeiitic intrusion-hosted Ni-Cu

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Pyroxenite
Gabbro
Quartzite

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age. Olalla
alkalic complex.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Plutonic Rocks Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Homestead showing is located at 1000 metres elevation on a western tributary of Olalla Creek, 3 kilometres northwest of Olalla, British Columbia. Little information could be found about this occurrence, therefore its location is approximated.

The Homestead Fraction (Lot 2059) claim was first reported Crown granted in 1903 to Jas.M. Sharp and W.J. Brewer. The Warrior (Lot 2749) and Rear Guard (Lot 2750) Fraction claims were Crown granted to W.J. Brewer. In 1928, W.C. McDougall and associates owned the Homestead and Elkhorn claims. A short 7.6-metre tunnel was driven. G.M. Explorations Ltd. conducted geochemical soil sampling and 51.8 metres of diamond drilling on the property in 1967.

The Homestead occurrence is underlain by pyroxenite of the ultramafic to alkaline Middle Jurassic Olalla intrusion. This intrusion has intruded a sequence of oceanic sediments and volcanics of the Carboniferous to Triassic Shoemaker and Old Tom formations. Black to green chert, light grey quartzite and minor limestone lenses comprise the dominant lithologies. The Shoemaker and Old Tom formations form a broadly folded, east-dipping sequence in the area. The Olalla intrusion consists of a magnetite-bearing pyroxenite peripheral zone to a diorite (or gabbro) and syenite core. The pyroxenite is composed primarily of augite with lesser magnetite. Coarse-grained syenite dikes occur at the contact with the peripheral pyroxenite zone.

The short tunnel driven in 1928 intersected segregations and stringers of pentlandite associated with pyrite and pyrrhotite hosted in pyroxenite of the Olalla stock. The pyroxenite is extremely fractured and faulted. The neighbouring Elkhorn claim is mainly underlain by quartzite of the Shoemaker Formation, which has been intruded by pyroxenite, gabbro and augite porphyry of the Olalla

CAPSULE GEOLOGY

stock. Mineralization consists of lenticular segregations of pyrite, pyrrhotite, magnetite and sparse chalcopyrite in 60 to 120 centimetre wide fracture zones in quartzite and shear-hosted quartz veins. The host quartzite is heavily copper carbonate stained over 5 to 46 centimetre widths. The strike of the quartz veins is nearly perpendicular to quartzite beds near the pyroxenite contact.

BIBLIOGRAPHY

EMPR AR 1903-247,249; 1904-226; 1907-220; *1928-261; *1967-219
EMPR ASS RPT 406, 14455, 17648, 19611
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW089**

NATIONAL MINERAL INVENTORY:

NAME(S): **SMUGGLER**, POWIS (L.946), SMUGGLER MINE,
SMUGGLER VEIN

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 10 10 N
LONGITUDE: 119 36 40 W
ELEVATION: 0600 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5449575
EASTING: 309675

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the Smuggler adit (Assessment Report 12189).

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Sphalerite Lepidolite
COMMENTS: Vein mineralogy variable and veins carry variable amounts.
ASSOCIATED: Quartz
ALTERATION: Malachite Chlorite
ALTERATION TYPE: Oxidation Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
DIMENSION: Metres STRIKE/DIP: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Strike and dip inferred from underground workings. TREND/PLUNGE: 090/90S

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Jurassic-Cretaceous			Fairview Intrusion
Jurassic			Oliver Plutonic Complex

ISOTOPIC AGE: 111 +/-5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Granodiorite
Quartzite
Mafic Schist

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Refer to Fieldwork 1988, pages 19-25 for age dates.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
YEAR: 1987
CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 58.9000 Grams per tonne
Gold 10.9000 Grams per tonne
Lead 0.4000 Per cent
Zinc 0.1200 Per cent

COMMENTS: Surface chip sample JDK-400.
REFERENCE: Yuriko Resources Corp. (1988): Prospectus.

CAPSULE GEOLOGY

The Smuggler occurrence is located at about 600 metres elevation, south of Togo Creek, in the historic Fairview mining camp. Oliver, British Columbia lies 4.5 kilometres to the east-northeast. The Smuggler occurrence was discovered prior to 1899, by which time a main tunnel had been driven 9 metres. The ground was staked

CAPSULE GEOLOGY

as the Powis claim, now a Reverted Crown grant. A full 10-stamp mill was erected on the property in 1901. Approximately 98 tonnes of ore from the Smuggler mine and another 492 tonnes of ore from the Stenwinder mine (082ESW007) were used to test the mill. Total underground development is reported to have consisted of a 107-metre adit with a 61-metre shaft connecting it to surface. Levels are reported north and south of the main adit at 15, 31 and 61 metres. Stopping was observed across about 1 metre at the shaft collar but the total length of stopping is unknown. Small amounts of ore have been mined intermittently in 1939, 1942, 1963 and 1973. In 1983, Lawrence Mining Corp. conducted geochemical soil sampling over the area of underground development on the Smuggler vein and reopened the No. 3 level. At this level the workings appeared to be only exploratory, as no significant gold-bearing veins were observed. Upper levels were inaccessible. Shangri-La Minerals Ltd. conducted an extensive exploration program in 1978 for Yuriko Resources Corp. In 1990, under option to Yuriko Resources Ltd., Fairbank Engineering Ltd. was hired to conduct a limited exploration program.

The Smuggler occurrence lies within the Okanagan Terrane of the Intermontane tectonic belt. Polydeformed and regionally metamorphosed rocks of the Carboniferous to Permian Kobau Group dominantly underlie the area. Highly deformed, low grade metamorphic quartzite, phyllite, schist, greenstone and marble comprise the main units of a 1900-metre structure succession. Three phases of fold have been identified in the Kobau Group rocks. The initial phase of folding was coincident with pre-Jurassic regional metamorphism, whereas later phases of folding are related to intrusive activity. The main intrusions in the Fairview camp are the Jurassic Oliver granite and the Jurassic to Cretaceous Fairview granodiorite. The Oliver pluton is heterogeneous and is composed of biotite-hornblende granite, porphyritic biotite granite, garnet-muscovite granite, porphyritic quartz monzonite and syenite. Other intrusive phases cutting the Kobau Group metasediments and volcanics include aplite dikes, granitic, dioritic and mafic stocks, auriferous quartz veins related to Jurassic intrusions and Tertiary northeast-trending mafic dikes.

The Smuggler occurrence is hosted along the contact between quartzite (KQ1) of the Kobau Group and Fairview pluton (Fieldwork 1988, pages 19-25). The Kobau Group unit is composed of quartzite layers 1 to 5 centimetres thick separated by biotite-rich layers, some biotite-rich sections and lenses of mafic schist. Chlorite is common throughout. Low-grade greenschist facies metamorphic effects were noted near the Smuggler workings.

Little is known of the mineralization and structure of the Smuggler vein. No early records could be found containing this information. Limited information has been obtained from re-opening underground workings. Mineralization, in quartz veins, includes pyrite, sphalerite, chalcopyrite and galena. Malachite alteration is frequently associated with chalcopyrite. If the workings followed the trend of the vein, the vein strikes roughly east and dips near vertical.

In 1987, several surface samples near the upper workings yielded anomalous values. Grab sample JDK-505 yielded 19.3 grams per tonne gold, 34.9 grams per tonne silver, 0.15 per cent zinc and 0.11 per cent copper from massive white quartzite with chalcopyrite and malachite (Yuriko Resources Corp. (1988): Prospectus). Another chip sample, JDK-400, yielded 10.9 grams per tonne gold, 58.9 grams per tonne silver, 0.40 per cent lead and 0.12 per cent zinc from massive white quartz with pyrite, chalcopyrite and minor disseminated galena (Yuriko Resources Corp. (1988): Prospectus). A third sample taken from a short adit yielded 3.12 grams per tonne gold (Yuriko Resources Corp. (1988): Prospectus). A total of 110 metres of the main adit were sampled at 5-metre intervals. The highest values were from sample 730, which yielded 1.99 grams per tonne gold and 3.8 grams per tonne (Yuriko Resources Corp. (1988): Prospectus). The sample was taken from a drift north of the raise.

Preliminary lead isotope studies indicate the mineralization is associated with quartz veins is younger than or as young as the Oliver pluton (circa 155 Ma) (Fieldwork 1988, pages 19-25).

Total intermittent production from 1939 to 1973 from the Smuggler occurrence amounts to 137 tonnes from which 3763 grams of gold, 2643 grams of silver, 93 kilograms of lead and 174 kilograms of zinc were recovered.

BIBLIOGRAPHY

EMPR AR 1894-map after 758; 1895-704; 1896-563,574; 1897-602; 1898-1116,1196; 1899-775; 1901-1155; 1939-37; 1942-26; 1965-165; 1973-A54
EMPR INDEX 3-214; 4-125

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1027
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *12189, 19561, 19947
EMPR BC METAL MM00363
EMPR FIELDWORK *1988, pp. 19-25
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
EMPR PF (*Yuriko Resources Corp. (1988): Prospectus)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Channel

COMMODITY

GRADE

Silver

217.3700

Grams per tonne

Gold

18.3100

Grams per tonne

COMMENTS: Sample 57596 of quartz vein across 1.0 metre true thickness from the intermediate levels of the former Susie mine.

REFERENCE: Assessment Report 16779.

CAPSULE GEOLOGY

The former Susie mine is located 1.0 kilometre east of Burnell Lake and 4.75 kilometres northwest of Oliver, British Columbia.

The Susie claim (Lot 1917) was discovered and staked by G.A. Guess prior to 1901. In 1901, the claim was Crown granted. Approximately 363 tonnes of ore are reported stoped from surface outcrops in 1911. From this, 6.34 tonnes of hand-sorted ore were shipped to a Tacoma smelter. By 1913, three shafts and numerous opencuts and surface stripping exposed or intersected a 1.2 to 12.2 metre wide quartz vein. By 1922, the property was owned by Federal Mining Co. The Susie claim group now consisted of the Susie, Banker, Federal and Agricola claims. A 61-metre tunnel was developed on the Federal claim. A 4.57-metre wide quartz vein was intersected. The vein strikes north. The vein was also traced on surface by several opencuts, surface stripping and diamond-drill holes. Further underground development was carried out on the Susie, in 1923.

Between 1932 and 1934, the Victoria (Oliver) property, adjoining the Susie Group to the north, was developed by several opencuts and an adit. During this time, 27 tonnes of ore yielding 560 grams of gold and 1430 grams of silver was shipped. In 1934, the Susie claim group had expanded and consisted of the Susie, Oakville, Federal, Banker, Agricola, Grey Gables and Tres Hermanos Crown-granted claims. The following year, ownership was changed to the Federal Mining and Smelting Co. On the Susie claim, a new low-level adit was developed and 853 metres of drifting and crosscutting was done. Various lessees have worked this property between 1960 and 1976, when most of its production occurred. In 1987, Highland Valley Resources Ltd. conducted an extensive exploration program on the Susie and Stenwinder (082ESW007) properties. Work on the Susie property was limited to detailed rock sampling of favourable quartz vein sections on all three underground levels and quartz vein outcrops near the decline portal.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of Penticton Group.

In the Susie claim area the Oliver plutonic complex is composed almost entirely of quartz monzonite. Three distinct phases are evident. A central core of massive medium-grained garnet-muscovite quartz monzonite is surrounded by hornblende-bearing porphyritic quartz monzonite north of the core and biotite-bearing to the south. The third phase is a hornblende-biotite quartz monzonite located to the south of the other two units.

The Susie mine is hosted by the hornblende-bearing porphyritic quartz monzonite northern phase of the Oliver plutonic complex. Nearby, a swarm of fine to medium grained quartz monzonite dikes cut this unit. The area has been extensively faulted and fractured. Regional hydrothermal alteration has resulted in epidote which occurs in seams up to 2.5 centimetres in width.

The Susie mine is comprised of a strong quartz vein. The vein is 1.2 to 15.2 metres wide, strikes north and dips 20 to 30 degrees east. At the shaft, the quartz vein strikes 010 degrees and dips 25 degrees east. The vein is characterized by an abundance of quartz, almost to the exclusion of other minerals. Pyrite mineralization is common along with varying amounts of galena, sphalerite and chalcopyrite which carry gold and silver values. Fragments of wallrock within the vein are also evident. The quartz has been subjected to varying amounts of post-mineralization fracturing, commonly to the extent that original textures are in large part destroyed. Hematite occurs in these fractures. Where relatively undeformed, the quartz occurs as large crystals generally 2.5 centimetres or more in cross-section and several centimetres in length. In places the crystals show a rough cockscomb texture. Some early grey quartz is evident although the bulk of the quartz is generally white. The vein is variably cut by a number of mafic dikes. Wallrock alteration is not pronounced but a thin zone of

CAPSULE GEOLOGY

sericitization occurs along vein margins. In 1987, underground sampling suggested a gold-rich shoot plunging northeast in a 2 to 3 metre wide quartz vein which dips 10 to 20 degrees east.

In 1902, samples from the Nos. 1 and 2 shafts on the Susie claim yielded high gold and silver values. The lowest sample from the No. 1 shaft, Sample 1, yielded 34.2 grams per tonne gold and 60.17 grams per tonne silver. Sample 6, the highest from Shaft No. 1, yielded 32.57 grams per tonne gold and 459.43 grams per tonne silver. From the No. 2 shaft, Sample 20 yielded 16.80 grams per tonne gold and 219.43 grams per tonne silver (Guess, G.A. (1902): Susie Mine Plan). The average grade of a 6.34 tonne shipment of hand-sorted ore made in 1911 was 61.71 grams per tonne gold and 1433.14 grams per tonne (Minister of Mines Annual Report 1913, page K174).

Between 1987 and 1988, Highland Valley Resources Ltd. conducted an extensive exploration program on the Susie and Stenwinder properties. On the Susie, accessible workings were examined and channel sampled. A total of 155 rock chip samples were collected; 13 from surface outcrop and the remainder from 3 levels of underground workings. Surface sample 58955, the highest of all surface samples, yielded 9.01 grams per tonne gold, 185.83 grams per tonne silver and 0.48 per cent lead over 1.20 metre true thickness. From the upper levels, Sample 63094 yielded 21.12 grams per tonne gold, 93.94 grams per tonne silver and 0.1 per cent lead over a true thickness of 0.70 metre. Sample 57596, from the intermediate levels, yielded 18.31 grams per tonne gold and 217.37 grams per tonne silver over a true thickness of 1.00 metre. From the lower levels, Sample 57661 yielded 7.71 grams per tonne gold and 164.57 grams per tonne silver over a true thickness of 0.95 metre (Assessment Report 16779).

Total recorded production from 1960 to 1976 from the former Susie mine included 17,537 tonnes mined from which 1,519,505 grams of silver, 82,081 grams of gold, 53,378 kilograms of lead, 24,519 kilograms of zinc and 4401 kilograms of copper were recovered. Production between 1932 and 1934 from the Victoria (Oliver) totalled 27 tonnes, yielding 560 grams of gold and 1430 grams of silver.

In addition to precious and base metal recovered, between 1960 and 1976 about 17,500 tonnes of quartz vein material was shipped to the Trail smelter for use as a flux (Fieldwork 1981, page 9).

BIBLIOGRAPHY

EM OF 1999-3
EMPR AR 1901-1231; *1913-K174,K178; 1915-K202; *1922-N165; *1923-A185; *1932-A25,A134,A136; 1933-A28,A169,A170; *1934-A25,D14,D15, D17; 1935-D12,D13,G47; 1960-A53; 1963-A48; 1964-A54,109; 1973-54; 1974-120; 1975-94; 1976-103
EMPR ASS RPT *16779
EMPR BC METAL MM00365; MM00370
EMPR ENG INSP (Mine plans)
EMPR EXPL 1975-E19
EMPR FIELDWORK *1981, p. 9; *1983, pp. 247,251
EMPR GEM 1973-43,44; 1974-24,53,54
EMPR INDEX 3-217; 4-125
EMPR MINING 1975, Volume I, pp. 28,55,59
EMPR MR MAP 7 (1934)
EMPR OF 1987-15; 1989-2; 1989-5, 1999-3; 1998-10
EMPR PF (Geology of Susie Mine, No. 2 level (date unknown); Guess, G.A. (1902): Plan, Assays, Section of the Susie Property Mines; Smith, D. (June,1975): Minister of Mines Inspector Report; Smith, D. (Sept.,1975): Minister of Mines Inspector Report)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; *179, pp. 1-9
GSC OF 481; 637; 1505A; 1565; 1969; 2167, pp. 49-50
GSC P 37-21; 72-53

DATE CODED: 1985/07/24
DATE REVISED: 1997/07/24

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW091**

NATIONAL MINERAL INVENTORY:

NAME(S): **STANDARD**, STANDARD MINE, SNOWFLAKE,
NOREX, EMPIRE CLAIM GROUP, EMPIRE,
MONARCH, RAM, EWE,
SEARCH, LAMB 1-3

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 11 58 N
LONGITUDE: 119 34 37 W
ELEVATION: 585 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5452824
EASTING: 312279

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the No. 1 adit on the Snowflake claim
(Assessment Report 18397).

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena Sphalerite Tetrahedrite
Hessite

COMMENTS: Gold values appear to be closely associated with galena and
sphalerite.

ASSOCIATED: Quartz

ALTERATION: Epidote

COMMENTS: Potassic alteration is most likely associated with post-vein fluid
movement.

ALTERATION TYPE: Propylitic

Potassic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Discordant
CLASSIFICATION: Unknown Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Regular

MODIFIER: Faulted

DIMENSION: 150 x 1

Metres

STRIKE/DIP: 040/65E

TREND/PLUNGE:

COMMENTS: The Snowflake vein strikes 040 degrees and dips 65 to 85 degrees
to the southeast. The vein has been exposed over 150 metres in Adit
No. 2. The average vein width in the south section is 1.20 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Oliver Plutonic Complex

ISOTOPIC AGE: 152 +/-3 Ma

DATING METHOD: Uranium/Lead

MATERIAL DATED: Zircon

LITHOLOGY: Hornblende Quartz Monzonite
Biotite Hornblende Quartz Monzonite
Garnet Muscovite Quartz Monzonite
Porphyritic Biotite Quartz Monzonite
Hornblende Diorite
Quartz Monzonite Dike
Augite Lamprophyre Dike

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Thompson Plateau

TERRANE: Plutonic Rocks

Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1984

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Silver

97.3700

Grams per tonne

Gold

8.4300

Grams per tonne

COMMENTS: The one-metre interval between 68.7 and 69.7 metres in drillhole
84-5.

REFERENCE: Assessment Report 12971.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Chip
COMMODITY:

COMMODITY	GRADE	
Silver	102.1700	Grams per tonne
Gold	8.6700	Grams per tonne

COMMENTS: Chip sample 51296, taken from the Snowflake vein, 50.5 metres from the portal of the No. 2 adit.
REFERENCE: Assessment Report 12971.

CAPSULE GEOLOGY

The former Standard mine is located 2.5 kilometres southeast of Burnell Lake and 3 kilometres northwest of Oliver, British Columbia.

Little is known about the discovery and early history of the Standard occurrence. By 1934, the Standard occurrence was part of the Empire claim group consisting of the Empire (Lot 611) (082ESW093), Standard, Monarch and others. The claim group was owned by a Vancouver syndicate. Early workings consisted of a 12-metre opencut exposing a quartz vein. The Standard occurrence and surrounding area were sampled extensively between 1961 and 1962 by Norex Mines Ltd. and Continental Consolidated Mines Ltd. Development work during this period consisted of several shafts, three adits (Nos. 1 to 3) and four diamond-drill holes at the end of the No. 2 adit; production was from the No. 2 adit. In the late 1970s the property was restaked as the Snowflake claim by B. Hegan and an option granted to Vermillion Resources Corp. In 1984, Vermillion Resources Corp. conducted exploration at the Standard occurrence that included 5 drillholes totalling 262 metres in the first phase and five holes totalling 330 metres in the second phase. Subsequent to diamond drilling, an electromagnetic survey was carried out but results were inconclusive. In 1986, Silver Saddle Mines Ltd. optioned the property. Two drillholes, geochemical soil sampling and another electromagnetic survey were carried out but the results only partially released. Millenium Resources Inc. optioned the property in 1987. Their program consisted of underground geological mapping and 610 metres of diamond drilling in ten holes.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of Penticton Group.

In the Standard occurrence area, the Oliver plutonic complex is composed almost entirely of quartz monzonite. Three distinct phases are evident. A central core of massive, medium grained garnet-muscovite quartz monzonite is surrounded by biotite-hornblende quartz monzonite north of the core and porphyritic biotite quartz monzonite to the south. Hornblende diorite occurs in several small areas to the immediate north.

The Standard mine is hosted by the hornblende-bearing porphyritic quartz monzonite northern phase of the Oliver plutonic complex. Nearby, a swarm of fine to medium grained, quartz monzonite dikes cut this unit. The area has been extensively faulted and fractured. Regional hydrothermal alteration has resulted in epidote which occurs in seams up to 2.5 centimetres in width.

In 1934, an opencut exposed a quartz vein with pyrite and galena mineralization. Where exposed, the vein varied from 0.46 to 1.37 metres wide. The vein strikes northwest and has a vertical dip.

The Snowflake vein strikes 040 degrees and dips 65 to 85 degrees to the southeast. The main (Snowflake or No. 1) vein is continuous for 150 metres throughout the length to the south end of the No. 2 adit where truncated against a magnetic augite lamprophyre dike (the 'central dike'). An intermediate section of the vein is also truncated by a dike. Over this section, the vein width varies from 30 to 106 centimetres, averaging 60 centimetres. South of the central dike, the vein width varies from 81 to 172 centimetres width, averaging 120 centimetres. On surface the main vein has been traced for 135 metres. The vein has also been displaced lateral and rotational by several small faults, commonly subparallel to the vein. Minor potassic alteration occurs adjacent to the vein and is most likely related to post-vein fluid movement. Several other veins are located to the north of the No. 2 adit. These veins are also faulted and fractured. Potassic alteration is also more intense.

Mineralization ranges from 5 per cent in auriferous sections to less than 0.5 per cent in the barren south section. In decreasing order of abundance, coarse patches of pyrite, chalcopyrite, galena, sphalerite, tetrahedrite and specks of hessite comprise mineralogy.

CAPSULE GEOLOGY

Ore at the Standard occurrence tends to occur as high-grade shoots. Gold values appear to be closely associated with galena and sphalerite. Barren sections of the vein contain considerable pyrite. Samples taken by Continental Consolidated and Norex in 1961 and 1962 yielded 28.86 grams per tonne gold across 1.06 metres (Assessment Report 12971). In 1983, a chip sample across the south stope yielded 56.91 grams per tonne gold and 435.43 grams per tonne silver from quartz vein with massive sulphides (Assessment Report 12971). Barren quartz yielded 15.43 grams per tonne gold and 2.23 grams per tonne silver (Assessment Report 12971). The best results of phase one diamond drilling in 1984 were from drillhole 1984-5. The one-metre interval between 68.7 and 69.7 metres yielded 8.43 grams per tonne gold and 97.37 grams per tonne silver (Assessment Report 12971). Results of the second phase of drilling were best in drillhole 84-6. The 0.80-metre interval between 63.7 and 64.5 metres yielded 10.4 grams per tonne gold (Assessment Report 12971). In 1984, nine samples were taken from the main vein in the No. 2 adit. Sample 51296, taken 50.5 metres from the portal, yielded 8.67 grams per tonne gold and 102.17 grams per tonne silver (Assessment Report 12971). The best results of the 1987 drill program were from hole 87-5. A 0.81-metre interval at 69 metres yielded 5.55 grams per tonne gold and 51.08 grams per tonne silver (Assessment Report 15833).

Total recorded production from the former Standard mine included 2411 tonnes mined in 1961 by Norex Mines Ltd. and in 1962 by Continental Corporation Mines Ltd. Recovery included 165,343 grams of silver, 36,795 grams of gold, 3474 kilograms of lead and 2468 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR 1934-D16; 1961-A48,62; 1962-A48,65
EMPR ASS RPT *12971, *15833, *18397
EMPR BC METAL MM00357; MM00364
EMPR INDEX 4-124,125
EMPR MAP 65, 1989
EMPR OF 1989-2; 1989-5; 1992-1
GSC MAP 6-1957; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 89-1E
WWW http://www.infomine.com/index/properties/STANDARD_MINE.html
Arnott, E.L. (1963): Mineralogy and Petrology of the Standard Mine,
Oliver B.C., University of British Columbia, B.A.Sc. Thesis
Matsen, B.F. (1960): University of British Columbia, B.Sc. Thesis
Richards, G.C. (1968): Petrology of the Oliver Quartz Monzonite,
University of British Columbia, B.Sc. Thesis

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW092**

NATIONAL MINERAL INVENTORY:

NAME(S): **DIVINE**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 10 47 N
LONGITUDE: 119 36 38 W
ELEVATION: 0600 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5450716
EASTING: 309755

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location estimated from the Minister of Mines Annual Report 1941, page 25.

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Quartz
COMMENTS: Inferred from the nearby Joe Dandy (082ESW161) occurrence.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Jurassic	Kobau	Undefined Formation	Oliver Plutonic Complex

ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

Jurassic-Cretaceous Fairview Intrusion

ISOTOPIC AGE: 111 +/-5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Siliceous Schist
Chlorite Actinolite Phyllite
Foliated Phyllitic Quartzite
Granodiorite
Porphyritic Quartz Monzonite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The precise location of the Divine occurrence could not be found. It is thought to be located near Reed Creek in the historic Fairview mining camp. Oliver, British Columbia lies 4.5 kilometres to the east.

The Divine occurrence lies within the Okanagan Terrane of the Intermontane tectonic belt. Polydeformed and regionally metamorphosed rocks of the Carboniferous to Permian Kobau Group dominantly underlie the area. Highly deformed, low grade metamorphic quartzite, phyllite, schist, greenstone and marble comprise the main units of a 1900-metre structure succession. Three phases of fold have been identified in the Kobau Group rocks. The initial phase of folding was coincident with pre-Jurassic regional metamorphism, whereas later phases of folding are related to intrusive activity. The main intrusions in the Fairview camp are the Jurassic Oliver plutonic complex and the Jurassic to Cretaceous Fairview granodiorite. The Oliver plutonic complex is composed mainly of medium-grained quartz monzonite occurring in three distinct phases; biotite-hornblende quartz monzonite, garnet-muscovite quartz monzonite and porphyritic quartz monzonite. Minor hornblende diorite comprises a minor phase. Other intrusive phases cutting the Kobau Group metasediments and volcanics include aplite dikes, granitic, dioritic and mafic stocks, auriferous quartz veins related to

CAPSULE GEOLOGY

Jurassic intrusions and Tertiary northeast trending mafic dikes. The Divine occurrence is hosted by siliceous schist, chlorite-actinolite phyllite and foliated phyllitic quartzite of the Kobau Group, near the contact with granodiorite of the Fairview pluton.

Preliminary lead isotope studies indicate that quartz vein mineralization of the Fairview mining camp is younger than or as young as the Oliver pluton (circa 155 Ma) (Fieldwork 1988, pages 19-25).

No information could be found describing type and character of mineralization at the Divine occurrence. However, quartz veins are ubiquitous in metasedimentary rocks of the Kobau Group, displaying varying degrees of deformation related to their time of emplacement. At the nearby Joe Dandy occurrence (082ESW161), mineralization is hosted within a 30 centimetre to 1.0 metre wide bluish white quartz vein, striking 115 degrees and dipping 36 to 60 degrees north. The vein is reported to be traceable on surface over 457 metres. Minerals in the vein include pyrite and galena. Areas where high sulphide mineralization occurs reportedly contains good gold values.

In 1941, 21 tonnes was mined from the Divine occurrence. From this 62 grams of gold and 373 grams of silver were recovered. The occurrence was owned by W. Bousfield.

BIBLIOGRAPHY

- EMPR AR *1941-25
- EMPR INDEX *3-194
- EMPR BC METAL *MM00339
- EMPR ASS RPT 12189, 19561, 19947
- EMPR FIELDWORK 1988, pp. 19-25
- EMPR OF 1989-2; 1989-5
- GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
- GSC MEM 38; 179
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21
- GAC Vol. 20, 1969, pp. 47-56
- Arnott, E.L. (1963): Mineralogy and Petrology of the Standard Mine, Oliver B.C., University of British Columbia, B.A.Sc. Thesis
- Richards, G.C. (1968): Petrology of the Oliver Quartz Monzonite, University of British Columbia, B.Sc. Thesis

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW093**

NATIONAL MINERAL INVENTORY:

NAME(S): **EMPIRE (L.611)**, EMPIRE MINE, EMPIRE CLAIM GROUP,
MONARCH, RAM, EWE,
SEARCH, LAMB 1-3

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:
LATTITUDE: 49 12 00 N
LONGITUDE: 119 33 58 W
ELEVATION: 450 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of the Empire occurrence (Assessment Report 18397).

Underground
MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5452859
EASTING: 313070

COMMODITIES: Silver Gold

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Pyrite, galena, chalcopyrite, sphalerite, tetrahedrite and hessite occur at the nearby Standard occurrence (082ESW091).

ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic			Oliver Plutonic Complex

ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Garnet Muscovite Quartz Monzonite
Biotite Hornblende Quartz Monzonite
Porphyritic Biotite Quartz Monzonite
Hornblende Diorite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The former Empire mine is located 3.25 kilometres southeast of Burnell Lake and 2.5 kilometres northwest of Oliver, British Columbia.

Little is known about the discovery and early history of the Empire occurrence. By 1934, the Empire occurrence was part of the Empire claim group consisting of the Empire (Lot 611), Empire, Monarch and others. The claim group was owned by a Vancouver syndicate. Early development work on the Empire occurrence consisted of a 7.6-metre shaft and four opencuts. The nearby Standard occurrence (082ESW091) and surrounding area were sampled extensively between 1961 and 1962 by Norex Mines Ltd. and Continental Consolidated Mines Ltd. In the late 1970s, the Standard property was restaked as the Snowflake claim by B. Hegan and an option granted to Vermillion Resources Corp. In 1984, Vermillion Resources Corp. conducted exploration at the Standard occurrence. In 1986, Silver Saddle Mines Ltd. optioned the property. Millenium Resources Inc. optioned the Standard property in 1987.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of Penticton Group.

In the Empire occurrence area, the Oliver plutonic complex is composed almost entirely of quartz monzonite. Three distinct phases are evident. A central core of massive, medium grained garnet-muscovite quartz monzonite is surrounded by biotite-hornblende

CAPSULE GEOLOGY

quartz monzonite north of the core and porphyritic biotite quartz monzonite to the south. Hornblende diorite occurs in several small areas to the immediate north.

The Empire mine is hosted by the garnet-muscovite quartz monzonite central phase of the Oliver plutonic complex. Nearby, a swarm of fine to medium grained quartz monzonite dikes cut this unit. The area has been extensively faulted and fractured. Regional hydrothermal alteration has resulted in epidote which occurs in seams up to 2.5 centimetres in width.

In 1934, two nearly parallel quartz veins, 0.45 to 1.37 metres wide, were exposed by a shaft and 4 opencuts. The veins are shear hosted.

No information could be found about the mineralogy of the veins. However, the mineralogy, in decreasing order of abundance at the Standard occurrence, consists of coarse patches of pyrite, chalcopyrite, galena, sphalerite, tetrahedrite and specks of hessite.

Total recorded intermittent production between 1936 and 1942 from the former Empire mine was 586 tonnes mined. Recovery included 45,068 grams of silver and 4385 grams of gold.

BIBLIOGRAPHY

- EMPR AR *1934-D16; 1936-A34; *1939-37; 1941-25; 1942-26
EMPR ASS RPT 12971, 15833, 18397
EMPR BC METAL MM00346
EMPR INDEX 3-195
EMPR MAP 65, 1989
EMPR MR MAP 7 (1934)
EMPR OF 1989-2; 1989-5; 1992-1
GSC MAP 6-1957; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 89-1E
Arnott, E.L. (1963): Mineralogy and Petrology of the Standard Mine, Oliver B.C., University of British Columbia, B.A.Sc. Thesis
Matsen, B.F. (1960): University of British Columbia, B.Sc. Thesis
Richards, G.C. (1968): Petrology of the Oliver Quartz Monzonite, University of British Columbia, B.Sc. Thesis

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW094**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEV, DEN, LLOYD,
DALE**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 22 12 N
LONGITUDE: 119 33 46 W
ELEVATION: 0466 Metres

NORTHING: 5471747
EASTING: 313954

LOCATION ACCURACY: Within 500M

COMMENTS: The centre of the Bev 5 claim (Geology, Exploration and Mining 1969, Figure 34, No. 237).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	
Eocene	Penticton	White Lake	
Eocene			Okanagan Gneiss

LITHOLOGY: Trachyte
Trachyandesite
Pyroclastic Rock
Feldspathic Andesite Lahar
Andesite Lava
Hornblende Granodiorite Ortho Gneiss

HOSTROCK COMMENTS: The Kitley Lake Member of the Marron Formation.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
Overlap Assemblage
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Bev showing is located on the eastern side of Skaha Lake, 3 kilometres north of the Dusty Mac occurrence (082ESW078). In 1969, Dusty Chief Mines Ltd. held the ground north of the Dusty Mac to explore for potential extension of gold and silver mineralization onto their claims.

The northern portion of the property is underlain by the Okanagan Gneiss complex. The Okanagan gneiss consists dominantly of strongly foliated, hornblende, biotite granodiorite orthogneiss. The orthogneiss is massive, resistant and weathers medium grey. The strong foliation locally grades to mylonitic gneiss, mylonite and blastomylonite. Minor amphibolite and paragneiss are also present. The gneiss is strongly chloritized along the Okanagan fault. To the south, the Eocene Penticton Group consists of the Kitley Lake Member of the Marron Formation and the overlying White Lake Formation. The Kitley Lake Member consists of massive, yellow to buff, trachyte to trachyandesite. The White Lake Formation consists of light coloured pyroclastic rocks, thick feldspathic andesite lahar deposits, minor andesitic lavas, and minor sandstones and carbonaceous shales.

These units are on the south limb of a southeasterly trending syncline. The beds have variable dips ranging from about 30 to 55 degrees northeast. A strong crossfracture system strikes approximately 010 degrees dipping about 80 degrees westerly almost perpendicular to the synclinal axis.

Line-cutting was done on the claims in 1969 but no record could be found describing any mineralization. Tectonic breccia, silicification, quartz veins and gossan occur at several locations

CAPSULE GEOLOGY

northwest from the Dusty Mac and which may occur on the Bev claims
(Bulletin 61, Figure 5.1).

BIBLIOGRAPHY

EMPR ASS RPT 1967
EMPR BULL *61
EMPR GEM *1969-294
EMPR MAP 35 (Preliminary)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; 637; 1969; 2167
GSC P 37-21; 77-1A; 89-1E

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW095**

NATIONAL MINERAL INVENTORY:

NAME(S): **KOH-I-NOOR**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 00 N
LONGITUDE: 119 36 04 W
ELEVATION: 480 Metres

NORTHING: 5451094
EASTING: 310457

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location estimated from Minister of Mines Annual Report 1940, page 24.

COMMODITIES: Silver Gold

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Pyrite and galena occur in quartz veins at the nearby Joe Dandy (082ESW161) occurrence.

ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
COMMENTS: Quartz veins are ubiquitous in metasediments of the Kobau Group in the Fairview mining camp.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Kobau	Undefined Formation	
Jurassic-Cretaceous			Fairview Intrusion

ISOTOPIC AGE: 111 +/-5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Siliceous Schist
Chlorite Actinolite Phyllite
Phyllitic Quartzite
Porphyritic Dike

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Koh-i-noor occurrence is located at about 480 metres elevation northeast of Reed Creek, in the historic Fairview mining camp. The Joe Dandy occurrence (082ESW161) lies to the southeast. Oliver, British Columbia lies 3 kilometres to the east.

The Koh-i-noor occurrence lies within the Okanagan Terrane of the Intermontane tectonic belt. The area is predominantly underlain by polydeformed and regionally metamorphosed rocks of the Carboniferous to Permian Kobau Group. Highly deformed, low-grade metamorphic quartzite, phyllite, schist, greenstone and marble comprise the main units of a 1900-metre structure succession. Three phases of fold have been identified in the Kobau Group rocks. The initial phase of folding was coincident with pre-Jurassic regional metamorphism, whereas later phases of folding are related to intrusive activity. The main intrusions in the Fairview camp are the Jurassic Oliver plutonic complex and the Jurassic to Cretaceous Fairview granodiorite. The Oliver pluton is heterogeneous and is composed of biotite-hornblende granite, porphyritic biotite granite, garnet-muscovite granite, porphyritic quartz monzonite and syenite. Other intrusive phases cutting the Kobau Group metasediments and volcanics include aplite dikes, granitic, dioritic and mafic stocks, auriferous quartz veins related to Jurassic intrusions and Tertiary northeast trending mafic dikes.

The Koh-i-noor occurrence is hosted by siliceous schist, chlorite-actinolite phyllite and foliated phyllitic quartzite of the

CAPSULE GEOLOGY

Kobau Group, near the contact with granodiorite of the Fairview pluton. In places, the vein lies between porphyritic dikes and schists.

No information could be found describing type and character of mineralization at the Koh-i-noor occurrence. However, quartz veins are ubiquitous in metasedimentary rocks of the Kobau Group, displaying varying degrees of deformation related to their time of emplacement. At the nearby Joe Dandy occurrence, mineralization is hosted within a 30-centimetre to 1.0-metre wide bluish white quartz vein, striking 115 degrees and dipping 36 to 60 degrees north. The vein is reported to be traceable on surface over 457 metres. Minerals in the vein include pyrite and galena. Areas where high sulphide mineralization occurs reportedly contains good gold values.

In 1940, the Koh-i-noor was owned and operated by L.E. Jorgensen and produced 16 tonnes of ore from which 1244 grams of silver and 124 grams of gold were recovered.

BIBLIOGRAPHY

- EMPR AR *1940-24
- EMPR BC METAL MM00355
- EMPR FIELDWORK *1988, pp. 19-25
- EMPR INDEX 3-202
- EMPR OF *1989-2; 1989-5
- GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
- GSC MEM 38; 179
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21
- GAC Vol. 20, 1969, pp. 47-56
- Arnott, E.L. (1963): Mineralogy and Petrology of the Standard Mine, Oliver B.C., University of British Columbia, B.A.Sc. Thesis
- Richards, G.C. (1968): Petrology of the Oliver Quartz Monzonite, University of British Columbia, B.Sc. Thesis

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW096**

NATIONAL MINERAL INVENTORY:

NAME(S): **OLALLA**, COMSTOCK

STATUS: Past Producer
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 16 46 N
LONGITUDE: 119 51 46 W
ELEVATION: 1000 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5462465
EASTING: 291796

LOCATION ACCURACY: Within 5 KM

COMMENTS: Approximate location of the Olalla occurrence is on the west fork of Olalla Creek (Minister of Mines Annual Report 1928, page 261).

COMMODITIES: Silver Gold Manganese

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Massive
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: I01 Au-quartz veins Q05 Jasper

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Chert
Argillite
Quartzite
Jasper

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age. Olalla alkalic complex.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Olalla showing is located at 1000 metres elevation on a western tributary of Olalla Creek, 3 kilometres northwest of Olalla, British Columbia. Little information could be found about this occurrence, therefore its location is approximated.

The Olalla claim was first reported Crown granted (Lot 2059) in 1903, when owned by Jas.M. Sharp and W.J. Brewer. In 1906, Bromley and Lyon were reported as owners of the Olalla and Comstock claims. A 3-metre adit and a long opencut were developed. In 1935, Olalla Gold Mines Ltd. acquired the property and reported a shipment of 18 tonnes of silver-gold ore.

The Olalla occurrence is underlain by the Carboniferous to Triassic Shoemaker Formation, northwest of the ultramafic to alkaline Middle Jurassic Olalla intrusion. This intrusion has intruded a sequence of oceanic sediments and volcanics of the Carboniferous to Triassic Shoemaker and Old Tom formations. Black to green chert, light grey quartzite and minor limestone lenses comprise the dominant lithologies. The Shoemaker and Old Tom formations form a broadly folded, east-dipping sequence in the area. The Olalla intrusion consists of a magnetite-bearing pyroxenite peripheral zone to a diorite and syenite core. The pyroxenite is composed primarily of augite with lesser magnetite. Coarse-grained syenite dikes occur at the contact with the peripheral pyroxenite zone.

In the vicinity of the Olalla showing are jasper and thin to massive bedded cherts. Massive acidic to intermediate pyroclastics of the Old Tom Formation, striking northerly and dipping shallowly to the west, outcrop to the west. Thin bedded cherts, argillite and quartzite with fracturing and minor folding occur to the east. Folds plunge 10 to 30 degrees towards 015 degrees.

A total of 45 tonnes ore was reported mined in 1935 by Olalla Gold Mines Ltd. Recovery included 1400 grams of silver and 498 grams of gold (BC Metal MM00359).

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1043
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1903-248; 1906-171; 1935-A25
EMPR ASS RPT 406, 14455, 17648, 19611
EMPR INDEX 3-208
EMPR BC METAL MM00359
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW097**

NATIONAL MINERAL INVENTORY:

NAME(S): **QUEEN MARY**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 30 N
LONGITUDE: 119 38 34 W

NORTHING: 5452125
EASTING: 307453

ELEVATION: 1120 Metres

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location estimated from Minister of Mines Annual Report 1940, page 25.

COMMODITIES: Silver Gold

MINERALS

SIGNIFICANT: Unknown

COMMENTS: Native gold, pyrite, galena, sphalerite and chalcopyrite occur in quartz veins at the nearby Stemwinder (082ESW007) and Morning Star (082ESW006) occurrences.

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I01 Au-quartz veins

COMMENTS: Quartz veins are ubiquitous in metasediments of the Kobau Group in the Fairview mining camp.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Upper Paleozoic

Kobau

Undefined Formation

Jurassic-Cretaceous

Fairview Intrusion

ISOTOPIC AGE: 111 +/-5 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Siliceous Schist
Chlorite Actinolite Phyllite
Phyllitic Quartzite
Granodiorite
Porphyritic Dike

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Thompson Plateau

TERRANE: Okanagan

Plutonic Rocks

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Queen Mary occurrence is located at about 480 metres elevation northeast of Reed Creek, in the historic Fairview mining camp. The Stemwinder occurrence (082ESW007) lies 1 kilometre to the northeast. Oliver, British Columbia lies 6 kilometres to the east.

The Queen Mary occurrence lies within the Okanagan Terrane of the Intermontane tectonic belt. The area is predominantly underlain by polydeformed and regionally metamorphosed rocks of the Carboniferous to Permian Kobau Group. Highly deformed, low-grade metamorphic quartzite, phyllite, schist, greenstone and marble comprise the main units of a 1900-metre structure succession. Three phases of fold have been identified in the Kobau Group rocks. The initial phase of folding was coincident with pre-Jurassic regional metamorphism, whereas later phases of folding are related to intrusive activity. The main intrusions in the Fairview camp are the Jurassic Oliver plutonic complex and the Jurassic to Cretaceous Fairview granodiorite. The Oliver pluton is heterogeneous and is composed of biotite hornblende granite, porphyritic biotite granite, garnet muscovite granite, porphyritic quartz monzonite and syenite. Other intrusive phases cutting the Kobau Group metasediments and volcanics include aplite dikes, granitic, dioritic and mafic stocks, auriferous quartz veins related to Jurassic intrusions and Tertiary northeast-trending mafic dikes.

CAPSULE GEOLOGY

The Queen Mary occurrence is hosted by siliceous schist, chlorite-actinolite phyllite and foliated phyllitic quartzite of the Kobau Group, near the contact with granodiorite of the Fairview pluton. In places, the vein lies between porphyritic dikes and schists.

No information could be found describing type and character of mineralization at the Queen Mary occurrence. However, quartz veins are ubiquitous in metasedimentary rocks of the Kobau Group, displaying varying degrees of deformation related to their time of emplacement. At the nearby Joe Dandy occurrence (082ESW161), mineralization is hosted within a 30 centimetre to 1.0 metre wide bluish white quartz vein, striking 115 degrees and dipping 36 to 60 degrees north. The vein is reported to be traceable on surface over 457 metres. Minerals in the vein include pyrite and galena. Areas where high sulphide mineralization occurs reportedly contains good gold values.

In 1940, the Queen Mary was owned and operated by A. Whitehead and produced 73 tonnes of ore from which 1244 grams of silver and 715 grams of gold were recovered.

BIBLIOGRAPHY

- EMPR AR *1940-25
- EMPR BC METAL MM00355
- EMPR FIELDWORK *1988, pp. 19-25
- EMPR INDEX 3-204
- EMPR OF *1989-2; 1989-5
- GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
- GSC MEM 38; 179
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21
- GAC Vol. 20, 1969, pp. 47-56
- Arnott, E.L. (1963): Mineralogy and Petrology of the Standard Mine, Oliver B.C., University of British Columbia, B.A.Sc. Thesis
- Richards, G.C. (1968): Petrology of the Oliver Quartz Monzonite, University of British Columbia, B.Sc. Thesis

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW098**

NATIONAL MINERAL INVENTORY:

NAME(S): **YELLOW VALLEY**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:
LATITUDE: 49 11 20 N
LONGITUDE: 119 36 24 W
ELEVATION: 746 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Location estimated from the Minister of Mines Annual Report 1939, page 37.

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

NORTHING: 5451725
EASTING: 310073

COMMODITIES: Silver Gold

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Pyrite and galena occur in quartz veins at the nearby Joe Dandy (082ESW161).
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Jurassic-Cretaceous			Fairview Intrusion

ISOTOPIC AGE: 111 +/- 5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Siliceous Schist
Chlorite Actinolite Phyllite
Phyllitic Quartzite
Granodiorite
Porphyritic Quartz Monzonite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Yellow Valley occurrence is located at about 480 metres elevation northeast of Reed Creek, in the historic Fairview mining camp. The Joe Dandy occurrence (082ESW161) lies to the southeast. Oliver, British Columbia lies 4 kilometres to the east. The Yellow Valley occurrence lies within the Okanagan Terrane of the Intermontane tectonic belt. Polydeformed and regionally metamorphosed rocks of the Carboniferous to Permian Kobau Group dominantly underlie the area. Highly deformed, low grade, metamorphic quartzite, phyllite, schist, greenstone and marble comprise the main units of a 1900-metre structure succession. Three phases of fold have been identified in the Kobau Group rocks. The initial phase of folding was coincident with pre-Jurassic regional metamorphism, whereas later phases of folding are related to intrusive activity. The main intrusions in the Fairview camp are the Jurassic Oliver plutonic complex and the Jurassic to Cretaceous Fairview granodiorite. The Oliver plutonic complex is composed mainly of medium-grained quartz monzonite occurring in three distinct phases: biotite-hornblende quartz monzonite, garnet-muscovite quartz monzonite and porphyritic quartz monzonite. Minor hornblende diorite comprises a minor phase. Other intrusive phases cutting the Kobau Group metasediments and volcanics include aplite dikes, granitic, dioritic and mafic stocks, auriferous quartz veins related to Jurassic intrusions and Tertiary northeast trending, mafic dikes. The Yellow Valley occurrence is hosted by siliceous schist, chlorite-actinolite phyllite and foliated phyllitic quartzite of the

CAPSULE GEOLOGY

Kobau Group, near the contact with granodiorite of the Fairview pluton.

No information could be found describing type and character of mineralization at the Yellow Valley occurrence. However, quartz veins are ubiquitous in metasedimentary rocks of the Kobau Group, displaying varying degrees of deformation related to their time of emplacement. At the nearby Joe Dandy occurrence (082ESW161), mineralization is hosted within a 30 centimetre to 1.0 metre wide bluish white quartz vein, striking 115 degrees and dipping 36 to 60 degrees north. The vein is reported to be traceable on surface over 457 metres. Minerals in the vein include pyrite and galena. Areas where high sulphide mineralization occurs reportedly contains good gold values.

Preliminary lead isotope studies indicate that quartz vein mineralization of the Fairview mining camp is younger than or as young as the Oliver pluton (circa 155 Ma) (Fieldwork 1988, pages 19-25).

In 1939, the Yellow Valley was owned and operated by R.F.C. Stewart and produced 36 tonnes of ore from which 467 grams of silver and 311 grams of gold were recovered.

BIBLIOGRAPHY

- EMPR AR *1939-A37
- EMPR INDEX *3-219
- EMPR BC METAL *MM00372
- EMPR ASS RPT 12189, 19561, 19947
- EMPR FIELDWORK 1988, pp. 19-25
- EMPR OF 1989-2; 1989-5
- GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
- GSC MEM 38; 179
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21
- GAC Vol. 20, 1969, pp. 47-56
- Arnott, E.L. (1963): Mineralogy and Petrology of the Standard Mine, Oliver B.C., University of British Columbia, B.A.Sc. Thesis
- Richards, G.C. (1968): Petrology of the Oliver Quartz Monzonite, University of British Columbia, B.Sc. Thesis

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW099**

NATIONAL MINERAL INVENTORY:

NAME(S): **SIL**, BLIND CREEK, CAWSTON

STATUS: Developed Prospect

Open Pit

MINING DIVISION: Osoyoos

REGIONS: British Columbia

NTS MAP: 082E04E

BC MAP:

LATITUDE: 49 11 46 N

LONGITUDE: 119 43 41 W

ELEVATION: 0750 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of approximate centre of Sil claim group, 7 kilometres east of Keremeos (Assessment Report 21293).

UTM ZONE: 11 (NAD 83)

NORTHING: 5452840

EASTING: 301259

COMMODITIES: Marble

Limestone

Dimension Stone

Building Stone

MINERALS

SIGNIFICANT: Calcite Brucite

ASSOCIATED: Scapolite Garnet Magnetite Humite

COMMENTS: The mineralogy of veinlets within marble.

MINERALIZATION AGE: Carboniferous

ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Rugose Coral

DEPOSIT

CHARACTER: Massive

Stratiform

CLASSIFICATION: Sedimentary

Syngenetic

Industrial Min.

TYPE: R04 Dimension stone - marble

R09 Limestone

SHAPE: Tabular

MODIFIER: Faulted

Fractured

DIMENSION: 400 x 150

Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Marble of the Blind Creek Formation is discontinuously exposed over 400 metres along strike and has an average calculated thickness of 150 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Carboniferous

GROUP

Undefined Group

FORMATION

Blind Creek

IGNEOUS/METAMORPHIC/OTHER

DATING METHOD: Fossil

MATERIAL DATED: Rugose Coral

LITHOLOGY: Marble

Limestone

Calcareous Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Thompson Plateau

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: MAIN

REPORT ON: Y

CATEGORY: Possible

YEAR: 1991

QUANTITY: 80700000 Tonnes

COMMODITY

GRADE

Marble

100.0000

Per cent

COMMENTS: Based on a calculation of 200,000 square metres of marble defined by mapping and diamond drilling, an average specific gravity of 2.69 and an average thickness of 150 metres. Of this, 35.5 million tonnes is suitable for dimension stone and 23 million tonnes for marble mosaic.

REFERENCE: Assessment Report 21293.

CAPSULE GEOLOGY

The Sil occurrence is situated on the northwest side of Blind Creek, about 7 kilometres east of Keremeos.

This marble prospect is hosted in the Carboniferous Blind Creek Formation, comprised largely of medium bedded grey limestone and calcareous argillite. The unit underlies a 1.4 by 1 kilometre area situated largely between Blind Creek and Manuel Creek on the northeast side of the Similkameen River.

At the Sil prospect, the rocks have been divided into three units: upper volcanic, marble and calcareous argillite, and lower volcanic and metasediments. The upper volcanic units consists of greyish green porphyritic andesite, possibly of the Triassic Old Tom

CAPSULE GEOLOGY

Formation. The lower contact with marble and calcareous argillite is not exposed but is inferred to be sharp from drillholes. The underlying marble and calcareous argillite unit has a measured thickness of approximately 200 metres. More massive cliff-forming marble outcrops are underlain by well bedded, competent, calcareous argillite. The lower contact of the marble unit is well exposed and is sharply underlain by volcanic rocks.

A major northwest-trending fault is expressed topographically by a canyon in the northeast corner of the prospect. Changes in bedding orientations in the marble indicate gentle folding with a northwest plunging fold axis. Regular parallel joints occur in zones several metres thick. The joints trend northeast with variable dips.

The Sil prospect covers discontinuous outcrops over 400 metres and subsurface extensions of marble. Exposures are common and the weathered surface has a pitted, grey pattern a few millimetres thick. Fresh marble is dull grey to black. A poorly developed bedding is locally present. Some horizons of black marble contain crinoid, brachiopods, belemnites and rugose coral fossils. Irregular white or yellow calcite veinlets occur within the marble. The veinlets are composed of white scapolite, garnet, magnetite and humite in a scattered mosaic of calcite and brucite. More massive, fine-grained marble is micritic textured. On the eastern half of the prospect the marble dips northward about 32 degrees. To the west the marble changes dip to 30 to 50 degrees to the west.

Diamond drilling on the Sil 1 claim and mapping in 1991 has defined a area containing 200,000 square metres of marble ranging from 50 to 200 metres thick. Based on an assumed average thickness of 150 metres and a specific gravity of 2.69 this zone is calculated to containing possible reserves of 80.7 million tonnes of black to grey marble (Assessment Report 21293). Based on the limited diamond drilling, 44 per cent of the marble is suitable for dimension stone and 50 per cent for marble mosaic. Therefore, 35.5 million tonnes possible reserves of dimension stone and 23 million tonnes possible reserves marble mosaic were determined (Assessment Report 21293). An undetermined amount of additional marble occurs to the north under volcanics. Further drilling is required to determine the total depth and lateral extent of fractures, thickness of the marble and presence of structural discontinuities.

The prospect is owned by F.G. Ramsey. In 1982 and 1983, Weymark Engineering Ltd. was contracted to examine the prospect. The limestone was explored as a source of marble by R.G. International Imports Ltd. in 1990. Six holes were drilled for a total of 180 metres.

BIBLIOGRAPHY

- EMPR ASS RPT *11350, *21293
- EMPR INF CIRC *1991-1, pp. 19,61
- EMPR OF 1989-5
- GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
- GSC MEM 38; 179
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21
- GCNL #180(Sept.18), 1985; #183(Sept.23), 1986
- Wilson, J.R. (1980): Redescription of type specimens of Permian rugose coral "Waagenphyllum columicum" Smith, 1935, type species of *Heritschoides* Yabe, 1950; *Journal of Paleontology*, Vol. 54, pp. 85-92.

DATE CODED: 1991/05/27
DATE REVISED: 1996/11/30

CODED BY: PSF
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW100**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOOT**, PIP

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 13 48 N
LONGITUDE: 119 42 46 W
ELEVATION: 1533 Metres

NORTHING: 5456566
EASTING: 302507

LOCATION ACCURACY: Within 1 KM

COMMENTS: Approximate location (Geology, Exploration and Mining in British Columbia 1969, Figure 34).

COMMODITIES: Copper Silver Nickel

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Volcanogenic
TYPE: G04 Besshi massive sulphide Cu-Zn

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Old Tom	

LITHOLOGY: Andesitic Flow
Andesite

HOSTROCK COMMENTS: The Old Tom Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau

RELATIONSHIP: Pre-mineralization GRADE: Zeolite

CAPSULE GEOLOGY

The Boot showing is located east of Manuel Creek, 4 kilometres due north of the Blind Creek Indian Reservation and 7.5 kilometres northeast of Keremeos, British Columbia. In 1969, the Boot and Pip claims were owned by G.H. Haddrell.

The Boot showing lies within the Quesnel Terrane of the Intermontane tectonic belt. The Boot showing is hosted within a faulted package of Eocene volcanics of the Penticton Group. At the Boot showing these consist of three members of the Marron Formation. The lowest Nimpit Lake Member consists of tan trachyte and trachyandesite lava and minor breccia. The Nimpit Lake Member is overlain by the Kearns Creek Member. Vesicular pyroxene-rich andesite lava comprises the Kearns Creek Member. The Kitley Lake Member overlies the two lower members. It is composed mostly of trachyandesite lava with conspicuous glomerophenocrystic feldspar clots. To the immediate west are the Carboniferous to Triassic Shoemaker and Old Tom formations. These strata are underlain by Carboniferous to Permian Kobau and Anarchist groups. The Boot showing is hosted in andesitic flows of the Old Tom Formation. The flows are of variable strike and dip in the vicinity with a general north to northeast strike and steep dips. There is a weak banding in the andesite that appears to strike just east of north and dip 50 degrees to the west.

No description could be found of the type or character of mineralization at the Boot showing. In 1969, one 29-metre diamond-drill hole was drilled on the showing. Copper, silver and nickel mineralization were reported.

BIBLIOGRAPHY

EMPR GEM *1969-297
EMPR OF 1989-2; 1989-5
EMPR PRELIM MAP *35
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1051
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW101**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAY, DOORN, FUR,
ARGENTIA, RON, FLO,
FIL**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E

Open Pit

MINING DIVISION: Greenwood

BC MAP:
LATITUDE: 49 22 06 N
LONGITUDE: 119 06 31 W
ELEVATION: 0914 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5470541
EASTING: 346917

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of drillhole 1983-16 (Assessment Report 12734).

COMMODITIES: Silver Zinc Lead Copper Molybdenum
Gold

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite Cuprite Aurichalcite
Molybdenite Pyrite

ASSOCIATED: Quartz Pyrite Hematite Magnetite Fluorite
ALTERATION: Sericite Quartz Pyrite Chlorite K-Feldspar

ALTERATION TYPE: Sericitic Chloritic Silicific'n Potassic Hematite
Propylitic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stockwork
CLASSIFICATION: Porphyry Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au

I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary Okanagan Batholith
Middle Jurassic Nelson Intrusions

LITHOLOGY: Granodiorite
Quartz Diorite
Porphyritic Biotite Quartz Monzonite
Granite Porphyry
Hornblende Feldspar Trachyte Dike

HOSTROCK COMMENTS: The Beaverdell porphyritic granite is Eocene age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland
Harper Ranch
RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1983

COMMODITY	GRADE	
Silver	6.8500	Grams per tonne
Copper	0.0100	Per cent
Lead	1.5400	Per cent
Zinc	2.0000	Per cent

COMMENTS: Sample of mineralized veinlets over 0.5 metre between 46.07 and 46.57 metres in drillhole 1983-16.

REFERENCE: Assessment Report 12734.

CAPSULE GEOLOGY

The May is located at about 915 metres elevation on the west side of the West Kettle River, 7.5 kilometres south-southwest of Beaverdell.

In 1970, an exploration program was carried out by Canex Aerial Exploration Ltd. A 9-tonne shipment of ore is recorded for that year. Since 1972, the property covering the occurrence has been owned and explored by Argentia Mines Ltd. In 1973, Rio Tinto Exploration Ltd. acquired an option on the property and Argentia

CAPSULE GEOLOGY

Mines Ltd. made a shipment of 54 tonnes of crude ore (two truck loads) to the Trail smelter. In 1984, the occurrence was part of a large claim group held by Canstat Petroleum Co. The occurrence was located on the May claim and three diamond-drill holes were drilled.

Hornblende granodiorite to quartz diorite of the Middle Jurassic Nelson intrusions is centred on and underlies most of the Beaverdell area. This batholith has been intruded by porphyritic biotite quartz monzonite of the Cretaceous to Tertiary Okanagan batholith and contains remnants of pendants and/or screens of tightly folded metamorphosed volcanic and sedimentary rocks of the Carboniferous to Permian Anarchist Group, the oldest unit in this area. These rocks consist of regionally greenschist metamorphosed andesitic tuffs and lavas, mafic intrusions, hornfels and a minor amount of limestone. The Eocene Beaverdell porphyry is a subcircular granitic stock centred 14 kilometres south of Beaverdell. It is mostly exposed on the northeast side of the Kettle River, in the Dominion Creek drainage, west of Boyer Creek and south of the mouth of Tuzo Creek. The stock has been dated by potassium-argon dating on biotite at 49.4 +/- 0.7 Ma. Satellite dikes and the stock itself intrude granodiorite phases of the Okanagan batholith and basal Tertiary rhyolite and conglomerate containing clasts of the Okanagan batholith, in the headwaters of the Dominion Creek.

Five separate rock units have been mapped locally at the May occurrence and surrounding area. The major rock type is an irregular mass of the porphyritic quartz monzonite. It occurs as small stocks and dike swarms. It is characterized by coarse (2.54 to 10 centimetres length) sanidine and smaller quartz phenocrysts in a groundmass of plagioclase, orthoclase quartz and minor biotite. This intrusion is generally barren of copper, lead and zinc sulphide mineralization. Minor pyrite occurs associated with sericite and carbonate alteration of plagioclase and sericite, chlorite, carbonate alteration of biotite. Granodiorite is medium grained and varies in composition from quartz monzonite to quartz diorite. Plagioclase, quartz, orthoclase and hornblende with minor biotite and magnetite comprise the granodiorite. A post-mineral hornblende-feldspar trachyte dike extends through the occurrence area. The oldest rocks are intensely deformed andesitic greenstone with felsic banding of the Anarchist Group. Porphyritic granite of the Beaverdell porphyry outcrop to the south of the occurrence.

The most obvious local structure feature is the northeast trend of the porphyry dike swarm, hornblende feldspar porphyry dike and attitude of the molybdenite zone at the nearby Mo occurrence (082ESW058). The most prominent fracture orientation strikes 040 degrees and dips steeply northwest and southeast. Others strike 290 degrees and dip north or 350 degrees with a 50 to 60 degree dip to the west. A major fault is implied by the offset of the hornblende feldspar porphyry dike across the West Kettle river valley. A right-lateral displacement of 300 metres is indicated.

Three distinct alteration environments have been identified. The most significant consists of hydrothermal alteration along the southern limits of the granodiorite and within 600 metres of the contact between the granodiorite and the Beaverdell porphyry. Minor alteration also occurs adjacent to the Beaverdell porphyry contact, over up to 61 metres width. Sericite-clay and chloritic alteration of the granodiorite and quartz monzonite prevail. To the west, alteration of the quartz monzonite consists of silicification and k-feldspar flooding, chloritization of mafics and minor pyrite and molybdenite. For a more detailed description of this latter alteration refer to the Mo occurrence (082ESW058).

Sphalerite, galena, chalcopyrite and cuprite with associated oxides and carbonates have been identified in altered granodiorite. Malachite occurs mainly as halos around copper sulphides, and aurichalcite (a hydrous zinc-copper carbonate near surface on joints and fractures) have been identified. Copper mineralization frequently occurs separately from lead-zinc mineralization, although trace copper sulphides can be found with the latter. The mode of occurrence is either as disseminations or as small clots in hairline quartz veinlets. The best mineralization trends northeast, paralleling and 600 metres north of the granodiorite-porphyry granite contact. Silver occurs in varying amounts, probably occurring in either argentite or tetrahedrite inclusions in galena. Surface oxidation of mineralized zones extends to 1.5 metres depth.

Of three drillholes drilled in 1983, hole 1983-16 returned the best assay results. The hostrock was granodiorite. The 0.5-metre interval between 46.07 and 46.47 metres yielded 6.85 grams per tonne silver, 1.54 per cent lead and 2.00 per cent zinc (Assessment Report 12734). In the same hole, the 0.5 metre interval between 58.55 and 59.05 metres yielded 0.38 per cent lead and 0.44 per cent zinc. Assay values from earlier trenches yielded grades from 1 to 2 per

CAPSULE GEOLOGY

cent zinc, 0.5 to 1.0 per cent lead, 0.10 copper and 3.42 grams per tonne silver (Assessment Report 4385).

The 63 tonnes ore shipped in 1970 and 1973 produced 6127 grams of silver, 1497 grams of gold, 117 kilograms of lead and 63 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR *1970-A52; *1973-A52
EMPR ASS RPT *3006, 3110, 4384, *4385, *4851, 10979, *12734
EMPR BC METAL MM00853
EMPR EXPL 1982-33,34; 1983-41,42; *1995 (in press)
EMPR GEM 1970-479; 1971-385,386; 1972-42; 1973-22,47,48
EMPR PF (Memorandum of production for 1973)
GSC MEM *79
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CIM *Special Volume 15, 1976, Table 1, No.4 - Characteristics of Some Canadian Cordilleran Porphyry deposits, in pocket
Leary, G.M. (1970): Petrology and Structure of the Tuzo Creek Molybdenite Prospect near Penticton, British Columbia, unpublished M.Sc thesis, UBC, 141 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW102**

NATIONAL MINERAL INVENTORY:

NAME(S): **CRYSTAL PEAK GARNET**, MOUNT RIORDAN SHAMROCK (L.3123),
BILLY GOAT (L.3122), POLESTAR CRYSTAL PEAK

STATUS: Developed Prospect
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:

MINING DIVISION: Osoyoos

LATITUDE: 49 23 35 N
LONGITUDE: 119 55 51 W
ELEVATION: 2073 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5475282
EASTING: 287337

LOCATION ACCURACY: Within 500M

COMMENTS: Centred on surface trace of garnet mass at the summit of Mount
Riordan (Property File - Polestar Exploration Prospectus, 1989).

COMMODITIES: Garnet Tungsten Copper Silver Gold
 Zinc

MINERALS

SIGNIFICANT: Garnet Andradite Grossularite Scheelite Axinite
 Pyrite Pyrrhotite Chalcopyrite Bornite Powellite
ASSOCIATED: Diopside Quartz Calcite Epidote Actinolite
 Magnetite Hedenbergite Clinopyroxene

COMMENTS: Also garnet and pyroxene.

ALTERATION: Garnet Diopside Quartz Epidote Actinolite
 Magnetite Wollastonite Chlorite

ALTERATION TYPE: Skarn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Disseminated
CLASSIFICATION: Replacement Skarn Industrial Min.
TYPE: K08 Garnet skarn K01 Cu skarn
 K05 W skarn K04 Au skarn

SHAPE: Bladed

DIMENSION: 800 x 300 x 30 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Garnetite mass, trending north-northwest.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Nicola	French Mine	
Lower Jurassic			Bromley Batholith
Middle Jurassic			Nelson Intrusions

ISOTOPIC AGE: 194.8+/-2.4 Ma

DATING METHOD: Uranium/Lead

MATERIAL DATED: Zircon

Middle Jurassic

LITHOLOGY: Limestone
Carbonate Sediment/Sedimentary
Garnet Skarn
Garnetite
Hornblende Porphyry Granodiorite
Microdiorite
Marble
Gossan

HOSTROCK COMMENTS: Granodiorite (Mount Riordan stock) surrounding the Crystal Peak occurrence.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Okanagan

METAMORPHIC TYPE: Regional Contact

PHYSIOGRAPHIC AREA: Thompson Plateau

Plutonic Rocks

RELATIONSHIP: Pre-mineralization
Syn-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SOUTH

REPORT ON: Y

CATEGORY: Indicated

YEAR: 1991

QUANTITY: 10663380 Tonnes

COMMODITY

GRADE

Garnet

77.0000 Per cent

COMMENTS: Drill indicated reserves. The South zone is the proposed open pit. An average rock density value of 3.5 g/cm³ was used to determine tonnage.

REFERENCE: MDAP - Crystal Peak Garnet, Stage 1 Report, March 1991.

INVENTORY

ORE ZONE: NORTH REPORT ON: Y
CATEGORY: Indicated YEAR: 1991
QUANTITY: 17955000 Tonnes
COMMODITY GRADE
Garnet 80.0000 Per cent
COMMENTS: Drill indicated reserves. An average rock density value of 3.5 grams per cubic centimetre was used to determine tonnage.
REFERENCE: MDAP - Crystal Peak Garnet, Stage 1 Report, March 1991.

ORE ZONE: WEST REPORT ON: Y
CATEGORY: Indicated YEAR: 1991
QUANTITY: 11848200 Tonnes
COMMODITY GRADE
Garnet 78.0000 Per cent
COMMENTS: Drill indicated reserves. An average rock density value of 3.5 grams per cubic centimetre was used to determine tonnage.
REFERENCE: MDAP - Crystal Peak Garnet, Stage 1 Report, March 1991.

CAPSULE GEOLOGY

The Crystal Peak Garnet deposit is centred on Mount Riordan, 26 kilometres west-southwest of Princeton.

The deposit is located on the eastern edge of the Hedley Mascot and Nickel Plate mining camp. The general area has been extensively prospected.

The deposit is hosted in a roof pendant of carbonate-rich sediments (limestone) of the Upper Triassic French Mine Formation, Nicola Group that has been almost completely replaced by garnet-rich skarn. The roof pendant is intruded from the north and east by hornblende porphyritic granodiorite of the Middle Jurassic Bromley batholith (locally known as Mount Riordan stock), part of the Middle Jurassic Nelson intrusions (Bulletin 101).

An elongate mass of garnetite trending north-northwest for up to 900 metres lies centred on Mount Riordan. The deposit contains three major, high grade zones (60 to 100 per cent garnet) outcropping over a total area of 3.35 hectares. Remnant bodies of microdiorite up to 30 metres in diameter are scattered about a broad zone lying in the centre of the skarn.

The skarn consists of massive and coarsely crystalline garnetite comprised of approximately 90 per cent andradite and 10 per cent grossularite. Garnet crystals typically contain andradite-rich cores and grossularite-rich margins. The garnet is usually brown and green, with minor black, red-brown, pink and yellow-green varieties. Diopside, quartz, calcite, epidote, actinolite, hedenbergite, clinopyroxene and magnetite occur in relatively low quantities. Traces of chlorite, wollastonite, scheelite and various sulphides are also present. Total impurities amount to 5 to 15 per cent of the skarn. Calcite occurs as rare flat lying or gently dipping marble layers, as interstitial blebs 1 to 3 millimetres in diameter, and as small veins developed near the summit of Mount Riordan.

Scheelite mineralization tends to occur as small crystals less than 1 millimetre in diameter sparsely disseminated or clustered throughout the skarn, and as blebs, coarse crystalline masses and veinlets up to 5 centimetres in width and 3 metres in length near the summit of Mount Riordan. A grab sample of scheelite-rich mineralization taken near the summit contained in excess of 5 per cent tungsten (Fieldwork, 1987). Some scheelite-rich sections also contain coarse axinite.

Pockets, irregular veinlets and blebs of magnetite intergrown with variable amounts of pyrrhotite, pyrite, chalcopyrite and traces of bornite are also present in the skarn. This mineralization is best developed in a series of gossanous zones found along a west trending linear structure in the northern half of the deposit. A grab sample of magnetite-rich mineralization assayed 1.69 grams per tonne gold, 19 grams per tonne silver, 0.74 per cent copper and 0.11 per cent zinc (Fieldwork, 1987).

Indicated reserves at the North zone are 17,955,000 tonnes grading 80 per cent garnet; indicated reserves at the West Zone are 11,848,200 tonnes grading 78 per cent garnet; indicated reserves at the South zone are 10,663,380 tonnes grading 77 per cent garnet (Mineral Development Assessment Process - Crystal Peak Garnet, Stage 1 Report, March 1991).

BIBLIOGRAPHY

EMPR AR 1900-884; *1901-1074,1160; 1902-H185,H186; 1903-H176; 1905-J254,J256; 1906-H166,H167; 1907-L117; 1909-K136,K137; 1917-F207;

BIBLIOGRAPHY

*1953-A107,A108
EMPR ASS RPT *19991
EMPR BULL 101, pp. 24,212
EMPR FIELDWORK 1985, pp. 101-105; *1986, pp. 65-79; *1987, pp. 59-77
EMPR INF CIRC 1991-1, p. 61; 1993-13, p. 15; 1994-1, p. 15
EMPR Mineral Market Update July 1991
EMPR OF *1988-6; *1989-3; 1989-5; *1991-23, pp. 135-145; 1992-1;
1992-9; 1994-1
EMPR PF (*Polestar Exploration (1989): Prospectus, Crystal Peak
Garnet Project Near Hedley, B.C.; Rights Offering Circular,
Hawkeye Developments Ltd., 1990; Memoranda and briefing notes;
Polestar Exploration Inc. (1989): B.C. Garnet - A Major New
Product, A Proposal to the Western Diversification Program;
Information Circular, November 9, 1989)
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 72-53
CIM Paper Presentation #77, Grond et al. (1991): Crystal Peak Garnet,
A Massive Skarn-hosted Andradite Deposit near Penticton, British
Columbia
ECON GEOL *Vol.87, pp. 1862-1876
GCNL #230(Nov.30), 1989; #136(Jul.16),#202(Oct.18),#213(Nov.2),
#231(Nov.29), 1990; #24(Feb.4), 1991; #145(July 28), 1992; #234
(Dec.7), 1994
N MINER Feb.24, Apr.13, 1992

DATE CODED: 1989/04/11
DATE REVISED: 1996/11/30

CODED BY: GO
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW103**

NATIONAL MINERAL INVENTORY: 082E6 Au2

NAME(S): **MAY (L.2355)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 24 N
LONGITUDE: 119 08 02 W
ELEVATION: 0914 Metres

NORTHING: 5484117
EASTING: 345464

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the upper and lower adit portals on the May (Lot 2355) Reverted Crown grant (Assessment Report 3740, Map 14).

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Pyrite Galena Silver

COMMENTS: Pyrite occurs as disseminations, galena as veinlets or in fault gouge with native silver.

ASSOCIATED: Quartz

ALTERATION: Chlorite Silica

ALTERATION TYPE: Chloritic Silicific'n

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: 1 Metres STRIKE/DIP: 045/15S

TREND/PLUNGE:

COMMENTS: A mineralized shear zone strikes 045 degrees and dips 15 to 20 degrees southwest or strikes 090 degrees and dips 20 degrees north to 60 degrees south, and has been traced over 1.5 metres.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Permian

Anarchist

Wallace

Jurassic

Westkettle Batholith

Cretaceous-Tertiary

Unnamed/Unknown Informal

LITHOLOGY: Quartzitic/Quartzose Chlorite Schist
Argillaceous Quartzite
Chlorite Talc Schist
Quartz Feldspar Dike
Quartz Feldspar Sill
Latite Dike
Dacite Dike
Foliated Granodiorite
Latite
Dacite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Harper Ranch

METAMORPHIC TYPE: Regional

Plutonic Rocks

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SHEAR

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1971

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

6362.0000 Grams per tonne

COMMENTS: A shear zone immediately east of the lower adit portal was chip sampled across 1.2 metres.

REFERENCE: Assessment Report 3740.

CAPSULE GEOLOGY

The May prospect is located at 914 metres elevation immediately south of Carmi Creek, 2.25 kilometres west-southwest of Carmi, British Columbia. The prospect is 396 metres west of the former Butcher Boy mine (082ESW132) and 640 metres west of the upper adit of the former Carmi mine (082ESW029).

The May claim was staked before 1901 on parallel veins and a

CAPSULE GEOLOGY

shear zone extending westward from the Carmi and Butcher Boy claims. In 1904, the claim was Crown granted to R.D. Kerr and associates. A three-quarter interest was acquired in the property in 1934 by Carmi Gold Mines Ltd. Development work on the claim has not been recorded, but it is believed that two short adits were driven in the early 1900s. No work has been done since this time except reopening portals and refurbishing collapsed adits. The property was examined and sampled by G.V. Lloyd Exploration Ltd. in 1971 as part of an extensive exploration program for Husky Oil Ltd. in the Carmi area. The May prospect has been developed by two adits; a lower and an upper. The lower adit is 30 metres south of Carmi Creek and 6 metres vertically above. It is about 42 metres long following a bearing of 170 degrees. A 12-metre crosscut was driven 24 metres from the portal. The upper adit lies 8.2 metres vertically above and 18 metres farther south. It is about 27 metres long along a bearing of 105 degrees.

The May prospect lies within a small roof pendant of Permian Wallace Formation. The pendant is composed of metamorphosed pelitic, siliceous and calcareous sediments bordering foliated granodiorite. Rock types encountered on the south side of Carmi Creek are argillaceous quartzite, chlorite schist and chlorite-talc schist. Hornblende-biotite foliated granodiorite occur adjacent to schists and quartzite. Quartz, feldspar dikes and sills intrude chlorite schists along defined fractures. Contacts with country rocks are poorly defined. Latite and dacite dikes are also present. Their contacts are well defined with chilled margins.

The May prospect is located approximately 300 metres east of the intersection of two major faults, an east-west fault in the Carmi Creek valley and a north-south fault along Second Creek. A shear zone in cherty and locally schistose metasediments trends northwest from the Carmi and Butcher Boy mines over about 914 metres on surface. The exact relationship between the shear zone on the May claim and the Carmi-Butcher Boy shear is unknown. The May shear is evident by visible slickensides. Associated closely-spaced fractures strike 150 degrees. A northwest striking overturned fold was observed above the upper adit portal.

Mineralization is confined to shear planes and quartz veins hosted in quartzitic chlorite schists. A 5 to 10 centimetre wide silicified shear is located on a steep face immediately east of the lower adit portal. The shear contains galena with significant silver values. The mineralization was traced over 1.5 metres along the shear. A chip sample taken over 1.2 metres of this mineralization yielded 6362 grams per tonne silver (Assessment Report 3740).

A trench, located east of the adits, exposed disseminations of pyrite and veinlets of galena and native silver, similar to mineralized veins at the lower adit portal.

A number of shears containing streaks of grey gouge, intersected in the adits, are believed to carry native silver and galena. Fine streaks of pyrite were visible in quartzitic chlorite schists. Samples taken from the upper and lower adits in 1971, however, yielded minor gold, silver, copper and lead values (Assessment Report 3740).

BIBLIOGRAPHY

EMPR AR 1901-1139-1140; 1904-300; 1934-D10
EMPR ASS RPT *3740, 5430, 5519, 5914, 6023, 8867
EMPR GEM 1972-44; 1973-50
EMPR OF 1989-5
EMPR PF (Mineral Lease document, 1967)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW104**

NATIONAL MINERAL INVENTORY: 082E6 Au2

NAME(S): **CAPCO**, CAPCO 44, CAPCO 42-45,
A ZONE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

MINING DIVISION: Greenwood

LATITUDE: 49 29 09 N
LONGITUDE: 119 08 51 W
ELEVATION: 1036 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5483682
EASTING: 344465

LOCATION ACCURACY: Within 500M

COMMENTS: The location of Trench No. 3 on the Capco 44 claim (Assessment Report 3740, Map 19).

COMMODITIES: Silver Gold Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Pyrite
COMMENTS: Chalcopyrite occurs as scattered blebs in massive pyrrhotite.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Massive Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 1 Metres STRIKE/DIP: 030/75S TREND/PLUNGE:
COMMENTS: Trench 3 has exposed a 1.2-metre wide shear zone with 30 centimetres of massive mineralization. The zone strikes 030 degrees and dips steeply south.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Anarchist	Wallace	
Jurassic			Westkettle Batholith
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Quartzitic/Quartzose Chlorite Schist
Argillaceous Quartzite
Chlorite Talc Schist
Quartz Feldspar Dike
Quartz Feldspar Sill
Rhyodacite Dike
Latite Dike
Dacite Dike
Rhyodacite
Latite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch
METAMORPHIC TYPE: Regional
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
PHYSIOGRAPHIC AREA: Okanagan Highland
GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1971
SAMPLE TYPE: Unknown
COMMODITY: Copper GRADE: 0.3200 Per cent
REFERENCE: Assessment Report 3740.

CAPSULE GEOLOGY

The Capco prospect is located at 914 metres elevation immediately south of Carmi Creek, 2.25 kilometres west-southwest of Carmi, British Columbia. The prospect is 396 metres west of the former Butcher Boy mine (082ESW132) and 640 metres west of the upper adit of the former Carmi mine (082ESW029).
The Capco claims lie in the Carmi-Beaverdell area where there has been significant exploration and mining activity since early 1900. Evidence of pre-1970 exploration work on the property consists of small opencuts. In 1970, International Minerals Corp. carried out an extensive exploration program of mapping, magnetic and induced polarization geophysical surveys. A drillhole was then drilled on an

CAPSULE GEOLOGY

induced polarization anomaly.

The Capco prospect lies within a small roof pendant of Permian Wallace Formation. The pendant is composed of metamorphosed pelitic, siliceous and calcareous sediments bordering foliated granodiorite or quartz diorite. Rock types encountered on the south side of Carmi Creek are argillaceous quartzite, chlorite schist and chlorite-talc schist. Hornblende, biotite foliated granodiorite occur adjacent to schists and quartzite. Quartz, feldspar dikes and sills intrude chlorite schists along defined fractures. Contacts with country rocks are poorly defined. Fine-grained rhyodacite, latite and dacite dikes are common. Their contacts are well defined with chilled margins.

Mineralization is confined to shear zones exposed by blast trenches. In Trench 1, a strongly fractured shear zone contains scattered blebs of chalcopyrite in massive pyrrhotite over 30 centimetres width. The shear zone is 1.2 metres wide, strikes 030 degrees and dips steeply to the south. Mineralization in Trench 3, 23 metres to the northwest, is less massive. Assay samples from this sheared and fractured zone yielded 0.32 per cent copper, 9 parts per million molybdenum, 38 parts per million nickel and 460 parts per million cobalt (Assessment Report 3740). Trench 1 samples yielded 0.16 per cent copper (Assessment Report 3740).

Diamond-drill hole #11, drilled in 1970 by International Minerals Corp., yielded massive pyrite and pyrrhotite between 21.6 and 41.4 metres. Assay samples yielded 0.17 gram per tonne gold and 6.86 gram per tonne silver between 27.1 and 33.5 metres (Assessment Report 3740).

BIBLIOGRAPHY

EMPR ASS RPT *3740, 5430, 5519, 5914, 6023, 7900, 8356, 8867
EMPR GEM 1973-50, 1974-60, 1975-E25, 1976-E31
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79, 178 pp.
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, 58 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW105**

NATIONAL MINERAL INVENTORY:

NAME(S): **ANDREANA**, BIRTHDAY, JOE LAKE,
BLACK GIANT

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 54 N
LONGITUDE: 119 54 32 W
ELEVATION: 2135 Metres

NORTHING: 5442463
EASTING: 287669

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of diamond drilling on the Andreana or
Birthday claim group (Assessment Report 8789).

COMMODITIES: Tungsten

MINERALS

SIGNIFICANT: Scheelite
ASSOCIATED: Quartz Epidote
ALTERATION: Epidote Pyrite Silica
ALTERATION TYPE: Skarn Pyrite Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Stratabound
CLASSIFICATION: Skarn
TYPE: K05 W skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Middle Jurassic			Similkameen Intrusions

LITHOLOGY: Greenstone
Chert
Tuff
Skarn
Porphyritic Diorite

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional Contact Plutonic Rocks
RELATIONSHIP: Pre-mineralization GRADE: Greenschist
Syn-mineralization Hornfels

CAPSULE GEOLOGY

The Andreana showing is located at 2135 metres elevation, approximately 400 metres north of Joe Lake, 13 kilometres south-southwest of Keremeos, British Columbia.

Scheelite was first discovered in 1978 by R. Schneider. The claims were optioned to Dankoe Mines. A subsequent option agreement was reached with Black Giant Mines and an exploration program was conducted in 1979. The exploration program consisted of 7 diamond-drill holes totalling 592 metres, soil and stream sediment sampling, a magnetometer survey and local geological mapping. Later in 1979 the claims were restaked as the Birthday claim group by P. Folk. Drill core was relogged and analysed for tungsten, gold and silver.

The showing is hosted by Triassic Independence Formation chert and greenstone and chert, tuffs and greenstone of the underlying Carboniferous to Triassic Shoemaker Formation. In addition, a small volume of very hard siliceous tuff breccia, possibly Tertiary, and a small dike-like body of porphyritic diorite were observed. A thin sill of rhyolite porphyry has also been observed in drill core. This sequence has been intruded by the Middle Jurassic Similkameen intrusion, which lies some 2 kilometres to the south or east. Triassic strata have been folded with emplacement of the porphyritic diorite along the north trending axial plane of a poorly defined anticline. Greenschist grade, regional metamorphism has produced a pervasive foliation. Chlorite, epidote, pyrite and thin skarn bands are present on a regional scale.

Scheelite occurs in narrow bands and lenses within pyritized and silicified strata of the Shoemaker Formation. Small occurrences of scheelite-epidote skarn and scheelite-bearing quartz veinlets are

CAPSULE GEOLOGY

widespread. The porphyritic diorite also hosts disseminated scheelite. Diamond drilling beneath the surface scheelite showing indicate that mineralized zones are lens-shaped. The Best scheelite exposures are along a ravine.

These exposures are high grade pods and lenses yielding up to 0.61 per cent tungsten over 2.4 metres, 0.5 per cent tungsten over 3 metres and close to 2 per cent tungsten in select samples (Assessment Report 8789). The best trench sample taken in 1979 by Black Giant Mines yielded 0.8 per cent WO₃ over 3.5 metres (Dick, H. (1980): Diamond Drilling Report on the Joe Lake claim group). The best tungsten analytical results of relogged drill core yielded 1.42 per cent tungsten over 1.6 metres from drillhole #6 and 0.19 per cent tungsten over 4.5 metres from drillhole #5 (Assessment Report 8789).

BIBLIOGRAPHY

EMPR ASS RPT *8789
EMPR GEM 1972-40; 1973-45; 1974-54; 1975-E20; 1976-E24
EMPR OF 1989-5; 1991-17
EMPR PF (H.D. Foreman (1980): Diamond Drilling Report on the Joe Lake claim group; Drill and camp area map; Placer Development Limited Intermediate Report, 1979)
GSC BULL 239, pp. 137-139
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 448-458; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40
American Journal of Science Vol. 237, pp. 527-549

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW106**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT KRUGER**, KRUGER MOUNTAIN, BUCK,
NEP

STATUS: Developed Prospect

MINING DIVISION: Osoyoos

REGIONS: British Columbia

NTS MAP: 082E04E

UTM ZONE: 11 (NAD 83)

BC MAP:

LATITUDE: 49 01 38 N

LONGITUDE: 119 35 38 W

ELEVATION: 1180 Metres

NORTHING: 5433724

EASTING: 310389

LOCATION ACCURACY: Within 500M

COMMENTS: Diamond-drill hole collar 86-1 (Assessment Report 15783). Includes
Kruger Mountain (formerly 082ESW160).

COMMODITIES: Nepheline Syenite Feldspar

MINERALS

SIGNIFICANT: Nepheline Feldspar
ASSOCIATED: Hornblende Biotite Garnet Aegirine
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Concordant
CLASSIFICATION: Magmatic Industrial Min.
TYPE: R13 Nepheline syenite
SHAPE: Tabular
DIMENSION: 340 x 160 x 80 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Main sill.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Kobau	Undefined Formation	Kruger Syenite
Jurassic			Similkameen Intrusions
Middle Jurassic			

LITHOLOGY: Nepheline Syenite Sill
Nepheline Syenite
Meta Volcanic Rock
Meta Sediment/Sedimentary Rock
Diorite
Gabbro
Quartz Monzonite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca Okanagan PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: MOUNT KRUGER REPORT ON: Y
CATEGORY: Combined YEAR: 1986
QUANTITY: 20000000 Tonnes
COMMODITY: Nepheline Syenite GRADE 100.0000 Per cent
COMMENTS: Overall inferred reserves using a twenty per cent dilution factor for
the combined Main and East zones.
REFERENCE: Assessment Report 15783.

ORE ZONE: EAST REPORT ON: Y
CATEGORY: Inferred YEAR: 1986
QUANTITY: 13200000 Tonnes
COMMODITY: Nepheline Syenite GRADE 100.0000 Per cent
COMMENTS: Southern half of zone as defined by units 2a to 2c (nepheline
syenite).
REFERENCE: Assessment Report 15783.

CAPSULE GEOLOGY

hornblende, minor aegirine-augite.
 The composition of each zone determined from the modal analysis of 53 polished thin sections is as follows in weight per cent (Assessment Report 15783):

ZONE	Hornblende	Aegirine- Augite	Biotite
SiO2	59.6	58.7	58.5
Al2O3	21.0	20.4	20.1
Fe2O3	3.0	4.0	4.0
MgO	0.26	0.68	0.74
CaO	1.0	2.2	1.3
Na2O	3.6	3.3	3.3
K2O	11.6	10.9	11.4
TiO2	0.15	0.20	0.33
H2O	0.12	0.22	14.7

The margins of the sills are commonly much finer grained than the cores but have a lower mafic mineral content. Generally, the nepheline syenite has a low alumina and high alkali and iron content.

Three samples of a salic light coloured phase analysed as follows in weight per cent (Fieldwork 1988, page 486):

SiO2	49.55 to 74.04
Al2O3	14.27 to 15.13
Fe2O3	0.65 to 11.33
CaO	0.87 to 9.16
Na2O	2.91 to 3.86
K2O	4.68 to 5.91

The nepheline syenite comprises two large sills (Main and East) and two much smaller sills (South and Northwest). The Main sill is 340 by 160 by 80 metres and contains an inferred reserve of 11.5 million tonnes of nepheline syenite. The southern half of the East sill is 700 by 120 by 60 metres and has an inferred reserve of 13.2 million tonnes of nepheline syenite. Using a 20 per cent dilution factor, overall inferred reserves for the Main and East sills are 20 million tonnes of nepheline syenite (Assessment Report 15783).

Analyses of three samples collected from outcrop of a salic, light-coloured phase exposed on a hilltop west of Kruger Mountain, approximately 9 kilometres west of the town of Osoyoos, indicate low alumina (up to 13.2 per cent) and high iron content, indicating the rock has limited potential to meet commercial specifications for glass and ceramic applications (Fieldwork, 1988).

BIBLIOGRAPHY

EMPR AR 1965-241
 EMPR ASS RPT 677, 4130, *15783
 EMPR EXPL 1987-C24
 EMPR FIELDWORK *1988, pp. 484,486
 EMPR OF 1987-17; 1988-13; 1991-10
 EMPR PF (Various correspondence between private concerns and government agents, 1965, 1968, 1969, 1970)
 GSC BULL *239, pp. 137-139
 GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
 GSC MEM 38, pp. 448-458; 179
 GSC OF 481; 637; 1505A; 1565; 1969
 GSC P 37-21
 McVey, H. (1988): A Study of Markets for British Columbia's Nepheline Syenite and Feldspathic Minerals p.46
 American Journal of Earth Science *Vol. 237, pp. 527-549

DATE CODED: 1985/07/24
 DATE REVISED: 1997/10/08

CODED BY: GSB
 REVISED BY: PSF

FIELD CHECK: N
 FIELD CHECK: N

MINFILE NUMBER: **082ESW107**

NATIONAL MINERAL INVENTORY:

NAME(S): **PATRICIA**, LAKE, NOVA,
ROY, RICK FRACTION, BLAKE FRACTION

STATUS: Prospect
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:
LATITUDE: 49 23 27 N
LONGITUDE: 119 56 18 W
ELEVATION: 1900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location of an abandoned adit portal (Assessment Report 4233).

Underground
MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5475057
EASTING: 286784

COMMODITIES: Copper Silver Gold Tungsten

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite Scheelite
COMMENTS: Powellite and axinite have been tentatively identified.
ALTERATION: Garnet Epidote Hedenbergite Clinopyroxene Actinolite
Silica Chlorite
ALTERATION TYPE: Skarn Silicific'n Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated Vein Shear
CLASSIFICATION: Replacement Skarn Hydrothermal Epigenetic
TYPE: K01 Cu skarn K05 W skarn
K04 Au skarn I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Nicola	French Mine	
Lower Jurassic			Bromley Batholith

ISOTOPIC AGE: 194.8+-2.4 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Skarn
Garnetite
Marble
Quartzite
Andesite Tuff
Biotite Hornblende Granodiorite
Microdiorite
Granite
Granodiorite Dike

HOSTROCK COMMENTS: Granodiorite surrounding the Patricia occurrence.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
COMMODITY
Silver 15.7700 Grams per tonne
Gold 2.0600 Grams per tonne
COMMENTS: A 3-metre sample between 71 and 74 metres in drillhole 89-18.
REFERENCE: Assessment Report 15244.
YEAR: 1986

CAPSULE GEOLOGY

The Patricia showing is located on the west side of Mount Riordan, 1 kilometre southeast of Nickel Plate Lake and about 20 kilometres east of Hedley, British Columbia.

The Patricia showing is located on the eastern edge of the Hedley Mascot and Nickel Plate mining camp. The general area has been extensively prospected. The property was explored in 1973 by Corval Resource Ltd. There is evidence of an old abandoned adit, discovered in 1986 during property exploration by Placer Development

CAPSULE GEOLOGY

Ltd.

Hostrocks of the Patricia occurrence are marble (limestone), quartzite and minor altered andesite tuff of the Triassic Nicola Group. The limestone is probably part of the limestone-rich French Mine Formation of the Nicola Group. The rare marble layers dip flat to gently dipping. Nicola Group rocks are presumably separated from deformed ophiolitic volcanics of the Apex Mountain complex by a fault. These are intruded by fine grained, biotite hornblende granodiorite and microdiorite of the Early to Middle Bromley Batholith and coarse grained, pink granite of the Middle Jurassic Nelson Plutonic Suite. The pink granite appears to be older than the fine-grained granodiorite. Partial skarn overprinting of these intrusive rocks indicates post-skarn mineralization. These are cut by late granite and mafic porphyry dikes.

This is one of several small, discontinuous, irregular skarn zones in the French Mine Formation of the Nicola Group, which forms an elongate mass 900 metres long by 500 metres width. An old adit was discovered driven into one of these skarns. A dump at the portal contained granite and garnet-diopside skarn.

At the Patricia showing, a highly altered skarn zone appreciably different from the Nickel Plate skarn is composed primarily of massive, coarsely crystalline andraditic garnetite, quartz, and epidote with variable amounts of carbonate, hedenbergite, clinopyroxene, actinolite and traces of chlorite and wollastonite. The garnet colour is variable and includes black, red, pink, brown, green and yellow-green in crystals up to 6 centimetres diameter and prominent growth zonations. Some outcrops show sharply defined subparallel colour zonation. Optically, the garnets are birefringent with iron-rich (andraditic) cores and aluminum-rich (grossularitic) edges. This may indicate that the skarn originally may have formed in an oxidizing environment and later evolved to a more reducing environment, that may have coincided with the deposition of gold and sulphides.

Locally, skarn contains small pockets and irregular veinlets and disseminations of magnetite intergrown with variable amounts of pyrite, chalcopyrite, pyrrhotite and trace bornite. Jarosite alteration is present. Visible traces of scheelite are seen over a wide area, both in skarn and as detrital fragments in soils but is best developed near the summit of Mount Riordan. Some scheelite outcrops may also contain minor powellite and axinite, although this has not been positively identified.

Gold values are generally low. In 1986, 4 diamond-drill holes were drilled on several magnetic and/or skarn zones. Drillholes 89-17, 89-18 and 89-19 were drilled in the vicinity of the skarn described above. Drillhole 89-17 intersected garnet-diopside-epidote skarn with minor pyrite, pyrrhotite and chalcopyrite above biotite granodiorite. Drillhole 89-18 intersected siliceous metasediments and fragmental lapilli tuff with narrow granodiorite dikes. Drillhole 89-19 also intersected skarn above granodiorite with chlorite veins and scattered pyrite stringers. Overall, drill core samples yielded insignificant precious and base metal values. The best precious metal intersection was over 3 metres between 71 and 74 metres from drillhole 89-18. The sample yielded 2.06 grams per tonne gold and 15.77 grams per tonne silver (Assessment Report 15244). Further trenching in the area in 1989 exposed sulphides in strongly silicified metasediments, quartz and shear zones. Samples, however, failed to yield anomalous precious and precious metal values (Assessment Report 18940).

BIBLIOGRAPHY

- EMPR ASS RPT *4233, 14549, *15244, *18940
EMPR FIELDWORK 1985, pp. 101-105; 1986, pp. 65-79; *1987, pp. 59-77
EMPR GEM 1972-40; 1974-55
EMPR OF *1989-3, pp. 29-31
EMPR PF (Corval Resources Ltd. (1971): Prospectus; Livgard, E. (1971): Report on the Corval Resources Ltd. Property - Nickel Plate Lake, B.C.)
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 72-53
GCNL #177(Sept.13), #199(Oct.16), 1991; #103(May 28), 1992

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW108**

NATIONAL MINERAL INVENTORY:

NAME(S): **TORRES, MARS, YORK,
BAR, DOE, MAY 1,
VIKING**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 13 30 N
LONGITUDE: 119 40 03 W

UTM ZONE: 11 (NAD 83)

ELEVATION: 1060 Metres

NORTHING: 5455893
EASTING: 305783

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of underground workings on the May 1 claim (Assessment Report 4637).

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Galena Sphalerite Arsenopyrite Tetrahedrite

ASSOCIATED: Gold Silver
Quartz Pyrite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Irregular

MODIFIER: Faulted

DIMENSION: 1 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: The quartz veins in the upper inclined adit are 0.9 to 1.2 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Paleozoic
Middle Jurassic
Jurassic

GROUP

Kobau

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions
Oliver Plutonic Complex

ISOTOPIC AGE: 152 +/-3 Ma

DATING METHOD: Uranium/Lead

MATERIAL DATED: Zircon

LITHOLOGY: Diorite
Diorite Feldspar Porphyry
Granite
Granodiorite
Chloritic Schist
Limestone
Greenstone
Serpentinite
Aplite Dike
Lamprophyre Dike

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Thompson Plateau

GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1933

SAMPLE TYPE: Chip

COMMODITY

GRADE

Gold

8.2300

Grams per tonne

COMMENTS: A 1.8-metre chip sample.

REFERENCE: Minister of Mines Annual Report 1933, page 167.

CAPSULE GEOLOGY

The Torres occurrence is located 3 kilometres southeast of Orofino Mountain, near the summit of the old Fairview-Cawston road.

CAPSULE GEOLOGY

Oliver lies 9 kilometres to the southeast and Keremeos lies 12.5 kilometres to the west-southwest.

The Torres occurrence is located within Middle Jurassic diorite and dioritic feldspar porphyry that has been subsequently intruded by granite and granodiorite of the Jurassic Oliver plutonic complex. To the immediate south of the occurrence lies metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. Chloritic schist with intercalated limestone, greenstone and serpentinite comprise lithologies of the Kobau Group. Younger aplite and lamprophyre dikes are found crosscutting all older rock units.

The old workings were restaked on the Mars 1 claim, which is underlain by diorite. The quartz veins occupy a shear zone in diorite. The veins contain lenses and disseminations of pyrite, chalcopyrite, galena, sphalerite, arsenopyrite, tetrahedrite, gold and silver. Crossfaults have displaced some of these veins about a metre.

The Torres occurrence was first discovered in 1933 and acquired by Viking Gold Mines, Ltd. in 1934. A 10-metre inclined adit and numerous open pits explored two 0.9 to 1.2-metre wide quartz veins. A chip sample across 1.8 metres yielded 8.23 grams per tonne gold (Minister of Mines Annual Report 1933, page 167). A grab sample yielded 274 grams per tonne gold. A select grab sample from the adit yielded 30.86 grams per tonne gold and 394 grams per tonne silver (Minister of Mines Annual Report 1933, page 167).

In 1934, a 186-metre adit was driven slightly below the inclined adit. This adit intersected two veins varying from several centimetres to 1.8 metres wide. Crosscuts were made north and south of the adit. Samples generally yielded low gold values but some high-grade sections were intersected. A 7.6-centimetre vein was sampled at the face of the adit. An assay of this vein yielded 100 grams per tonne gold and 840 grams per tonne silver (Minister of Mines Annual Report 1934, page D15). In 1935, Viking Gold Mines shipped 2 tonnes of ore, yielding 187 grams of silver, likely from this property.

Topper Mining Ltd. mined 40 tonnes of ore from the Torres occurrence in 1973. Recovery included 809 grams of silver, 62 grams of gold, 80 kilograms of lead and 40 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR *1933-167,168; *1934-D15; 1935-A25; 1973-54
EMPR ASS RPT 4383, *4637
EMPR BC METAL MM00369; MM00371
EMPR GEM *1973-44
EMPR OF 1989-2; 1989-5
EMPR INDEX 3-217
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969; 2167
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW109**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAURION**, LOR, ROD FRACTION,
ARGENTIA

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 23 30 N
LONGITUDE: 119 06 47 W
ELEVATION: 0900 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5473144
EASTING: 346667

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of an abandoned adit portal (Assessment Report 4385).

COMMODITIES: Lead
Mercury

Zinc

Gold

Silver

Platinum

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Marcasite
ASSOCIATED: Calcite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Two highly oxidized stringers exposed in an opencut contain galena, sphalerite and pyrite. Galena, sphalerite and marcasite comprise calcite-filled fractures in a crosscut.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Cretaceous-Tertiary			Okanagan Batholith
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Andesitic Greenstone
Porphyritic Biotite Quartz Monzonite
Hornblende Granodiorite
Porphyritic Granite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.
The Beaverdell porphyritic granite is of Eocene age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Harper Ranch
METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Okanagan Highland

GRADE: Greenschist

INVENTORY

ORE ZONE: SHAFT

REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1980
SAMPLE TYPE:	Chip		
COMMODITY		GRADE	
Lead		2.4800	Per cent
Zinc		5.8000	Per cent

COMMENTS: A chip sample taken from the shaft collar in 1980.
REFERENCE: Assessment Report 8504.

CAPSULE GEOLOGY

The Laurion showing is located at about 900 metres elevation on the west side of the West Kettle River, 5 kilometres south-southwest of Beaverdell, north of the confluence of Tuzo Creek with the West Kettle River.

The first record of the Laurion occurrence was in 1927, then owned by G. Bongalis. The property was optioned to the West Kettle River Mining Co. Ltd. Exploration and development continued until 1929. Workings consisted of an opencut and a 161-metre crosscut driven 38 metres above the shaft collar and a second adit driven under the shaft. The shaft was sunk 4.6 metres. In 1970, an exploration program was carried out by Canex Aerial Exploration Ltd. In 1972, the property covering the occurrence has been owned and

CAPSULE GEOLOGY

explored by Argentia Mines Ltd. In 1973, Rio Tinto Exploration Ltd. acquired an option on the property. In 1984, the occurrence was part of a large claim group held by Canstat Petroleum Co.

Hornblende granodiorite to quartz diorite of the Middle Jurassic Nelson intrusions is centred on and underlies most of the Beaverdell area. This batholith has been intruded by porphyritic biotite quartz monzonite of the Cretaceous to Tertiary Okanagan batholith and contains remnants of pendants and/or screens of tightly folded metamorphosed volcanic and sedimentary rocks of the Carboniferous to Permian Anarchist Group, the oldest unit in this area. These rocks consist of regionally greenschist metamorphosed andesitic tuffs and lavas, mafic intrusions, hornfels and a minor amount of limestone. The Eocene Beaverdell porphyry is a subcircular granitic stock centred 14 kilometres south of Beaverdell. It is mostly exposed on the northeast side of the Kettle River, in the Dominion Creek drainage, west of Boyer Creek and south of the mouth of Tuzo Creek. The stock has been dated by potassium-argon dating on biotite at 49.4 +/- 0.7 Ma. Satellite dikes and the stock itself intrude granodiorite phases of the Okanagan batholith and basal Tertiary rhyolite and conglomerate containing clasts of the Okanagan batholith, in the head waters of the Dominion Creek.

The hostrocks of the Laurion occurrence are andesitic greenstones with felsic banding of the Anarchist Group. These rocks have been intensely deformed, altered and faulted. An opencut exposed two highly oxidized stringers containing specks of galena, sphalerite and pyrite that widens out to 76 centimetres carrying galena and pyrite (Minister of Mines Annual Report 1927, page 234). In the upper crosscut, fractures are filled with calcite and specks of galena, sphalerite and marcasite. Still higher on Cranberry Ridge, segregations of pyrite carry high gold values (Minister of Mines Annual Report 1929, page 259). This mineralization is reported to have yielded gold, platinum and mercury from assays (Minister of Mines Annual Report 1929, page 259). The shaft intersected a 5 to 15 centimetre wide vein. No mineralization was found in the lower crosscut.

The abandoned crosscut and shaft were re-examined by Mahogany Mining Co. Ltd. in 1980 with the following results. Over 18 fault-shear zones with associated quartz veins up to 0.3 metre wide were exposed in the 150-metre long crosscut. Samples yielded low gold however (Assessment Report 20849). Several shafts in the vicinity intersected highly oxidized structures with quartz veinlets but negligible gold (Assessment Report 20849). A sample from the main shaft collar of the Laurion in 1980 yielded 153.28 grams per tonne silver, 2.48 per cent lead and 5.80 per cent zinc (Assessment Report 8504). Another grab from the shaft dump yielded 164.57 grams per tonne silver, 0.51 gram per tonne gold, 3.4 per cent lead and 0.96 per cent copper (Assessment Report 8504).

BIBLIOGRAPHY

EM GEOFILE 2000-2, 2000-5
EMPR AR *1927-234,405; 1928-251; *1929-259
EMPR ASS RPT 3006, 3110, 4384, *4385, 4851, 5441, *8504, 9557, 10979,
*12734
EMPR EXPL *1995, pp. 124-126
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW110**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHUTTLEWORTH CREEK**, PEDRO, SUNSHINE,
SHUT, BOOMERANG, IVORMACK,
WADE FR., DOG, AJAX,
500X

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06W
BC MAP:

Open Pit

MINING DIVISION: Osoyoos

LATITUDE: 49 19 06 N
LONGITUDE: 119 29 28 W
ELEVATION: 0884 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5465830
EASTING: 318966

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate centre of a dunite body (Minister of Mines Annual Report 1953, page 182). Includes former 082ESW127.

COMMODITIES: Asbestos Mica Vermiculite

MINERALS

SIGNIFICANT: Anthophyllite Biotite Vermiculite
ASSOCIATED: Olivine Amphibole Serpentine Magnetite Talc

ALTERATION: Amphibole Serpentine Talc
COMMENTS: Olivine is altered to amphibole, serpentine and magnetite.
Amphibole is altered to talc.

ALTERATION TYPE: Serpentin'zn Talc
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive Stratabound
CLASSIFICATION: Metamorphic Hydrothermal Epigenetic Industrial Min.

TYPE: M06 Ultramafic-hosted asbestos
SHAPE: Bladed
DIMENSION: 800 x 200 x 30 Metres STRIKE/DIP: 050/90W TREND/PLUNGE:

COMMENTS: Dimensions for dunite mass. Asbestos lenses are 0.3 to 3.0 metres wide and up to 3.7 metres long. Veinlets are 0.63 to 68 centimetres thick, strike 050 to 080 degrees and dip near vertical.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene			Okanagan Gneiss
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Fine Grained Dunite
Granitic Gneiss
Granodiorite Gneiss
Felsic Dike
Pegmatite

HOSTROCK COMMENTS: Dunite body intrudes Okanagan Gneiss.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Undivided Metamorphic Assembl. Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Shuttleworth Creek asbestos occurrence lies on a hillside between 790 and 980 metres elevation, 0.8 kilometre south of Shuttleworth Creek and 6.5 kilometres southeast of Okanagan Falls. This asbestos occurrence has been known for many years. It was supposed to have been discovered by G. Maynard in 1898. Claims were recorded on the ground in 1910. Platinum was reported discovered in Shuttleworth Creek in 1918, by J. Hislop and G. Maynard. No further record of work was recorded until 1920. A second hiatus of work occurred until 1947, when R.C. McKay and L.E. Iverson worked on the occurrence. In the following year exploration was overseen by W.J. Asselstine. Little else was done until 1953 when Western Asbestos and Development Ltd. acquired the property. Exploration consisted of trenching, geological mapping and diamond drilling. In 1971, the southern portion of the ground was staked as the Soo claims by Action Exploration Ltd. and an airborne magnetometer geophysical survey was conducted. The northern portion was owned by Noranda Exploration Co. Ltd. consisting of the Dog and Ajax claims. Their exploration program consisted of geological mapping, soil geochemical, and

CAPSULE GEOLOGY

magnetic, electromagnetic and induced polarization geophysical surveys. In 1988, the ground covering the Shuttleworth Creek occurrence was staked as the Shut claim, owned by G. Crooker. A ground magnetometer survey was conducted.

The deposit is hosted in a mass of fine grained, dark green to black (unweathered) dunite that intrudes light to medium grey granitic and granodioritic gneiss of the Eocene Okanagan Gneiss. The dunite body is exposed discontinuously over 800 metres length and up to 200 metres width. Drilling indicates the dunite is approximately 30 metres thick. The contact relations between the dunite and host gneiss are uncertain but one exposure in a trench indicates the dunite intrudes the gneiss along a shear.

The rock is composed mostly of olivine with up to 10 per cent altered to amphibole and minor serpentine and magnetite. The amphibole is in turn partly altered to talc. A few patches and irregular veinlets of enstatite are also present. The dunite is intruded by felsic dikes and irregular pegmatitic masses 0.13 to 2.1 metres thick.

Asbestos mineralization consists of greyish-green to white anthophyllite, occurring in irregular lenses and cross fibre veinlets scattered throughout the dunite. The lenses are 0.3 to 3 metres wide and up to 3.7 metres in length. Individual veinlets are 0.63 to 68 centimetres thick, with most varying from 5 to 15 centimetres. They strike in various directions, most commonly between 050 and 080 degrees and 135 and 150 degrees, and usually dip near vertical. Frequently, the asbestos and associated mica form zones along the walls of felsic dikes, with dike enclosed by mica which itself is enclosed by asbestos. This occurs most commonly on the hangingwall side.

The anthophyllite occurs in three forms; as hard woody chunks with fibres 20 to 25 centimetres long, as randomly orientated sheaf like clumps, 0.63 to 1.8 centimetres in length, and as powdery aggregates of tiny needle-like fibres. All fibre is easily reduced to a talc-like powder by rubbing between fingers or by pounding on a flat surface. The second and third types of anthophyllite described above are commonly intermixed with varying amounts of silvery green to black biotite and brown vermiculite. A few lenses are comprised almost completely of fine-grained biotite. The vermiculite, an alteration product of the biotite, is brittle, soft, slippery and exfoliates quite well when heated. A sample of long fibre anthophyllite analysed as follows in per cent (Minister of Mines Annual Report 1948, page 182):

SiO2 57.50
Al2O2 0.36
Cr2O3 0.03
Fe2O3 1.10
FeO 5.69
MnO 0.25
MgO 29.21
CaO 2.24
H2O+ 3.60
H2O- 0.22

One lens of fine-grained biotite was mined to produce material for use in roof manufacturing some time prior to 1948. No production figures are available.

BIBLIOGRAPHY

EMPR AR 1920-164; *1948-182; *1953-181-184; 1960-132
EMPR ASS RPT 1971, 3353, *17354
EMPR OF 1986-7
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC OF 481; 551; 637; 1505A; 1565; 1969
GSC SUM RPT 1910, pp. 117-118; 1918
GCNL #56(Mar.20), 1990
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW111**

NATIONAL MINERAL INVENTORY:

NAME(S): **PASS**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 48 N
LONGITUDE: 119 33 16 W
ELEVATION: 0920 Metres

NORTHING: 5433934
EASTING: 313282

LOCATION ACCURACY: Within 1 KM

COMMENTS: The centre of 1973 drilling (Geology, Exploration and Mining 1973, page 42 and Fig A, #31).

COMMODITIES: Copper Lead Gold Silver

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Quartz lenses and veins carry copper, lead, gold and silver values.
ASSOCIATED: Quartz Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Kobau	Undefined Formation	Kruger Syenite
Jurassic			

LITHOLOGY: Schist
Chlorite Schist
Quartzite
Amphibolite
Marble
Syenite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Pass showing is located at 920 metres elevation, 500 metres east of Kilpoola Lake and approximately 7.5 kilometres west of Osoyoos, British Columbia.

Regionally, the Pass showing is underlain by north striking and moderately west dipping Carboniferous to Permian Kobau Group metavolcanic and metasedimentary rocks. The Kobau Group consists of schist, chlorite schist, quartzite, amphibolite and minor marble. The Kobau package is bound to the east by the Middle Jurassic Nelson intrusions and to the west by the Jurassic Kruger batholith composed mainly of medium to coarse-grained nepheline syenite. The nepheline syenite is a mafic phase of the Kruger batholith with high iron content present mainly as very fine grained (-200 mesh) disseminated magnetite.

The showing consists of scattered quartz lenses and veins containing copper, lead, gold and silver mineralization.

In 1973, Cone Properties Ltd. conducted an extensive property exploration program consisting of geological mapping, a magnetometer geophysical survey, a 3100 sample geochemical soil survey and 10 percussion-drill holes totalling 821 metres. No assessment record detailing the results of this work could be found.

BIBLIOGRAPHY

EMPR GEM *1973-42
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1076
REPORT: RGEN0100

BIBLIOGRAPHY

WWW <http://www.infomine.com/index/properties/PASS.html>

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW112**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD, A.U. RAIN,
ROAD, MEADOW**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06W
BC MAP:
LATITUDE: 49 16 54 N
LONGITUDE: 119 18 46 W
ELEVATION: 1394 Metres

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5461342
EASTING: 331800

LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of the Road and Meadow zones on the Gold claim (Assessment Report 13477).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite
COMMENTS: Electrum and gold-silver amalgam with up to 30 per cent silver have been identified at the nearby Venner occurrence (082ESW127).

ASSOCIATED: Quartz Carbonate
ALTERATION: Silica Jasper Chalcedony Limonite Clay
Hematite Sericite

ALTERATION TYPE: Silicific'n Argillic Hematite Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Breccia
CLASSIFICATION: Hydrothermal Epigenetic Replacement
TYPE: I01 Au-quartz veins
DIMENSION: 8 x 1 Metres STRIKE/DIP: 023/40S

COMMENTS: Quartz-calcite veins up to 1.5 metres wide have not been traced for more than 2 or 3 metres. The volcanics have a general north-northeast strike and dip 40 degrees southeast. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Eocene Proterozoic	Penticton	Undefined Formation	Monashee Complex

LITHOLOGY: Feldspar Porphyritic Trachyte
Andesitic Flow
Andesitic Breccia
Lahar
Volcanic Sandstone
Crystal Tuff
Conglomerate
Andesite

HOSTROCK COMMENTS: Eocene Penticton Group volcanics are assigned to the Marron, White Lake and Springbrook formations.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan Monashee
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Drill Core
COMMODITY: Gold GRADE: 0.3380 Grams per tonne
COMMENTS: A resampling of drillcore from drillhole 1984-1 on the Meadow zone.
The sample interval was between 80.10 and 81.45 metres.
REFERENCE: Assessment Report 18892.

INVENTORY

ORE ZONE: MAIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Drill Core
COMMODITY: Gold 13.6200 Grams per tonne
COMMENTS: A sample from drillhole 72478 over 0.22 metres between 109.90 and 110.12 metres, on the Road zone.
REFERENCE: Assessment Report 18892.

CAPSULE GEOLOGY

The Gold occurrence is located at 1417 metres elevation, immediately east of Solco Creek at Venner Meadows. Okanagan Falls, British Columbia is located 26 kilometres to the west. The occurrence consists of two zones; the Road and Meadow.

The main (Road) showing consists of an auriferous quartz-carbonate vein, first discovered by D. Ewers, S. McLean and K.G. Thomson in 1973. A considerable amount of exploration work has since been conducted in the vicinity by Teck Corp. (1973 and 1974), Granby Mining Corp. (1975 and 1976), Lacana Mining Corp. (1981 to 1983 and 1988), Rio Algom (1984) and K.L. Daughtry and P.P. Neilsen, present owners of claims covering the occurrence. The E and D Joint Venture was formed in 1981 between the present owners and Energex Mineral Ltd. with property work in 1981 and 1982. Lacana Mining Corp. and Rio Algom have acquired and explored the Venner claim group with similar mineralization on the easterly neighbouring Venner 1 claim (082ESW127). Rio Algom also acquired an option on the Gold occurrence property in 1984. In 1988, Inco Gold Co. entered an option agreement with E and D Joint venture. Canadian Nickel Co. Ltd, a subsidiary of Inco Gold Co., conducted an exploration program on the Gold property in 1988 and 1989.

The Gold occurrence is hosted within a Eocene outlier of Pentiction Group volcanics which unconformably overlies granitic rocks of Middle Jurassic intrusions and Proterozoic Monashee granitic gneiss and amphibolite. Andesites of the Marron Formation and overlying volcanoclastics of the White Lake Formation of the Pentiction Group are underlain by the Springbrook Formation.

Eocene volcanic rocks in the vicinity of the Gold occurrence can be subdivided into a lower volcanic and upper sedimentary-volcanic sequence. Lower volcanics consist primarily of green, feldspar porphyry andesitic flows, monolithic breccias, lahars and minor volcanic sandstone. Feldspar phenocrysts are typically altered to carbonate and sericite. Phenocrysts range from 2 to 6 millimetres long. Pseudomorphs of biotite and hornblende comprise mafic minerals. A felsic crystal tuff was intersected at the bottom of drillhole 1984-3. The volcanic package is unconformably overlain by tuff, sandstone and conglomerate. Bedding attitudes indicate a general north-northeast strike with a 40 degree dip to the east.

Outcrop and drillhole information suggests these Eocene rocks are cut by a series of northwest trending, east-dipping faults which have successively down-dropped eastern strata.

Geological mapping, rock sampling, and geochemical soil, magnetic and electromagnetic geophysical surveys have outlined two structurally-controlled epithermal mineralized zones; the Road and Meadow zones. The zones are hosted in Eocene subaerial andesitic flows and breccias of the Pentiction Group.

The Meadow zone consists of a northwest trending silicified, pyritic fault structure identified by broad arsenic soil, magnetic and electromagnetic anomalies. Where intersected by drilling, the zone averages 8 metres true width. Mineralization consists of pyrite comprising 1 to 5 per cent of the silicified hostrock. Electrum has been reported in drill core at the neighbouring Venner occurrence (082ESW127).

Gold values range up to 0.135 gram per tonne with 0.03 per cent arsenic (Assessment Report 13477). Up to 0.295 gram per tonne gold is associated with narrow quartz veins and silicified breccia zones in volcanic rocks (Assessment Report 13477). Three drillholes were drilled on the Meadow zone in 1984. The best intersections are as follows. Drillhole 1984-1 yielded 1.0 to 2.9 grams per tonne silver which was confined to narrow areas of brecciated and siliceous andesite hostrocks. The highest gold value was 0.225 gram per tonne gold from siliceous breccia over the interval from 80.1 to 80.8 metres (Assessment Report 13477). Drillholes 1984-2 and 3 yielded lower silver and gold values. Drill core from these holes was re-assayed in 1989 with the following results. The interval between 80.10 and 81.45 centimetres, in breccia, yielded 0.338 gram per tonne gold (Assessment Report 18892). The results from other drillholes were lower gold values.

CAPSULE GEOLOGY

The Road zone is an east trending, pyritic, silicified zone containing breccias and veins up to 1.5 metres wide. The veins form a composite sheeted vein structure with several quartz, quartz-calcite and calcite veins cutting feldspar porphyritic trachyte. Locally, calcite veins crosscut quartz veins. Some calcite veins are massive while others are composed of numerous 1 millimetre bands. Veins strike about 100 degrees and dip moderately to steeply to the southwest. Gold and silver mineralization are also associated with limonitic fractures and propylitic altered trachyte. The trachyte is locally pervasively replaced by chalcedony and cut by steep dipping quart-carbonate veins. Finely disseminated pyrite comprises up to 1 per cent of the hostrock. Veins have not been traced for more than 2 or 3 metres on surface or in drillholes, which may be partially due to intense faulting. Breccia is commonly associated with faults and mineralization. They commonly contain disseminated pyrite and are variably silicified. Jasper, hematite, and clay characterized surface oxidation.

The best gold and silver values from surface sampling to date, occur in the northernmost roadcut of the Road zone. Gold values increase from 0.40 gram per tonne at the south end to 3.60 grams per tonne at the north end (Assessment Report 13477). Resampling in 1989 yielded 1.5 grams per tonne gold and 11.9 grams per tonne silver over 6.5 metres (Assessment Report 18892). The zone is coincident with a broad magnetic low.

Drillhole 1984-1 on this zone yielded a high value of 0.225 gram per tonne (Assessment Report 13477). Silver values are highest at the south end, ranging from 11.0 to 14.5 grams per tonne (Assessment Report 13477). The veins appear to carry most of the gold, although wallrocks are also slightly anomalous. The 1989 drill program yielded several significant gold intersections. Drillhole 72474 yielded 15.5 grams per tonne gold over 0.54 metres between 42.78 and 43.32 metres. Similarly, drillhole 72478 yielded 13.62 grams per tonne gold over the 0.22 metre interval between 109.90 and 110.12 metres elevation (Assessment Report 18892).

BIBLIOGRAPHY

EMPR ASS RPT 4763, 5009, 5702, 5886, 8961, 9413, 10410, 10624, 10735, 11276, 11745, 11798, 12156, 12750, 13113, *13477, 17327, *18892
EMPR GEM 1973-47; 1974-56; 1975-E21; 1976-E26
EMPR OF 1898-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW113**

NATIONAL MINERAL INVENTORY: 082E5 Au6,Mn2

NAME(S): **OROFINO MOUNTAIN, MO, KING SHOWING, HILL**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E05E 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 15 46 N
LONGITUDE: 119 41 35 W
ELEVATION: 1370 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5460158
EASTING: 304072

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the Lower and Upper King adits (Assessment Report 9933). See also Grandoro (082ESW010) and Twin Lakes (082ESW011). Includes Mo (formerly 082ESW137).

COMMODITIES: Gold Rhodonite Silver Gemstones Lead Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena Gold Rhodonite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au
F01 Sedimentary Mn Q02 Rhodonite
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 400 x 1 Metres STRIKE/DIP: 042/90 TREND/PLUNGE:
COMMENTS: The vein exposed in the Lower King adit is 0.6 to 1.2 metres wide and has been traced 400 metres along strike by trenching. The vein strikes 042 degrees and dips near vertical.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Nelson Intrusions
Jurassic			Oliver Plutonic Complex

ISOTOPIC AGE: 152+/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Hornblende Gabbro
Biotite Diorite
Biotite Schist
Quartzite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age and the Shoemaker, Carboniferous to Triassic age. Age data; Fieldwork 1988, pp. 19-25.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist
COMMENTS: Metamorphism is pre-quartz vein mineralization.

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Drill Core
COMMODITY: Gold GRADE: 22.2800 Grams per tonne
COMMENTS: The one-metre interval between 23 and 24 metres from drillhole 78-5.
REFERENCE: Assessment Report 16648.

CAPSULE GEOLOGY

The Orofino Mountain occurrence is located 1.5 kilometres north of the peak of Orofino Mountain, 12 kilometres northeast of Keremeos, British Columbia. It is one of three main occurrences forming the historic Orofino Mountain gold camp.

CAPSULE GEOLOGY

Orofino Mountain gold camp activity began shortly after the Fairview camp was discovered in the 1880s. Considerable development work was carried out between 1930 and 1941. The occurrence was part of the King claim group, which in its early days was known as the King showing. The first reported activity on the King showing occurred in 1938 under lease to J. Wukelick from Gold Standard Fairview Mining Co. Ltd. Two 9.1-metre shafts and an adit were developed and sorted ore was shipped. The Lower King adit is about 50 metres length and the Upper King adit is 25 metres long. Another shipment of sorted ore is reported made in 1940. Interest in the property was revived in 1973 when the King showing was restaked as the Hill 2-5 claims by D.W. Wieweger. A geochemical soil sampling program was carried out by Cripple Creek Resources Ltd. on the Hill 3 and 5 claims. The property was restaked as the Mo claim in 1976 by G. Crooker. Trenching revealed rhodonite mineralization. The King claim group was subsequently staked around the Mo claim. DRC Resources Corp. carried out an extensive exploration program between 1981 and 1984. In 1986, Grandex resources Ltd. optioned the property and conducted extensive property exploration in 1986 and 1987.

The Orofino Mountain property is located within the Intermontane tectonic belt near its eastern boundary with the Omineca crystalline belt. The property is underlain by complexly deformed metamorphic rocks of the Carboniferous to Permian Kobau Group, and west and northwest trending sequences of quartzite, chert and greenstone belonging to the Carboniferous to Triassic Shoemaker and Old Tom formations. These are intruded by gabbroic to granitic rocks of the Middle Jurassic Nelson plutonic complex and Similkameen batholith, Jurassic Oliver plutonic complex and Jurassic to Cretaceous Fairview intrusion. Eocene vesicular basalts of the Marron Formation, Penticton Group are block faulted against older rocks on the north and west sides of the property.

On the northwestern slopes of Orofino Mountain, the oldest rocks are quartzite of the Kobau Group. Light grey, massive to thinly bedded quartzites of the Shoemaker Formation form two relatively narrow bands which strike west and northwest, and dip mainly to the southwest at 70 to 80 degrees. These rocks are adjacent to altered dioritic rocks, varying from massive coarse-grained hornblende gabbros and biotite diorite, to fine-grained biotite schist. Near the quartzite-diorite contact, mineralized quartz veins strike north to northeast and dip moderately to steeply to the southeast or steeply to the west.

The best mineralized veins in the Orofino Mountain gold camp appear to strike north to northeast and dip 45 degrees southeast to near vertical. Trenching and drilling in 1987 have revealed a complex fault pattern which displaces veins left-laterally by steep northeast faults or shallow faults. The intersection of these faults with veins appears to structurally control gold values.

The Lower King adit was driven 50 metres in a southerly direction. The vein strikes 042 degrees, dips nearly vertical and varies from 0.6 to 1.5 metres width. Approximately 30 metres inside the adit a 2-metre wide fault, west striking and dipping 57 degrees to the north, offsets the vein 5 metres. Quartz veins host pyrite, chalcopyrite, galena and native gold. In 1987, trenching has established a strike length of 400 metres.

The Upper King adit is 27 metres long and follows a vertical, 0.1 to 1.4 metre wide quartz vein striking 015 degrees along a shear zone. On the surface the vein is up to 2.7 metres wide and can be traced for 95 metres. The vein is mainly white quartz with pyrite. Chalcopyrite, galena and native gold are also present. The vein has been traced over a strike length of 100 metres by trenching in 1987.

A 0.9-metre chip sample from the Lower King adit assayed 370 grams per tonne gold and 48 grams per tonne silver (Assessment Report 9933). A similar sample from the Upper King adit, S2, assayed 8.4 grams per tonne gold (Assessment Report 11480). The sample was taken 20 metres from the upper adit portal. Several significant intersections were encountered in seven drillholes during 1987 diamond drilling. Drillhole 87-1 intersected 0.23 metre of 9.22 grams per tonne gold over the interval 50.65 to 50.88 metres (Assessment Report 16648). Drillhole 87-2 intersected 3.46 grams per tonne gold over the 1.53 metre interval between 63.26 and 64.79 metres (Assessment Report 16648). The best intersection was from drillhole 89-5, which yielded 22.28 grams per tonne gold over the 1.00 metre interval between 23.00 and 24.00 metres (Assessment Report 16648). Values of up to 38.0 grams per tonne gold (30-003) were obtained in surface trenches (Assessment Report 16648). Geophysical and geochemical surveys indicated the extension of the structure.

In 1976, rhodonite was discovered on the Mo claim. The rhodonite occurs with quartz as irregular replacement zones in the Shoemaker Formation. The largest lens is 75 metres long by up to

CAPSULE GEOLOGY

1 metre wide.

The total production from the Orofino Mountain occurrence is unknown. An estimated 1000 to 2000 tonnes ore was mined from the Lower King adit in 1933 and/or 1934 but not recorded. Production in 1938 and 1940 is included with Grandoro (082ESW010). Production records indicate a 3-tonne ore shipment to the Trail smelter in 1976. Recovery included 31 grams of gold, 69 grams of silver, 3 kilograms of lead and 3 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR 1938-D35; 1940-A24; 1976-103
EMPR ASS RPT 4604, *9933, *11480, 12705, 13576, 15078, *16159, *16648
EMPR BC METAL MM0378
EMPR BULL 20, Part III, p. 19
EMPR EXPL 1981-159; 1983-33; 1984-15; 1985-C15; 1986-C24
EMPR GEM 1973-46
EMPR PF (Grandex Resources Ltd. (1987): Prospectus; Brightwork Resources Inc. (1989): Prospectus)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
GCNL #44(Mar.2),#134(July 12), 1990
V STOCKWATCH May 22,1987

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW114**

NATIONAL MINERAL INVENTORY:

NAME(S): **JJ, KOZIUSCO, MCKINLEY,
APEX, EVEREST, KILIMANJARO,
MONT BLANC**

STATUS: Prospect
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:
LATITUDE: 49 23 54 N
LONGITUDE: 119 53 47 W
ELEVATION: 1840 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location of pits 1E and 2E (Assessment Report 14743).

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

NORTHING: 5475772
EASTING: 289859

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Pyrite Bornite
ASSOCIATED: Quartz
ALTERATION: Silica Limonite
COMMENTS: Iron-manganese oxides are also present.
ALTERATION TYPE: Silicific'n Oxidation Leaching
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Massive Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: 106 Cu±Ag quartz veins
DIMENSION: 75 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: A fault and fracture zone is 75 metres wide and contains 5 to 10 millimetre quartz veinlets and chalcopyrite, pyrrhotite and pyrite.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Nicola	Undefined Formation	Okanagan Intrusions
Jurassic			

LITHOLOGY: Quartz Biotite Mica Schist
Limestone
Quartzite
Andesite Tuff
Biotite Hornblende Granodiorite
Granite
Mafic Dike
Granite Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: PIT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1985
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 2.0000 Grams per tonne
Gold 0.9800 Grams per tonne
Copper 0.1800 Per cent
COMMENTS: Chip sample P47 over 20 centimetres from Pit 1E.
REFERENCE: Assessment Report 14743.

CAPSULE GEOLOGY

The JJ showing is located east of the Apex Mountain Provincial Recreation Area and 2.25 kilometres west of Green Mountain. The property was explored in the early 1970s by New Northcal Mines Ltd. In the mid-1980s, Siemont Resources Ltd. and Brohm Resources Ltd. conducted further property exploration.

The JJ showing is located on the eastern edge of the Hedley Mascot and Nickel Plate mining camp. The general area has been extensively prospected. There is evidence of old hand trenching and bulldozer trenching along a intensely fractured and pyritized zone,

CAPSULE GEOLOGY

exposed along the Apex Mountain Provincial Recreation Area and ski resort access road. A small shaft and a 7-metre adit were discovered in 1985.

Hostrocks of the JJ occurrence are limestone, quartzite and minor altered andesite tuff of the Triassic Nicola Group. These are intruded by fine grained, biotite hornblende granite and granodiorite of the Jurassic Okanagan intrusions and coarse grained, pink granite of the Middle Jurassic Nelson Plutonic Suite. The pink granite appears to be older than the fine-grained granite. These are cut by late granite porphyry and mafic dikes.

At the JJ showing, metasediment rocks of the Nicola Group have been intensely sheared and highly altered to a quartz-biotite-mica schist, with local gneissic phases that form a small roof pendant. The predominant foliation is northeast with a variable steep dip. There are numerous small drag folds. The schists have been cut along the southeast contact by a northeast trending fault zone. The schist is weakly silicified near its faulted contact with granodiorite. At surface, strong oxidation and leaching have occurred. Pyrite with lesser pyrrhotite and chalcopyrite are associated with areas of silicification.

In 1985, a large zone of massive sulphides was located in the vicinity of an abandoned 7-metre adit, south of the Apex Mountain Ski Resort access road. The zone was trenched and sampled over 75 metres width across the structure. Pyrrhotite, pyrite, chalcopyrite and minor bornite were exposed by trenching. Many small fractures and faults contain 5 to 10 millimetre wide quartz veins. Iron-manganese oxide and limonite frequently occur on weathered surfaces and fractures.

The analytical results of samples from pits are as follows: Sample P58 from Pit 2E yielded 4.1 grams per tonne gold and 6.1 grams per tonne silver from fracture containing fault gouge and up to 5 millimetre wide quartz veinlets (Assessment Report 14743). From the same pit, Sample P59 yielded 0.25 per cent copper and 2.4 grams per tonne silver over 30 centimetres (Assessment Report 14743). The sample consisted of siliceous greenstone with up to 40 per cent pyrrhotite, pyrite and chalcopyrite. Three samples from Pit 1E also yielded significant values. Sample P47 yielded 0.18 per cent copper, 0.98 gram per tonne gold and 2.0 grams per tonne silver from 20 centimetres of fault gouge (Assessment Report 14743). Sample P46 was taken over 1-metre of wallrock on the north side of the fault and consisted of siliceous greenstone with 5 per cent disseminated pyrrhotite, pyrite and chalcopyrite. It yielded 0.13 per cent copper, 1.1 grams per tonne silver and 0.29 gram per tonne gold (Assessment Report 14743). From the south side wallrocks, Sample P48 yielded 0.50 gram per tonne gold and 0.03 per cent copper over 80 centimetres (Assessment Report 14743).

BIBLIOGRAPHY

EMPR ASS RPT 3916, 4794, *14743, *15179
EMPR GEM 1972-41; 1973-46
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 72-53

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

lead and 65 kilograms of zinc. In 1987, Highland Valley Resources Ltd. conducted an extensive exploration program on the Susie and Stemwinder (082ESW007) properties. Work on the Susie property was limited to detailed rock sampling of favourable quartz vein sections on all three underground levels and quartz vein outcrops near the decline portal.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of Penticton Group.

In the Federal (Lot 2030s) claim area the Oliver plutonic complex is composed almost entirely of quartz monzonite. Three distinct phases are evident. A central core of massive, medium-grained garnet- muscovite quartz monzonite is surrounded by hornblende- bearing porphyritic quartz monzonite north of the core and biotite- bearing to the south. The third phase is a hornblende-biotite quartz monzonite located to the south of the other two units. Minor hornblende diorite also occurs in the area.

The Federal prospect is hosted by the hornblende-bearing porphyritic quartz monzonite northern phase of the Oliver plutonic complex. Nearby, a swarm of fine to medium grained quartz monzonite dikes cut this unit. The area has been extensively faulted and fractured. Regional hydrothermal alteration has resulted in epidote which occurs in seams up to 2.5 centimetres in width.

A north-striking vein, up to 4.5 metres wide, is characterized by an abundance of quartz almost to the exclusion of other minerals. The quartz has been subjected to varying amounts of post-mineralization fracturing, commonly to the extent that original textures are in large part destroyed. Where relatively undeformed the quartz occurs as large crystals generally 2.5 centimetres or more in cross-section and several centimetres in length. In places the crystals show a rough cockscomb texture. Some early grey quartz is evident although the bulk of the quartz is generally white. Wallrock alteration is not pronounced but a thin zone of sericitization occurs along vein margins. Pyrite mineralization is common along with varying amounts of galena, sphalerite and chalcopyrite which carry gold and silver values.

BIBLIOGRAPHY

EMPR AR 1916-K524; *1922-N165; *1923-A185; 1932-A136; 1934-D14; 1963-A48,65
EMPR ASS RPT 16779
EMPR ENG INSP (Mine plans, Susie)
EMPR FIELDWORK *1983, pp. 247,251
EMPR GEM 1973-43,44; 1974-24,53,54
EMPR MINING 1975, Volume I, pp. 28,55,59
EMPR MR MAP 7 (1934)
EMPR OF 1987-15; 1989-2; 1989-5
EMPR BC METAL MM00337
EMPR INDEX 4-120
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179, pp. 1-9
GSC OF 481; 637; 1505A; 1565; 1969; 2167, pp. 49-50
GSC P 37-21; 72-53

DATE CODED: 1989/04/18
DATE REVISED: 1996/11/30

CODED BY: GO
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW116**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROCK CREEK ASBESTOS**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 18 N
LONGITUDE: 119 04 04 W
ELEVATION: 1566 Metres

NORTHING: 5437482
EASTING: 348979

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Asbestos

MINERALS

SIGNIFICANT: Chrysotile
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: M06 Ultramafic-hosted asbestos

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE

Eocene
Unknown

GROUP

Penticton

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Serpentinite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: Post-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Rock Creek Asbestos occurrence is located between Johnstone and Nathan creeks, 2.5 kilometres north of Highway 3. Bridesville, British Columbia lies 8 kilometres to the southwest.

The oldest rocks in the vicinity of the Rock Creek Asbestos occurrence belong to the Permian to Carboniferous Kobau and Anarchist groups. Amphibolite, greenstone, quartzite, chert, chlorite schist and minor marble comprise the Kobau Group and amphibolite, greenstone, quartz chlorite schist, quartz biotite schist and minor serpentinitized peridotite comprise lithologies of the Anarchist Group. Penticton Group lithologies outcrop around the occurrence while Middle Jurassic porphyritic granite, granodiorite and monzonite intrusions are found to the immediate west. Smaller plugs, dikes and sills of biotite granodiorite, quartz diorite and granite of Middle Jurassic to Cretaceous age intrude the Anarchist Group rocks.

Small dikes and sills of serpentinite are assigned to the Anarchist Group while larger bodies are of uncertain age. The Rock Creek Asbestos occurrence is hosted in one of these serpentinite bodies. No economic occurrences of asbestos have been found in the area to date but the existence of serpentinite with chrysotile indicate that the correct conditions for formation did prevail. At the occurrence, scattered narrow veinlets of chrysotile fibre occur in serpentinite. No further geological details could be found.

BIBLIOGRAPHY

EMPR IND MIN FILE (Asbestos #1)
GSC MAP 538A; 539A; 15-1961; 1505A; 1736A
GSC OF 1969
GSC P *7-21, p. 46

DATE CODED: 1985/07/24
DATE REVISED: 1997/10/08

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW117**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOLKA (L.2675)**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03W
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 24 N
LONGITUDE: 119 29 03 W
ELEVATION: 0457 Metres

NORTHING: 5431170
EASTING: 318334

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of an abandoned adit in the southwest corner of the Molka Reverted Crown grant (Lot 2675) (Assessment Report 658).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Chlorite Epidote
ALTERATION: Malachite
ALTERATION TYPE: Oxidation Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Stratabound
CLASSIFICATION: Hydrothermal Epithermal Skarn
TYPE: I06 Cu±Ag quartz veins K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	

LITHOLOGY: Skarn
Greenstone

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Molka prospect is located at 457 metres elevation on the eastern slopes of Mount Kruger, 3 kilometres southeast of Osoyoos, British Columbia. The Dividend-Lakeview past producer (082ESW001) lies 1.75 kilometres to the northwest.

Little information is available on the early history of the Molka (Lot 2675) Reverted Crown grant. Work presumably began before 1903 when the claim was first Crown granted to J. Rink and associates. Little else was done on the property until 1964 by Noranda Exploration Co. Ltd. In 1968, Granby Mining Co. Ltd. conducted further exploration in the vicinity. In 1986 and 1987, Markus Resources Inc. conducted extensive exploration in the Dividend-Lakeview area, including on the Molka property.

The regional geology of the Dividend-Lakeview area consists of medium to coarse-grained granodiorite of the composite Middle Jurassic Similkameen batholith. To the west this includes alkali syenite and nepheline syenite of the Kruger intrusion. The Fairview intrusion outcrops to the north. The Similkameen intrusion extends from 10 kilometres north of the Canada-United States border, south into Washington state. The granodiorite is grey-green, medium to coarse grained and dominantly composed of quartz, plagioclase and hornblende. The Similkameen batholith has intruded metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. Intensely folded and metamorphosed quartzite, greenstone, phyllite, chlorite or mica schist with intercalations of dioritic rocks and sparse limestone lenses comprise lithologies. To the west lie a series of highly sheared schists, greenstones and quartzites known informally as the Kruger Schists. The greenstone has been highly sheared in many areas associated with emplacement of the Similkameen intrusion and other intrusions. Shear zones strike southeast and dip moderately to steeply northeast and southwest. Local variations occur however.

Silicification composed of quartz pods, stringers and veins is common throughout the greenstone and in quartzite near the southwest

CAPSULE GEOLOGY

corner of the Gold Hill claim. Minor carbonate is also present.

The Molka claim is underlain by intensely sheared and fractured greenstone. The most prominent shears and fractures strike to the north or east with steep dips to the northwest. Crossfractures with chlorite and epidote occur adjacent to major shears.

The Molka showing consists of numerous chalcopyrite mineralized quartz veins with malachite staining and epidote-rich skarn hosted in chloritized greenstone.

In the southwest corner of the Molka claim, a short adit (less than 6 metres) was driven on a 30-centimetre wide quartz vein containing disseminated chalcopyrite and malachite staining. The hostrock is greenstone.

In the northeast corner of the Molka claim, lies a small skarn zone. The zone was weakly responsive to magnetic and electromagnetic surveys. Thirty metres to the northwest, a 7.6-metre drillhole was previously drilled on another skarn zone.

BIBLIOGRAPHY

EMPR AR 1903-248; 1966-244; 1968-221
EMPR ASS RPT *658, 808, 1182, 2922, 8188, 9180, 14877, 16074, 21634,
22987, 23381
EMPR BULL 1 (1932), p. 88; 20 (1945, Part III), p. 18
EMPR GEM 1971-383
EMPR OF 1989-5
GSC MAP 84A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 389-423; 179, p. 20
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40
GSC SUM RPT 1912, p. 211

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW118**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAYBE**, CROWN POINT GROUP, CROWN POINT FRACTION (L2449),
 ZAMORA, LEONA GROUP

STATUS: Past Producer
 REGIONS: British Columbia
 NTS MAP: 082E03E
 BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 08 11 N
 LONGITUDE: 119 00 55 W
 ELEVATION: 0853 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5444573
 EASTING: 353005

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the Maybe adit (Assessment Report 9909).
 See also Crown Point (082ESW064). Former 082ESW118 (Baldy) is
 included with Rice (082ESW171).

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite Bornite
 ASSOCIATED: Quartz
 ALTERATION: Chlorite Calcite Silica Malachite
 ALTERATION TYPE: Propylitic Silicific'n Oxidation
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au
 DIMENSION: 5 Metres STRIKE/DIP: 022/35W TREND/PLUNGE: /
 COMMENTS: The Maybe occurrence consists of quartz veins of variable width hosted
 in a 5-metre wide shear zone. The zone strikes 022 degrees and dips
 35 to 55 degrees southeast.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Upper Paleozoic
 GROUP: Anarchist
 FORMATION: Undefined Formation
 IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Greenstone
 Argillite
 Quartzite
 Limestone
 Magnesite
 Gneiss

HOSTROCK COMMENTS: The Anarchist Group is of Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
 TERRANE: Okanagan
 METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1981
 SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	6.2000	Grams per tonne
Gold	0.0600	Grams per tonne
Copper	0.1700	Per cent
Lead	0.0400	Per cent
Zinc	1.2000	Per cent

COMMENTS: Sample 017412, taken from Trench 1 at the Maybe occurrence.
 REFERENCE: Assessment Report 9909.

CAPSULE GEOLOGY

The Maybe occurrence is located at 853 metres elevation, 250 metres northeast of the Crown Point occurrence (082ESW064). Since 1938 the ground hosting the Maybe occurrence has been owned by owners of the Crown Point (Lot 2448) Crown grant and other claims. The Crown grant was part of the Crown Point group which consisted of the Crown Point (Lot 2448), Crown Point Fraction (Lot 2449), Triangle Fraction (Lot 1448), Sunnyside (Lot 1440), No. 2 (Lot 2447), No. 3 (Lot 2445) and Enio (Lot 2852). The Maybe occurrence lies on the

CAPSULE GEOLOGY

northeast side of the Crown Point Fraction (Lot 2449) claim (Minister of Mines Annual Report 1949, pages 148-149). The Crown Point, Triangle Fraction and Sunnyside are presently Reverted Crown grants; the remaining are of unknown status.

In 1938, the property was owned by G.E. White. In 1948, Wanke and Johnson leased the Maybe property and mined 110 tonnes of ore. The lease lapsed and White continued mining in the following year. The Maybe adit has been flooded since this time. Since the 1980s, J. Kucheron has owned the claims covering the Maybe occurrence. Various companies have optioned the claims. Exploration programs have consisted primarily of soil geochemistry and magnetic and electromagnetic geophysical surveys.

The Maybe occurrence lies within an inlier of metavolcanic and metasedimentary rocks of the Carboniferous to Permian Anarchist Group. Greenstone, locally tuffaceous and serpentized, and quartzite are the predominant host lithology. Argillite and quartzite, locally cherty, minor limestone and magnesite with mariposite, and gneiss comprise the remaining hostrocks of the Anarchist Group. Greenstones are propylitic altered, consisting primarily of chlorite and calcite. Minor silicification is also present. At the main Maybe shaft, the quartzite wallrock is strongly sheared. To the east is a small stock of granodiorite and microdiorite of the Cretaceous Okanagan batholith. Eocene volcanic rocks of the Pentiction Group occur to the north and west. These include feldspar porphyries and aplite dikes. The contact between these units is faulted. The greenstone is folded, faulted and has a variable northwest to north foliation.

Mineralization on the Maybe claim consists of quartz veins and veinlets with stringers of galena and sphalerite with disseminated pyrite and minor chalcopyrite. The veins are hosted in a 5-metre wide shear zone that strikes 022 degrees and dips 35 to 55 degrees southeast. Veins have been exposed by trenching. In trench 1, a 10-centimetre wide quartz vein was exposed. In trench 2, a 20-centimetre wide quartz vein contains galena, sphalerite, pyrite, chalcopyrite with malachite staining and bornite. The vein strikes approximately 015 degrees and dips 32 degrees to the southeast. At the mouth of the main Maybe adit a 5-centimetre wide vuggy quartz vein with disseminated pyrite was observed. Strong shearing was apparent.

The results of rock geochemistry, in 1981, were as follows: sample 017412 yielded 0.06 gram per tonne gold, 6.2 grams per tonne silver, 0.17 per cent copper, 0.04 per cent lead and 1.20 per cent zinc (Assessment Report 9909); sample 017413 yielded 0.06 gram per tonne gold and 0.34 gram per tonne silver (Assessment Report 9909). The samples were from Trenches 1 and 2, respectively.

The Maybe occurrence has a recorded production of 160 tonnes from which 35,084 grams of silver, 155 grams of gold, 11,488 kilograms of lead and 9609 kilograms of zinc were recovered. Mining occurred in 1949 and 1950.

BIBLIOGRAPHY

EMPR AR *1949-148-129; *1950-116; *1951-139; 1968-227
EMPR INDEX 3-205
EMRP ASS RPT *9909, 10765, 12746, *12759, 13020, 13801, 13839,
*15918, 16290
EMPR BC METAL *MM00947
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1996/09/08
DATE REVISED: 1996/09/08

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW119**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOMESTAKE (L.1892)**, HB GROUP, HB,
RICE, MYRTLE (L.1654), DAISY FR. (L.1881),
ADMIRAL DEWEY (L.1952), GEM, PORTO RECO

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:
LATITUDE: 49 04 46 N
LONGITUDE: 119 07 52 W
ELEVATION: 1128 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location of rotary-drill hole 93DC2 #8 on the Homestake claim.

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5438475
EASTING: 344378

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Arsenopyrite Chalcopyrite
COMMENTS: Arsenopyrite reported in skarn only.
ASSOCIATED: Garnet Epidote Quartz Calcite
COMMENTS: Garnet and epidote reported in skarn only.
ALTERATION: Garnet Epidote Pyrite Malachite
ALTERATION TYPE: Skarn Propylitic Pyrite Leaching
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Vein Shear Disseminated
CLASSIFICATION: Skarn Hydrothermal Epigenetic
TYPE: K04 Au skarn K01 Cu skarn
I01 Au-quartz veins
DIMENSION: 18 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Disseminated chalcopyrite, pyrite and pyrrhotite occur in a 18 metre wide shear zone. Gold skarn mineralization has been intersected over 91 metres depth in drillhole 96-1.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Eocene	Penticton	Undefined Formation	
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Skarn
Hornfels
Greenstone
Greywacke
Andesite
Diorite
Dacite
Pyroclastic Flow

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional Contact RELATIONSHIP: Pre-mineralization Syn-mineralization GRADE: Greenschist Hornfels

INVENTORY

ORE ZONE: SHEAR REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1993
SAMPLE TYPE: Drill Core
COMMODITY: Gold GRADE: 3.0500 Grams per tonne
COMMENTS: The 7.5 metre interval from 30 to 37.6 metres in rotary-drill hole 93DC2 #8.
REFERENCE: Assessment Report 23355.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1094
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 2359, 2748, 5249, 6074, 7538, 11467, 12368, 12359,
13563, 14514, 20650, 23326, *23355
EMPR EXPL 1976-E23; 1979-18
EMPR GEM 1970-410; 1974-51
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 1505A
GSC OF 637; 1565; 1969
GCNL #154(Aug.12), 1994; #226(Nov.24), 1995; #34(Feb.16),
#59(Mar.22), 1996

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/22

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW120**

NATIONAL MINERAL INVENTORY:

NAME(S): **COBO**, COBO 1-18

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 36 N
LONGITUDE: 119 12 04 W

NORTHING: 5434607
EASTING: 339150

ELEVATION: 1387 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate centre of the Cobo 1-18 claims (Assessment Report 2491).

COMMODITIES: Copper Nickel

MINERALS

SIGNIFICANT: Unknown

COMMENTS: No nickel or copper-bearing minerals are reported.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound

CLASSIFICATION: Magmatic

TYPE: M02 Tholeiitic intrusion-hosted Ni-Cu

DIMENSION: Metres

STRIKE/DIP: 315/40N

TREND/PLUNGE:

COMMENTS: The general strike of Anarchist hostrocks is 315 degrees, dipping 40 to 70 degrees northeast.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	

LITHOLOGY: Gabbro
Greenstone
Para Gneiss

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Post-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Cobo showing is located 3 kilometres northwest of Bridesville, British Columbia, at about 1387 metres elevation. The Anarchist Chrome occurrence (082ESW024) is located 2.25 kilometres to the south.

The Cobo occurrence was staked and owned by E. Mueller in 1970 and 1971. During this period, geochemical soil sampling and a self potential survey were conducted on the property.

Because of its proximity to the Anarchist Chrome occurrence, the early development and exploration history is given here. In the early 1950s, two chromium occurrences were located and explored in the Bridesville area; the Anarchist Chrome and the Chrome Bell properties. The chromite showings were originally staked in 1956 by the Anarchist Chrome Company Ltd. A total of 74 claims were staked on the south side of a 1518 metre peak, 2.5 kilometres west-southwest of Bridesville. Initial work, between 1956 and 1958, consisted of some stripping, ground magnetometer surveying and diamond drilling but the results were not published. A few hundred tonnes of ore were sorted for shipment. The AA anomaly was estimated to contain reserves of 99,790 tonnes (Western Canada Mining News, September 1957). The claims were allowed to lapse and the ground was restaked by Pacific Chrome Alloys Ltd. in 1961, at which time more magnetometer surveys and diamond drilling were done. Again the claims were allowed to lapse. Later the area was covered by claims staked in association with exploration of the Old Nick (082ESW055) nickel prospect, but no work was done on the chromite showings.

The showing is hosted by a sequence of metasediments and metavolcanics of the Permian to Carboniferous Anarchist Group. Greenstone, quartzite, greywacke, limestone, serpentinite and locally paragneiss comprise the Anarchist Group. These have been intruded by granodiorite, quartz diorite, granite, quartz monzonite, monzonite and syenite of the Middle Jurassic Nelson intrusions.

CAPSULE GEOLOGY

The occurrence is reported to be underlain by paragneiss, greenstone and gabbro of the Anarchist Group. These lithologies have a general northwest strike with a dip of 40 to 70 degrees to the northeast. Copper and nickel were explored for in these metaplutonic and metavolcanic rocks. Details of the mineralogy were not reported.

BIBLIOGRAPHY

EMPR AR *1957-35; *1961-62
EMPR ASS RPT *2491, *3079
EMPR GEM 1970-411; 1971-383
EMPR OF 1989-5; 1990-27
GSC MAP 84A; 538A; 539A; 37-21; 15-1961; 1738A
GSC MEM 38, pp. 389-423
GSC OF 481; 637; 1505A; 1565; 1969
Canadian Mineralogist (1964): Vol. 8, Part 1, p. 116
Whittaker, P.J. (1983): Chromite in Cache Creek, unpublished Ph.D.
Thesis, Carleton University

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW121**

NATIONAL MINERAL INVENTORY:

NAME(S): **RAY**, MARIE, RITA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 13 N
LONGITUDE: 119 11 20 W
ELEVATION: 1233 Metres

NORTHING: 5432018
EASTING: 339970

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of anomaly No. 1 in Area 2 (Assessment Report 1905).

COMMODITIES: Copper Nickel

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Pyrite
COMMENTS: Nickel-bearing minerals have not been identified.

ALTERATION: Serpentinite

ALTERATION TYPE: Serpentin'zn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Magmatic
TYPE: M02 Tholeiitic intrusion-hosted Ni-Cu

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Anarchist	Undefined Formation	

LITHOLOGY: Serpentinite
Gabbro

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: Post-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Ray showing is located on the north side of Highway 3, 1.25 kilometres southeast of the Anarchist Chrome prospect (082ESW024) and 3.6 kilometres southwest of Bridesville.

Because of its proximity to the Anarchist Chrome occurrence, the early development and exploration history is given here. In the early 1950s, two chromium occurrences were located and explored in the Bridesville area; the Anarchist Chrome and the Chrome Bell properties. The chromite showings were originally staked in 1956 by the Anarchist Chrome Company Ltd. A total of 74 claims were staked on the south side of a 1518 metre peak, 2.5 kilometres west-southwest of Bridesville. Initial work, between 1956 and 1958, consisted of some stripping, ground magnetometer surveying and diamond drilling but the results were not published. A few hundred tonnes of ore were sorted for shipment. The AA anomaly was estimated to contain reserves of 99,790 tonnes (Western Canada Mining News, Sept. 1957). The claims were allowed to lapse and the ground was restaked by Pacific Chrome Alloys Ltd. in 1961, at which time more magnetometer surveys and diamond drilling were done. Again the claims were allowed to lapse. Later the area was covered by claims staked in association with exploration of the Old Nick (082ESW055) nickel prospect, but no work was done on the chromite showings.

In 1968, exploration at the Ray occurrence consisted of a geochemical soil survey for copper and nickel and an electromagnetic and magnetometer geophysical survey.

Hostrocks underlying the deposit are amphibolites, schists, cherts and metavolcanic rocks of the Carboniferous to Permian Anarchist Group. They have a general strike of 290 to 310 degrees and dip steeply, but many local variations are present. These rocks are intensely folded with vertical to west verging axial planes. The general trend of the fold axes and layering is 350 degrees. Chevron folding has been identified in greenstones north of the chromitite showings (Sutherland-Brown, A., 1957; Whittaker, P., 1983).

Anomalous copper and nickel values were reported from

CAPSULE GEOLOGY

serpentinized gabbro. The only known mineralization was pyrite, pyrrhotite and chalcopyrite.

BIBLIOGRAPHY

EMPR AR 1957-35; 1961-62
EMPR ASS RPT 252, 1243, *1905, 17924, 19737
EMPR GEM *1969-303
EMPR OF 1989-5; 1990-27
GSC MAP 85A; 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
GSC MEM 38, pp. 389-423
Canadian Mineralogist (1964): Vol. 8, Part 1, p. 116
Whittaker, P.J. (1983): Chromite in Cache Creek, unpublished Ph.D.
Thesis, Carleton University

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW122**

NATIONAL MINERAL INVENTORY:

NAME(S): **GIL**, PA, LG,
EL, LG

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E04W
BC MAP:

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)

LATITUDE: 49 08 25 N
LONGITUDE: 119 55 50 W
ELEVATION: 1760 Metres

NORTHING: 5447186
EASTING: 286268

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the original tungsten-bearing skarn outcrop on the former PA 1 or LG 2 mineral claims (formerly 082ESW105) (Assessment Report 11891).

COMMODITIES: Tungsten Molybdenum Copper Zinc Lead
Silver

MINERALS

SIGNIFICANT: Scheelite Molybdenite Chalcopyrite Sphalerite Pyrite
Pyrrhotite Arsenopyrite

COMMENTS: Mineralization occurs associated with skarn zones or porphyry-related in quartz veins or disseminated in porphyritic intrusions.

ASSOCIATED: Garnet Quartz Epidote Calcite
ALTERATION: Garnet Quartz Epidote Calcite Limonite
ALTERATION TYPE: Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stratabound Vein Stockwork
CLASSIFICATION: Skarn Replacement Porphyry
TYPE: K05 W skarn L04 Porphyry Cu ± Mo ± Au
L07 Porphyry W

SHAPE: Irregular
MODIFIER: Fractured
DIMENSION: 45 x 7 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: The original (discovery) skarn outcrop is about 7.5 by 45 metres. Skarn lenses are of small lateral dimensions and appear to be subvertically oriented.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Old Tom	
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Middle Jurassic			Similkameen Intrusions

LITHOLOGY: Limestone
Skarn
Argillaceous Sediment/Sedimentary
Argillite
Siltstone
Chert
Greenstone
Intrusive Breccia
Felsic Dike
Quartz Diorite

HOSTROCK COMMENTS: The Shoemaker and Old Tom formations are of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional Contact Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization GRADE: Greenschist
Syn-mineralization Hornfels

INVENTORY

CAPSULE GEOLOGY

body is approximately 7.5 by 45.0 metres and contains tungsten grades of up to 0.52 per cent tungsten (0.65 per cent WO₃) over 5 metres (Assessment Report 11891). Tungsten grades were much lower in other skarn outcrops (Assessment Report 11891). Rock sampling by Minnova in 1989 yielded anomalous silver, copper, lead and zinc (Assessment Report 19044). The best sample (BCS12339) yielded 32.8 grams per tonne silver, 0.10 per cent lead and 0.11 per cent zinc (Assessment Report 19044). Sample BCS12325 yielded 31.5 grams per tonne silver and 0.62 per cent copper (Assessment Report 19044).

BIBLIOGRAPHY

EMPR ASS RPT 5573, 5677, 5787, 6191, 6557, 7614, 8789, *11891, 17701, *19044
EMPR EXPL 1975-E20; 1976-E24; 1977-E23; 1978-E23
EMPR GEM 1972-40; 1973-45, 1974-54
EMPR OF 1989-5
EMPR PF (Canadian Occidental Petroleum Ltd. (1978): Report on Diamond Drilling of the GIL-LIG-LI-LG claim group)
EMPR BULL 101, p. 213
GSC BULL 239, pp. 137-139
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 448-458; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40
American Journal of Science Vol. 237, pp. 527-549

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW123**

NATIONAL MINERAL INVENTORY:

NAME(S): **RENO, MARSEL, FLATS**

STATUS: Showing
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:

Open Pit

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 20 00 N
LONGITUDE: 119 46 58 W
ELEVATION: 1100 Metres

NORTHING: 5468237
EASTING: 297834

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of a diamond-drill hole in 1976 on the Reno 7 claim.

COMMODITIES: Silver Copper

MINERALS

SIGNIFICANT: Pyrite
ALTERATION: Silica Malachite
COMMENTS: Manganese oxides are also present.
ALTERATION TYPE: Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
DIMENSION: 20 Metres
COMMENTS: The shear zone is traceable for about 20 metres on surface.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Old Tom	
Eocene	Undefined Group	Springbrook	

LITHOLOGY: Greenstone
Chert
Conglomerate

HOSTROCK COMMENTS: The Old Tom Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau
Overlap Assemblage
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Grab
COMMODITY: Silver
COMMENTS: Sample JD-M-05. GRADE: 1.0900 Grams per tonne
REFERENCE: Assessment Report 13533.

CAPSULE GEOLOGY

The Reno showing is located north of Highway 3A, 1.25 kilometres due west of Yellow Lake.

The Reno showing is underlain by the Carboniferous to Triassic Shoemaker Formation, immediately west of and unconformably overlain by a fault-bound basin of Eocene Penticton Group volcanic rocks. The Shoemaker Formation consists mainly of blue-grey chert, minor limestone and greenstone that have been intruded by pyroxenite, hornblendite and serpentinite. Silicification is widespread in greenstone. The contact between chert and greenstone is gradational over widths of up to 10 metres. Bedding strikes northeast with moderate to steep dips to the southeast.

The Reno showing consists of a shear zone composed of narrow, subparallel, northwest-trending shears that are silicified, oxidized and contain pyrite. A narrow lens of Springbrook Formation conglomerate occurs within the fault zone. At the Reno showing, pyrite, minor malachite and manganese oxide have been exposed by several opencuts. The zone is traceable for about 20 metres on surface.

CAPSULE GEOLOGY

Sample JD-M-05 taken from this shear zone in 1984 yielded 1.09 grams per tonne silver (Assessment Report 13533). Approximately 750 metres to the west, sample FC-157 taken from a trench, yielded 1.80 grams per tonne silver from a chert breccia with disseminated pyrite (Assessment Report 13533). Sample FC-158 yielded 3.50 grams per tonne silver and 0.40 per cent copper from silicified greenstone containing up to 10 per cent disseminated pyrite and malachite staining.

A lead-zinc-silver geochemical soil anomaly was discovered near the Reno showing in 1988 during exploration on the Flats claims by Grand National Resources Inc.

BIBLIOGRAPHY

EMPR ASS RPT 5005, *5871, *12366, *13533, 18332
EMPR EXPL 1976-25; 1977-25; 1978-25; 1979-24; 1985-C24
EMPR GEM 1974-55
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

Dividend Mountain include the Dividend No. 1, Dividend A, Dividend No. 2, Dividend No. 3 Fraction, Selkirk, Maple Leaf, Longshot, Mammouth, Iron Mask, Juno and Diana. Many of these were formerly Crown granted and part of the Dividend Claim Group.

The Dividend occurrence was staked in 1900 after a pyrrhotite oxidation cap was discovered on surface over 457 metres. Property development in this year consisted of a 7.6-metre shaft and several opencuts. In 1901, the property was held by Keremeos Mining Syndicate. The West workings consisted of a 1.82 by 2.44 metre pit exposing a 1.8-metre wide replacement zone containing garnet, pyrrhotite and arsenopyrite. The strike of the zone was southwest with a dip 60 degrees west. Other workings included a 3-metre shaft, 15 metres from the West workings and a 5.5-metre pit, 152 metres from the West workings. In 1902, two shallow shafts were sunk; the first was 2.13 by 2.74 by 3.04 metres and the second was 0.30 by 2.74 by 3.04 metres, which exposed 'copper-gold ore' in 20 places. The Dividend and six other claims were owned by Olalla Mining and Smelting Co. in 1906. Little else was done on the property until 1966, when Cominco Ltd. conducted magnetic and electromagnetic geophysical surveys on the Peak group, covering the Dividend claim area. In 1972 and 1975, Southcan Mines Ltd. conducted airborne geophysical and soil geochemical surveys on the Sel, Kim and Jo claims covering the Dividend claim area. In 1981, L. Reichert, owner of the Dividend claim, began exploration and re-examination of the old workings on the property.

Diorite, andesite, cherts, greenstone and hornfels comprise rock types of the Dividend showing. Garnet-actinolite and pyroxene skarn adjacent to crystalline marble comprise the dominant alteration type.

Numerous old workings and new trenches at the Dividend occurrence contain disseminated to massive pyrrhotite with chalcopyrite, magnetite, pyrite, scheelite and wolframite.

Mineralization at the Dividend showing consists of massive pyrrhotite lenses with disseminations of chalcopyrite and scheelite. Pyrrhotite lenses vary from a few centimetres to 3 metres wide and 15 metres long that occur as an echelon lenses over 30 to 50 metres. The strike of the lenses is 300 to 030 degrees with a vertical dip. Mineralization has been traced over a total strike length of 2400 metres and possibly up to 500 metres thickness.

In 1991, several samples taken of dump material at the old workings were analysed. Sample 91-DIV-110R of garnet-actinolite skarn with chalcopyrite and pyrrhotite yielded 6.8 grams per tonne silver and 0.46 per cent copper (Assessment Report 22008). Sample 91-DIV-111R yielded 6.0 grams per tonne silver and 0.26 per cent copper (Assessment Report 22008). This sample consisted of garnet-actinolite skarn with trace chalcopyrite and pyrrhotite. A chip sample over 2.5 metres, reported from Dividend Mountain in 1981 from an unknown location, yielded 0.44 per cent copper, 1.71 grams per tonne silver and 0.01 per cent tungsten (Assessment Report 10092). One of two samples (BS) tested with a tungsten lamp was analysed and yielded 0.32 per cent copper, 3.43 grams per tonne silver, 0.82 gram per tonne gold and 0.33 per cent tungsten (Assessment Report 10092).

BIBLIOGRAPHY

- EMPR AR 1900-885; 1901-1158; 1902-185; 1903-176; 1906-168
EMPR ASS RPT 802, 5199, 5574, *10092, 16796, *22008
EMPR GEM 1974-55; 1975-E21; 1977-E25
EMPR PF (Cochrane Consultants Ltd. (1974): Geophysical Report on the Aeromagnetic Survey of the Dividend Group of Claims in Southcan Mining Ltd. (1975): Prospectus; Claim map)
EMPR BULL 101, p. 213
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53
GCNL Jan.24, 1979

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW125**

NATIONAL MINERAL INVENTORY:

NAME(S): **NIKKI**, CAM, BB

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 07 N
LONGITUDE: 119 37 59 W
ELEVATION: 0750 Metres

NORTHING: 5431013
EASTING: 307429

LOCATION ACCURACY: Within 500M

COMMENTS: The centre of the Nikki 1 and 6 claim boundary (Assessment Report 4759).

COMMODITIES: Copper Lead Zinc Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Galena Sphalerite
COMMENTS: Inferred from commodities and nearby occurrences.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 2134 x 121 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Quartz veins up to 3 metres wide form an arcuate belt over 2134 metres along strike and over 121 metres width, including veins to the south across the International boundary.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Similkameen Intrusions
Jurassic			Kruger Syenite

LITHOLOGY: Schist
Chlorite Schist
Quartzite
Amphibolite
Marble
Granite
Granodiorite
Syenite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Okanagan
METAMORPHIC TYPE: Regional Plutonic Rocks RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1969
SAMPLE TYPE: Channel	
COMMODITY	GRADE
Silver	137.0000 Grams per tonne
Gold	0.3400 Grams per tonne
Lead	6.0000 Per cent
REFERENCE: Assessment Report 2219.	

CAPSULE GEOLOGY

The Nikki showing is located along the Canada-United States of America boundary, 7 kilometres south-southeast of Richter Mountain. The showing was staked in 1969 as the Cam and BB claims by M.V. Nixon. In 1973, the showing and surrounding area were restaked as the Nikki claims owned by Bonavista Mining Corp. Ltd. The Nikki occurrence is hosted by roof pendants of metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. These roof pendants are surrounded by granite and granodiorite of the Similkameen intrusion and syenite of the Kruger pluton. During 1969, several quartz veins were discovered and trenched

CAPSULE GEOLOGY

on the former Cam 13,14,27 and 28 claims. The veins are 0.6 to 3.0 metres wide and form a northeast-trending belt which curves eastward to the north near the Similkameen intrusion. The best trench, on the Cam 13 claim 120 metres north of the Canada-United States boundary, exposed a 1.8-metre wide quartz vein over 7.6 metres strike length. The veins are reported to carry copper, lead, zinc and silver values. A channel sample of this vein yielded 0.34 gram per tonne gold, 137 grams per tonne silver and 6 per cent lead (Assessment Report 2219).

The veins are similar to quartz veins to the south across the International boundary. The combined strike length of these veins is 2134 metres over 121 metres width.

BIBLIOGRAPHY

EMPR ASS RPT *2219, 4759, *5250
EMPR GEM 1973-42; 1974-52; 1975-E18
EMPR OF 1989-5
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW126**

NATIONAL MINERAL INVENTORY:

NAME(S): **YOUNKIN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 51 N
LONGITUDE: 119 13 23 W
ELEVATION: 1540 Metres

NORTHING: 5444380
EASTING: 337832

LOCATION ACCURACY: Within 1 KM

COMMENTS: Molybdenite occurrence 11.4 kilometres north of Bridesville on the Camp McKinney road (Bulletin 9 (1940), page 81).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: L05 Porphyry Mo (Low F- type)

COMMENTS: Flakes of molybdenite were found in 2.5-centimetre wide quartz veins.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Paleozoic
Middle Jurassic

GROUP

Anarchist

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Nelson Intrusions

LITHOLOGY: Quartzite
Greenstone
Greywacke
Limestone
Biotite Schist
Granite
Granodiorite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

Plutonic Rocks

RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Okanagan Highland

GRADE: Greenschist

CAPSULE GEOLOGY

The Younkin showing is located at 1509 metres elevation on the southern slopes of Baldy Mountain, 3.25 kilometres northwest of the Cariboo-Amelia occurrence (082ESW020) of the historic Camp McKinney.

The Younkin showing lies in a complex sequence of volcanic and metasedimentary rocks of the Carboniferous to Permian Anarchist Group. To the north are Cretaceous granitic and granodioritic rocks of the Okanagan batholith. Middle Jurassic granitic rocks of the Nelson intrusions occur to the southwest. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies of the Anarchist Group to the east. For a more detailed description of the regional geology of the McKinney camp refer to the Cariboo-Amelia occurrence (082ESW020).

Flakes of molybdenite were reported found in a 2.5-centimetre wide quartz vein (Bulletin 9 (1940), page 81). The vein was explored by a small shaft.

BIBLIOGRAPHY

EMPR BULL 6; *9 (1940), p. 81
EMPR OF 1898-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
Munitions Resources Commission Canada 1920, p. 127

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW127**

NATIONAL MINERAL INVENTORY:

NAME(S): **VENNER**

MINING DIVISION: Osoyoos

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 16 54 N
LONGITUDE: 119 18 32 W
ELEVATION: 1432 Metres

NORTHING: 5461333
EASTING: 332083

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the area of drilling (Assessment Report 17327). Former 082ESW127 (Shuttleworth Creek) is included with 082ESW110.

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Electrum Silver Pyrite Chalcopyrite
COMMENTS: Up to 30 per cent silver has been found in amalgam.
ASSOCIATED: Calcite Aragonite Siderite K-Feldspar Quartz
Chlorite Amethyst Fluorite
ALTERATION: Chalcedony Chlorite Calcite Epidote Sericite
Marcasite Hematite Clay

ALTERATION TYPE: Silicific'n Propylitic Hematite Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 23 x 1 Metres STRIKE/DIP:
COMMENTS: A 0.3 to 1.0 metre wide calcite-quartz vein has been traced for 23 metres.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Undefined Formation	Monashee Complex
Proterozoic			

LITHOLOGY: Andesitic Feldspar Porphyry Flow
Trachyandesite Feldspar Porphyry Flow
Andesitic Breccia
Trachyandesite Breccia
Rhyolitic Quartz Feldspar Porphyry
Conglomerate
Coarse Grained Sandstone
Andesite

HOSTROCK COMMENTS: Eocene Penticton Group volcanics are assigned to the Marron, White Lake and Springbrook formations.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
Monashee
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Drill Core
COMMODITY: Gold GRADE: 3.8400 Grams per tonne
COMMENTS: The 1-metre interval from 16 to 17 metres in drillhole 1988-23, intersecting a breccia zone with irregular quartz stringers.
REFERENCE: Assessment Report 17327.

INVENTORY

ORE ZONE: TRENCH

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Chip

COMMODITY

GRADE

Gold

2.7400

Grams per tonne

COMMENTS: A 1-metre chip sample from a trench at 104E.

REFERENCE: Assessment Report 17327.

CAPSULE GEOLOGY

The Venner occurrence is located at 1524 metres elevation, immediately east of Solco Creek at Venner Meadows. The town Okanagan Falls is located 26 kilometres to the west.

The main (Road) showing of the nearby Gold occurrence (082ESW112) consists of an auriferous quartz-carbonate vein, first discovered by D. Ewers, S. McLean and K.G. Thomson in 1973. A considerable amount of exploration work has since been conducted in the vicinity including Teck Corp. (1973 and 1974), Granby Mining Corp. (1975 and 1976), Lacana Mining Corp. (1981 to 1983 and 1988), Rio Algom (1984) and K.L. Daughtry and P.P. Neilsen. Lacana Mining Corp. acquired the Venner claim group in 1980. Since 1980, Lacana Mining Corp. and Rio Algom Exploration Ltd. have explored the Venner claim group with similar mineralization to the westerly neighbouring Gold occurrence.

The Venner occurrence is hosted within a Eocene outlier of Penticton Group volcanics which unconformity overlies granitic rocks of Middle Jurassic intrusions and Proterozoic Monashee granitic gneiss and amphibolite. Andesites of the Marron Formation and overlying volcanoclastics of the White Lake Formation of the Penticton Group are underlain by the Springbrook Formation.

Outcrops surrounding the Venner occurrence consist of dark to reddish green, massive andesitic to trachyandesitic feldspar porphyry flows and breccias, light grey to beige, very fine grained rhyolitic quartz-feldspar porphyry and dark green, poorly sorted conglomerates and gritstones with narrow coal seams. Within the area of known mineralization, andesites are propylitically altered to chlorite, calcite, epidote, sericite and marcasite. Calcite occurs as narrow, irregular fracture infillings, locally forming carbonate-cemented crackle breccias. Coarse grained replacements of siderite or ankerite, locally with purple fluorite, form irregular veinlets 1 to 50 millimetres wide. Chalcedonic quartz veinlets are rare. Calcite replacement dominates veinlets which are usually sulphide barren.

Faulting typically occurs above and in contact with andesite. Hematitic and argillic (clay) alteration is also locally pervasive in andesites, adjacent to faults. Disseminated pyrite may also occur in andesites adjacent to faults. Andesites are brecciated and sheared adjacent to faults. Andesite and lesser quartz-carbonate vein breccia fragments are cemented in a matrix of andesite, secondary chlorite and sometimes hematite. Rhyolites are also strongly argillically altered with disseminated pyrite and irregular quartz-carbonate veinlets or clay seams near faults. Clay seams have resulted from shearing.

Geological mapping, rock sampling, and geochemical soil, magnetic and electromagnetic geophysical surveys have outlined two structurally-controlled epithermal mineralized zones; the Road and Meadow zones. The zones are hosted in Eocene subaerial andesitic flows and breccias of the Penticton Group.

Gold mineralization has been found in 0.5 to 3.0 metre wide quartz-carbonate fissure veins, veinlets and replacement breccias. These fissure veins strike easterly and dip steeply southward. Veins are composed of: (1) aragonite plus or minus potassium feldspar and quartz, (2) quartz plus or (3) minus chlorite or quartz. Gold mineralized zones crosscut hydrothermally altered and brittlely deformed andesite which are overlain by conglomerates to the north and bound by rhyolites to the east.

Electrum and gold-silver amalgam containing up to 30 per cent silver have been identified by electron microscope from 1983 drillholes (Assessment Report 12156). Pyrite is common throughout all units as: (1) fracture fillings, disseminations in quartz veins and as partial matrix replacement in breccia zones. Rare specks of chalcopyrite were observed. Common accessory minerals are amethyst and fluorite (Assessment Report 12156).

The best assay results from the 1988 exploration program were as follows. A grab sample from a 15 centimetre calcite vein in 1988 trenching near Trench G (140E) yielded up to 94.97 grams per tonne silver. Sampling from the same trench also yielded 2.74 grams per tonne gold over 1 metre (Assessment Report 17327). The trench uncovered a 0.3 to 1.0 metre wide carbonate-quartz vein. The

CAPSULE GEOLOGY

wallrocks carried lower gold values. Slightly further east (162.5E), north-trending drusy quartz veins along the andesite-rhyolite contact yielded 12.07 grams per tonne gold and 9.15 grams per tonne gold over 2 metres (Assessment Report 17327). Still further east (175E) a 0.5 metre wide quartz-carbonate breccia along the andesite-rhyolite contact yielded 4.49 grams per tonne gold over 2 metres and 10.49 grams per tonne gold from a grab sample (Assessment Report 17327).

Gold assay results from diamond-drill holes were similar. Drillhole 1988-22 yielded 12.68 grams per tonne from the interval 45.0 to 45.72 metres at the bottom of the hole. A breccia zone with irregular narrow quartz stringers yielded 3.84 grams per tonne gold between 16 and 17 metres in drillhole 1988-23. Drillhole 1988-29 yielded 2.60 grams per tonne gold and 3.22 grams per tonne gold at 32 to 33 metres and 34 to 35 metres, respectively. Drillhole 1983-9, near drillhole 1988-29, was re-analysed and yielded 4.11 grams per tonne gold over the interval from 55 to 56 metres (Assessment Report 17327).

BIBLIOGRAPHY

EMPR ASS RPT 4763, 5009, 5702, 5886, 8961, 9413, 10410, 10624, 10735, 11276, 11745, 11798, *12156, 12750, 13113, 13477, *17327

EMPR GEM 1973-47; 1974-56; 1975-E21; 1976-E26

EMPR OF 1898-5

GSC MAP 538A; 539A; 37-21; 15-1961; 1738A

GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1996/08/15
DATE REVISED: 1996/08/15

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW128**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD STANDARD**, GOLD STANDARD GROUP, OGOFAN, ECUADOR (L.1452), LEMON (L.760), PENNSYLVANIA, GALENA, W2, AH, HAG, PML, BALDY

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 06 34 N
LONGITUDE: 119 08 47 W
ELEVATION: 1006 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5441841
EASTING: 343357

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the adit and shaft on the Gold Standard claim (Memoir 179, page 18 and Assessment Report 16653). Includes Ogofan (formerly 082ESW129).

COMMODITIES: Gold Lead Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Chalcopyrite Sphalerite Gold
COMMENTS: Galena and gold from the Gold Standard claim. Chalcopyrite and sphalerite from the Ogofan claim.

ASSOCIATED: Quartz

ALTERATION: Ankerite Chlorite Malachite

COMMENTS: Ankerite, chlorite and malachite alteration from the Ogofan claim.

ALTERATION TYPE: Carbonate Chloritic Leaching

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic Mesothermal
TYPE: I01 Au-quartz veins 105 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 2 Metres STRIKE/DIP: 090/45N TREND/PLUNGE:

COMMENTS: Quartz vein outcrop on the Gold Standard claim is 1.8 to 2.4 metres wide. A 30-centimetre quartz vein strikes 090 degrees and dips 45 degrees east.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE: Upper Paleozoic GROUP: Anarchist FORMATION: Undefined Formation IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Schist
Calcareous Greenstone
Quartzite
Hornblende Porphyritic Diorite
Argillite
Marble
Ortho Gneiss

HOSTROCK COMMENTS: The Anarchist Group is of Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Gold Standard occurrence is located at 1006 metres elevation adjacent to Rock Creek near its confluence with Jolly Creek, 600 metres west of the Victoria occurrence (082ESW021). Bridesville, British Columbia lies 8 kilometres to the south-southwest.

Early development on the Gold Standard claim was a 122-metre adit near the quartz lens and a 27 metre shaft on the small quartz vein located 122 metres downstream. The adit exposes a number of stringers and masses of quartz which carry pyrite and coarsely crystalline galena. The large lens of quartz occurring near the portal is not reported in the workings. This early work was conducted by Lemon Gold Mining Co. from 1898 to 1901. A 5-stamp mill was reported shipped and operated to process ore from the 38-metre level of the adit, in 1901. No production records could be located however. Claims owned at this time included the Lemon (Lot 760), Gold Standard, Pennsylvania, Last Chance and Galena. By 1935, the property was referred to as the Gold Standard Group and included the Gold Standard, Ogofan and Ecuador (Lot 1452) claims.

CAPSULE GEOLOGY

The Gold Standard occurrence is situated in a sequence of metavolcanic and metasedimentary rocks of the Carboniferous to Permian Anarchist Group. The sequence, over 1000 metres thick, consists of greenstone and diorite grading upward into a sedimentary sequence which in turn grades upward into a tuffaceous sedimentary sequence. Calcareous greenstone is the dominant rock type surrounding the Gold Standard occurrence. The greenstone is locally sheared, schistose and talcose. Where less altered, a porphyritic texture is observed. Other greenstones are finely crystalline and tuffaceous grading to a medium grained hornblende porphyritic hornblende diorite. Elsewhere greenstones contain argillaceous and minor marble partings and bands. Orthogneiss is developed along faults to the northeast. To the north are Cretaceous granites and granodiorites of the Okanagan batholith. Middle Jurassic Nelson granites occur to the southwest. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies to the east. Lithologies located east and northeast of the Gold Standard occurrence include quartz latite, trachyandesite and syenite. For a more detailed description of the geology refer to the Cariboo-Amelia (082ESW020).

Mineralization on the Gold Standard claim of the Gold Standard Group is within small quartz lenses and stringers, and an irregular quartz lens. Stringers and lenses intersected in underground workings carried disseminated pyrite and minor coarsely crystalline galena. The lens is 1.8 to 2.4 metres wide and hosted by black schist. The lens is parallel to the foliation of the schist. Smaller veins of quartz occur in the wallrock. Approximately 122 metres downstream from the lens along Jolly (Rock) Creek is a small quartz vein reportedly containing free gold. Still further downstream, along Rock Creek, a 30 centimetre wide quartz vein containing pyrite and galena, striking east and dipping 45 degrees north, outcrops.

A showing on the former Ogofan claim of the Gold Standard Group consisted of a 1.2-metre wide shear zone striking 035 degrees and dipping 67 degree southeast. Ankeritic and chlorite altered greenstone comprised wallrock of the zone. The shear zone hosted quartz stringers mineralized with pyrite, chalcopyrite, sphalerite and contained malachite staining. Assay sample results, however, were reported to be low (Memoir 179, page 18).

On the Ecuador claim of the Gold Standard Group, a shear zone occupies black schist between two walls of quartzite 1.2 metres apart. This shear zone strikes 070 degrees and dips 45 to 80 degrees southeast. The schist hosts bunches and stringers of quartz that are also reported to carry low values (Memoir 179, page 18).

BIBLIOGRAPHY

- EMPR AR *1898-1118; *1899-774; *1901-1152
EMPR ASS RPT 5408, 5795, 9498, 14514, 15256, *16653
EMPR EXPL 1975-17; 1976-24
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
EMPR PF (*Nesbitt, B.I. (1948): Report of the Old England Group;
Brican Resources Ltd. (1989): News Release; Brican Resources Ltd.
(1988): Statement of Material Facts)
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC MEM *179, p. 18
GSC OF 481; 637; 1505A; 1565A; 1969;
GCNL (undated)
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp,
pp. 12-22

DATE CODED: 1985/07/24
DATE REVISED: 1996/07/23

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW129**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEONA**, LEONA GROUP, DAVID 1-3,
 BEV 1-4, NORM 1-8, CROWN POINT GROUP,
 CROWN POINT FRACTION (L.2449), ZAMORA, ENIO (L.2852)

STATUS: Prospect	Underground	MINING DIVISION: Greenwood
REGIONS: British Columbia		
NTS MAP: 082E03E		UTM ZONE: 11 (NAD 83)
BC MAP:		
LATITUDE: 49 07 54 N		NORTHING: 5444047
LONGITUDE: 119 00 53 W		EASTING: 353031
ELEVATION: 930 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: The approximate location of the shafts 1 to 3 and a trench on the former Enio (Lot 2852) Crown-granted claim (Assessment Report 9909). Former 082ESW129 (Ogofan) is included with Gold Standard (082ESW128).		

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Pyrite
 ASSOCIATED: Quartz
 ALTERATION: Chlorite Calcite Silica Malachite
 ALTERATION TYPE: Propylitic Silicific'n Oxidation
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I01 Au-quartz veins
 DIMENSION: Metres STRIKE/DIP: I05 Polymetallic veins Ag-Pb-Zn±Au
 COMMENTS: The Leona occurrence consists of quartz veins of variable width hosted in a shear zone. The veins strike 090 to 135 degrees and dip 45 to 80 degrees southeast. TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Anarchist	Undefined Formation	

LITHOLOGY: Greenstone
 Argillite
 Quartzite
 Limestone
 Magnesite
 Gneiss

HOSTROCK COMMENTS: The Anarchist Group is of Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
 TERRANE: Okanagan
 METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1981
 SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	256.0000	Grams per tonne
Gold	0.7500	Grams per tonne
Lead	16.7200	Per cent

 COMMENTS: Sample 017410, taken from shaft 3 at the Leona occurrence.
 REFERENCE: Assessment Report 9909.

CAPSULE GEOLOGY

The Leona occurrence is located at 930 metres elevation, 350 metres south-southeast of the Crown Point occurrence (082ESW064). It lies on ground previously known as the Enio (Lot 2852) Crown-granted claim. Since 1938 the ground hosting the Leona occurrence has been owned by owners of the Crown Point (Lot 2448) Crown grant and other claims. The Enio claim was part of the former Crown Point group which consisted of the Crown Point (Lot 2448), Crown Point Fraction (Lot 2449), Triangle Fraction, Sunnyside (Lot 1440), No. 2 (Lot 2447), No. 3 (Lot 2445) and Enio (Lot 2852). The Crown Point and

CAPSULE GEOLOGY

Sunnyside are presently Reverted Crown grants; the remaining are of unknown status.

The early exploration history of the Leona occurrence is unknown, but most likely was discovered around the same time as the Crown Point occurrence. In 1981, J. Kucherhan discovered the old shafts and trenches on the Leona occurrence. These old workings were developed on two quartz veins striking 090 to 135 degrees and dipping 45 to 80 degrees.

The Leona occurrence lies within an inlier of metavolcanic and metasedimentary rocks of the Permian to Carboniferous Anarchist Group. Greenstone, locally tuffaceous and serpentized, is the predominant host lithology. The greenstone is folded, faulted and has a variable northwest to north foliation. Argillite and quartzite, locally cherty, minor limestone and magnesite with mariposite and gneiss comprise the remaining hostrocks of the Anarchist Group. Greenstones are propylitic altered, consisting primarily of chlorite and calcite. Minor silicification is also present. To the east is a small stock of granodiorite and microdiorite of the Cretaceous Okanagan batholith. Eocene volcanic rocks of the Penticton Group occur to the north and west. These include feldspar porphyries and aplite dikes. The contact between these units is faulted.

Mineralization on the Leona claim consists of two quartz veins striking 090 to 135 degrees and dipping 45 to 70 degrees. Mineralization consists of stringers of galena and disseminated pyrite in these veins. In shaft 1, the quartz vein was 70 centimetres wide hosted in sheared greenstone. The vein has been offset by a fault striking about 045 degrees and dipping 80 degrees to the southeast. In shaft 3, a 15 centimetre wide quartz vein was intersected. The vein strikes east. In the trench, the quartz vein was up to 40 centimetres wide and hosted in a 75 centimetre wide shear zone.

The results of rock geochemistry, in 1981, were as follows: sample 017408 yielded 0.89 gram per tonne gold, 185 grams per tonne silver, 14.30 per cent lead and 0.03 per cent zinc (Assessment Report 9909); sample 017409 yielded 1.37 grams per tonne gold, 102 grams per tonne silver, 5.15 per cent lead and 0.08 per cent zinc (Assessment Report 9909); sample 017410 yielded 0.75 gram per tonne gold, 256 grams per tonne silver, 16.72 per cent lead and 0.05 per cent zinc (Assessment Report 9909). The samples were from shafts 1, 2 and 3, respectively. Trench sample 017411 yielded similar results.

BIBLIOGRAPHY

EMRP ASS RPT *9909, 10765, 12746, *12759, 13020, 13801, 13839,
*15918, 16290
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
EMPR PF (Monte Carlo Resources Ltd. Prospectus, 1987)
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp,
pp. 12-22

DATE CODED: 1996/09/08
DATE REVISED: 1996/09/08

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW130**

NATIONAL MINERAL INVENTORY:

NAME(S): **BUL 19**, OLD 10

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 36 N
LONGITUDE: 119 35 10 W

NORTHING: 5435495
EASTING: 311018

ELEVATION: 0900 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of copper mineralization which outcrops on the former BUL 19 claim (Assessment Report 4919).

COMMODITIES: Silver Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Pyrite
ASSOCIATED: Magnetite Quartz Calcite
COMMENTS: Mineralization occurs in quartz and calcite veinlets in Similkameen intrusions and Kobau rocks.

ALTERATION: Malachite Silica Chlorite Epidote Carbonate

ALTERATION TYPE: Oxidation Silicific'n Propylitic Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Shear
CLASSIFICATION: Porphyry Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins L04 Porphyry Cu ± Mo ± Au
COMMENTS: Mineralization occurs in venlets up to 5 millimetres wide hosted in shear zones.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Similkameen Intrusions
Jurassic			Kruger Syenite

LITHOLOGY: Quartzite
Phyllite
Quartz Mica Schist
Greenstone
Granodiorite
Quartz Diorite
Syenite
Nepheline Syenite

HOSTROCK COMMENTS: The Koabu Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Okanagan Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1967
SAMPLE TYPE: Unknown	
COMMODITY	<u>GRADE</u>
Silver	17.1400 Grams per tonne
Copper	0.3730 Per cent
Molybdenum	0.0040 Per cent

COMMENTS: A typical sample.
REFERENCE: Assessment Report 970.

CAPSULE GEOLOGY

The BUL 19 showing is located at 900 metres elevation along a prominent northwest-trending ridge, 2 kilometres west of the northern end of Blue Lake (Assessment Report 970).
The southern two-thirds of the property are underlain by Jurassic Kruger syenite and nepheline syenite. To the north are granodiorite and quartz diorite of the Middle Jurassic Similkameen intrusion. Jointly, these have intruded a northwest-trending roof

CAPSULE GEOLOGY

pendant of Carboniferous to Permian Kobau Group metasediments and metavolcanics. Quartzite, phyllite, quartz-mica schist and greenstone are the dominant lithologies surrounding the showing. Alteration consists primarily of silicification with minor carbonate alteration. The greenstone has been more intensely propylitic altered to chlorite, epidote, carbonate, and potassic altered to potassium feldspar.

Low grade copper mineralization occurs in all rock types except syenite and nepheline syenite. Disseminated chalcopryrite and bornite with pyrite and magnetite comprise sulphides which appear to have been hydrothermally introduced in quartz and calcite veinlets up to 5 millimetres thickness. Malachite stains are also present in an abandoned pit at the Joe 7 showing. Copper mineralization appears associated with regional northwest-trending shears. A typical sample from one of these shear zones is reported to yield 17.14 grams per tonne silver, 0.373 per cent copper and 0.004 per cent molybdenum (Assessment Report 970).

BIBLIOGRAPHY

EMPR ASS RPT *970, 1228, 2027, 3701, 4423, *4919
EMPR GEM 1969-298; 1971-384; 1972-39; 1973-45
EMPR OF 1989-5
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW131**

NATIONAL MINERAL INVENTORY:

NAME(S): **WALT 32**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 12 N
LONGITUDE: 119 35 34 W
ELEVATION: 0820 Metres

NORTHING: 5436623
EASTING: 310569

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of copper mineralization on the former WALT 32 claim (Assessment Report 4919).

COMMODITIES: Silver Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Pyrite
ASSOCIATED: Magnetite Quartz Calcite

COMMENTS: Mineralization occur in quartz and calcite veinlets in Similkameen intrusions and Kobau rocks.

ALTERATION: Malachite Silica Chlorite Epidote Carbonate

ALTERATION TYPE: Oxidation Silicific'n Propylitic Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Shear
CLASSIFICATION: Porphyry Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au 106 Cu±Ag quartz veins
COMMENTS: Mineralization occurs in veinlets up to 5 millimetres wide hosted in shear zones.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Similkameen Intrusions
Jurassic			Kruger Syenite

LITHOLOGY: Quartzite
Phyllite
Quartz Mica Schist
Greenstone
Granodiorite
Quartz Diorite
Syenite
Nepheline Syenite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Okanagan Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1967
SAMPLE TYPE:	Unknown		
COMMODITY		GRADE	
Silver		17.1400	Grams per tonne
Copper		0.3730	Per cent
Molybdenum		0.0040	Per cent

COMMENTS: A typical sample.
REFERENCE: Assessment Report 970.

CAPSULE GEOLOGY

The Walt 32 showing is located at 820 metres elevation along a prominent northwest-trending ridge, 2 kilometres northwest of the northern end of Blue Lake (Assessment Report 4919).

The southern two-thirds of the property are underlain by Jurassic Kruger syenite and nepheline syenite. To the north, is granodiorite and quartz diorite of the Middle Jurassic Similkameen intrusion. Jointly, these have intruded a northwest-trending roof

CAPSULE GEOLOGY

pendant of Carboniferous to Permian Kobau Group metasediments and metavolcanics. Quartzite, phyllite, quartz-mica schist and greenstone are the dominant lithologies surrounding the showing. Alteration consists primarily of silicification with minor carbonate alteration. The greenstone has been more intensely propylitic altered to chlorite, epidote, carbonate, and potassic altered to potassium feldspar.

Low grade copper mineralization occurs in all rock types except syenite and nepheline syenite. Disseminated chalcopyrite and bornite with pyrite and magnetite comprise sulphides which appear to have been hydrothermally introduced in quartz and calcite veinlets up to 5 millimetres thickness. Malachite stains are also present in an abandoned pit at the Joe 7 showing. Copper mineralization appears associated with regional northwest-trending shears. A typical sample from one of these shear zones is reported to yield 17.14 grams per tonne silver, 0.373 per cent copper and 0.004 per cent molybdenum (Assessment Report 970).

BIBLIOGRAPHY

EMPR ASS RPT *970, 1228, 2027, 3701, 4423, *4919
EMPR GEM 1969-298; 1971-384; 1972-39; 1973-45
EMPR OF 1989-5
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW132**

NATIONAL MINERAL INVENTORY: 082E6 Au2

NAME(S): **BUTCHER BOY (L.2353)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Open Pit Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 30 N
LONGITUDE: 119 08 22 W
ELEVATION: 2200 Metres

NORTHING: 5484314
EASTING: 345067

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the Butcher Boy shaft on the Butcher Boy Reverted Crown grant (Lot 2353). See also Carmi (082ESW029).

COMMODITIES: Gold Silver Zinc Lead Copper
Molybdenum

MINERALS

SIGNIFICANT: Pyrite Sphalerite Galena Chalcopyrite Molybdenite
COMMENTS: Sphalerite and galena carry gold and silver values. Chalcopyrite and molybdenite are rare.

ASSOCIATED: Quartz Ankerite Sericite

ALTERATION: Sericite

COMMENTS: In some places the vein contains intensely sericite altered dike material.

ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Bladed

MODIFIER: Faulted

DIMENSION: 549 x 2 Metres

STRIKE/DIP: 090/45S

TREND/PLUNGE:

COMMENTS: The shear hosted Butcher Boy vein strikes 090 degrees and dips 45 to 60 degrees south. It has been traced for a minimum strike length of 549 metres and maximum width of 2.13 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP
Permian
Jurassic
Cretaceous-Tertiary

FORMATION
Wallace

IGNEOUS/METAMORPHIC/OTHER
Westkettle Batholith
Unnamed/Unknown Informal

LITHOLOGY: Granodiorite
Quartz Diorite
Diorite
Quartz Monzonite Dike
Quartz K-Feldspar Dike
Andesitic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1930

COMMODITY	GRADE	
Silver	85.7100	Grams per tonne
Gold	11.6100	Grams per tonne
Lead	1.6000	Per cent

COMMENTS: A general sample of unsorted ore from the shaft dump.
REFERENCE: Minister of Mines Annual Report 1930, page 220.

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1931

SAMPLE TYPE: Unknown

COMMODITY

COMMODITY	GRADE	
Silver	102.8600	Grams per tonne
Gold	17.1400	Grams per tonne
Zinc	3.0000	Per cent

COMMENTS: The average grade of ore shipped.

REFERENCE: Minister of Mines Annual Report 1931, page A126.

CAPSULE GEOLOGY

The Butcher Boy past producer is located immediately south of Carmi, British Columbia, on the Butcher Boy (Lot 2352) Reverted Crown grant. The Reverted Crown grant lies on the west side of the West Kettle River and adjoins the Carmi property (082ESW029) to the west.

The Butcher Boy claim was first staked in 1896 by J.C. Dale. Development work initially consisted of trenches. Shaft sinking began in 1903. In 1904, the Butcher Boy (Lot 2353), May (Lot 2355) and No. 3 (Lot 2354) were Crown granted to J.C. Dale, R.D. Kerr and P.B.S. Stanhope. In 1913, the claims were leased to A. Robinson from F.J. Finnuccane. No further work was reported until 1930 when Dale, Stanhope and Kerr leased the property to J. Carlson and associates. The underground workings were extended with ore shipments made in 1930 and 1931. Canadian-American Mines Ltd. acquired the Carmi (082ESW029), Butcher Boy and 18 other claims in 1932. In 1934, the underground workings of the Carmi mine were extended into the Butcher Boy claim 94 metres. Canadian-American Mines Ltd. assets were taken over by Carmi Gold Mines Ltd. in 1934 and further underground development work was completed. Lessees worked the property for a short time in 1935. The claim was acquired by J.V. Hinks and J.A. Olinger. Options have been held by International Minerals and Chemical Corp. (Canada) Ltd. in 1970 and by Husky Oil and G.V. Lloyd Exploration Ltd. in 1970 and 1971.

Vestor Explorations Ltd. optioned Mineral Lease M 290, which include the St. Lawrence (Lot 1562s), Copper Queen (Lot 1563s), Lily (Lot 1565s), Butcher Boy (Lot 2353), No. 3 (Lot 2354), May (Lot 2355), No. 6 Fraction (Lot 2356) and Hatford (Lot 2358) Reverted Crown grants, Mineral Lease ML 425 and about 300 adjacent claims, in 1974. In 1981, Kelvin Energy Ltd. was owner of the Carmi claims, surrounding the Carmi occurrence. An 8-hole diamond drill program was conducted, three of which tested for the Carmi veins below the old workings.

The Butcher Boy is hosted by granodiorite of the Jurassic Westkettle batholith and an irregular body of Permian Wallace Formation approximately 2.56 square kilometres. The Westkettle batholith varies in composition from granodiorite to quartz diorite to diorite. The granodiorite phase is medium grained, grey to pink with chlorite or occasionally biotite-altered mafics. Local epidote and minor potassic alteration also occur. The quartz diorite phase is commonly foliated and porphyritic. These phases are intruded by quartz monzonite, quartz-k-feldspar and andesitic dikes. Veins are composed of quartz, quartz and k-feldspar or quartz-calcite plus or minus pyrite. The veins are commonly associated with a clay-rich fault gouge.

The Butcher Boy and Carmi workings appear to be on the same faulted vein, following a shear zone in fine-grained granodiorite. The shear zone strikes 090 degrees and dips 45 to 60 degrees southward. It has been traced for over 549 metres strike length, despite minor fault displacement. The vein varies from 5 to 213 centimetres width. One mineralized ore shoots near the surface was reported to be 76.2 metres long.

Mineralization consists of pyrite with lesser sphalerite and galena carrying gold and silver values. Minor chalcopyrite and molybdenite are also present. The gangue is quartz and ankerite and in places intensely sericitized andesitic dike.

A general sample of unsorted ore taken in 1930 from the shaft dump yielded 11.66 grams per tonne gold, 85.71 grams per tonne silver and 1.6 per cent lead (Minister of Mines Annual Report 1930, page 220). In the following year shipped ore averaged 17.14 grams per tonne gold, 102.86 grams per tonne silver and 3 per cent zinc (Minister of Mines Annual Report 1931, page A126).

The Butcher Boy has produced 2000 tonnes of ore intermittently between 1904 and 1940. Recovery included 21,337 grams of silver, 5195 grams of gold, 361 kilograms of lead and 634 kilograms of zinc.

BIBLIOGRAPHY

EMPR AR 1898-1119; 1901-1139; 1902-182; 1903-168; 1904-216; 1913-156;

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1122
REPORT: RGEN0100

BIBLIOGRAPHY

1914-335; 1930-220; 1931-123; 1932-126; 1933-154; 1934-D10; 1935-
A25; 1940-62
EMPR ASS RPT 3740, 8867, *9174
EMPR BC METAL MM00835
EMPR BULL 1 (1932), p. 86; 20 (1945, Part III), pp. 16-17
EMPR GEM 1970-408; 1971-386; 1972-44; 1973-50
EMR MP CORPFILE (Carmi Gold Mines Ltd.; Vestor Explorations Ltd.)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, p. 32

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW133**

NATIONAL MINERAL INVENTORY: 082E6 Ag1

NAME(S): **HIGHLAND LASS (L.2341)**, BEAVERDELL, HIGHLAND-BELL,
BELL (L.2343), GEM FRACTION (L.2347), IDAHO (L.2362)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 25 50 N
LONGITUDE: 119 02 46 W
ELEVATION: 1524 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5477333
EASTING: 351641

LOCATION ACCURACY: Within 500M

COMMENTS: The lower mine workings (2900 level) projected to surface, occur approximately in the centre of the Idaho No. 1 (Lot 3960s) Crown-granted claim, located 1.25 kilometres northwest of Mount Wallace and 3 kilometres east of Beaverdell (Assessment Report 15704). See Beaverdell (082ESW030) also.

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Tetrahedrite Pyrargyrite
Chalcopyrite Polybasite Arsenopyrite

COMMENTS: Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1267.

ASSOCIATED: Quartz Calcite Fluorite
ALTERATION: Chlorite Clay Calcite

ALTERATION TYPE: Propylitic Argillic

MINERALIZATION AGE: Eocene

ISOTOPIC AGE: 50 Ma DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Bladed

MODIFIER: Faulted

DIMENSION: 152 x 30 Metres STRIKE/DIP: 090/75S

TREND/PLUNGE:

COMMENTS: Ore shoots extend up to 152 metres horizontally and 30 metres up dip. Veins average 15 centimetres width. The Highland Lass vein system strikes 090 degrees and dips steeply south.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Anarchist	Wallace	
Jurassic			Westkettle Batholith
Eocene			Unnamed/Unknown Informal

ISOTOPIC AGE: 50.6 +/- 1.5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Whole rock

LITHOLOGY: Granodiorite
Quartz Latite Dike
Andesitic Tuff
Andesitic Lava
Hornblende Diorite Porphyry
Olivine Gabbro

HOSTROCK COMMENTS: A quartz latite (Idaho-type) dike has been dated as Eocene (Canadian Journal of Earth Sciences, Vol. 19, No. 6, page 1267).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Highland Lass (Lot 2341) past producer is located 1.25 kilometres northwest of the summit of Mount Wallace and 3.00 kilometres east of Beaverdell, British Columbia (Assessment Report 15704). The Highland Lass claim is part of the Highland-Bell (Beaverdell) mine (082ESW030) which has mined what is commonly referred to as the 'Highland or Upper Lass' vein system. Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver

CAPSULE GEOLOGY

(082ESW040) and Bell (082ESW030), with numerous other small workings throughout the area. Production commenced on the Highland Lass in 1922. In 1930, R.B. Staples and associates obtained control of the Bell and Highland Lass, however, production was recorded separately until the purchase was complete in 1936. Production continued under the amalgamated Highland-Bell mine owned by Highland-Bell Ltd. Highland-Bell Ltd. was purchased by Leitch Gold Mines Ltd. in 1946 but operations continued as the Highland-Bell mine. In 1953, a down-faulted section of the Lass vein system was found 229 metres vertically lower and developed by a 1600-metre adit. Teck Corp. assumed control of the mine in 1970. In 1986 and 1987, property exploration by Teck Corp. located an eastward ore extension with increased gold content on the lower (2900) level. This included an ore block containing 5442 tonnes grading 1371 grams per tonne silver (Assessment Report 15790). Production ceased in 1991.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Beaverdell porphyry. These have been dated by potassium-argon methods as Eocene (Watson, P.H. (1981): Genesis and zoning of silver-gold veins in the Beaverdell area, south-central British Columbia; Leary, G.M. (1970): Petrology and structure of the Tuzo Creek molybdenite prospect near Penticton, British Columbia and Exploration in British Columbia 1995, pages 124-126. The Westkettle batholith has been correlated with the Nelson intrusions that has been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper sections of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east.

A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. One of these was dated by potassium-argon methods at 61.6 +/- 2.2 Ma (Watson, P.H., 1981). Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization. One of these has given a potassium-argon age of 50.6 +/- 1.5 Ma (Watson, P.H., 1981).

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. Five distinctly separate quartz vein systems are arranged roughly en echelon in this structural zone. The west-half contains the Wellington (Lot 2621), Sally (082ESW075, Lot 2092) and Rob Roy (Lot 2093, also part of Sally) systems which all strike east and dip from 70 degrees south to vertical. The Wellington and Sally each comprise two separate veins and the Rob Roy three. In the central part of the zone, the Bell (082ESW030, Lot 2343) comprises two veins which strike east to northeast and dip south to southeast. The eastern part of the zone contains the upper and lower sections of the Lass (082ESW133) and Highland Lass (Lot 2341, also part of the Bell) vein which strikes northeast and dips 50 degrees southeast. In general, quartz breccia veins and stockworks are so complex that continuous mineralized sections are a maximum of a few metres before being faulted or disrupted. Nevertheless, some mineralized zones have been found that extend up to 150 metres horizontally. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship: (1) high angle, north-striking normal faults, (2) low angle, north trending, strike-slip faults, (3) northeast striking, high angle normal faults (terminal faults), (4) northeast trending, 'slice' faults and (5) crossfaults. The northeast striking, high angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are

CAPSULE GEOLOGY

mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite. 'Ore ground' has been described as propylitic altered granodiorite, quartz diorite and quartz monzonite of the Westkettle batholith, up to 15 metres wide. These zones are characterized by sericite, clay minerals, chlorite, calcite, epidote and hematite. The fault-bounded veins commonly have a banded texture defined by outer, crudely parallel sulphide stringers. The wallrocks are brecciated and sheared over 30 to 150 centimetres width adjacent to veins. Weak sericite alteration of feldspars is pervasive in the Westkettle batholith.

The interpretation of galena lead-lead isotope age data coupled with geometrical and age relationships between dikes and veins suggests mineralization was formed around 50 Ma, coeval with Eocene stocks (Canadian Journal of Earth Sciences, Vol. 19, No. 6, pages 1264-1274, 1982).

The Highland Lass vein system averages 13 centimetres width. The system is funnel-shaped and widens to the west. In plan view, the vein system is composed of a series of faulted ore shoots, elongate along strike and en echelon downdip. In general, in the upper part of the vein system there is a higher gangue content in the veins than in the Lower Lass. There are no strong trends between gangue content or vein thickness and silver values. Gold-silver zonation is present in the system with silver values highest in the higher parts of the system and centrally between the hangingwall and footwall. This is supported by fluid inclusion data indicating temperatures of 180 to 260 degrees Celsius, less saline (less than 15 per cent) and lower pressure solutions (Watson, 1981). Gold is concentrated at depth in the system and in several small locations along the system footwall and supported by fluid inclusion temperatures of 260 to 310 degrees Celsius, 15 per cent salinity and high pressure solutions (Watson, 1981). Elemental correlations were found between silver content and galena, sphalerite and antimony sulphosalts (Watson, 1981). Gold is associated with pyrite and chalcopyrite (Watson, 1981). The Highland Lass vein system is characterized by high silver values, moderate zinc and lead values, more gangue and thinner veins than the Lower Lass system, and multiple vein and stringers zones. An Idaho-type dike zone is well exposed on the No. 8 level of the Highland Lass. The zone is composed of numerous subparallel slice faults and faulted segments with one or more dikes. The overall strike of the zone is 090 degrees and dips southeast somewhat more steeply than the Lass vein system.

Seven stages of mineral paragenesis have been recognized in the Lass vein system with many veins containing one or more of the following stages from oldest to youngest: (1) quartz-pyrite and minor sphalerite, (2) pyrite brecciation and replacement by arsenopyrite, (3) dark sphalerite with emulsions of chalcopyrite, (4) main depositional stage of galena, light sphalerite with little or no chalcopyrite, (5) silver minerals closely associated with galena including pyrargyrite, tetrahedrite and polybasite, (6) late gangue (mainly quartz) and (7) minor silver supergene mineralization.

Production from the Highland Lass commenced in 1922 and continued annually from 1928 to 1936. During this period, 4735 tonnes was mined with 30,925,029 grams silver, 5940 grams gold, 313,371 kilograms lead and 487,528 kilograms zinc were recovered. After 1936, production figures were combined with the Highland-Bell mine. The Highland Lass was developed by nine levels in a fault block about 396 metres wide in an east-west direction and bounded by the East and West Terminal faults. Ore shoots were continuous over horizontal distances of up to 152 metres and 30 metres updip, which were followed to the contact between granodiorite and the Wallace Formation. The largest and richest stopes were reported to be within 120 metres of this contact.

BIBLIOGRAPHY

- EMPR AR 1903-H247; 1921-G185,G188; 1922-N172; 1925-A202; 1928-G252;
1929-C261,C262; 1930-A219; 1931-ALL,A123; 1932-A12,A125,A126;
1933-A14,A153; 1934-A7,A25,A29,D9; 1935-A7,A25,A30,D14,G52; 1936-
D56; 1937-A29; 1938-A27; 1939-A29; 1940-A17; 1941-A19; 1942-A21;
1943-A38; 1947-A153; *1949-A139-A143,A145-A148; 1955-44,45
EMPR INDEX 3-199
EMPR ASS RPT *15704, *15790, 16771
EMPR BC METAL MM00868
EMPR ENG INSP (Mine Plans)
EMPR GEM 1973-48; 1974-57
EMPR GEOLOGY 1975, pp. G30-G33
EMPR FIELDWORK *1982, pp. 227-249; 1988, pp. 360,361
EMPR MAP 65 (1989)
EMPR OF 1989-5; 1998-10

BIBLIOGRAPHY

EMPR PF (082ESW General - Underground Plans)
EMR MIN BULL MR 166
EMR MP CORPFILE (Highland-Bell Mines Ltd.; Highland Lass Ltd.;
Mastadon-Highland Bell Mines Ltd.; Leitch Mines Ltd.; Beaver Silver
Mines Ltd.; Sally Mines Ltd.; Teck Corp.)
EMR MP RESFILE (Highland-Bell Mines Res.)
GSC EC GEOL 1928, Vol. 23, pp. 434-441
GSC MEM 79
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79, pp. 89,92,120-122
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CANMET IR 1947,2268; 1950,MD 2640; 1951,MD 2740; 1968,68-72
CIM *Vol. II, 1957: Structural Geology of Canadian Ore Deposits,
pp. 136-141
CJES *Vol. 19, No. 6, pp. 1264-1274, 1982
MIN REV Nov./Dec. 1981, pp. 23,24
W MINER 1946, Vol.19, May pp. 38-43, Jun. pp. 54-58; 1948, Vol.21,
Dec. pp. 158,159
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the
Beaverdell Area, South Central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW134**

NATIONAL MINERAL INVENTORY:

NAME(S): **SNO**, OK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04W
BC MAP:

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 02 36 N
LONGITUDE: 119 52 58 W
ELEVATION: 2300 Metres

NORTHING: 5436277
EASTING: 289342

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of sample 27421, taken from a quartz vein with chalcopyrite (Assessment Report 5676).

COMMODITIES: Copper Molybdenum Lead Tungsten

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Galena Scheelite
COMMENTS: Chalcopyrite, pyrite, galena and molybdenite are associated with quartz veins. Low grade molybdenite and strong pyrite are associated with local skarn development.

ASSOCIATED: Quartz K-Feldspar Carbonate Garnet Plagioclase
Diopside Epidote Scheelite

COMMENTS: Scheelite is associated with local skarn development.

ALTERATION: Malachite

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Hydrothermal Epigenetic Skarn
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au K01 Cu skarn
DIMENSION: 7 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Quartz veins are most common in the dioritic phase of the Kruger intrusion and range from 5 to 30 centimetres wide. A 7.5-metre wide skarn outcrop was located along the diorite-argillite contact.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Paleozoic-Mesozoic	Undefined Group	Old Tom	
Jurassic			Kruger Syenite
Middle Jurassic			Similkameen Intrusions

LITHOLOGY: Microdiorite
Skarn
Argillite
Chert

HOSTROCK COMMENTS: The Shoemaker and Old Tom formations are of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional Contact Okanagan
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization Syn-mineralization
GRADE: Greenschist Hornfels

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1975
SAMPLE TYPE: Unknown
COMMODITY GRADE
Copper 0.6400 Per cent
COMMENTS: Sample 27421, taken from a quartz vein with chalcopyrite.
REFERENCE: Assessment Report 5676.

CAPSULE GEOLOGY

The Sno showing is located at 2300 metres elevation near the ridge of the southwest spur of Snowy Mountain, 1.25 kilometres from the summit. Keremeos is located 18 kilometres to the east-northeast. The property was once staked as part of the large KS claim block. Parts of the KS claims were subsequently staked by Noranda Explorations Co. Ltd. as the Jen 1 to 81 claims and SR claims in

CAPSULE GEOLOGY

1972. The claims lapsed in the following year when J. Strebchuk staked the Jon 1 to 4 claims. The only evidence of previous work on the property was an abandoned pit was found on a quartz sericite vein in argillite hostrock. The vein was malachite stained. In 1979, the ground was staked as the Sno 1 to 16 claims by Canadian Occidental Petroleum Ltd.

Regionally, the Sno showing is underlain by argillite and chert of the Carboniferous to Triassic Shoemaker Formation and overlying greenstone, breccia and intrusions of the Carboniferous to Triassic Old Tom Formation. These have been intruded by the Middle Jurassic Similkameen and Jurassic Kruger intrusions.

Locally, the Old Tom Formation was subdivided texturally into massive tuff or basalt, hornblende porphyroblastic greenstone and amphibolite. The Kruger intrusion consists predominantly of a dioritic phase at the Sno showing but lesser porphyritic monzonite is also found. The above rock types are intruded by numerous pegmatite, micropegmatite and microdiorite dikes. Surrounding country rocks have deformed and thermally metamorphosed up to high-grade hornblende hornfels facies by the Similkameen and Kruger intrusions.

Quartz veins, 5 to 20 centimetres wide, occur throughout the property but are most concentrated in the dioritic phase of the Kruger intrusion. Orthoclase, epidote and carbonate are also found. Sulphides within these veins include chalcopyrite, pyrite, molybdenite and sparse galena. Malachite staining is locally common. Skarn is locally developed along the contacts of these two intrusions. The skarn consists of grossular garnet, plagioclase, diopside, epidote, and rare scheelite.

The best copper values, taken during a comprehensive exploration program in 1975, were from samples 27420 and 27421. Sample 27420, of aplite and argillite contact rocks, yielded 0.34 per cent copper (Assessment Report 5676). Sample 27421 yielded 0.64 per cent copper from a quartz vein with chalcopyrite (Assessment Report 5676). The best molybdenum value was from sample 27412, yielding 0.012 per cent molybdenum (Assessment Report 5676). The sample was chert taken from near a contact between chert and diorite. The best tungsten value was sample 27362, yielding 0.016 per cent tungsten (Assessment Report 5676).

BIBLIOGRAPHY

EMPR ASS RPT *5676, *7808, 8579, 1097
EMPR GEM 1975-E19
EMPR OF 1989-5; 1991-17
EMPR PF (Memorandum from J.T. Fyles, 1971)
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW135**

NATIONAL MINERAL INVENTORY:

NAME(S): **JUN**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 12 N
LONGITUDE: 119 54 58 W
ELEVATION: 2190 Metres

NORTHING: 5439334
EASTING: 287020

LOCATION ACCURACY: Within 1 KM

COMMENTS: The approximate centre of the former Jun 1 to 12 claims (Exploration in British Columbia 1975, page E20).

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Sphalerite

COMMENTS: Chalcopyrite and sphalerite are assumed from reported copper-zinc mineralization.

ALTERATION TYPE: Skarn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound

CLASSIFICATION: Skarn

TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Old Tom	
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Middle Jurassic			Similkameen Intrusions
Jurassic			Kruger Syenite

LITHOLOGY: Chert
Argillite
Massive Tuff
Skarn
Hornblende Porphyritic Greenstone
Basalt
Amphibolite
Intrusive Breccia
Hornblende Diorite
Porphyritic Monzonite

HOSTROCK COMMENTS: The Shoemaker and Old Tom formations are of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Okanagan

METAMORPHIC TYPE: Regional Contact

Plutonic Rocks

RELATIONSHIP: Pre-mineralization
Syn-mineralization

PHYSIOGRAPHIC AREA: Thompson Plateau

GRADE: Greenschist
Hornfels

CAPSULE GEOLOGY

The Jun showing is located at 2190 metres elevation, 4 kilometres northwest of Snowy Mountain, 16 kilometres to the southwest of Keremeos, British Columbia.

Regionally, the Jun showing is underlain by argillite and chert of the Carboniferous to Triassic Shoemaker Formation and overlying greenstone, breccia and intrusions of the Carboniferous to Triassic Old Tom Formation. These have been intruded by the Middle Jurassic Similkameen and Jurassic Kruger intrusions.

Locally, the Old Tom Formation was subdivided texturally into massive tuff or basalt, hornblende porphyroblastic greenstone and amphibolite. The Kruger intrusion consists predominantly of a dioritic phase at the Jun showing but lesser porphyritic monzonite is also found. The above rock types are intruded by numerous pegmatite, micropegmatite and microdiorite dikes. Surrounding country rocks have deformed and thermally metamorphosed up to high-grade hornblende hornfels facies by the Similkameen and Kruger intrusions.

The showing was staked and explored briefly during 1975 by Canadian Occidental Petroleum Ltd. The exploration program consisted of geological mapping and rock, soil and stream sediment geochemical sampling.

CAPSULE GEOLOGY

Hostrocks are mainly cherts, argillite and greenstone of the Shoemaker and Old Tom formations. Thermal contact metamorphism from intrusion of the Similkameen and Kruger intrusions has produced a hornfelsed aureole up to 300 metres wide. Pyrite and copper-zinc mineralization was discovered in greenstone and skarn lenses.

BIBLIOGRAPHY

EMPR EXPL *1975-E20
EMPR OF 1989-5; 1991-17
EMPR BULL 101, p. 213
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

side of West Kettle River. The occurrence is currently held by Apollo Development Inc. as the Y claim group.

There are old workings at and surrounding the Doorn occurrence including eight small adits with winzes, opencuts and trenches. These workings were driven prior to 1960 at four locations to crosscut and drift along shear-hosted quartz veins. Exact locations for the adits and trenches can be found using Assessment Report 9557, Figure 2.

These workings are likely the Midnight Group, which is described in Minister of Mines Annual Report 1938, page 36. At this time, a 37-metre adit was driven and W.T. Hayes shipped 2 tonnes of ore, yielding 62 grams of gold, 871 grams of silver and 67 kilograms of lead.

In 1975, a localized magnetic geophysical and geological mapping exploration program was conducted by Argentia Mines Ltd. over the trenched area on the Doorn claims on the north side of Logan Creek. From 1980 to 1981, Mahogany Mining Company Ltd. completed exploration on the ground covering the Doorn occurrence, held as the Dell claims, and then as the Wye claims. Exploration by Mahogany revealed several geochemical soil and geophysical electromagnetic anomalies on the north and south sides of Logan Creek. Geochemical soil anomalies were erratic with highs of 41,000 ppm lead, 2290 ppm zinc, 5.8 ppm silver and 127 ppm copper (Assessment Report 20849). In 1997, St. Elias Mines Ltd. held the area as the Dad E claim and conducted sampling of T1 Trench and Cabin Adits (George Cross Newsletter #152 (Aug.8), 1997).

The Doorn occurrence is underlain by granodiorite, quartz diorite, diorite, quartz monzonite and monzonite of the Middle Jurassic Nelson intrusions and Cretaceous to Tertiary Okanagan batholith. Three kilometres to the north these rocks are intruded by a one to two kilometre diameter stock of Eocene Coryell monzonite. Approximately 5 kilometres to the east is a small pendant of Carboniferous to Permian metasedimentary and metavolcanic rocks of the Anarchist Group. Five fault orientations have been found to the east on Wallace Mountain; of which two are important with respect to mineralization. High angle, north striking, normal faults, dipping steeply to the east, divide Wallace Mountain into several large blocks which displace veins. Southwest striking normal faults dip moderately steeply to the northwest have displacements of a few centimetres to several metres. Fault spacing is locally on a metre scale, dividing veins into numerous short sections.

In the west-central and south part of the claim area granodiorite and quartz diorite of the Nelson intrusions have been intruded by quartz monzonite and monzonite of the Okanagan batholith. On the western and southern boundaries of the claims, fine grained, Eocene diorite and aplite dikes intrude the granodioritic country rocks.

Mineralization on the claim is confined to fractures and quartz veins within chloritic and argillic altered shear zones hosted by granodiorite and quartz diorite. Irregular andesite dikes occur within these shear zones. Magnetic highs are related to these andesite dikes. North of Logan Creek trenching has exposed two vein systems. The first trench (T1) exposed up to 3 quartz veins 5 to 90 centimetres wide striking 120 degrees and dipping 60 to 70 degrees south. Minerals within the veins include free gold, galena, chalcopyrite, bornite, sphalerite and bismuth telluride. Malachite staining is frequent within the fracture zone for over 1.2 metres. Several samples from this trench have yielded anomalous gold, silver and copper. The best results were from samples taken in 1975 which yielded 199.88 grams per tonne gold, 997.71 grams per tonne silver and 1.57 per cent copper over 30 centimetres (Assessment Report 5441). The average of 7 chip samples from this trench over an average width of 40 centimetres was 57.99 grams per tonne gold, 329.93 grams per tonne silver and 0.65 per cent copper (Assessment Report 5441).

A second area of trenching 61 to 91 metres west of the main trench has exposed a mineralized shear approximately 1.0 metre wide striking 060 degrees and dipping 70 degrees northwest in weakly altered granodiorite. A composite sample has returned values of 8.9 grams per tonne gold, 70 grams per tonne silver, and 0.87 per cent copper (Assessment Report 5441). A 3-metre continuous chip sample yielded 1.47 grams per tonne gold, 1.71 grams per tonne silver and 0.96 per cent copper (Assessment Report 5441).

On the north side of Logan Creek, mineralized zones in these two trenches, occupies east trending fractures.

The following descriptions occupy northeast fractures with no visible sulphide mineralization or significant gold values (Assessment Report 9557). About 500 metres to the south, two short adits expose a narrow rusty shear zone with quartz veinlets and

CAPSULE GEOLOGY

massive sulphides. The zone is weakly argillic altered. A sample from a 20-centimetre quartz vein yielded 0.91 gram per tonne gold (Assessment Report 20849). There are several northwest trending quartz veins exposed in trenches to the west of these adits.

Another kilometre south, a 150-metre long crosscut exposes over 18 fault-shear zones with associated quartz veins up to 0.3 metre wide. Samples yielded low gold however (Assessment Report 20849). Several winzes in the vicinity intersected highly oxidized structures with quartz veinlets but negligible gold (Assessment Report 20849). A sample from one of these winze collars in 1980 yielded 153.28 grams per tonne silver, 2.48 per cent lead and 5.80 per cent zinc (Assessment Report 8504). Another grab from the winze dump yielded 164.57 grams per tonne silver, 0.51 gram per tonne gold, 3.4 per cent lead and 0.96 per cent copper (Assessment Report 8504).

BIBLIOGRAPHY

EMPR AR 1938-A36,D36
EMPR ASS RPT 4384, 4385, 4851, *5441, *8504, *9557, *20849, 24465
EMPR BC METAL MM00895
EMPR EXPL 1975-22
EMPR GEM 1972-22,42; 1973-47
EMPR INDEX 3-205
EMPR OF 1989-5
EMPR PF (Argentia Mines Ltd. (1972): Report on the Doorn property in Argentia Mines Ltd. (1972): Prospectus)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
CJES 1982, Vol. 19, No. 6, p. 1964
GCNL #63(Apr.2), 1991; #152(Aug.8), 1997

DATE CODED: 1988/11/15
DATE REVISED: 1996/08/15

CODED BY: TBH
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW137**

NATIONAL MINERAL INVENTORY:

NAME(S): **HILLSIDE**

STATUS: Showing
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E04W
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 14 35 N
LONGITUDE: 119 48 54 W
ELEVATION: 0600 Metres

NORTHING: 5458290
EASTING: 295120

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of adits B and C, midway between the eastern claim boundaries of the Juniper Reverted Crown grant (Lot 1604) and Dolphin Crown grant (Lot 978s) (Assessment Report 17300). Former 082ESW137 (Mo) is included with Orofino Mountain (082ESW113).

COMMODITIES: Silver Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Tetrahedrite
COMMENTS: Tetrahedrite has not been positively identified.
A dump contains garnet skarn with chalcopyrite.

ASSOCIATED: Quartz Garnet
ALTERATION: Malachite Azurite Garnet

ALTERATION TYPE: Oxidation Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Stratabound
CLASSIFICATION: Hydrothermal Epigenetic Skarn
TYPE: I06 Cu±Ag quartz veins K01 Cu skarn
COMMENTS: Quartz veins are 3 to 6 centimetres wide.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic Middle Jurassic	Undefined Group	Shoemaker	Unnamed/Unknown Informal

LITHOLOGY: Skarn
Quartzite
Argillite
Hornblende Syenite
Quartz Porphyry Dike

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age. Olalla alkalic complex.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Thompson Plateau

TERRANE: Okanagan

Plutonic Rocks

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

589.7100

Grams per tonne

Gold

11.2100

Grams per tonne

REFERENCE: Assessment Report 22256.

CAPSULE GEOLOGY

The Hillside showing is located 2 kilometres south-southeast of Olalla, British Columbia. It lies near the southern edge of the historic Olalla Gold Camp.

The early history of the Hillside showing is unknown. In 1985, G. Crooker conducted geochemical and geophysical surveys on the Bell and Juniper (Lot 1604) Reverted Crown grants. The following year, prospecting and geological mapping were carried out, during which several old adits were discovered; Adit A on the Juniper Reverted Crown grant (Lot 1604), Adit D to the east of the Juniper Reverted Crown grant and Adits B and C, between the Juniper Reverted Crown grant (Lot 1604) and Dolphin Crown grant (Lot 978s).

The Hillside showing is located near the ultramafic to alkaline

CAPSULE GEOLOGY

Jurassic Olalla intrusion. This intrusion has intruded a sequence of oceanic sediments and volcanics of the Carboniferous to Triassic Shoemaker and Old Tom formations. Black to green chert, light grey quartzite and minor limestone lenses comprise the dominant lithologies. The Shoemaker and Old Tom formations form a broadly folded, east-dipping sequence in the area. The Olalla intrusion consists of a magnetite-bearing pyroxenite peripheral zone to a diorite and syenite core. The pyroxenite is composed primarily of augite with lesser magnetite. Biotite alteration occurs within the pyroxenite. The syenite is fine grained, light grey to buff to pink. Coarse grained syenite dikes occur at the contact with the peripheral pyroxenite zone.

Metasomatic deposits have formed along the contact of the Olalla intrusion with Shoemaker sediments. Mineralization is related to skarns, shearing and quartz veining. Mineralization consists mainly of auriferous and argentiferous pyrite and pyrrotite with minor chalcopyrite, malachite, azurite and tetrahedrite.

The main hostrock underlying the Hillside showing are quartzite and argillite. These rock types have been intruded by hornblende syenite and quartz-eye porphyry dikes and plugs. The showing has been explored by two adits, now caved. A dump at the adits contains garnet skarn with chalcopyrite. In 1988, the highest values obtained from sampling at the Hillside showing was from a 3 to 6 centimetre wide quartz vein near Adits B and C. A sample, containing chalcopyrite and tetrahedrite mineralization with malachite and azurite staining, yielded 11.21 grams per tonne gold and 589.71 grams per tonne silver (Assessment Report 22256). Samples from several other quartz veins at Adits B and C yielded up to 6.79 grams per tonne gold and 589.71 grams per tonne silver (Assessment Report 22256). A dump sample yielded 0.86 gram per tonne gold, 15.43 grams per tonne silver and 2.14 per cent copper (Assessment Report 17300).

BIBLIOGRAPHY

- EMPR ASS RPT 11241, 12088, 12116, 14767, *17300, 19963, *22256
EMPR OF 1989-2; 1989-5
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
Sturdevant, J.A. (1963): Petrography of the Olalla stock, Okanagan Mountains, British Columbia, unpublished M.Sc. Thesis, University of New Mexico

DATE CODED: 1986/10/27
DATE REVISED: 1996/11/30

CODED BY: AFW
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW138**

NATIONAL MINERAL INVENTORY:

NAME(S): **FOB**, RAD, VAC

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04W 092H01E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 00 N
LONGITUDE: 120 00 00 W
ELEVATION: 0740 Metres

NORTHING: 5450317
EASTING: 281320

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of diamond-drill hole 1-3 on the former FOB 2 claim (Assessment Report 6173).

COMMODITIES: Molybdenum Copper Silver Gold

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite
COMMENTS: Chalcopyrite is minor.
ASSOCIATED: Pyrite Albite Magnetite
COMMENTS: Pyrite, albite and magnetite are reported associated.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stockwork
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Old Tom	
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Middle Jurassic			Similkameen Intrusions

LITHOLOGY: Andesitic Tuff
Greenstone
Feldspar Porphyry
Granodiorite

HOSTROCK COMMENTS: The Shoemaker and Old Tom formations are of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional Contact Plutonic Rocks
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization Syn-mineralization
GRADE: Greenschist Hornfels

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1977
SAMPLE TYPE: Drill Core
COMMODITY: Molybdenum GRADE: 0.1200 Per cent
COMMENTS: Drillhole KV #3, sample 830, the 10-metre interval between 20 and 30 metres.
REFERENCE: Assessment Report 6173.

CAPSULE GEOLOGY

The FOB showing is located at 740 metres elevation near the east bank of the Ashnola River (Assessment Report 6173). Keremeos, British Columbia lies 13 kilometres to the east-northeast. The showing was staked and explored in 1976 and 1977 by Consolidated Kalco Valley Mines Ltd. Exploration initially consisted of geological mapping, geochemical soil surveys and magnetometer, electromagnetic and self potential geophysical surveys. This was followed up by three surface diamond-drill holes on the FOB 2 claim, totalling 322 metres. The oldest rock units in the area are Carboniferous to Triassic Old Tom and Shoemaker formations. These consist of chert, argillite, mafic volcanic flows and minor limestone beds. The Old Tom and Shoemaker formations have been intruded by the Middle Jurassic Similkameen intrusive. The composition varies from hornblende diorite to quartz diorite. Intrusive dike swarms have accompanied

CAPSULE GEOLOGY

the Similkameen intrusion. Pervasive regional metamorphism is of upper greenschist to lower amphibolite facies. Superimposed on top of this is a later thermal contact metamorphism.

The showing consists of molybdenite and minor chalcopyrite mineralization hosted in andesitic tuff, greenstone, grey feldspar porphyry dikes and granodiorite.

The best molybdenite values from drilling were from holes KV #1 and KV #3. Drillhole KV #1 yielded 0.10 per cent MoS₂ (0.06 per cent molybdenum) over the 10-metre interval between 480 and 490 metres (Sample 10468) (Assessment Report 6173). From drillhole KV #3, sample 830 yielded 0.21 per cent MoS₂ (0.12 per cent molybdenum) over the 10-metre interval between 20 and 30 metres (Assessment Report 6173). In the same hole, sample 867 yielded 0.19 per cent MoS₂ (0.11 per cent molybdenum) over the 10-metre interval between 240 and 250 metres (Assessment Report 6173).

BIBLIOGRAPHY

EMPR ASS RPT *6173
EMPR GEM *1976-E25; *1977-E23
EMPR OF 1989-5
GSC BULL 239, pp. 137-139
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 448-458; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40
American Journal of Science Vol. 237, pp. 527-549

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW139**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRENT LAKE**, CLARK, BRENT SWAMP,
BRENT FLATS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E05W
BC MAP:
LATITUDE: 49 29 20 N
LONGITUDE: 119 46 04 W
ELEVATION: 0800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing (Assessment Report 7851, Geology Map).

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5485488
EASTING: 299559

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Coal
COMMENTS: High uranium concentrations have been found in conglomerate, greywacke and lignite coal patches.

MINERALIZATION AGE: Recent
ISOTOPIC AGE: 0.001-0.020 Ma DATING METHOD: Uranium/Thorium MATERIAL DATED: Postglacial Sed

DEPOSIT

CHARACTER: Unconsolidated Stratabound
CLASSIFICATION: Sedimentary Syngenetic Epigenetic
TYPE: D04 Basal U B08 Surficial U
COMMENTS: Refer to Canadian Journal of Earth Sciences, Volume. 21, 1984, pages 559-566 for age data.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Undefined Group	Kettle River	
Quaternary			Postglacial Sediments
Middle Jurassic			Okanagan Batholith

LITHOLOGY: Glaciolacustrine Soil
Coal
Granite Boulder Conglomerate
Greywacke

HOSTROCK COMMENTS: The Okanagan batholithic complex is Middle Jurassic.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Overlap Assemblage Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1979
SAMPLE TYPE: Drill Core
COMMODITY: Uranium GRADE: 0.0400 Per cent
COMMENTS: The maximum over a 0.5-metre interval.
REFERENCE: Geological Survey of Canada Open File 551.

CAPSULE GEOLOGY

The Brent Lake young uranium occurrence lies about 13 kilometres west of Penticton, British Columbia. This occurrence, consisting of the Brent Swamp and Brent Flat areas, lies near the northwest end of a 2-kilometre northwest trending area of erratic uranium and thorium occurrences. The Brent Lake young uranium occurrence was examined in 1979 by D.G. Leighton as a follow-up to uranium anomalies discovered during reconnaissance geological, geochemical and prospecting in 1977 and 1978 on the Clark claims.

Regionally, the area is principally underlain by medium grained intrusive rocks of the Middle Jurassic Okanagan batholithic complex and Middle Jurassic Bromley batholith. The Okanagan batholithic complex consists primarily of biotite granite and granodiorite, locally porphyritic. The Bromley batholith consists of hornblende biotite granodiorite, quartz diorite and granite. Both are massive, light grey weathering, medium to coarse grained and equigranular. To

CAPSULE GEOLOGY

the south, these intrusive rocks cut Carboniferous to Permian Kobau Group metasedimentary rocks and to the west cut Triassic rocks of the Shoemaker Formation, Old Tom Formation, Independence Formation, Nicola Group and other volcanic rocks. On its northern margin, the intrusive mass is in contact with an overlying assemblage of Eocene volcanics and sediments of Penticton Group. The Kettle River Formation, consisting of granite boulder conglomerate, arkose, volcanic wacke and rhyolite breccia, is overlain by volcanics of the Springbrook and Marron formations.

Bedrock types at the Brent Lake uranium occurrence include granite boulder conglomerate, arkose, volcanic wacke and rhyolite breccia of the Kettle River Formation occurring as outliers within a stock of the Okanagan batholithic complex.

The Brent Swamp area of the Brent Lake occurrence covers about 31,200 square metres and has been classified as a fluvial-type young uranium occurrence (IAEA TECDOC 332, Table 1). Deposition is controlled by groundwater flow and organic sequestration of uranium in a swamp. The occurrence is characterized by uranium concentrations generally at the bottom of organic profiles (IAEA TECDOC 332, Table 1). Four augerholes have defined a layer of radioactive sediments 3-metres thick at an average depth of 2.2 metres depth. The average uranium value obtained was 0.018 per cent with a maximum of 0.05 per cent uranium over a 0.5-metre interval (Geological Survey of Canada Open File 551).

The Brent Flats area of the Brent Lake occurrence covers about 17,000 square metres. Four augerholes in the flats have defined a layer of radioactive sediments 1-metre thick layer at an average depth of 0.8 metre. The average uranium value obtained was 0.020 per cent with a maximum of 0.038 per cent uranium over a 0.5-metre interval (Geological Survey of Canada Open File 551).

Radioactive paleochannels and uranium-rich coal seams have been identified in the area. Five small patches of strongly radioactive (to 9000 counts per second) coal occur within conglomerate and greywacke on the west side of Farleigh Creek (Assessment Report 7851). Selected grab samples assayed up to 1.5 per cent uranium (Assessment Report 7851). The coal is low-grade lignite. It is not developed in seams but only as isolated fragments within the matrix of the clastic beds. The uranium in the coal is likely the result of adsorption or local reduction by the organic material from uranium in groundwater.

About 300 metres to the northwest, a 10-metre zone of radioactive soil (300 counts per second) overlying green pebbly sandstone occurs along the same horizon as the radioactive coal.

BIBLIOGRAPHY

- EMPR ASS RPT 6360, 6504, 6532, 6657, 6949, 7095, 7185, 7398, 7670, *7851
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, p. 17,246-259
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32, p. 13
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC *322 Surficial Uranium Deposits, Vienna, 1984, pp. 179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36, 183-184
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as Observed in the Natural Environment in British Columbia, Royal Commission on Uranium Mining, Accession List 2017S, 15 pages with Appendices
Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology Reviews Vol. 3, pp. 313-330

DATE CODED: 1987/03/17
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW140**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPOTTED LAKE**

STATUS: Past Producer Open Pit

MINING DIVISION: Osoyoos

REGIONS: British Columbia

NTS MAP: 082E04E

BC MAP:

LATITUDE: 49 04 43 N

LONGITUDE: 119 34 00 W

ELEVATION: 0580 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5439368

EASTING: 312572

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate centre of Spotted Lake (National Topographic System 82E/4).

COMMODITIES: Magnesium Sulphate Sodium Carbonate

MINERALS

SIGNIFICANT: Unknown

COMMENTS: Hydrous magnesium, sodium and calcium salts.

ASSOCIATED: Gypsum

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive

CLASSIFICATION: Sedimentary Industrial Min.

TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Paleozoic
Middle Jurassic

GROUP

Kobau

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Similkameen Intrusions

LITHOLOGY: Schist
Chlorite Schist
Quartzite
Amphibolite
Marble

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

Plutonic Rocks

RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Thompson Plateau

GRADE: Greenschist

INVENTORY

ORE ZONE: AREA

REPORT ON: Y

CATEGORY: Inferred

YEAR: 1940

QUANTITY: 11797 Tonnes

COMMODITY

GRADE

Sodium Carbonate

0.5200

Per cent

COMMENTS: The grade is an average of 5 sample analyses.

REFERENCE: Bulletin 4 (1940), pages 53,55.

ORE ZONE: LAKE

REPORT ON: Y

CATEGORY: Inferred

YEAR: 1938

QUANTITY: 33475 Tonnes

COMMODITY

GRADE

Magnesium Sulphate

47.2400

Per cent

COMMENTS: The grade is the average of 5 sample analyses.

REFERENCE: Bulletin 4 (1940), pages 53,55.

CAPSULE GEOLOGY

The Spotted Lake occurrence occurs in Spotted Lake near Richter Pass, located 9.8 kilometres from Osoyoos, British Columbia.

The showing is underlain by metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. Schist, chlorite schist, quartzite, amphibolite and minor limestone comprise major lithologies of the Kobau Group. To the immediate south, granite and granodiorite of the Similkameen intrusions intrude the Kobau Group.

Spotted Lake covers approximately 8 hectares. When examined in 1938, the lake was covered with 15 to 20 centimetres of brine. The brine crystals form a bowl-like shape covering 50 to 6 per cent of

CAPSULE GEOLOGY

the lake. The bowl-like shapes are 6 to 24 metres diameter, averaging 1.07 metres depth. The encircling mud rings are raised 10 to 46 centimetres above the crystal level, containing gypsum. The mud was determined to contain 70 to 80 per cent calcium sulphate. The following table summarizes analytical results of 5 surface samples from bowls. Sample 6 was analysed from mined surface crystals containing 40.26 per cent water but recalculated to a 100 water free basis (Bulletin 4 (1940), page 53).

	1	2	3	4	5	6
MgSO4	50.02	44.67	47.25	47.04	47.21	57.58
Na2SO4	48.08	53.80	51.16	51.67	46.62	42.38
NaHCO3	0.49	0.57	0.56	0.48	0.50	
Na2CO3				tr		
NaCl	0.17	0.22	0.15	0.14	0.22	
CaSO4	0.70	0.28	0.70	0.41	3.11	
Insol	0.36	0.46	0.18	0.26	2.44	
Alkalinity						nil
Cl						trace

The lake was estimated to contain 45,272 tonnes of hydrous salts of magnesium and sodium with 11,797 tonnes of sodium carbonate salts (Bulletin 4 (1940), page 55).

Records indicate 1361 tonnes of crystal (magnesium sulphite) were shipped by Stewart-Calvert Co. Ltd. from the Spotted Lake showing between 1915 and 1919 and shipped to Oroville, Washington for refining and sale (Bulletin 4 (1940), page 53).

BIBLIOGRAPHY

EMPR AR 1915-28,202,446; 1916-260,524; 1917-206,215;
1918-26,203,213; 1919-169
EMPR BULL *4 (1940), pp. 51-53,55
EMPR BC METAL (Industrial Mineral (Magnesite) production fiche)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW141**

NATIONAL MINERAL INVENTORY:

NAME(S): **CONTACT LAKE**, OLI, CORNERPOST POOL

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 05 N
LONGITUDE: 119 34 46 W
ELEVATION: 530 Metres

NORTHING: 5451194
EASTING: 312041

LOCATION ACCURACY: Within 500M

COMMENTS: Contact Lake (Assessment Report 6949, Figure 6).

COMMODITIES: Uranium Thorium

MINERALS

SIGNIFICANT: Zircon Thorite
COMMENTS: No uranium minerals have been identified in unconsolidated surficial sediments.

ASSOCIATED: Biotite
MINERALIZATION AGE: Recent

ISOTOPIC AGE: 0.001-0.020 Ma DATING METHOD: Uranium/Thorium MATERIAL DATED: Postglacial Sed

DEPOSIT

CHARACTER: Unconsolidated Vein Disseminated
CLASSIFICATION: Sedimentary Syngenetic
TYPE: B08 Surficial U
COMMENTS: Refer to Canadian Journal of Earth Sciences Volume 21, 1984, pages 559-566 for age data.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u> Upper Paleozoic Jurassic	<u>GROUP</u> Kobau	<u>FORMATION</u> Undefined Formation	<u>IGNEOUS/METAMORPHIC/OTHER</u> Oliver Plutonic Complex
ISOTOPIC AGE: 152 +/-3 Ma	DATING METHOD: Uranium/Lead		
MATERIAL DATED: Zircon			
Quaternary			Postglacial Sediments

LITHOLOGY: Soil
Glaciolacustrine Sediment/Sedimentary
Porphyritic Quartz Monzonite
Quartzite
Limestone

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.
The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1977
SAMPLE TYPE: Grab
COMMODITY GRADE
Thorium 0.0500 Per cent
Uranium 0.0100 Per cent

REFERENCE: Assessment Report 6949.

CAPSULE GEOLOGY

The Contact Lake uranium occurrence lies about 2 kilometres west-northwest of Oliver, British Columbia and 1.5 kilometres south of the former Standard mine (082ESW091).

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of Penticton Group. The Kettle River Formation, consisting of conglomerate, arkose and rhyolite tuff, is overlain by the Springbrook and Marron formations.

Bedrock types surrounding Contact Lake include laminated quartz

CAPSULE GEOLOGY

schist or dirty quartzite, massive and laminated quartzite and minor limestone of the Kobau Group. In the Contact Lake area, the Oliver plutonic complex is composed almost entirely of biotite-hornblende quartz monzonite. The southern contact is approximately 200 metres to the north of Contact lake. Three distinct phases have been identified. From youngest to oldest these are: a central core of massive medium-grained garnet-muscovite quartz monzonite which is surrounded by porphyritic biotite quartz monzonite to the south and biotite-hornblende quartz monzonite north of the core. Hornblende diorite occurs in several small areas to the north. Border phases and dikes related to the Oliver plutonic complex include lamprophyre, augite-plagioclase porphyritic andesite, micro-quartz diorite, albite porphyritic dacite, diabase, fine-grained quartz monzonite and aplite.

Several irregular masses of fine-grained quartz monzonite occur in the metasediments along a northwest trend for about 1.5 kilometres. Thin sections of the rock show many minute subhedral inclusions of zircon (thorite) in biotite, which form pleochroic haloes due to radioactive emanations. Scintillometer readings are up to 750 counts per second and sampling yielded up to 0.05 per cent thorium and 0.01 per cent uranium (Assessment Report 6949). Some aplite dikes are rich in thorium and high in uranium.

Irregular zones of radioactivity occur in the limestone near the contact. Scintillometer readings on a SPP2 NF are up to 700 counts per second (background 70 counts per second) and a sample analysed 0.01 per cent uranium (Assessment Report 6949).

The Contact Lake occurrence, covering about 3800 square metres of uranium enrichment, has been classified as a lacustrine/playa-type young uranium occurrence (IAEA TECDOC 332, Table 1). The depositional environment of uranium is a cyclically closed basin, controlled by topography and evaporation. The occurrence is characterized by alkaline conditions, interlayered clays and organics and occasional hydrogen sulphide gas (IAEA TECDOC 332, Table 1).

One augerhole into a 6.5-metre thick surficial layer averaged 0.0304 per cent uranium, with a 0.5-metre thickness averaging 0.0552 per cent uranium (Culbert, R.R., 1979).

BIBLIOGRAPHY

- EMPR ASS RPT 6532, 6657, 6750, *6949, 7095, 7185, 7398, 7670
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, p. 17,246-259
1988, pp. 19-25
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC 322 *Surficial Uranium Deposits, Vienna, 1984, pp. 179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36, 183-184
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as Observed in the Natural Environment in British Columbia, Royal Commission on Uranium Mining, Accession List 2017S, 15 pages with Appendices
Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology Reviews Vol. 3, pp. 313-330

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW142**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPIRE**, MAC 1-2, PLEX 1-2

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E06W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 27 13 N
LONGITUDE: 119 15 28 W
ELEVATION: 1250 Metres

NORTHING: 5480334
EASTING: 336372

LOCATION ACCURACY: Within 500M

COMMENTS: The location of a polymetallic quartz vein (Assessment Report 20475).

COMMODITIES: Silver Gold Copper Lead Zinc
Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Galena

ASSOCIATED: Quartz

ALTERATION: Chlorite Epidote Malachite Azurite

COMMENTS: Malachite and azurite are associated with disseminated porphyry mineralization.

ALTERATION TYPE: Propylitic Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Disseminated
CLASSIFICATION: Epigenetic Hydrothermal Porphyry

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au L04 Porphyry Cu ± Mo ± Au

DIMENSION: 30 Metres STRIKE/DIP: 260/60N TREND/PLUNGE: /

COMMENTS: The 30 to 75 centimetre wide polymetallic vein strikes 260 to 270 degrees and dips 60 to 70 degrees northwest. Porphyry-style copper mineralization covers an area 600 by 400 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP
Eocene Penticton
Middle Jurassic
Cretaceous-Tertiary

FORMATION
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER
Nelson Intrusions
Okanagan Batholith

LITHOLOGY: Granodiorite
Granite
Andesite Flow
Basalt Flow
Volcanic Breccia
Sandstone
Quartzite
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Plutonic Rocks

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

Okanagan

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1990

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

41.5000

Grams per tonne

Copper

1.2100

Per cent

COMMENTS: Grab sample 652.

REFERENCE: Assessment Report 20475.

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1990

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver	3.0000	Grams per tonne
Copper	0.4400	Per cent
Lead	0.1200	Per cent
Zinc	1.4500	Per cent

COMMENTS: Grab sample 654.

REFERENCE: Assessment Report 20475.

CAPSULE GEOLOGY

The Spire occurrence is located on the south side of Saunier Creek, 16 kilometres west of Beaverdell.

The occurrence is located on the Mac 1 and 2 claims, currently owned by E.W. Johnson. The claims were first staked as the Spire claims in the late 1970s by T.J. Fraser. Hand trenching was conducted on quartz veins carrying copper, molybdenum, silver and gold. Several other abandoned pits (circa 1930) have since been discovered. In 1977, the ground was staked as the Mac 1 and 2 claims by H.M. Jones and explored for uranium mineralization, based on anomalous uranium in water samples collected during a regional survey by the Geological Survey of Canada.

The Spire occurrence is underlain by granodiorite and granite of the Middle Jurassic Nelson intrusions. Minor chlorite and epidote alteration has occurred in these intrusions. To the east, small outliers of Eocene Penticton Group volcanics outcrop within Nelson intrusions. Volcanics consist of andesite and basalt flows and breccias. In places flows are vesicular and filled with zeolite amygdules. Minor sandstone, quartzite and limestone also occurs. The Nelson intrusions are in contact with the Cretaceous to Tertiary Okanagan batholith to the east.

Two mineralization styles are present in the Spire intrusive hostrocks; mineralized polymetallic quartz veins and disseminated porphyry-style copper(±molybdenum) mineralization.

A new polymetallic quartz vein has been discovered at 1250 metres elevation, south of Saunier Creek. Hand trenching in 1990 has uncovered a 30 to 75 centimetre wide quartz vein which strikes 260 to 270 degrees and dips 60 to 70 degrees northwest. The veins have been traced intermittently over 30 metres. The footwall of the vein is faulted as evidenced by slickensides. A fault gouge also occurs along the hangingwall.

Little information has been found with respect to the vein mineralogy but samples taken from the vein have returned significant precious and base metals assay values. Sample 651, a grab sample with galena yielded 1.54 grams per tonne silver, 31.3 per cent lead and 0.24 per cent zinc. Another grab (Sample 654) yielded 3.0 grams per tonne silver, 0.44 per cent copper, 0.12 per cent lead and 1.45 per cent zinc. Sample 655, a 30-centimetre chip sample, yielded 43 grams per tonne silver and 1.67 per cent lead.

Eight-hundred metres to the west, copper-porphyry mineralization has been found covering an area 600 by 400 metres. Mineralization consists of blebs and narrow stringers of chalcopyrite with malachite and azurite alteration. Grab sample 652 yielded 41.5 grams per tonne silver and 1.21 per cent copper (Assessment Report 20475).

BIBLIOGRAPHY

EMPR ASS RPT 6626, *20475
EMPR GEM 1977-E26
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW143**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOUGH OAKS**, BWINABY, GLYNNEHILL,
GOLDEN TOAD, CREEK, WHEELBARROW,
SITTING ROCK, BLACKSMITH

STATUS: Showing
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 49 27 07 N
LONGITUDE: 119 58 03 W
ELEVATION: 1720 Metres

NORTHING: 5481932
EASTING: 284935

LOCATION ACCURACY: Within 500M
COMMENTS: The location of the Creek showing, on the southern banks of Broken
Creek (Assessment Report 9780).

COMMODITIES: Gold Silver Copper Tungsten

MINERALS

SIGNIFICANT: Tetrahedrite Arsenopyrite Chalcopyrite Pyrrhotite
ASSOCIATED: Quartz Pyrite
COMMENTS: Garnet and dark calcsilicate minerals occur at the Sitting Rock
showing.

ALTERATION: Silica Garnet
ALTERATION TYPE: Silicific'n Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Hydrothermal Epigenetic Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au K01 Cu skarn
K05 W skarn

DIMENSION: 1 Metres STRIKE/DIP: 050/90 TREND/PLUNGE:
COMMENTS: At the Creek showing, a silicified zone is 1-metre wide, with
individual veins up to 2 centimetres wide. The zone strikes 050
degrees and dips vertical.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Nicola	Undefined Formation	
Jurassic			Okanagan Intrusions
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Quartzite
Chert
Argillite
Limestone
Fine Grained Hornblende Biotite Granite
Coarse Grained Granite
Siltstone
Diorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Okanagan Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Silver 2.5700 Grams per tonne
Gold 0.6800 Grams per tonne
COMMENTS: A 1-metre intersection from drillhole 81-4 on the Wheelbarrow
showing.
REFERENCE: Assessment Report 9780.

CAPSULE GEOLOGY

The Tough Oaks occurrence is located on Broken Creek and
consists of two principal showings; the Creek and Wheelbarrow.
The occurrence is about 17.5 kilometres from Hedley, British
Columbia.

CAPSULE GEOLOGY

Former work on the Tough Oaks property consists of trenching and blasting on various mineral showings. Umex carried out a geochemical soil survey over the Wheelbarrow showing. In 1980, Tricor Resources Ltd. carried out geophysical surveys. Diamond drilling was conducted in 1981.

Hostrocks of the Tough Oaks occurrence are limestone, quartzite and minor altered andesite tuff comprising a 1.62 by 6.5 kilometre roof pendant of Triassic Nicola Group. These are intruded by fine grained, biotite hornblende granite of the Jurassic Okanagan intrusions and to the south by a coarse grained, pink granite of the Middle Jurassic Nelson Plutonic Suite. The pink granite appears to be older than the fine-grained granite. These are cut by late granite porphyry dikes.

Mineralization consists of pyrite and arsenopyrite in quartz and ore silicified zones in Nicola Group rocks. At the Creek showing, a pit west and adjacent to Broken Creek has exposed a 1-metre wide zone of discontinuous and irregular quartz veins, less than 2 centimetres wide and about 15 centimetres apart. The zone strikes 050 degrees and dips vertically in grey to reddish quartzite. Occasional blebs of tetrahedrite and rare disseminations of arsenopyrite comprise sulphides. A select sample of quartz yielded 0.34 gram per tonne silver and 0.03 gram per tonne gold (Assessment Report 9780). Two drillholes on the Creek showing failed to intersect significant mineralization.

The Wheelbarrow showing appears to be on strike, 250 metres to the southwest of the Creek showing. A siliceous zone contains quartz veins, strikes 060 degrees and dips 80 degrees southeast in black quartzite and chert with silicified argillite. The zone contains fine-grained stringers of pyrrhotite and rare disseminated arsenopyrite. A 2-metre chip sample yielded 1.03 grams per tonne silver and 1.56 grams per tonne gold (Assessment Report 9780). Drillhole 81-4 intersected 2.57 grams per tonne gold, 0.68 gram per tonne silver and 0.01 per cent copper over 1 metre (Assessment Report 9780).

Other showings in the vicinity include the Sitting Rock showing, east of the Creek showing, a skarn zone occurring at the contact between calcareous units and coarse limestone. The skarn is composed of dark brown calcsilicate minerals and garnet with blebs of chalcopryrite. A sample of skarn yielded 0.01 per cent copper, 0.14 gram per tonne gold and 0.48 per cent tungsten (Assessment Report 9780). The Blacksmith showing is located east of the Creek showing and north-northeast of the Sitting Rock showing. A number of open pits, trenches and adit have exposed a silicified zone in siltstone, cherts and diorite dikes. The best sample yielded 5.48 grams per tonne gold (Assessment Report 9780)

BIBLIOGRAPHY

EMPR ASS RPT 6091, 8736, *9780, 24435
EMPR GEM 1977-E26
EMPR OF 1991-17
GSC MAP 4A; 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 72-53
GCNL #99, 1981

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW144**

NATIONAL MINERAL INVENTORY:

NAME(S): **EK, BRIDESVILLE, KUHN,**
AU 4, FLINT, LIS 1

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

MINING DIVISION: Greenwood

LATITUDE: 49 00 40 N
LONGITUDE: 119 06 04 W
ELEVATION: 1250 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5430818
EASTING: 346358

LOCATION ACCURACY: Within 500M

COMMENTS: The location of samples taken by the Geological Survey Branch in 1982 (Fieldwork 1982, page 5).

COMMODITIES: Silica

MINERALS

SIGNIFICANT: Silica
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R07 Silica sandstone

DIMENSION: 200 x 100 Metres STRIKE/DIP: 315/30E

COMMENTS: The general strike of Anarchist rocks is northwest to west and dip 30 to 45 degrees east. Fine grained quartzite knolls cover an area 200 by 100 metres.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	

LITHOLOGY: Quartzite
Phyllitic Slate
Volcanic Rock

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The EK occurrence is located at 1250 metres elevation, 5 kilometres southeast of Bridesville, British Columbia.

The oldest rocks in the vicinity of the EK occurrence belong to the Permian to Carboniferous Kobau and Anarchist groups. Amphibolite, greenstone, quartzite, chert, chlorite schist and minor marble comprise the Kobau Group and amphibolite, greenstone, quartz chlorite schist, quartz biotite schist and minor serpentinitized peridotite comprise lithologies of the Anarchist Group. Penticton Group lithologies outcrop to the east while Middle Jurassic porphyritic granite, granodiorite and monzonite intrusions are found to the immediate north. Smaller plugs, dikes and sills of biotite granodiorite, quartz diorite and granite of Middle Jurassic to Cretaceous age intrude the Anarchist Group rocks.

The area is mainly underlain by schists and volcanic rocks of the Anarchist Group. The general trend of the units is northwest to west, with dips of 30 to 55 degrees to the northeast. Very fine grained quartzite crops out in an en echelon series over several small knolls covering an area about 200 by 100 metres. The surrounding rocks are mainly phyllitic slate, however, siliceous bands and, less commonly, fine grained, massive, greenish grey volcanic rocks are also present.

Some diamond drilling was done on the occurrence in 1966 and 1967. Quartz from a 28-metre diamond-drill hole was analysed. A 20 metre core sample yielded 99.5 per cent SiO₂ with some erratic iron, calcium and aluminum. Two chip samples collected by the Geological Survey Branch in 1982 yielded 99.0 and 99.9 weight per cent silica (Open File 1987-15, page 22).

ProAm Explorations Corp. drilled the property in 1999.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1149
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *6227
EMPR FIELDWORK *1982, p. 196
EMPR OF *1987-15, p. 22
GSC MAP 84A; 538A; 539A; 15-1961; 1505A; 1736A
GSC MEM 38, pp. 389-423
GSC OF 1969
GCNL #169(Sept.3), 1991
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/22

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW145**

NATIONAL MINERAL INVENTORY: 082E6 Ag4

NAME(S): **HIGHLAND CHIEF (L.2345)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 26 04 N
LONGITUDE: 119 03 22 W
ELEVATION: 1463 Metres

NORTHING: 5477785
EASTING: 350928

LOCATION ACCURACY: Within 500M

COMMENTS: Portal, 2.25 kilometres west-northwest from the summit of Mount Wallace, 2.0 kilometres east of the village of Beaverdell (Geology 1975, Figure G-17).

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Arsenopyrite Chalcopyrite

ASSOCIATED: Silver

QUARTZ: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Carboniferous
Jurassic

GROUP

Anarchist

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Westkettle Batholith

LITHOLOGY: Meta Volcanic Rock
Meta Sediment/Sedimentary Rock
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Quesnel

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1926

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver	1371.2000	Grams per tonne
Gold	0.7000	Grams per tonne
Lead	12.0000	Per cent
Zinc	15.0000	Per cent

COMMENTS: Sample from tunnel ore material.

REFERENCE: Minister of Mines Annual Report 1926, page A208.

CAPSULE GEOLOGY

The Highland Chief past producer is located 2.25 kilometres west-northwest of the summit of Mount Wallace and 2.00 kilometres east of Beaverdell, British Columbia (Geology 1975, Figure G-17).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040) and Bell (082ESW030), with numerous other small workings throughout the area.

The first recorded work on the Highland Chief occurred in 1920 when E. Maloney developed a small silver-lead vein by a short tunnel. By the end of 1921, Maloney had driven the tunnel 6 metres along a high-grade silver-lead vein. Maloney deceased in 1923 and in 1925 the property was acquired by M. Smith and associates, who formed the Highland Chief Mining Co. Numerous opencuts and short adits were driven in the following year. Development work consisted of about 148 metres of drifting, 188 metres of crosscutting, 25 metres of raising and 79 metres of surface trenching and opencuts. The

CAPSULE GEOLOGY

majority of this work occurred between 1938 and 1941. The property was optioned to Highland-Bell Ltd. in 1949, owner of the Beaverdell mine. In 1970, ownership was transferred to Teck Corp. The Beaverdell mine operated until 1991.

The Highland Chief claim (Lot 2345) adjoins the Beaverdell mine (082ESW030) on the northeast. Mineralized quartz vein structures occur in a fault/shear zone at or near the contact of Wallace Formation metavolcanic and metasedimentary rocks which overlies Westkettle granodiorite, estimated to lie 91 metres vertically below.

Mineralization is found in quartz veins in metamorphosed Wallace Formation rocks and occurs as low-grade segregations or as stringer-type mineralization 5 to 10 centimetres in width. The mineralization consists of galena, sphalerite, pyrite, arsenopyrite, chalcopyrite and occasional films of native silver in a gangue of mainly quartz. The mineralized structures tend to horsetail and disperse within the Wallace Formation. The veins and hostrocks are intensely brecciated and fractured. A picked sample of ore-grade material from the Blacksmith tunnel in 1926 yielded 1371.2 grams per tonne silver, 0.7 gram per tonne gold, 12 per cent lead and 15 per cent zinc (Minister of Mines Annual Report 1916, page A208).

Recorded production from the Highland Chief was 13 tonnes mined in 1922, 1938, 1939 and 1941. Recovery included 72,252 grams of silver, 836 kilograms of lead and 797 kilograms of zinc.

For a detailed description of the geology and mineralization of the area refer to the Beaverdell (082ESW030).

BIBLIOGRAPHY

EMPR AR 1903-H247; 1920-N155,N156; 1921-G185; 1925-A207; *1926-A208;
1934-D9; 1938-A34,D40; 1939-A36,A94; 1940-A79; 1941-A25,A74;
*1949-A138-A143,A145

EMPR INDEX 3-199

EMPR BC METAL MM00867

EMPR GEOLOGY *1975, Fig. G-17

EMPR OF 1989-5

GSC MAP 538A; 539A; 37-21; 15-1961; 1736A

GSC MEM 79

GSC OF 481; 637; 1505A; 1565; 1969

GSC P 37-21

CJES *Vol. 19, No. 6, pp. 1264-1274, 1984

*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW146**

NATIONAL MINERAL INVENTORY:

NAME(S): **OLYMPIC**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 27 39 N
LONGITUDE: 119 06 14 W
ELEVATION: 0822 Metres

NORTHING: 5480814
EASTING: 347546

LOCATION ACCURACY: Within 500M

COMMENTS: Tha location of old abandoned workings on the Olympic claim (Assessment Report 17921).

COMMODITIES: Silver

MINERALS

SIGNIFICANT: Unknown

COMMENTS: Pyrite, galena, sphalerite and chalcopryrite occur 500 metres to the west at the Lucky Boy (082ESW152) occurrence.

ALTERATION: Chlorite Sericite

ALTERATION TYPE: Chloritic Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 9 Metres

STRIKE/DIP: 080/65S

TREND/PLUNGE:

COMMENTS: A shear zone exposed in an adit has been sampled over 9 metres. The shear zone strikes 080 degrees, dips 65 degrees south and varies from 20 to 30 centimetres width.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith

LITHOLOGY: Granodiorite
Greenstone
Quartzite
Limestone
Para Gneiss

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

48.3400 Grams per tonne

COMMENTS: The average silver grade of 19 chip samples over 9 metres length and 30 centimetres average width.

REFERENCE: Assessment Report 17921.

CAPSULE GEOLOGY

The Olympic prospect is located at about 822 metres elevation on the eastern slopes of Cranberry Ridge, 3 kilometres northwest of Beaverdell, British Columbia. The Lucky Boy occurrence (082ESW152) is located about 500 metres west on the Lucky Boy claim group Crown grants.

The only record of exploration or development work on the Olympic claim was in 1935 and 1936. By this time exploratory and development work had been carried out periodically. A second shaft was reported sunk in 1936 by L. Clery.

The hostrocks underlying Cranberry Ridge, immediately west of Beaverdell, are similar to that underlying Mount Wallace to the west. Granodiorite of the Jurassic Westkettle batholith, grading to quartz diorite and diorite, underlies most of Cranberry Ridge. To the immediate north, the Westkettle batholith has intruded Permian

CAPSULE GEOLOGY

Wallace Formation metavolcanics and metasediments, now present as roof pendants. Lithologies include greenstone, quartzite, greywacke, limestone and local paragneiss. Younger Eocene intrusions of granite to granodiorite or quartz monzonite to syenite composition and associated dikes have intruded both Westkettle granodiorite and Wallace Formation rocks.

An abandoned adit of unknown depth and a dump were discovered on the Olympic claim in 1986. Subsequent exploration has located a trench and a 9-metre adit following a bearing of 260 degrees. The adit follows a 20 to 30 centimetre wide shear zone striking 080 degrees and dipping 65 degrees south. The hostrock is medium-grained granodiorite. Adjacent to the shear zone mafic minerals are strongly chlorite altered and feldspar minerals to sericite.

Two chip samples across a shear zone in the adit and one dump sample were taken in 1986. The 30-centimetre chip sample across the shear zone in the adit yielded 34.2 grams per tonne silver and trace gold (Assessment Report 17921). In 1988, 25 samples were taken from the Olympic adit. Nineteen chip samples were taken over a length of 9.0 metres and an average width of 30 centimetres. The average silver grade was 48.34 grams per tonne silver with Sample R-72 yielding a high of 231.77 grams per tonne silver (Assessment Report 17921).

BIBLIOGRAPHY

EMPR AR 1935-G52; *1936-D57
EMPR ASS RPT *17921
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW147**

NATIONAL MINERAL INVENTORY: 082E6 Au3

NAME(S): **NIPPER, JUBILEE, SILVER CABLE,
RADIO, NIPPER GROUP, DALE,
DOLLAR CAMP**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:
LATITUDE: 49 27 44 N
LONGITUDE: 119 07 27 W
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The approximate location of the Nipper showing (Geological Survey of Canada Map 539A, #69).

Underground
MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5481010
EASTING: 346081

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite
ASSOCIATED: Quartz
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 2 Metres STRIKE/DIP: 045/
COMMENTS: On the Nipper claim, a 15-centimetre wide quartz vein is hosted in a 61-centimetre wide shear zone which strikes 045 degrees.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Anarchist	Wallace	
Jurassic			Westkettle Batholith
Quaternary			Glacial/Fluvial Gravels

LITHOLOGY: Granodiorite
Quartz Diorite
Schist

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

Harper Ranch
RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Okanagan Highland
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1925
SAMPLE TYPE: Unknown
COMMODITY

COMMODITY	GRADE	
Silver	891.4300	Grams per tonne
Gold	6.8600	Grams per tonne
Lead	32.0000	Per cent

COMMENTS: A quartz vein sample from the upper crosscut on the Nipper claim.
REFERENCE: MInister of Mines Annual Report 1925, page 201.

CAPSULE GEOLOGY

The Nipper showing is located at about 1219 metres on the western slopes of Cranberry Ridge, 4.75 kilometres northwest of Beaverdell, British Columbia.

The Nipper claim group was discovered and worked between 1916 and 1928. The Nipper showing was once staked as the Nipper claim group consisting of the Nipper, Jubilee, Silver Cable and Radio claims. The claims were owned and operated between 1916 and 1925 by J. Dale and associates. In 1928, the claims were bonded to W.E. Johnston and R.C. Draggio. Development on the Nipper claim consisted of three crosscuts. On other claims, development consisted of opencuts, tunnels and shallow shafts which intersected oxidized and displaced sections of quartz vein mineralized with galena, pyrite and sphalerite.

Hostrocks of the Nipper showing are granodiorite and quartz

CAPSULE GEOLOGY

diorite of the Jurassic Westkettle batholith and schist of the Permian Wallace Formation.

Most of the work was done on the Nipper claim, on the account of high grade silver-lead float discovered in gravel overburden. Various opencuts, tunnels and shallow shafts intersected a shear-hosted quartz vein striking 045 degrees. The shear zone is about 61 centimetres wide. The vein averages 15 centimetres wide and is mineralized with pyrite, galena and sphalerite with silver and gold values in a quartz gangue. The vein was explored by three crosscuts. The upper crosscut, at 1242 metres, intersected the vein at 6 metres from the portal. A sample from the upper crosscut taken in 1925 yielded 6.86 grams per gram gold, 891.43 grams per tonne silver and 32 per cent lead (Minister of Mines Annual Report 1925, page 201). The middle crosscut was driven 18 metres at 1227 metres elevation but did not intersect the vein. The lower crosscut intersected a 5-centimetre wide quartz vein mineralized with pyrite, galena and sphalerite. A sample from the lower crosscut yielded 17.14 grams per tonne gold, 102.86 grams per tonne silver, 0.5 per cent lead and 5.0 per cent zinc (Minister of Mines Annual Report 1925, page 201).

BIBLIOGRAPHY

EMPR AR 1916-256; 1917-212; *1925-201; *1928-251
EMPR ASS RPT 3740
EMPR OF 1989-5
GSC MAP 538A; *539A; *37-21; 15-1961; 1736A
GSC MEM *79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

2123), Texas Fr. (Lot 2124), (Lot 2125), Long Shot (Lot 2451) and Duff (Lot 2452) Crown-granted claims. Records indicate that the Jo Dandy and Old Kentucky received the majority of exploration and development.

Exploration and development work on the Jo Dandy occurrence dates back to 1902 when the Jo Dandy and Old Kentucky claims were Crown granted to L.S.M. Barrett. By 1926, the property was Crown granted to A. Mellor. Under his ownership, development on the Jo Dandy consisted of 10.6-metre deep shaft, a 22.9-metre crosscut tunnel with a 14.6-metre long opencut approaching it, and a 9.1-metre tunnel 6.1 metres deeper in the shaft. Little else was done on the Jo Dandy until Canadian Exploration took an option from L. Long and M. Wiley in 1952. Trenching and geological mapping revealed disappointing results and the option was dropped in the same year. In 1983, Quinella Exploration Ltd. conducted an exploration program on the Old Kentucky and surrounding area. Previous trenching and diamond drilling of unknown age was indicated. Two correlative geochemical soil and geophysical anomalies (A and B), covering an area 700 by 350 metres, include the Old Kentucky workings.

The property is underlain by metasediments and metavolcanics of the Permian to Carboniferous Anarchist Group. Hostrock of the Jo Dandy occurrence is highly metamorphosed schist. The schist has been highly serpentinized. The schist strikes 180 degrees and dips 20 degrees to the west. Argillite is also locally present. These are overlain by a quartz feldspar porphyry sill. An intrusive dike crosscuts this schist 30 metres from the shaft. Mafic volcanics have been mapped as the hostrock on the Old Kentucky claim. These are overlain by volcanics of the Penticton Group. Volcanics include amygdaloidal flows, pyroclastic equivalents and quartz feldspar porphyry.

Quartz or quartz-calcite veins hosting mineralization on the Jo Dandy and Old Kentucky claim of the Jo Dandy occurrence range from 1 to 200 centimetres width. The mineralization consists of stringer, lenses and disseminations of pyrite, galena, sphalerite and lesser chalcopyrite. Ribbon textures were noted in quartz veins and brecciation of volcanic wallrock has locally occurred.

On the Jo Dandy claim, samples taken from different parts of the upper and lower tunnels in 1927 yielded trace to 1.7 grams per tonne gold, 48 to 65 grams per tonne silver, 4 to 10 per cent lead and 2 to 11 per cent zinc (Minister of Mines Annual Report 1927, page 234).

Sampling in 1983 from the west trench of two trenches adjacent to the gloryhole on the Old Kentucky claim revealed the following assay results. Sample D from the south wall of the west trench yielded 1.37 grams per tonne gold, 19.9 grams per tonne silver, 0.23 per cent lead and 5.6 per cent zinc (Assessment Report 11569). Similarly, sample E yielded 1.37 grams per tonne gold, 25.37 grams per tonne silver, 0.15 per cent copper, 0.24 per cent lead and 4.1 per cent zinc (Assessment Report 11569).

BIBLIOGRAPHY

EMPR AR 1902-304; 1926-447; *1927-234; 1928-251; 1957-37
EMPR ASS RPT *11569
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

occurred during World War I. S. Godwin developed a small opencut and a shallow shaft and had stockpiled a small amount of sorted ore for shipment. The Rock Creek showings were originally staked as the Yellow Ocher, Red Ocher and Green Ocher claims. These were later restaked by L. Mader as the Hulme Creek showing. Subsequent work consisted of a number of opencuts and a 7.6-metre shaft, prior to World War II. In 1942, the showings were staked as the Tobruch claim by J.O. Howells. Geological mapping and trenching were conducted. The property was restaked by B. Fenwick-Wilson in 1955, who conducted bulldozer trenching and about 123 metres of diamond drilling in three holes. In 1958, the Belair Mining Corp. Ltd. staked the Belchrome Nos. 1-8 claims which were also referred to as the Sammy prospect. These claims were later allowed to lapse and in 1980, D.W.S. Davies staked the D.W.S. claims. From 1980 to 1987, the property has been extensively prospected for chromium, nickel, platinum, gold and silver with marginal results (see table below). No work has been recorded since 1987 and the claims lapsed in December, 1989.

The oldest rocks in vicinity of the Rock Creek chromite occurrence belong to the Carboniferous to Permian Kobau and Anarchist groups. Amphibolite, greenstone, quartzite, chert, chlorite schist and minor marble comprise the Kobau Group and amphibolite, greenstone, quartz chlorite schist, quartz biotite schist and minor serpentinitized peridotite comprise lithologies of the Anarchist Group. Penticton Group lithologies outcrop to the east while Middle Jurassic porphyritic granite, granodiorite and monzonite intrusions are found to the immediate north. Smaller plugs, dikes and sills of biotite granodiorite, quartz diorite and granite of Middle Jurassic to Cretaceous age intrude the Anarchist Group rocks. Small serpentinite intrusions of uncertain age occur throughout the area and comprise the hostrock of the Rock Creek chromite occurrence.

The chromite is hosted in a 50 by 500 metre serpentinitized peridotite body of uncertain age. The body is fault bounded by metavolcanic rocks of the Anarchist Group. The serpentinite is massive and fractured with talc coating the fracture surfaces.

Chromite occurs as stringers of disseminated grains and some nodules up to 20 centimetres in diameter. Trenching and diamond drilling indicate a broad zone of intermittent low-grade mineralization 10 metres wide with a higher grade stringer 2.25 metres across. The strike length has not been defined. A 3-metre chip sample across a stringer zone yielded 8.87 per cent Cr₂O₃ and a sample of a nodule graded 27.8 per cent Cr₂O₃ (Minister of Mines Annual Report, 1958). Sampling of old dump material by Stevenson (1941) yielded best assays of 41.6 per cent and 46.6 per cent Cr₂O₃.

Rock and soil sampling by D.W.S. Davies between 1980 and 1987 yielded the following results:

Rock:						
Report Year	# of samples	Cr	Ni Range	Ni Average	Ag Value	Pt
1981	3	-		0.20 %	1.37 gm/t	-
1983	12	710		-	-	-
		715 ppm				
1985	7	<30 ppm	<50 ppm		-	-
1986	14	110 ppm			-	<35 ppb
1987	16	2			-	dl
		293 ppm				
Soil:						
1981	4	-			<10 ppb	-
1983	210	<50 ppm	<25 ppm		-	-
1985	21	40			-	-
		974 ppm				
1986	21	-			dl	-
1987	5	8			-	-
		184 ppm				

Codes: ppm - parts per million
 dl - detection limit or below
 "-" - not analysed

Values are summarized from Assessment Reports: 9737, 10913, 12381, 14333, 15027 and 16883.

BIBLIOGRAPHY

EMPR AR 1928-251; *1958-34
 EMPR ASS RPT 8791, *9737, *10913, *12381, *14333, *15027, *16883
 EMPR BULL (*Stevenson, J.S. (1941): unpublished Bulletin)
 EMPR EXPL 1980, p. 25; 1981, p. 105; 1982, p. 28
 EMPR OF 1990-27
 GSC EC GEOL 13, p. 98

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1160
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 538A; 539A; 15-1961; 1505A; 1736A
GSC OF 481; 1969
GSC P 37-21, pp. 7,43; 72-53, p. 80; 89-1E
CANMET IR 1399 (May 1943)

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/21

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW150**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER STAR**, SHIPPER

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 03 54 N
LONGITUDE: 119 43 40 W
ELEVATION: 0500 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5438266
EASTING: 300754

LOCATION ACCURACY: Within 1 KM

COMMENTS: Approximate location (Geological Survey of Canada Map 539A, #34).

COMMODITIES: Silver Copper Lead Zinc Molybdenum

MINERALS

SIGNIFICANT: Galena Chalcopyrite Sphalerite Molybdenite Tetrahedrite
ASSOCIATED: Quartz
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Kobau	Undefined Formation	
Paleozoic-Mesozoic	Undefined Group	Old Tom	
Middle Jurassic			Similkameen Intrusions

LITHOLOGY: Granodiorite
Greenstone
Quartzite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. The Old Tom Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

Plutonic Rocks PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Silver Star occurrence is located at about 500 metres elevation on the west side of the Similkameen River and north of Shoudy Creek. The Tinhorn occurrence (082ESW005) is located 2.5 kilometres to the southeast.

The Silver Star occurrence occurs west of the contact between greenstone and quartzite of the Carboniferous to Permian Kobau Group and granodiorite of the Middle Jurassic Similkameen batholith. To the north, the Similkameen batholith has intruded andesitic greenstone of the Carboniferous to Triassic Old Tom Formation.

Galena, chalcopyrite, sphalerite, molybdenite and tetrahedrite occur in a shear-hosted quartz vein in granodiorite.

In 1923 (11 tonnes) and 1926 (1 tonne), a total of twelve tonnes were mined from which 11,539 grams of silver were recovered. The operator was F. Bowden for Cawston and Shipper Mining Co.

BIBLIOGRAPHY

EMPR AR 1923-383; 1926-443
EMPR INDEX *3-213
EMPR BC METAL *MM00373
EMPR OF 1989-2; 1989-5
GSC MAP 538A; *539A; 37-21; 15-1961; 1736A
GSC MEM 79; 179, pp. 20-26
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW151**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN GATE** KET 8, KET 10 GROUP,
KET 6-10, ROCK CREEK (L.2527), WREN (L.2528)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 12 N
LONGITUDE: 119 06 40 W
ELEVATION: 0910 Metres

NORTHING: 5435531
EASTING: 345758

LOCATION ACCURACY: Within 500M
COMMENTS: The location of mineral occurrence number 39 (Geological Survey of Canada Map 539A).

COMMODITIES: Zinc Lead Copper Silver Gold

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Galena
ASSOCIATED: Quartz Pyrrhotite Pyrite Magnetite
ALTERATION: Muscovite Limonite
COMMENTS: Alteration type for muscovite unknown but probably quartz-carbonate.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive Discordant Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 1 Metres STRIKE/DIP: 160/70W TREND/PLUNGE: /
COMMENTS: The shear zone hosting quartz stringers and veins strikes 160 degrees, dips 70 degrees to the west and has an average width of 1.5 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	Nelson Intrusions
Middle Jurassic			

LITHOLOGY: Diorite
Greenstone

HOSTROCK COMMENTS: Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Syn-mineralization
Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1992
SAMPLE TYPE:	Grab		
COMMODITY	GRADE		
Silver	58.8000	Grams per tonne	
Gold	5.5000	Grams per tonne	
Copper	0.3800	Per cent	
Lead	0.9300	Per cent	
Zinc	0.2100	Per cent	

COMMENTS: Sample 91KT8-147R, a 1-metre chip sample taken from the floor of the opencut at the Golden Gate occurrence.
REFERENCE: Assessment Report 22175.

CAPSULE GEOLOGY

The Golden Gate occurrence is located approximately halfway between Bridesville and Johnstone Provincial Park, on the north side of Highway 3. The showing is located on the steep eastern slopes of the Rock Creek valley at 910 metres elevation, 600 metres north of the confluence of Rock Creek with Baker Creek. The property and surrounding area have undergone mineral exploration dating back to the turn of the century, most with no record of work. The Rock Creek (Lot 2527) was Crown granted to A. Megraw in 1903. The oldest rocks in vicinity of the Golden Gate occurrence belong to the Carboniferous to Permian Kobau and Anarchist groups.

CAPSULE GEOLOGY

Amphibolite, greenstone, quartzite, chert, chlorite schist and minor marble comprise the Kobau Group and amphibolite, greenstone, quartz chlorite schist, quartz biotite schist and minor serpentized peridotite comprise lithologies of the Anarchist Group. Penticton Group lithologies outcrop to the east while Middle Jurassic porphyritic granite, granodiorite and monzonite Nelson intrusions are found to the immediate north. Smaller plugs, dikes and sills of biotite granodiorite, quartz diorite and granite of Middle Jurassic to Cretaceous age intrude the Anarchist Group rocks.

Middle Jurassic altered biotite granodiorite underlies the Golden Gate occurrence. Immediately to the east a fault contact separates this intrusion from mainly coarse boulder and pebble conglomerate of the Penticton Group. Diorite and rhomb porphyry, presumably of Middle Jurassic age, are also found. To the south and west of the Golden Gate occurrence lie lithologies of the Anarchist Group. Foliated marble is common along the contact between the Anarchist Group and biotite granodiorite.

The occurrence consists of several trenches and one large opencut. Massive pyrrhotite, pyrite and chalcopyrite occur in quartz stringers and veins hosted in greenstone and diorite. Galena is also reported (Geological Survey of Canada Map 539A). The diorite also carries 2 to 5 per cent pyrite and magnetite. Limonite indicates surface oxidation of massive sulphides. The best mineralization to date has been found immediately above a pumphouse, where a cut exposes a 1.5 metre wide zone of semimassive to massive pyrrhotite, pyrite and chalcopyrite with minor sphalerite. The zone strikes 160 degrees and dips 70 degrees to the west. Milky white limonite-stained quartz are numerous around the opencut. These have been prospected in the past by a series of trenches. Sulphides are sparse in vein exposures. The diorite contacts are commonly altered to massive muscovite over tens of centimetres.

In 1992, property exploration was conducted by Crownex Resources (Canada) Ltd. The best assay results to date were obtained from grab sample 92-KET9-59R. This sample, taken from the Rock Creek Mines caved adit, yielded 5.55 grams per tonne gold, 58.8 grams per tonne silver, 0.38 per cent copper, 0.93 per cent lead and 0.21 per cent zinc (Assessment Report 22784). Another sample, 92-KET8-15R, yielded 0.20 gram per tonne gold, 13.2 grams per tonne silver, 0.13 per cent copper, 0.58 per cent lead and 0.39 per cent zinc (Assessment Report 22874). The assay results of rock geochemical samples taken in 1991 also yielded similar values (Assessment Report 22175).

BIBLIOGRAPHY

EMPR ASS RPT 21004, *22175, *22784
EMPR OF 1989-5
EMPR PF (Hedley, M.S. (Dec.1, 1941): Report on the Geology of Rock Creek Bridge Site; Maps and photos)
EMPR MR MAP 7 (1934)
GSC MAP 84A; 538A; *539A; 15-1961; 1505A; 1736A
GSC MEM 38, pp. 389-423
GSC OF 481; 1969
GSC P 37-21, p. 35

DATE CODED: 1985/07/24
DATE REVISED: 1996/05/21

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

3074s) claims owned by E. Etchepare and associates. At this time the workings consisted of trenches, shallow shafts and short adits. In 1928, the property was referred to as the Titanic. The four claims were Crown granted to E. Etchepare and M. Doyharcabol in 1930. The Glory Fraction (Lot 3076s) was Crown granted in 1934 to Etchepare and associates. During the 1960s, 70s and 80s, various companies and individuals have conducted trenching, limited surface drilling, magnetic and electromagnetic geophysical surveys and biogeochemical surveys. The Lucky Boy workings were relocated in 1987 by E. Dickson above the old abandoned Olympic adit (082ESW146) and near the boundary between the Lucky Boy and Glory Crown grants. A comprehensive exploration program was undertaken by Dryden Resources under an option agreement in 1988.

The hostrocks underlying Cranberry Ridge, immediately west of Beaverdell, are similar to that underlying Mount Wallace to the west. Granodiorite of the Jurassic Westkettle batholith, grading to quartz diorite and diorite, underlies most of Cranberry Ridge. To the immediate north, the Westkettle batholith has intruded Permian Wallace Formation metavolcanics and metasediments, now present as roof pendants. Lithologies include greenstone, quartzite, greywacke, limestone and local paragneiss. Younger Eocene intrusions of granite to granodiorite or quartz monzonite to syenite composition and associated dikes have intruded both Westkettle granodiorite and Wallace Formation rocks.

Four veins hosted in four roughly parallel shear zones in medium grained Westkettle granodiorite were discovered on the Lucky Boy claim group. The veins strike 080 degrees and dip vertically and are hosted in shear zones. The shear zone has been traced for 300 metres by previous underground workings. On the Lucky Boy Crown grant, a 20 to 150 centimetre wide quartz vein contains disseminated and segregations of pyrite, galena, sphalerite and chalcocopyrite. The vein has been exposed for 20 metres in a 25-metre long adit along a bearing of 260 degrees, numerous opencuts and trenches. The vein pinches out completely near the face of the adit. Other gangue minerals include sericite, barite, carbonate and chlorite.

A sample from a pile of sorted ore yielded trace gold, 4834 grams per tonne silver and 5.3 per cent copper (Minister of Mines Annual Report 1925, page 199). Three samples of ore dump material were sampled in 1988. Sample R-77 yielded the highest silver value of 398.7 grams per tonne silver along with 1.18 per cent copper, 1.62 per cent lead and 0.64 per cent zinc (Assessment Report 17921). The average of 22 samples taken across the vein and wallrock over 20 metres and an average width of 51.4 centimetres from the Lucky Boy main adit was 45.26 grams per tonne silver, 0.18 per cent copper, 0.07 per cent lead and 0.52 per cent zinc (Assessment Report 17921). Three bulldozer trenches excavated in 1988 failed to expose extensions of the Lucky Boy vein.

BIBLIOGRAPHY

EMPR AR 1904-216; 1911-291; *1925-199; 1928-252; 1930-445;
EMPR ASS RPT *17921
EMPR OF 1989-5
GSC MAP 538A; *539A; 37-21; 15-1961; 1736A
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P *37-21, p. 33

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW153**

NATIONAL MINERAL INVENTORY:

NAME(S): **IRENE, GORD, KEN,
MARK, SILVER PRINCE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 12 41 N
LONGITUDE: 119 40 40 W
ELEVATION: 1080 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5454407
EASTING: 304981

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of samples taken from a quartz vein along the western boundary of the Irene claim (Assessment Report 6797).

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Pyrite Galena
ASSOCIATED: Quartz
ALTERATION: Sericite Chlorite
ALTERATION TYPE: Sericitic Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
COMMENTS: The average width of the vein is 0.4 metre, which strikes south to southeast and dips shallowly.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Middle Jurassic Jurassic	Kobau	Undefined Formation	Nelson Intrusions Oliver Plutonic Complex

ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Granodiorite
Diorite
Chloritic Schist
Limestone
Greenstone
Serpentinite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1977
SAMPLE TYPE: Chip
COMMODITY

	GRADE	
Silver	6.8600	Grams per tonne
Gold	0.6800	Grams per tonne

COMMENTS: Sample 4978, a 2.0-metre chip sample from the portal of an adit.
REFERENCE: Assessment Report 6797.

CAPSULE GEOLOGY

The Irene occurrence is located 4 kilometres south of Orofino Mountain on the east side of Blind Creek. Oliver, British Columbia lies 10 kilometres to the southeast and Cawston, British Columbia lies 6 kilometres to the southwest. The claim was formerly staked as the Silver Prince.
In 1970, the occurrence was explored by Conoco Silver Mines Ltd. Approximately 1219 square metres of surface stripping were done. In

CAPSULE GEOLOGY

1977, the occurrence was owned by J. Penny and examined by P. Folk. The Irene occurrence is located within Middle Jurassic diorite and dioritic feldspar porphyry that has been subsequently intruded by granite and granodiorite of the Jurassic Oliver plutonic complex. To the immediate south of the occurrence lies metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. Chloritic schist with intercalated limestone, greenstone and serpentinite comprise lithologies of the Kobau Group. Younger aplite and lamprophyre dikes are found crosscutting all older rock units. A south to southeast striking, shallow dipping quartz vein outcrops near the western boundary of the Irene claim. The vein attains a maximum width of 2.0 metres and averages 0.4 metre. Pyrite and galena comprise the mineralogy of the vein. At least two significant faults are thought to have displaced the vein. Sericitic alteration is commonly found adjacent to the vein. Weak chloritic alteration also extends several metres into host granodiorite. The vein has been explored by numerous opencuts and short adits. Several samples taken in 1977 yielded anomalous gold and silver values. Surface chip sample 4976, taken across 0.4 metres from the southwestern corner of the Irene claim, yielded 2.40 grams per tonne silver and 19.88 grams per tonne gold (Assessment Report 6797). Several samples were taken from the portal of an adit. Sample 4979, across 0.4 metre, yielded 1.37 grams per tonne gold and 29.48 grams per tonne silver (Assessment Report 6797). A second chip sample 4978, across 2.0 metres, yielded 0.68 gram per tonne gold and 6.86 grams per tonne silver (Assessment Report 4978).

BIBLIOGRAPHY

EMPR ASS RPT *6797
EMPR EXPL 1978-E23
EMPR GEM 1970-395
EMPR OF 1989-2; 1989-5
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969; 2167
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW154**

NATIONAL MINERAL INVENTORY:

NAME(S): **FARLEIGH LAKE**, CLARK, ALLIE,
CAT, MICKI, MOUSE,
IAN, ASTRO

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E05W

UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 49 27 45 N
LONGITUDE: 119 45 24 W
ELEVATION: 0800 Metres

NORTHING: 5482525
EASTING: 300256

LOCATION ACCURACY: Within 500M
COMMENTS: Diamond-drill hole (Fieldwork 1983, page 16, Figure 2).

COMMODITIES: Thorium Uranium

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Coal
ALTERATION: Limonite Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Epigenetic Sedimentary
TYPE: D04 Basal U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	
Eocene	Undefined Group	Kettle River	
Middle Jurassic			Okanagan Batholith

LITHOLOGY: Grit
Coal
Arkose
Conglomerate
Tuff

HOSTROCK COMMENTS: The Farleigh Lake occurrence is hosted in the Yellow Lake Member, Marron Formation. Okanagan batholithic complex is Middle Jurassic.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1978
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Thorium 0.0185 Per cent
Uranium 0.0065 Per cent
COMMENTS: Sample 2365, a 0.6-metre sample from a coal seam in diamond-drill hole 78-5.
REFERENCE: Assessment Report 7095.

CAPSULE GEOLOGY

The Farleigh Lake young uranium occurrence lies about 12.5 kilometres west of Penticton, British Columbia. This occurrence lies near the northwest end of a 2-kilometre northwest trending area of erratic uranium and thorium occurrences. The Farleigh Lake young uranium occurrence was examined in 1979 by D.G. Leighton for British Newfoundland Exploration Ltd. as a follow-up to uranium anomalies discovered during reconnaissance geological, geochemical and prospecting in 1977 and 1978 on the Clark claims. Regionally, the area is principally underlain by medium grained intrusive rocks of the Middle Jurassic Okanagan batholithic complex and Middle Jurassic Bromley batholith. The Okanagan batholithic complex consists primarily of biotite granite and granodiorite, locally porphyritic. The Bromley batholith consists of hornblende biotite granodiorite, quartz diorite and granite. Both are massive,

CAPSULE GEOLOGY

light grey weathering, medium to coarse grained and equigranular. To the south, these intrusive rocks cut Carboniferous to Permian Kobau Group metasedimentary rocks and to the west cut Triassic rocks of the Shoemaker Formation, Old Tom Formation, Independence Formation, Nicola Group and other volcanic rocks. On its northern margin, the intrusive mass is in contact with an overlying assemblage of Eocene volcanics and sediments of the Penticton Group. The Kettle River Formation, consisting of granite boulder conglomerate, arkose, volcanic wacke and rhyolite breccia, is overlain by volcanics of the Springbrook and Marron formations.

Bedrock types at the Farleigh Lake uranium occurrence include the Kettle River Formation and Yellow Lake Member of the Marron Formation occurring as outliers within a stock of the Okanagan batholithic complex. The Kettle River formation is composed of granite boulder conglomerate, arkose, volcanic wacke and rhyolite breccia. The overlying Yellow Lake Member consists mostly of pyroxene-rich mafic phonolite lava and lesser purple-grey volcanic wacke, derived from erosion of the phonolite lava, a pink radioactive feldspathic trachytic ash flow, sandstone (grit) and conglomerate.

Radioactivity is associated with a pink grit unit, which occurs within wacke-shale lenses, intercalated in the lower part of the Yellow Lake Member alkaline volcanic assemblage. The well-layered grit unit is best exposed at the northwest end of Farleigh Lake, where it is 30 metres thick. The unit appears to be a channel deposit of reworked alkaline ash and ash flow material, as evidenced by a few examples of crossbedding, grading and scour marks. The unit also contains small coal partings and wisps up to 7.6 centimetres thick.

In 1978, Pacific Petroleum Ltd. drilled 200 metres west of the pink grit outcrop and intersected 3.8 metres of the grit unit (diamond-drill hole 78-5). A 2.3-metre sample assayed 0.003 per cent uranium and 0.013 per cent thorium, within which is a 0.6-metre coal seam which assayed 0.0065 per cent uranium and 0.0185 per cent thorium (Assessment Report 7095). The unit shows limonite-calcite alteration.

BIBLIOGRAPHY

- EMPR ASS RPT 6360, 6504, 6532, 6657, 6750, 6949, *7095, *7185, 7398, 7670, 7851
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; *1983, pp. 15-18,246-259
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32, p. 14
EMPR PF (Claim map; Summary of exploration and development form, 1980)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; 551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp. 179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36, 183-184
Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages
Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology Reviews Vol. 3, pp. 313-330

DATE CODED: 1987/03/17
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW155**

NATIONAL MINERAL INVENTORY:

NAME(S): **PAULSEN TALC**, WESTERN MINES

STATUS: Showing Open Pit

MINING DIVISION: Osoyoos

REGIONS: British Columbia

NTS MAP: 082E04E

BC MAP:

LATITUDE: 49 09 47 N

LONGITUDE: 119 43 29 W

ELEVATION: 0966 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of a group of talc showings discovered southeast of Cawston, British Columbia (Minister of Mines Annual Report 1962, page 164).

UTM ZONE: 11 (NAD 83)

NORTHING: 5449157

EASTING: 301369

COMMODITIES: Talc Magnesium

MINERALS

SIGNIFICANT: Talc

ALTERATION: Talc

ALTERATION TYPE: Serpentin'zn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Replacement Industrial Min.

TYPE: E08 Carbonate-hosted talc

SHAPE: Tabular

MODIFIER: Faulted

DIMENSION: 7 x 5 Metres STRIKE/DIP: 150/15S

TREND/PLUNGE: 305/

COMMENTS: The main talc occurrence is exposed in an open cut 7.5 by 5.5 metres. The rocks have a general strike of 150 to 160 degrees and dip 15 to 55 degrees. The talc occurrences trend along 305 degrees.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Upper Paleozoic

GROUP: Kobau

FORMATION: Undefined Formation

IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Talc Schist
Chlorite Schist
Quartzite
Greenstone

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Thompson Plateau

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: MAIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1962

SAMPLE TYPE: Chip

COMMODITY

GRADE

Magnesium

21.9200 Per cent

COMMENTS: Chip samples of talc schist across 3 metres from the Main showing was found to contain 21.92 per cent magnesium oxide.

REFERENCE: Minister of Mines Annual Report 1962, page 164.

CAPSULE GEOLOGY

The Paulsen talc occurrence is located approximately 3.25 kilometres southeast of Cawston, British Columbia and 400 metres east of Highway 3 (Minister of Mines Annual Report, page 164).

The talc occurrence was first discovered in 1957 by K. Paulsen. In 1959, 5 additional claims were staked on additional talc showings around the discovery showing by K. Paulsen for Western Mines Ltd.

The talc showings comprising the Paulsen talc occurrence are located in Carboniferous to Permian Kobau Group rocks. The talc occurs in scattered patches of schist associated with chlorite schist, dark thin-bedded quartzite, carbonate-cemented, coarse grained white quartzite and greenstone. The rocks strike 150 to 160 degrees and dip 15 to 55 degrees southwest. The talc showings trend along 305 degrees.

CAPSULE GEOLOGY

The talc showings are exposed by small scattered rock exposures in two adjoining subparallel gullies and are described as follows. The showing lowest in elevation occurs about 60 metres above the highway. A 5.5-metre wide opencut has been dug over 7.6 metres along the bottom of a small northwest trending gully. Talc schist is exposed along the sides of the opencut and on either side of a chlorite schist band. Folding and faulting observed in the exposure suggest fault duplication of the talc schist band. The widest continuous exposure of talc, on the southwest side of the cut, was sampled across 3 metres width. The composition was determined to be:

SiO2	52.77%
Al2O3	1.35%
CaO	4.17%
MgO	21.92%
CO2	6.59%
Fe	4.53%
H2O	0.13% (105 degrees C)
H2O	5.64% (>105 degrees C)

The pulverized samples were pale greenish white and slightly gritty.

About 30 metres to the northwest and down the gully, a 1.5-metre wide talc schist zone was uncovered over 12 metres along a gully bank. The talc schist is enclosed in chlorite schist with minor quartzite interbeds. Midway between these two exposures an opencut 3.00 by 0.90 by 0.45 metres has been excavated on a 0.90-metre wide talc lens.

In another gully, 300 metres to the southwest and 113 metres higher in elevation, talc schist is exposed over 52 metres along the gully bottom. Thin bedded and folded quartzites are associated. Two smaller talc schist exposures were found between these two main showings.

BIBLIOGRAPHY

EMPR AR *1962-164-165
EMPR OF 1989-5
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW156**

NATIONAL MINERAL INVENTORY:

NAME(S): **HARD CASH (L.2715)**

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082E06E
 BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 26 42 N
 LONGITUDE: 119 03 24 W
 ELEVATION: 1189 Metres

NORTHING: 5478960
 EASTING: 350920

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of adits 3 kilometres northwest from the summit of Mount Wallace and 2.5 kilometres northeast of Beaverdell (Minister of Mines Annual Report 1937, Part D - Special Report by M.S. Hedley).

COMMODITIES: Silver Zinc Lead Copper Gold

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Sphalerite Galena Chalcopyrite
 COMMENTS: Refer to Beaverdell (082ESW030) for age of mineralization data.
 ASSOCIATED: Quartz
 ALTERATION: Silica
 ALTERATION TYPE: Silicific'n
 MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Vein Shear
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
 DIMENSION: Metres STRIKE/DIP: 110/75S TREND/PLUNGE:
 COMMENTS: One of several quartz veins strikes 110 degrees and dips 75 degrees southwest. Other veins dip 60 to 75 degrees southwest. Vein width varies from 25 to 51 centimetres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Permian	Anarchist	Wallace	
Jurassic			Westkettle Batholith

LITHOLOGY: Granodiorite
 Meta Volcanic Rock
 Meta Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Plutonic Rocks
 METAMORPHIC TYPE: Regional

Harper Ranch PHYSIOGRAPHIC AREA: Okanagan Highland
 RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1937
 SAMPLE TYPE: Grab

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	61.7000	Grams per tonne
Gold	0.6800	Grams per tonne
Lead	0.8000	Per cent
Zinc	2.6000	Per cent

COMMENTS: A sample from the inner end of an adit.
 REFERENCE: Minister of Mines Annual Report 1937, Part D - Report by M.S. Hedley.

CAPSULE GEOLOGY

The Hard Cash (Lot 2715) Crown-granted prospect is located 3.0 kilometres northwest of the summit of Mount Wallace and 2.5 kilometres northeast of Beaverdell, British Columbia (Minister of Mines Annual Report 1937, Part D - Special Report by M. S. Hedley). Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040) and Bell (082ESW030), with numerous other small workings throughout the area. The claim was first Crown granted to W. Kintz and G.E. Foster in 1906. In 1937, L.H. Evans was the

CAPSULE GEOLOGY

owner. An 8-metre adit was driven in granodiorite in the southwest corner of the claim, along a bearing of 115 degrees. A second adit was driven into the Wallace Formation, 15 metres east of the first adit. The adit is 7.3 metres long along a bearing of 090 degrees. A third adit is located 9 metres south of the second adit and was driven along 137 degrees for 10.4 metres then 170 degrees for 8.5 metres and finally along 100 degrees for 5.2 metres, all in the Wallace Formation. Numerous opencuts and several other small adits were also excavated.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Eocene Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Eocene Beaverdell porphyry. The Westkettle batholith has been correlated with the Nelson intrusions that have been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper (Permian) section of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east. A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization.

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. The mineralized veins are fissure-hosted, formed along east-trending faults in the west portion of the Beaverdell camp and northeast-trending faults in the east portion of the camp. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship. The northeast striking, high angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite.

The Hard Cash prospect is located 1 kilometre north of the Beaverdell mine (082ESW030) and is underlain by Westkettle granodiorite, in the southwest corner, which is in contact with Wallace Formation metavolcanic and metasedimentary rocks on the remainder of the claim.

Stringers and lenses of mineralized quartz veins occupy a partially silicified shear zone that occurs in both the granodiorite and the Wallace Formation rocks. The shear zone trends 070 degrees and the width and attitude are obscure. The veins are irregular and range from 20 to 51 centimetres in width. One of the veins strikes 110 degrees and dips 75 degrees southwest. Other veins dip 60 to 75 degrees southwest. Mineralization consists of various proportions of pyrite, pyrrhotite, sphalerite, galena and chalcopyrite as stringers and pockets in a gangue of mainly quartz.

A sample taken in 1937 from a vein in one of the adits yielded 61.7 grams per tonne silver, 0.68 gram per tonne gold, 2.6 per cent zinc and 0.8 per cent lead (Minister of Mines Annual Report 1937, Part D - Special Report by M.S. Hedley). Another sample taken from another vein yielded 21.26 grams per tonne silver, trace gold, 2.4 per cent lead and 2.6 per cent zinc (Minister of Mines Annual Report 1937, Part D - Special Report by M.S. Hedley).

BIBLIOGRAPHY

EMPR AR 1906-H253; *1937-D29, Part D-Special Report by M.S. Hedley
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79

BIBLIOGRAPHY

GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES Vol. 19, No. 6, pp. 1264-1274, 1984
Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the
Beaverdell Area, south-central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW157**

NATIONAL MINERAL INVENTORY:

NAME(S): **CRANBERRY, TUZO**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 23 30 N
LONGITUDE: 119 08 34 W
ELEVATION: 0910 Metres

NORTHING: 5473205
EASTING: 344510

LOCATION ACCURACY: Within 1 KM

COMMENTS: The showing is located on the north side of Eugene (Cranberry) Creek, 2.8 kilometres west of its confluence with the West Kettle River (Minister of Mines Annual Report 1937, Part D - Special Report by M.S. Hedley).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
ALTERATION: Specularite
ALTERATION TYPE: Hematite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 91 x 1 Metres STRIKE/DIP: /30N TREND/PLUNGE: /
COMMENTS: A quartz vein is 20 to 30 centimetres wide and dips 30 degrees north along the footwall of a feldspar porphyry dike hosted in granodiorite. A second vein has been traced over 91 metres on surface.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Granodiorite
Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
Harper Ranch
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1937
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 17.8000 Grams per tonne
Gold 6.8000 Grams per tonne
COMMENTS: A chip sample across 20 to 25 centimetres width of footwall quartz.
REFERENCE: Minister of Mines Annual Report 1937, Part D - Report by M.S. Hedley.

CAPSULE GEOLOGY

The Cranberry showing is located 2.8 kilometres west of the confluence of Eugene (Cranberry) Creek with the West Kettle River, at 910 metres elevation. The showing is on the north side of the creek and was owned by T. Henderson in 1937.

Cranberry Ridge occupies a stretch of country about 13 kilometres long, between Carmi and the mouth of Eugene (Cranberry) Creek. The hostrock is dominantly granodiorite of the Westkettle batholith, except at the northern end where it is overlain by metamorphosed lavas, tuffs and sediments of the Permian Wallace Formation. The granodiorite has been intruded by dikes, largely of andesitic composition. The mineral occurrences differ from those in the Wallace Formation. Pyrite is the dominant sulphide with only minor galena and occasionally chalcopyrite and molybdenite. Pyrrargyrite and tetrahedrite are absent. There is generally a higher gold content. Many claims have been staked, leased and prospected

CAPSULE GEOLOGY

without any commercial tonnage developments.

Granodiorite is the hostrock of the Cranberry showing. Immediately to the south, granodiorite has been intruded by large, coarse grained, feldspar porphyry dikes.

Mineralization is hosted in a 20 to 30 centimetre wide quartz vein which dips 30 degrees north along the footwall of a 2.4 to 2.7 metre wide feldspar porphyry dike. Granodiorite in the footwall has been altered over 91 centimetres width. Mineralization appears to extend for about 7.6 metres before being obscured by overburden. The quartz vein is crystalline and vuggy with pyrite and specular hematite. About 137 metres west, a nearly flat quartz vein is 5 to 91 centimetres wide and carries pyrite. This vein has been traced another 91 metres farther west.

A sample taken in 1937 across 20 to 25 centimetres of the footwall quartz yielded 6.8 grams per tonne gold and 17.8 grams per tonne silver. A select sample of sulphides yielded 31.5 grams per tonne gold and silver (Minister of Mines Annual Report 1937, Part D - Special Report by M.S. Hedley).

BIBLIOGRAPHY

EMPR AR *1937, Part D - Special Report by M.S. Hedley
EMPR ASS RPT 10044, 11357, 11360, 14317
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW158**

NATIONAL MINERAL INVENTORY:

NAME(S): **FLORENCE**, PAYMASTER, MOON,
 SUN, CRANBERRY RIDGE, SUN AND MOON,
 DAD

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 082E06E
 BC MAP:
 LATITUDE: 49 27 51 N
 LONGITUDE: 119 04 59 W
 ELEVATION: 0991 Metres
 LOCATION ACCURACY: Within 1 KM
 COMMENTS: A mineral showing at 991 metres elevation on King Solomon Ridge, 3.25 kilometres north of Beaverdell, British Columbia (Minister of Mines Annual Report 1973, Part D - Special Report by M.S. Hedley). Includes Sun and Moon (formerly 082ESW203).

Underground
 MINING DIVISION: Greenwood
 UTM ZONE: 11 (NAD 83)
 NORTHING: 5481143
 EASTING: 349066

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Chalcopyrite Bornite
 ASSOCIATED: Quartz Arsenopyrite
 ALTERATION: Clay Chlorite Malachite
 ALTERATION TYPE: Argillic Propylitic Chloritic Oxidation
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
 SHAPE: Irregular
 MODIFIER: Faulted
 DIMENSION: 23 x 1 Metres STRIKE/DIP: 075/85S TREND/PLUNGE:
 COMMENTS: An adit was driven along a 43 to 76 centimetre wide quartz vein striking 075 degrees and dipping 80 degrees south. The first 23 metres of the adit appears to have intersected the most sulphides.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Granodiorite
 Quartz Diorite
 Andesite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Plutonic Rocks
 METAMORPHIC TYPE: Regional
 PHYSIOGRAPHIC AREA: Okanagan Highland
 HARPER RANCH RELATIONSHIP: Pre-mineralization
 GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1980
 SAMPLE TYPE: Channel
 COMMODITY GRADE
 Silver 15.7700 Grams per tonne
 Gold 13.6400 Grams per tonne
 Copper 0.0800 Per cent
 Lead 0.0500 Per cent
 Zinc 0.3600 Per cent

COMMENTS: Sample 15658, a 20.32-centimetre channel sample across 7.62 centimetres of altered granodiorite and 12.70 centimetres of quartz veinlets.

REFERENCE: Assessment Report 8196.

CAPSULE GEOLOGY

The Florence showing is located at 991 metres elevation, 3.25 kilometres north of Beaverdell, British Columbia (Minister of Mines Annual Report 1937, Part D - Special Report by M.S. Hedley). The showing is located on the former Florence and Paymaster Crown grants. In 1937, the Florence and Paymaster Crown grants were owned by

CAPSULE GEOLOGY

T.W. Hoyes and associates. Development consisted of an old 33.5-metre adit at 991 metres elevation driven along 075 degrees at the end of a 5.5-metre opencut.

The hostrock of the Florence showing is quartz diorite of the Jurassic Westkettle batholith. For a more detailed description of the regional geology refer to the Carmi occurrence (082ESW029).

The adit was driven along the footwall of a 43 to 76 centimetre wide quartz vein which dips 85 degrees south. The vein is offset by a branching crosscut fault 3 metres from the portal and follows intense shearing with clay, chlorite and gouge. Nine metres from the hangingwall, another thin quartz vein follows the hangingwall of an irregular andesite dike that dips steeply south. In 1980, sample 15658 of concentrated sulphides in a quartz vein yielded 13.64 grams per tonne gold, 15.77 grams per tonne silver, 0.05 per cent lead, 0.36 per cent zinc and 0.08 per cent copper (Assessment Report 8916). The first 23 metres of the adit appears to have intersected the majority of sulphide mineralization.

At the adit face, a fault with gouge contains several centimetres of brecciated quartz. Mineralization consists of pyrite with small amounts of galena, sphalerite, arsenopyrite, chalcopyrite and bornite. A 45-centimetre wide quartz vein was found about one metre from the adit portal. The vein is exposed over 1.5 metres length, containing oxidized pyrite and malachite. A sample from the adit dump yielded 0.68 gram per tonne gold and 404.6 grams per tonne silver (Minister of Mines Annual Report 1937, Part D - Special Report by M.S. Hedley). Another sample (15659) of dump material taken in 1980 yielded 36.14 grams per tonne gold, 69.60 grams per tonne silver, 7.94 per cent lead, 4.34 per cent zinc and 0.65 per cent copper (Assessment Report 8916).

About 61 metres from the adit and 45.7 metres higher in elevation, is an opencut exposing a 31-centimetre wide quartz vein. The vein strikes 075 degrees.

A zone of quartz on the hangingwall and footwall of an andesite dike was found 152 metres north of the adit. The zone is 45 to 91 centimetres wide, strikes 315 degrees and dips 75 degrees northeast. Minor mica and pyrite are associated with the quartz. Two other veins have been discovered 213 and 335 metres north of the adit, respectively. Each vein is 20 to 30 centimetres wide, strikes northeast to east and dips 75 degrees southerly. The veins are mineralized with pyrite.

BIBLIOGRAPHY

- EMPR AR *1937-Part D (Special Report by M. S. Hedley)
EMPR ASS RPT 7970, *8916, 24465
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79, pp. 89,92,120-122
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
Kenyon, J.M. (1978): Mo and U mineralization with special reference to a Mo-(U) Deposit at Carmi, British Columbia. M.Sc. Thesis, University of Alberta, 118 pp.

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW159**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOLLY CREEK CHROME**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 08 00 N
LONGITUDE: 119 07 04 W
ELEVATION: 1070 Metres

NORTHING: 5444437
EASTING: 345519

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located in the headwaters of Jolly Creek (Stevenson, J.S. (1958): unpublished Bulletin).

COMMODITIES: Chromium

MINERALS

SIGNIFICANT: Chromite
ALTERATION: Serpentine
ALTERATION TYPE: Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Stratabound
CLASSIFICATION: Magmatic Industrial Min.
TYPE: M03 Podiform chromite
DIMENSION: 600 x 100 Metres
COMMENTS: Dimensions are for the serpentinite body.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Cretaceous-Tertiary			Okanagan Batholith
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Serpentinite
Peridotite
Amphibolite
Greenstone
Quartz Chlorite Schist
Quartz Biotite Schist
Granodiorite
Granite
Monzonite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Post-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Jolly Creek chromite showing is located 11.5 kilometres north of Bridesville. The showing is on the lower slopes of Storm Hill, east of Jolly Creek at about 1219 metres elevation. The oldest rocks in the vicinity of the Jolly Creek chromite occurrence belong to the Carboniferous to Permian Anarchist Group. Amphibolite, greenstone, quartz chlorite schist, quartz biotite schist and minor serpentinitized peridotite comprise lithologies of the Anarchist Group. Penticton Group lithologies outcrop to the east while porphyritic granite, granodiorite and monzonite of the Cretaceous to Tertiary Okanagan batholith are found to the immediate north. Smaller plugs, dikes and sills of biotite granodiorite, quartz diorite and granite of the Middle Jurassic Nelson intrusions crosscut Anarchist Group rocks. Small serpentinite intrusions of uncertain age occur throughout the area and comprise the hostrock of the Jolly Creek chromite occurrence. The chromite is hosted in a 600 by 100 metre serpentinitized peridotite body of uncertain age. Shear-hosted chromite lenses occur in serpentinite. For further details of the typical chromite occurrences of this area refer to the Rock Creek Chromite (082ESW149) and Bridon (082ESW025) occurrences.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1180
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR BULL *Stevenson, J.S. (1941): unpublished bulletin
EMPR PF (Memoranda and notes re: proposed park at Conkle Lake)
GSC MAP 316A; 538A; 539A; 15-1961; 1505A; 1736A
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1985/07/24
DATE REVISED: 1997/10/08

CODED BY: GSB
REVISED BY: LJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW160**

NATIONAL MINERAL INVENTORY:

NAME(S): **RIDGE**, RICH 1-13, RICHTER GROUP

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 44 N
LONGITUDE: 119 40 29 W
ELEVATION: 1855 Metres

NORTHING: 5445229
EASTING: 304879

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of sample RG138 from a gossanous quartz vein yielding high gold values (Assessment Report 19284). Former 082ESW106 (Kruger Mountain) is included with Mount Kruger (082ESW106).

COMMODITIES: Gold Silver Zinc

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Quartz
ALTERATION: Limonite Silica
ALTERATION TYPE: Leaching Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Discordant
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Kobau	Undefined Formation	
Jurassic-Cretaceous			Fairview Intrusion

ISOTOPIC AGE: 111 +/-5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartzite
Phyllite
Calcareous Phyllite
Granodiorite
Gossan

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Ridge showing is located at about 1855 metres, 2.75 kilometres north of Mount Kobau. The showing was located during exploration of the Richter claim group by Minnova Inc. in 1990. Regionally, the Ridge showing is hosted by polydeformed regionally metamorphosed sedimentary and volcanic rocks of the Carboniferous to Permian Kobau Group. The aerial distribution of Kobau Group rocks is restricted by the Similkameen River to the west and the Okanagan fault to the east. These rocks have been affected by regional metamorphism reaching greenschist grade, thought to have been attained during the first phase of regional deformation. The Similkameen plutonic complex is located 1.5 kilometres to the southwest. Granodiorite plugs of the Jurassic to Cretaceous Fairview intrusion occur in the area.

The Kobau Group rocks have been subdivided into up to three main units; generally consisting of quartzite, phyllite and calcareous phyllite. The Kobau Group rocks have a northwest trending schistosity as well as a major northwest trending fold axis.

The Ridge showing consists of a gossan along the contact of Kobau Group rocks with a plug of Fairview granodiorite. Silicification is intense and quartz veins are common along this contact. The quartz veins are 1 to 5 centimetres wide, lack visible sulphides and form a stockwork. Alteration and quartz veining are generally related to fault structures. Sample RG138 from a quartz vein in the gossan yielded 2.2 grams per tonne gold and 0.4 gram per

CAPSULE GEOLOGY

tonne silver (Assessment Report 19284).

BIBLIOGRAPHY

EMPR ASS RPT *19284, 20531, 20560
EMPR OF 1989-2; 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A; 2389
GSC MEM 79; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CIM Vol. 61, pp. 1326-1334
Okulitch, A.V. (1969): Geology of Mount Kobau, unpublished Ph.D.
Thesis, University of British Columbia, 141 pp.

DATE CODED: 1996/11/30
DATE REVISED: 1996/11/30

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

neighboring Daisy, Atlas (Lot 664) and Belmont Fraction (Lot 837). A 6-metre tunnel was driven on the Belmont and a 9-metre shaft sunk on the Daisy. A new 18-metre tunnel was driven on the Joe Dandy and a winze sunk to the old tunnel. In the same year, ownership was transferred to the British Columbia Development Corp. Fairview Gold Mining Co. acquired the property in 1897. In 1901, the Fairview Corp. is reported to have bought the Joe Dandy property. The New Joe Dandy tunnel was reopened in 1983 by the Lawrence Mining Corp. The vein was intermittent and sampling indicated low gold values. Further work was carried out under option to Yuriko Resources Corp. from 1987 to 1990. Property work in 1987 was conducted by Shangri-La Minerals Ltd.

Development was composed of two underground tunnels (the 'Old' and the 'New' Joe Dandy tunnels) and various opencuts. The 'New' Joe Dandy tunnel also had two drifts; the No. 1 and No. 2. The No. 2 drift is reported to have run along almost the entire vein underground. The No. 1 drift was 68 metres long and intersected a 0.9 to 1.8-metre long ore shoot. The drifts occur in two areas about 185 metres apart along the regional west-northwest trend. The total amount of ore mined is not known, however, approximately 90 tonnes of ore was reported on the dump in 1896. The workings that are accessible are reported as being driven on narrow subsidiary structures. It is reported the original owners mined and milled a considerable amount of ore in a stamp mill at Fairview (Minister of Mines Annual Report 1986, page 574).

The Joe Dandy occurrence lies within the Okanagan Terrane of the Intermontane tectonic belt. Polydeformed and regionally metamorphosed rocks of the Carboniferous to Permian Kobau Group dominantly underlie the area. Highly deformed, low grade metamorphic quartzite, phyllite, schist, greenstone and marble comprise the main units of a 1900-metre structure succession. Three phases of fold have been identified in the Kobau Group rocks. The initial phase of folding was coincident with pre-Jurassic regional metamorphism, whereas later phases of folding are related to intrusive activity. The main intrusions in the Fairview camp are the Jurassic Oliver granite and the Jurassic to Cretaceous Fairview granodiorite. The Oliver pluton is heterogeneous and is composed of biotite-hornblende granite, porphyritic biotite granite, garnet-muscovite granite, porphyritic quartz monzonite and syenite. Other intrusive phases cutting the Kobau Group metasediments and volcanics include aplite dikes, granitic, dioritic and mafic stocks, auriferous quartz veins related to Jurassic intrusions and Tertiary northeast-trending mafic dikes.

The Joe Dandy occurrence is hosted by siliceous schist, chlorite-actinolite phyllite and foliated phyllitic quartzite of the Kobau Group, near the contact with granodiorite of the Fairview pluton. In places, the vein lies between porphyritic dikes and schists.

Mineralization is within a 30 centimetre to 1.0 metre wide bluish white quartz vein striking 115 degrees and dipping 36 to 60 degrees north. The vein is reported to be traceable on surface over 457 metres. High gold values are reported to occur within parallel quartz veins near this intrusive-schist contact. Minerals in the vein include pyrite and galena. Areas where high sulphide mineralization occurs reportedly contains good gold values. In 1987, the best gold value obtained was from a sample taken near the northern entrance to the Old Joe Dandy tunnel. Sample JDK-008 yielded 6.3 grams per tonne gold (Yuriko Resources Corp. (1988): Prospectus). The sample was taken from an intensely oxidized quartz vein with minor calcite in folded phyllite.

Preliminary lead isotope studies indicate the mineralization is associated with quartz veins is younger than or as young as the Oliver pluton (circa 155 Ma) (Fieldwork 1988, pages 19-25).

BIBLIOGRAPHY

- EMPR AR 1892-543; 1894-Map; 1895-704; 1896-562,574; *1897-575,601; 1898-1115; 1901-1154
- EMPR ASS RPT *12189, 19561, 19947
- EMPR FIELDWORK *1988, pp. 19-25
- EMPR MR MAP 7 (1934)
- EMPR OF 1989-5
- EMPR PF (*Yuriko Resources Corp. (1988): Prospectus)
- GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
- GSC MEM 38; 179
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1185
REPORT: RGEN0100

BIBLIOGRAPHY

GAC Vol. 20, 1969, pp. 47-56

DATE CODED: 1988/11/10
DATE REVISED: 1996/11/30

CODED BY: TBH
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW162**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARRON FLAT**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 21 00 N
LONGITUDE: 119 40 04 W
ELEVATION: 1200 Metres

NORTHING: 5469788
EASTING: 306253

LOCATION ACCURACY: Within 5 KM

COMMENTS: Rhodonite occurs in Marron Valley but the exact location is not known (Canadian Rockhound, February 1966, page 9).

COMMODITIES: Rhodonite Gemstones

MINERALS

SIGNIFICANT: Rhodonite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Metamorphic Industrial Min.
TYPE: Q02 Rhodonite F01 Sedimentary Mn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Eocene	Penticton	Marron	

LITHOLOGY: Chert
Tuff
Greenstone
Limestone

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
Overlap Assemblage
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Marron Flat rhodonite occurrence location is not known. The Marron Valley area lies within the central part of the White Lake basin, a thick accumulation of Eocene Penticton Group volcanic rocks, interlayered with clastic sedimentary rocks which are largely of volcanic derivation. The Eocene rocks rest unconformably on Carboniferous to Triassic metavolcanic and metasedimentary rocks of Old Tom and Shoemaker formations, Upper Triassic Independence Formation and Jurassic granitic intrusions. The White Lake basin forms a topographic low and is truncated by early gravity faults. The units generally dip to the east and are folded and faulted. It is possible that jasper occurs either in a small inlier of Shoemaker Formation or as float in Quaternary outliers within Eocene Penticton Group volcanics.

BIBLIOGRAPHY

EMPR OF 1989-5
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 72-53, p. 58
The Canadian Rockhound *Feb., 1966, page 9

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW163**

NATIONAL MINERAL INVENTORY:

NAME(S): **CAWSTON**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 30 N
LONGITUDE: 119 44 34 W
ELEVATION: 0500 Metres

NORTHING: 5450532
EASTING: 300101

LOCATION ACCURACY: Within 5 KM
COMMENTS:

COMMODITIES: Rhodonite Talc Gemstones

MINERALS

SIGNIFICANT: Rhodonite Talc
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Industrial Min. Metamorphic
TYPE: F01 Sedimentary Mn E08 Carbonate-hosted talc
 Q02 Rhodonite

HOST ROCK

DOMINANT HOSTROCK: Unknown

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Quaternary			Glacial/Fluvial Gravels

LITHOLOGY: Unconsolidated Sediment/Sedimentary

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP:
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

CAPSULE GEOLOGY

The Cawston showing is located within the southeastern corner of Cawston, British Columbia.

The Cawston showing lies within the Quesnel Terrane of the Intermontane tectonic belt. The Cawston showing is hosted along the western margin of a thick faulted package of Carboniferous to Permian Kobau Group. The showing is hosted in Quaternary unconsolidated glacial, fluvial and alluvial deposits along the Okanagan River.

Good quality rhodonite and talc are reported to have been found at the Cawston showing.

BIBLIOGRAPHY

EMPR OF 1989-2; 1989-5
EMPR PF (Nasmith, H. (1951): Reconnaissance of Unconsolidated Deposits Near Cawston)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 72-53
The Canadian Rockhound Feb., 1966, page 8
West Homes and Living *Oct., 1961

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW164**

NATIONAL MINERAL INVENTORY:

NAME(S): **COVERT BASIN, HUNTER**

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 14 09 N
LONGITUDE: 119 32 47 W
ELEVATION: 308 Metres

NORTHING: 5456793
EASTING: 314641

LOCATION ACCURACY: Within 500M

COMMENTS: Covert Basin deposit (Canadian Journal of Earth Sciences Volume 21, 1984, Figure 1 and Culbert, 1988).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown

COMMENTS: No uranium minerals have been identified in unconsolidated surficial sediments.

MINERALIZATION AGE: Recent

ISOTOPIC AGE: 0.001-0.020 Ma

DATING METHOD: Uranium/Thorium

MATERIAL DATED: Postglacial Sediment

DEPOSIT

CHARACTER: Unconsolidated

CLASSIFICATION: Sedimentary Syngenetic

TYPE: B08 Surficial U

DIMENSION: 800 x 800 Metres STRIKE/DIP:

COMMENTS: Refer to Canadian Journal of Earth Sciences Volume 21, 1984, pages 559-566 for age data.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Jurassic

ISOTOPIC AGE: 152 +/-3 Ma

DATING METHOD: Uranium/Lead

MATERIAL DATED: Zircon

Oliver Plutonic Complex

Quaternary

Postglacial Sediments

LITHOLOGY: Glaciolacustrine Clay
Peat
Quartz Monzonite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Thompson Plateau

TERRANE: Overlap Assemblage

Plutonic Rocks

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: COVERT BASIN

REPORT ON: Y

CATEGORY: Measured

YEAR: 1979

QUANTITY: 126720 Tonnes

COMMODITY

GRADE

Uranium

0.0180

Per cent

COMMENTS: Tonnage is calculated from an area of 72,000 square metres and average thickness of 1.6 metres, with an average density of 1100 kilograms per cubic metre.

REFERENCE: CJES Volume 21, May 1984, page 561 and Culbert, 1979.

CAPSULE GEOLOGY

The Covert Basin uranium occurrence lies about 6 kilometres north of Oliver, British Columbia and 4.5 kilometres east-northeast of the former Standard mine (082ESW091).

Regionally, the area is principally underlain by medium-grained intrusive rocks that form the Jurassic Oliver plutonic complex. Three distinct phases have been identified. From youngest to oldest these are: a central core of massive, medium-grained garnet-muscovite quartz monzonite which is surrounded by porphyritic biotite quartz monzonite to the south and biotite-hornblende quartz monzonite north of the core. Hornblende diorite occurs in several small areas to the north. Border phases and dikes related to the Oliver plutonic complex include lamprophyre, augite-plagioclase porphyritic andesite,

CAPSULE GEOLOGY

micro-quartz diorite, albite porphyritic dacite, diabase, fine-grained quartz monzonite and aplite. To the south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. These include laminated quartz schist or dirty quartzite, massive and laminated quartzite and minor limestone. On its northern margin, the intrusive mass is in contact with overlying Eocene volcanics and sediments of the Penticton Group. The Kettle River Formation, consisting of conglomerate, arkose and rhyolite tuff, is overlain by the Springbrook and Marron formations. The Covert Basin uranium occurrence has formed in unconsolidated glacial, fluvial and alluvial Quaternary sediments in the Okanagan river valley.

The Covert Basin is a fluviatile type of surficial uranium deposit. It occurs within an ancient meander (oxbow), which is now a valley margin swamp, on the flood plain of the Okanagan River where it has eroded into a glacial terrace. Uraniferous alkaline groundwater are infiltrating from side drainages into the porous terrace. Here the uranium is adsorbed and probably reduced in peaty layers within sand and clays. The deposit contains about 23 tonnes of uranium (Canadian Journal of Earth Sciences, Volume 21, May 1984, page 561).

The uranium-enriched area measures 72,000 square metres (800 by 800 metres) and averages 1.6 metre thick, at an average depth of 0.7 metre. With an estimated average density of 1100 kilograms per cubic metre, the deposit yields 126,720 tonnes. The average uranium concentration of 4 augerholes was 0.018 per cent with a 0.5-metre thickness assaying 0.05 per cent uranium (Culbert, 1979). Total contained uranium is 23 tonnes.

BIBLIOGRAPHY

- EMPR ASS RPT 6532, 6949, 7398
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1988, pp. 19-25
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32, p. 19
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
*IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp. 179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36, 183-184
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as Observed in the Natural Environment in British Columbia, Royal Commission on Uranium Mining, Accession List 2017S, 15 pages with Appendices
*Culbert, R.R. and D.G. Leighton (1988): Young Uranium; in Unconventional Uranium Deposits; Ore Geology Reviews Vol. 3, pp. 313-330

DATE CODED: 1987/03/12
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW165**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALLEN GROVE**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 27 00 N
LONGITUDE: 119 50 04 W
ELEVATION: 1524 Metres

NORTHING: 5481345
EASTING: 294569

LOCATION ACCURACY: Within 1 KM

COMMENTS: Approximate location (Western Home and Living, October, 1961).

COMMODITIES: Agate Gemstones

MINERALS

SIGNIFICANT: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Industrial Min. Replacement
TYPE: Q GEMS AND SEMI-PRECIOUS STONES (diamonds under N)

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Eocene	Penticton	Marron	

LITHOLOGY: Tuff
Chert
Greenstone
Limestone

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau
Overlap Assemblage
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Allen Grove showing is located at 1600 metres elevation, west of Clark Creek and 18 kilometres west of Penticton, British Columbia.

The Allen Grove showing lies within the central part of the White Lake basin, a thick accumulation of Eocene Penticton Group volcanic rocks, interlayered with clastic sedimentary rocks which are largely of volcanic derivation. The Eocene rocks rest unconformably on Triassic metavolcanic and metasedimentary rocks of the Old Tom and Shoemaker formations, Upper Triassic Independence Formation and Jurassic granitic intrusions. The White Lake basin forms a topographic low and is truncated by early gravity faults. The units generally dip to the east and are folded and faulted.

It is possible that jasper and geodes occur either in a small inlier of Shoemaker Formation or as float in Quaternary outliers within Penticton Group volcanics.

BIBLIOGRAPHY

EMPR BULL 61
EMPR MAP 35 (Preliminary)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969; 2167
GSC P 37-21; 72-53
The Canadian Rockhound Feb., 1966
Western Homes and Living, *Oct., 1961

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW166**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHINGLE CREEK**, GREEN MOUNTAIN

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E05E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 28 31 N
LONGITUDE: 119 38 54 W
ELEVATION: 610 Metres

NORTHING: 5483664
EASTING: 308155

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Feldspar Gemstones

MINERALS

SIGNIFICANT: Feldspar Quartz
COMMENTS: Bipyramidal quartz crystals and large twinned sanidine phenocrysts may be of interest to mineral collectors.

ASSOCIATED: Quartz
MINERALIZATION AGE: Eocene
ISOTOPIC AGE: 52.4 +/- 1.8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Industrial Min. Magmatic Syngenetic
TYPE: Q GEMS AND SEMI-PRECIOUS STONES (diamonds under N)
DIMENSION: 7000 x 2000 Metres STRIKE/DIP:
COMMENTS: The Shingle Creek Porphyry is a lenticular-shaped stock roughly 7 by 2 kilometres. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Eocene Shingle Creek Porphyry

ISOTOPIC AGE: 52.4 +/- 1.8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Porphyry
Diorite
Granodiorite

HOSTROCK COMMENTS: Refer to Map 35 (Preliminary) for age date.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Plutonic Rocks

CAPSULE GEOLOGY

The Shingle Creek porphyry is located 3.75 kilometres west of Penticton, British Columbia on the Penticton Indian Reserve, adjacent to Shingle Creek.

The porphyry consists of an irregularly-shaped lenticular stock (2 by 7 kilometres) concaved to the south with several large offshoot dikes at the western boundary. It is characterized by large twinned potassium feldspar crystals (1 to 10 centimetres), smaller plagioclase phenocrysts (up to 1.5 centimetres), quartz bipyramid (Herkimer diamond) euhedra/subhedra (up to 1 centimetre) and minor mafic minerals (magnetite and biotite) in a medium to fine grained matrix of similar composition. The stock intrudes diorite and granodiorite phases of the Okanagan batholith and part of its own volcanic pile that consists of rhyolite tuff and breccia containing large broken sanidine phenocrysts.

The bipyramidal quartz crystals (Herkimer diamonds) and the large, commonly twinned, sanidine phenocrysts that weather free of the hostrock are of interest to mineral collectors.

The age the porphyry, based on K-Ar analysis of fine grained, biotite inclusions within sanidine phenocrysts is 52.4 +/- 1.9 Ma (Map 35-Preliminary).

BIBLIOGRAPHY

EMPR EXPL *1995-126
ENPR MAP *35 (Preliminary)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; 637; 1505A; 1565; 1969

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1192
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 37-21; 72-53, p. 58
Western Homes & Living, Oct. 1961

DATE CODED: 1985/07/24
DATE REVISED: 1996/04/26

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESW167**

NATIONAL MINERAL INVENTORY:

NAME(S): **OLIVER**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 10 00 N
LONGITUDE: 119 33 05 W
ELEVATION: 300 Metres

NORTHING: 5449118
EASTING: 314017

LOCATION ACCURACY: Within 1 KM

COMMENTS: The approximate location of a gravel pit behind the Oliver High School (Western Homes and Living; October, 1961).

COMMODITIES: Agate

Gemstones

MINERALS

SIGNIFICANT: Chalcedony

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unconsolidated

CLASSIFICATION: Placer

TYPE: Q03 Agate

Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Quaternary

Glacial/Fluvial Gravels

LITHOLOGY: Unconsolidated Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Oliver agate showing is located behind the high school in Oliver, British Columbia (Western Homes and Living; October, 1961).

Agates were reported discovered in a gravel pit behind the Oliver High School. The gravel pit is part of Quaternary unconsolidated glacial, fluvial and alluvial deposits along the Okanagan River. The bedrock source of these agates is unknown. However, bedrock to the immediate south are quartz biotite gneiss, quartzite, marble and amphibolite of the Grand Forks Gneiss. Other bedrock types in the vicinity include metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. To the north, Triassic bedrock includes the Old Tom Formation of the Apex Mountain Complex and the underlying Shoemaker Formation. Numerous rhodonite occurrences (Mo, 082ESW009; Pinky, 082ESW80; and Louis, 082ESW082) have been found in the Shoemaker Formation.

BIBLIOGRAPHY

EMPR MAP 65 (1989)
EMPR OF 1987-15; 1989-2; 1989-5; 1992-1
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179, pp. 1-9
GSC OF 481; 637; 1505A; 1565; 1969; 2167, pp. 49-50
GSC P 37-21; 72-53, p. 57
The Canadian Rockhound Feb., 1966, p. 9
Western Homes and Living, *Oct., 1961

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/30

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW168**

NATIONAL MINERAL INVENTORY:

NAME(S): **DAN**, DANA GROUP, DAN 1-6,
ROCK GROUP, ROCK 1-11, ROCK 13-13

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 04 N
LONGITUDE: 119 05 05 W
ELEVATION: 1158 Metres

NORTHING: 5431526
EASTING: 347577

LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of rock geochemistry sample 90CM-349-R.

COMMODITIES: Nickel Chromium

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Mineralogy was not identified.
ASSOCIATED: Magnesite Barite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Magmatic Skarn
TYPE: M02 Tholeiitic intrusion-hosted Ni-Cu M03 Podiform chromite

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Serpentinite
Phyllite
Argillite
Limestone
Chert
Pebble Conglomerate
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis SAMPLE TYPE: Unknown COMMODITY	YEAR: 1990
Chromium	0.0520 Per cent
Nickel	1.3550 Per cent
COMMENTS: Sample 90CM-349-R.	
REFERENCE: Assessment Report 21414.	

CAPSULE GEOLOGY

The Dan showing is located at 1158 metres elevation on a small ridge on the east side of Budy Creek. The showing is 2 kilometres southeast of the Ket 28 prospect (082ESW210) and 6 kilometres east-southeast of Bridesville.

The ground hosting the Dan showing was staked as the Rock Group claims in 1986 by D. Hopper and S. Wirth. The Old Nick prospect (082ESW055) was the first major nickel occurrence in the immediate area, discovered in 1955. Since this time numerous aggressive exploration programs have been carried out in the area by Newmont Mining Corp., Nickel Ridge Mines Ltd., Utica Mines Ltd. and more recently by Phoenix Gold Resources Ltd., Sway Resources Inc., Gold City Mining Corp. and Orion International Minerals Corp. The 1990 exploration program at the Dan showing was conducted by Crownex Resources Corp.

The oldest rocks in the vicinity of the Dan showing are a metavolcanic and metasedimentary sequence assigned to the Carboniferous to Permian Kobau and Anarchist groups. Amphibolite,

CAPSULE GEOLOGY

greenstone, quartzite, chert, chlorite schist and minor marble comprise the Kobau Group and amphibolite, greenstone, quartz chlorite schist, quartz biotite schist and minor serpentized peridotite comprise lithologies of the Anarchist Group. Penticton Group lithologies outcrop to the east while Middle Jurassic porphyritic granite, granodiorite and monzonite of the Nelson intrusions are found to the immediate north. Smaller plugs, dikes and sills of biotite granodiorite, quartz diorite and granite of Middle Jurassic to Cretaceous age intrude the Anarchist Group rocks.

The Dan showing is underlain by a sequence of nearly flat-lying metasediments of the Anarchist Group. The sequence dips gently to the northwest(?) and has been crosscut by several Cretaceous granitic dikes. Going upsection the Anarchist sequence consists of phyllite, argillite, limestone with interbedded argillite and chert, and pebble conglomerate with greenstone interbeds. Tight folding associated with northeast and north-trending faults have occurred throughout the metasedimentary sequence. Phyllitic and mylonitic fabrics, and brecciation occur adjacent to many the predominant faults.

During an exploration program in 1990, assay values returned from two rock geochemistry samples were anomalous in nickel. Sample 90CM-349-R yielded 1.355 per cent nickel and 0.052 per cent chromium (Assessment Report 21414). Sample 90CM-350-R, taken 75 metres to the north-northwest also yielded 1.380 per cent nickel and 0.048 per cent chromium (Assessment Report 21414). Both samples were hosted in serpentinite. Minor magnesite skarn and barite lenses are reported on the Dana Group hosting the Dan showing. No description of the mineralogy or significant assay results have been reported for the skarns despite the discovery of the Buckhorn Mountain skarn system to the south.

BIBLIOGRAPHY

EMPR ASS RPT 1243, 3677, 8087, 8390, 9296, 10547, 13412, 13803,
14863, *15163, *21414, 23724, 24066
EMPR OF 1989-5
GSC MAP 84A; 538A; 539A; 15-1961; 1736A
GSC MEM 38, pp. 389-423
GSC OF 1505; 1969
GSC P 37-21

DATE CODED: 1996/05/31
DATE REVISED: / /

CODED BY: KJM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW169**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEAVERDELL GRANITE** MARGRANITE, BEAVERDELL,
CASCADE CORAL, BEAVER, MOOSE,
BEAR, ELK, HAWK,
CASCADE QUARRY, QUADRA STONE

STATUS: Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Open Pit

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 20 24 N
LONGITUDE: 119 03 19 W
ELEVATION: 0762 Metres

NORTHING: 5467285
EASTING: 350702

LOCATION ACCURACY: Within 500M

COMMENTS: Quarry, located 10.5 kilometres south of Beaverdell, adjacent to
Highway 33 (Fieldwork 1986, Figure 4-8-7, page 318).

COMMODITIES: Granite Dimension Stone Building Stone Aggregate

MINERALS

SIGNIFICANT: Unknown

COMMENTS: Granite.

MINERALIZATION AGE: Eocene

ISOTOPIC AGE: 49.4 +/- 0.7 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: feldspar

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Magmatic Industrial Min.
TYPE: R03 Dimension stone - granite

R15 Crushed rock

SHAPE: Regular
MODIFIER: Fractured

DIMENSION: 130 x 40 Metres

STRIKE/DIP:

TREND/PLUNGE: 045/

COMMENTS: A 40-metre wide quarriable-ranked granite dimension stone trends
northeast for 130 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene			Unnamed/Unknown Informal

ISOTOPIC AGE: 49.4 +/- 0.7 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Feldspar

LITHOLOGY: Feldspar Porphyritic Granite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Beaverdell Granite occurrence is located 14 kilometres south of Beaverdell, adjacent to Highway 33. Another abandoned quarry was quarried for granite building stone. The quarry is 10.5 kilometres south of Beaverdell, adjacent to Highway 33 and the Canadian Pacific Railway.

The hostrock of the Beaverdell Granite quarry is a subcircular granitic stock centred 14 kilometres south of Beaverdell. It is mostly exposed on the northeast side of the Kettle River, in the Dominion Creek drainage, west of Boyer Creek and south of the mouth of Tuzo Creek. The stock has been dated at 49.4 +/- 0.7 Ma (Eocene). Satellite dikes and the stock itself intrude granodiorite phases of the Okanagan batholith and basal Tertiary rhyolite and conglomerate containing clasts of the Okanagan batholith, in the headwaters of the Dominion batholith.

The quarry trends northeast from Highway 33 following a 40-metre wide band of lightly jointed porphyritic granite for approximately 130 metres. This band is flanked by weakly to highly fractured granite.

The stone at the Beaverdell Granite quarry consists of pink, coarse grained (greater than 5 millimetres) porphyritic granite with phenocrysts of pink orthoclase feldspar up to 3.5 by 6 centimetres. Other minerals include plagioclase, quartz, biotite and minor hornblende. The average modal composition of the quarriable (QR or Cascade Coral) unit is 15 per cent quartz, 55 per cent orthoclase, 20 per cent plagioclase and 10 per cent biotite and hornblende. The chemical composition of the porphyry is as follows in per cent and

CAPSULE GEOLOGY

closely resembles the composition of the Shingle Creek porphyry.

	Cascade Coral	Shingle Creek
SiO ₂	72.35	72.18
TiO ₂	0.29	0.39
Al ₂ O ₃	14.89	15.16
Fe ₂ O ₃	1.40	1.69
MnO	0.03	0.05
MgO	0.46	0.57
CaO	1.39	2.53
Na ₂ O	4.44	2.63
K ₂ O	4.74	4.80

major oxides caste to 100 per cent

Along the southern side of the property, the granite has been crosscut by a biotite feldspar porphyry dike striking 304 to 328 degrees and dipping 55 to 75 degrees. The dike width ranges from 5 to 10 metres.

Three joint sets or fractures are well developed. J1 joints are horizontal, strike 360 degrees and dip 25 to 50 degrees east. These are mostly likely the result of differential expansion/contraction due to cooling and/or off-loading. J2 joints strike from 205 to 220 degrees and dip 50 to 75 degrees northwest. J3 joints strike from 270 to 330 and dip steeply to vertically northwest to northeast. The joint density of the possibly quarriable and quarriable units is 1 joint per 1.5 metres (Assessment Report 20569).

Fracture intensity appears to increase northwest of the quarry where 42 per cent of joints and fractures measured are spaced less than 50 centimetres apart and 67 per cent are spaced less than 100 centimetres apart. Northeast of the quarry, over 94 per cent of the joints and fractures are spaced more than 50 centimetres apart and 78 per cent are spaced wider than 100 centimetres. The quarry itself measures approximately 40 metres long by 12 metres high at its face with large potential reserves extending north of the site.

In 1985 and 1986, the Geotechnical and Materials Branch of the British Columbia Department of Transportation and Highways conducted a physical dimension test on the abandoned quarry face with the following results.

Specific Gravity	2.61	
Density	2605	kg/m ³
Absorption by weight	0.50	%
Compressive Strength	55.92-65.80	MPa
Traverse Strength	7.94-10.07	MPa

The quarry was operated from the 1960s up to about 1987 by CANROC International Corporation. The company shipped the stone to its processing plant in Delta to produce monument stone, flooring tile and facing stone for interior and exterior uses. From 1965 to 1967, Continental Marble & Granite Ltd. produced crushed stone for artificial stone. From 1971 to 1972, the company produced building stone. The stone is marketed under the trade name 'Cascade Coral'. Pacific Granistone Corporation, a subsidiary of 1885 Holdings Ltd. took over CANROC's operations and has reactivated the quarry. It expected to produce less than 100,000 tonnes in 1991 (Mineral Market Update, July, 1991). To date, the quarry has produced approximately 90 tonnes of blocks for polished slabs and tiles, crushed and sized fragments for terrazzo, and precast concrete slab products. Quadra Stone Co. Ltd. opened 2 quarries in 1994. Margranite Industry Ltd. also produces Cascade Coral from the area.

BIBLIOGRAPHY

- EMPR AR 1964-182
- EMPR ASS RPT *20569
- EMPR BC METAL (Industrial mineral production fiche)
- EMPR EXPL *1985, p. B26; *1995, pp. 123-130
- EMPR FIELDWORK *1986, pp. 317-319
- EMPR INF CIRC 1987-1, p. 75; *1988-6, p. 9; 1991-1, pp. 59,60; 1994-19, p. 17, 1994-15; 1995-1, p. 17; 1995-9, p. 20; 1996-1, p. 20; 2000-1, p. 11
- EMPR MAP 65 (1989)
- EMPR Mineral Market Update July, 1991
- EMPR MINING 1986-1987 p. 81; 1988 p. 80
- EMPR OF 1992-1; 1992-9; 1994-1
- EMPR P *1987-1, pp. 309-342
- GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 89-1E
- WWW <http://home.iSTAR.ca/~qstone/>
- WWW <http://ceramstone.com/margranite.html>

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1198
REPORT: RGEN0100

BIBLIOGRAPHY

Stone World October 1995, pp. 43,47

DATE CODED: 1987/01/05
DATE REVISED: 1997/07/24

CODED BY: GW
REVISED BY: KJM

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **082ESW170**

NATIONAL MINERAL INVENTORY:

NAME(S): **JUNIPER (L.1604)**, BELL

STATUS: Prospect
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E04W
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 14 25 N
LONGITUDE: 119 48 51 W
ELEVATION: 0560 Metres

NORTHING: 5457979
EASTING: 295169

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of Adit A on the Juniper Reverted Crown grant (Lot 1604) (Assessment Report 14767).

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite Tetrahedrite

COMMENTS: Massive pyrite and pyrrhotite mineralization occur throughout a limestone lens 50 metres long by 3 to 5 metres wide.

ASSOCIATED: Quartz Calcite Dolomite Garnet Pyroxene

Epidote Chlorite

ALTERATION: Actinolite Azurite Malachite

ALTERATION TYPE: Skarn Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Vein

CLASSIFICATION: Skarn

TYPE: K04 Au skarn K01 Cu skarn

I06 Cu±Ag quartz veins

DIMENSION: 50 x 3 Metres

STRIKE/DIP: TREND/PLUNGE:

COMMENTS: The limestone lens is northeast striking.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic-Mesozoic
Middle Jurassic

GROUP

Undefined Group

FORMATION

Shoemaker

IGNEOUS/METAMORPHIC/OTHER

Okanagan Batholith

LITHOLOGY:

Limestone
Quartzite
Argillite
Chert
Hornblende Syenite
Quartz Porphyry Dike
Diorite
Pyroxenite
Skarn

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age. Olalla alkalic complex and Okanagan batholithic complex are Middle Jurassic.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Okanagan

METAMORPHIC TYPE: Regional Contact

Plutonic Rocks

RELATIONSHIP: Pre-mineralization
Syn-mineralization

PHYSIOGRAPHIC AREA: Thompson Plateau

GRADE: Greenschist
Hornfels

INVENTORY

ORE ZONE: SKARN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1986

SAMPLE TYPE: Chip

COMMODITY

COMMODITY	GRADE	UNIT
Silver	1.3700	Grams per tonne
Gold	1.1000	Grams per tonne

COMMENTS: Chip sample J86-004, over 1.15 metres.
REFERENCE: Assessment Report 14767.

CAPSULE GEOLOGY

The Juniper showing is located 2.5 kilometres south-southeast of Olalla, British Columbia. It lies on the southern edge of the historic Olalla Gold Camp.

The early history of the Juniper showing is unknown. In 1985, G. Crooker conducted geochemical and geophysical surveys on the Bell

CAPSULE GEOLOGY

and Juniper (Lot 1604) Reverted Crown grants. The following year, prospecting and geological mapping were carried out, during which several old adits were discovered; Adit A on the Juniper Reverted Crown grant, Adit D to the east of the Juniper Reverted Crown grant and Adits B and C, between the Juniper Reverted Crown grant and Dolphin Crown grant (Lot 978s) (082ESW012).

The Juniper showing is located near the ultramafic to alkaline Middle Jurassic Olalla intrusion. This intrusion has intruded a sequence of oceanic sediments and volcanics of the Carboniferous to Triassic Shoemaker and Old Tom formations. Black to green chert, light grey quartzite and minor limestone lenses comprise the dominant lithologies. The Shoemaker and Old Tom formations form a broadly folded, east-dipping sequence in the area. The Olalla intrusion consists of a magnetite-bearing pyroxenite peripheral zone to a diorite and syenite core. The pyroxenite is composed primarily of augite with lesser magnetite. Biotite alteration occurs within the pyroxenite. The syenite is fine grained, light grey to buff to pink. Coarse grained syenite dikes occur at the contact with the peripheral pyroxenite zone.

Metasomatic deposits have formed along the contact of the Olalla intrusion with Shoemaker sediments. Mineralization is related to skarns, shearing and quartz veining. Mineralization consists mainly of auriferous and argentiferous pyrite and pyrrhotite with minor chalcopyrite, malachite, azurite and tetrahedrite.

The main hostrock underlying the Juniper showing are quartzite and argillite. These rock types have been intruded by hornblende syenite and quartz-eye porphyry dikes and plugs. At Adit A on the Juniper Reverted Crown grant, skarn mineralization occurs in a northeast striking limestone lens, 50 metres long by 3 to 5 metres wide. Massive pyrrhotite and pyrite occur sporadically throughout the limestone lens. Gold values range from 0.07 to 6.03 grams per tonne gold (Assessment Report 22256). In 1986, grab sample J86-006 yielded 2.88 grams per tonne gold and 5.83 grams per tonne silver (Assessment Report 14767). The best chip sample, Sample J86-004, yielded 1.10 grams per tonne gold and 1.37 grams per tonne silver over 1.15 metres (Assessment Report 14767).

Between 1980 and 1990, the highest values obtained from sampling in the Juniper showing area was from a 3 to 6 centimetre wide quartz vein near Adits B and C. A sample, containing chalcopyrite and tetrahedrite mineralization with malachite and azurite staining, yielded 11.21 grams per tonne gold and 589.71 grams per tonne silver (Assessment Report 22255). Samples from several other quartz veins at Adits B and C yielded up to 6.79 grams per tonne gold and 589.71 grams per tonne silver (Assessment Report 22255).

BIBLIOGRAPHY

- EMPR ASS RPT 11241, 12088, 12116, *14767, 17300, 19963, *22256, 23900, 24415
EMPR OF 1989-2; 1989-3, p. 100; *1989-5
EMPR BULL 101, p. 213
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
Sturdevant, J.A. (1963): Petrography of the Olalla stock, Okanagan Mountains, British Columbia, unpublished M.Sc. Thesis, University of New Mexico

DATE CODED: 1986/10/27
DATE REVISED: 1996/11/30

CODED BY: AFW
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW171**

NATIONAL MINERAL INVENTORY:

NAME(S): **RICE**, Nighthawk Group, Rice 1-8,
Rice Fraction, Jolly 1-12, Hypay 1-16,
Hypay Fraction 1-3, Nighthawk (L.688), Progress (L.1942),
Baldy

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 52 N
LONGITUDE: 119 08 17 W
ELEVATION: 1158 Metres

NORTHING: 5440527
EASTING: 343929

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of rock geochemical sample MOD-123R on the Rice 2 claim (Assessment Report 13563). Includes Baldy (formerly 082ESW118).

COMMODITIES: Gold Copper Lead

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena
ASSOCIATED: Quartz Calcite
ALTERATION: Silica Epidote Calcite Hematite Magnetite

ALTERATION TYPE: Silicific'n Propylitic Hematite Oxidation Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
DIMENSION: 600 x 1 Metres STRIKE/DIP: 090/ TREND/PLUNGE: /
COMMENTS: Quartz veins up to 1.2 metres wide are exposed in a east trending fissure vein system with a minimum strike length of 600 metres.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic Middle Jurassic	Anarchist	Undefined Formation	Nelson Intrusions

LITHOLOGY: Greenstone
Rhyolite Dike
Feldspar Porphyry Dike
Quartzite
Pebble Conglomerate
Argillite
Diorite
Felsic Dike

HOSTROCK COMMENTS: The Anarchist Group is of Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1994
SAMPLE TYPE: Drill Core
COMMODITY: Gold GRADE Grams per tonne
 Gold 2.3700 Grams per tonne
COMMENTS: From the 1.52-metre interval, between 16.77 and 18.29 metres, in drillhole 94NH #5.
REFERENCE: Property File (Phoenix Gold Resources Ltd., (1995): Prospectus).

CAPSULE GEOLOGY

The Rice mineral occurrence is located at 1158 metres elevation on the west side of Rice Creek. The Dayton occurrence (082ESW022) is located 2 kilometres to the south. Bridesville, British Columbia lies 7 kilometres to the southwest.
The area was explored in the early 1900s, resulting in the Nighthawk (Lot 688) and Progress (Lot 1942) Crown-granted claims

CAPSULE GEOLOGY

being staked. Early work consisted of prospecting and development of several opencuts and trenches. The ground covering the Rice occurrence was explored by Riocanex in the 1970s and then by Rex Silver Mines Ltd in 1982 and 1983. Property exploration in 1992, consisting of soil geochemical sampling, was conducted by Rock Creek Resource Ltd. under the direction of M. Pardek. The most recent exploration has been conducted by the Rock Creek Joint Venture, consisting of a partnership between Phoenix Gold Resources Ltd., Gold City Mining Corp. and Orion International Minerals Corp.

Lithologies covering the Rice occurrence include metasediments and metavolcanics of the Carboniferous to Permian Anarchist Group. Quartzite with interbedded pebble conglomerate and lesser greenstone and black argillite comprise lithologies. The black argillite contains disseminated graphite and pyrite. Diorite of the Middle Jurassic Nelson intrusions locally intrudes the Anarchist Group metasedimentary-metavolcanic sequence. Rhyolite and feldspar porphyry dikes were observed from drill core but not found in outcrop. Alteration associated with mineralization includes hematite, manganese, epidote, magnetite, calcite and thin quartz veining associated with propylitic greenstone and sheared metasediments.

The Rice occurrence consists of a mineralized east trending fissure zone associated with a 8-metre wide felsic dike. Pyrite and chalcopyrite mineralization were observed disseminated in the dike. Gold and lesser silver were reported obtained from dike samples (Minister of Mines Annual Report 1901, page 1152). The fault zone is characterized by fault gouge up to 0.5 metre wide and consisting of fine grained clay and carbonates. Near the western end of the surface exposure, Riocanex uncovered a fissure vein system of intense silicification and shearing hosting pyrite, galena and lesser chalcopyrite. The eastern extension of this fissure vein system was rediscovered by Rex Silver Mines Ltd. in 1982. Quartz veins up to 1.2 metres wide are hosted in the fissure system at the eastern exposure. These exposures indicate a minimum strike length of 600 metres.

The best assay results from this occurrence were from sample MOD-123R taken in 1983. The sample yielded 2.38 grams per tonne gold (Assessment Report 13563). The results of surface geochemistry and geophysics and rotary percussion drilling by the Rock Creek Joint Venture in the 1990s have indicated several gold targets. Results from drillholes ranged from 0.245 gram per tonne gold over 1.52 metres in drillhole 94NH #1 to 2.37 grams per tonne from a 1.52-metre interval from 16.77 to 18.29 metres in drillhole 94NH #5 (Phoenix Gold Resources Ltd, (1995): Prospectus).

BIBLIOGRAPHY

EMPR AR *1901-1153; 1906-253; 1917-449
EMPR ASS RPT 5408, 5795, 6133, *12368, *13563, 22337
EMPR EXPL 1976-E24
EMPR GEM 1974-51-52; 1975-E17
EMPR MR MAP 7 (1934)
EMPR PF (*Phoenix Gold Resources Ltd., (1995): Prospectus; Gold City Mining Corp., Phoenix Gold Resources, Orion International Minerals Corp., (1996): Geological/Mineral Deposit Field Trip Report)
GSC MAP 539A; 15-1961
GSC OF 1505A; 1565; 1989-5; 1969

DATE CODED: 1996/06/20
DATE REVISED: 1996/06/20

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW172**

NATIONAL MINERAL INVENTORY:

NAME(S): **RICE B**, RICE A, NIGHTHAWK GROUP,
RICE 1-8, RICE FRACTION, JOLLY 1-12,
HYPAY 1-16, HYPAY FRACTION 1-3, JIM CROW (L.1951),
BLUEJAY (L.1958), MOLSON (L.2526), ATLANTIC (L.2526),
BALDY

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 05 12 N
LONGITUDE: 119 08 09 W
ELEVATION: 1158 Metres

NORTHING: 5439287
EASTING: 344056

LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of rock geochemical sample MOD-121R on the
Rice 2 claim (Assessment Report 13563).

COMMODITIES: Gold Silver Copper Lead

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena
ASSOCIATED: Quartz Calcite
ALTERATION: Silica Hematite Epidote Calcite Magnetite
Clay

ALTERATION TYPE: Silicific'n Hematite Propylitic Oxidation Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
DIMENSION: 500 Metres STRIKE/DIP: 080/90 TREND/PLUNGE: /
COMMENTS: Quartz-calcite veins are exposed in a fissure vein system striking
080 degrees and dipping vertical. Two surface exposures are 500
metres apart.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Greenstone
Chert
Quartzite
Pebble Conglomerate
Argillite
Diorite

HOSTROCK COMMENTS: The Anarchist Group is of Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Rock
COMMODITY GRADE
Silver 6.1000 Grams per tonne
Gold 0.1520 Grams per tonne
Copper 0.2700 Per cent
COMMENTS: Rock geochemical sample MOD-83-121R.
REFERENCE: Assessment Report 13563.

CAPSULE GEOLOGY

The Rice B mineral occurrence is located at 1158 metres elevation on the west side of Rice Creek. The Dayton occurrence (082ESW022) is located 1 kilometre to the south. Bridesville, British Columbia lies 7 kilometres to the southwest.

The area was explored in the early 1900s, resulting in the Jim Crow (Lot 1951), Bluejay (Lot 1958), Molson (Lot 2526) and Atlantic

CAPSULE GEOLOGY

(Lot 2526) Crown-granted claims being staked. Early work consisted of prospecting and development of several opencuts and trenches. The ground covering the Rice B occurrence was explored by Riocanex in the 1970s and then by Rex Silver Mines Ltd in 1982 and 1983. Property exploration in 1992, consisting of soil geochemical sampling, was conducted by Rock Creek Resource Ltd. under the direction of M. Pardek. The most recent exploration has been conducted by the Rock Creek Joint Venture, consisting of a partnership between Phoenix Gold Resources Ltd., Gold City Mining Corp. and Orion International Minerals Corp.

Lithologies covering the Rice occurrence include metasediments and metavolcanics of the Carboniferous to Permian Anarchist Group. Quartzite with interbedded pebble conglomerate and lesser greenstone and black argillite comprise lithologies. The black argillite contains disseminated graphite and pyrite. Diorite of the Middle Jurassic Nelson intrusions locally intrudes the Anarchist Group metasedimentary-metavolcanic sequence.

The Rice B occurrence consists of a mineralized, fissure-vein exposed at two locations approximately 500 metres apart. The first (south) exposure consists of a fissure zone trending 080 degrees in highly sheared limy greenstone. Intense fracturing is vertical with a strike of either 020 or 080 degrees. Quartz and quartz-calcite fracture fillings are 2 to 4 centimetres wide containing pyrite. Wallrocks are intensely silicified with up to 1 per cent pyrite. The second (north) exposure strikes 040 degrees and dips 70 degrees west. Narrow chert breccia zones are developed along strike hosting numerous, crosscutting silicified fractures with a strike of 134 degrees. Fractures are either quartz or quartz-carbonate filled with intense silicification, hematization and brecciation. Greenstone and chert wallrocks have been altered to chlorite schist in places.

The best assay results from this occurrence were from sample MOD-83-121R taken in 1983. The sample yielded 0.152 gram per tonne gold, 6.1 grams per tonne silver and 0.27 per cent copper (Assessment Report 13563). A second sample, AF-83-05, yielded 0.152 gram per tonne gold, 0.970 gram per tonne silver and 0.068 per cent copper from a very fine grained quartz vein with minor chalcopryrite, galena and 2 per cent pyrite. The vein was exposed over 2 metres in a trench hosted in the fissure zone (Assessment Report 13563).

Approximately 500 metres to the north, two trenches exposed a northern extension of this fissure system. Assay results from samples taken from these two trenches were less encouraging. The best sample, MOD-83-124R, yielded 0.028 gram per tonne gold and 0.27 gram per tonne silver (Assessment Report 13563).

Property exploration in 1991 by Rock Creek Resources Ltd. under the ownership of M. Pardek revealed two soil geochemical anomalies to the immediate northeast of the Rice B occurrence. The first was a 300 by 500 metre gold-zinc anomaly and the second was a small copper-gold anomaly (Assessment Report 22337).

BIBLIOGRAPHY

EMPR AR 1894-map; *1901-1153; 1906-253; *1917-449
EMPR ASS RPT 5408, 5795, 6133, *12368, *13563, *22337
EMPR EXPL 1976-E24
EMPR GEM 1974-51-52; 1975-E17
EMPR MR MAP 7 (1934)
EMPR PF (Phoenix Gold Resources Ltd., (1995): Prospectus; Gold City Mining Corp., Phoenix Gold Resources, Orion International Minerals Corp., (1996): Geological/Mineral Deposit Field Trip Report)
GSC MAP 539A; 15-1961
GSC OF 1505A; 1565; 1989-5; 1969

DATE CODED: 1996/06/20
DATE REVISED: 1996/06/20

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW173**

NATIONAL MINERAL INVENTORY: 082E5 Au7

NAME(S): **VAULT**, MAIN ZONE, NORTH VEIN

STATUS: Developed Prospect
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05E
BC MAP:

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 22 11 N
LONGITUDE: 119 36 38 W
ELEVATION: 0518 Metres

NORTHING: 5471835
EASTING: 310485

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of drilling on mineralized zone, 500 metres west of Highway 97 along Skaha Lake, 4 kilometres northwest from the town of Okanagan Falls (Assessment Report 18745).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrrhotite Gold Pyrite Sphalerite
COMMENTS: Gold and silver are typically not visible but are considered likely to occur as native elements or as electrum.

ASSOCIATED: Chalcedony Quartz Ankerite Adularia Calcite
ALTERATION: Chalcedony Quartz Clay K-Feldspar Mica
Hematite Calcite Chlorite

ALTERATION TYPE: Silicific'n Argillic Potassic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein Breccia
CLASSIFICATION: Epithermal Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Bladed
MODIFIER: Faulted Fractured
DIMENSION: 1066 x 100 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: North Vein.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marama	
Eocene	Penticton	Kitley Lake	

LITHOLOGY: Plagioclase Porphyritic Trachyte Lava
Volcanic Breccia
Pyroclastic Rock
Epiclastic Rock
Lapilli Tuff
Ash Tuff
Trachytic Porphyry Flow
Mudstone
Siltstone
Plagioclase Porphyritic Dacite Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Overlap Assemblage

INVENTORY

ORE ZONE: NORTH VEIN REPORT ON: Y
CATEGORY: Indicated YEAR: 1990
QUANTITY: 152000 Tonnes
COMMODITY: Gold GRADE: 14.0000 Grams per tonne
COMMENTS: Located 350 metres north of the Main zone.
REFERENCE: George Cross News Letter No.182 (September 20), 1990.

CAPSULE GEOLOGY

The Vault developed prospect is located 500 metres west of Highway 97 along Skaha Lake, 4 kilometres northwest of Okanagan Falls, British Columbia.
Quartz veining and an associated gossan were observed by B.N. Church of the British Columbia Geological Survey Branch. The Vault 1 claim was subsequently staked in 1982 by M. Morrison. RioCanex Inc. optioned the property and staked the Vault 2-5 claims. In 1983,

CAPSULE GEOLOGY

Riocanex Inc. drilled the Discovery zone and subsequently dropped their option. Dome Mines Ltd. acquired an option, conducted further property exploration, then also allowed their option to lapse. In 1985, Seven Mile High Resources Inc. optioned the property conducting further exploration. A drill program was completed, consisting of 24,505 metres in 72 holes. In 1989, the company name was changed to Seven Mile High Group Inc. Inco Gold earned a 60 per cent interest in the property.

The Vault occurrence lies within the eastern part of the White Lake basin, a thick accumulation of Eocene Penticton Group volcanic rocks, interlayered with clastic sedimentary rocks which are largely of volcanic derivation. The Eocene rocks rest unconformably on Triassic metavolcanic and metasedimentary rocks of the Independence, Old Tom and Shoemaker formations, and Jurassic granitic intrusions. The White Lake basin forms a topographic low and is truncated by early gravity faults. The units generally dip to the east and are folded and faulted.

The stratigraphic sequence on the Vault property includes the Kitley Lake Member at the base, overlain by the Marama Formation, with the White Lake Formation at the top. The rocks are gently folded about northeasterly trending synclinal and anticlinal axes and offset by northerly and northeasterly trending faults which form a step-like downdropped pattern. Precious metal mineralization is related to an east-west oriented fracture system confined largely to the lower Marama Formation.

The Kitley Lake Member consists of purplish brown to grey, fine grained, plagioclase porphyritic lavas of trachyte to trachyandesite composition. The upper contact of this unit is strongly weathered.

The overlying Marama Formation is the favourable host unit in which gold-silver mineralization occurs, and is subdivided into upper and lower sections. At the base of the lower Marama is a coarse pyroclastic and/or epiclastic unit. The section grades upward into a crudely alternating sequence of coarse and fine grained, tuffaceous and fragmental rocks, believed to reflect repeated explosive events. Much of this section varies from lapilli to ash tuff, with coarse fragments and massive fine grained, trachyte porphyry flows intercalated with thin laminated mudstone and siltstone. The flows display abundant, irregular clay and zeolite(?) -filled amygdules. In some areas the tuff is broken into larger subrounded clasts that are probably the result of epiclastic processes. At other localities the breccia has a random chaotic appearance, characteristic of laharic slumping or debris flow.

The upper Marama is a massive, aphanitic dacite flow unit that is plagioclase porphyritic, with alkali feldspar, minor hornblende and biotite. Some outcrops display flow banding and platy brittle fracture. Sheeted dacite feeder dikes, averaging about 1 metre in width, intrude the dacite in the central part of the property.

At the top of the Vault sequence the White Lake Formation consists of coarse agglomeratic and laharic rocks interlayered with andesitic and trachytic flows, conglomerates and carbonaceous mudstones.

Drill information indicates that alteration is dominated by an elongate zone of intense silicification and stockwork veining occurring above the Kitley Lake Member/lower Marama Formation contact. In drill core, the intensity of silicification appears to increase with the frequency of quartz veining. Within the area of mineralization, silicification is pervasive and the replacement of wallrock by chalcedonic quartz is locally evident. Clay alteration is common adjacent to fault zones and is particularly notable as feldspar alteration in trachytic flows and breccias. Minor muscovite and green micaceous minerals are also present in altered sections. Hematite, calcite and chlorite alteration are poorly developed in all units and are usually confined to fractures, vein margins and breccia matrix or fragments. Calcite veinlets usually crosscut silicic alteration and veining.

Gold-silver mineralization is associated with a discontinuous, east trending, steeply dipping quartz vein system on the north limb of a northeast-trending syncline. Veining is concentrated primarily in lower Marama rocks, where the porosity and permeability of the volcanic breccias and tuffs are highest, although a few minor gold-bearing veins have been encountered in the Kitley Lake and upper Marama formations. Intense silicification and weak, very fine grained pyritization accompanies much of the mineralization.

Near-surface mineralization, where silicification is less intense, is generally anomalous in precious metals, but below an estimated economic grade of less than 3 grams per tonne gold. With increased depth, silicification becomes more intense and the average grade increases to the 5-10 grams per tonne range, in places over

CAPSULE GEOLOGY

substantial widths. Gold and silver are typically not visible to the naked eye, but are considered likely to occur as native elements, or possibly as electrum. Silver-gold ratios in the mineralized zones are highly variable, averaging 9.8:1. The ratios tend to be lowest with higher gold values.

Veins in the main mineralized zone have typical adularia-sericite-type epithermal textures and mineral assemblages. Finely banded and bladed chalcedonic quartz, ankeritic carbonate and minor alkali feldspar (adularia) are the main vein components. Veins range in size from fine irregular anastomosing veinlets a few millimetres thick, to larger veins about 10 centimetres wide. Some exceptionally large veins are up to about 30 centimetres in width. They commonly display multistage growth textures, such as scalloped colloform banding, bladed cockscomb intergrowths and drusy cavities. Where the vein minerals occur as breccia matrix, some breccia fragments are rimmed with finely banded quartz and occur in a matrix of black, grey and white silica. Some of the most significant gold values are associated with complex multistage veining. In a number of intersections the veins have been brecciated and subsequently rehealed by the addition of banded silica. In other areas, banded quartz clasts are a significant component of the breccia.

The sulphide content associated with mineralization is typically low, although some sections are highly oxidized, with 5 to 10 per cent pyrite which is very fine grained and may occur as disseminations, fracture or vein-breccia fillings and thin veinlets. Minor pyrrhotite with sphalerite intergrowths is also associated with pyrite. Native gold is observed associated with pyrrhotite.

On a regional and vein scale, mineralization is structurally controlled by major northeast and east-trending faults and related parallel fracture systems. It is, in part, lithologically controlled, confined primarily to tuffaceous, agglomeratic and brecciated rocks of the lower Marama Formation (Exploration in British Columbia 1988, pages B5-B13).

Fluid inclusion and stable isotope studies at the Vault occurrence indicate epithermal fluids were responsible for mineralization events. The fluids are characterized by homogenization temperatures of 143 to 347 degrees Celsius, salinities of 0 to 3.4 weight per cent NaCl and oxygen del 18 values of minus 0.2 to 6.6 per mil (relative to standard mean ocean water). The mineralization occurred at depths of 3 to 4 kilometres. Early stage homogenization temperatures indicate the deposit likely formed around 270 degrees Celsius. Calculated oxygen-18 isotope values suggest three types of fluids were involved with mineralization formation at the Vault occurrence.

The Main zone is 600 metres long, 40 to 125 metres wide and 5 to 30 metres thick. The top of the mineralization is 170 metres below surface at the west end and 500 metres below surface at the east end.

The North Vein is a discrete narrow quartz-calcite-adularia vein located 350 metres north of the Main zone. Diamond drilling to date gives an indicated reserve of 152,000 tonnes of 14 grams per tonne gold on a vein approximately 1066 metres long and tested to a depth of 100 to 200 metres (George Cross News Letter #182, 1990).

Drilling by Seven Mile High Resources Inc. outlined an area 2.95 by 1.64 kilometres of epithermal gold mineralization.

In 1998, Winslow Gold Corp. acquired an option from Aqua Regia Mineral to earn 51% interest in the Vault property by completing \$300,000 exploration, over 4 years.

The Vault property was explored and drilled by Inco between 1982 and 1990. Inco sold the property to Aqua Regia in May 1997.

Ecstall Mining Corp. entered into an agreement with Aqua Regia whereby Ecstall can purchase a 100 per cent interest in the claims.

BIBLIOGRAPHY

- EM GEOMAP 2002-05
- EMPR ASS RPT 10968, 12487, 15595, 17293, 18745
- EMPR BULL 61
- EMPR EXPL 1982-31,32; 1984-20; *1988-B5-B13
- EMPR FIELDWORK 1988, pp. 355-363
- EMPR GEM 1969, Figure 38
- EMPR OF 1988-6; 1989-5; 1992-1
- EMPR P 1991-4, p. 203
- EMPR MAP 35; 65 (1989)
- EMR MP CORPFILE (Seven Mile High Group Inc.)
- EMPR PF (Geotec Consultants Ltd. (1989): An Initial Report on the EPI Group of Claims - an Epithermal Gold Prospect; Crocker, G.F. (1990): Geological and Geophysical Report on the EPI 1-13 claims)
- GSC BULL 126
- GSC MAP 538A; 627A; 628A; 15-1961
- GSC OF 481; 637; 1969; 2167, p. 49

BIBLIOGRAPHY

GSC P 89-1E
GCNL #2(Jan.4),#64(Apr.4),#136(July17),#158(Aug.17),#180(Sept.19),
#206,#235,#242(Dec.18), 1989; #73(Apr.12),#44(Mar.2),#150(Aug.3),
*#182(Sept.20), 1990; #48 (Mar.10), 1998
N MINER Jan.9, Dec.25, 1989; Sept.24, 1990
PR REL Ecstall Mining Corp., Mar.6, 2003
WWW <http://www.ecstall.com>
*Xiong, Yongliang (1993): Geochemistry of the Vault Epithermal Au
mineralization and its Environs, Okanagan Falls, Southern British
Columbia; unpublished M.Sc. thesis, University of Edmonton,
Edmonton, Alberta

DATE CODED: 1987/08/28
DATE REVISED: 1996/11/30

CODED BY: LLC
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **082ESW174**

NATIONAL MINERAL INVENTORY:

NAME(S): **SINKING POND AND FLATS**, SYN. SINK LAKE,
SINKING FLATS, SINKING POOL, SINKING BASIN

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 51 N
LONGITUDE: 119 35 21 W
ELEVATION: 510 Metres

NORTHING: 5452638
EASTING: 311381

LOCATION ACCURACY: Within 500M
COMMENTS: Sinking Flats deposit (Assessment Report 7670, Figure 3).
Sinking Pond lies 500 metres to the south.

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
COMMENTS: No uranium minerals have been identified in unconsolidated surficial
sediments.

MINERALIZATION AGE: Recent
ISOTOPIC AGE: 0.001-0.020 Ma DATING METHOD: Uranium/Thorium MATERIAL DATED: Postglacial Sediment

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary Syngenetic
TYPE: B08 Surficial U

SHAPE: Tabular
DIMENSION: 250 x 60 x 3 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: The Sinking Flats deposit is 250 by 60 by 3 metres. The Sinking Pond
is 130 by 80 by 6 metres. Refer to Canadian Journal of Earth Sciences
Volume 21, 1984, pages 559-566 for age data.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Oliver Plutonic Complex

ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

Quaternary Postglacial Sediments

LITHOLOGY: Glaciolacustrine Clay
Quartz Monzonite
Biotite Hornblende Quartz Monzonite
Diorite
Porphyritic Biotite Quartz Monzonite
Quartz Monzonite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau

TERRANE: Overlap Assemblage Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SINKING POND AND FLATS REPORT ON: Y

CATEGORY: Measured YEAR: 1979

QUANTITY: 180000 Tonnes

COMMODITY GRADE
Uranium 0.0200 Per cent

COMMENTS: Sinking Pond and Flats surficial deposits average 0.02 per cent
uranium. Approximate tonnage calculated from volume and density
(Culbert, 1979).

REFERENCE: Assessment Report 7670.

CAPSULE GEOLOGY

The Sinking Pond and Flats (Sink Lake) uranium occurrence lies about 1 kilometre west-southwest of the former Standard mine (082ESW091) and 3.5 kilometres northwest of Oliver, British Columbia. The property was examined and evaluated by D.G. Leighton for British Newfoundland Exploration Ltd. in 1979. A total of eleven augerholes were drilled into unconsolidated sediments.

CAPSULE GEOLOGY

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the immediate south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of Penticton Group. The Kettle River Formation, consisting of conglomerate, arkose and rhyolite tuff, is overlain by the Springbrook and Marron formations.

Bedrock types to the south of Sink Lake include laminated quartz schist or dirty quartzite, massive and laminated quartzite and minor limestone of the Kobau Group. In the Sink Lake area, the Oliver plutonic complex is composed almost entirely of biotite-hornblende quartz monzonite. The southern contact is approximately 150 metres to the south of Sink Lake. Three distinct phases have been identified. From youngest to oldest these are: a central core of massive medium-grained garnet-muscovite quartz monzonite which is surrounded by porphyritic biotite quartz monzonite to the south and biotite-hornblende quartz monzonite north of the core. Hornblende diorite occurs in several small areas to the north. Border phases and dikes related to the Oliver plutonic complex include lamprophyre, augite-plagioclase porphyritic andesite, micro-quartz diorite, albite porphyritic dacite, diabase, fine-grained quartz monzonite and aplite.

The Sinking Pond and Flats are postglacial, lacustrine-playa, closed basin type young uranium deposits. The depositional environment of uranium is a cyclically closed basin, controlled by topography and evaporation. The occurrence is characterized by alkaline conditions, interlayered clays and organics and occasional hydrogen sulphide gas (IAEA TECDOC 332, Table 1).

The Sinking Flats is about 250 metres long by 60 metres wide and averages 3.7 metres thick at an average depth of 2.3 metres. The deposit averages 0.029 per cent uranium and contains about 13,500 kilograms of uranium (Assessment Report 7670). The Sinking Pond, 500 metres to the south, measures 130 by 80 by 6 metres thickness, with an average depth of 3.0 metres. It averages 0.017 per cent uranium and contains about 9500 kilograms of uranium (Assessment Report 7670). The underlying rocks are likely sources of labile uranium with possible contributions from mineralized fault zones. Lateral groundwater flow occurs in the uppermost portion of the Sinking Pond.

BIBLIOGRAPHY

- EMPR ASS RPT 6532, 6657, 6750, *6949, 7095, 7185, 7398, *7670
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, pp. 17,246-259;
1988, pp. 19-25
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32, p. 19
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
*IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp.
179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of
Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36,
183-184
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as
Observed in the Natural Environment in British Columbia, Royal
Commission on Uranium Mining, Accession List 2017S, 15 pages
with Appendices
*Culbert, R.R. and D.G. Leighton (1988): Young Uranium; in
Unconventional Uranium Deposits; Ore Geology
Reviews Vol. 3, pp. 313-330

DATE CODED: 1987/03/13
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW175**

NATIONAL MINERAL INVENTORY:

NAME(S): **GYPO GREISEN**, GYPO MINE, GYPO (L.3098S),
BALLARET (L.3099S), BALLARAT, OLIVER SILICA,
PACIFIC SILICA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:
LATITUDE: 49 11 50 N
LONGITUDE: 119 33 34 W
ELEVATION: 380 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Greisen on north part of Gypo quarry (082ESW084) (Fieldwork 1983).

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5452534
EASTING: 313545

COMMODITIES: Uranium Thorium

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Muscovite Quartz
ALTERATION: Muscovite
ALTERATION TYPE: Greisen Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Replacement Hydrothermal
TYPE: I15 Classical U veins
COMMENTS: Anomalous uranium and thorium have been detected in greisen, up to 30 metres thick on the footwall (north) side of the Gypo vein.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Oliver Plutonic Complex
ISOTOPIC AGE:	152 +/-3 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		

LITHOLOGY: Porphyritic Quartz Monzonite
Greisen
Biotite Hornblende Quartz Monzonite
Muscovite Garnet Quartz Monzonite
Hornblende Diorite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional
Okanagan
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Gypo mine is located on the west side of Highway 97 on the northern outskirts of the town of Oliver. The Gypo Crown Grant (Lot 3098S) was originally staked in 1927 to explore the small amounts of metallic mineralization associated with the quartz veining.

The Gypo pegmatite quartz body occurs within the Jurassic Oliver Plutonic Complex or Oliver granite. This pluton is composed mainly of medium-grained quartz monzonite occurring in three distinct phases; biotite-hornblende quartz monzonite, garnet-muscovite quartz monzonite and porphyritic quartz monzonite. Large quartz veins and plugs, such as the Gypo quartz body, are restricted to a porphyritic quartz monzonite phase. The veins formed mainly by open-space filling although there is some evidence of wallrock replacement.

The area is underlain principally by three distinct phases of medium grained intrusive rocks of the Oliver Plutonic Complex. These are, from youngest to oldest, muscovite-garnet quartz monzonite, porphyritic biotite quartz monzonite, and biotite-hornblende quartz monzonite. Additional phases include diorite rocks and fine-grained dikes and pods of quartz monzonite. To the south the pluton cuts Kobau metasedimentary rocks of Carboniferous to Permian age.

The quartz body strikes east and dips south at 55 to 60 degrees. At the quarry it has a known strike length of 152 metres, width of 61 metres and approximate true thickness of 85 metres. To the west, a thinner extension of the main body continues for another 90 metres.

CAPSULE GEOLOGY

The hangingwall is a narrow shear zone while the footwall exhibits greisen alteration, consisting of muscovite and lesser quartz, up to 30 metres from the quartz. For further information about the Gypo vein, refer to the Gypo occurrence (082ESW084).

The greisen of the Gypo deposit is reported to contain considerable thorium and near-equilibrium uranium suggesting it was dominantly a hydrothermal deposit of at least moderate temperature (Assessment Report 6949). Loosely defined patches of anomalous uranium (160 to 600 counts per second) have also been found in fine-grained quartz monzonite hosted within porphyritic biotite quartz monzonite, near the margin of the Oliver intrusion. These anomalies contain no thorium.

BIBLIOGRAPHY

- EMPR ASS RPT 6360, 6504, 6532, 6657, 6750, *6949, 7095, 7185, 7398, 7670, 7851
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; *1983, p. 17,246-259
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1987-15, p. 38; 1989-2; 1989-5; 1990-32
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; 551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp. 179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36, 183-184
Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages
Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology Reviews Vol. 3, pp. 313-330

DATE CODED: 1987/03/16
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW176**

NATIONAL MINERAL INVENTORY:

NAME(S): **SKAHA RESERVATION**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E05E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 27 00 N
LONGITUDE: 119 38 34 W
ELEVATION: 0870 Metres

NORTHING: 5480840
EASTING: 308458

LOCATION ACCURACY: Within 500M

COMMENTS: Eastern end of radioactive sediment unit (Fieldwork 1978, Figure 3).

COMMODITIES: Thorium

Uranium

MINERALS

SIGNIFICANT: Unknown
ALTERATION: Sericite Quartz Epidote Zoisite Fluorite
ALTERATION TYPE: Sericitic Epidote Deuteric
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Syngenetic
TYPE: D04 Basal U

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Undefined Formation	
Eocene	Undefined Group	Kettle River	
Eocene			Shingle Creek Porphyry
	ISOTOPIC AGE: 52.4 +/-1.8 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		
Middle Jurassic			Okanagan Batholith

LITHOLOGY: Arkosic Grit
Tuff
Volcanic Arkosic Sandstone
Conglomerate

HOSTROCK COMMENTS: The occurrence is hosted in the Yellow Lake Member, Marron Formation.
Refer to Exploration in B.C. (1995) for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Skaha Reservation uranium occurrence lies about 5.5 kilometres southwest of Penticton, British Columbia. This occurrence lies near the northwest end of a 2-kilometre northwest trending area of erratic uranium and thorium occurrences. The Skaha Reservation uranium occurrence was examined in 1977 by D.G. Leighton.

Regionally, the area is principally underlain by medium grained intrusive rocks of the Middle Jurassic Okanagan batholithic complex and Middle Jurassic Bromley batholith. The Okanagan batholithic complex consists primarily of biotite granite and granodiorite, locally porphyritic. The Bromley batholith consists of hornblende biotite granodiorite, quartz diorite and granite. Both are massive, light grey weathering, medium to coarse grained and equigranular. To the south, these intrusive rocks cut Carboniferous to Permian Kobau Group metasedimentary rocks and to the west cut Triassic rocks of the Shoemaker Formation, Old Tom Formation, Independence Formation, Nicola Group and other volcanic rocks. On its northern margin, the intrusive mass is in contact with an overlying assemblage of Eocene volcanics and sediments of the Penticton Group. The Kettle River Formation, consisting of granite boulder conglomerate, arkose, volcanic wacke and rhyolite breccia, is overlain by volcanics of the Springbrook and Marron formations.

Bedrock types at the Skaha Reservation uranium occurrence include the Kettle River Formation and Yellow Lake Member of the Marron Formation occurring along the southern margin of the Okanagan batholithic complex. The Kettle River formation is composed of granite boulder conglomerate, arkose, volcanic wacke and rhyolite

CAPSULE GEOLOGY

breccia. The overlying Yellow Lake Member consists mostly of pyroxene-rich mafic phonolite lava and lesser purple-grey volcanic wacke, derived from erosion of the phonolite lava, a pink radioactive feldspathic trachytic ash flow, sandstone (grit) and conglomerate. Rhyolite and rhyolite tuffs comagmatic with the Eocene Shingle Creek porphyry outcrop to the immediate north of the Skaha Reservation uranium occurrence.

Radioactivity is associated with a pink grit unit, which occurs within wacke-shale lenses, intercalated in the lower part of the Yellow Lake Member alkaline volcanic assemblage. The well-layered grit unit is best exposed at the northwest end of Farleigh Lake, where it is 30 metres thick. The unit appears to be a channel deposit of reworked alkaline ash and ash flow material, as evidenced by a few examples of crossbedding, grading and scour marks. The unit also contains small coal partings and wisps up to 7.6 centimetres thick. Radioactivity of these rocks average 65 parts per million uranium and are in excess of 300 parts per million thorium (Assessment Report 6750). The most radioactive rocks have undergone zoisite-fluorite alteration and lesser quartz-carbonate and sericite alteration. The radioactive pink grit unit occurs as a northeast trending, discontinuous band over 4.5 kilometres. The beds are about 10 to 25 metres thick.

Uraniferous surficial occurrences are located on the Penticton Indian Reserve, occurring in faulted, discontinuous bands between Farleigh Lake and the lower section of Skaha Creek (Fieldwork 1978, pages 7-15). Field testing of the pink grits yielded scintillometer readings ranging from 300 to 600 counts per second (Fieldwork 1978, pages 7-15). Laboratory analyses of these same rocks yielded up to 0.021 percent thorium and 0.005 per cent uranium (Fieldwork 1978, pages 7-15). Much higher values are reported in certain carbonaceous seams associated with the grits.

BIBLIOGRAPHY

- EMPR ASS RPT 6360, 6504, 6532, 6657, *6750, 6949, 7095, 7185, 7398, 7670, 7851
EMPR EXPL 1977-E22,E26; 1978-*12-14,22,23,26; 1979-25; 1995
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, pp. 17,246-259
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2; 1989-5; 1990-32, pp. 13,14
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; 551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp. 179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36, 183-184
Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages
Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology Reviews Vol. 3, pp. 313-330

DATE CODED: 1987/03/24
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW177**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH WOW FLAT**, NORTH WOW, NORTH WOW LAKE,
WOW LAKES, RKL, OLIVER,
NORTH FLATS

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 082E04E

MINING DIVISION: Osoyoos

BC MAP:
LATITUDE: 49 12 44 N
LONGITUDE: 119 34 37 W

UTM ZONE: 11 (NAD 83)

ELEVATION: 500 Metres

NORTHING: 5454244
EASTING: 312327

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of North Wow Lake (Assessment Report 6949).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown

COMMENTS: Refer to Canadian Journal of Earth Sciences, Volume 21, 1984, pages 559-566 for age data.

ASSOCIATED: Gypsum

COMMENTS: Gypsum crystals occur in clays.

MINERALIZATION AGE: Recent

ISOTOPIC AGE: 0.001-0.020 Ma

DATING METHOD: Uranium/Thorium

MATERIAL DATED: Postglacial Sediment

DEPOSIT

CHARACTER: Unconsolidated

CLASSIFICATION: Sedimentary

Syngenetic

TYPE: B08 Surficial U

SHAPE: Tabular

DIMENSION: 100 x 90 x 6 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: The North Wow Lake deposit is roughly 100 metres long by 90 metres wide covering 9200 square metres. The average thickness of the deposit is 1.5 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Jurassic

ISOTOPIC AGE: 152 +/-3 Ma

DATING METHOD: Uranium/Lead

MATERIAL DATED: Zircon

Oliver Plutonic Complex

Quaternary

Postglacial Sediments

LITHOLOGY: Glaciolacustrine Clay

Sand

Marl

Porphyritic Muscovite Biotite Monzonite

Muscovite Garnet Quartz Monzonite

Porphyritic Biotite Quartz Monzonite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Thompson Plateau

TERRANE: Overlap Assemblage

Plutonic Rocks

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: NORTH WOW FLAT

REPORT ON: Y

CATEGORY: Measured

YEAR: 1979

QUANTITY: 24000 Tonnes

COMMODITY

GRADE

Uranium 0.0500 Per cent

COMMENTS: The North Wow surficial uranium deposit contains 11.5 tonnes of uranium. The grade is the average for the North Wow Lake (Culbert, 1975). Tonnage is calculated from volume and density.

REFERENCE: CJES Volume 21, May 1984, page 561 and Culbert, 1979.

CAPSULE GEOLOGY

The North Wow Flats uranium occurrence lies about 4 kilometres northwest of Oliver, British Columbia and 1.5 kilometres north of the former Standard mine (082ESW091). The property was examined and evaluated by D.G. Leighton for British Newfoundland Exploration Ltd.

CAPSULE GEOLOGY

in 1979. A total of 92 augerholes were drilled into unconsolidated sediments.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the immediate south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of Penticton Group. The Kettle River Formation, consisting of conglomerate, arkose and rhyolite tuff, is overlain by the Springbrook and Marron formations.

Bedrock types to the south of North Wow Flats include laminated quartz schist or dirty quartzite, massive and laminated quartzite and minor limestone of the Kobau Group. In the North Wow Flats area, the Oliver plutonic complex is composed almost entirely of biotite-hornblende quartz monzonite. The southern contact with the Kobau Group is approximately 2.5 kilometres to the south of Sink Lake. Three distinct phases have been identified. From youngest to oldest these are: a central core of massive medium-grained garnet-muscovite quartz monzonite which is surrounded by porphyritic biotite quartz monzonite to the south and biotite-hornblende quartz monzonite north of the core. Hornblende diorite occurs in several small areas to the north. Border phases and dikes related to the Oliver plutonic complex include lamprophyre, augite-plagioclase porphyritic andesite, micro-quartz diorite, albite porphyritic dacite, diabase, fine-grained quartz monzonite and aplite. Bedrock uranium mineralization consists of pegmatite accumulations, uraniumiferous limestone, uranium-pyrrhotite and fracture-hosted uranium (Assessment Report 7398). The latter are common in the Wow Lakes area.

The Wow Lakes (see also South Wow, 082ESW178) lie along a north-northeast trending linear which separates muscovite-garnet quartz monzonite to the east from porphyritic biotite quartz monzonite to the west. To the immediate north, a narrow transitional zone along the linear consists of porphyritic muscovite-biotite quartz monzonite.

The North Wow Flat is a postglacial, lacustrine-playa, closed basin type of deposit which is forming within a few metres of the surface by enrichment of uranium and other elements by evaporative pumping. The Wow Lakes are considered a type deposit of a closed basin where hydrological conditions tend to become hypersaline. The uranium is concentrated, within grey and white clays (marl muds and sands) containing gypsum crystals, as a salt from saline oxidizing groundwaters in an arid environment and there is a downward trend of uranium concentrations in the deposit. No uranium minerals have been recognized. The underlying rocks are sources of labile uranium with possible contributions from mineralized fault zones. However, this is one type of young uranium deposit that can be detected by gamma ray spectrometry.

The North Wow Flats uranium occurrence consists of two areas, the North Wow Lake and North Flats. The North Wow Lake is reported to cover 9200 square metres surface area. A 1.5-metre thick layer at surface is reported to average 0.05 per cent uranium with a maximum of 0.165 per cent uranium over a one-half metre thick interval (Culbert, 1979). The results were obtained from 68 augerholes. The North Flats covers 4000 square metres surface area. The results from 4 augerholes was an average of 0.014 per cent uranium with a maximum of 0.026 per cent uranium over a one-half metre interval (Culbert, 1979). The deposit was 4.0 metres thick extending from the surface. The North Wow Flat deposit contains about 11.5 tonnes of uranium (Canadian Journal of Earth Sciences, 1984, page 561).

BIBLIOGRAPHY

- EMPR ASS RPT *6360, 6504, 6532, *6949, *7398, 7670
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, pp. 17,246-259;
1988, pp. 19-25
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32, p. 19
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp.
179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of
Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36,
183-184

BIBLIOGRAPHY

- *Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages
- Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as Observed in the Natural Environment in British Columbia, Royal Commission on Uranium Mining, Accession List 2017S, 15 pages with Appendices
- Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology Reviews Vol. 3, pp. 313-330

DATE CODED: 1987/03/12
DATE REVISED: 1997/10/08

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW178**

NATIONAL MINERAL INVENTORY:

NAME(S): **SOUTH WOW LAKE**, RKL, WOW LAKES,
WOW FLATS, OLIVER

MINING DIVISION: Osoyoos

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 12 37 N
LONGITUDE: 119 34 43 W
ELEVATION: 0500 Metres

NORTHING: 5454032
EASTING: 312198

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of South Wow Lake (Assessment Report 6360).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent
ISOTOPIC AGE: 0.001-0.020 Ma
DATING METHOD: Uranium/Thorium
MATERIAL DATED: Postglacial Sed

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary Syngenetic
TYPE: B08 Surficial U
DIMENSION: 240 x 100 Metres
STRIKE/DIP:
COMMENTS: Refer to Canadian Journal of Earth Sciences, Volume 21, 1984, pages 559-566 for age data.
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Oliver Plutonic Complex
	ISOTOPIC AGE: 152 +/-3 Ma		
	DATING METHOD: Uranium/Lead		
	MATERIAL DATED: Zircon		
Quaternary			Postglacial Sediments

LITHOLOGY: Glaciolacustrine Clay
Porphyritic Muscovite Biotite Monzonite
Muscovite Garnet Quartz Monzonite
Porphyritic Biotite Quartz Monzonite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: LAKE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Auger
YEAR: 1981
COMMODITY: Uranium
GRADE: 0.0370 Per cent
COMMENTS: The average uranium grade from 98 augerholes.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The South Wow Lake uranium occurrence lies about 3.75 kilometres northwest of Oliver, British Columbia and 1 kilometre north of the former Standard mine (082ESW091). The property was examined and evaluated by D.G. Leighton for British Newfoundland Exploration Ltd. from 1977 to 1979. A total of 98 augerholes were drilled into unconsolidated sediments.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the immediate south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of the Penticton Group. The Kettle River Formation, consisting of conglomerate, arkose and rhyolite tuff, is overlain by the Springbrook and Marron formations.

Bedrock types to the south of South Wow Lake include laminated

CAPSULE GEOLOGY

quartz schist or dirty quartzite, massive and laminated quartzite and minor limestone of the Kobau Group. In the South Wow Lake area, the Oliver plutonic complex is composed almost entirely of biotite-hornblende quartz monzonite. The southern contact with the Kobau Group is approximately 2.5 kilometres to the south of the Wow Lakes. Three distinct phases have been identified. From youngest to oldest these are: a central core of massive medium-grained garnet-muscovite quartz monzonite which is surrounded by porphyritic biotite quartz monzonite to the south and biotite-hornblende quartz monzonite north of the core. Hornblende diorite occurs in several small areas to the north. Border phases and dikes related to the Oliver plutonic complex include lamprophyre, augite-plagioclase porphyritic andesite, micro-quartz diorite, albite porphyritic dacite, diabase, fine-grained quartz monzonite and aplite. Bedrock uranium mineralization consists of pegmatite accumulations, uraniferous limestone, uranium-pyrrhotite and fracture-hosted uranium (Assessment Report 7398). The latter are common in the Wow Lakes area.

The Wow Lakes (see also North Wow, 082ESW177) lie along a north-northeast trending linear which separates muscovite-garnet quartz monzonite to the east from porphyritic biotite quartz monzonite to the west. To the immediate north, a narrow transitional zone along the linear consists of porphyritic muscovite-biotite quartz monzonite. High radioactivity (up to 1000 counts per second on a SPP2 NF scintillometer) is associated with the contact zone of the latest two phases of the plutonic complex.

The South Wow Lake occurrence is a postglacial, lacustrine-lava, closed basin type of deposit which is forming within a few metres of the surface by enrichment of uranium and other elements by evaporative pumping. The uranium is concentrated in clays as a salt from saline oxidizing groundwaters in an arid environment in the deposit. No uranium minerals have been recognized. The underlying rocks are sources of labile uranium with possible contributions from mineralized fault zones. However, this is one type of young uranium deposit that can be detected by gamma ray spectrometry.

The deposit has been drilled with 98 augerholes, outlining a 17,500-square metre deposit approximately 1 metre thick (Culbert, 1979). The average uranium concentration was 0.036 per cent, with a maximum value of 0.080 per cent uranium over a one-half metre section (Culbert, 1979).

BIBLIOGRAPHY

- EMPR ASS RPT *6360, 6504, 6532, *6949, 7398, 7670
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, pp. 17,246-259;
1988, pp. 19-25
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp.
179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of
Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36,
183-184
Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages
Culbert, R.R. and D.G. Leighton (1988): Young Uranium, Ore Geology
Reviews Vol. 3, pp. 313-330

DATE CODED: 1987/03/13
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW179**

NATIONAL MINERAL INVENTORY:

NAME(S): **BURNELL POND**, BURNELL MARSH, BURNELL LAKE,
BURNELL RIM, BURNELL CENTRE, BURNELL SWAMP,
BURNELL LAKE WEST, SAWMILL LAKE, SAWMILL POND,
RKL, SYN

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:
LATITUDE: 49 12 20 N
LONGITUDE: 119 37 04 W
ELEVATION: 0750 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Burnell Pond deposit (Assessment Report 7398, Figure 5).

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5453605
EASTING: 309328

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent
ISOTOPIC AGE: 0.001-0.020 Ma DATING METHOD: Uranium/Thorium MATERIAL DATED: Postglacial Sed

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary Syngenetic
TYPE: B08 Surficial U
COMMENTS: Refer to Canadian Journal of Earth Sciences, Volume 21, 1984, pages
559-566 for age data. The Burnell Pond occurrence covers a total
surface area of 221,000 square metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Quaternary			Postglacial Sediments
Jurassic			Oliver Plutonic Complex

ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Glaciolacustrine Clay
Quartz Monzonite
Porphyritic Biotite Quartz Monzonite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Overlap Assemblage Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Auger
COMMODITY GRADE
Uranium 0.0270 Per cent
COMMENTS: The average uranium concentration of samples from 3 augerholes.
REFERENCE: Geological Survey of Canada Open File 551.

CAPSULE GEOLOGY

The Burnell Pond uranium occurrence lies about 1.5 kilometres west of the former Susie mine (082ESW090) and 5.5 kilometres northwest of Oliver, British Columbia. This occurrence lies near the northwest end of a 2 -kilometre northwest trending area of erratic uranium and thorium occurrences. The property was examined and evaluated by D.G. Leighton for British Newfoundland Exploration Ltd. in 1979. A total of 19 augerholes were drilled into unconsolidated sediments. Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the immediate south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of the Penticton Group. The Kettle River Formation, consisting of conglomerate, arkose and rhyolite tuff, is overlain by the

CAPSULE GEOLOGY

Springbrook and Marron formations.

Bedrock types to the south of Burnell Pond include laminated quartz schist or dirty quartzite, massive and laminated quartzite and minor limestone of the Kobau Group. In the Burnell Pond area, the Oliver plutonic complex is composed almost entirely of porphyritic biotite quartz monzonite which likely contains labile uranium as a source for the overlying surficial deposit. Three distinct phases have been identified. From youngest to oldest these are: a central core of massive medium-grained garnet-muscovite quartz monzonite which is surrounded by porphyritic biotite quartz monzonite to the south and biotite-hornblende quartz monzonite north of the core. Hornblende diorite occurs in several small areas to the north. Border phases and dikes related to the Oliver plutonic complex include lamprophyre, augite-plagioclase porphyritic andesite, micro-quartz diorite, albite porphyritic dacite, diabase, fine-grained quartz monzonite and aplite.

The Burnell Pond young uranium occurrence is composed of four zones or areas; the Burnell Marsh (Pond), Burnell Lake West, Burnell Centre and Burnell Rim.

The Burnell Pond is a fluvial-type young uranium deposit occurring in a swamp where groundwater flow and organic sequestration are probably the dominant depositional controls (IAEA TECDOC 322). The Burnell Pond zone covers 12,000 square metres with an average thickness of 5.5 metres at an average depth of 1 metre. In 1979, auger drilling intersected 0.033 per cent uranium over 4 metres in one hole and 0.026 per cent uranium in another (Assessment Report 7398). A 0.107 per cent uranium value occurs over 0.5 metre within the uraniumiferous layer (Culbert, 1979).

The Burnell Lake West is a postglacial, lacustrine-playa, cyclically-closed basin that has a lateral component of groundwater movement through the deposit. The Burnell Lake West covers a surface area of 7800 square metres and has a thickness of 4.5 metres. The deposit lies at an average depth of 4.5 metres. The average uranium concentration of three augerholes was 0.0117 per cent uranium with a maximum of 0.020 per cent uranium (Culbert, 1979). Other values obtained include up to 0.0386 per cent uranium over 0.5 metre (Culbert, 1979).

The Burnell Rim zone is 88,000 square metres with an average thickness of 3.5 metres, at an average depth of 5.5 metres. Sampling from 7 augerholes yielded 0.0108 per cent uranium with a maximum of 0.0252 per cent uranium over a one-half metre interval (Culbert, 1979). The Burnell Centre zone is 43,000 square metres with an average thickness of 1 metre, at an average depth of 10 metres. Sampling from 6 augerholes yielded 0.0213 per cent uranium with a maximum of 0.0386 per cent uranium over a one-half metre interval

BIBLIOGRAPHY

- EMPR ASS RPT 6360, 6504, 6532, 6657, 6750, 6949, 7095, 7185, *7398, 7670, 7851
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, pp. 17,246-259
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp. 179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36, 183-184
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages
Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology Reviews Vol. 3, pp. 313-330

DATE CODED: 1987/03/13
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW180**

NATIONAL MINERAL INVENTORY: 082E5 Au3

NAME(S): **YUNIMAN**, BLACK PINE (L.1912), BUSH RAT (L.1913),
BLACK JACK (L.1914), BLUE BELL (L.2472), OLD DIGGINGS,
LITTLE BESSIE (L.1915), FAR WEST (L.2469), HUB FR. (L.2470),
TRIUNE (L.2471), YMIRMAN, YUMNAN,
YUNINAN

STATUS: Prospect
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:
LATITUDE: 49 18 30 N
LONGITUDE: 119 56 18 W
ELEVATION: 2040 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of diamond-drill holes Y86-4 and 5 near No. 4 Tunnel (Assessment Report 15843, Figure 6).

Underground
MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5465887
EASTING: 286427

COMMODITIES: Gold Silver Lead Zinc Copper
Rhodonite

MINERALS

SIGNIFICANT: Arsenopyrite Gold Galena Sphalerite Chalcopyrite
Pyrite Marcasite Pyrrhotite Magnetite Rhodonite
COMMENTS: Native gold was observed as inclusions in pyrite.
ASSOCIATED: Quartz Calcite
ALTERATION: Quartz Calcite Scapolite Garnet Pyrite
Limonite Hematite
ALTERATION TYPE: Silicific'n Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Disseminated Industrial Min. Stratabound Sedimentary Massive Skarn
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au K04 Au skarn
DIMENSION: 40 Metres STRIKE/DIP: 340/ TREND/PLUNGE:
COMMENTS: The mineralized breccia zone is up to 40 metres wide and follows a fault striking 340 degrees.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic Undefined Group Shoemaker
Triassic Undefined Group Independence
Jurassic Okanagan Intrusions

LITHOLOGY: Argillaceous Chert
Tuff
Greenstone
Andesite
Chert Breccia
Biotite Hornblende Diorite
Biotite Hornblende Breccia Dike
Andesite Dike

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Drill Core
COMMODITY Gold GRADE 94.9700 Grams per tonne
COMMENTS: The 0.3-metre interval at 56.77 metres depth in diamond-drill hole Y86-4. The sample also contained 1.95 per cent arsenic.
REFERENCE: Assessment Report 15843.

CAPSULE GEOLOGY

The Yuniman occurrence is located on the crest and south slopes

CAPSULE GEOLOGY

of Yuniman Ridge near the headwaters of Bradshaw Creek, about 10 kilometres northwest of Olalla, British Columbia.

The Yuniman occurrence consists of several escheated and Reverted Crown grants, including the Black Pine (Lot 1912, escheated), Bush Rat (Lot 1913), Black Jack (Lot 1914), Little Bessie (Lot 1915), Far West (Lot 2469), Hub Fraction (Lot 2470), Triune (Lot 2471) and Blue Bell (Lot 2472). The Old Diggings is a more recent claim also staked in the area of the showing. The claims have been referred to as the Ymirman, Yumman, Yuninan, or Yuniman Group. The group was originally owned by E. Bullock-Webster and Crown granted in 1902. Initial exploration and development consisted of over 61 metres of crosscuts, drifts and raises in three adits, 2 shafts and opencuts. Hedley Yuniman Gold Fields Ltd. acquired eight Crown grants in 1937. An additional 44 adjacent claims and fractions were staked and prospected. In 1946 and 1947, 113 metres of crosscutting and drifting in a new lower (No. 4) adit at about 1810 metres elevation. Toby Creek Resources Ltd. optioned the property in 1984 from J. Hrabí was completed. The Old Diggings claim was staked. A comprehensive exploration program was carried out in 1984 and followed up with diamond drilling in 1986. A 51 per cent option agreement was granted to T.R.V. Minerals Corp. in 1987.

The regional geology of the area consists of a series of Carboniferous to Triassic volcanic and sedimentary rocks that have been intruded by granitic Okanagan intrusions. Larger intrusions are composed of granite and granodiorite, while smaller stocks are composed of diorite and gabbro. Numerous sills, dikes and apophyses are associated. Carboniferous to Triassic rocks are assigned to the Shoemaker and Old Tom formations, overlain by the Upper Triassic Independence Formation. These rocks form the eastern limb of a large anticlinal fold with fold axes striking roughly north.

The predominant rock type in the claim area is a dark brown, grey to white, fine grained, massive, competent chert. Occasional thin beds up to 0.3 metre thick are identified by layers of chert pebble tuff or silt. The age of these chert beds is uncertain and may belong to the Independence or Shoemaker formations. The cherts are in fault contact with andesitic volcanic rocks which are called the Old Tom Formation. Jurassic diorite and gabbro intrusions cut the cherts and andesites. A pervasive quartz-calcite alteration affects both the andesitic rocks and the diorite intrusion. The four main rock types encountered at the occurrence are argillaceous chert, dark green andesite, buff chert and chert breccia, and biotite hornblende diorite. A number of narrow, north trending, post mineral andesite dikes are also present.

Mineralized veins appear to be of four types and/or orientations. The first type are northeast to east-northeast trending quartz-calcite-galena-sphalerite-gold-silver veins. These veins appear to be somewhat older than quartz-calcite-pyrite-arsenopyrite-gold veins trending north to 340 degrees. A third but minor mineralization type consists of late stage quartz-pyrite-arsenopyrite veinlets hosting low gold values and the calcite-scapolite-garnet alteration zones of limy andesite which show patches of pyrite and gold values. Quartz-pyrite veins in the andesite carry significant arsenopyrite and sometimes hosts free gold as inclusions in the pyrite. Marcasite and pyrite occur along fractures in the andesite and pyrrhotite with chalcopyrite replace calcite amygdules in andesite flows. The diorite stock also hosts marcasite, pyrite and pyrrhotite along fractures with late, northeast trending fractures hosting quartz-calcite-pyrite-galena-sphalerite veins and pods that carry gold and silver values. Disseminated magnetite is also present.

The most significant alteration and mineralization occurs in an irregular, north trending, white sugary quartz replacement zone bordering a coarse grained, biotite hornblende breccia dike, 5 to 15 metres wide. The dike occurs along a fault, striking 340 degrees. Numerous quartz veinlets host pyrite and arsenopyrite. The zone is up to 40 metres wide and extends from the contact of the breccia dike east to Tunnel No. 2 of the Old Yuniman mine.

The best sample of gold associated with arsenopyrite was from diamond-drill hole Y86-4, in 1986. The drillhole intersected a vein at 56.77 metres depth. The 0.3-metre true width interval yielded 1.95 per cent arsenic and 94.97 grams per tonne gold (Assessment Report 15843). In drillhole Y86-5, the replacement zone extends from 153 to 217 metres depth. Four sections from this drillhole yielded 1.23 to 2.88 grams per tonne gold over 3 metres or greater intervals (Assessment Report 15843). Samples YT2-7, 9, 11, 13 and 16, from this breccia zone from Tunnel No. 3 of the old Yuniman Mine, yielded 5.86, 3.60, 2.67, 12.51 and 1.41 grams per tonne gold, respectively.

In the vicinity of the Far West claim (Lot 2469), rhodonite occurs in irregular pockets in a zone about 45.7 metres long by 4.6

CAPSULE GEOLOGY

metre wide in chert.

BIBLIOGRAPHY

EMPR AR 1900-883; *1902-303; 1924-C268; 1933-172; 1934-D19; *1937-
D8-11
EMPR ASS RPT *7429, *14059, 14580, *14651, *15843
EMPR BULL 101, p. 137
EMPR EXPL 1985-C26
EMPR OF *1989-5
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53, p. 56

DATE CODED: 1987/10/30
DATE REVISED: 1996/11/30

CODED BY: LLC
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW181**

NATIONAL MINERAL INVENTORY:

NAME(S): **POWERLINE**, POWERLINE FLATS, POWERLINE POND,
POWERLINE LAKE, OLIVER

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 14 00 N
LONGITUDE: 119 36 04 W
ELEVATION: 575 Metres

NORTHING: 5456651
EASTING: 310648

LOCATION ACCURACY: Within 500M
COMMENTS: Powerline Lake (Assessment Report 6949, Figure 5)

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent
ISOTOPIC AGE: 0.001-0.020 Ma
DATING METHOD: Uranium/Thorium
MATERIAL DATED: Postglacial Sediment

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary Syngenetic
TYPE: B08 Surficial U
COMMENTS: Refer to Canadian Journal of Earth Sciences, Volume 21, 1984, pages 559-566 for age data. The Powerline showing covers a surface area of 3600 square metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Quaternary			Postglacial Sediments
Jurassic			Oliver Plutonic Complex

ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Glaciolacustrine Soil
Porphyritic Biotite Quartz Monzonite
Hornblende Diorite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage
METAMORPHIC TYPE: Regional
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Auger
COMMODITY: Uranium
GRADE: 0.0217 Per cent
YEAR: 1979
COMMENTS: The maximum assay over a 0.5-metre interval.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The Powerline uranium occurrence lies about 6.5 kilometres northwest of Oliver, British Columbia and 2.75 kilometres north of the former Susie mine (082ESW090). The property was examined and evaluated by D.G. Leighton for British Newfoundland Exploration Ltd. in 1977. One augerhole was drilled into unconsolidated sediments.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the immediate south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of the Pentiction Group. The Kettle River Formation, consisting of conglomerate, arkose and rhyolite tuff, is overlain by the Springbrook and Marron formations.

Bedrock types to the south of the Powerline showing include laminated quartz schist or dirty quartzite, massive and laminated quartzite and minor limestone of the Kobau Group. At the Powerline

CAPSULE GEOLOGY

showing area, the Oliver plutonic complex is composed almost entirely of porphyritic biotite quartz monzonite intermixed with hornblende diorite. Three distinct phases have been identified. From youngest to oldest these are: a central core of massive medium-grained garnet-muscovite quartz monzonite which is surrounded by porphyritic biotite quartz monzonite to the south and biotite-hornblende quartz monzonite north of the core. Hornblende diorite occurs in several small areas to the north. Border phases and dikes related to the Oliver plutonic complex include lamprophyre, augite-plagioclase porphyritic andesite, micro-quartz diorite, albite porphyritic dacite, diabase, fine-grained quartz monzonite and aplite. Bedrock uranium mineralization consists of pegmatite accumulations, uraniferous limestone, uranium-pyrrhotite and fracture-hosted uranium (Assessment Report 7398).

The Powerline young uranium occurrence is a post glacial, lacustrine-playa cyclically-closed basin with uranium enrichment of surface soils. Topography and evaporation are the principal controls on deposition. An estimated 3600 square metre area contains a 1.5-metre thick layer averaging 0.0134 per cent uranium, including a maximum assay of 0.0217 per cent uranium over a 0.5-metre interval (Culbert, 1979). The average depth of this uraniferous layer is 1.5 metres.

BIBLIOGRAPHY

- EMPR ASS RPT 6360, 6504, 6532, *6949, 7398, 7670
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, pp. 17,246-259;
1988, pp. 19-25
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp.
179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of
Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36,
183-184
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages
Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology
Reviews Vol. 3, pp. 313-330

DATE CODED: 1988/01/29
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW182**

NATIONAL MINERAL INVENTORY:

NAME(S): **HEART**, HEART LAKE, OLIVER

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 13 02 N
LONGITUDE: 119 34 57 W
ELEVATION: 500 Metres

NORTHING: 5454814
EASTING: 311942

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Heart Lake (Assessment Report 6949, Figure 5).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE: Recent

ISOTOPIC AGE: 0.001-0.020 Ma

DATING METHOD: Uranium/Thorium

MATERIAL DATED: Postglacial Sediment

DEPOSIT

CHARACTER: Unconsolidated

CLASSIFICATION: Sedimentary Syngenetic

TYPE: B08 Surficial U

COMMENTS: Refer to Canadian Journal of Earth Sciences, Volume 21, 1984, pages 559-566 for age data. The Heart showing covers a surface area of 6600 square metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Quaternary

Jurassic

ISOTOPIC AGE: 152 +/-3 Ma

DATING METHOD: Uranium/Lead

MATERIAL DATED: Zircon

Postglacial Sediments

Oliver Plutonic Complex

LITHOLOGY: Glaciolacustrine Soil
Porphyritic Biotite Quartz Monzonite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Overlap Assemblage

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau

Plutonic Rocks

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1979

SAMPLE TYPE: Auger

COMMODITY

GRADE

Uranium

0.0839

Per cent

COMMENTS: The maximum assay over a 0.5-metre interval.

REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The Heart Lake uranium occurrence lies about 4.5 kilometres northwest of Oliver, British Columbia and 2 kilometres north-northwest of the former Standard mine (082ESW091). The property was examined and evaluated by D.G. Leighton for British Newfoundland Exploration Ltd. in 1979. Three augerholes were drilled into unconsolidated sediments to determine uranium concentrations.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the immediate south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of the Penticton Group. The Kettle River Formation, consisting of conglomerate, arkose and rhyolite tuff, is overlain by the Springbrook and Marron formations.

Bedrock types to the south of Heart Lake include laminated quartz schist or dirty quartzite, massive and laminated quartzite and minor limestone of the Kobau Group. In the Heart Lake area, the Oliver plutonic complex is composed almost entirely of porphyritic

CAPSULE GEOLOGY

biotite quartz monzonite. The southern contact with the Kobau Group is approximately 2.5 kilometres to the south of Sink Lake. Three distinct phases have been identified. From youngest to oldest these are: a central core of massive medium-grained garnet-muscovite quartz monzonite which is surrounded by porphyritic biotite quartz monzonite to the south and biotite-hornblende quartz monzonite north of the core. Hornblende diorite occurs in several small areas to the north. Border phases and dikes related to the Oliver plutonic complex include lamprophyre, augite-plagioclase porphyritic andesite, micro-quartz diorite, albite porphyritic dacite, diabase, fine-grained quartz monzonite and aplite. Bedrock uranium mineralization consists of pegmatite accumulations, uraniferous limestone, uranium-pyrrhotite and fracture-hosted uranium (Assessment Report 7398).

Heart Lake is a postglacial lacustrine-playa closed basin with uranium enrichment of surface soils. A 6600 square metre area contains a 2.5-metre thick layer averaging 0.0247 per cent uranium, including a maximum assay of 0.084 per cent uranium over a 0.5-metre interval (Culbert, 1979). The layer occurs at surface.

BIBLIOGRAPHY

- EMPR ASS RPT 6360, 6504, 6532, *6949, 7398, 7670
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, pp. 17,246-259;
1988, pp. 19-25
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp.
179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of
Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36,
183-184
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages
Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology
Reviews Vol. 3, pp. 313-330

DATE CODED: 1988/01/29
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW183**

NATIONAL MINERAL INVENTORY:

NAME(S): **PURPLE** PURPLE LAKE, OLIVER

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 13 13 N
LONGITUDE: 119 34 37 W
ELEVATION: 480 Metres

NORTHING: 5455140
EASTING: 312358

LOCATION ACCURACY: Within 500M

COMMENTS: Purple Lake (Assessment Report 6949, Figure 5).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Uranyl carbonate complexes occur in groundwater, which are rapidly decomposed under acidic and/or bacterial reducing conditions.

ASSOCIATED: Gypsum
COMMENTS: A 0.5-metre hard gypsum layer overlies uranium concentrations.

MINERALIZATION AGE: Recent

ISOTOPIC AGE: 0.001-0.020 Ma

DATING METHOD: Uranium/Thorium

MATERIAL DATED: Postglacial Sediment

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Syngenetic Epigenetic
TYPE: B08 Surficial U

COMMENTS: Refer to Canadian Journal of Earth Sciences, Volume 21, 1984, pages 559-566 for age data. The Purple showing covers a surface area of 6400 square metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Quaternary			Postglacial Sediments
Jurassic			Oliver Plutonic Complex

ISOTOPIC AGE: 152 +/-3 Ma

DATING METHOD: Uranium/Lead

MATERIAL DATED: Zircon

LITHOLOGY: Glaciolacustrine Soil
Porphyritic Biotite Quartz Monzonite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Thompson Plateau

TERRANE: Overlap Assemblage

Plutonic Rocks

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1979

SAMPLE TYPE: Auger

COMMODITY

GRADE

Uranium

0.0488

Per cent

COMMENTS: The maximum assay over a 0.5-metre interval.

REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The Purple uranium occurrence lies about 4.5 kilometres northwest of Oliver, British Columbia and 2.25 kilometres north of the former Standard mine (082ESW091). The property was examined and evaluated by D.G. Leighton for British Newfoundland Exploration Ltd. in 1978. One augerhole was drilled into unconsolidated sediments to determine uranium concentrations.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the immediate south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of the Pentiction Group. The Kettle River Formation, consisting of conglomerate, arkose and rhyolite tuff, is overlain by the Springbrook and Marron formations.

CAPSULE GEOLOGY

Bedrock types to the south of Purple Lake include laminated quartz schist or dirty quartzite, massive and laminated quartzite and minor limestone of the Kobau Group. In the Purple Lake area, the Oliver plutonic complex is composed almost entirely of porphyritic biotite quartz monzonite. Three distinct phases have been identified. From youngest to oldest these are: a central core of massive medium-grained garnet-muscovite quartz monzonite which is surrounded by porphyritic biotite quartz monzonite to the south and biotite-hornblende quartz monzonite north of the core. Hornblende diorite occurs in several small areas to the north. Border phases and dikes related to the Oliver plutonic complex include lamprophyre, augite-plagioclase porphyritic andesite, micro-quartz diorite, albite porphyritic dacite, diabase, fine-grained quartz monzonite and aplite. Bedrock uranium mineralization consists of pegmatite accumulations, uraniferous limestone, uranium-pyrrhotite and fracture-hosted uranium (Assessment Report 7398).

Purple Lake is a postglacial, lacustrine-playa closed basin with a uranium rich layer formed under hypersaline reducing conditions and protected by a 0.5-metre thick hard gypsum layer. Topography, evaporation and bacterial reduction are the primary depositional controls. These young uranium occurrences are characterized by deeper basins capped by sulphate brines and underlain by uranium concentrations. A layer of purple sulphur-fixing bacteria occurs at the sediment-brine interface. Groundwaters contain uranyl carbonate complexes which are rapidly decomposed under acid and/or bacterial reducing conditions, resulting in a relatively homogeneous uranium concentration in sediments. A 6400-square metre area contains a 1.0-metre thick layer averaging 0.0285 per cent uranium, with a maximum assay of 0.049 per cent uranium over a 0.5-metre interval (Culbert, 1979). The layer occurs at an average depth of 0.5 metre.

BIBLIOGRAPHY

- EMPR ASS RPT 6360, 6504, 6532, *6949, 7398, 7670
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, pp. 17,246-259;
1988, pp. 19-25
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp.
179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of
Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36,
183-184
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages
Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology
Reviews Vol. 3, pp. 313-330

DATE CODED: 1988/01/29
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW184**

NATIONAL MINERAL INVENTORY:

NAME(S): **POLVO**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 13 02 N
LONGITUDE: 119 34 44 W
ELEVATION: 500 Metres

NORTHING: 5454805
EASTING: 312204

LOCATION ACCURACY: Within 500M

COMMENTS: Geological Survey of Canada Open File 551.

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE: Recent

ISOTOPIC AGE: 0.001-0.020 Ma

DATING METHOD: Uranium/Thorium

MATERIAL DATED: Postglacial Sediment

DEPOSIT

CHARACTER: Unconsolidated

CLASSIFICATION: Sedimentary Syngenetic

TYPE: B08 Surficial U

COMMENTS: Refer to Canadian Journal of Earth Sciences, Volume 21, 1984, pages 559-566 for age data. The Polvo showing has a surface area of 2800 square metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Quaternary

Jurassic

ISOTOPIC AGE: 152 +/-3 Ma

DATING METHOD: Uranium/Lead

MATERIAL DATED: Zircon

Postglacial Sediments

Oliver Plutonic Complex

LITHOLOGY: Glaciolacustrine Soil
Porphyritic Biotite Quartz Monzonite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Overlap Assemblage

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau

Plutonic Rocks

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1979

SAMPLE TYPE: Auger

COMMODITY

GRADE

Uranium

0.0616

Per cent

COMMENTS: The maximum assay over a 0.5-metre interval.

REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The Polvo uranium occurrence lies about 4.5 kilometres northwest of Oliver, British Columbia and 2 kilometres north-northwest of the former Standard mine (082ESW091). The property was examined and evaluated by D.G. Leighton for British Newfoundland Exploration Ltd. in 1978. One augerhole was drilled into unconsolidated sediments to determine uranium concentrations.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the immediate south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of the Penticton Group. The Kettle River Formation, consisting of conglomerate, arkose and rhyolite tuff, is overlain by the Springbrook and Marron formations.

Bedrock types to the south of the Polvo showing include laminated quartz schist or dirty quartzite, massive and laminated quartzite and minor limestone of the Kobau Group. In the Polvo showing area, the Oliver plutonic complex is composed almost entirely

CAPSULE GEOLOGY

of porphyritic biotite quartz monzonite. Three distinct phases have been identified. From youngest to oldest these are: a central core of massive medium-grained garnet-muscovite quartz monzonite which is surrounded by porphyritic biotite quartz monzonite to the south and biotite-hornblende quartz monzonite north of the core. Hornblende diorite occurs in several small areas to the north. Border phases and dikes related to the Oliver plutonic complex include lamprophyre, augite-plagioclase porphyritic andesite, micro-quartz diorite, albite porphyritic dacite, diabase, fine-grained quartz monzonite and aplite. Bedrock uranium mineralization consists of pegmatite accumulations, uraniferous limestone, uranium-pyrrhotite and fracture-hosted uranium (Assessment Report 7398).

Polvo is a postglacial, lacustrine-playa closed basin with uranium enrichment of the soils. A 2800 square metre area contains a 3.0-metre thick layer, 1.0 metre below surface, averaging 0.02 per cent uranium and including a maximum assay of 0.06 per cent uranium over a 0.5-metre interval (Culbert, 1979).

BIBLIOGRAPHY

- EMPR ASS RPT 6360, 6504, 6532, 6949, 7398, 7670
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, pp. 17,246-259;
1988, pp. 19-25
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp.
179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of
Inquiry, Health and Environmental Protection, Uranium Mining;
Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36,
183-184
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South
Central British Columbia, Royal Commission on Uranium Mining,
Accession List #2109S01, 20 pages
Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology
Reviews Vol. 3, pp. 313-330

DATE CODED: 1988/01/29
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW185**

NATIONAL MINERAL INVENTORY:

NAME(S): **RANCH LAKE**, RANCHHOUSE LAKE

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 13 26 N
LONGITUDE: 119 34 55 W
ELEVATION: 480 Metres

NORTHING: 5455554
EASTING: 312007

LOCATION ACCURACY: Within 500M

COMMENTS: Ranch Lake (Assessment Report 6949, Figure 5).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE: Recent

ISOTOPIC AGE: 0.001-0.020 Ma

DATING METHOD: Uranium/Thorium

MATERIAL DATED: Postglacial Sediment

DEPOSIT

CHARACTER: Unconsolidated

CLASSIFICATION: Sedimentary Syngenetic

TYPE: B08 Surficial U

COMMENTS: Refer to Canadian Journal of Earth Sciences, Volume 21, 1984, pages 559-566 age data. The Ranch showing covers a surface area of 12,000 square metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Quaternary

Jurassic

ISOTOPIC AGE: 152 +/-3 Ma

DATING METHOD: Uranium/Lead

MATERIAL DATED: Zircon

Postglacial Sediments

Oliver Plutonic Complex

LITHOLOGY: Glaciolacustrine Soil
Porphyritic Biotite Quartz Monzonite
Hornblende Diorite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Overlap Assemblage

METAMORPHIC TYPE: Regional

Plutonic Rocks

RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Thompson Plateau

GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1979

SAMPLE TYPE: Auger

COMMODITY

GRADE

Uranium

0.0300

Per cent

COMMENTS: The maximum assay over a 0.5-metre interval.

REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The Ranch Lake uranium occurrence lies about 5 kilometres northwest of Oliver, British Columbia and 2.75 kilometres north of the former Standard mine (082ESW091). The property was examined and evaluated by D.G. Leighton for British Newfoundland Exploration Ltd. between 1977 and 1979. Two augerholes were drilled into unconsolidated sediments.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the immediate south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of the Penticton Group. The Kettle River Formation, consisting of conglomerate, arkose and rhyolite tuff, is overlain by the Springbrook and Marron formations.

Bedrock types to the south of the Ranch Lake showing include laminated quartz schist or dirty quartzite, massive and laminated quartzite and minor limestone of the Kobau Group. At the Ranch Lake

CAPSULE GEOLOGY

showing area, the Oliver plutonic complex is composed almost entirely of porphyritic biotite quartz monzonite intermixed with hornblende diorite. Three distinct phases have been identified. From youngest to oldest these are: a central core of massive medium-grained garnet-muscovite quartz monzonite which is surrounded by porphyritic biotite quartz monzonite to the south and biotite-hornblende quartz monzonite north of the core. Hornblende diorite occurs in several small areas to the north. Border phases and dikes related to the Oliver plutonic complex include lamprophyre, augite-plagioclase porphyritic andesite, micro-quartz diorite, albite porphyritic dacite, diabase, fine-grained quartz monzonite and aplite. Bedrock uranium mineralization consists of pegmatite accumulations, uraniferous limestone, uranium-pyrrhotite and fracture-hosted uranium (Assessment Report 7398).

The Ranch Lake uranium showing is a postglacial, lacustrine-playa cyclically-closed basin with uranium enrichment of the soils. Topography and evaporation are the dominant depositional controls under alkaline conditions. A 12,000-square metre area contains a 2.5-metre thick layer averaging 0.0186 per cent uranium and a maximum uranium concentration of 0.030 per cent over a 0.5-metre interval (Culbert, 1979).

BIBLIOGRAPHY

- EMPR ASS RPT 6360, 6504, 6532, 6657, 6750, 6949, 7095, 7185, 7398, 7670, 7851
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, pp. 17,246-259; 1988, pp. 19-25
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC *322 Surficial Uranium Deposits, Vienna, 1984, pp. 179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36, 183-184
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages
Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology Reviews Vol. 3, pp. 313-330

DATE CODED: 1988/01/29
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW186**

NATIONAL MINERAL INVENTORY:

NAME(S): **MEYERS SWAMP**, MEYERS FLATS, MEYERS FLAT

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 14 27 N
LONGITUDE: 119 34 59 W
ELEVATION: 450 Metres

NORTHING: 5457440
EASTING: 311991

LOCATION ACCURACY: Within 500M

COMMENTS: Location map (Culbert, R.R., 1979). Location is for Meyers Swamp; Meyers Flat lies about 2.6 kilometres to the north-northwest.

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent
ISOTOPIC AGE: 0.001-0.020 Ma
DATING METHOD: Uranium/Thorium
MATERIAL DATED: Postglacial Sediment

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary Syngenetic
TYPE: B08 Surficial U
COMMENTS: Refer to Canadian Journal of Earth Sciences, Volume 21, 1984, pages 599-566 for age data. The Meyers Swamp showing covers a surface area of 18,500 square metres and the Meyers Flats, 66,000 square metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Quaternary			Postglacial Sediments
Jurassic			Oliver Plutonic Complex

ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Glaciolacustrine Soil
Porphyritic Biotite Quartz Monzonite
Hornblende Diorite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Auger
COMMODITY: Uranium
GRADE: 0.2970 Per cent
COMMENTS: A maximum assay over a 0.5-metre interval from the Meyers Swamp.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The Meyers Swamp uranium occurrence lies about 6.5 kilometres north-northwest of Oliver, British Columbia and 4 kilometres north of the former Standard mine (082ESW091). This occurrence lies near the southeast end of a 2.6-kilometre northwest trending area of erratic uranium occurrences. The property was examined and evaluated by D.G. Leighton for British Newfoundland Exploration Ltd. between 1977 and 1979. Six augerholes were drilled into unconsolidated sediments on the Meyers Swamp and eight augerholes drilled on the Meyers Flats.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the immediate south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of the Penticton Group. The Kettle River Formation, consisting of conglomerate, arkose and rhyolite tuff, is overlain by the Springbrook and Marron formations.

CAPSULE GEOLOGY

Bedrock types to the south of the Meyers Swamp showing include laminated quartz schist or dirty quartzite, massive and laminated quartzite and minor limestone of the Kobau Group. At the Meyers Swamp showing area, the Oliver plutonic complex is composed almost entirely of porphyritic biotite quartz monzonite intermixed with hornblende diorite. Three distinct phases have been identified. From youngest to oldest these are: a central core of massive medium-grained garnet-muscovite quartz monzonite which is surrounded by porphyritic biotite quartz monzonite to the south and biotite-hornblende quartz monzonite north of the core. Hornblende diorite occurs in several small areas to the north. Border phases and dikes related to the Oliver plutonic complex include lamprophyre, augite-plagioclase porphyritic andesite, micro-quartz diorite, albite porphyritic dacite, diabase, fine-grained quartz monzonite and aplite. Bedrock uranium mineralization consists of pegmatite accumulations, uraniferous limestone, uranium-pyrrhotite and fracture-hosted uranium (Assessment Report 7398).

Meyers Swamp contains 1.5 to 3 metres of uranium enriched organic material overlying sands. Except for small ash layers at the top of the sand zone, all uraniferous sections are very organic. The area of uranium accumulation measures 18,500 square metres (about 350 by 50 metres) with an average of 0.055 per cent uranium over 1.5 metres thickness. The highest uranium result is a 0.5-metre interval yielding 0.2968 per cent (Culbert, 1979). The average depth of this layer is 1.3 metres. The Meyers Swamp is a fluvial type of young uranium deposit. Groundwater flow and organic sequestration are the primary depositional controls in this swamp. The Meyers Swamp deposit occurs where Victoria Creek passes under porous glacial sediments and resurfaces below a swamp. This rising water appears to oxidize and destroy organics at the underlying peat-sand interface, further concentrating uranium. The upwelling is diffuse, slow and apparently have sufficiently low salinity for adsorption-filtration to be effective at the organic boundary (Culbert and Leighton, 1988).

The nearby Meyers Flats, 2.6-kilometres to the north-northwest, contains an area of 66,000 square metres of uranium enrichment with a high of 0.024 per cent uranium over 0.5 metre (Culbert, 1979).

BIBLIOGRAPHY

- EMPR ASS RPT 6360, 6532, 6949, 7398, 7670
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, pp. 17,246-259
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
*IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp. 179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36, 183-184
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages
Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as Observed in the Natural Environment in British Columbia, Royal Commission on Uranium Mining, Accession List 2017S, 15 pages with Appendices
*Culbert, R.R. and D.G. Leighton (1988): Young Uranium; in Unconventional Uranium Deposits; Ore Geology Reviews Vol. 3, pp. 313-330

DATE CODED: 1988/01/29
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW187**

NATIONAL MINERAL INVENTORY:

NAME(S): **KALEDEN**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E05E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 22 30 N
LONGITUDE: 119 37 34 W
ELEVATION: 500 Metres

NORTHING: 5472461
EASTING: 309376

LOCATION ACCURACY: Within 500M
COMMENTS: Location map (Culbert, 1979).

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent
ISOTOPIC AGE: 0.001-0.020 Ma
DATING METHOD: Uranium/Thorium
MATERIAL DATED: Postglacial Sediment

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary Syngenetic
TYPE: B08 Surficial U
COMMENTS: Refer to Canadian Journal of Earth Sciences, Volume 21, 1984, pages 599-566 for age data.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Eocene	Penticton	Marron	
Quaternary			Postglacial Sediments

LITHOLOGY: Soil
Trachyte Lava
Trachyandesite Lava
Ash Flow Tuff
Mudstone
Intrusive
Trachyte
Trachyandesite

HOSTROCK COMMENTS: The Kaleden young uranium occurrence is hosted in 52.9-44.2 Ma old volcanics of the Kitley Lake Member of the Marron Formation.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
Okanagan
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Auger
YEAR: 1979
COMMODITY: Uranium
GRADE: 0.0148 Per cent
COMMENTS: The maximum assay over a 0.5-metre interval.
REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The Kaleden young uranium occurrence lies about 2.75 kilometres west of Kaleden, British Columbia. This occurrence lies near the northwest end of a 2 kilometre northwest trending area of erratic uranium and thorium occurrences. Uranium in sediments has been examined at the showing by one augerhole. Regionally, the area is principally underlain by an assemblage of Eocene volcanics and sediments of Penticton Group. At the base of this assemblage, the Eocene Kettle River Formation consists of granite boulder conglomerate, arkose, volcanic wacke and rhyolite breccia. Volcanics of the Springbrook and Marron formations overlie the Kettle Creek Formation. To the south and north, these Eocene volcanics and sediments unconformably overlie medium grained intrusive rocks of the Cretaceous Okanagan batholith and Nelson plutonic suite, which to the south cuts Carboniferous to Permian Kobau Group metasedimentary rocks. The Okanagan batholith consists

CAPSULE GEOLOGY

primarily of biotite granite and granodiorite, locally porphyritic. The Nelson plutonic rocks are hornblende biotite granodiorite, quartz diorite and granite. Both are massive, light grey weathering, medium to coarse grained and equigranular.

Bedrock types at the Kaleden young uranium occurrence are assigned to the Kitley Lake Member of the Marron Formation. The Kitley Lake Member consists mainly of massive, yellow to buff, trachyte to trachyandesite lava with conspicuous glomerophenocrystic feldspar and biotite clots in a fine-grained matrix. Minor ash-flow tuff, mudstone and intrusive equivalents comprise the remainder of this member. The Kitley Lake Member age lies between 52.9 Ma (biotite) and 44.2 Ma (whole rock) by potassium-argon dating.

Kaleden contains uranium in organic material on sands. The area of uranium accumulation is approximately 40,000 square metres in a 6.5-metre thick layer. The average uranium concentration yielded from samples taken from 1 augerhole was 0.009 per cent uranium with a maximum value of 0.0148 per cent uranium over a 0.5-metre interval (Culbert, 1979).

BIBLIOGRAPHY

- EMPR ASS RPT 6360, 6504, 6532, 6657, 6750, 6949, 7095, 7185, 7398, 7670, 7851
EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, pp. 17,246-259
EMPR MAP 29; 35 (Revised); 39
EMPR OF 1989-2, 1989-5; 1990-32
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC OF 481; *551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31
CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
CJES *Vol. 21, May 1984, pp. 559-566
ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
IAEA TECDOC 322 Surficial Uranium Deposits, Vienna, 1984, pp. 179-191
Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36, 183-184
*Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages
Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology Reviews Vol. 3, pp. 313-330

DATE CODED: 1988/01/29
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW188**

NATIONAL MINERAL INVENTORY:

NAME(S): **NKWALA SOUTH**, NKWALA P. LINE, NKWALA CASES,
NKWALA SIDE BASIN, NKWALA CENTRE, NKWALA NORTH

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E05E 082E12E
BC MAP:

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 20 N
LONGITUDE: 119 40 44 W
ELEVATION: 975 Metres

NORTHING: 5485255
EASTING: 305995

LOCATION ACCURACY: Within 500M

COMMENTS: Nkwala South (Geological Survey of Canada Open File 551). Five locations were sampled along a 3.0-kilometre north-south trend.

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Recent
ISOTOPIC AGE: 0.001-0.020 Ma

DATING METHOD: Uranium/Thorium

MATERIAL DATED: Postglacial Sediment

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Sedimentary Syngenetic
TYPE: B08 Surficial U

COMMENTS: Refer to Canadian Journal of Earth Sciences, Volume 21, 1984, pages 599-566 for age data.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Quaternary			Postglacial Sediments
Middle Jurassic			Okanagan Batholith

LITHOLOGY: Glaciolacustrine Soil
Granodiorite

HOSTROCK COMMENTS: The Okanagan batholithic complex is Middle Jurassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage
METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Auger

YEAR: 1979

COMMODITY	GRADE	Per cent
Uranium	0.0270	

COMMENTS: The maximum assay over a 0.5-metre interval for the Nkwala South area.

REFERENCE: Culbert, 1979.

CAPSULE GEOLOGY

The Nkwala Cases young uranium occurrence lies about 6.5 kilometres west of Penticton, British Columbia. This occurrence consists of four defined areas of uranium enrichment in postglacial sediments: the Nkwala South, Nkwala Side Basin, Nkwala P. Line, Nkwala Centre and Nkwala North. This occurrence lies at the northwest end of a 2 kilometre northwest trending area of erratic uranium and thorium occurrences. The Nkwala Cases young uranium occurrence was examined in late 1970s by D.G. Leighton in response to uranium anomalies discovered during reconnaissance geological, geochemical and prospecting.

Regionally, the area is principally underlain by medium grained intrusive rocks of the Middle Jurassic Okanagan batholithic complex and Bromley batholith, which to the south cuts Carboniferous to Permian Kobau Group metasedimentary rocks. The Okanagan batholithic complex consists primarily of biotite granite and granodiorite, locally porphyritic. The Bromley batholith consists of hornblende biotite granodiorite, quartz diorite and granite. Both are massive, light grey weathering, medium to coarse grained and equigranular. Intrusive rocks in the vicinity of the Nkwala Cases uranium

CAPSULE GEOLOGY

occurrence are highly fractured and altered. On its southern margin, the Okanagan batholithic complex is in contact with an overlying assemblage of Eocene volcanics and sediments of the Pentiction Group and rhyolite and rhyolite tuffs comagmatic with the Eocene Shingle Creek porphyry. At the base of the Pentiction Group lies the Eocene Kettle River Formation, consisting of granite boulder conglomerate, arkose, volcanic wacke and rhyolite breccia. The Kitley Lake Member of the Marron Formation and Nimpit Lake Member of the Marama Formation comprise the primary Pentiction Group rock types nearest the Nkwala Cases young uranium occurrence. The Kitley Lake Member consists of massive, yellow to buff, trachyte and trachyandesite with conspicuous feldspar and biotite glomerophenocrysts in a fine-grained matrix. The age of the Kitley Member ranges from 52.9 Ma (biotite) to 44.2 Ma (whole rock). The overlying Nimpit Lake Member is composed of recessive, reddish, amygdaloidal trachyandesite with minor intercalated pyroclastic deposits.

The Nkwala occurrence is a fluvial-type young uranium showing where groundwater flow and organic sequestration are the dominant depositional controls of uranium in soils underlying swamp.

Several small areas of uranium enrichment occur in soils along a 3.0 kilometre north-south trend. The following is a table of five augerhole sample locations from Culbert, 1979:

1	2	3	4	5	6	7
Nkwala North	47500	5.5	2.5	0.0118	0.0130	082ENW087
Nkwala Center	22500	Surface	3.0	0.0079	0.0102	082ENW088
Nkwala P. Line	5000	-	3.0	0.0126	0.0184	082ENW089
Nkwala South	20000	2.8	3.0	0.0098	0.0270	082ESW188
Nkwala Side Basin	6000	3.5	1.5	0.0104	0.0153	082ESW188

Where:

1. Name
2. Area in square metres
3. Average depth of uraniferous layer below surface (metres)
4. Average thickness of uraniferous layer (metres)
5. Average uranium assay in per cent
6. Maximum uranium assay in per cent over 0.5-metre
7. MINFILE number reference.

BIBLIOGRAPHY

EMPR ASS RPT 6360, 6504, 6532, 6657, 6750, 6949, 7095, 7185, 7398, 7670, 7851
 EMPR EXPL 1977-E22,E26; 1978-22,23,26; 1979-25
 EMPR FIELDWORK 1977, pp. 7-13; 1978, pp. 12-15; 1983, pp. 17,246-259
 EMPR MAP 29; 35 (Revised); 39
 EMPR OF 1989-2, 1989-5; 1990-32
 GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
 GSC OF 481; *551; 637; 1505A; 1565; 1969
 GSC P 77-1A, p. 31
 CIM BULL Vol. 71, No. 783, May 1978, pp. 103-110
 CJES *Vol. 21, May 1984, pp. 559-566
 ECON GEOL Vol. 77, No. 5, 1982, pp. 1176-1209
 IAEA TECDOC *322 Surficial Uranium Deposits, Vienna, 1984, pp. 179-191
 Bates, D.V., J.W. Murray and V. Raudsepp (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining; Commissioners' Report, October 30, 1980, Vol. 1, pp. 35-36, 183-184
 *Culbert, R.R. (1979): Post-Glacial Uranium Concentration in South Central British Columbia, Royal Commission on Uranium Mining, Accession List #2109S01, 20 pages
 Culbert, R.R. (1979): Uranium Equilibrium - Disequilibrium as Observed in the Natural Environment in British Columbia, Royal Commission on Uranium Mining, Accession List 2017S, 15 pages with Appendices
 Culbert, R.R. and D.G. Leighton (1988): Young Uranium; Ore Geology Reviews Vol. 3, pp. 313-330

DATE CODED: 1988/01/29
 DATE REVISED: 1996/11/30

CODED BY: LDJ
 REVISED BY: KJM

FIELD CHECK: N
 FIELD CHECK: N

MINFILE NUMBER: **082ESW189**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALLENDALE LAKE**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E06W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 23 35 N
LONGITUDE: 119 21 07 W
ELEVATION: 1680 Metres

NORTHING: 5473811
EASTING: 329338

LOCATION ACCURACY: Within 500M
COMMENTS: GSC Paper 77-1A, page 31.

COMMODITIES: Uranium

MINERALS

SIGNIFICANT: Betafite Cyrtolite Brannerite Euxenite
ASSOCIATED: Magnetite Hematite
ALTERATION: Hematite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Pegmatite
TYPE: O02 Rare element pegmatite - NYF family 115 Classical U veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene			Coryell Intrusions

ISOTOPIC AGE: 51.7-53.0+/-1.8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Pegmatite
Porphyritic Syenite
Monzonite
Shonkinite
Pegmatite Dike

HOSTROCK COMMENTS: The age date of the Allendale Lake stock of the Coryell intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Allendale Lake occurrence is located 1.5 kilometres west of Allendale Lake, 18 kilometres east-northeast of Okanagan Falls.

The occurrence is underlain by a small oval-shaped stock of the Eocene Coryell intrusions and is informally referred to as the Allendale Lake stock. This stock is roughly 2.5 kilometres diameter (8 square kilometres) and occurs at the intersection of the Eocene hornblende granodiorite to the west, the Okanagan Gneiss to the southwest and northwest, and granite of the Cretaceous Okanagan batholith.

The Allendale Lake stock consists of three phases. The main phase is biotite pyroxene monzonite. The rock is typically porphyritic with a spongy framework of smoky grey, perthitic textured high temperature orthoclase and orthoclase-anorthoclase phenocrysts, 1 to 2 centimetres diameter with interstitial diopsidic augite and biotite. These mafic minerals occur either as individual grains or as clusters with apatite, magnetite and sphene.

The syenite phase is hosted in small pockets in the monzonite phase. Rhomb-shaped anorthoclase phenocrysts are distinctive. Apatite and magnetite are also locally abundant. The syenite is weakly propylitic altered in isolated fracture zones. Epidote and calcite veins comprise alteration minerals. Local zones of strong secondary biotite replacement occur adjacent to pegmatite dikes. Argillic alteration of feldspars is very weak. Partially assimilated aplite xenoliths are common within the syenite. They range from less than 1.5 to 6 metres length. However, angular fragments of gneiss are also present.

A shonkinitic border phase is exposed along the west and southwest margins of the stock where it forms a continuous zone ranging from 50 to 300 metres wide. The phase is relatively

CAPSULE GEOLOGY

mafic-rich and probably is a basic differentiate of the monzonite. The fine to medium-grained rock is composed of intermixed anorthoclase and orthoclase perthite (80 per cent) and pyroxene (15 per cent). The pyroxene contains accessory biotite and hornblende in clots with apatite and magnetite or as poikilitic inclusions in large augite grains. Small, partly altered nepheline grains, one-half to one millimetre diameter, are sparingly disseminated throughout the rock.

The main fractures within this Coryell stock have a mean strike of 035 degrees and dip 80 degrees southeast. Strong subsidiary fractures strike 245 degrees dipping 80 degrees northwest. Two weaker sets strike 190 degrees dipping 55 degrees northwest and 135 degrees dipping vertical.

Pegmatite dikes crosscut the syenite and monzonite phases in the north, east central and south parts of the stock. The pegmatites are quartz-rich and feldspars consist of very coarse albite. Biotite and actinolite comprise mafic minerals. Sphene, allanite and magnetite comprise accessory minerals.

Mineralization at the Allendale Lake occurrence consists of a pegmatite dike within syenite. The dike contains betafite, cyrtolite, and perhaps brannerite and euxenite in association with magnetite and hematite. Somewhat higher than normal radioactivity occurs in this Coryell stock.

BIBLIOGRAPHY

EMPR AR 1966-190; 1968-217
EMPR ASS RPT 1741, 2363, 3481, 10517, 10772, 12290, 15466, 20132
EMPR GEM 1969-351; *1971-386-396; 1972-41
EMPR PF (Yukon Minerals Corp. (1989): Press Release)
EMPR OF 1990-32
GSC P *77-1A, p. 31
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC OF 481; 551; 637; 1505A; 1565; 1969

DATE CODED: 1988/01/29
DATE REVISED: 1996/11/30

CODED BY: LDJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW190**

NATIONAL MINERAL INVENTORY:

NAME(S): **PDL**, ASTRO, FORD,
AKIRA

STATUS: Prospect
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 22 21 N
LONGITUDE: 119 46 30 W
ELEVATION: 1300 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5472570
EASTING: 298559

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of reverse circulation-drill hole
PDL-89-RC-2 (Assessment Report 18527).

COMMODITIES: Gold Silver Copper Lead Zinc
Molybdenum

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite
COMMENTS: Pyrite and arsenopyrite are the only sulphides reported.
ASSOCIATED: Quartz
ALTERATION: Limonite Pyrite Silica Chalcedony
ALTERATION TYPE: Argillic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Stratabound Massive
CLASSIFICATION: Hydrothermal Epigenetic Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au K04 Au skarn
K01 Cu skarn
DIMENSION: 140 x 20 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: An argillic alteration zone with a silicified core is 20 metres wide
and 140 metres long.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Eocene	Penticton	Marron	

LITHOLOGY: Cherty Breccia
Biotite Porphyritic Andesite
Chert
Limestone
Greenstone
Trachyandesite Flow
Andesite Flow
Trachyandesite

HOSTROCK COMMENTS: The alteration zone is hosted in the Kitley Lake Member of the Marron
Formation. Shoemaker Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Silver 14.8000 Grams per tonne
Gold 0.7000 Grams per tonne
Molybdenum 0.1500 Per cent
COMMENTS: A 3-metre section from reverse circulation-drill hole PDL-89-RC-2.
REFERENCE: Assessment Report 18527.

CAPSULE GEOLOGY

A short adit at the base of some cliffs on the PDL claim is evidence of previous property exploration (circa 1930), but no published record exists. There is also evidence of diamond drilling in the adit. Several bulldozer trenches were found above the adit and cliffs, believed to have been excavated around 1971. The PDL

CAPSULE GEOLOGY

claim was staked by Placer Dome Development Ltd. in 1983. This was followed by property exploration in 1984 and 1985. The property was optioned to QPX Minerals Inc. in 1987. The adjacent Astro claims were staked by Pacific Petroleum Ltd. (Petro Canada Ltd.) in 1977 and 1979. Exploration was conducted for uranium in the area. QPX Minerals Inc. conducted a comprehensive exploration program on the PDL and Astro claims in 1988.

The PDL showing lies along the western margin of a fault-bound basin of Eocene Penticton Group volcanic rocks. To the west, the property is underlain by the Carboniferous to Triassic Shoemaker Formation, consisting mainly of blue-grey chert, minor limestone and greenstone that have been intruded by pyroxenite, hornblendite and serpentinite. Silicification is widespread in greenstone. The contact between chert and greenstone is gradational over widths of up to 10 metres. Bedding strikes northeast with moderate to steep dips to the southeast. To the east at the base of the Penticton Group volcanic succession, lies the Springbrook Formation that consists of massive, unsorted, polymictic conglomerate and breccia with lesser sandstone and tuff. The matrix of the conglomerate and breccia is silty and green. Clasts are dominantly volcanics (45 per cent) and chert (35 per cent) with lesser metamorphic rocks (10 per cent), sediments (5 per cent) and intrusions (5 per cent). This is overlain by trachyandesite and andesite flows with conspicuous glomerophenocrystic clots of feldspar of the Kitley Lake Member. Highly vesicular, pyroxene-rich basaltic andesite of the Kearns Creek Member overlies the Kitley Lake Member. Several north-trending faults also cuts through the property area.

Gold occurs in a number of east-trending, very small pyrite-arsenopyrite quartz stringers in the Shoemaker Formation. The stringers do not exceed widths of 5 centimetres. The quartz stringers occur in chert breccia of the Shoemaker Formation. During 1988 exploration, an argillic-altered and silicified system was discovered on the Astro 34 claim in biotite porphyritic andesite of the Marron volcanics. The argillic (limonite and pyrite) alteration zone is up to 20 metres wide over a strike length of 140 metres. The argillic alteration envelopes a silicified core, up to 3 metres wide. Reverse-circulation drilling indicates a widening of silicification to 14 metres true width at depth and a depth of 47 metres. This may be the result of the merging of two zones at depth. The zone appears to dip vertically or very steep. Alteration appears to be controlled by north-trending faults.

The highest results from pyrite-arsenopyrite stringers were from grab sample PDL-556 in 1987. This sample yielded 30.3 grams per tonne gold, 22.5 grams per tonne silver, 0.25 per cent copper, 0.14 per cent lead, 0.57 per cent zinc and 3.74 per cent arsenic (Assessment Report 16674).

Anomalous gold (up to 0.70 gram per tonne), silver (up to 14.8 grams per tonne) and molybdenum (up to 0.15 per cent) values, over 3-metre sections from reverse circulation-drill hole PDL-89-RC-2, were found associated with chalcedonic veinlets in argillically altered Kitley Member volcanics of the Marron Formation on the Astro 34 claim (Assessment Report 18527).

An abandoned 10-metre adit intersected, and an old trench also exposed small, discontinuous massive sulphide lenses on the PDL claim (Assessment Report 18527). Sampling from Trench 1 yielded values up to 0.49 gram per tonne gold and 0.15 per cent copper (Assessment Report 16675).

BIBLIOGRAPHY

EMPR ASS RPT 13199, 14062, *16674, 18251, 18284, *18527
EMPR PF (Pacific Petroleum Ltd., Claim Map)
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 72-53

DATE CODED: 1988/03/09
DATE REVISED: 1996/11/30

CODED BY: GSA
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW191**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALASKA (L.2938)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 24 25 N
LONGITUDE: 119 03 04 W
ELEVATION: 1474 Metres

NORTHING: 5474718
EASTING: 351207

LOCATION ACCURACY: Within 500M

COMMENTS: The location of adits 2.75 kilometres west-southwest from the summit of Goat Peak and 4.25 kilometres south-southeast from Beaverdell (Assessment Report 12734).

COMMODITIES: Silver Gold Copper Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena
COMMENTS: Refer to Rambler Fraction (082ESW034) for age of mineralization data.
ASSOCIATED: Quartz
ALTERATION: Chlorite Malachite
ALTERATION TYPE: Chloritic Oxidation
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres STRIKE/DIP: 110/90N TREND/PLUNGE:
COMMENTS: A mineralized quartz vein system strikes 110 degrees and dips vertical. The veins range from 8 to 40 centimetres width.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Westkettle Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Harper Ranch
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 252.9000 Grams per tonne
Gold 3.5700 Grams per tonne
Copper 1.2000 Per cent
Lead 0.0400 Per cent
Zinc 0.2100 Per cent
COMMENTS: Sample 50339c, a grab sample from an adit dump containing quartz veins with pyrite and malachite.
REFERENCE: Assessment Report 12734.

CAPSULE GEOLOGY

The Alaska (Lot 2938) prospect is located 2.75 kilometres west of the summit of Goat Peak and 4.25 kilometres south-southeast of Beaverdell, British Columbia (Assessment Report 12734). The Alaska Reverted Crown grant was forfeited February 15, 1994. Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area. The first recorded development on the Alaska claim was in 1918. In this year, J. Kelly and associates developed workings on the claim. Further development occurred in 1935 under lease to a Penticton syndicate represented by L. Smith. In 1947 and 1948

CAPSULE GEOLOGY

further work was carried out by Highland Silver Mines Ltd. Recent interest in the property was by Canstat Petroleum Corp., in 1982 and 1983.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Eocene Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Eocene Beaverdell porphyry. The Westkettle batholith has been correlated with the Nelson intrusions that have been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper (Permian) section of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east. A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine-grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization.

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. The mineralized veins are fissure-hosted, formed along east-trending faults in the west portion of the Beaverdell camp, and northeast-trending faults in the east portion of the camp. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship. The northeast-striking, high angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite.

The Alaska (Lot 2938) adjoins the Buster claim (082ESW036) in the north and the Gold Drop Fraction claim (082ESW041) in the west-southwest. The property is underlain by chloritic altered granodiorite of the Westkettle batholith. A mineralized quartz vein system striking 110 degrees and dipping vertical occupies a shear zone in the granodiorite. The veins range from 8 to 40 centimetres in width and are mineralized with pyrite, chalcopyrite, galena and locally malachite. Grab sample 50339c, taken from an adit dump in 1983, yielded 252.9 grams per tonne silver, 3.57 grams per tonne gold, 1.2 per cent copper, 0.21 per cent zinc and 0.04 per cent lead (Assessment Report 12734).

BIBLIOGRAPHY

- EMPR AR 1918-K220; 1925-202; 1935-D14,G52; 1947-A154; 1948-A126
- EMPR ASS RPT *12734
- EMPR EXPL 1983-41,42
- EMPR OF 1989-5
- GSC MEM *79
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21
- CJES Vol. 19, No. 6, pp. 1264-1274, 1984
- Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1989/03/22
DATE REVISED: 1996/08/15

CODED BY: GO
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW192**

NATIONAL MINERAL INVENTORY:

NAME(S): **BELLACLAVA (L.3837S)**, BALLACLAVA, BALACLAVA,
CRATER LAKE GROUP

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 24 20 N
LONGITUDE: 119 04 48 W
ELEVATION: 1090 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5474621
EASTING: 349108

LOCATION ACCURACY: Within 500M

COMMENTS: An adit located 3.5 kilometres south of Beaverdell and 4.75 kilometres west from the summit of Goat Peak (Assessment Report 16772).

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Pyrrhotite Arsenopyrite
Silver

COMMENTS: Refer to Rambler Fraction (082ESW034) for age of mineralization data. Native silver occurs as occasional films. Mineralized quartz stringers were exposed over 6 metres in the lower adit.

ASSOCIATED: Quartz
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 6 Metres STRIKE/DIP: 140/50S TREND/PLUNGE: /
COMMENTS: A shear zone striking 290 degrees and dipping vertical hosts two quartz veins; the older striking 140 degrees and dipping 50 degrees southwest; the younger striking 220 degrees and dipping 40 degrees.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith
Paleocene			Unnamed/Unknown Informal

ISOTOPIC AGE: 61.9 +/- 2.2 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Whole Rock

LITHOLOGY: Granodiorite
Andesite Dike

HOSTROCK COMMENTS: An andesite (Wellington-type) dike has been dated as Paleocene (Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1267).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Harper Ranch
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SHEAR REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Channel
COMMODITY GRADE
Silver 37.0000 Grams per tonne
Gold 36.3000 Grams per tonne
COMMENTS: Sample #26, the best of 6 channel samples taken over 0.55 metre from a shear zone with intense alteration, iron staining and silicification hosted in andesite dike exposed in a stripped area immediately north of an adit.
REFERENCE: Assessment Report 16772.

CAPSULE GEOLOGY

The Bellaclava (Lot 3837s) prospect is located 4.75 kilometres west of the summit of Goat Peak and 3.5 kilometres south of Beaverdell, British Columbia (Assessment Report 16772). Initial prospecting began in the Beaverdell area in the late

CAPSULE GEOLOGY

1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area.

The first recorded development on the Bellaclava was in 1931. In this year Crater Lake Mining Co. owned and operated the Crater Lake group consisting of the Bellaclava (082ESW192), Zora May, Silver Hoard and Hidden Treasure (082ESW193) claims. Development consisted of numerous opencuts and short tunnels which followed the hanging and footwalls of a narrow, dark green andesite (Wellington-type) dike. A lower tunnel, 9 metres vertically below a 18-metre drift containing indicators of an ore shoot on the floor, was 41 metres long along a 305 degree trend. Crater Lake Mining Co. continued work until 1937. Since 1946, work has been intermittent and ownership has changed several times: 1946 - Silver Bounty Mines Ltd., 1958 - Sheritt-Lee Mines Ltd., 1963 - Ruby Silver Mines Ltd., 1971 - Copper Bounty Mines Ltd. and 1983 - Walmont Precious Metals Corp. The occurrence is currently owned by IGF Metals Inc. Highland Bell Ltd. obtained a lease on the Bellaclava claim in 1947 and conducted 152 metres of development in 4 adits. An old adit was cleared as a drilling diamond drilling base in 1967 by Silver-Lee Mines Ltd.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Eocene Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Eocene Beaverdell porphyry. The Westkettle batholith has been correlated with the Nelson intrusions that have been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper (Permian) section of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east. A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine-grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization.

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. The mineralized veins are fissure-hosted, formed along east-trending faults in the west portion of the Beaverdell camp and northeast-trending faults in the east portion of the camp. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship. The northeast-striking, high angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite.

The Bellaclava (Lot 3837s) adjoins the Hidden Treasure property (082ESW193) in the north. The property is underlain by Westkettle batholith granodiorite. A shear zone, striking 190 degrees and dipping 15 to 58 degrees west, hosts two quartz stringers 2 to 5 centimetres wide and contains galena, sphalerite, pyrite and possibly arsenopyrite and pyrrhotite exposed at the face of the lower adit over 6 metres. The older stringer strikes 140 degrees and dips 50 degrees southwest while the other younger stringer strikes 220 degrees and dips 40 degrees northwest. A narrow, dark green andesite (Wellington-type) dike is 1 to 15 centimetres wide, striking 290 degrees and dipping vertically. The dike occurs in and closely follows the shear zone.

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1249
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1931-A123; 1935-D14; 1936-D57; 1937-D35; 1949-A138-A143;
1958-64; *1967-224
EMPR ASS RPT *17, 37, *16772
EMPR OF 1989-5
GSC MEM *79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES Vol. 19, No. 6, pp. 1264-1274, 1984
Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the
Beaverdell Area, south-central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pp.

DATE CODED: 1989/03/22
DATE REVISED: 1996/08/15

CODED BY: GO
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW193**

NATIONAL MINERAL INVENTORY:

NAME(S): **HIDDEN TREASURE (L.3840S)**, SILVER HOARD (L.3836S), CRATER LAKE GROUP

STATUS: Prospect

Underground

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E06E

BC MAP:

LATITUDE: 49 24 34 N

LONGITUDE: 119 04 34 W

ELEVATION: 1100 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: A cluster of four adits located 4.5 kilometres west from the summit of Goat Peak and 2.75 kilometres south of Beaverdell (Assessment Report 16772).

UTM ZONE: 11 (NAD 83)

NORTHING: 5475046

EASTING: 349402

COMMODITIES: Silver

Lead

Zinc

Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Silver Pyrite

COMMENTS: Refer to Rambler Fraction (082ESW034) for age of mineralization data.

ASSOCIATED: Quartz Calcite

ALTERATION: Limonite

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Vein

Shear

CLASSIFICATION: Hydrothermal

Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

DIMENSION: Metres

STRIKE/DIP: 120/77S

TREND/PLUNGE:

COMMENTS: A shear zone, striking 120 degrees and dipping 77 degrees south to vertical, host quartz veins 2 to 8 centimetres wide.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Jurassic
Paleocene

Westkettle Batholith
Unnamed/Unknown Informal

ISOTOPIC AGE: 61.9 +/- 2.2 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Whole rock

LITHOLOGY: Granodiorite
Andesite Dike

HOSTROCK COMMENTS: An andesite (Wellington-type) dike has been dated as Paleocene (Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1267).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

1581.3000

Grams per tonne

Gold

1.0200

Grams per tonne

Lead

2.2500

Per cent

Zinc

1.3000

Per cent

COMMENTS: Sample of quartz vein.

REFERENCE: Assessment Report 16772.

CAPSULE GEOLOGY

The Hidden Treasure (Lot 3840s) prospect is located 4.5 kilometres west of the summit of Goat Peak and 2.75 kilometres south of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area.

CAPSULE GEOLOGY

The first recorded development on the Hidden Treasure was in 1931. In this year Crater Lake Mining Co. owned and operated the Crater Lake group consisting of the Bellaclava (082ESW192), Zora May, Silver Hoard and Hidden Treasure claims. Development consisted of 3 adits driven along or near a dark green andesite (Wellington-type) dike striking 290 degrees and dipping vertically. Crater Lake Mining Co. continued work until 1937. Since 1946, work has been intermittent and ownership has changed several times: 1946 - Silver Bounty Mines Ltd., 1958 - Sheritt-Lee Mines Ltd., 1963 - Ruby Silver Mines Ltd., 1971 - Copper Bounty Mines Ltd. and 1983 - Walmart Precious Metals Corp. The occurrence is currently owned by IGF Metals Inc.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Eocene Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Eocene Beaverdell porphyry. The Westkettle batholith has been correlated with the Nelson intrusions that have been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper (Permian) section of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east. A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine-grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization.

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. The mineralized veins are fissure-hosted, formed along east-trending faults in the west portion of the Beaverdell camp and northeast-trending faults in the east portion of the camp. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship. The northeast-striking, high angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite.

The Hidden Treasure (Lot 3840s) and Silver Hoard (Lot 3836s) adjoin the Bellaclava claim (082ESW192) in the south as well as the Golden property (082ESW194). The claims are underlain by Westkettle granodiorite. Three adits have been driven along a dark green andesite (Wellington-type) dike that strikes 290 degrees and dips vertically. The dike is 1 to 14 centimetres wide along a shear zone, striking approximately 120 degrees and dipping 77 to 90 degrees south. In the upper adit and trenches, mineralized quartz occurs with minor calcite in 2 to 8 centimetre wide veinlets and lenses up to 5 centimetres wide by 152 centimetres long. Limonite occurs along fractures on both margins of the shear zone and within fractures in the dike.

Mineralization occurs along the footwall and hangingwall of the dike and also in the quartz veinlets and consists of small, but wide separated lenses of a few centimetres in extent of galena, sphalerite, pyrite and occasional films of native silver. A chip sample taken in 1987 by IGF Metals Inc. from one of these quartz veins on surface yielded 1581.3 grams per tonne silver, 1.02 grams per tonne gold, 2.25 per cent lead and 1.3 per cent zinc (Assessment Report 16772). Channel sample #29 yielded 308.57 grams per tonne silver and 0.03 gram per tonne gold (Assessment Report 16772). The sample was also taken in 1987 from a quartz vein with galena, sphalerite (one-third) and altered granodiorite hostrock (two-thirds).

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1252
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR *1931-A123; 1935-D14; 1936-D57; 1937-D35; 1949-A138-A143
EMPR ASS RPT *17, *16772
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM *79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES Vol. 19, No. 6, pp. 1264-1274, 1984
Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the
Beaverdell Area, south-central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pp.

DATE CODED: 1989/03/23
DATE REVISED: 1996/08/15

CODED BY: GO
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW194**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN FR. (L.3289S)**, GOLDEN (L.1433S), RECO FR (L.3839S),
RICO FR, RECO (L.3288S), RICO

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 24 35 N
LONGITUDE: 119 04 07 W
ELEVATION: 1280 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5475062
EASTING: 349946

LOCATION ACCURACY: Within 500M

COMMENTS: An adit located 3.25 kilometres west from the summit of Goat Peak and
3.25 kilometres south of Beaverdell (Assessment Report 16772).

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite Tetrahedrite

Silver

COMMENTS: Refer to Rambler Fraction (082ESW034) for age of mineralization data.

ASSOCIATED: Quartz Calcite

ALTERATION: Silica Limonite

ALTERATION TYPE: Silicific'n Oxidation

MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres

STRIKE/DIP: 280/70N

TREND/PLUNGE:

COMMENTS: A shear zone varies in width from a fissure to 61 centimetres wide.
The average of five parallel shears is a strike of 280 degrees and
a dip of 70 to 80 degrees to the northwest.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith
Paleocene			Unnamed/Unknown Informal

ISOTOPIC AGE: 61.9 +/- 2.2 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Whole rock

LITHOLOGY: Granodiorite
Andesite Dike

HOSTROCK COMMENTS: An andesite (Wellington-type) dike has been dated as Paleocene
(Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1267).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Harper Ranch

PHYSIOGRAPHIC AREA: Okanagan Highland

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SHEAR

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Channel

COMMODITY

GRADE

Silver

2000.9100 Grams per tonne

Gold

0.1700 Grams per tonne

COMMENTS: Channel sample #46 over 0.35 metre of a mineralized shear zone.

REFERENCE: Assessment Report 16772.

CAPSULE GEOLOGY

The Golden Fraction (Lot 3289s) prospect is located 3.75 kilometres west of the summit of Goat Peak and 3.25 kilometres south of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area.

CAPSULE GEOLOGY

The first recorded work on the Golden claim group was in 1936, owned and operated by Wallace Mountain Mining Co. Ltd. The Golden claim group consisted of the Golden (Lot 1433s), Golden Fraction (Lot 3289s), Reco (Lot 3288s) and Rico Fraction (Lot 3839s) Crown grants. In 1938, R. Cheyne was reported the operator. Since 1946, work has been intermittent and ownership has changed several times: 1946 - Silver Bounty Mines Ltd., 1958 - Sheritt-Lee Mines Ltd., 1963 - Ruby Silver Mines Ltd., 1971 - Copper Bounty Mines Ltd. and 1983 - Walmart Precious Metals Corp. The occurrence is currently owned by IGF Metals Inc. Past development has centred on three parallel shear zones within 15 metres of each other. The main workings consisted of a 46-metre long opencut on the south shear zone near the east boundary of the Golden Fraction, a 16-metre adit from the west end of the opencut driven along a 100 degree trend, and a shaft. The adit was driven to intersect the central shear zone also hosting an andesite dike. The shaft was driven down 15 metres on a shear zone 61 metres southwest of the opencut. A 76-metre adit was also driven along this shear zone. Two short cuts and a short adit were also made above 'Dry' Creek.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Eocene Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Eocene Beaverdell porphyry. The Westkettle batholith has been correlated with the Nelson intrusions that have been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper (Permian) section of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east. A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine-grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization.

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver, lead, zinc vein camp. The mineralized veins are fissure-hosted, formed along east-trending faults in the west portion of the Beaverdell camp, and northeast-trending faults in the east portion of the camp. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship. The northeast-striking, high angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite.

The Golden Fraction (Lot 3289s) adjoins the Hidden Treasure claim (082ESW193) to the west. The property is underlain by granodiorite of the Westkettle batholith which hosts five subparallel to parallel shear zones striking approximately 280 degrees, dipping 70 to 80 degrees northwest and ranging from a fissure to 61 centimetres wide, with an average of 15 centimetres. Three of these five shear zones have been developed by workings.

Galena, sphalerite, pyrite, chalcopyrite, tetrahedrite and native silver of variable proportions occur in quartz-calcite veins with wallrock within the shear zones. A 4.3-metre section, 20 centimetres wide, contained considerable light-coloured sphalerite. The shear zones are locally siliceous and iron-stained. An andesite (Wellington-type) dike trends east and occurs in and closely follows the central shear zone.

A sample of dump material from the opencut taken in 1936 yielded 0.34 gram per tonne gold, 8468 grams per tonne silver, 26.5 per cent lead, 22.3 per cent zinc and 0.1 per cent copper (Minister of Mines

CAPSULE GEOLOGY

Annual Report 1936, page D31). Another sample was taken from the south end of a shear zone 17 metres vertically above the central opencut and adit. The sample yielded 0.34 gram per tonne gold, 3860 grams per tonne silver, 5.9 per cent lead and 0.8 per cent zinc (Minister of Mines Annual Report 1936, page D31). In 1987, sample #46 yielded 2000.91 grams per tonne silver and 0.17 gram per tonne gold (Assessment Report 16772). The sample was a 0.35-metre channel sample from a shear zone with thin banding of iron staining and gouge on the hangingwall, silicification, galena and pyrite.

In 1938, production from the Golden Fraction occurrence was reported as 9 tonnes from the Rico Fraction (Lot 3839s), from which 17,978 grams of silver, 353 kilograms of lead and 502 kilograms of zinc were recovered.

BIBLIOGRAPHY

EMPR AR *1936-D31; *1938-A34; 1949-A138-A143; 1959-57; 1960-63
EMPR INDEX 3-210
EMPR BC METAL MM00916
EMPR ASS RPT 17, *16772
EMPR OF 1989-5
GSC MEM *79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES Vol. 19, No. 6, pp. 1264-1274, 1984
Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1989/03/23
DATE REVISED: 1996/08/15

CODED BY: GO
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW195**

NATIONAL MINERAL INVENTORY:

NAME(S): **EXCELSIOR FR. (L.1204S)**, HIGHLAND-BELL, BEAVERDELL

STATUS: Prospect

Underground

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E06E

BC MAP:

LATITUDE: 49 25 31 N

LONGITUDE: 119 04 14 W

ELEVATION: 1326 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: An adit located 3.0 kilometres west from the summit of Mount Wallace and 1.75 kilometres south-southeast of Beaverdell (Geology 1975, Figure G-17).

UTM ZONE: 11 (NAD 83)

NORTHING: 5476795

EASTING: 349853

COMMODITIES: Lead

MINERALS

SIGNIFICANT: Galena

COMMENTS: Refer to Beaverdell (082ESW030) for age of mineralization data.

ASSOCIATED: Quartz

MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Vein

Shear

CLASSIFICATION: Hydrothermal

Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Jurassic

Paleocene

Westkettle Batholith

Unnamed/Unknown Informal

ISOTOPIC AGE: 61.9 +/- 2.2 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Whole rock

LITHOLOGY: Granodiorite

Andesite Dike

Quartz Latite Dike

HOSTROCK COMMENTS:

An andesite (Wellington-type) dike has been dated as Paleocene and a quartz latite (Idaho-type) as Eocene (CJES, Vo. 19, No. 6, p. 1267).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

METAMORPHIC TYPE: Regional

Harper Ranch

RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Okanagan Highland

GRADE: Greenschist

CAPSULE GEOLOGY

The Excelsior Fraction prospect is located 3.0 kilometres west of the summit of Mount Wallace and 1.75 kilometres south-southeast of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area. A small quartz vein with galena was discovered on the Excelsior Fraction in 1901. In 1911, the claim was Crown granted to Vancouver and Boundary Creek Developing and Mining Co. Ltd. By 1934, the property was acquired as part of the Sally claim group by Sally Mines Ltd. By 1949, the property became part of the ground held by Highland-Bell Ltd., owner of the Highland-Bell (Beaverdell) mine. The Highland-Bell mine produced until 1991.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Eocene Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Eocene Beaverdell porphyry. The Westkettle batholith has been correlated with the Nelson intrusions that have been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper (Permian) section of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite

CAPSULE GEOLOGY

porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east. A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine-grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization.

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver, lead, zinc vein camp. The mineralized veins are fissure-hosted, formed along east-trending faults in the west portion of the Beaverdell camp and northeast-trending faults in the east portion of the camp. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship. The northeast-striking, high-angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite.

The Excelsior Fraction (Lot 1204s) adjoins the Wellington claim (082ESW072) and Sally claim (082ESW073) in the north and the Nodaway claim (082ESW068) and Duncan claim (082ESW032) in the south. The property is underlain by Westkettle granodiorite.

A quartz vein 20 to 30 centimetres wide and mineralized with galena, occurs in an east trending shear zone. An andesite dike (Wellington-type) roughly parallels the shear zone structure. A quartz latite dike (Idaho-type) strikes across both the andesite dike and shear zone. Past development consisted of adits.

BIBLIOGRAPHY

- EMPR AR *1901-1144; 1911-K291; 1925-A205; 1934-D9; 1949-A138-A143
EMPR GEOLOGY 1975, Fig. G-17
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES Vol. 19, No. 6, pp. 1264-1274, 1984
Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1989/03/23
DATE REVISED: 1996/08/15

CODED BY: GO
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW196**

NATIONAL MINERAL INVENTORY:

NAME(S): **ADVANCE FR. (L.3834S)**, INVASION FR. (L.3833S), LYON-ADVANCE

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 25 13 N
LONGITUDE: 119 04 49 W
ELEVATION: 1080 Metres

NORTHING: 5476258
EASTING: 349133

LOCATION ACCURACY: Within 500M

COMMENTS: The location of the upper of three adits and a shaft 3.75 kilometres west from the summit of Mount Wallace and 2.0 kilometres south of Beaverdell (Assessment Report 16772).

COMMODITIES: Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite
COMMENTS: Refer to Rambler Fraction (082ESW034) for age of mineralization data. Significant minerals are not reported. The northern adjoining Nodaway (082ESW068) contains galena, silver, sphalerite and tetrahedrite.

ASSOCIATED: Quartz
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic			Westkettle Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland
Harper Ranch
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SHEAR
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel
COMMODITY: Silver
GRADE: 15.9000 Grams per tonne

YEAR: 1987

COMMENTS: Channel sample #32 over 0.20 metre of intensely altered shear zone.
REFERENCE: Assessment Report 16772.

CAPSULE GEOLOGY

The Advance Fraction (Lot 3834s) prospect is located 3.75 kilometres west of the summit of Mount Wallace and 2 kilometres south of Beaverdell, British Columbia (Assessment Report 16772). Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area.

The first recorded work on the Advance Fraction occurrence was in 1927, which consisted of a couple of months of development work. In 1937, the property was owned by J. Southern and had been worked by several lessees for some time. In 1938, Lyon-Advance syndicate mined 3 tonnes of ore. Since 1946, work has been intermittent and ownership has changed several times: 1946 - Silver Bounty Mines Ltd., 1958 - Sheritt-Lee Mines Ltd., 1963 - Ruby Silver Mines Ltd., 1971 - Copper Bounty Mines Ltd. and 1983 - Walmont Precious Metals Corp. The occurrence is currently owned by IGF Metals Inc. The Invasion-Advance Fraction vein has been explored and sampled by IGF Metals Inc. Past development includes several adits and a shaft.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks

CAPSULE GEOLOGY

including the Eocene Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Eocene Beaverdell porphyry. The Westkettle batholith has been correlated with the Nelson intrusions that have been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper (Permian) section of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east. A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine-grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization.

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. The mineralized veins are fissure-hosted, formed along east-trending faults in the west portion of the Beaverdell camp and northeast-trending faults in the east portion of the camp. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship. The northeast-striking, high-angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite.

The Advance Fraction (Lot 3834s) and Invasion Fraction (Lot 3833s) adjoin the Nodaway claim (082ESW068) in the northeast. The property is underlain by Westkettle batholith granodiorite. A pyritic quartz vein occupies an intensely altered, iron stained and friable shear zone that trends east with moderate to steep dips to the south. Silver values with low gold occur. Channel sample #32 taken over 0.20 metre of this shear zone in 1987 yielded 15.9 grams per tonne silver (Assessment Report 16772).

In 1938, 20,372 grams of silver, 287 kilograms of lead and 315 kilograms of zinc were recovered from 3 tonnes of ore mined.

BIBLIOGRAPHY

- EMPR AR 1927-C405; 1936-D57; 1937-D35; 1938-A34; 1946-A134; 1947-A153; 1948-A126; 1949-A138-A143
EMPR INDEX 3-204
EMPR BC METAL MM00892
EMPR ASS RPT *16772
EMPR OF 1989-5
GSC MEM *79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES Vol. 19, No. 6, pp. 1264-1274, 1984
Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1989/03/31
DATE REVISED: 1996/08/15

CODED BY: GO
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW197**

NATIONAL MINERAL INVENTORY:

NAME(S): **REVENGE (L.3294S)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 26 05 N
LONGITUDE: 119 03 51 W

NORTHING: 5477832
EASTING: 350345

ELEVATION: 1219 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Two adits located 2.75 kilometres west-northwest from the summit of Mount Wallace and 1.75 kilometres east of Beaverdell (Geology 1975, Figure G-17).

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Pyrite Sphalerite Tetrahedrite

COMMENTS: Age date: Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1267.

Tetrahedrite is rare.

ASSOCIATED: Quartz

ALTERATION: Silica

ALTERATION TYPE: Silicific'n

MINERALIZATION AGE: Eocene

ISOTOPIC AGE: 50 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Bladed

MODIFIER: Faulted

DIMENSION: Metres

STRIKE/DIP:

TREND/PLUNGE: 090/

COMMENTS: Quartz veins up to 15 centimetres wide are hosted in a east-trending shear zone. Faulting has displaced the vein 30 to 60 centimetres along strike.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

1836.3000

Grams per tonne

Gold

1.0200

Grams per tonne

COMMENTS: Chip sample 87-19 over 9 centimetres from underground in the No. 2 adit.

REFERENCE: Assessment Report 16771.

CAPSULE GEOLOGY

The Revenge past producer is located 2.75 kilometres west-northwest of the summit of Mount Wallace and 1.75 kilometres east of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040) and Bell (082ESW030), with numerous other small workings throughout the area.

In 1917, the Revenge, Sunset, Fraction and Bell Fraction were owned by G. Barrett. Work commenced on surface showings and included 7.6 metres of opencutting, 9.1 metres of stripping and 42.7 metres of

CAPSULE GEOLOGY

drifting and crosscutting started from the lower open-cut. Five tonnes of ore were reported mined from a 13-centimetre pay streak in these workings (Minister of Mines Annual Report 1917, page F203). Another 8 tonnes was reported sacked and ready to ship in the following year (Minister of Mines Annual Report 1918, page K220). Another 27 metres of drifting was done on a promising vein. The crosscut was continued for another 24 metres in 1919 with 24 tonnes mined and shipped. The crosscut was extended another 3 metres in 1921 and a 12-metre drift driven. The property was leased and bonded to Westbridge interests in 1922. Barrett, however, developed a new 31-metre upper tunnel. Development was continued by lessees in 1923, with another 23-metre tunnel driven 7.6 metres below the upper tunnel and a shallow shaft sunk in the upper tunnel. In 1925, the property was leased to R. Clothier et al., who did considerable development work. The following year, the Chrysler Mining syndicate leased and bonded the Revenge, Sunset Fraction, and Bell Fraction claims. The Revenge No. 2 (upper) and lower tunnels were driven ahead with ore taken from the upper tunnel. Work ceased in 1927 as operating capital ran out. Further work in 1928 consisted of a short crosscut driven under the No. 2 tunnel by Barrett. The upper tunnel was mined for a short time in 1929 by Silver Star Mines Ltd. A minor amount of work was done in 1930. Work ceased until 1934 when a Penticton syndicate drove two crosscuts below and southwest of the No. 2 tunnel. The Revenge Mining Co. made the last recorded ore shipment in 1935. In 1939, the Revenge property was leased to R.C. McLanders and 61 metres of surface stripping and underground work was done. The following year, A.St. Clair Brindle carried out a small amount of development work. The property was acquired by Highland-Bell Ltd. in 1946, owner of the Beaverdell mine. In 1970, ownership was transferred to Teck Corp. The Beaverdell mine operated until 1991.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Beaverdell porphyry. These have been dated by potassium-argon methods as Eocene (Watson, P.H. (1981): Genesis and zoning of silver-gold veins in the Beaverdell area, south-central British Columbia; Leary, G.M. (1970): Petrology and structure of the Tuzo Creek molybdenite prospect near Penticton, British Columbia and Exploration in British Columbia 1995, pages 124-126. The Westkettle batholith has been correlated with the Nelson intrusions that has been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper sections of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblende, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east.

A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. One of these was dated by potassium-argon methods at 61.6 +/- 2.2 Ma (Watson, P.H., 1981). Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization. One of these has given a potassium-argon age of 50.6 +/- 1.5 Ma (Watson, P.H., 1981).

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. Five distinctly separate quartz vein systems are arranged roughly in echelon in this structural zone. The west-half contains the Wellington (Lot 2621), Sally (082ESW075, Lot 2092) and Rob Roy (Lot 2093, also part of Sally) systems which all strike east and dip from 70 degrees south to vertical. The Wellington and Sally each comprise two separate veins and the Rob Roy three. In the central part of the zone, the Bell (082ESW030, Lot 2343) comprises two veins which strike east to northeast and dip south to southeast. The eastern part of the zone contains the upper and lower sections of the Lass (082ESW133) and Highland Lass (Lot 2341, also part of the Bell) vein which strikes northeast and dips 50 degrees southeast. In general, quartz breccia veins and stockworks are so complex that continuous mineralized sections are a maximum of a few metres before being faulted or disrupted. Nevertheless, some mineralized zones have been

CAPSULE GEOLOGY

found that extend up to 150 metres horizontally. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship: (1) high angle, north-striking normal faults, (2) low angle, north trending, strike-slip faults, (3) northeast striking, high angle normal faults (terminal faults), (4) northeast trending, 'slice' faults and (5) crossfaults. The northeast striking, high angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite. 'Ore ground' has been described as propylitic altered granodiorite, quartz diorite and quartz monzonite of the Westkettle batholith, up to 15 metres wide. These zones are characterized by sericite, clay minerals, chlorite, calcite, epidote and hematite. The fault-bounded veins commonly have a banded texture defined by outer, crudely parallel sulphide stringers. The wallrocks are brecciated and sheared over 30 to 150 centimetres width adjacent to veins. Weak sericite alteration of feldspars is pervasive in the Westkettle batholith.

The interpretation of galena lead-lead isotope age data coupled with geometrical and age relationships between dikes and veins suggests mineralization was formed around 50 Ma, coeval with Eocene stocks (Canadian Journal of Earth Sciences, Vol. 19, No. 6, pages 1264-1274, 1982).

The Revenge (Lot 3294s) adjoins the Beaverdell mine (082ESW030) in the southeast and the Sally mine (082ESW073) in the south. The property is underlain by Westkettle granodiorite. Quartz veins and veinlets averaging 15 centimetres in width occupy east trending shear zones and are displaced 30 to 60 centimetres by numerous faults. The shear zones are locally silicified.

Mineralization consists of sphalerite, galena and pyrite as nodules in a gangue of mainly quartz. A 13-centimetre pay streak was found in 1917. A sample taken in 1919 from the lower tunnel assayed 4.46 grams per tonne gold, 3504 grams per tonne silver and 5.8 per cent lead (Minister of Mines Annual Report 1919, page N169). The ore was also reported to carry high zinc. A sample from the upper tunnel taken in 1922 yielded trace gold, 5280 grams per tonne silver, 14 per cent lead and 5 per cent zinc (Minister of Mines Annual Report 1922, page N173). Sample 87-19, a 9-centimetre chip sample taken from the No. 2 tunnel in 1987 as part of ongoing property exploration, yielded 1836.3 grams per tonne silver and 1.02 grams per tonne gold (Assessment Report 16771).

The Revenge occurrence has produced 115 tonnes of ore intermittently between 1919 and 1935. A total of 564,053 grams of silver, 310 grams of gold, 5487 kilograms of lead and 3088 kilograms of zinc were recovered. Another 5.4 and 8 tonnes were reported mined in 1917 and 1918 respectively but no records could be found indicating shipment.

BIBLIOGRAPHY

- EMPR AR *1917-F203,F212; *1918-K220; *1919-N168,N169; 1921-G188;
*1922-N172,N173; *1923-A183; 1925-A205,A206; 1926-A208; 1927-C233;
1928-C252,C253; 1929-C262; 1930-A220; 1934-D9; 1935-A25,G52; 1939-
A94; 1940-A79; 1949-A138-A143
EMPR INDEX 3-210
EMPR ASS RPT *16771
EMPR BC METAL MM00915
EMPR GEOLOGY *1975, Figure G-17
EMPR OF 1989-5
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES *Vol. 19, No. 6, pp. 1264-1274, 1984
*Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the
Beaverdell Area, south-central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pp.

DATE CODED: 1989/04/03
DATE REVISED: 1996/08/15

CODED BY: GO
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW198**

NATIONAL MINERAL INVENTORY:

NAME(S): **WOMBAT**, DELL NO. 1

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 23 45 N
LONGITUDE: 119 05 17 W

NORTHING: 5473557
EASTING: 348493

ELEVATION: 1097 Metres
LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of drillhole collar 83-2, 4.5 kilometres south of Beaverdell and 5.25 kilometres south-southwest from the summit of Mount Wallace (Assessment Report 12734). Includes Wombat (formerly 082ESW204).

COMMODITIES: Gold Copper Silver

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Bornite
ASSOCIATED: Quartz Calcite
ALTERATION: Azurite Malachite Silica Chlorite Calcite
Epidote K-Feldspar Kaolinite

ALTERATION TYPE: Oxidation Silicific'n Chloritic Propylitic Potassic
Argillic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au L04 Porphyry Cu ± Mo ± Au
DIMENSION: 10 x 6 Metres STRIKE/DIP: TREND/PLUNGE: 150/
COMMENTS: Two narrow fractured siliceous zones, 0.20 to 0.33 metre wide, contain narrow mineralized quartz lenses. In Trench 5, chalcopyrite, pyrite and bornite occur over 10 metres length and 6 metres updip.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic Paleocene			Westkettle Batholith Unnamed/Unknown Informal

ISOTOPIC AGE: 61.9 +/- 2.2 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Whole rock

LITHOLOGY: Siliceous Granodiorite
Granodiorite
Alaskite Porphyry Dike
Andesite Dike
Andesite

HOSTROCK COMMENTS: An andesite (Wellington-type) dike has been dated as Paleocene (Canadian Journal of Earth Sciences, Vol. 19, No. 6, p. 1267).

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Harper Ranch
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Silver 10.9000 Grams per tonne
Gold 4.2500 Grams per tonne
Copper 0.5200 Per cent

COMMENTS: Sample 95257 from the 0.20 metre interval between 8.69 and 9.02 metres in drillhole WB83-2 on the upper mineralized siliceous zone in granodiorite.

REFERENCE: Assessment Report 12734.

CAPSULE GEOLOGY

The Wombat prospect is located 5.25 kilometres west of the summit of Mount Wallace and 4.5 kilometres south of Beaverdell,

CAPSULE GEOLOGY

British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area. The Wombat prospect was discovered in 1982 during an exploration program by Canstat Petroleum Corp. Follow-up exploration was carried out in 1983.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Eocene Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Eocene Beaverdell porphyry. The Westkettle batholith has been correlated with the Nelson intrusions that have been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper (Permian) section of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east. A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine-grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization.

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. The mineralized veins are fissure-hosted, formed along east-trending faults in the west portion of the Beaverdell camp and northeast-trending faults in the east portion of the camp. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship. The northeast-striking, high-angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite.

The Wombat is located 4.5 kilometres south of the Beaverdell mine (082ESW030) and 1.75 kilometres west of the Fran past producer (082ESW071). The area is underlain by Westkettle granodiorite and Permian Wallace Formation metavolcanic and metasedimentary rocks. Chlorite alteration and calcite veining occurs in fault gouge zones, potassic alteration (potassium feldspar) is common throughout the granodiorite and propylitic alteration (epidote) is common at depth.

During 1982 and 1983, five trenches were excavated on the Wombat claim. Trench 1 was cut to expose an east-trending shear zone in the centre of the Wombat copper soil geochemical anomaly. Several narrow shears and fractures are associated with chlorite and kaolinite altered granodiorite with occasional malachite staining. Quartz and carbonate veinlets constitute 10 per cent of the hostrock. Trenches 2 to 4 were cut to determine the extent of mineralization. Fractured granodiorite with gossanous pods containing pyrite and chalcopyrite were exposed along the northern edge of the copper soil geochemical anomaly. Trench 5 exposed siliceous granodiorite with pervasive malachite and azurite staining with disseminated chalcopyrite and pyrite. Massive pyrite, chalcopyrite and bornite were exposed in narrow quartz lenses over 10 metres along a trend of 150 degrees and updip over 6 metres. Sample 47201c from Trench 5 yielded 125.5 grams per tonne silver, 49.9 grams per tonne gold, 11 per cent copper and 0.06 per cent zinc (Assessment Report 12734). The sample consisted of granodiorite with 10 centimetres of chalcopyrite and pyrite in grey quartz with malachite staining.

Four diamond-drill holes were drilled to test mineralization exposed in Trench 5 at depth. Only WB83-2 intersected copper-silver-

CAPSULE GEOLOGY

gold mineralization, in an upper and lower zone. The upper zone is composed of 0.33 metre of disseminated or massive veinlets of chalcopyrite and pyrite with malachite staining in siliceous granodiorite. The lower zone is composed of 0.20 metre of disseminated chalcopyrite and malachite staining. Assay results from the upper zone were 10.9 grams per tonne silver, 4.25 grams per tonne gold and 0.52 per cent copper (Assessment Report 12734).

BIBLIOGRAPHY

EMPR ASS RPT 9988, *10979, *12734
EMPR EXPL 1981-174; 1982-33,34; 1983-41,42
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES Vol. 19, No. 6, pp. 1264-1274, 1984
GCNL #248(Dec.29), 1982; #162 (Aug.23), #175(Sept.12), #179(Sept.16),
#192(Oct.4), #211(Nov.1), 1983; #167(Aug.29), 1997
Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the
Beaverdell Area, south-central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pp.

DATE CODED: 1989/04/05
DATE REVISED: 1996/08/15

CODED BY: GO
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW199**

NATIONAL MINERAL INVENTORY:

NAME(S): **JAY**, DOMINION, FRAN PROPERTY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 23 11 N
LONGITUDE: 119 04 05 W
ELEVATION: 1354 Metres

NORTHING: 5472467
EASTING: 349916

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of drillhole collar DM83-5, 5.75 kilometres south of Beaverdell and 5 kilometres south-southwest from the summit of Mount Wallace (Assessment Report 12734).

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Calcite Epidote Quartz
ALTERATION: Chlorite Epidote Silica Hematite K-Feldspar
ALTERATION TYPE: Chloritic Propylitic Silicific'n Oxidation Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stockwork
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au
DIMENSION: 1 Metres STRIKE/DIP: TREND/PLUNGE: 090/
COMMENTS: A east-trending shear zone in altered granodiorite hosts stringers and disseminations of pyrite and chalcopyrite. A 1-metre mineralized zone was intersected in drillhole DM83-5.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Anarchist	Wallace	Westkettle Batholith
Jurassic			Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Granodiorite
Microdiorite
Hornfels
Hornblende Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Silver 2.0500 Grams per tonne
Copper 0.3100 Per cent

COMMENTS: Sample 83418, over the 1-metre interval between 31.5 and 32.5 metres in drillhole DM83-5 containing disseminated chalcopyrite-pyrite mineralization.

REFERENCE: Assessment Report 12734.

CAPSULE GEOLOGY

The Jay prospect is located 5 kilometres south-southwest of the summit of Mount Wallace and 5.75 kilometres south of Beaverdell, British Columbia (Assessment Report 16772).

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040), and Bell (082ESW030), with numerous other small workings throughout the area. The Jay prospect was discovered in 1982 during an exploration program by Canstat Petroleum Corp. Follow-up exploration was carried out in 1983.

CAPSULE GEOLOGY

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Eocene Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Eocene Beaverdell porphyry. The Westkettle batholith has been correlated with the Nelson intrusions that have been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper (Permian) section of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks. Mineralization rarely extends into the Wallace Formation to the east. A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine-grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization.

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. The mineralized veins are fissure-hosted, formed along east-trending faults in the west portion of the Beaverdell camp, and northeast-trending faults in the east portion of the camp. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship. The northeast-striking, high-angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite.

The Jay is located 1 kilometre south of the Fran occurrence (082ESW071) and is underlain by Westkettle granodiorite close to the contact with Permian Wallace Formation metamorphosed volcanic rocks. A gradational zone where the granodiorite assimilated some of the Wallace Formation rocks has resulted in a microdiorite unit. Some hornfels and younger hornblende porphyry dikes also occur. Chloritic, propylitic (epidote) and siliceous alteration is common throughout the granodiorite with potassic (potassium feldspar) alteration weakly distributed. Predominant calcite stringers with minor quartz occur throughout the microdiorite unit.

In 1983, three diamond-drill holes were drilled to test a shear zone thought to be controlling disseminated pyrite and chalcopyrite mineralization discovered in Trench 12. Trench 12 cut the eastern edge of the Wombat-Babe copper soil geochemical anomaly. The trench exposed a malachite stained quartz pod grading into a siliceous zone trending east. Blebs of pyrite and chalcopyrite comprise mineralization. Drillholes 5 and 6 intersected a few narrow zones of microdiorite with chlorite, epidote alteration and silicification throughout. Chalcopyrite and pyrite occur as disseminations and hairline stringers throughout the granodiorite and increases slightly in the microdiorite. Some pyritic siliceous zones with calcite stringers and epidote are also evident. Hematite occurs as an oxidation product along fractures in faults. One of the better silver intersections was from the 0.61-metre interval between 6.84 and 7.45 metres in drillhole DM83-5. This sample (95277) yielded 5.5 grams per tonne silver and 0.03 per cent copper (Assessment Report 12734). Sample 83418 yielded 2.1 grams per tonne silver and 0.31 per cent copper over the 1-metre interval between 31.5 and 32.5 metres in drillhole DM83-5 (Assessment Report 12734).

BIBLIOGRAPHY

EMPR ASS RPT 9998, 10979, *12734
EMPR EXPL 1983-41,42
EMPR OF 1989-5
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1268
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 37-21
CJES Vol. 19, No. 6, pp. 1264-1274, 1984
Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the
Beaverdell Area, south-central British Columbia, M.Sc. Thesis,
University of British Columbia, 156 pp.

DATE CODED: 1989/04/06
DATE REVISED: 1996/08/15

CODED BY: GO
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW200**

NATIONAL MINERAL INVENTORY:

NAME(S): **YELLOW LAKE**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 20 27 N
LONGITUDE: 119 46 05 W
ELEVATION: 0914 Metres

NORTHING: 5469032
EASTING: 298934

LOCATION ACCURACY: Within 500M

COMMENTS: Phonolite lava flows outcrop near Yellow Lake, 10 kilometres north-northeast from the village of Olalla, 14 kilometres west from the town of Okanagan Falls (Revised Preliminary Map 35).

COMMODITIES: Feldspar

MINERALS

SIGNIFICANT: Plagioclase Aegirine Augite
COMMENTS: Well developed plagioclase and aegirine-augite phenocrysts.
ALTERATION: Analcite Hematite
COMMENTS: Phillipsite also possibly identified.
ALTERATION TYPE: Zeolitic Oxidation
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Volcanogenic Industrial Min.
TYPE: R INDUSTRIAL ROCKS

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Eocene Penticton Marron

LITHOLOGY: Phonolite Lava Flow
Phonolite

HOSTROCK COMMENTS: Yellow Lake Member.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Yellow Lake feldspar showing is located in a steep gully, immediately northwest of Yellow Lake and Highway 3A between Keremeos and Penticton, British Columbia.

Phonolite lava flows of the Eocene Yellow Lake Member of the Marron Formation, Penticton Group outcrop near Yellow Lake, west of Okanagan Falls. The rock consists of fine grained, pyroxene-rich mafic lava with locally well developed plagioclase and aegirine-augite phenocrysts.

Twelve samples collected from different outcrops were analysed to evaluate whether the rock is a potential source of feldspar for industrial applications. Results are as follows:

Major Oxides	Weight	Per Cent
SiO ₂	50.07	- 64.67
Al ₂ O ₃	13.63	- 19.49
Fe ₂ O ₃	3.30	- 6.93
CaO	1.46	- 8.47
Na ₂ O	3.05	- 5.86
K ₂ O	4.42	- 6.97

All samples tested contain high amounts of iron. The sample with the least iron was sent to CANMET for processing to determine whether impurities could be reduced to industry standards but the rock was considered to be too fine grained for mineral separation studies and cannot meet the specification for amber glass (Fieldwork 1988, page 487).

BIBLIOGRAPHY

EMPR FIELDWORK *1988, pp. 484,487
EMPR MAP *35
EMPR OF *1991-10, pp. 37-38
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1270
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53

DATE CODED: 1989/04/03
DATE REVISED: 1996/11/30

CODED BY: GWV
REVISED BY: KJM

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **082ESW201**

NATIONAL MINERAL INVENTORY:

NAME(S): **KET 27**, ANNA 2, KET 5 GROUP,
KET 4-5, KET 25-27, CJ 1-11

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 01 21 N
LONGITUDE: 119 04 36 W
ELEVATION: 1082 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5432035
EASTING: 348180

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of sample 91KT27:D54R near an old adit and
opencut on the Ket 5 claim.

COMMODITIES: Gold Copper Lead

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena
ASSOCIATED: Quartz Calcite
ALTERATION: Malachite
ALTERATION TYPE: Leaching
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Shear
CLASSIFICATION: Hydrothermal Epithermal
TYPE: I01 Au-quartz veins
DIMENSION: Metres STRIKE/DIP: 065/75E TREND/PLUNGE:
COMMENTS: A mineralized shear zone strikes 065 degrees and dips 75 degrees
southeast.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Proterozoic	Anarchist	Undefined Formation	
Eocene	Penticton	Undefined Formation	
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Chert Pebble Conglomerate
Argillite
Quartzite
Serpentinite
Siltstone
Greenstone
Diorite
Granodiorite
Sandstone
Phonolite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Chip
COMMODITY GRADE
Gold 4.0000 Grams per tonne
Copper 0.3900 Per cent
COMMENTS: Sample 91KT27:D89R, a 1.6-metre chip sample.
REFERENCE: Assessment Report 22176.

CAPSULE GEOLOGY

The Ket 27 occurrence is located about 2.5 kilometres east-southeast of the Ket 28 (082ESW210) occurrence. Bridesville, British Columbia lies 6 kilometres to the west-northwest.

Diorite and granodiorite of the Middle Jurassic Nelson intrusions cutting greenstone and argillite of the Carboniferous to Permian Anarchist Group comprise lithologies hosting the Ket 27 occurrence. Conglomerate, limestone, marble, quartzite and minor siltstone comprise other Anarchist Group lithologies in the area.

CAPSULE GEOLOGY

Several northwest trending augite porphyry dikes also crosscut the Anarchist metasedimentary-metavolcanic sequence.

Several old trenches were located near the Ket 27 occurrence, indicating previous mineral exploration. The Ket 5 group and Anna 2 claim was owned by Crown Resources Corp. from 1991 to 1993. The property is currently held by the Rock Creek Gold Trend Venture, with partners Phoenix Gold Resources Ltd., Orion International Minerals Inc. and Gold City Mining Corp.

Lithologies of the Ket 5 Group, surrounding the Ket 27 occurrence, consists of mainly metasediments and metavolcanics of the Anarchist Group. To the north, massive quartzite dominates. Locally, the quartzite is intensely fractured and silicified and contains lenses of serpentinite. To the south and at the Ket 27 occurrence, black silicified argillite with minor siltstone and greenstone occur. The major structures in the area are faults striking north, east or northwest, separating the Anarchist Group into discrete fault blocks. A strong foliation, bleaching and phyllitic to mylonitic fabrics are associated with north-striking faults. The Anarchist Group metasediment-metavolcanic sequence has been intruded by diorite and granodiorite of the Nelson intrusions. To the east, the sequence is overlain by conglomerate, sandstone and minor phonolite, trachyte and trachyandesite of the Eocene Penticton Group.

Trenching and rock geochemistry sampling during the 1991 exploration program has identified a mineralized shear zone striking 065 degrees and dipping 75 degrees west. Wallrocks have a strike of 025 degrees and dip 70 degrees north. Trenching has uncovered a chert pebble conglomerate along this shear hosting trace disseminated pyrite and chalcopyrite with malachite staining. The possible eastern extension of the shear zone was located 350 metres to the east on the Anna 2 claim. The northeast-trending zone consists of vuggy quartz-calcite cemented argillite breccia with trace pyrite, chalcopyrite and galena.

Several samples taken from trenching during the 1991 exploration program yielded anomalous gold and copper values. Sample 91KT27:D89R, a 1.6-metre chip sample, yielded 4.0 grams per tonne gold and 0.39 per cent copper. Sample 91KT27:D90R, from a second poorly exposed trench, yielded 6.0 grams per tonne gold and 0.55 per cent copper (Assessment Report 22176). A 2-metre chip sample, 20ATR L2W 25S, taken from the shear zone on the Anna 2 claim in 1992 yielded 1.27 grams per tonne gold (Assessment Report 23072).

BIBLIOGRAPHY

EMPR ASS RPT 14154, 19737, 21003, *21023, 21413, 21541, *22176, 22548, *23072
EMPR PF (Gold City Mining Corporation, (1994): Annual Report;
Phoenix Gold Resources Ltd. (1995): Prospectus; Gold City Mining Corp., Phoenix Gold Resources, Orion International Minerals Corp. (1996): Geological/Mineral Deposit Field Trip Report)
GSC MAP 84A; 538A; 539A; 15-1961; 1505A; 1736A
GSC MEM 38, pp. 389-423
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1996/06/24
DATE REVISED: 1996/06/24

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW202**

NATIONAL MINERAL INVENTORY:

NAME(S): **O.K. MARL (L.2193)**, OKANAGAN LIME, O.K. FALLS MARL

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E05E
BC MAP:

Open Pit

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 21 13 N
LONGITUDE: 119 35 11 W
ELEVATION: 427 Metres

NORTHING: 5469984
EASTING: 312177

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on Lot 2193, one kilometre northwest of Okanagan Falls.

COMMODITIES: Marl

MINERALS

SIGNIFICANT: Calcite Clay
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: B11 Marl
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Quaternary	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Marl
Glaciolacustrine Clay

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

Marl occurs on Lot 2193, approximately 1 kilometre northwest of Okanagan Falls near the south end of Skaha Lake.

The O.K. Marl occurrence lies within the eastern part of the White Lake basin, a thick accumulation of Eocene Penticton Group volcanic rocks, interlayered with clastic sedimentary rocks which are largely of volcanic derivation. The Eocene rocks rest unconformably on Triassic metavolcanic and metasedimentary rocks of the Independence, Old Tom and Shoemaker formations, and Jurassic granitic intrusions. The White Lake basin forms a topographic low and is truncated by early gravity faults. The units generally dip to the east and are folded and faulted. A marl deposit was found in Quaternary glaciofluvial clay overlying Penticton Group volcanics.

Okanagan Lime & Exploration Company mined an initial 946 tonnes of marl between 1948 and 1950. Popkum Marl Lime Products Ltd. operated the property briefly in the later half of 1950, producing 544 tonnes of marl. O.K. Marl Company Ltd. mined the deposit on an intermittent basis between 1952 and 1964 producing 4401 tonnes of marl.

BIBLIOGRAPHY

EMPR Mineral Policy Production Files
GSC MAP 341A; 538A; 539A; 541A; *15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1990/04/28
DATE REVISED: / /

CODED BY: PSF
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **082ESW203**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROADSIDE, BELL**

STATUS: Prospect
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E04W
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 14 15 N
LONGITUDE: 119 49 53 W
ELEVATION: 0740 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5457717
EASTING: 293904

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of an abandoned shaft (Assessment Report 22882). Former 082ESW203 (Sun and Moon) is included with Florence (082ESW158).

COMMODITIES: Gold Silver Copper Platinum

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Chalcopyrite
COMMENTS: Trace platinum is reported found associated with copper ores.
ASSOCIATED: Calcite Garnet Diopside Epidote Chlorite

ALTERATION: Malachite
COMMENTS: The hostrocks surrounding the Roadside showing are heavily copper carbonate altered.

ALTERATION TYPE: Oxidation Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Stratabound Disseminated
CLASSIFICATION: Magmatic Skarn
TYPE: I06 Cu±Ag quartz veins K01 Cu skarn

DIMENSION: Metres STRIKE/DIP: 080/90 TREND/PLUNGE:
COMMENTS: The shear intersected in the shaft strikes 080 degrees and dips vertical.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Old Tom	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Chert
Cherty Argillite
Limestone
Pyroxenite
Syenite
Diorite

HOSTROCK COMMENTS: The Old Tom Formation is of Carboniferous to Triassic age. Olalla alkalic complex.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Thompson Plateau

TERRANE: Okanagan

Plutonic Rocks

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1992
SAMPLE TYPE:	Chip		
COMMODITY	GRADE		
Silver	15.3000	Grams per tonne	
Gold	0.8100	Grams per tonne	
Copper	1.4000	Per cent	

COMMENTS: A 30-centimetre chip sample taken from a shear zone immediately east of the shaft.

REFERENCE: Assessment Report 22256.

CAPSULE GEOLOGY

The Roadside showing is located at 740 metres elevation, 3 kilometres south-southwest of Olalla, British Columbia. The occurrence is part of the historic Olalla gold camp.

In 1899, the Roadside showing was owned by Mangott, Shatford and Coutney and it was reported very good copper ore with gold was discovered in a shaft. The shaft was extended in 1900 and a

CAPSULE GEOLOGY

considerable body of copper sulphides was intersected. The Roadside claim was Crown granted by 1906. The showing consisted of a shaft, several opencuts and tunnels. Little else is known of the history of the Roadside showing until the 1980s when staked as the Bell claim by G. Crooker. Crooker and various options have continued exploration on the Roadside and other occurrences in the Olalla area.

The Roadside occurrence is located within the ultramafic to alkaline Middle Jurassic Olalla intrusion. This intrusion has intruded a sequence of oceanic sediments and volcanics of the Triassic Shoemaker Formation and overlying Triassic Old Tom Formation. Black to green chert, light grey quartzite and minor limestone lenses comprise the dominant lithologies. The Old Tom and Shoemaker formations form a broadly folded, east-dipping sequence in the area. The Olalla intrusion consists of a magnetite-bearing pyroxenite peripheral zone to a diorite and syenite core. The pyroxenite is composed primarily of augite with lesser magnetite. Potassic alteration consisting of biotite, orthoclase, calcite and quartz occurs within the pyroxenite. The syenite is fine grained, light grey to buff to pink and has also been altered to orthoclase and quartz. Coarse grained syenite dikes occur at the contact with the peripheral pyroxenite zone.

Metasomatic deposits have formed along the contact of the Olalla intrusion with Shoemaker sediments. Mineralization is related to skarns, shearing and quartz veining. Mineralization consists mainly of auriferous and argentiferous pyrite and pyrrhotite with minor chalcopyrite, malachite, azurite and tetrahedrite.

Mineralization at the Roadside showing consists of a number of small erratic sulphide zones hosted in metasediments of the Old Tom Formation. Chert and cherty argillites comprise the dominant rock type. Pyrrhotite, pyrite, chalcopyrite and malachite occur in small lensoidal calcareous seams, often strongly oxidized. The gangue is commonly recrystallized calcite that is commonly enclosed by or contains skarn minerals such as garnet (grossularite), diopside, epidote and chlorite. A large area surrounding the Roadside showing is reported to be heavily copper carbonate altered. Trace platinum is also reported found associated with copper ores (Minister of Mines Annual Report 1922, page 163).

An old shaft, approximately 8 metres deep, intersected a 1-metre wide shear zone, striking 080 degrees and dipping vertical. In 1992, a rock chip sample taken over a 30-centimetre wide shear zone immediately east of this shaft, yielded 0.81 gram per tonne gold, 15.3 grams per tonne silver and 1.4 per cent copper (Assessment Report 22256). The shaft has been drifted from the bottom but the drift length is unknown. Several old trenches in the area were also sampled. One of these trenches, 125 metres north-northwest of the shaft, is 7 metres long by 2 metres wide and exposes a 1-metre wide shear zone striking 245 degrees and dipping 66 degrees north. The shear is host to a 1 to 45-centimetre wide calcite vein containing pyrite, chalcopyrite, malachite and possibly bornite. Grab sample E004-011 yielded 0.24 gram per tonne gold, 2.4 grams per tonne silver and 0.32 per cent copper (Assessment Report 22256). Two other large trenches, 100 metres north of the adit, have exposed a shear striking 268 to 276 degrees and dipping 70 to 85 degrees north. The shear is accompanied by strong oxidation, massive pyrite skarn and narrow fractures with quartz and calcite. The best grab sample from these trenches yielded 0.03 gram per tonne gold, 5.1 grams per tonne silver and 0.54 per cent copper (Assessment Report 22256).

A diamond drill program was initiated approximately 110 metres north-northeast of the Roadside showing in 1984, but two holes were abandoned due to poor recovery and drilling difficulties. The drillholes were done by Boise Creek Resources Ltd.

In 1939, the Roadside produced 27 tonnes of ore from which 560 grams of silver were recovered. The property was operated by R. Guastin.

BIBLIOGRAPHY

- EM GEOFILE 2000-2; 2000-5
- EMPR AR 1899-776; 1900-884; 1902-185; *1906-171; *1922-163
- EMPR ASS RPT *12088, *22256, 24415
- EMPR BC METAL MM00918
- EMPR BULL 1(1932), p. 88
- EMPR INDEX 3-211
- EMPR OF 1989-2; 1989-5
- GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
- GSC MEM 38; 179
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21
- Sturdevant, J.A. (1963): Petrography of the Olalla stock, Okanagan Mountains, British Columbia, unpublished M.Sc. Thesis, University

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1276
REPORT: RGEN0100

BIBLIOGRAPHY

of New Mexico

DATE CODED: 1996/11/30
DATE REVISED: 1996/11/30

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW204**

NATIONAL MINERAL INVENTORY:

NAME(S): **COPPER KING, COPPER HILL, COPPER KING EXTENSION, MOUNTAIN LION, COPPER QUEEN**

STATUS: Prospect
 REGIONS: Kootenay Region, British Columbia
 NTS MAP: 082E05W
 BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 15 31 N
 LONGITUDE: 119 50 37 W
 ELEVATION: 820 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5460096
 EASTING: 293103

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of two adits on the Copper King claim (Assessment Report 22257). See also Golconda (082ESW016). Former 082ESW204 (Wombat) is included with 082ESW198.

COMMODITIES: Gold Silver Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
 ASSOCIATED: Epidote Garnet Calcite Magnetite
 COMMENTS: The skarn also contains ferromagnesian minerals.
 ALTERATION: Magnetite Malachite Azurite Hematite
 ALTERATION TYPE: Oxidation Skarn
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Stratabound Massive
 CLASSIFICATION: Magmatic Skarn
 TYPE: I06 Cu±Ag quartz veins K01 Cu skarn
 DIMENSION: Metres STRIKE/DIP: 170/80S TREND/PLUNGE:
 COMMENTS: The shear zone strikes 170 degrees and dips 80 degrees southwest.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic-Mesozoic	Undefined Group	Shoemaker	Unnamed/Unknown Informal
Middle Jurassic			

LITHOLOGY: Limestone
 Quartzite
 Pyroxenite
 Diorite Dike
 Skarn

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age. Olalla alkalic complex.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
 TERRANE: Okanagan Plutonic Rocks
 METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1991
SAMPLE TYPE: Grab	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	40.0000 Grams per tonne
Copper	1.0800 Per cent
Lead	0.1900 Per cent
COMMENTS: Grab sample 91G-32.	
REFERENCE: Assessment Report 22882.	

CAPSULE GEOLOGY

The Copper King (Lot 3065s) prospect is located at 820 metres elevation, 1 kilometre southwest of Olalla, British Columbia. It is part of the historic Olalla gold camp, 500 metres south-southwest of the Golconda occurrence (082ESW016).
 The earliest record of work on the Copper King (Lot 3065s) claim was in 1899. Work was also done in 1900. Two claims, the Copper King and Pembroke, were reported owned by J. Stevens and J. Buchanan in 1902, which contained a shear vein with gold values and a large copper body. Further work was reported in 1904 and 1910. By 1917, the ground was staked as the Copper King, Copper King Extension,

CAPSULE GEOLOGY

Copper Hill and Mountain Lion claims. A shipment of 3.6 tonnes was reported made to the Grand Forks smelter for trial from an upper tunnel. In 1922, the prospect was owned by R. Northey. In this year, a 30-metre adit was driven on a narrow mineralized fissure on the Copper Queen, northwest of the Copper King. The Copper King claim (Lot 3065s) was Crown granted to the Estate of Northey, Hegelby and Newton in 1928. In 1957, ownership of the Copper King was transferred to W.W. Gemwinder. Friday Mines Ltd. acquired the property in 1961. Trenching and diamond drilling were carried out. Freedom Resources Ltd. conducted property exploration on the Copper King between 1981 and 1983. Recent exploration has been carried out by Goldcliff Resources Corp. Total development consisted of the 10.7-metre shaft and two adits, 7.6 metres and 19.8 metres respectively.

The Copper King prospect is located within the ultramafic to alkaline Middle Jurassic Olalla intrusion. This intrusion has intruded a sequence of oceanic sediments and volcanics of the Carboniferous to Triassic Shoemaker and Old Tom formations. Black to green chert, light grey quartzite and minor limestone lenses comprise the dominant lithologies. The Shoemaker and Old Tom formations form a broadly folded, east-dipping sequence in the area. The Olalla intrusion consists of a magnetite-bearing pyroxenite peripheral zone to a diorite and syenite core. The pyroxenite is composed primarily of augite with lesser magnetite. Potassic alteration consisting of biotite, orthoclase, calcite and quartz occurs within the pyroxenite. The syenite is fine grained, light grey to buff to pink and has also been altered to orthoclase and quartz. Coarse grained syenite dikes occur at the contact with the peripheral pyroxenite zone. Metasomatic deposits have formed along the contact of the Olalla intrusion with Shoemaker sediments. Mineralization is related to skarns, shearing and quartz veining. Mineralization consists mainly of auriferous and argentiferous pyrite and pyrrhotite with minor chalcopyrite, malachite, azurite and tetrahedrite.

The Copper King prospect consists of a 15-centimetre wide shear zone cutting quartzite and skarn mineralization in limestone lenses. The prospect lies along the western contact between pyroxenite and quartzite, minor limestone and tuff of the Old Tom Formation. Diorite dikes intrude quartzite parallel to the shear zone. A magnetite "cap" covers the shear zone on surface. The shear zone strikes 170 degrees and dips 80 degrees southwest. Mineralization consists of chalcopyrite and magnetite in the shear and in highly altered limestone with epidote-garnet skarn. Trenching in 1993 exposed a large garnet, epidote, calcite and ferromagnesian skarn containing massive magnetite and pyrite with lesser chalcopyrite, hematite and malachite. Drillhole samples in 1961 apparently yielded about 0.40 per cent copper (Assessment Report 22882). Grab samples 91G-31 and 91G-32, taken by Goldcliff Resources Corp. in 1991, yielded up to 40.0 grams per tonne silver, 1.08 per cent copper and 0.19 per cent lead (Assessment Report 22882). The samples were taken from a shear zone in hornfelsed quartzite with pyrite, malachite and azurite. The quartzite has been intruded by pyroxenite.

There is no apparent structural relationship between the Golconda (082ESW016) and Copper King occurrences.

BIBLIOGRAPHY

- EMPR AR 1899-776; 1900-885; 1902-185; 1903-176; 1904-226; 1906-170;
1909-138; 1910-124; *1917-206; 1918-211; 1920-157; *1922-163; 1928-
520; 1957-34; *1961-59-62
EMPR ASS RPT 12116, 15992, 19963, 22257, *22882
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
Sturdevant, J.A. (1963): Petrography of the Olalla stock, Okanagan
Mountains, British Columbia, unpublished M.Sc. Thesis, University
of New Mexico

DATE CODED: 1996/11/30
DATE REVISED: 1996/11/30

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW205**

NATIONAL MINERAL INVENTORY: 082E4 Au2

NAME(S): **MAM**, JJ, CHICKAMIN (L.799),
DIVIDE (L.800), CHICAMIN

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 03 30 N
LONGITUDE: 119 33 34 W
ELEVATION: 0853 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5437096
EASTING: 313023

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of Sample #4, taken from a quartz vein
(Assessment Report 8830).

COMMODITIES: Gold Silver Copper Lead Zinc
Molybdenum

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite Bornite Gold
Silver Telluride

COMMENTS: Gold, silver and bismuth tellurides.

ASSOCIATED: Quartz
ALTERATION: Chlorite Sericite Epidote Carbonate Calcite
Malachite Azurite

ALTERATION TYPE: Propylitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au L04 Porphyry Cu ± Mo ± Au
DIMENSION: 244 x 1 Metres STRIKE/DIP: 135/75S TREND/PLUNGE:
COMMENTS: The main quartz vein strikes 135 degrees and dips 75 degrees
southwest. Vein width varies from one centimetre to 1.5 metres and
has been traced over 244 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Nelson Intrusions
Jurassic			Kruger Syenite

LITHOLOGY: Granodiorite
Diorite
Andesite
Schist
Greenstone
Syenite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Grab
COMMODITY
Silver 6.1700 Grams per tonne
Gold 18.1700 Grams per tonne
COMMENTS: Sample #4.
REFERENCE: Assessment Report 8830.

CAPSULE GEOLOGY

The Mam prospect is located 1.5 kilometres north of Blue Lake near Richter Pass. Osoyoos is 7.5 kilometres to the southeast. The occurrence was staked on the Mam claims, which were acquired by Highmark Resources Ltd. from J. Markevich in 1979. In 1980, Highmark Resources Ltd. also acquired the Chickamin (Lot 799) and Divide (Lot 800) Reverted Crown grants and staked the ES, MS, CM, WR,

CAPSULE GEOLOGY

BW and GM claims. Highmark carried out geological mapping, a geochemical soil survey, surface stripping and trenching and diamond drilling. Drilling consisted of 16 EXT holes totalling 453.5 metres and 8 BQ holes totalling 1153.9 metres. The Chickamin and Divide Reverted Crown grants were first Crown granted in 1895 to Adams British Columbia Co. Ltd. It is reported that a short adit was driven.

The Mam occurrence lies within granodiorite and diorite of the Middle Jurassic Similkameen intrusions which have intruded quartzite, schist and greenstone rocks of the Carboniferous to Permian Kobau Group. To the north and east, the Kobau rocks are exposed. To the south, syenitic rocks of the Jurassic Kruger pluton occur. Fissuring, shearing and fracturing of andesite and other volcanic rocks on the property is extensive and is possibly related to the northwest trending Blue Lake fault.

Mineralization occurs in shear hosted quartz veins within granodiorite. The main vein is one centimetre to over 1.50 metres wide, strikes 135 degrees, dips 75 degrees southwest, and is traceable over a distance of 244 metres. Minerals hosted by the vein include pyrite, pyrrhotite, chalcopyrite, bornite, native silver, native gold and microscopic tellurides of gold, silver and bismuth. Alteration extends for considerable distances either side of the vein. Copper sulphides have been locally oxidized to malachite and azurite. Propylitic alteration minerals include chlorite, sericite, epidote, carbonate, calcite and feldspar.

Sample #4, taken from a quartz vein in 1980, yielded 18.17 grams per tonne gold and 6.17 grams per tonne silver (Assessment Report 8830).

BIBLIOGRAPHY

EMPR ASS RPT *8830, *9402
EMPR EXPL 1980-28; 1981-30
EMPR OF 1989-5
EMPR PF (Toba Gold Resources Ltd. (1989): Prospectus)
EMPR MR MAP 7 (1934)
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
GCNL #112(June11),#204(Oct.25), 1993

DATE CODED: 1988/11/10
DATE REVISED: 1996/08/15

CODED BY: TBH
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW206**

NATIONAL MINERAL INVENTORY:

NAME(S): **LINDA LOU, CRISP, WHY, WHY NOT, CECIL**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 15 N
LONGITUDE: 119 41 55 W
ELEVATION: 1000 Metres

NORTHING: 5451806
EASTING: 303369

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of rock sample GM-2 (Assessment Report 13894).

COMMODITIES: Gold Silver Lead Copper

MINERALS

SIGNIFICANT: Pyrite Galena Chalcopyrite
ASSOCIATED: Quartz
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Stratabound
CLASSIFICATION: Hydrothermal Epigenetic Skarn
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au K SKARN
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: Metres STRIKE/DIP: 296/90 TREND/PLUNGE:
COMMENTS: Most veins are less than 30 centimetres and pinch out over 3 to 4 metres. One vein sampled, strikes 296 degrees and dips vertical.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Kobau	Undefined Formation	Oliver Plutonic Complex
Jurassic			
ISOTOPIC AGE: 152 +/-3 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Chloritic Mica Schist
Quartzite
Limestone
Granodiorite
Hornblende Gabbro

HOSTROCK COMMENTS: The Kobau Group is Carboniferous to Permian age. Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1985
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 2.2000 Grams per tonne
Gold 0.6000 Grams per tonne
COMMENTS: Chip sample GM-2, taken across a 30-centimetre wide quartz vein striking 296 degrees and dipping vertical.
REFERENCE: Assessment Report 13894.

CAPSULE GEOLOGY

The Linda Lou occurrence is located 4.5 kilometres east of Cawston, British Columbia between Blind and Cawston creeks. The Linda Lou occurrence was first staked and explored by Checkmate Resources in 1983. Little Bear Resources Ltd. conducted further exploration in 1984, and under option to Gold-Metal Resources Ltd. and Boise Creek Resources in 1985. In 1989, additional

CAPSULE GEOLOGY

exploration was conducted by Little Bear Resources Ltd.

The Linda Lou occurrence is located within metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. Chloritic schist, chloritic mica schist, quartzite and limestone comprise lithologies of the Kobau Group. Structurally, the metasediments appear to follow a broad synclinal fold with its axis striking north-northwest and dipping moderately north. To the immediate north of the occurrence lies Middle Jurassic diorite and dioritic feldspar porphyry that has been subsequently intruded by granodiorite of the Jurassic Oliver plutonic complex. Younger aplite and lamprophyre dikes are found crosscutting all older rock units. Lenses of hornblende gabbro locally occur in Kobau lithologies. A northeast trending, regional-scale fault or shear appears to cut across the southern portion of the property.

A number of quartz veins vary from 2 to 100 centimetres width. The veins locally form a quartz stockwork. Most veins are less than 30 centimetres wide and pinch out over 3 to 4 metre intervals. These veins occur along one of two orientations; one set following bedding and the other crosscutting bedding up to 60 degrees.

Vein mineralization consists of variable amounts of pyrite, galena and chalcopyrite. Several of these veins were sampled in 1985 with the following results. Sample GM-11 was sampled across a 20-centimetre wide quartz vein striking 277 degrees and dipping vertical. The sample contained minor disseminated pyrite, galena and chalcopyrite and yielded 0.01 gram per tonne gold and 0.2 gram per tonne silver (Assessment Report 13894). Sample GM-2 yielded 0.6 gram per tonne gold and 2.2 grams per tonne silver (Assessment Report 13894). The sample was taken across a 30-centimetre quartz vein, striking 296 degrees and dipping vertical.

Skarn mineralization has also been observed. Sample GM-19 yielded 0.29 gram per tonne gold and 0.2 gram per tonne silver (Assessment Report 13894).

BIBLIOGRAPHY

EMPR ASS RPT 12195, *12274, *13894, 19427
EMPR OF 1989-2; 1989-5
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969; 2167
GSC P 37-21

DATE CODED: 1996/11/30
DATE REVISED: 1996/11/30

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW207**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOBO**, SNEAKY SNAKE, FOXY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 26 50 N
LONGITUDE: 119 08 37 W
ELEVATION: 1036 Metres

NORTHING: 5479382
EASTING: 344625

LOCATION ACCURACY: Within 500M

COMMENTS: The location of rusty weathering granodiorite outcrop on the Lobo 5 claim (Assessment Report 10122). Former 082ESW207 (Dell-Kuza) is included with Doorn (082ESW136).

COMMODITIES: Silver Copper Molybdenum Nickel

MINERALS

SIGNIFICANT: Unknown
COMMENTS: The mineralogy is not reported.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Hydrothermal Epithermal
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Nelson Intrusions
Eocene			Coryell Intrusions

LITHOLOGY: Granodiorite
Granite
Monzonite
Andesite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Plutonic Rocks Harper Ranch
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Lobo showing is located along Eugene Creek, 4.25 kilometres north-northwest of Beaverdell.

The Lobo occurrence is underlain by granodiorite, quartz diorite and diorite of the Middle Jurassic Nelson intrusions which have been intruded and are flanked by quartz monzonite and monzonite of the Cretaceous Okanagan batholith. These are in turn intruded by a one to two kilometre diameter stock of Eocene Coryell monzonite to the immediate west of the Lobo occurrence. To the north is a small pendant of Carboniferous to Permian metasedimentary and metavolcanic rocks of the Anarchist Group. Five regional fault orientations have been found to the east on Wallace Mountain; two of which are important with respect to mineralization. High angle, north striking normal faults, dipping steeply to the east, divide Wallace Mountain into several large blocks which displace veins. Southwest striking normal faults dip moderately steeply to the northwest and have displacements of a few centimetres to several metres. Fault spacing is locally on a metre scale, dividing veins into numerous short sections.

Granite and granodiorite underlie the Lobo occurrence. These are locally cut by andesite and porphyry dikes. To the immediate west is a small stock of Coryell monzonite.

The Lobo showing consists of several large outcrops of rusty weathered granodiorite hosting small mineralized shears. Rock sampling along the Eugene Creek logging road, on the nearby Foxy 3 claim, has yielded weakly anomalous results. Sample 13659A returned the highest results; 1.0 gram per tonne silver, 0.10 per cent copper, 0.02 per cent nickel and 0.024 per cent molybdenum (Assessment Report 10122).

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1284
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *10122
EMPR OF 1989-5
EMPR PF (see Cariboo Gold Quartz (93H 019) - Gold City Mining Corp.
Annual Report 1994, p. 7)
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1996/08/15
DATE REVISED: 1997/10/03

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW208**

NATIONAL MINERAL INVENTORY:

NAME(S): **PINKY**, ASHNOLA, PINKY 1-2,
PINKY 7-8

STATUS: Past Producer Open Pit
REGIONS: British Columbia
NTS MAP: 082E04W

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)

BC MAP:
LATITUDE: 49 10 35 N
LONGITUDE: 119 59 07 W
ELEVATION: 1067 Metres

NORTHING: 5451355
EASTING: 282436

LOCATION ACCURACY: Within 500M
COMMENTS: Located on the Pinky 1-2 claims (Claim Map M082E/4W).

COMMODITIES: Rhodonite Gemstones Gold

MINERALS

SIGNIFICANT: Rhodonite
ASSOCIATED: Silica Quartz
COMMENTS: Heavy manganese staining.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: Q02 Rhodonite F01 Sedimentary Mn
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 30 x 12 Metres STRIKE/DIP: 360/60E TREND/PLUNGE:
COMMENTS: The rhodonite bed is up to 12 metres wide and 30 metres long.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Shoemaker	

LITHOLOGY: Chert
Greenstone
Tuff

HOSTROCK COMMENTS: The Shoemaker Formation is of Carboniferous to Triassic age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Quesnel

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Grab
COMMODITY GRADE
Gold 1.0200 Grams per tonne
COMMENTS: Highest assay from samples of good quality rhodonite.
REFERENCE: R.G. Schnieder, personal communication, 1991.

CAPSULE GEOLOGY

The Pinky deposit is located on the Pinky 1-2 claims, about 16 kilometres west of Keremeos.
The area is underlain by chert, greenstone and tuff of the Carboniferous to Triassic Shoemaker Formation and volcanic flows of the Old Tom Formation. There are several known rhodonite occurrences in the Shoemaker Formation in this area (082ESW009, 082, 161, 137). North-south shearing is evident.
The Pinky rhodonite deposit is hosted in rocks of the Shoemaker Formation. The rhodonite bed is up to 12 metres wide and is exposed for 30 metres. The bed, characterized by blue-green chert, grey quartzite and heavy manganese staining, strikes north-south and dips 50 to 70 degrees east.
The rhodonite, when polished, is of good quality and takes a high polish due to the high quartz content. Samples of the rhodonite have assayed up to 1.02 grams per tonne gold (R.G. Schneider, personal communication, 1991).
Over the last few years, R.G. Schneider has removed 45 to 63 tonnes of rhodonite from these claims. The deposit was recently

CAPSULE GEOLOGY

classified as producing less than 100,000 tonnes a year (Mineral Market Update July, 1991).

BIBLIOGRAPHY

EMPR Mineral Market Update Vol. 3, No. 3 July, 1991
EMPR OF 1989-5
GSC BULL 239, pp. 137-139
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 448-458; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40; 72, pp. 53-58
American Journal of Science Vol. 237, pp. 527-549

DATE CODED: 1992/01/13
DATE REVISED: 1996/11/30

CODED BY: DEJ
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW209**

NATIONAL MINERAL INVENTORY:

NAME(S): **KERO**, LAREDO-PUMA, LAREDO,
PUMA, KEREMEOS

STATUS: Prospect
REGIONS: Kootenay Region, British Columbia
NTS MAP: 082E05W
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 20 23 N
LONGITUDE: 119 49 28 W
ELEVATION: 1100 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5469060
EASTING: 294834

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of an adit just south of South Keremeos
Creek (Assessment Report 23104).

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Arsenopyrite
ASSOCIATED: Quartz Pyrite
ALTERATION: Limonite Silica Chlorite
COMMENTS: Host greenstone also contains locally up to 40 per cent magnetite.
ALTERATION TYPE: Oxidation Silicific'n Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 700 x 1 Metres STRIKE/DIP: 260/39W TREND/PLUNGE:
COMMENTS: Quartz vein mineralization has been exposed over a strike length of
700 metres by trenching and diamond drilling. The vein width ranges
from 8 to 50 centimetres wide in a 86-centimetre wide shear zone.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Undefined Group	Old Tom	
Paleozoic-Mesozoic	Undefined Group	Shoemaker	
Jurassic			Okanagan Intrusions

LITHOLOGY: Greenstone
Chert
Tuff
Granite
Granodiorite

HOSTROCK COMMENTS: The Shoemaker and Old Tom formations are of Carboniferous to Triassic
age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1993
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Silver 0.6800 Grams per tonne
Gold 1.3700 Grams per tonne
Copper 0.0100 Per cent
Lead 0.2000 Per cent
Zinc 0.0400 Per cent

COMMENTS: The minimum values obtained from 34 diamond-drill holes drilled to
the west of the Kero adit.

REFERENCE: Assessment Report 23104.

CAPSULE GEOLOGY

The Kero prospect is located on the south side of South
Keremeos Creek, 750 metres west of its confluence with Keremeos
Creek. Olalla, British Columbia lies 8.5 kilometres to the south.
Other than a small adit, little recorded exploration has been
conducted on the Kero claims prior to the 1980s. The Kero claims

CAPSULE GEOLOGY

were acquired from M. Scram in 1983. From 1983 to 1992, Grand National Resources Inc. has conducted extensive property exploration including cleaning of the Kero adit, trenching and sampling of the Kero vein, geochemical soil and geophysical electromagnetic surveys. In 1993, 34 diamond-drill holes totalling 1366 metres were drilled to test the Kero vein structure at depth.

The Kero occurrence is underlain by cherts, tuffs and greenstones of the Carboniferous to Triassic Shoemaker and the Old Tom formations. Minor limestone lenses also occur in the Shoemaker Formation. Bedding strikes northeast with moderate to steep dips to the southeast. All units have been intruded by granite and granodiorite of the Jurassic Okanagan intrusions. Eocene volcanics and sediments unconformably overlie the older units.

At the Kero prospect, quartz veins fill fractures and shears in chloritic and pyritic greenstone of the Old Tom Formation. A quartz vein exposed in the Kero adit is 8 to 50 centimetres wide and pinches and swells along strike. The overall strike of the vein is 260 degrees and the dip is 39 degrees to the north. The vein is associated with a strong shear zone that is at least 86 centimetres wide. Mineralization consists of galena, sphalerite, pyrite, chalcopyrite, arsenopyrite and occurs as disseminations and discrete stringers in quartz. The quartz is vitreous and ribboned fractured. Locally it is vuggy and gossanous with some limonite.

A trenching program has indicated the shear structure has a strike length of at least 577 metres. The attitude and character of the quartz vein is fairly consistent along this length, but poorly exposed. Diamond drilling has shown the vein extends at depth and along strike to about 700 metres.

Trench sampling along the western extension of the vein in 1990 yielded 40.11 grams per tonne gold and 50.40 grams per tonne silver over an apparent width of 1.7 metres (Assessment Report 23104). Analyses of drill core samples has yielded similar results, with the best results from quartz samples. It appears gold values increase with an increase in sulphide content. Gold values from core samples with quartz vein range from 1.37 to 51.77 grams per tonne (Assessment Report 23104). Silver values from the same core ranged from 0.68 to 82.28 grams per tonne (Assessment Report 23104). Lead ranges from 0.2 to 7.3 per cent, zinc from 0.04 to 4.93 and copper from 0.01 to 0.26 per cent (Assessment Report 23104).

Topper Gold Corp. and Grand National Resources Inc. drilled a massive sulphide zone in 1998. See also Papex (082ESW049) and Kopr (082ESW050).

BIBLIOGRAPHY

- EMPR ASS RPT 12699, 12845, 13448, 13905, 13906, 16807, 16945, 17476, 18223, 18327, 19643, 19644, 20747, 22107, *22661, *23104, 23223, 23454, 24206, 24749, 24804
EMPR MAP 35
EMPR OF 1994-1
GSC BULL 126
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53
GCNL #6(Jan.9),#22(Jan.31), 1991; #79(April 26),#115(June 16), #120(June 23), 1993; #206(Oct.26), 1995; #181(Sept.21), #191(Oct.5), 1998
WWW <http://www.infomine.com/>
Neugebauer, H.E.O. (1965): Lithology and Structure of the Late Paleozoic rocks of the Apex Mountain area, British Columbia, unpublished M.A. Thesis, University of Oregon

DATE CODED: 1994/01/04
DATE REVISED: 1996/11/30

CODED BY: GO
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW210**

NATIONAL MINERAL INVENTORY:

NAME(S): **KET 28**, RM GROUP, RM 1-13,
RM 16, MIDWAY, ROCK CREEK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 01 41 N
LONGITUDE: 119 06 28 W
ELEVATION: 1220 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5432715
EASTING: 345923

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of drillhole KT-1 on the Ket 28 mineral claim (Assessment Report 21413). Bridesville, British Columbia lies 4 kilometres to the west-northwest.

COMMODITIES: Gold

MINERALS

SIGNIFICANT:	Pyrite	Pyrrhotite					
ASSOCIATED:	Quartz	Siderite	Magnesite	Magnetite			
ALTERATION:	Pyrite	Silica	Hematite				
ALTERATION TYPE:	Pyrite		Silicific'n	Oxidation	Propylitic	Argillic	
MINERALIZATION AGE:	Skarn						

DEPOSIT

CHARACTER:	Breccia	Vein	Shear	Disseminated
CLASSIFICATION:	Hydrothermal	Epigenetic	Replacement	
TYPE:	101 Au-quartz veins			
DIMENSION:	300 x 50	Metres	STRIKE/DIP: 315/	TREND/PLUNGE: /
COMMENTS:	A northwest striking, gold bearing fault structure has been identified over 300 metres strike length and 50 metres width.			

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Chlorite Schist
Argillite
Phyllite
Diorite
Greenstone
Skarn
Mylonite
Felsic Dike

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane	PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan	
METAMORPHIC TYPE: Regional	RELATIONSHIP: Pre-mineralization
	GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1994
SAMPLE TYPE: Drill Core	
COMMODITY	GRADE
Gold	52.2200 Grams per tonne
COMMENTS:	The weighted average from drillhole 94-RM1-1C was 3.35 metres yielding 52.22 grams per tonne gold.
REFERENCE:	George Cross News Letter No. 115 - June 16, 1994.

CAPSULE GEOLOGY

The Ket 28 occurrence is located at 1220 metres elevation, 4 kilometres east-southeast of Bridesville, British Columbia. The oldest rocks in vicinity of the Ket 28 occurrence belong to the Permian to Carboniferous Kobau and Anarchist groups. Amphibolite, greenstone, quartzite, chert, chlorite schist and minor marble comprise the Kobau Group and amphibolite, greenstone, quartz chlorite schist, quartz biotite schist and minor serpentized peridotite comprise lithologies of the Anarchist Group. Penticton

CAPSULE GEOLOGY

Group lithologies outcrop to the east while Middle Jurassic porphyritic granite, granodiorite and monzonite intrusions are found to the immediate north. Smaller plugs, dikes and sills of biotite granodiorite, quartz diorite and granite of Middle Jurassic to Cretaceous age intrude the Anarchist Group rocks.

Tight folds are noted along northeast and north-trending faults in Anarchist and Kobau groups metasediments and metavolcanics. Phyllitic and mylonitic fabrics along with minor breccia zones occur adjacent to most predominant fault structures.

The RM mineral claim group is underlain by the Anarchist Group. At the Ket 28 occurrence, chlorite schist striking northwest with mylonitic textures is the predominant rock type. Propylitic alteration is common. The Ket 28 occurrence occurs along strike of the 18 kilometre long, northwest striking Rock Creek fault zone hosting identifiable gold-bearing anomalies over 300 metres strike length and 50 metres width.

Gold mineralization at the Ket 28 occurrence is hosted in discontinuous pods of pyrite bearing, matrix supported, brecciated quartz veins and swarms, along the southern extension of the Rock Creek fault zone.

In 1990, property exploration by Crownex Resources (Canada) Ltd. consisted of geochemical soil sampling, rock chip sampling, a ground magnetic geophysical survey and seven reverse circulation-drill holes.

Rock chip samples of old trenches, pits and adits yielded anomalous gold values that correlate well with quartz veins in argillically altered chlorite schist in close proximity to siliceous magnesite skarn (Assessment Report 21413). The highest gold value was returned from sample 90CM-243-R, which yielded 2.47 grams per tonne gold and 0.60 gram per tonne silver (Assessment Report 21413). This chip sample consisted of siliceous magnesite with pyrite. Sample 90CM-262-R yielded 3.870 grams per tonne gold and 2.0 grams per tonne silver (Assessment Report 21413). Sample 90CM-455-R, a sample of pyritic argillite with trace magnesite, yielded 2.12 grams per tonne gold (Assessment Report 21413).

These results lead to the discovery of a soil geochemistry anomaly. Follow-up ground magnetic geophysical survey results indicated an anomaly in the vicinity of the soil geochemistry gold anomaly. These anomalies occur in a broad argillite-phyllite belt near diorite outcrop and locally mylonitic magnetite-bearing greenstone.

This was followed by seven reverse circulation percussion-drill holes with over 658 metres drilled total, targeted on discontinuous pyrite, siderite and quartz swarmed veins within a north trending phyllonitic to mylonitic zone. Reverse circulation percussion-drill hole KT-1 yielded 6.1 metres grading 8.91 grams per tonne gold (Assessment Report 21413). Pyrite, hematite and magnesite with silicification and bleaching in greenstone and diorite are all associated with anomalous gold values. Magnetite is locally abundant above anomalous gold mineralization with pyrrhotite dominating near diorite.

During diamond drilling in 1994, diamond-drill hole 94-RM1-2C intersected 3.35 metres with a weighted average of 52.22 grams per tonne gold (George Cross News Letter No. 115 - June 16, 1994). Assay samples from diamond-drillholes 94-RM1-1C and 94-RM1-3C also yielded significant gold values (George Cross News Letter No. 115 - June 16, 1994).

Further aggressive property exploration up to 1996 included diamond drilling, electromagnetic and induced polarization geophysical surveys and limited rock chip geochemical sampling. The best drillhole results from 1996 were from diamond-drill hole 96GH-17C which yielded 3.77 grams per tonne gold over the 4.3 metre interval from 70.7 to 75.0 metres depth Property File - Phoenix Gold Resources Ltd. (1996): News Release). These results are related to pervasively silicified volcanic breccia. Observations in 1996 indicated the oxidized upper part of the structure are low and erratic. Deeper in the structure, gold values are higher, more consistent and appear to have associated pyritization, silicification, and an increase in felsic dikes (Property File - Gold City Mining Corp., Orion International Mineral Corp., Phoenix Gold Resources Ltd. (1996): Joint News Release).

BIBLIOGRAPHY

- EM EXPL 1996-E4
- EMPR ASS RPT 14154, 19737, 21003, 21023, *21413, 21541, 22176, 22548, 23072, 23912
- EMPR INF CIR 1994-19, p. 23; 1995-1, p. 22
- EMPR PF (Phoenix Gold Resources Ltd. Prospectus, 1995; see Cariboo Gold Quartz (093H 019) - Gold City Mining Corp. Annual Report

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1291
REPORT: RGEN0100

BIBLIOGRAPHY

1994, p. 6; Gold City Mining Corp., Phoenix Gold Resources, Orion
International Minerals Corp. (1996): Geological/Mineral Deposit
Field Trip Report)
GSC MAP 84A; 538A; 539A; 15-1961; 1505A; 1736A
GSC MEM 38, pp. 389-423
GSC OF 1969
GCNL #115(June16), #118(June21), #127(July5), #154 (Aug.12), 1994;
#82(Apr.28), 1995; #56(Mar.19), #60(Mar.25), 1996
WWW <http://www.infomine.com/>

DATE CODED: 1996/05/19
DATE REVISED: 1996/06/18

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW211**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALLENDALE**, ALLENDALE STONE, CORYELL SYENITE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06W
BC MAP:
LATITUDE: 49 24 00 N
LONGITUDE: 119 20 04 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Located about 20 kilometres east of Okanagan Falls (Fieldwork 1994, page 367).

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)
NORTHING: 5474544
EASTING: 330631

COMMODITIES: Granite Dimension Stone Building Stone Nepheline Syenite

MINERALS

SIGNIFICANT: K-Feldspar Orthoclase Augite
COMMENTS: The K-feldspar is a distinctive rhomb-shaped anorthoclase phenocryst.
ASSOCIATED: Biotite Nepheline Apatite Magnetite Pyrite
ALTERATION: Chlorite Epidote
ALTERATION TYPE: Propylitic Chloritic
MINERALIZATION AGE: Eocene
ISOTOPIC AGE: 51.7-53.0 +/-1.8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Magmatic Industrial Min.
TYPE: R03 Dimension stone - granite R13 Nepheline syenite

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER

Eocene
ISOTOPIC AGE: 51.7-53.0 +/- 1.8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

Coryell Intrusions

LITHOLOGY: K-Feldspar Porphyritic Syenite
Monzonite
Shonkinite
Pegmatite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks Okanagan PHYSIOGRAPHIC AREA: Okanagan Highland
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Allendale dimension stone prospect is located 1 kilometre north of Allendale Lake, 18 kilometres east-northeast of Okanagan Falls.

The occurrence is underlain by a small oval-shaped stock of the Eocene Coryell intrusions. This stock is roughly 2.5 kilometres diameter (8 square kilometres) and occurs at the intersection of the Eocene hornblende granodiorite to the west, the Okanagan Gneiss to the southwest and northwest, and granite of the Cretaceous Okanagan batholith.

This Coryell stock consists of four phases. The main phase is biotite pyroxene monzonite. The rock is typically porphyritic with a spongy framework of smoky grey, perthitic textured high temperature orthoclase and orthoclase-anorthoclase phenocrysts, 1 to 2 centimetres diameter with interstitial diopsidic augite and biotite. These mafic minerals occur either as individual grains or as clusters with apatite, magnetite and sphene.

The syenite phase is hosted in small pockets in the monzonite phase. Rhomb-shaped anorthoclase phenocrysts are distinctive. Apatite and magnetite are also locally abundant. The syenite is weakly propylitic altered in isolated fracture zones. Epidote and calcite veins comprise alteration minerals. Local zones of strong secondary biotite replacement occur adjacent to pegmatite dikes. Argillic alteration of feldspars is very weak. Partially assimilated aplitic xenoliths are common within the syenite. They range from less than 1.5 to 6 metres length. However, angular fragments of gneiss are also present.

A shonkinitic border phase is exposed along the west and

CAPSULE GEOLOGY

southwest margins of the stock where it forms a continuous zone ranging from 50 to 300 metres wide. The phase is relatively mafic-rich and probably is a basic differentiate of the monzonite. The fine to medium grained rock is composed of intermixed anorthoclase and orthoclase perthite (80 per cent) and pyroxene (15 per cent). The pyroxene contains accessory biotite and hornblende in clots with apatite and magnetite or as poikilitic inclusions in large augite grains. Small, partly altered nepheline grains, one-half to one millimetre diameter, are sparingly disseminated throughout the rock.

The main fractures within this Coryell stock have a mean strike of 035 degrees and dip 80 degrees southeast. Strong subsidiary fractures strike 245 degrees dipping 80 degrees northwest. Two weaker sets strike 190 degrees dipping 55 degrees northwest and 135 degrees dipping vertical.

Pegmatite dikes crosscut the syenite and monzonite phases in the north, east-central and south parts of the stock. The pegmatites are quartz-rich and feldspars consist of very coarse albite. Biotite and actinolite comprise mafic minerals. Sphene, allanite and magnetite comprise accessory minerals.

This unusual type of stone prospect forms a round hill with a scattered boulder field along its edges. When cut and polished, this stone has a dark blue colour with occasional light iridescence in some feldspar grains. The rock is a very coarse grained, dark grey syenite. The colour and texture of the stone varies slightly in individual boulders and rock outcrops. The presence of many small boulders indicates a high fracture density. Therefore, in spite of its very attractive appearance in finished slabs, potential development of this site will probably be limited to monument work and interior projects only.

The Allendale stone is a distinctive, dark grey to black, rhomb-shaped anorthoclase syenite. The rock is very coarse with large (1-2 centimetres) phenocrysts of grey anorthoclase and black augite. It has a poorly developed linear fabric defined by the augite crystals. The rock is partially altered with pseudomorphs of chlorite after augite and some chloritization of biotite. Quartz is significant in its absence and nepheline may be present as a minor constituent of the fine matrix. Minor constituents are apatite, magnetite and pyrite.

The rock takes a good polish (7-8/10) with some pitting on chlorite or biotite grains. There are tight intergranular cracks throughout the rock and individual grains show some cracking as well. Grains are well interlocked and there is no iron staining from either the pyrite or magnetite (2-3 per cent) (Fieldwork 1994, pages 367-368).

BIBLIOGRAPHY

EMPR ASS RPT 1741, 2363, 3481, 10517, 10772, 12290, 15466, 20132
EMPR FIELDWORK *1994, pp. 365-369
EMPR GEM 1969-351; *1971-386-396; 1972-41
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC OF 481; 551; 637; 1505A; 1565; 1969
GSC P 77-1A, p. 31

DATE CODED: 1994/12/23
DATE REVISED: 1997/07/24

CODED BY: DH
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW212**

NATIONAL MINERAL INVENTORY:

NAME(S): **SYACKAN**, KET 5 GROUP, KET 4-5,
KET 25-27, CJ 1-11, ROCK CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:
LATITUDE: 49 02 16 N
LONGITUDE: 119 04 07 W
ELEVATION: 884 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of rock geochemical sample 91KT27:D54R
(Assessment Report 22176).

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5433717
EASTING: 348816

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
ASSOCIATED: Garnet Pyroxene Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Replacement Skarn
TYPE: K01 Cu skarn K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic Middle Jurassic	Anarchist	Undefined Formation	Nelson Intrusions

LITHOLOGY: Skarn
Marble
Limestone
Quartzite
Argillite
Greenstone
Conglomerate
Siltstone
Diorite
Granodiorite

HOSTROCK COMMENTS: The Anarchist Group is of Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Syackan occurrence is located about 2.75 kilometres east-southeast of the Old Nick (082ESW055) occurrence. The occurrence is found at about 558 metres elevation, immediately north of the old railway grade and south of highway No. 3. Bridesville, British Columbia lies 7.5 kilometres to the west-northwest.

An old adit and opencut were located at the Syackan occurrence, indicating previous mineral exploration. The Syackan occurrence is, located on the northern portion of the Ket 27 claim, was owned by Crown Resources Corp. from 1991 to 1993. The property is currently held by the Rock Creek Gold Trend Venture, with partners Phoenix Gold Resources Ltd., Orion International Minerals Inc. and Gold City Mining Corp.

Limestone and marble along the contact between diorite and granodiorite of the Middle Jurassic Nelson intrusions and lithologies of the Permian to Carboniferous Anarchist Group comprise hostrocks of the Syackan occurrence. Greenstone, argillite, conglomerate, limestone, marble, quartzite and minor siltstone comprise other Anarchist Group lithologies in the area. Several northwest-trending augite porphyry dikes also crosscut the Anarchist metasedimentary-metavolcanic sequence.

Lithologies of the Ket 5 Group, surrounding the Syackan occurrence, consists of mainly metasediments and metavolcanics of the Permian to Carboniferous Anarchist Group. To the north, massive quartzite dominates. Locally, the quartzite is intensely fractured and silicified and contains lenses of serpentinite. To the south

CAPSULE GEOLOGY

black silicified argillite with minor siltstone and greenstone occur. The major structures in the area are faults striking north, east or northwest, separating the Anarchist Group into discrete fault blocks. A strong foliation, bleaching and phyllitic to mylonitic fabrics are associated with north striking faults. The Anarchist Group metasediment-metavolcanic sequence has been intruded by diorite and granodiorite of the Middle Jurassic Nelson intrusions. To the east, the sequence is overlain by conglomerate, sandstone and minor phonolite, trachyte and trachyandesite of the Eocene Penticton Group.

Skarn has been discovered in limestone and marble of the Anarchist Group. Skarn mineralization includes poorly formed almandine garnet, pyroxene, quartz, pyrite, pyrrhotite and rare chalcopyrite. An old adit was discovered collared in this skarn.

To date, samples have not yielded significant metal values. The best assay results were from a 2-metre chip sample, sample 91KT27:D54R. This sample yielded 0.074 per cent copper and 0.058 per cent lead (Assessment Report 22176).

BIBLIOGRAPHY

EMPR ASS RPT 14154, 21003, 21413, 21541, *22176, 22548, 23072
EMPR PF (Gold City Mining Corporation, (1994): Annual Report;
Phoenix Gold Resources Ltd. (1995): Prospectus; Gold City Mining
Corp., Phoenix Gold Resources, Orion International Minerals Corp.
(1996): Geological/Mineral Deposit Field Trip Report)
GSC MAP 84A; 538A; 539A; 15-1961; 1505A; 1736A
GSC MEM 38, pp. 389-423
GSC OF 1969

DATE CODED: 1996/06/25
DATE REVISED: 1997/10/03

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

a 143 metres diamond drill program in 4 holes.

Lithologies underlying the Anarchist occurrence consists of granitic rocks of the Middle Jurassic Nelson intrusions. The dominant composition is biotite granite. The dominant fractures strike 032 degrees. For a more detailed description of the surrounding geology refer to the Cariboo-Amelia occurrence (082ESW020).

Three parallel veins were discovered on the Anarchist claim over 9 metres width. The veins were traceable for up to 183 metres along strike. Drilling in 1981 did not intersect two parallel veins. All three veins strike 020 degrees and dip vertically. The west wall (hangingwall) of the main vein is silicified and bleached over a few centimetres and has a gneissic fabric. The footwall is composed of granite. Underground, the main vein has an average width of 1.4 metres. The vein width and dip is consistent throughout its traceable length.

The vein appears to follow an auxiliary fault structure of varying orientation. At the main shaft the fault strikes 032 degrees, dips vertical and is 150 centimetres wide. Thirty metres south, the fault strikes 360 degrees and dips vertical. The vein is visible at this point and is 60 centimetres wide. To the south 30 metres, the fault strikes 032 degrees and is 120 centimetres wide. Underground, the main vein has been displaced, a distance equivalent to the vein width, by near-horizontal faults.

Mineralization consists predominantly of pockets and blebs of pyrite and fine to coarse-grained galena in blebs up to 5 centimetres across. Small amounts of native gold, sphalerite, chalcopyrite and tetrahedrite are also reported in a white or locally rose quartz gangue. In 1894, a 41-centimetre ore streak was reported discovered on the main vein.

In 1981, gold values obtained from assay samples of drill core were low in both gold and silver overall (Assessment Report 9686). The best silver values was from the 3 metre interval from 22.2 to 25.2 metres in drillhole #2. The sample yielded 12.3 grams per tonne silver but only trace gold (Assessment Report 9686).

No production records could be found for the Anarchist occurrence and the Dynamite claim has received only exploration work.

BIBLIOGRAPHY

EMPR AR 1894-754, map after 758; *1895-705; 1896-562; *1897-608; 1898-1119
EMPR ASS RPT 8153, *9686, 12389, 15519, 16168, *16975, 17236, 22643
EMPR BULL 6, pp. 6,15
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC MEM *179, pp. 11-20
GSC OF 481; 637; 1505A; 1565A; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp, pp. 12-22

DATE CODED: 1996/07/26
DATE REVISED: 1996/07/26

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW214**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRANITE (L.1585)**, BANNER (L.1586)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 03 N
LONGITUDE: 119 12 27 W

NORTHING: 5441012
EASTING: 338870

ELEVATION: 1204 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the main shaft on the Granite (Lot 1585)
Reverted Crown grant (Assessment Report 14609).

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Galena Pyrite Sphalerite

COMMENTS: Significant minerals are for the Granite but assumed to be similar on
the nearby Banner vein.

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I01 Au-quartz veins

DIMENSION: 41 x 1 Metres STRIKE/DIP: 290/

TREND/PLUNGE: /

COMMENTS: The Granite vein is 140 centimetres wide and strikes 290 to 330
degrees. The vein has been traced for 41 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic Nelson Intrusions

LITHOLOGY: Biotite Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SHAFT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1985

SAMPLE TYPE: Unknown

COMMODITY

GRADE

Gold 8.2000 Grams per tonne

COMMENTS: Sample 582060, taken from 4.6 metres deep in the main shaft on the
Granite claim.

REFERENCE: Assessment Report 14609.

CAPSULE GEOLOGY

The Granite occurrence is located at 1204 metres elevation 6.5 kilometres east of McKinney Creek and south of Baldy Mountain. The Cariboo-Amelia occurrence (082ESW020) is located 4.5 kilometres to the northeast and Bridesville, British Columbia is located 8 kilometres to the south-southeast.

Work was reported on the Banner and Granite claims as early as 1899. At this time they were owned and operated by Camp McKinney Mines. A substantial amount of work was reported and a 5-stamp mill was reported to have run for some time with very satisfactory results. No records could be found, however, concerning the length of time, the amount of ore that was processed, or the recovered grades. It is thought that most of the mill ore was supplied from the Banner claim. Recent work on the Granite and Banner claims has been conducted in 1981 by the Rock Creek Joint Venture Syndicate, 1985 by A. Dupras, 1986 by Gold Hill Syndicate and in 1987 under option to Wapiti Exploration Inc.

Lithologies underlying the Granite occurrence consists of biotite granodiorite of the Middle Jurassic Nelson intrusions. The dominant fractures strike 032 degrees. For a more detailed description of the surrounding geology refer to the Cariboo-Amelia

CAPSULE GEOLOGY

occurrence.

On the Granite claim, it is reported that a quartz vein carried chalcopyrite, galena, pyrite and minor sphalerite. The vein is 140 centimetres wide and strikes 290 to 330 degrees in the main shaft. The vein has been traced 41 metres north to a second shallower shaft in granodiorite hostrock. In 1985, a sample was taken from 4.6 metres deep in the main shaft. This sample (582060) yielded 8.2 grams per tonne gold (Assessment Report 14609).

On the Banner claim, another quartz vein is hosted in granodiorite. Three samples were taken by the Rock Creek Joint Venture Syndicate in 1981. The best sample, a 60-centimetre chip across the vein, yielded 0.24 gram per tonne gold and 2.81 grams per tonne silver (Assessment Report 12389).

BIBLIOGRAPHY

EMPR AR *1899-773; 1900-990
EMPR ASS RPT *9896, *12389, *14609, 16168, 16975
EMPR BULL 6, p. 6
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565A; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp,
pp. 12-22

DATE CODED: 1996/07/29
DATE REVISED: 1996/07/29

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW215**

NATIONAL MINERAL INVENTORY:

NAME(S): **KAMLOOPS (L.275)**, CAMELIA, CAMP MCKINNEY

STATUS: Prospect

Underground

MINING DIVISION: Greenwood

REGIONS: British Columbia

NTS MAP: 082E03E

BC MAP:

LATITUDE: 49 06 47 N

LONGITUDE: 119 09 53 W

ELEVATION: 1326 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the western shaft on the Kamloops (Lot 275) Reverted Crown grant (Gold City Mining Corporation (1996): Geological/Mineral Deposit Field Trip Report).

UTM ZONE: 11 (NAD 83)

NORTHING: 5442280

EASTING: 342031

COMMODITIES: Gold

Silver

Lead

Copper

Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Chalcopyrite Sphalerite

COMMENTS: Mineralogy inferred from the Sailor (082ESW045) and the Minnie-Ha-Ha (082ESW046).

ASSOCIATED: Quartz

COMMENTS: See Significant Mineral comment.

ALTERATION: Carbonate Quartz

COMMENTS: See Significant Mineral comment.

ALTERATION TYPE: Carbonate Silicific'n

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal

Epigenetic

TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Upper Paleozoic

GROUP

Anarchist

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone

Quartzite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Kamloops occurrence is located at 1326 metres elevation 7.5 kilometres southeast of Baldy Mountain, in the former historic Camp McKinney. The Kamloops Reverted Crown grant lies between the Sailor (Lot 766) and Minnie-Ha-Ha (Lot 680) Reverted Crown grants of the McKinney camp. The camp lies 9 kilometres north-northwest of Bridesville, British Columbia.

The Camp McKinney area is underlain by interbanded and intergrading Carboniferous to Permian Anarchist Group metamorphosed sediments and volcanics. The group is mainly sedimentary and consists of greenstone, locally calcareous, altered quartzite and argillaceous quartzite, greywacke, limestone and locally micaceous quartzite and calcareous biotite schist. The minor volcanics are described as mainly altered andesitic and basaltic flows.

Granite and granodiorite of the Middle Jurassic Nelson intrusions have intruded the Anarchist Group to the west and south as small stocks and plugs. Along the contacts of these intrusions the Anarchist rocks have been deformed and hydrothermally altered. Younger dikes of felsic and mafic composition intrude both stratified and granitic rocks and may have been associated with faults related to these granitic intrusions.

The major regional structural feature in the vicinity of the Cariboo-Amelia occurrence (082ESW020) is a northeast trending fault zone 5 kilometres to the east. The fault follows Conkle Creek, Conkle Lake and Jolly Creek.

Faulting in the Cariboo-Amelia mine area is postmineral and widespread. Major east dipping, low angle thrust faults in the central portion of the mine have displaced the hangingwall to the northwest by about 122 metres. An east-dipping fault has also moved

CAPSULE GEOLOGY

the hangingwall south by about 91 metres. The complexly faulted and folded rocks are predominantly northwest striking and steeply to moderately northeast dipping.

The Kamloops occurrence is hosted in banded greenstone of the Anarchist Group dipping flatly northward. Considerable quartz was reported in a dump near the shaft.

Development work began on the Kamloops occurrence pre-1897, as by this time it was reported that a 30-metre shaft, with 23 metres of drifting, was sunk on a quartz vein (Minister of Mines Annual Report 1901, page 1151). A second 12-metre shaft is located 24 metres southwest of the main shaft. The shaft was sunk in quartzite but little quartz vein or mineralization was observed. Two other prospecting shafts were also commenced and were 3.6 and 4.6 metres deep, respectively. At this time the Crown-granted claim was owned by J. Moran and development was carried out by the McKinney-Kamloops Company until 1900. In 1940, the property was owned by J.L. Grant.

The vein intersected in the two shafts is considered to be the eastern extension of the Sailor vein (082ESW045) and the faulted western extension of the Minnie-Ha-Ha vein (082ESW046). Refer to these two occurrences for further details on the vein geology and mineralization.

BIBLIOGRAPHY

EMPR AR 1894-map after 758; *1897-604,606; 1898-1117; 1899-774;
*1901-1151
EMPR ASS RPT 8153, 9840, 13768, 15519, 16168, 20668, 22643
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC BULL *6, pp. 1-15,19
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC OF 481; 637; 1505A; 1565; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp,
pp. 12-22

DATE CODED: 1996/07/30
DATE REVISED: 1996/07/30

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW216**

NATIONAL MINERAL INVENTORY:

NAME(S): **BIG BUG (L.923)**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 20 N
LONGITUDE: 119 10 59 W
ELEVATION: 1234 Metres

NORTHING: 5441485
EASTING: 340669

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate centre of the Big Bug (Lot 923) Reverted Crown grant.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
COMMENTS: A 5 to 20 centimetre wide quartz vein strikes 090 degrees and dips 80 degrees south.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic Cretaceous-Tertiary	Anarchist	Undefined Formation	Okanagan Batholith

LITHOLOGY: Calcareous Greenstone
Argillite
Andesitic Flow
Basaltic Flow
Tuff
Quartzite
Greywacke
Biotite Schist
Granite
Granodiorite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Big Bug occurrence is located at 1234 metres elevation 8.5 kilometres southeast of Baldy Mountain, in the former historic Camp McKinney. The Big Bug (Lot 923) Reverted Crown grant lies below the Minnie-Ha-Ha (Lot 680) Reverted Crown grant of the McKinney camp. The camp lies 9 kilometres north-northwest of Bridesville, British Columbia.

Development work began on the Big Bug occurrence in 1897 under the ownership of A. McGraw and W.H. Norris and continued until 1901. A 9.1-metre shaft was sunk on a small quartz vein striking 090 degrees. Apparently, no further work was done. The Big Bug property is now owned by W.G. Hallauer.

The Camp McKinney area is underlain by interbanded and intergrading Carboniferous to Permian Anarchist Group metamorphosed sediments and volcanics. The group is mainly sedimentary and consists of greenstone, locally calcareous, altered quartzite and argillaceous quartzite, greywacke, limestone and locally micaceous quartzite and calcareous biotite schist. The minor volcanics are described as mainly altered andesitic and basaltic flows.

Granite and granodiorite of the Middle Jurassic Nelson intrusions have intruded the Anarchist Group to the west and south as small stocks and plugs. Along the contacts of these intrusions the Anarchist rocks have been deformed and hydrothermally altered. Younger dikes of felsic and mafic composition intrude both stratified and granitic rocks and may have been associated with faults related to these granitic intrusions.

CAPSULE GEOLOGY

The major regional structural feature in the vicinity of the Cariboo-Amelia occurrence (082ESW020) is a northeast trending fault zone 5 kilometres to the east. The fault follows Conkle Creek, Conkle Lake and Jolly Creek.

Faulting in the Cariboo-Amelia mine area is postmineral and widespread. Major east-dipping, low angle thrust faults in the central portion of the mine have displaced the hangingwall to the northwest by about 122 metres. An east-dipping fault has also moved the hangingwall south by about 91 metres. The complexly faulted and folded rocks are predominantly northwest striking and steeply to moderately northeast dipping.

Outcrop is sparse on the Big Bug property. Calcareous greenstone is found in a few outcrops west of the old shaft. Alteration and shearing have given a weak schistose texture to the greenstone. The shaft was sunk on a 5 to 20 centimetre quartz vein striking 090 degrees and dipping 80 degrees south. The vein has been traced on surface, 10 metres west of the shaft. Pyrite occurs as fracture fillings and disseminations in the quartz vein. Four samples were taken from the Big Bug dump in 1991, however, assay results for gold and silver were not significant (Assessment Report 21464). Sample R2-91001WH yielded 0.07 gram per tonne gold. 4 grams per tonne silver and 0.03 per cent zinc (Assessment Report 21464).

BIBLIOGRAPHY

EMPR AR *1897-606; *1898-1116,1117
EMPR ASS RPT 8153, 9840, 13768, 15519, 16168, 20668, *21464
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC BULL 6, pp. 1-15
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC OF 481; 637; 1505A; 1565; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp, pp. 12-22

DATE CODED: 1996/07/30
DATE REVISED: 1996/07/30

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW217**

NATIONAL MINERAL INVENTORY:

NAME(S): **WIARTON (L.856)**, CAMELIA, CAMP MCKINNEY

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 57 N
LONGITUDE: 119 10 36 W
ELEVATION: 1295 Metres

NORTHING: 5442614
EASTING: 341168

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of three shafts on the Wiar-ton (Lot 856) Crown grant (Gold City Mining Corporation (1996): Geological/Mineral Deposit Field Trip Report). See also Cariboo-Amelia (082ESW020).

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Gold Pyrite Galena Sphalerite

COMMENTS: Mineralogy is inferred from the Waterloo (082ESW019) and Cariboo-Amelia (082ESW020) occurrences, which are neighbouring and of similar character.

ASSOCIATED: Quartz

COMMENTS: See Significant Mineral comment.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic Mesothermal

TYPE: I01 Au-quartz veins

DIMENSION: 1 Metres

STRIKE/DIP:

TREND/PLUNGE: /

COMMENTS: A 91 centimetre wide quartz vein.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Anarchist	Undefined Formation	

LITHOLOGY: Amphibolite
Argillaceous Quartzite
Silty Sediment/Sedimentary
Calcareous Sediment/Sedimentary

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age. Specific hostrocks are inferred from the neighbouring Waterloo (082ESW019).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Wiar-ton occurrence is located at 1295 metres elevation on the Wiar-ton (Lot 856) Crown grant in the historic Camp McKinney. The occurrence is 750 metres east of the Cariboo-Amelia occurrence (082ESW020). The camp lies 9 kilometres north-northwest of Bridesville, British Columbia.

The Camp McKinney area is underlain by interbanded and intergrading Carboniferous to Permian Anarchist Group metamorphosed sediments and volcanics. The group is mainly sedimentary and consists of greenstone, locally calcareous, altered quartzite and argillaceous quartzite, greywacke, limestone and locally micaceous quartzite and calcareous biotite schist. The minor volcanics are described as mainly altered andesitic and basaltic flows.

Granite and granodiorite of the Middle Jurassic Nelson intrusions have intruded the Anarchist Group to the west and south as small stocks and plugs. Along the contacts of these intrusions the Anarchist rocks have been deformed and hydrothermally altered. Younger dikes of felsic and mafic composition intrude both stratified and granitic rocks and may have been associated with faults related to these granitic intrusions.

The major regional structural feature in the vicinity of the Cariboo-Amelia occurrence (082ESW020) is a northeast trending fault zone 5 kilometres to the east. The fault follows Conkle Creek, Conkle Lake and Jolly Creek.

Faulting in the Cariboo-Amelia mine area is postmineral and widespread. Major east-dipping, low angle thrust faults in the

CAPSULE GEOLOGY

central portion of the mine have displaced the hangingwall to the northwest by about 122 metres. An east-dipping fault has also moved the hangingwall south by about 91 metres. The complexly faulted and folded rocks are predominantly northwest striking and steeply to moderately northeast dipping.

Hostrocks of the Wiarton occurrence are dominantly argillaceous quartzites. Other lithologies include soft quartzose rocks and other silty to calcareous sediments metamorphosed to amphibolite. The amphibolite is composed primarily of fibrous amphibole. A north-trending gully on the Wiarton claim is indicative of a local fault.

Development on the Wiarton occurrence began in 1894 and continued to 1899 under ownership by the Camp McKinney Development Co. Ltd. By 1899, three shafts, 15.8, 16.1 and 18.3 metres respectively were developed along with 27 metres of drifting. The eastern continuation of the Cariboo/McKinney vein was intersected. The vein was 91 centimetres wide and of similar character to the Cariboo-Amelia and Waterloo (082ESW019) occurrences. In 1934, Pioneer Gold Mines of B.C. Limited conducted a limited surface diamond drilling program on the western edge of the Wiarton and on the Amelia claims to locate the eastern extension of the Cariboo-McKinney vein, without success. It was reported only one high grade quartz section was intersected (Bulletin 6, page 4). Later in that same year an unknown lessee sank a shaft down on one the earlier vertical drillholes of Pioneer. The results of this work is unknown.

Production records indicate 129 tonnes of ore was mined from the Wiarton in 1940 and 1941 by Highland-Bell Ltd. From this, 3950 grams of gold, 1357 grams of silver, 78 kilograms of lead and 245 kilograms of zinc were recovered.

BIBLIOGRAPHY

EMPR AR 1894-map after 758; 1897-607; 1898-1118; 1899-773; 1940-24, 62; 1941-25,61
EMPR INDEX 3-218
EMPR ASS RPT 8928, 13768, 16325, 17236, 22643, 23041, 23494
EMPR BC METAL MM00942
EMPR BULL *6, pp. 1-15,20-21
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 179, pp. 17,18
GSC OF 481; 637; 1505A; 1565; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp, pp. 12-22

DATE CODED: 1996/07/30
DATE REVISED: 1996/07/30

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW218**

NATIONAL MINERAL INVENTORY:

NAME(S): **PANDRE (L.2661)**, ALMA (L.2660)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 23 N
LONGITUDE: 119 11 51 W
ELEVATION: 1432 Metres

NORTHING: 5443461
EASTING: 339671

LOCATION ACCURACY: Within 500M

COMMENTS: The centre of the Pandre (Lot 2661) Reverted Crown grant.

COMMODITIES: Gold Lead

MINERALS

SIGNIFICANT: Gold Pyrite Galena
COMMENTS: Free gold is reported from veins on the Alma and Pandre claims.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic Mesothermal
TYPE: I01 Au-quartz veins
DIMENSION: 640 x 1 Metres
COMMENTS: The average width of the quartz vein on the Pandre claim is 61 centimetres and it has been traced for 640 metres on surface by test pits.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic Middle Jurassic	Anarchist	Undefined Formation	Nelson Intrusions

LITHOLOGY: Quartzite
Greenstone
Greywacke
Limestone
Argillaceous Quartzite
Biotite Schist
Granite
Granodiorite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Pandre occurrence is located at 1432 metres elevation on the southern slopes of Baldy Mountain, 1.25 kilometres northwest of the Cariboo-Amelia occurrence (082ESW020) of the historic Camp McKinney. The occurrence consists of quartz veins on the Pandre (Lot 2661) and Alma (Lot 2660) Reverted Crown grants.

The Pandre occurrence lies in a complex sequence of volcanic and metasedimentary rocks of the Carboniferous to Permian Anarchist Group. To the north are Cretaceous granitic and granodioritic rocks of the Okanagan batholith. Middle Jurassic granitic rocks of the Nelson intrusions occur to the southwest. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies of the Anarchist Group to the east. For a more detailed description of the regional geology of the McKinney camp refer to the Cariboo-Amelia occurrence (082ESW020). Quartzites of the Anarchist Group are reported to the dominant hostrock of the Pandre occurrence (Assessment Report 9840).

The earliest recorded development on the Pandre occurrence was in 1898 when a 46-centimetre wide quartz vein was discovered on the Alma and a quartz vein carrying free gold was discovered on the Pandre (Minister of Mines Annual Report 1898, page 1117). At this time, development on the Alma consisted of two 3-metre shafts. On the Pandre, a 3.6-metre shaft was sunk. Surface stripping exposed the vein for 30 metres length. In the following year, two shafts on the Pandre were 9.1 and 10.7 metres deep, respectively. Several test

CAPSULE GEOLOGY

pits were also dug. The vein was traced along these test pits for 640 metres length. The average width of the vein was 60 centimetres. Free gold, pyrite and galena comprised the vein mineralogy (Minister of Mines Annual Report 1899, page 774). Assay values were reported to have been very high (Minister of Mines Annual Report 1899, page 774). No further work was reported on either claim until 1981. However, the Alma claim was Crown granted to P.B.S. Stanhope in 1905 and the Pandre was Crown granted to Executors of the E. James estate in 1909.

In 1981, a joint exploration program was conducted on the ground covering the Pandre occurrence by McQuillan Gold Ltd. and Jan Resources Ltd. The program was limited to prospecting and a soil geochemistry survey. A zinc soil anomaly was found which extended onto the Pandre and eastern edge of the Alma claims. In 1986, A. Dupras conducted limited prospecting and rock geochemistry sampling on ground surrounding the Pandre occurrence. No significant results were reported.

BIBLIOGRAPHY

EMPR AR *1898-1117; *1899-774; 1905-254; 1909-277
EMPR ASS RPT *9840, 12389, *15519, 16168
EMPR BULL 6, pp. 1-15
EMPR MR MAP 7 (1934)
EMPR OF 1898-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp,
pp. 12-22

DATE CODED: 1996/07/31
DATE REVISED: 1996/07/31

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

6.1-metre shaft is located 116 metres southwest of the above pit. It is hosted in greenstone. An adit, 53 metres northwesterly from this shaft, was driven 40.2 metres along a strike of 333 degrees. No vein was intersected and the adit appears to follow a quartzite-greenstone bedding contact (Bulletin 6, page 17).

On the eastern border of the Edward VII, a 7.6 to 60.9 centimetre wide quartz vein strikes 120 degrees and dips 75 degrees to the southwest. A small shaft and adit were developed on this vein prior to 1940 and since caved in.

BIBLIOGRAPHY

EMPR AR 1905-255
EMPR ASS RPT 9840, 12389, 15519, 16168
EMPR BULL *6, pp. 1-16,21
EMPR MR MAP 7 (1934)
EMPR OF 1898-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp,
pp. 12-22

DATE CODED: 1996/07/31
DATE REVISED: 1996/07/31

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW220**

NATIONAL MINERAL INVENTORY:

NAME(S): **SLAMET (L.2663)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 06 N
LONGITUDE: 119 11 53 W
ELEVATION: 1417 Metres

NORTHING: 5442937
EASTING: 339615

LOCATION ACCURACY: Within 500M

COMMENTS: The location of an old adit and trenches in the southwest corner of the Slamet (Lot 2663) Reverted Crown grant (Assessment Report 15005).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
ALTERATION: Silica
COMMENTS: Silicification is intense.
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
DIMENSION: 1 Metres STRIKE/DIP: 280/
COMMENTS: A 1-metre wide quartz vein strikes 280 degrees. A second vein strikes 300 degrees and dips steeply southwest.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Greenstone
Quartzite
Greywacke
Limestone
Biotite Schist
Granite
Granodiorite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Slamet occurrence is located at 1417 metres elevation on the Slamet (Lot 2663) Reverted Crown grant, 6.75 kilometres southeast of Baldy Mountain. The Cariboo-Amelia occurrence (082ESW020) is located 1 kilometre to the east, both in the historic Camp McKinney.

Development began in the early 1900s on the Slamet occurrence. In 1905, it was first Crown granted to L.W. Shatford, W. Edwards and others. Later in 1918, the property was Crown granted to E. Hallet. No records could be found of the early development work or vein geology. Little other work was done on the property again until the 1980s. In 1984, Mintek Resources Ltd. staked ground which included the Slamet occurrence but no work was recorded. In 1986, G. Allen prospected the occurrence. Limited rock geochemistry sampling was also done.

The Slamet occurrence lies in a complex sequence of volcanic and metasedimentary rocks of the Carboniferous to Permian Anarchist Group. To the north are Cretaceous granitic and granodioritic rocks of the Okanagan batholith. Middle Jurassic granitic rocks of the Nelson intrusions occur to the southwest. Eocene Pentiction Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies of the Anarchist Group to the east. For a more detailed description of the regional geology of the McKinney camp refer to the Cariboo-Amelia occurrence (082ESW020). Intense silicification of greenstone has occurred at the Slamet occurrence

CAPSULE GEOLOGY

(Bulletin 6, page 9).

The Slamet occurrence lies along a prominent ridge of thinly bedded granular white quartzite, trending 020 degrees. An old adit and trenches have uncovered several quartz veins that strikes 280 to 300 degrees and dips steeply southwest. The largest of these veins is 1 metre wide and is hosted in sheared and silicified greenstone. Disseminated pyrite was the only mineralization observed (Assessment Report 15005). A grab sample taken from this vein in 1986 yielded 9.05 grams per tonne gold (Assessment Report 15005).

BIBLIOGRAPHY

EMPR AR 1903-248; 1918-474
EMPR ASS RPT 9840, 12389, *15005, 15519, 16168
EMPR BULL *6, pp. 1-15
EMPR MR MAP 7 (1934)
EMPR OF 1898-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp,
pp. 12-22

DATE CODED: 1996/07/31
DATE REVISED: 1996/07/31

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW221**

NATIONAL MINERAL INVENTORY:

NAME(S): **PICTOU (L.2524)**, CHRIS 3-8

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 08 18 N
LONGITUDE: 119 09 50 W

NORTHING: 5445088
EASTING: 342172

ELEVATION: 1280 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The location of an old shaft in the southwest corner of the Pictou (Lot 2524) Reverted Crown grant (Assessment Report 17236).

COMMODITIES: Lead Copper Zinc

MINERALS

SIGNIFICANT: Galena Pyrite Chalcopyrite Sphalerite

COMMENTS: Sphalerite is sparse.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins

DIMENSION: 6 Metres STRIKE/DIP: 040/

TREND/PLUNGE: /

COMMENTS: A 6.1-metre wide shear zone striking 040 degrees was discovered 183 metres northwest of the old Pictou adit.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Cretaceous-Tertiary			Okanagan Batholith

LITHOLOGY: Granite
Granodiorite
Greenstone
Quartzite
Greywacke
Limestone
Schist

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Pictou occurrence is located at 1280 metres elevation on the east side of Rock Creek, 7.25 kilometres southeast of Baldy Mountain. The Cariboo-Amelia (082ESW020) of the historic Camp McKinney lies 2.75 kilometres to the southwest and Bridesville, British Columbia lies 11.5 kilometres to the south.

The Pictou occurrence lies in granitic and granodioritic rocks of the Cretaceous to Tertiary Okanagan batholith. To the south lies the complex sequence of volcanic and metasedimentary rocks of the Carboniferous to Permian Anarchist Group. To the north are Middle Jurassic granitic rocks of the Nelson intrusions. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies of the Anarchist Group to the east. For a more detailed description of the regional geology of the McKinney camp area refer to the Cariboo-Amelia occurrence.

Little information could be found with respect to the early development and property work on the Pictou occurrence. By 1898, however, a considerable amount of work had been done with no significant findings (Minister of Mines Annual Report 1898, page 1118).

In 1985, airborne electromagnetic and magnetometer surveys were conducted over the Pictou area. Then in 1988, J. Craney and G. Whatley conducted prospecting on the Chris 3-8 claims which covered the Pictou occurrence. Several old adits, shafts and trenches were found. At least three old trenches were re-excavated. Approximately 183 metres northwest of the old Pictou shaft, a new 6.1-metre shear zone was discovered. The shear zone is mineralized

CAPSULE GEOLOGY

with galena, chalcopyrite, pyrite and sparse sphalerite (Assessment Report 17236). The strike of the shear zone is 040 degrees.

BIBLIOGRAPHY

EMPR AR *1898-1118
EMPR ASS RPT 9840, 12389, *13768, 15005, 15519, 16168, *17236
EMPR MR MAP 7 (1934)
EMPR OF 1898-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp,
pp. 12-22
WWW http://www.infomine.com/index/properties/PICTOU_AND_NORTHSTAR.html

DATE CODED: 1996/07/31
DATE REVISED: 1996/07/31

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW222**

NATIONAL MINERAL INVENTORY:

NAME(S): **ARGEN (L.343)**, RCJV 1-6

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 07 20 N
LONGITUDE: 119 10 06 W
ELEVATION: 1250 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5443307
EASTING: 341796

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of the abandoned Argen shaft (Assessment Report 8928).

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Pyrite Galena

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins
DIMENSION: 1 Metres

101 Au-quartz veins

STRIKE/DIP: 125/80S TREND/PLUNGE:

COMMENTS: The shear zone strikes 125 degrees and dips 80 degrees southwest. It varies from 15 to 61 centimetres wide where exposed in the old shaft.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Cretaceous-Tertiary	Anarchist	Undefined Formation	Okanagan Batholith

LITHOLOGY: Siliceous Schist
Quartzite
Greenstone
Greywacke
Limestone
Granite
Granodiorite

HOSTROCK COMMENTS: The Anarchist Group is of Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1980

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver	48.0000	Grams per tonne
Gold	2.4000	Grams per tonne
Lead	1.0000	Per cent

COMMENTS: Sample 23188, a 36-centimetre chip sample taken from a clean, blasted surface of vein material from the Argen shaft.

REFERENCE: Assessment Report 8928.

CAPSULE GEOLOGY

The Argen occurrence is located on the west side of Rock Creek at 1250 metres elevation, 7.75 kilometres southeast of Baldy Mountain. The Cariboo-Amelia of the historic Camp McKinney lies 1.25 kilometres to the southwest and 9 kilometres north of Bridesville, British Columbia.

The Argen occurrence lies in a complex sequence of volcanic and metasedimentary rocks of the Carboniferous to Permian Anarchist Group. Granitic and granodioritic rocks of the Cretaceous to Tertiary Okanagan batholith and Middle Jurassic granitic rocks of the Nelson intrusions lie immediately to the north. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies of the Anarchist Group to the

CAPSULE GEOLOGY

east. For a more detailed description of the regional geology of the McKinney camp area refer to the Cariboo-Amelia occurrence (082ESW020).

Locally, the Argen occurrence is hosted in siliceous schist and quartzite. These rocks strike north with steep dips and are highly fractured, banded and jointed.

No early records could be found concerning the development of the Argen occurrence on the Argen claim. The claim was Crown granted to J.A. Mara in 1896. In 1980, the Rock Creek Joint Venture optioned the ground covering the Argen occurrence from Dayton Creek Silver Mines Ltd. The following is their description of the Argen occurrence. The Argen shaft is 6.1 metres deep. Nine metres to the northwest is a small caved pit. Opencuts extend northwest from this pit 45 metres. Other old trenches and opencuts are scattered on the Argen claim.

This shaft intersected a shear zone striking 125 degrees and dipping 80 degrees to the southwest. The shear zone varies from 15 to 61 centimetres wide and is rusty. Quartz in the shear zone is mineralized with pyrite and galena (Assessment Report 8928). A 36-centimetre chip sample (23188) taken from freshly blasted vein material in 1980 yielded 2.4 grams per tonne gold, 48.0 grams per tonne silver and 1 per cent lead (Assessment Report 8928).

BIBLIOGRAPHY

EMPR ASS RPT *8928, 9840, 12389, 15005, 15519, 16168
EMPR MR MAP 7 (1934)
EMPR OF 1898-5
EMPR AR 1894-map after 758; 1896-562
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
Basque, G. (1992): Ghost Towns and Mining Camps of the Boundary Camp, pp. 12-22

DATE CODED: 1996/07/31
DATE REVISED: 1996/07/31

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies to the east. For a more detailed description of the geology refer to the Victoria occurrence (082ESW021).

Development work was recorded on the Lemon occurrence as early as 1896. At this time, an opencut 6.1 by 2.7 by 1.8 metres was excavated east of a main shaft and penetrated the main shaft at 3 metres depth. At this time, the property was owned by M.T. Greevy and was Crown granted in the following year. The location of descriptive information given in 1901 is uncertain but has been provided for completeness. The Lemon, Pennsylvania, Last Chance, Gold Standard and Galena claims were held by Lemon Gold Mining Co. A 69-metre shaft was reported to pass under Rock (Stanhope?) Creek. From the 38-metre level, a 17-metre south and a 15-metre north drift were excavated and all ore (amount unknown) is reported to have come from this level (Minister of Mines Annual Report 1901, page 1152). The 63-metre level was also drifted north and south. A 5-stamp mill was reported to have been erected also (Minister of Mines Annual Report 1901, page 1152).

Little exploration work has been conducted on the Lemon occurrence since these early times. The property has been owned since the late 1970s by A. Hook and C. Heady.

The occurrence consisted of a shear hosted, quartz vein mineralized with iron sulphides and was capped by 'iron' to a depth of 3 metres. The vein was traced on surface for 518 metres along a northeast trend. The country rocks on the east side of the vein are quartzite while those on the west side are black slate.

Rock grab sample 281-87bk-284 taken in 1987 from a quartz vein with 5 to 10 per cent pyrite yielded 1.74 grams per tonne gold (Assessment Report 16653).

BIBLIOGRAPHY

EMPR AR *1896-575; 1897-576; *1901-1152
EMPR ASS RPT 6512, 7636, 9498, 14154, 15256, *16653, 18186, 19476,
22323
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC MEM 179-18
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1996/08/06
DATE REVISED: 1996/08/06

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW224**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOLLY**, JOLLY 2-4

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 01 N
LONGITUDE: 119 03 54 W
ELEVATION: 1219 Metres

NORTHING: 5442509
EASTING: 349319

LOCATION ACCURACY: Within 500M

COMMENTS: The centre of the Jolly 4 claim (Assessment Report 16290).

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Upper Paleozoic
Eocene

GROUP

Anarchist
Penticton

FORMATION

Undefined Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone
Argillite

HOSTROCK COMMENTS: The Anarchist Group is of Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

INVENTORY

ORE ZONE: TRENCH

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1987

COMMODITY

GRADE

Silver	50.0000	Grams per tonne
Gold	0.5500	Grams per tonne
Lead	1.0000	Per cent

COMMENTS: A 25-centimetre chip sample from trench 2. Lead is greater than 1 per cent. Trench 1 sample yielded 3.4 per cent copper and 2.3 per cent zinc.

REFERENCE: Assessment Report 16290.

CAPSULE GEOLOGY

The Jolly occurrence is located on the Jolly 4 claim at 1219 metres elevation. The occurrence is 8.5 kilometres due east of the Cariboo-Amelia occurrence (082ESW020) of the historic Camp McKinney. The oldest rocks on the Jolly 4 claim are Permian to Carboniferous Anarchist Group lithologies, dominantly greenstone. The protolith was probably fine grained andesite, dacite or basalt or fine-grained sediment. On the Jolly 4 claim these consist primarily of massive basalt flow and purple and green andesitic flow breccias. Alteration consists of variable amounts of chlorite, epidote, calcite and quartz. Other lithologies include basic intrusions and flows, serpentinite and metasediments including limestone, argillite, quartzite, chert and chert pebble conglomerate. The chert pebble conglomerate is best exposed along the south-central edge of the claim. These are overlain by Eocene Penticton Group volcanics and associated sediments. On the Jolly 4 claim these consist primarily of augite andesite porphyry flows, medium to coarse grained sandstone and arkosic sandstone. Other volcanics include andesite, dacite or phonolite flows, dikes, sills and breccia. Associated sediments include sandstone, siltstone, shale, and arkose

CAPSULE GEOLOGY

and pebble conglomerate. Feldspar porphyry, trachyandesite and/or augite andesite dikes were also noted.

Exploration work in the vicinity of the Jolly occurrence has been conducted since 1983 by Edgewater Resources Ltd., Nexus Resource Corp. and Park Resources Ltd. on the Jolly claim itself. A preliminary exploration geochemical and geophysical program in 1984 disclosed several coincident anomalies up to 650 metres long and open-ended on the southern portion of the claim. Further surveys in 1985 revealed two anomalous areas of economic potential. The first was a 300 by 300 metre geochemical and electromagnetic anomaly in the southwest corner of the claim. An old trench (Trench 1) was discovered near the centre of this anomaly. The second was a correlative soil geochemistry anomaly associated with serpentinite. This anomaly also correlates well with an old trench (Trench 2). A 1987 soil geochemical program was focused on these two previously discovered anomalies.

Mineralization at Trench 1 is hosted in greenstone of the Anarchist Group. A select dump sample yielded 0.07 gram per tonne gold, 3 grams per tonne silver, 3.4 per cent copper and 2.3 per cent zinc (Assessment Report 16290). Dump mineralization included pyrite and chalcopyrite with malachite and azurite alteration. Mineralization at Trench 2 is hosted in strongly fractured and silicified black argillite with numerous re-healed quartz veinlets. Pyrite and chalcopyrite comprise mineralization. An assay of dump material from this trench yielded 3.4 grams per tonne gold (Assessment Report 16290). A 25-centimetre chip sample from the old trench yielded 0.55 gram per tonne gold, 50 grams per tonne silver and greater than 1 per cent lead (Assessment Report 16290).

BIBLIOGRAPHY

EMRP ASS RPT 9909, 10765, *12746, 12759, *13020, *13801, *13839,
15918, *16290, 23830
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1996/08/12
DATE REVISED: / /

CODED BY: KJM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW225**

NATIONAL MINERAL INVENTORY:

NAME(S): **STAN**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 08 00 N
LONGITUDE: 119 08 05 W
ELEVATION: 1189 Metres

NORTHING: 5444472
EASTING: 344283

LOCATION ACCURACY: Within 500M

COMMENTS: The location of a mineralized quartz vein on the southern edge of the Stan claim (Assessment Report 10734).

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite

ASSOCIATED: Quartz

COMMENTS: The sulphides are strongly oxidized.

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

COMMENTS: The vein is locally brecciated and occurs along the contact between a diabase dike and metadiorite. The vein width is irregular.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Anarchist	Undefined Formation	

LITHOLOGY: Diabase Dike
Gabbro Dike
Meta Diorite
Siliceous Meta Sediment/Sedimentary
Diabase
Gabbro

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Stan occurrence is located at 1189 metres elevation between Stanhope and Jolly creeks, 1 kilometre north of the Lemon occurrence (082ESW223). Bridesville, British Columbia lies 11 kilometres to the south.

Regionally, the Stan occurrence is hosted by a sequence of metavolcanic and metasedimentary rocks of the Permian to Carboniferous Anarchist Group. To the north are granite and granodiorite of the Okanagan batholith. Granite of the Middle Jurassic Nelson intrusions occurs to the southwest. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies to the east. For a more detailed description of the geology refer to the Victoria occurrence (082ESW021).

Locally, the best outcrops are located along Stanhope Creek immediately west of the Stan occurrence. These outcrops are considered to belong to the Anarchist Group consisting of siliceous metasediments and metadiorite. The metasediments are fine to medium grained, light grey, poorly foliated and contain quartz, potassium feldspar and plagioclase. Chlorite and biotite comprise minor mafic constituents. Quartz and calcite veinlets are common. The metadiorite is similar in appearance but is locally coarser grained and contains more plagioclase and minor hornblende. A gabbro or diabase dike is thought to form, in part, the hostrock of the Stan occurrence.

The Stan occurrence consists of a number of quartz veins occurring along the contact between the diabase dike and adjacent metadiorite. The veins contain disseminated pyrite and minor

CAPSULE GEOLOGY

chalcopyrite and are strongly oxidized. The veins are discontinuous and lensey. Along narrower sections, the metadiorite wallrock is brecciated.

Twelve rock samples were taken from these veins as part of an exploration program in 1981 by K. Heffernan. Several samples yielded anomalous silver. Sample 11-81-07, a 0.19-metre chip sample from brecciated footwall metadiorite, assayed 11.2 grams per tonne silver (Assessment Report 10734). Similarly, sample 11-81-08, a grab from a quartz lens with minor disseminated pyrite yielded 15.9 grams per tonne silver (Assessment Report 10743). A 0.11-metre chip (Sample 11-81-09) from siliceous metadiorite in the hangingwall assayed 15.2 grams per tonne silver (Assessment Report 10734). Sample 11-81-01 yielded 0.192 per cent copper and 6.6 grams per tonne silver from a brecciated quartz vein with disseminated pyrite and chalcopyrite (Assessment Report 10734). Gold, lead and zinc results were poor.

BIBLIOGRAPHY

EMPR ASS RPT 6512, 7636, 9498, *10734, 14154, 15256, 16653, 18186,
19476, 22323
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1996/08/12
DATE REVISED: / /

CODED BY: KJM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW226**

NATIONAL MINERAL INVENTORY:

NAME(S): **HO**, HO 1-8

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 39 N
LONGITUDE: 119 07 35 W

NORTHING: 5443807
EASTING: 344873

ELEVATION: 1036 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The location of an old adit, exposing a quartz vein hosting chalcopyrite (Assessment Report 15405).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite

ASSOCIATED: Quartz

COMMENTS: The sulphides are strongly oxidized.

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I06 Cu±Ag quartz veins

DIMENSION: 1 Metres

COMMENTS: The vein is up to 1.2 metres wide.

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Upper Paleozoic

Anarchist

Undefined Formation

LITHOLOGY:

Meta Diorite
Siliceous Meta Sediment/Sedimentary
Gabbro Dike
Diabase Dike

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The Ho occurrence is located at 1039 metres elevation between Stanhope and Jolly creeks and immediately west of Little Fish Lake 900 metres northeast of the Lemon occurrence (082ESW223). Bridesville, British Columbia lies 11 kilometres to the south.

Regionally, the Ho occurrence is hosted by a sequence of metavolcanic and metasedimentary rocks of the Permian to Carboniferous Anarchist Group. To the north are granite and granodiorite of the Okanagan batholith. Granite of the Middle Jurassic Nelson intrusions occurs to the southwest. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies to the east. For a more detailed description of the geology refer to the Victoria occurrence (082ESW021).

Locally, the best outcrops are located along Stanhope Creek immediately west of the Ho occurrence. These outcrops are considered to belong to the Anarchist Group consisting of siliceous metasediments and metadiorite. The metasediments are fine to medium grained, light grey, poorly foliated and contain quartz, potassium feldspar and plagioclase. Chlorite and biotite comprise minor mafic constituents. Quartz and calcite veinlets are common. The metadiorite is similar in appearance but is locally coarser grained and contains more plagioclase and minor hornblende. A gabbro or diabase dike is thought to form, in part, the hostrock of the Ho occurrence.

The Ho occurrence consists of a 1.2 metre quartz vein hosted in metadiorite. The vein, discovered in an abandoned adit, contains disseminated pyrite and minor chalcopyrite. Further to the west an old trench was found exposing a 15-centimetre wide quartz stringer with pyrite (Assessment Report 15405). No samples were taken for

CAPSULE GEOLOGY

assay.

BIBLIOGRAPHY

EMPR ASS RPT 6512, 7636, 9498, 10734, 14154, *15405, 15256, 16653,
18186, 19476, 22323
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1996/08/13
DATE REVISED: 1996/08/13

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

exploration on ground surrounding the International occurrence. Work included geological mapping, geochemical soil sampling and a electromagnetic geophysical survey.

The hostrocks of the International occurrence are dominantly of the Permian to Carboniferous Anarchist Group. Lithologies include calcareous and siliceous argillite, argillaceous and calcareous quartzite, argillaceous limestone and greenstone. To the immediate north Anarchist rocks are in fault contact with the White Lake Member of the Eocene Penticton Group. Outcrops near the International occurrence consist of andesite and felsite. To the southeast, lies a small granite stock of the Nelson intrusions.

Mineralization at the International occurrence consists of 0.5 to 2.0 metre wide quartz veins with pyrite and marcasite. The hostrock is granite. Narrower quartz veins (20 to 75 centimetres wide) are hosted in metasediments of the Anarchist Group. These veins contain pyrite and galena.

One of these veins, in an old abandoned adit, was chip sampled over 75 centimetres with the following assay results. Sample 65217, taken from the right side of the vein, yielded 0.01 per cent lead, 37.4 grams per tonne silver and 6.07 grams per tonne gold (Assessment Report 11974). Sample 67128, from the middle of the same vein, yielded 0.18 per cent lead, 39.8 grams per tonne silver and 6.07 grams per tonne gold (Assessment Report 11974). The hostrock is argillite.

BIBLIOGRAPHY

EMPR ASS RPT *1974, 13481, 14181
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 84A; 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
GSC MEM 38, pp. 389-423

DATE CODED: 1996/08/13
DATE REVISED: 1996/08/13

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW228**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 09 02 N
LONGITUDE: 119 10 41 W
ELEVATION: 1501 Metres

NORTHING: 5446477
EASTING: 341178

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate centre of the Elk claim (Assessment Report 17611).

COMMODITIES: Gold Silver Lead Zinc Copper
Chromium

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite Chromite
ASSOCIATED: Quartz
ALTERATION: Jarosite Limonite Silica
ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Podiform Disseminated Stratabound
CLASSIFICATION: Hydrothermal Epigenetic Magmatic Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au M03 Podiform chromite

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Anarchist Undefined Formation
Cretaceous-Tertiary Okanagan Batholith

LITHOLOGY: Quartzite
Serpentinite
Andesite
Micaceous Greenstone
Feldspar Porphyritic Monzonite

HOSTROCK COMMENTS: Chromite hostrock is metaplutonic.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist
Post-mineralization

COMMENTS: Metamorphism is post-chromite and pre-polymetallic vein mineralization

CAPSULE GEOLOGY

The Elk occurrence is located at 1349 metres elevation, northwest of the confluence of Wapiti Creek with Rock Creek, and 5.75 kilometres east-southeast of Baldy Mountain. Bridesville, British Columbia lies 12 kilometres to the south.

The Elk occurrence lies within a complex sequence of volcanic and metasedimentary rocks of the Permian to Carboniferous Anarchist Group. To the east, north and west lies granitic and granodioritic rocks of the Cretaceous to Tertiary Okanagan batholith. To the southwest are Middle Jurassic granitic rocks of the Nelson intrusions. Eocene Penticton Group volcanic and sedimentary rocks overlie locally sheared amphibolite and serpentinite bodies of the Anarchist Group to the east. For a more detailed description of the regional geology of the McKinney Camp area refer to the Cariboo-Amelia occurrence (082ESW020).

In 1989, B.R. Stenhouse conducted a reconnaissance geological mapping program on the Elk property. Several areas of mineralogical potential were blast trenched and sampled but no assay results were reported.

Quartzite of the Anarchist Group is the dominant lithology of the Elk occurrence. Andesite and micaceous greenstone of the Anarchist Group are also found on the Elk property. A strong foliation trends subparallel to quartzite bands. Intensely silicified quartzite lenses and quartz veins within quartzite host galena, sphalerite and pyrite mineralization, usually in the central portions. Spotty jarosite and limonite alteration of pyrite are also present. Granitic rocks located on the Elk property include feldspar porphyritic monzonite,

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1327
REPORT: RGEN0100

CAPSULE GEOLOGY

A serpentinite body is located on the northeast corner of the Elk property. Chromite lenses are reported hosted within this serpentinite.

BIBLIOGRAPHY

EMPR ASS RPT 9840, 12389, 13768, 15005, 15519, 16168, 17236, *17611
EMPR OF 1898-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1996/08/15
DATE REVISED: / /

CODED BY: KJM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW229**

NATIONAL MINERAL INVENTORY:

NAME(S): **HGM**

MINING DIVISION: Osoyoos
Greenwood
UTM ZONE: 11 (NAD 83)
NORTHING: 5441226
EASTING: 333722

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03W
BC MAP:

LATITUDE: 49 06 05 N
LONGITUDE: 119 16 41 W
ELEVATION: 1433 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of two trenches on the HGM claim (Assessment Report 19317).

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Pyrite Galena
ASSOCIATED: Quartz
ALTERATION: Sericite Biotite Chlorite Epidote Pyrolusite
ALTERATION TYPE: Sericitic Biotite Propylitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres STRIKE/DIP: 135/85N TREND/PLUNGE:
COMMENTS: The quartz vein follows the local foliation which strikes 315 degrees and dips steeply northeast.

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Proterozoic			Grand Forks Gneiss

LITHOLOGY: Quartz Feldspar Biotite Gneiss
Biotite Gneiss
Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Grab
COMMODITY
Silver 8.3000 Grams per tonne
Lead 0.1000 Per cent
COMMENTS: Sample HGM-B-3, from trench B.
REFERENCE: Assessment Report 19317.

CAPSULE GEOLOGY

The HGM occurrence is located 7.0 kilometres west-southwest of the Cariboo-Amelia occurrence (082ESW020) of the historic Camp McKinney and near the headwater of Coteay Creek. Bridesville, British Columbia lies 11 kilometres to the southeast.

Little is known about the history of the area surrounding this occurrence prior to the McKay brothers staking the claims and trenching.

The HGM occurrence is underlain by Proterozoic Grand Forks Gneiss. Lithologies on the property consist of quartz, feldspar +/- biotite and garnet to biotite gneiss. The gneiss has a west to northwest mineral lineation which dips steeply to the north. Tight folding was observed and appears to be parallel to the strike of the regional foliation; 135 degrees. The foliation dips steeply northeast. Alteration of the gneiss consists of sericite and biotite locally developed with minor chlorite and epidote. Pyrolusite is developed on fracture and joint surfaces. A feldspar porphyry dike striking 020 degrees and dipping vertical crosscuts the gneiss. The dike is probably Eocene or Tertiary in age, as evidenced by minor

CAPSULE GEOLOGY

alteration and its massive character. To the immediate south are Middle Jurassic Nelson intrusions and granitic rocks of the Cretaceous Okanagan batholith.

Two trenches has uncovered quartz veins hosted in moderate to strongly altered gneiss. The veins follow the prominent foliation although minor veinlets also follow fractures. Pyrite and minor galena occur as disseminations in the veins and host gneiss. An unidentified sulphide, possibly a silver sulphide, was also observed. The pyrite is strongly oxidized at the surface. Samples taken from these two trenches yielded anomalous silver values. Samples HGM-A-2 and HGM-A-3, from Trench A, yielded 5.1 and 4.9 grams per tonne, respectively (Assessment Report 19317). From Trench B, Samples HGM-B-2 and HGM-B-3 yielded 5.7 and 8.3 grams per tonne silver (Assessment Report 19317). The latter also returned 0.10 per cent lead (Assessment Report 19317).

BIBLIOGRAPHY

EMPR ASS RPT *19317
EMPR OF 1898-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1996/08/15
DATE REVISED: 1997/10/14

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW230**

NATIONAL MINERAL INVENTORY:

NAME(S): **RCJV**, BURLINGTON (L.1518), ALOHA,
ALOHA FR. (L.1579), GREENWOOD (L.1520), SLAMET (L.2663),
BANNER (L.1586)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:
LATITUDE: 49 06 09 N
LONGITUDE: 119 11 44 W
ELEVATION: 1295 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The approximate location of an abandoned shaft, sampled in 1981
(Assessment Report 9867).

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5441172

EASTING: 339747

COMMODITIES: Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite
COMMENTS: Disseminated galena and sphalerite are minor.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Biotite Hornblende Granodiorite
Diorite
Quartzite
Greenstone

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SHAFT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Copper	0.0500	Per cent
Lead	0.2200	Per cent
Zinc	0.2400	Per cent

REFERENCE: Assessment Report 9867.

CAPSULE GEOLOGY

The RCJV occurrence is located at 1295 metres elevation, east of McKinney Creek and 6.5 kilometres south of Baldy Mountain. The Cariboo-Amelia occurrence (082ESW020) is located 4.5 kilometres to the northeast and Bridesville, British Columbia is located 8 kilometres to the south-southeast.

The RCJV occurrence is located on ground staked in 1981 as the RCJV 19 claim, covering the former Burlington (Lot 1518), Aloha, Aloha Fraction (Lot 1579) and Greenwood (Lot 1520) Crown-granted claims, and the Slamet (Lot 2663) and Banner (Lot 1586) Reverted Crown grants. The owner at this time was Dayton Creek Silver Mines Ltd. and the operator was the 1981 Rock Creek Joint Venture.

An old abandoned shaft was found at the RCJV occurrence, probably dating back to the turn of the century. For a description of early work and development on the former Crown grants refer to the Granite (082ESW214) and Slamet (082ESW220) occurrences. Recent work on the Granite and Banner claims has been conducted in 1981 by the 1981 Rock Creek Joint Venture Syndicate, in 1985 by A. Dupras, in

CAPSULE GEOLOGY

1986 by Gold Hill Syndicate and in 1987 under option to Wapiti Exploration Inc.

Lithologies underlying the RCJV occurrence consists of foliated biotite, hornblende granodiorite and diorite of the Middle Jurassic Nelson intrusions on the southern half. On the northern half, are greenstone and quartzite of the Carboniferous to Permian Anarchist Group. The dominant fractures strike 032 degrees. For a more detailed description of the surrounding geology refer to the Cariboo-Amelia occurrence.

At the southeastern corner of the RCJV claim, an old abandoned shaft was found. The shaft intersected a quartz vein carrying pyrite with minor disseminated galena and sphalerite. No visible gold was observed. Several quartz vein chip samples were taken from the old shaft but returned insignificant silver and gold values (Assessment Report 9867). Two samples, however, yielded significant lead, zinc and copper. Sample 23259 yielded 0.24 per cent zinc, 0.22 per cent lead and 0.05 per cent copper (Assessment Report 9867). Similarly, Sample 23256 yielded 0.31 per cent lead and 0.11 per cent copper (Assessment Report 9867). The chip samples were over 60 centimetres.

BIBLIOGRAPHY

EMPR ASS RPT *8930, *9867, 9896, 12389, 14609, 16168, 16975
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565A; 1969

DATE CODED: 1996/08/15
DATE REVISED: 1996/08/15

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW231**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAWLESS, COLE, MARK,
DALE, LESLIE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

MINING DIVISION: Osoyoos
UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 49 N
LONGITUDE: 119 12 42 W
ELEVATION: 1112 Metres

NORTHING: 5431326
EASTING: 338283

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of reverse circulation-drill hole 3
(Assessment Report 22666).

COMMODITIES: Gold Silver Copper Zinc Molybdenum

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Sphalerite Molybdenite
ASSOCIATED: Quartz Calcite
ALTERATION: Quartz Chlorite Calcite
ALTERATION TYPE: Silicific'n Chloritic Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	
Middle Jurassic			Nelson Intrusions

LITHOLOGY: Quartzite
Amphibolite
Amphibolite Gneiss
Gneiss
Biotite Schist
Skarn
Hornblende Biotite Granodiorite
Hornblende Pyroxene Diorite

HOSTROCK COMMENTS: The Anarchist Group is of Permian to Carboniferous age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1992
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Silver 7.6000 Grams per tonne
Gold 1.5000 Grams per tonne

COMMENTS: The gold value is from Hole 3 and the silver value is from Hole 1;
both 1.5-metre intervals.

REFERENCE: Assessment Report 22666.

CAPSULE GEOLOGY

The Lawless occurrence is located at 1112 metres elevation, 300 metres south of Highway 3 and 4.5 kilometres southwest of Bridesville, British Columbia.

The property is owned by L. Lehman who first staked the ground in 1987. No previous work is known. Since this time, work consisted of prospecting, hand trenching and small scale geophysical surveys. In 1992, a reverse circulation drill program was carried out on the Lawless 1, 2, 5 and 6 claims, totalling 670.6 metres. The program was based on the results of an earlier geochemical and geological program in 1989.

The showing is underlain by a sequence of metasediments and metavolcanics of the Carboniferous to Permian Anarchist Group.

CAPSULE GEOLOGY

Greenstone, quartzite, greywacke, limestone and locally paragneiss comprise the Anarchist Group. These have been intruded by granodiorite, quartz diorite, granite, quartz monzonite, monzonite and syenite of the Middle Jurassic Nelson intrusions.

Lithologies encountered at the Lawless occurrence include quartzite and amphibolite, locally designated amphibolite gneiss, gneiss, biotite schist and locally developed skarn. The gneiss is differentiated from the amphibolite gneiss by a strong banding. Alteration consists primarily of oxidation of pyrite to limonite and hematite. Pervasive silicification is the most prominent alteration type, occurring as broad replacement, as quartz or quartz-calcite veins. Minor chlorite and calcite alteration is disseminated or in fractures. Secondary quartz-calcite veinlets also occur locally. Hornblende biotite granodiorite is locally silicified. Carbonate is common along fractures and as veinlets. Hornblende pyroxene diorite also occurs.

Mineralization found at the Lawless showing consists of pyrite, chalcopyrite and sphalerite associated with silicification or veins, and molybdenite associated with quartz veinlets in granodiorite and diorite. Scheelite has also possibly been identified.

Significant gold and silver values were obtained from assays of reverse circulation-drill hole samples. The best silver value, 7.6 grams per tonne, was from the 1.5-metre interval from 22.9 to 24.4 metres in Hole 1 (Assessment Report 22666). Several holes had significant gold values. The 1.5-metre interval from 25.9 to 27.4 metres in Hole 3 yielded 6.1 grams per tonne gold. The same interval in Hole 6 yielded 1.5 grams per tonne (Assessment Report 22666). Sample A, of the molybdenite mineralization taken in 1989, yielded 0.161 per cent molybdenum (Assessment Report 18109).

BIBLIOGRAPHY

EMPR ASS RPT *18109, *22666
EMPR OF 1898-5
GSC MAP 84A; 538A; 539A; 37-21; 15-1961; 1738A
GSC MEM 38, pp. 389-423
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1996/08/15
DATE REVISED: 1996/08/15

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW232**

NATIONAL MINERAL INVENTORY:

NAME(S): **KET 20**, KET 20 GROUP, KET 11-12,
KET 20-21

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

MINING DIVISION: Greenwood
UTM ZONE: 11 (NAD 83)

LATITUDE: 49 03 25 N
LONGITUDE: 119 14 40 W
ELEVATION: 1204 Metres

NORTHING: 5436213
EASTING: 336029

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of samples 90-CM-34R and 90-CM-342R on the
Ket 20 claim (Assessment Report 21001).

COMMODITIES: Chromium Nickel

MINERALS

SIGNIFICANT: Magnetite
ASSOCIATED: Pyrite Fuchsite Mariposite
COMMENTS: Fuchsite or mariposite has possibly been identified.
ALTERATION: Magnetite Talc Serpentinite
ALTERATION TYPE: Talc Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Stratabound
CLASSIFICATION: Magmatic Industrial Min.
TYPE: M03 Podiform chromite

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic Middle Jurassic	Anarchist	Undefined Formation	Nelson Intrusions

LITHOLOGY: Serpentinite
Greenstone
Quartzite
Marble
Biotite Hornblende Granodiorite
Skarn

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1991
SAMPLE TYPE: Grab	
<u>COMMODITY</u>	<u>GRADE</u>
Chromium	0.1400 Per cent
Nickel	0.1700 Per cent
COMMENTS: Sample 90-CM-342R.	
REFERENCE: Assessment Report 21001.	

CAPSULE GEOLOGY

The Ket 20 occurrence is located at 1204 metres elevation, 6.5 kilometres southwest of Bridesville, British Columbia. The property has been owned by Crownex Resources (Canada) Ltd. since 1991. No previous work is known.

The showing is underlain by a sequence of metasediments and metavolcanics of the Permian to Carboniferous Anarchist Group. Greenstone, quartzite, greywacke, limestone and locally paragneiss comprise the Anarchist Group. These have been intruded by granodiorite, quartz diorite, granite, quartz monzonite, monzonite and syenite of the Middle Jurassic Nelson intrusions.

Lithologies encountered at the Ket 20 occurrence include greenstone, quartzite, minor marble and serpentinitized peridotite. Skarn has been developed locally along the northeast side of the serpentinite. Talc alteration is closely associated with the

CAPSULE GEOLOGY

serpentinite. Biotite hornblende granodiorite occurs immediately to the northeast.

Mineralization found at the Ket 20 showing consists of stringers and pods of anhedral magnetite hosted in the serpentinite. A nickel (fuchsite) or chromium (mariposite) mica has also possibly been identified. Minor pyrite also occurs.

Significant nickel and chromium values were obtained from rock geochemical samples of serpentinite. Sample 90-CM-317R yielded 0.14 per cent nickel and 0.12 per cent chromium. Samples 90-CM-341R analysed 0.10 per cent chromium and 0.12 per cent nickel (Assessment Report 21001). Similarly, 90-CM-342R analysed 0.14 per cent chromium and 0.17 per cent nickel (Assessment Report 21001). Two other samples, 90-CM-527R and 90-CM-528R, yielded equally anomalous chromium and nickel.

BIBLIOGRAPHY

EMPR ASS RPT *21001, 22177
EMPR OF 1898-5
GSC MAP 84A; 538A; 539A; 37-21; 15-1961; 1738A
GSC MEM 38, pp. 389-423
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1996/08/15
DATE REVISED: / /

CODED BY: KJM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW233**

NATIONAL MINERAL INVENTORY:

NAME(S): **MONTE CHRISTO (L.3125)**, L FRACTION (L.2575), MONTE, CAP

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Open Pit Underground

MINING DIVISION: Greenwood

LATITUDE: 49 15 58 N
LONGITUDE: 119 00 29 W
ELEVATION: 0823 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5458979
EASTING: 353914

LOCATION ACCURACY: Within 500M

COMMENTS: The location of old workings on the Monte Christo (Lot 3125) Reverted Crown grant (Assessment Report 22282).

COMMODITIES: Gold Silver Copper Lead

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Bornite Galena

ASSOCIATED: Quartz

ALTERATION: Chlorite Silica

COMMENTS: Alteration is intense.

ALTERATION TYPE: Chloritic Silicific'n

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear

CLASSIFICATION: Mesothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01

DIMENSION: 2 Metres STRIKE/DIP: TREND/PLUNGE: /

COMMENTS: At the Monte Christo, a 10 to 20 centimetre wide quartz vein is hosted in a 50 to 100 centimetre wide shear zone. The vein has been traced for 2.5 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Nelson Intrusions
Cretaceous-Tertiary			Okanagan Batholith

LITHOLOGY: Hornblende Biotite Granodiorite
Quartz Diorite
Granite
Biotite Porphyritic Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization
Syn-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1981

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver 162.2000 Grams per tonne

Gold 58.6000 Grams per tonne

COMMENTS: A 10 centimetre chip sample taken in 1981 from the vein at the Monte Christo adit.

REFERENCE: Assessment Report 22282.

CAPSULE GEOLOGY

The Monte Christo prospect is located at 823 metres elevation, on the east side of Highway 33 between Hay and Boomerang creeks. Beaverdell, British Columbia lies 25 kilometres to the north. The prospect consists of the Monte and Cap claims and the Monte Christo (Lot 3125) and L Fraction (Lot 2575) Reverted Crown grants. The Ohio (Lot 3124) Reverted Crown grant is adjacent to this property along the western boundary.

Mining activity has taken place in the area since 1859, when placer gold was panned from Rock Creek. Old workings on the Monte Christo (Lot 3125) and L Fraction (Lot 2575) Reverted Crown grants indicate early prospecting and development at the Monte Christo

CAPSULE GEOLOGY

occurrence. In 1981, a soil geochemical survey outlined a number of small precious and base metals anomalies. Rock samples yielding 0.75 and 0.86 gram per tonne gold were coincident with the highest base metals soil anomalies (Assessment Report 22282). Limited exploration was carried out around the old Monte Christo workings in 1990 by G.F. Crooker. In 1991 and 1992 exploration consisted of prospecting, small-scale geochemical soil surveying and an electromagnetic geophysical survey.

Hostrocks underlying the Monte Christo prospect are predominantly foliated, medium to coarse grained, hornblende biotite granodiorite, quartz diorite and granite. These are assigned to the Middle Jurassic Nelson intrusions. Massive biotite porphyritic granodiorite and granite of the Cretaceous to Tertiary Okanagan batholith also occur in the vicinity. Outcrops of conglomerate, breccia, porphyritic andesite and trachyte of the Eocene Penticton Group overlie these intrusions.

The prospect consists of workings on the Monte Christo and Cap claims. On the Monte Christo, a 10 to 20 centimetre wide quartz vein is hosted in a 50 to 100 centimetre wide shear zone with associated intense chlorite and silicification alteration. The vein was exposed in a 19 metre long adit and several nearby trenches. The vein is traceable for 2.5 metres, where it truncates against a fault. Mineralization is reported to consist of pyrite, chalcopyrite and bornite. A 10-centimetre chip sample of quartz vein in 1981 yielded 58.6 grams per tonne gold and 162.2 grams per tonne silver (Assessment Report 22282). Another mineralized quartz vein was discovered in siliceous and sericitic altered granite outcrop in 1991, 100 metres to the southwest. However, grab sample 91M-4 yielded only 0.06 gram per tonne gold, 1.0 gram per tonne silver and 0.01 per cent lead (Assessment Report 22282). Three hundred metres to the southwest more abandoned workings were discovered, including several trenches and an adit. They uncovered a 5 to 20 centimetre wide quartz vein in a 20 centimetre wide siliceous zone. The vein strikes 209 degrees and dips 30 degrees west. Pyrite and galena were observed. Sample 91M-6, a grab of dump material, analysed 33.1 grams per tonne gold, 116.3 grams per tonne silver and 2.45 per cent lead (Assessment Report 22282).

At the Cap workings, a 15 to 50 centimetre wide quartz vein striking 027 degrees and dipping 54 degrees west is exposed above the adit portal. The vein has also been exposed by two trenches over a strike length of 20 metres and the adit. The vein is exposed for 2.5 metres in trench A. The vein width varies from 15 to 40 centimetres and is faulted. On one side of the fault the vein strikes 033 degrees and dips 58 degrees west while on the other side it strikes 036 degrees and dips 60 degrees east. Left-lateral movement is indicated along the fault. In trench B, the vein is 15 to 50 centimetres wide and exposed for 1.5 metres. The vein attitude changes across a similar fault. The hostrock is fine grained siliceous granite. Up to 5 per cent pyrite and 2 per cent galena occur within 2 to 5 centimetres of the hangingwall.

Surface samples have yielded low gold values. However, several dump samples of adit vein material yielded anomalous gold. In 1990, sample 90M-1 yielded 16.8 grams per tonne gold and sample 90M-7 yielded 64.0 grams per tonne gold (Assessment Report 22282). Several samples taken of quartz vein material from the main adit dump in 1991 yielded high gold, silver and lead values. Samples 91M-1 of chloritic and silicified wallrock taken from the dump, analysed 2.08 grams per tonne gold, 9.4 grams per tonne silver and 0.87 per cent lead. Sample 91M-3 yielded 6.09 grams per tonne gold, 6.7 grams per tonne silver and 0.09 per cent lead (Assessment Report 22282).

BIBLIOGRAPHY

EMPR AR 1898-1196; 1901-1145; *1912-326
EMPR ASS RPT *8417, *9504, 21092, *22282
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1996/08/15
DATE REVISED: 1996/08/15

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW234**

NATIONAL MINERAL INVENTORY:

NAME(S): **OHIO (L.3124)**, MERLIN, JEFFRIES

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 16 05 N
LONGITUDE: 119 00 51 W
ELEVATION: 0792 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5459207
EASTING: 353475

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate centre of the Ohio (Lot 3124) Reverted Crown grant.

COMMODITIES: Gold Silver Copper Lead

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena Gold
COMMENTS: Minor chalcopyrite and galena and occassional free gold.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins
SHAPE: Irregular
MODIFIER: Faulted Fractured
DIMENSION: 12 Metres STRIKE/DIP: 355/ TREND/PLUNGE:
COMMENTS: A vein has been traced for 12.8 metres in Tunnel No. 2 and for 5.8 metres in Tunnel No. 1. Veins above Tunnel No. 1 strike 355 and 028 degrees.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Nelson Intrusions
Cretaceous-Tertiary			Okanagan Batholith

LITHOLOGY: Diorite
Hornblende Biotite Granodiorite
Quartz Diorite
Granite
Biotite Porphyritic Granodiorite
Aplite Dike
Quartz Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist
Syn-mineralization

INVENTORY

ORE ZONE: ADIT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1929
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 68.6000 Grams per tonne
Gold 6.8000 Grams per tonne
Copper 1.5000 Per cent
COMMENTS: Taken from the shallow winze in the No. 1 Tunnel workings.
REFERENCE: Minister of Mines Annual Report 1929, page 259.

CAPSULE GEOLOGY

The Ohio (Lot 3124) is located at 792 metres elevation, on the east side of Highway 33 between Hay and Boomerang creeks, 25 kilometres south of Beaverdell. It is adjacent to the Monte Christo property (082ESW233).

Mining activity has taken place in the area since 1859, when placer gold was panned from Rock Creek. Old workings on the Ohio (Lot 3124) Reverted Crown grant indicate early prospecting and development. The first records are in 1901. In 1912, the Ohio claim was Crown granted to N. Morrison. Then in 1923, B.S. Stanhope was the registered owner. By 1923, J.F. Worthington and associates had

CAPSULE GEOLOGY

developed two crosscut tunnels with several associated drifts and short winzes. One tonne of ore is reported mined in 1928 by the Ohio Syndicate. In 1980 and 1981, the occurrence and surrounding area were staked and explored by Rock Creek Joint Venture and Dayton Creek Silver Mines Ltd., respectively.

Hostrocks underlying the Ohio past producer are predominantly foliated, medium to coarse grained, hornblende biotite granodiorite, quartz diorite and granite. These are assigned to the Middle Jurassic Nelson intrusions. Massive biotite porphyritic granodiorite and granite of the Cretaceous to Tertiary Okanagan batholith also occur in the vicinity. Outcrops of conglomerate, breccia, porphyritic andesite and trachyte of the Eocene Penticton Group overlie these intrusions.

Hostrocks are dominantly medium to coarse grained, locally porphyritic, granodiorite of the Nelson intrusions. Cretaceous diorite, aplite and quartz porphyry dikes intrude the granodiorite.

The upper crosscut tunnel (No. 1) extends 4.6 metres. At the end is a short winze. A drift extends for another 12.8 metres. A quartz vein, 15 to 36 centimetres wide, is exposed over 5.8 metres strike length. The shear-hosted vein strikes 227 degrees and dips 70 degrees to the northwest. Pyrite with iron staining, minor disseminated chalcopyrite, galena and free gold comprises the vein mineralization. A sample from the winze yielded 6.85 grams per tonne gold, 68.6 grams per tonne silver and 1.5 per cent copper (Minister of Mines Annual Report 1929, page 259). Above the tunnel 15 metres, numerous opencuts expose two veins striking 355 and 028 degrees, respectively. A porphyry dike striking 010 degrees has displaced the veins.

The lower crosscut tunnel (No. 2) is found 30 metres west and 3 metres south of the upper tunnel. A 4.6-metre winze is found at the end of the tunnel from which a 26-metre drift follows a quartz vein for 12.8 metres. The vein width varies from 2.5 to 51.0 centimetres and has been displaced and fractured from faulting. Mineralization is the same as found in the No. 1 tunnel. A sample from the sorted dump assayed trace gold, 13.7 grams per tonne silver and 0.7 per cent copper (Minister of Mines Annual Report 1929, page 259).

Sampling of these old workings during 1981 did not yield any anomalous gold or silver values (Assessment Report 9504).

The 1 tonne of ore mined from the Ohio in 1928 yielded 62 grams of silver and 6 kilograms of lead.

BIBLIOGRAPHY

EMPR AR *1901-1145; 1912-326; *1923-183; 1928-515; *1929-259
EMPR ASS RPT 8417, *9504, 21092, 22282
EMPR BC METAL MM00909
EMPR MR MAP 7 (1934)
EMPR OF 1989-5
EMPR INDEX 3-207
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969

DATE CODED: 1996/08/15
DATE REVISED: 1996/08/15

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW235**

NATIONAL MINERAL INVENTORY:

NAME(S): **BUG**, GOLDBUG GROUP, BILL GROUP,
(L.2979)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 23 57 N
LONGITUDE: 119 08 17 W
ELEVATION: 1069 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5474029
EASTING: 344876

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of samples 017405 and 017406, 250 metres north-northwest of the Bug 1 and 2 claim post (Assessment Report 10044).

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
COMMENTS: Galena and sphalerite are also likely present based on assay results.
ASSOCIATED: Quartz
ALTERATION: Chlorite Epidote Hematite Magnetite Sericite
K-Feldspar Carbonate Limonite

COMMENTS: Jarosite.
ALTERATION TYPE: Propylitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 1 Metres STRIKE/DIP: 010/27E TREND/PLUNGE:
COMMENTS: On the Bill 4 claim, a 1-metre quartz vein strikes 010 degrees and dips 27 degrees east.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic Cretaceous-Tertiary			Nelson Intrusions Okanagan Batholith

LITHOLOGY: Granodiorite
Quartz Monzonite
Quartz Diorite
Monzonite
Aplite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
Harper Ranch
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1985
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Silver 198.8600 Grams per tonne
Lead 1.5200 Per cent
Zinc 0.5400 Per cent
COMMENTS: A sample from the top of the Bug #2 drillhole.
REFERENCE: Assessment Report 14317.

CAPSULE GEOLOGY

The Bug occurrence is located at 1069 metres elevation, 500 metres north of the confluence of Eugene and Tuzo creeks, 5 kilometres south-southwest of Beaverdell. The occurrence is located on the Bill claim group (formerly Lot 2979 Crown grant), currently held by Midland Energy Resources Ltd. Immediately to the southwest the Goldbug claim group is currently held by Belinda Mines Ltd. There are old workings at and surrounding the Bug occurrence including small caved adits, opencuts and trenches. No records could be found on these workings.

CAPSULE GEOLOGY

The Bug occurrence is underlain by granodiorite, quartz diorite, diorite, quartz monzonite and monzonite of the Middle Jurassic Nelson intrusions and Cretaceous to Tertiary Okanagan batholith. Three kilometres to the north these rocks are intruded by a one to two kilometre diameter stock of Eocene Coryell monzonite. Approximately 5 kilometres to the east is a small pendant of Carboniferous to Permian metasedimentary and metavolcanic rocks of the Anarchist Group. Five fault orientations have been found to the east on Wallace Mountain; of which two are important with respect to mineralization. High-angle north striking normal faults, dipping steeply to the east, divide Wallace Mountain into several large blocks which displace veins. Southwest striking normal faults dip moderately steeply to the northwest have displacements of a few centimetres to several metres. Fault spacing is locally on a metre scale, dividing veins into numerous short sections.

A 1-metre quartz vein was discovered on the Bill 4 claim. It is hosted in a shear zone striking 010 degrees and dipping 27 degrees to the east. The vein is traceable on surface for 5 metres and the host rock is granodiorite that is hematite, limonite and jarosite altered within the shear zone. Chalcopyrite comprises the only visible sulphide. Some malachite staining is also present. The vein appears to pinch and swell along strike but widens with depth.

Sample 017405 taken from this vein yielded 0.27 gram per tonne gold, 64.80 grams per tonne silver and 0.11 per cent copper. Sample 017406, taken 25 metres to the south, yielded 0.62 gram per tonne gold and 0.34 gram per tonne silver (Assessment Report 10044). A follow-up geochemical soil survey identified a large zinc anomaly surrounding this showing. Other elements produced only local anomalies suggesting sporadic, discontinuous and localized mineralization.

To the immediate south on the Bug 2 claim, four drillholes were completed in 1983 to investigate a vein discovered by trenching and surface sampling. Only drillhole Bug #1 intersected the vein at depth. Pyrite and hematite in a quartz gangue were visible. Holes Bug #2 and #3 were abandoned and hole #4 did not intersect the vein. Quartz monzonite was the dominant rock type intersected. Holes #1 and #4 intersected several strongly chlorite and epidote altered breccia zones with siliceous fragments, pyrite and magnetite. The breccias were up to 1.8 metres thick. Samples from these two holes were not assayed, however. A sample from the top of hole #2 was assayed and yielded 198.86 grams per tonne silver, 1.52 per cent lead and 0.54 per cent zinc (Assessment Report 14317). Minor sericite, K-feldspar and carbonate alteration were also noted.

BIBLIOGRAPHY

EMPR ASS RPT *10044, *11357, *11360, *14317, 24465
GSC MAP 538A; 539A; 37-21; 15-1961; 1738A
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1996/08/15
DATE REVISED: 1996/08/15

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW236**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHARYBDIS**, GLADWIN FRACTION (L.3847S), MAPLE LEAF (L.2274),
BLACK DIAMOND (L.2274)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

MINING DIVISION: Greenwood

LATITUDE: 49 26 35 N
LONGITUDE: 119 03 04 W
ELEVATION: 1173 Metres

UTM ZONE: 11 (NAD 83)
NORTHING: 5478732
EASTING: 351317

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate centre of the Gladwin Fraction Reverted Crown grant
(National Topographic System 82E/6).

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Pyrite
COMMENTS: Silver-lead mineralization is inferred from the Hard Cash occurrence
(082ESW156), 500 metres to the northwest.

ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Anarchist	Wallace	
Jurassic			Westkettle Batholith

LITHOLOGY: Granodiorite
Meta Sediment/Sedimentary
Meta Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland
Harper Ranch
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Charybdis showing is located 2.5 kilometres northwest of the summit of Mount Wallace and 2.75 kilometres northeast of Beaverdell, British Columbia (Minister of Mines Annual Report 1937, Part D - Special Report by M.S. Hedley). The showing was covered by three claims immediately west and southwest of the Hard Cash (Lot 2715) occurrence (082ESW156), in 1937.

Initial prospecting began in the Beaverdell area in the late 1880s. The first ore was shipped in 1896. The major producing mines in the Beaverdell silver-lead-zinc vein camp, from west to east, were the Wellington (082ESW072), Sally and Rob Roy (082ESW073), Beaver (082ESW040) and Bell (082ESW030), with numerous other small workings throughout the area. Near the southwest corner of the Hard Cash claim, a quartz vein was explored by a few small opencuts.

Granodiorite of the Westkettle batholith underlies most of the area. It has been intruded by small quartz monzonite porphyry stocks including the Eocene Beaverdell, Tuzo Creek, Eugene Creek and Carmi stocks. Other granitic porphyry stocks that intrude the Westkettle batholith are the Eocene Beaverdell porphyry. The Westkettle batholith has been correlated with the Nelson intrusions that have been dated by potassium-argon and uranium-lead methods as Middle Jurassic. The Westkettle batholith contains remnants of pendants and/or screens of metamorphosed Wallace Formation. The Wallace Formation is believed to be correlative with the upper (Permian) section of the Carboniferous to Permian Anarchist Group. Lithologies include metamorphosed andesitic tuffs and lavas, hornblende diorite porphyries, olivine gabbro and hornblendite, hornfels and minor limestone. The contact between the Wallace Formation and the Westkettle batholith is sinuous, trending north with gentle east dips. These are unconformably overlain by Oligocene tuffs and conglomerates and Miocene plateau basalts. Westkettle granodiorite or Beaverdell quartz monzonite are the dominant hostrocks.

CAPSULE GEOLOGY

Mineralization rarely extends into the Wallace Formation to the east. A series of dikes, ranging in composition from quartz latite and quartz monzonite porphyries to hornblende andesite porphyries, are found throughout the area. In the Beaverdell camp, fine grained, brown andesite dikes, referred to as Wellington-type dikes, are believed to be pre-mineralization. Quartz latite dikes are referred to as Idaho-type dikes and thought to be syn or post-mineralization.

Beaverdell silver-rich veins are found in a 3.0 by 0.8 kilometre belt, referred to as the Beaverdell silver-lead-zinc vein camp. The mineralized veins are fissure-hosted, formed along east-trending faults in the west portion of the Beaverdell camp and northeast-trending faults in the east portion of the camp. Faults have been classified into five types based on their orientation, with each type having common orientation, kind of movement and age relationship. The northeast striking, high angle normal faults pose the greatest obstacle to systematic exploration and mining, as these faults are commonly spaced a few metres apart dividing veins into short segments in a northwest-downward direction.

Vein-type mineralization of the Beaverdell camp is characterized by a high silver content. Mineralization is composed of galena, sphalerite and pyrite with lesser amounts of arsenopyrite, tetrahedrite, pyrargyrite, chalcopyrite, polybasite, acanthite, native silver and pyrrhotite. The gangue minerals in veins are mainly quartz with lesser amounts of calcite, fluorite and sericite with rare barite.

The Charybdis showing is located 1 kilometre northeast of the Beaverdell mine (082ESW030) and is underlain by Westkettle granodiorite in contact with Wallace Formation metavolcanic and metasedimentary rocks.

A narrow quartz vein was explored in a few opencuts. The vein is sparsely mineralized with pyrite. No recorded further exploration could be found for this showing.

BIBLIOGRAPHY

- EMPR AR *1937-D29, Part D - Special Report by M.S. Hedley
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CJES Vol. 19, No. 6, pp. 1264-1274, 1984
Watson, P.H. (1981): Genesis and Zoning of Silver-Gold Veins in the Beaverdell Area, south-central British Columbia, M.Sc. Thesis, University of British Columbia, 156 pp.

DATE CODED: 1996/08/15
DATE REVISED: 1996/08/15

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW237**

NATIONAL MINERAL INVENTORY:

NAME(S): **OBSERVATORY (L.1252S)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 45 N
LONGITUDE: 119 05 58 W

NORTHING: 5484696
EASTING: 347977

ELEVATION: 1189 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The centre of the Observatory (Lot 1252s) Reverted Crown grant
(National Topographic System 82E/6).

COMMODITIES: Silver

MINERALS

SIGNIFICANT: Unknown

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: A small high grade silver vein was discovered.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Westkettle Batholith

LITHOLOGY: Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland
Harper Ranch
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Observatory (Lot 1252s) past producer is located at about 1189 metres elevation on the western slopes of King Solomon Mountain, 1.75 kilometres east-northeast of Carmi, British Columbia (National Topographic System 82E/6).

The hostrock of the Observatory occurrence is quartz diorite of the Jurassic Westkettle batholith. For a more detailed description of the regional geology refer to the Carmi occurrence (082ESW029).

A small high grade silver vein was reported discovered on the Observatory claim in 1904. It was reported that two or three carloads of ore would be ready for shipment that winter. The claim was Crown granted to J. Dale and A.S. Black in 1911. No further records are found until 1940 when 12 tonnes of ore were shipped by J. P. Gachain. A total of 6283 grams silver were recovered.

BIBLIOGRAPHY

EMPR AR *1904-216; 1911-291; *1940-24
EMPR INDEX 3-207
EMPR BC METAL MM00905
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79, pp. 89,92,120-122
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1996/08/15
DATE REVISED: 1996/08/15

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW238**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOUNDARY**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 27 19 N
LONGITUDE: 119 06 49 W
ELEVATION: 1128 Metres

NORTHING: 5480216
EASTING: 346824

LOCATION ACCURACY: Within 500M

COMMENTS: The location of abandoned workings immediately south of the Ideal (Lot 3057s) Crown grant (Assessment Report 17921).

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Pyrite Chalcopyrite

COMMENTS: Galena occurs as a massive seam or disseminated with pyrite and chalcopyrite.

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Bladed

MODIFIER: Faulted

DIMENSION: 6 Metres STRIKE/DIP: 200/90

TREND/PLUNGE:

COMMENTS: A 0.60-metre wide quartz vein strikes 200 degrees and dips vertically. The vein is offset by a shear zone striking 260 degrees and dipping vertically. A 6.5-metre section of the vein was sampled.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Anarchist	Wallace	
Jurassic			Westkettle Batholith

LITHOLOGY: Granodiorite
Quartz Diorite
Diorite
Greenstone
Quartzite
Limestone
Para Gneiss

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Plutonic Rocks

Harper Ranch

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

28.4600

Grams per tonne

Lead

2.2800

Per cent

Zinc

1.5800

Per cent

COMMENTS: A 60-centimetre chip sample.

REFERENCE: Assessment Report 17921.

CAPSULE GEOLOGY

The Boundary prospect is located at about 1128 metres elevation on the eastern slopes of Cranberry Ridge, 3 kilometres northwest of Beaverdell, British Columbia. The Lucky Boy occurrence (082ESW152) is located about 500 metres west on the Lucky Boy claim group. There are no previous records of the exploration and development work at the Boundary prospect. In 1988, the occurrence was held on ground staked by Dryden Resources Corp.

The hostrocks underlying Cranberry Ridge, immediately west of Beaverdell, are similar to that underlying Mount Wallace to the west.

CAPSULE GEOLOGY

Granodiorite of the Jurassic Westkettle batholith, grading to quartz diorite and diorite, underlies most of Cranberry Ridge. To the immediate north, the Westkettle batholith has intruded Permian Wallace Formation metavolcanics and metasediments, now present as roof pendants. Lithologies include greenstone, quartzite, greywacke, limestone and local paragneiss. Younger Eocene intrusions of granite to granodiorite or quartz monzonite to syenite composition and associated dikes have intruded both Westkettle granodiorite and Wallace Formation rocks.

The Boundary prospect consists of one 15-metre adit along 260 degrees, one shaft of unknown depth and ten trenches. Outside the adit a 0.60-metre wide quartz vein was traced for 6.5 metres. The vein strikes 200 degrees and dips vertically. A 5-centimetre wide seam of massive galena occurs along the western edge of the vein. Other mineralization includes disseminated pyrite, galena and chalcopyrite. The vein is offset by a shear zone striking 260 degrees and dipping vertically. The adit follows the shear zone.

A 60-centimetre chip sample of the vein and galena seam yielded 28.46 grams per tonne silver, 2.28 per cent lead and 1.58 per cent zinc (Assessment Report 17921). Four samples taken from the shear zone yielded up to 2.42 per cent lead and 1.60 per cent zinc (Assessment Report 19721). Three samples were also taken from a small dump of trench material, 150 metres west of the adit. Sample R-15 yielded 6.86 grams per tonne gold, 46.63 grams per tonne silver, 0.06 per cent copper and 0.11 per cent lead (Assessment Report 17921).

BIBLIOGRAPHY

EMPR ASS RPT *17921
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1996/08/15
DATE REVISED: / /

CODED BY: KJM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW239**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E06E
BC MAP:

Underground

MINING DIVISION: Greenwood

LATITUDE: 49 27 56 N
LONGITUDE: 119 06 58 W
ELEVATION: 1219 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5481364
EASTING: 346675

LOCATION ACCURACY: Within 500M

COMMENTS: The location of old abandoned workings 750 metres northwest of the Lucky Boy (Lot 3073s) Crown grant (082ESW152) (Assessment Report 17921).

COMMODITIES: Silver Lead

MINERALS

SIGNIFICANT: Pyrite Galena
ALTERATION: Chlorite Sericite
ALTERATION TYPE: Chloritic Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 8 Metres STRIKE/DIP: 060/55S TREND/PLUNGE:
COMMENTS: A quartz vein exposed in an adit has been sampled over 8.5 metres. The vein strikes 060 degrees, dips 55 degrees southeast and varies from 0.60 to 1.5 metres width.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Anarchist	Wallace	
Jurassic			Westkettle Batholith

LITHOLOGY: Granodiorite
Quartz Diorite
Greenstone
Quartzite
Limestone
Para Gneiss

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Okanagan Highland
Harper Ranch
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 32.5700 Grams per tonne
Lead 0.2800 Per cent

COMMENTS: The (Sample R-20) highest silver grade and average lead grade of 12 chip samples over 8.5 metres length and 50 centimetres average width.
REFERENCE: Assessment Report 17921.

CAPSULE GEOLOGY

The North prospect is located at about 1219 metres elevation on the eastern slopes of Cranberry Ridge, 4 kilometres northwest of Beaverdell, British Columbia. The Lucky Boy occurrence (082ESW152) is located about 750 metres southeast on the Lucky Boy claim group Crown grants.

Evidence of previous exploration and development work consists of a 13-metre long adit and several pits. However, no records of exploration or development work could be found. In 1988, Dryden Resources Corp. conducted an exploration program of geological mapping, soil geochemical sampling and electromagnetic and induced polarization geophysical surveys.

The hostrocks underlying Cranberry Ridge, immediately west of

CAPSULE GEOLOGY

Beaverdell, are similar to that underlying Mount Wallace to the west. Granodiorite of the Jurassic Westkettle batholith, grading to quartz diorite and diorite, underlies most of Cranberry Ridge. To the immediate north, the Westkettle batholith has intruded Permian Wallace Formation metavolcanics and metasediments, now present as roof pendants. Lithologies include greenstone, quartzite, greywacke, limestone and local paragneiss. Younger Eocene intrusions of granite to granodiorite or quartz monzonite to syenite composition and associated dikes have intruded both Westkettle granodiorite and Wallace Formation rocks.

An abandoned adit, discovered at the North occurrence in 1986, was drifted along a 0.60 to 1.5-metre wide quartz vein with disseminated pyrite and minor galena. The vein strikes 060 degrees and dips 55 degrees southeast. The hostrock is granodiorite with strong chlorite and sericite alteration.

Twelve chip samples along 8.5 metres of the quartz vein and wallrock over an average width of 50 centimetres yielded an average of 0.28 per cent lead and a high of 32.57 grams per tonne silver (Sample R-20) (Assessment Report 17921).

BIBLIOGRAPHY

EMPR ASS RPT *17921
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1985/07/24
DATE REVISED: 1996/08/15

CODED BY: GSB
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW240**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARY-O**, IVY, MULLIN HILL,
 ML M-23

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 082E06E
 BC MAP:

MINING DIVISION: Greenwood
 UTM ZONE: 11 (NAD 83)

LATITUDE: 49 29 26 N
 LONGITUDE: 119 00 29 W
 ELEVATION: 0945 Metres

NORTHING: 5483929
 EASTING: 354578

LOCATION ACCURACY: Within 1 KM
 COMMENTS: The approximate location of the Mary-O and Ivy claims (Assessment Report 3740).

COMMODITIES: Gold Silver Copper Zinc Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
 COMMENTS: Sphalerite was observed in float.
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
 CLASSIFICATION: Unknown
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Anarchist	Wallace	Westkettle Batholith
Jurassic			Unnamed/Unknown Informal
Cretaceous-Tertiary			

LITHOLOGY: Greenstone
 Quartzite
 Greywacke
 Limestone
 Para Gneiss
 Granodiorite
 Latite Dike
 Dacite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
 TERRANE: Harper Ranch
 METAMORPHIC TYPE: Regional
 PHYSIOGRAPHIC AREA: Okanagan Highland
 Plutonic Rocks
 RELATIONSHIP: Pre-mineralization
 GRADE: Greenschist

INVENTORY

ORE ZONE: PIT REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1971
 SAMPLE TYPE: Unknown
 COMMODITY GRADE
 Silver 24.7000 Grams per tonne
 Gold 21.1000 Grams per tonne
 Copper 0.1200 Per cent
 Molybdenum 0.0096 Per cent
 Zinc 2.1800 Per cent

COMMENTS: A group of samples from an old exploratory pit. Molybdenum converted from 0.016 per cent MoS₂.

REFERENCE: Assessment Report 3740.

CAPSULE GEOLOGY

The Mary-O showing is located approximately at 945 metres elevation immediately north of the confluence of St. John Creek with Beaverdell Creek, 8 kilometres northeast of Beaverdell, British Columbia.

The showing lies in an area of considerable exploration and mining activity since the early 1900s. Chalcopyrite on Knob Hill, at the head of Beaverdell Creek, was found, staked and developed as early as 1901. Other mineral occurrences (Observatory, 082ESW237) were discovered and explored to the west on King Solomon Mountain.

The hostrocks in the vicinity of the Mary-O showing are Permian Wallace Formation greenstone, quartzite, greywacke, limestone and

CAPSULE GEOLOGY

locally paragneiss. These lithologies form roof pendants surrounded by granodiorite of the Jurassic Westkettle batholith. Latite and dacite dike intrude these older lithologies.

An old abandoned pit was discovered at the Mary-0 showing. The average assay values of samples from this pit were 21.1 grams per tonne gold, 24.7 grams per tonne silver, 2.18 per cent copper, 0.12 per cent zinc, trace lead and 0.0096 per cent molybdenum (0.016 per cent MoS₂) (Assessment Report 3740). Several molybdenum-rich outcrops were noted and sphalerite was observed in float.

BIBLIOGRAPHY

EMPR ASS RPT *3740
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1996/08/15
DATE REVISED: / /

CODED BY: KJM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW241**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD HILL (L.1916)**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 00 33 N
LONGITUDE: 119 30 57 W
ELEVATION: 0820 Metres

NORTHING: 5431524
EASTING: 316028

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of an abandoned adit near the centre of the Gold Hill Reverted Crown grant (Assessment Report 16630).

COMMODITIES: Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Pyrrhotite, pyrite, chalcopyrite, magnetite and arsenopyrite occur in quartz pods, stringers and veins throughout the area.

ASSOCIATED: Quartz

ALTERATION: Malachite Silica

COMMENTS: Malachite and limonite staining are frequently associated with shear zones.

ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epithermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

COMMENTS: A weakly mineralized shear zone strikes northeast and dips moderately to steeply southeast or northwest.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Similkameen Intrusions

LITHOLOGY: Greenstone
Quartzite
Phyllite
Granodiorite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Other intrusions include the Fairview and Kruger intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

PHYSIOGRAPHIC AREA: Okanagan Highland

TERRANE: Okanagan

Plutonic Rocks

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Unknown

YEAR: 1987

COMMODITY

GRADE

Silver	1.1000	Grams per tonne
Copper	0.0400	Per cent
Lead	0.0100	Per cent
Zinc	0.0200	Per cent

COMMENTS: A sample from the face of the adit.
REFERENCE: Assessment Report 16630.

CAPSULE GEOLOGY

The Gold Hill showing is located at 820 metres elevation, 4.5 kilometres southwest of Osoyoos, British Columbia. The Gold Hill occurs on the Gold Hill Reverted Crown grant (Lot 1916) on the western side of the historic Lakeview-Dividend claims. The claim is owned by R. Stewart. The Lakeview-Dividend occurrence (082ESW001) is located approximately 1 kilometre to the northeast.

Regionally, the Gold Hill occurrence is underlain by medium to coarse-grained granodiorite of the composite Middle Jurassic Similkameen batholith. To the west this includes alkali syenite and

CAPSULE GEOLOGY

nepheline syenite of the Kruger intrusion. The Fairview intrusion outcrops to the north. The Similkameen batholith has intruded metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. Intensely folded and metamorphosed quartzite, greenstone, phyllite, chlorite or mica schist with intercalations of dioritic rocks and sparse limestone lenses comprise lithologies. To the west lie a series of highly sheared schists, greenstones and quartzites known informally as the Kruger Schists.

Four rock types occur on the Gold Hill claim. These are greenstone, phyllite, quartzite and granodiorite. Greenstone is the dominant rock type which is locally schistose with abundant chlorite and biotite. The protolith was most likely basalt or andesite. Phyllites are generally siliceous, strike southeast and dip steeply southwest or vertical. The granodiorite ranges from unaltered to intensely altered and foliated.

The greenstone has been highly sheared in many areas associated with emplacement of the Similkameen batholith and other intrusions. Shear zones strike southeast and dip moderately to steeply northeast and southwest. Local variations occur however.

Silicification composed of quartz pods, stringers and veins is common throughout the greenstone and in quartzite near the southwest corner of the Gold Hill claim. Minor carbonate is also present.

Little is recorded of the early history of the Gold Hill showing. The first record of work was in 1896 (Minister of Mines Annual Report 1896, page 574). In 1904, the claim was Crown granted to E. D. Boeing and S. Mangott. An adit, an 8-metre shaft and 5 trenches along the south and east claim boundaries comprise old workings found on the Gold Hill Reverted Crown grant.

The mineralization of the Gold Hill showing is not reported but pyrrhotite, pyrite, chalcopyrite, magnetite and arsenopyrite are common in quartz pods, stringers and veins throughout the area. Malachite and limonite staining are frequently associated. Weakly sheared greenstone and quartzite are reported to be quartz cemented and weakly mineralized (Assessment Report 14877).

In 1987, prospecting was carried out on the Gold Hill showing. A sample from the face of the Gold Hill adit yielded 1.1 grams per tonne silver, 0.04 per cent copper, 0.01 per cent lead and 0.02 per cent zinc (Assessment Report 16630). Several drillholes of unknown age were discovered along the north claim boundary. Drill core was resampled. Drillhole #2 yielded 1.5 grams per tonne silver and 0.19 per cent copper over the interval from 30 to 60 centimetres (Assessment Report 16630).

BIBLIOGRAPHY

EMPR AR 1896-574; 1902-304
EMPR ASS RPT 658, 808, 8188, 9180, *16630
EMPR BULL 1 (1935), p. 88; 20 (1945, Part III), 18
EMPR OF 1989-5
EMPR PF (Maxwell Mines Ltd. (1972): Prospectus)
GSC MAP 85A; 538A; 539A; 541A; 37-21; 15-1961; 1736A
GSC MEM 38, pp. 425-478; 179, p. 20
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40
GSC SUM RPT 1912, p. 211

DATE CODED: 1996/08/15
DATE REVISED: 1996/08/15

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW242**

NATIONAL MINERAL INVENTORY:

NAME(S): **MANX (L.3558S)**, LITTLE MANX FRACTION (L.3559S), DIV

STATUS: Showing

Underground

MINING DIVISION: Osoyoos

REGIONS: British Columbia

NTS MAP: 082E03W 082E04E

BC MAP:

LATITUDE: 49 00 44 N

LONGITUDE: 119 30 01 W

ELEVATION: 0579 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of sample TC-87-002, 100 metres southwest of an abandoned adit on the Manx (Lot 3558s) Crown grant (Assessment Report 16074). See also Dividend-Lakeview (082ESW001).

UTM ZONE: 11 (NAD 83)

NORTHING: 5431826

EASTING: 317176

COMMODITIES: Copper

Gold

Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite

ASSOCIATED: Quartz Epidote Garnet Calcite Magnetite

ALTERATION: Epidote Garnet Calcite Magnetite Malachite

ALTERATION TYPE: Skarn Oxidation Silicific'n

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound

CLASSIFICATION: Hydrothermal Epigenetic Skarn

TYPE: I06 Cu±Ag quartz veins K01 Cu skarn

K04 Au skarn

SHAPE: Tabular

MODIFIER: Faulted

DIMENSION: 46 Metres STRIKE/DIP: 270/45N

TREND/PLUNGE:

COMMENTS: A 5 to 15 centimetre wide quartz vein strikes 270 degrees and dips 45 to 70 degrees north. The vein has been offset 9 metres by a fault. An adit has traced the footwall of the vein for 45.7 metres.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Upper Paleozoic
Middle Jurassic

GROUP: Kobau
FORMATION: Undefined Formation

IGNEOUS/METAMORPHIC/OTHER: Similkameen Intrusions

LITHOLOGY: Limestone
Skarn
Meta Volcanic
Granite
Granodiorite
Monzonite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Informally referred to as Osoyoos granodiorite.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Okanagan

METAMORPHIC TYPE: Regional

Plutonic Rocks

RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Okanagan Highland

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver 28.5000 Grams per tonne

Gold 3.1000 Grams per tonne

Copper 1.1900 Per cent

COMMENTS: Sample TC-87-002, taken 100 metres southwest of the Manx adit.

REFERENCE: Assessment Report 16074.

CAPSULE GEOLOGY

The Manx showing is located at 579 metres elevation on the eastern slopes of Mount Kruger, south of the Lakeview (Lot 1899) Reverted Crown grant and west of the Dividend (Lot 1589) Crown grant (082ESW001). Osoyoos is located 2.25 kilometres to the southeast. Little information is available on the early history of the Manx

CAPSULE GEOLOGY

showing. In 1933, the Manx and Little Manx Fraction claims were part of the Dividend-Lakeview claim group owned by Northern Syndicate and later by Osoyoos Mines Ltd. The upper tunnel on the Little Manx Fraction claim was extended 7.6 metres for a total length of 61 metres. Further work was carried out on the Manx and Little Manx Fractions in 1934 and 1935, under ownership by Osoyoos Mines Ltd. and optioned to C. Antonson and D. Loney. Markus Resources Ltd. assumed ownership of the claims in 1986 and conducted property exploration programs in 1986 and 1987.

The regional geology of the Dividend-Lakeview area consists of medium to coarse grained granodiorite of the composite Middle Jurassic Similkameen batholith. To the west this includes alkali syenite and nepheline syenite of the Kruger intrusion. The Similkameen intrusion extends from 10 kilometres north of the Canada-United States border, south into Washington state. The granodiorite is grey-green, medium to coarse grained and dominantly composed of quartz, plagioclase and hornblende. The Similkameen batholith has intruded metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. Intensely folded and metamorphosed quartzite, greenstone, phyllite, chlorite or mica schist with intercalations of dioritic rocks and sparse limestone lenses comprise lithologies. To the west lie a series of highly sheared schists, greenstones and quartzites known informally as the Kruger Schists. The greenstone has been highly sheared in many areas associated with emplacement of the Similkameen intrusion and other intrusions. Shear zones strike southeast and dip moderately to steeply northeast and southwest. Local variations occur however.

The Manx showing is hosted in limestone of the Kobau Group, near its contact with granite, granodiorite and monzonite of Osoyoos granodiorite, a satellite stock of the Similkameen batholith. On the Little Manx Fraction claim, the upper adit explored a 5 to 15 centimetre wide quartz vein striking 270 degrees and dipping 45 to 70 degrees north. The footwall of the vein was followed for 45.7 metres, where it was offset 9 metres south by a southwest-trending fault. Beyond this fault a massive siliceous band of pyrite up to 1.8 metres wide follows the quartz vein. Mineralization associated with the quartz vein and massive pyrite band consists of chalcopyrite with malachite staining.

A sample taken from the massive pyrite band in the upper tunnel yielded 17.14 grams per tonne gold (Minister of Mines Annual Report 1933, page 164). A grab sample taken from the Little Manx Fraction dump in 1987 yielded 0.07 per cent copper, 0.24 gram per tonne silver and 0.60 gram per tonne silver (Assessment Report 16074). The skarn sample consisted of epidote, garnet, calcite, magnetite, chalcopyrite and malachite.

In the Manx adit, a chip sample across 1.5 metres yielded 11.31 grams per tonne gold (Minister of Mines Annual Report 1934, page D13). During 1987, sample TC-87-002 taken 100 metres southwest of the Manx adit, yielded 1.19 per cent copper, 3.1 grams per tonne gold and 28.5 grams per tonne silver (Assessment Report 16074). The sample was taken from a lens of massive pyrite within a east trending shear in metavolcanics of the Kobau Group.

BIBLIOGRAPHY

- EMPR AR 1902-303; 1903-246
- EMPR ASS RPT 658, 808, 1182, 2922, 8188, 9180, 11924, *14877, *16074, 21634, 22987, 23381
- EMPR BULL 1 (1932), p. 88; 20 (1945, Part III), p. 18
- EMPR OF 1989-5
- GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
- GSC MEM 38, pp. 425-478; 179, p. 20
- GSC OF 481; 637; 1505A; 1565; 1969
- GSC P 37-21, pp. 37-40
- GSC SUM RPT 1912, p. 211

DATE CODED: 1996/08/15
DATE REVISED: 1997/10/03

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

1986 and 1987. An abandoned shaft was discovered near the south-central portion of the Blue Bell (Lot 1902) Reverted Crown grant.

The regional geology of the Dividend-Lakeview area consists of medium to coarse grained granodiorite of the composite Middle Jurassic Similkameen batholith. To the west this includes alkali syenite and nepheline syenite of the Kruger intrusion. The Similkameen intrusion extends from 10 kilometres north of the Canada-United States border, south into Washington state. The granodiorite is grey-green, medium to coarse grained and dominantly composed of quartz, plagioclase and hornblende. The Similkameen batholith has intruded metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. Intensely folded and metamorphosed quartzite, greenstone, phyllite, chlorite or mica schist with intercalations of dioritic rocks and sparse limestone lenses comprise lithologies. To the west lie a series of highly sheared schists, greenstones and quartzites known informally as the Kruger Schists. The greenstone has been highly sheared in many areas associated with emplacement of the Similkameen intrusion and other intrusions. Shear zones strike southeast and dip moderately to steeply northeast and southwest. Local variations occur however.

The Blue Bell showing is hosted in metasediments and metavolcanics of the Kobau Group, near its contact with granite, granodiorite and monzonite of Osoyoos granodiorite, a satellite stock of the Similkameen batholith. Pyrrhotite, pyrite and chalcopryrite mineralization is hosted in a shear zone. The shear zone strikes 305 degrees and dips 60 degrees northeast in sheared metavolcanics which are in turn bound by quartzite. A sample of skarn material from the shaft dump consisted of garnet, epidote, chalcopryrite and malachite.

Grab sample TC-87-005 of sheared metavolcanics containing pyrite, chalcopryrite and malachite yielded 0.20 per cent copper and 1.7 grams per tonne silver (Assessment Report 16074).

In the Blue Bell shaft, grab sample TC-87-006 taken 3 metres deep consisted of garnet skarn and yielded 0.57 per cent copper, 0.10 gram per tonne gold and 3.5 grams per tonne silver (Assessment Report 16074). A second grab sample G-87-002 of silicified metavolcanics yielded 2.81 per cent copper, 1.65 grams per tonne gold and 20.2 grams per tonne silver (Assessment Report 16074). A third grab sample G-87-001 of garnet-epidote skarn yielded 1.24 per cent copper, 0.24 gram per tonne gold and 2.9 grams per tonne silver (Assessment Report 16074). A grab sample (86KB49) taken from this skarn in the previous year yielded 2.6 per cent copper, 1.1 grams per tonne gold and 34.4 grams per tonne silver (Assessment Report 14877). The sample was taken about 1.5 metres from the hangingwall of the shear zone.

BIBLIOGRAPHY

- EMPR AR 1902-303; 1903-246
EMPR ASS RPT 658, 808, 1182, 2922, 8188, 9180, *14877, *16074, 21634, 22987, 23381
EMPR BULL 1 (1932), p. 88; 20 (1945, Part III), p. 18
EMPR OF 1989-5
EMPR PF (Maxwell Mines Ltd. (1972): Prospectus)
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179, p. 20
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40
GSC SUM RPT 1912, p. 211

DATE CODED: 1996/08/15
DATE REVISED: / /

CODED BY: KJM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW244**

NATIONAL MINERAL INVENTORY:

NAME(S): **KRUGER**, BLUE OX

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 01 47 N
LONGITUDE: 119 30 51 W
ELEVATION: 0720 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5433805
EASTING: 316225

LOCATION ACCURACY: Within 500M

COMMENTS: The location of Skarn zone A and B located on the Kruger Mountain claim (Assessment Report 14877).

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Pyrrhotite Chalcopyrite
ASSOCIATED: Epidote Garnet Quartz Feldspar Diopside
Tremolite
ALTERATION: Epidote Garnet Quartz Feldspar Diopside
Tremolite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein Stratabound
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: K01 Cu skarn K04 Au skarn
DIMENSION: 20 x 1 Metres STRIKE/DIP: 305/25N TREND/PLUNGE: /
COMMENTS: The largest skarn lens from the Skarn B zone is 20 metres long by 1.0 to 1.8 metres wide along a shear zone striking 305 degrees and dipping 25 degrees northeast.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Kobau Undefined Formation
Middle Jurassic Similkameen Intrusions

LITHOLOGY: Skarn
Greenstone
Graphitic Quartz Schist
Chlorite Schist

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age. Informally referred to as Osoyoos granodiorite.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca PHYSIOGRAPHIC AREA: Okanagan Highland
TERRANE: Okanagan Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SKARN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 23.2000 Grams per tonne
Gold 3.8000 Grams per tonne
COMMENTS: Grab sample 86KB25.
REFERENCE: Assessment Report 14877.

CAPSULE GEOLOGY

The Kruger prospect is located at 720 metres elevation, 900 metres west of the main adit on the Lakeview (Lot 1899) Reverted Crown grant. The prospect is covered by ground staked as the Kruger Mountain claim. Osoyoos is located 4 kilometres to the northeast. Markus Resources Ltd. staked the Kruger Mountain claim in 1986 and conducted property exploration programs in 1986 and 1987. Three abandoned adits were discovered near the east-central portion of the Kruger Mountain claim. In 1991, the ground was staked as the Blue Ox claims and further exploration was done on the area surrounding the Kruger prospect by G.E. Keller and associates. The regional geology of the Dividend-Lakeview area consists of

CAPSULE GEOLOGY

medium to coarse-grained granodiorite of the composite Middle Jurassic Similkameen batholith. To the west this includes alkali syenite and nepheline syenite of the Kruger intrusion. The Similkameen intrusion extends from 10 kilometres north of the Canada-United States border, south into Washington state. The granodiorite is grey-green, medium to coarse grained and dominantly composed of quartz, plagioclase and hornblende. The Similkameen batholith has intruded metasediments and metavolcanics of the Carboniferous to Permian Kobau Group. Intensely folded and metamorphosed quartzite, greenstone, phyllite, chlorite or mica schist with intercalations of dioritic rocks and sparse limestone lenses comprise lithologies. To the west lie a series of highly sheared schists, greenstones and quartzites known informally as the Kruger Schists. The greenstone has been highly sheared in many areas associated with emplacement of the Similkameen intrusion and other intrusions. Shear zones strike southeast and dip moderately to steeply northeast and southwest. Local variations occur however.

Kruger prospect is hosted in metasediments and metavolcanics of the Kobau Group, near its contact with granite, granodiorite and monzonite of Osoyoos granodiorite, a satellite stock of the Similkameen batholith. Two lenticular skarn bodies were discovered during property exploration in 1986. They are known as the Skarn A and Skarn B zones and were previously explored by three adits. These bodies are 1.0 to 1.8 metres wide, up to 20 metres long, strike 305 degrees and dip 28 degrees northeast. The skarn is composed of approximately 40 per cent silica, 20 per cent calcite with garnet, epidote, diopside, tremolite and small amounts of pyrrhotite and locally chalcopyrite.

The Skarn A zone lies 100 metres southwest of the Skarn B zone. The zone contains several small lenses of epidote, garnet and garnet skarn which occur adjacent to a shear zone in graphitic quartz schist, chlorite schist and quartzite. Discontinuous quartz veins are also located within this shear zone. Several dikes also occur within or adjacent and parallel to the shear zone. Two samples were taken from adit dumps in 1986. Sample 86KB25 was taken from an opencut along the shear zone. It yielded 4.95 per cent copper, 23.2 grams per tonne silver and 3.80 grams per tonne gold (Assessment Report 14877). Chip sample 86KB46 was taken across 1.0 metre of quartz-feldspar-epidote-garnet skarn and yielded 0.27 per cent copper, 0.90 gram per tonne silver and 0.09 gram per tonne gold (Assessment Report 14877). In 1987, grab sample TC-87-037 was taken of quartz vein material from the opencut dump. It yielded 0.50 per cent copper, 39.70 grams per tonne gold and 36.50 grams per tonne silver (Assessment Report 16074).

The Skarn B zone consists of a main east trending skarn lens and several smaller lenses in or adjacent to the shear zone. The dominant hostrock is greenstone. Several samples were taken with the following results. Sample 86KB47 was a 1.0 chip sample across skarn with no visible mineralization. It yielded 2.1 grams per tonne silver and 0.09 gram per tonne gold (Assessment Report 14877). In 1987, follow-up sample TC-87-034 from sheared greenstone near this skarn zone yielded 1.4 grams per tonne silver and 0.05 gram per tonne gold (Assessment Report 16074).

BIBLIOGRAPHY

EMPR AR 1902-303; 1903-246
EMPR ASS RPT 658, 808, 1182, 2922, 8188, 9180, *14877, *16074, 21634, 22987, 23381
EMPR BULL 1 (1932), p. 88; 20 (1945, Part III), p. 18
EMPR OF 1989-5
EMPR PF (Maxwell Mines Ltd. (1972): Prospectus)
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179, p. 20
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, pp. 37-40
GSC SUM RPT 1912, p. 211

DATE CODED: 1996/08/15
DATE REVISED: 1996/08/15

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW245**

NATIONAL MINERAL INVENTORY: 082E04 Au2

NAME(S): **MS, ES, CM,
WR, BW, GM,
MAM, CHICKAMIN (L.799), DIVIDE (L.800)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E04E

Underground

MINING DIVISION: Osoyoos

BC MAP:
LATITUDE: 49 03 01 N

UTM ZONE: 11 (NAD 83)

LONGITUDE: 119 33 05 W

NORTHING: 5436181

ELEVATION: 0880 Metres

EASTING: 313582

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate centre of drilling on a quartz vein on the MS claim (Assessment Report 9402).

COMMODITIES: Gold

Silver

Copper

Bismuth

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite Bornite Gold

Silver Telluride
COMMENTS: Gold, silver and bismuth tellurides.

ASSOCIATED: Quartz

ALTERATION: Chlorite Sericite Epidote Carbonate Calcite

Malachite Azurite

ALTERATION TYPE: Propylitic Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

Breccia

CLASSIFICATION: Mesothermal

Porphyry

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

L04 Porphyry Cu ± Mo ± Au

DIMENSION: 244 x 1

Metres

STRIKE/DIP: 135/75S

TREND/PLUNGE: /

COMMENTS: The main quartz vein discovered on the MAM prospect (082ESW205) strikes 135 degrees and dips 75 degrees southwest. Vein width varies from 1 centimetre to 1.5 metres, over 244 metres strike length.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Paleozoic

Middle Jurassic

Jurassic

GROUP

Kobau

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Similkameen Intrusions

Kruger Syenite

LITHOLOGY: Granodiorite

Diorite

Andesite

Schist

Greenstone

Syenite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Plutonic Rocks

METAMORPHIC TYPE: Regional

Okanagan

RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Thompson Plateau

GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1980

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Silver

85.0300

Grams per tonne

Gold

0.6800

Grams per tonne

Copper

0.0200

Per cent

COMMENTS: The 30-centimetre intersection between 4.26 and 4.56 metres in drillhole 80-6.

REFERENCE: Assessment Report 9402.

CAPSULE GEOLOGY

The MS prospect is located 1.5 kilometres north of Blue Lake near Richter Pass. Osoyoos is 7.5 kilometres to the southeast.

The occurrence was staked on the MS claim in 1980 by Highmark Resources Ltd., which also acquired the Chickamin (Lot 799) and

CAPSULE GEOLOGY

Divide (Lot 800) Reverted Crown grants and staked the ES, CM, WR, BW and GM claims. Highmark carried out geological mapping, a geochemical soil survey, surface stripping and trenching and diamond drilling. Drilling consisted of 16 EXT holes totalling 453.5 metres and 8 BQ holes totalling 1153.9 metres. The Chickamin and Divide Reverted Crown grants were first Crown granted in 1895 to Adams British Columbia Co. Ltd. It is reported that a short adit was driven.

The MS occurrence lies within granodiorite and diorite of the Middle Jurassic Similkameen intrusions which have intruded quartzite, schist and greenstone rocks of the Carboniferous to Permian Kobau Group. To the north and east, the Kobau rocks are exposed. To the south, syenitic rocks of the Jurassic Kruger pluton occur. Fissuring, shearing and fracturing of andesite and other volcanic rocks on the property is extensive and is possibly related to the northwest trending Blue Lake fault.

Mineralization occurs in shear hosted quartz veins within granodiorite. On the neighbouring Mam prospect (082ESW205), the main vein is 1 centimetre to over 1.50 metres wide, strikes 135 degrees, dips 75 degrees southwest, and is traceable over a distance of 244 metres. Minerals hosted by quartz veins include pyrite, pyrrhotite, chalcopryite, bornite, native silver, native gold and microscopic tellurides of gold, silver and bismuth. Alteration extends for considerable distances either side of the veins. Copper sulphides have been locally oxidized to malachite and azurite. Propylitic alteration minerals include chlorite, sericite, epidote, carbonate, calcite, and feldspar.

In 1980 and 1981, diamond drilling was centred on quartz veins on the MS claim. The best gold and silver intersections from EXT drillholes is as follows: drillhole 80-6 yielded 0.68 gram per tonne gold, 85.03 grams per tonne silver and 0.02 per cent copper over the 30 centimetre intersection between 4.26 and 4.56 metres (Assessment Report 9402); drillhole 80-10 intersected 173 grams per tonne gold over the 1.2 metre interval between 31.70 to 32.90 metres (Assessment Report 9402). Gold and silver values were lower from BQ drillholes. Gold values ranged from 0.07 to 2.40 grams per tonne and silver values from 0.07 to 21.60 grams per tonne (Assessment Report 9402).

BIBLIOGRAPHY

EMPR ASS RPT *8830, *9402
EMPR EXPL 1980-28; 1981-30
EMPR OF 1989-5
EMPR PF (Toba Gold Resources Ltd. (1989): Prospectus)
EMPR MR MAP 7 (1934)
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1996/08/15
DATE REVISED: 1996/08/15

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW246**

NATIONAL MINERAL INVENTORY:

NAME(S): **RICHTER**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 04 37 N
LONGITUDE: 119 33 29 W
ELEVATION: 0640 Metres

NORTHING: 5439161
EASTING: 313194

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of rock sample 51261 (Assessment Report 13217).

COMMODITIES: Silver Gold Copper

MINERALS

SIGNIFICANT: Unknown
ALTERATION: Silica
COMMENTS: Host granite is silicified and rusty weathered along shear zones.
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Similkameen Intrusions
Jurassic			Kruger Syenite

LITHOLOGY: Granite
Granodiorite
Diorite
Quartzite
Schist
Greenstone
Syenite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization PHYSIOGRAPHIC AREA: Thompson Plateau GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 1.4000 Grams per tonne
Gold 0.3000 Grams per tonne
Copper 0.0300 Per cent

COMMENTS: Sample 51261.
REFERENCE: Assessment Report 13217.

CAPSULE GEOLOGY

The Richter showing is located 2 kilometres east of Richter pass and 3.0 kilometres north of Blue Lake near Richter Pass. Osoyoos is 8 kilometres to the southeast. The showing is covered by the Richter claims, owned and operated in 1984 by P. Peto. The Richter occurrence lies within granodiorite and diorite of the Middle Jurassic Similkameen intrusions which have intruded quartzite, schist and greenstone rocks of the Carboniferous to Permian Kobau Group. To the north and east, the Kobau rocks are exposed. To the south, syenitic rocks of the Jurassic Kruger pluton occur. Fissuring, shearing and fracturing of andesite and other volcanic rocks on the property is extensive and is possibly related to the northwest trending Blue Lake fault. During property exploration in 1984, rock samples were taken

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1362
REPORT: RGEN0100

CAPSULE GEOLOGY

from silicified outcrops within a rusty shear zone in altered granite. The best sample, 51261, yielded 1.4 grams per tonne silver, 0.30 gram per tonne gold and 0.03 per cent copper (Assessment Report 13217).

BIBLIOGRAPHY

EMPR ASS RPT *13217
EMPR OF 1989-5
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-477; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21

DATE CODED: 1996/08/15
DATE REVISED: / /

CODED BY: KJM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW247**

NATIONAL MINERAL INVENTORY:

NAME(S): **IXL-ELLEN**, IXL (L.2972), ELLEN (L.2974)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 06 26 N
LONGITUDE: 119 41 44 W
ELEVATION: 1140 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5442875
EASTING: 303274

LOCATION ACCURACY: Within 500M

COMMENTS: The location of an abandoned adit along the IXL (Lot 2972) and Ellen (Lot 2974) Reverted Crown grants (Assessment Report 20638).

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
DIMENSION: 25 x 1 Metres STRIKE/DIP: 210/55N TREND/PLUNGE:
COMMENTS: A 1-metre wide shear zone hosts 1 to 20-centimetre wide quartz-carbonate stringers. The shear strikes 210 degrees and dips 55 to 65 degrees northwest. It is exposed over 25 metres.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Kobau	Undefined Formation	Similkameen Intrusions
Middle Jurassic			

LITHOLOGY: Foliated Greenstone
Chlorite Schist
Quartz Sericite Schist
Granodiorite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 8.2000 Grams per tonne
Gold 0.0600 Grams per tonne
Copper 0.2900 Per cent

COMMENTS: Sample 105910, taken from a 20-centimetre wide quartz vein with pyrite and chalcopyrite.

REFERENCE: Assessment Report 20638.

CAPSULE GEOLOGY

The IXL-Ellen showing is located at about 1150 metres elevation on the western slopes of Mount Kobau on the northwest banks of Mak Siccar Brook, 500 metres northwest of the Mak Siccar occurrence (082ESW004).

The showing was located during reconnaissance mapping in 1990 by Azimuth Geological Inc. and consists of an outcrop and an abandoned adit.

Regionally, the IXL-Ellen showing is hosted by polydeformed regionally metamorphosed sedimentary and volcanic rocks of the Carboniferous to Permian Kobau Group. The areal distribution of Kobau Group rocks is restricted by the Similkameen River to the west

CAPSULE GEOLOGY

and the Okanagan fault to the east. Intruding these rocks are small granodiorite plugs of the Middle Jurassic Similkameen intrusion, lying along the Manery Creek fault. A pluton of the Similkameen intrusion is located 1.5 kilometres to the southwest. Post-Middle Jurassic pyroxenite is also found at the Mak Siccar deposit.

The Kobau Group rocks have been subdivided into up to nine units. However, these generally consist of chlorite schist, foliated greenstone and lesser quartz sericite schist. The Kobau Group rocks have a northwest trending schistosity as well as a major northwest trending fold axis. Shears cut these rocks in three directions: north-south on the eastern portion of the property, and northeast and northwest to the west.

A 0.5-metre wide limonitic quartz vein is exposed in outcrop and a 5-metre adit at the IXL-Ellen showing. The vein width is irregular and steeply dipping, crosscutting foliated greenstone. Ten metres southeast of this adit, a 1-metre wide shear zone hosts 1 to 20 centimetre wide quartz and minor carbonate stringers. The shear, striking 210 degrees and dipping 55 to 65 degrees northwest, runs subparallel to the local foliation and is exposed for 25 metres. Pyrite and chalcopyrite are sporadically disseminated in these stringers.

Select samples yielded significant gold, silver and copper values. Grab sample 105907 was taken from quartz stringers with pyrite and chalcopyrite. Geochemical analysis yielded 85.3 grams per tonne gold and 38.9 grams per tonne silver (Assessment Report 20638). Sample 105908 was taken from adit dump material consisting of limonitic quartz that yielded 0.20 gram per tonne gold and 1.7 grams per tonne silver (Assessment Report 20638). A third sample, 105910, yielded 0.06 gram per tonne gold, 8.2 grams per tonne silver and 0.29 per cent copper (Assessment Report 20638). The sample was taken from a 20-centimetre wide quartz vein with pyrite and chalcopyrite.

BIBLIOGRAPHY

- EMPR AR 1904-225,299; 1907-220; 1927-238; 1928-260; 1929-268;
1930-219; 1931-136; 1933-166; 1934-A25,D15; 1935-A25,D13,G47;
1938-A35; 1939-37; 1966-190
EMPR ASS RPT 8996, 15920, 20115, *20638
EMPR EXPL 1987, pp. B7-15
EMPR FIELDWORK 1983; 1988, pp. 19-25; 355-363
EMPR OF 1989-5
EMPR MR MAP 7 (1934)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79; 179, pp. 20-26
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CIM Vol. 61, pp. 1326-1334
CJES Vol. 10, p. 1508
GSA Special Paper 218, pp. 55-91
Okulitch, A.V. (1969): Geology of Mount Kobau, unpublished Ph.D.
Thesis, University of British Columbia, 141 pp.

DATE CODED: 1996/11/29
DATE REVISED: / /

CODED BY: KJM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW248**

NATIONAL MINERAL INVENTORY:

NAME(S): **APEX (L.1038S)**, APEX, APEX ADIT

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 06 55 N
LONGITUDE: 119 40 24 W
ELEVATION: 1870 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5443713
EASTING: 304927

LOCATION ACCURACY: Within 500M

COMMENTS: The location of an abandoned adit on the Apex (Lot 1038s) Reverted Crown grant (Assessment Report 20638).

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
DIMENSION: 45 x 1 Metres STRIKE/DIP: 250/75N TREND/PLUNGE:
COMMENTS: A 0.50 to 0.75-metre wide quartz vein strikes 250 degrees and dips 75 degrees northwest. It is exposed over 2.5 metres in the Apex adit and has been traced over 45 metres to a roadcut exposure.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic Middle Jurassic	Kobau	Undefined Formation	Similkameen Intrusions

LITHOLOGY: Massive Quartzite
Greenstone
Chlorite Schist
Quartz Sericite Schist
Granodiorite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP: Pre-mineralization

PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Grab
COMMODITY

Silver	1.1000	Grams per tonne
Gold	0.2100	Grams per tonne

COMMENTS: Sample 105664, taken from a pyritic quartz vein.
REFERENCE: Assessment Report 20638.

CAPSULE GEOLOGY

The Apex showing is located at about 1870 metres on the summit of Mount Kobau on the northwest banks of Mak Siccar Brook, 2 kilometres northwest of the Mak Siccar occurrence (082ESW004). The showing was relocated during reconnaissance mapping in 1990 by Azimuth Geological Inc., approximately 50 metres east of a radio communications tower. Regionally, the Apex showing is hosted by polydeformed regionally metamorphosed sedimentary and volcanic rocks of the Carboniferous to Permian Kobau Group. The areal distribution of Kobau Group rocks is restricted by the Similkameen River to the west and the Okanagan fault to the east. Intruding these rocks are small granodiorite plugs of the Middle Jurassic Similkameen intrusion,

CAPSULE GEOLOGY

lying along the Manery Creek fault. A pluton of the Similkameen intrusion is located 1.5 kilometres to the southwest. Post-Middle Jurassic pyroxenite is also found at the Mak Siccar deposit.

The Kobau Group rocks have been subdivided into up to nine units. However, these generally consist of chlorite schist, foliated greenstone and lesser quartz sericite schist. The Kobau Group rocks have a northwest trending schistosity as well as a major northwest trending fold axis. Shears cut these rocks in three directions: north-south on the eastern portion of the property, and northeast and northwest to the west.

A 0.50 to 0.75-metre wide quartz vein trends northeasterly across the summit of Mount Kobau. At the northeast end of the vein it has been exposed over 2.5 metres by the Apex adit. Here the vein pinches and swells dramatically. The veins strikes 250 degrees and dips 75 degrees to the north. Narrow, north-trending faults have resulted in minor displacement of the vein. Forty-five metres to the southwest, the vein is exposed in a small roadcut. Here, the vein is 0.60 metre wide and trends 225 degrees. The vein is hosted in massive quartzite.

Select samples yielded elevated gold, silver and copper values. Grab sample 105664 was taken from a pyritic quartz vein with minor limonite. Geochemical analysis yielded 0.21 gram per tonne gold and 1.1 grams per tonne silver. Sample 105662 was taken across 1.15 metres from the adit roof at the portal. The material, consisting of limonitic quartz, yielded 0.40 gram per tonne gold and 0.0014 per cent copper (Assessment Report 20638).

BIBLIOGRAPHY

- EMPR AR 1904-225,299; 1907-220; 1927-238; 1928-260; 1929-268;
1930-219; 1931-136; 1933-166; 1934-A25,D15; 1935-A25,D13,G47;
1938-A35; 1939-37; 1966-190
EMPR ASS RPT 8996, 15920, 20115, *20638
EMPR EXPL 1987, pp. B7-15
EMPR FIELDWORK 1983; 1988, pp. 19-25; 355-363
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79; 179, pp. 20-26
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CIM Vol. 61, pp. 1326-1334
CJES Vol. 10, p. 1508
GSA Special Paper 218, pp. 55-91
Okulitch, A.V. (1969): Geology of Mount Kobau, unpublished Ph.D.
Thesis, University of British Columbia, 141 pp.

DATE CODED: 1996/11/29
DATE REVISED: 1996/11/29

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW249**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOWER**, FRENCH (L.2975)

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 52 N
LONGITUDE: 119 40 36 W
ELEVATION: 1870 Metres

NORTHING: 5443629
EASTING: 304681

LOCATION ACCURACY: Within 500M

COMMENTS: The location of a large exposure of silicified, and limonite and manganese-stained greenstone on the French (Lot 2975) Reverted Crown grant (Assessment Report 20638).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Quartz Limonite
COMMENTS: Greenstone is limonite and manganese-stained.
ALTERATION TYPE: Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Kobau	Undefined Formation	Similkameen Intrusions
Middle Jurassic			

LITHOLOGY: Greenstone
Diabase
Chlorite Schist
Quartz Sericite Schist
Granodiorite
Granodiorite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY: Gold
GRADE: 0.1800 Grams per tonne
COMMENTS: Sample 105770.
REFERENCE: Assessment Report 20638.

CAPSULE GEOLOGY

The Tower showing is located at about 1870 metres on the summit of Mount Kobau, 35 metres southwest of the radio communications tower and 1.5 kilometres northwest of the Mak Siccar occurrence (082ESW004). The showing was located during reconnaissance mapping in 1990 by Azimuth Geological Inc.

Regionally, the Tower showing is hosted by polydeformed regionally metamorphosed sedimentary and volcanic rocks of the Carboniferous to Permian Kobau Group. The areal distribution of Kobau Group rocks is restricted by the Similkameen River to the west and the Okanagan fault to the east. Intruding these rocks are small granodiorite plugs of the Middle Jurassic Similkameen intrusion, lying along the Manery Creek fault. A pluton of the Similkameen intrusion is located 1.5 kilometres to the southwest. Post-Middle Jurassic pyroxenite is also found at the Mak Siccar deposit.

CAPSULE GEOLOGY

The Kobau Group rocks have been subdivided into up to nine units. However, these generally consist of chlorite schist, foliated greenstone and lesser quartz sericite schist. The Kobau Group rocks have a northwest trending schistosity as well as a major northwest trending fold axis. Shears cut these rocks in three directions: north-south on the eastern portion of the property, and northeast and northwest to the west.

The Tower showing consists of a podiform zone of silicified and pyritic greenstone or diabase. Limonite and manganese alteration is widespread in this zone which is transected by numerous north-trending linears. Sample 105770 taken from this zone yielded 0.18 gram per tonne gold (Assessment Report 20638).

BIBLIOGRAPHY

- EMPR AR 1904-225,299; 1907-220; 1927-238; 1928-260; 1929-268;
1930-219; 1931-136; 1933-166; 1934-A25,D15; 1935-A25,D13,G47;
1938-A35; 1939-37; 1966-190
EMPR ASS RPT 8996, 15920, 20115, *20638
EMPR EXPL 1987, pp. B7-15
EMPR FIELDWORK 1983; 1988, pp. 19-25; 355-363
EMPR OF 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79; 179, pp. 20-26
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CIM Vol. 61, pp. 1326-1334
CJES Vol. 10, p. 1508
GSA Special Paper 218, pp. 55-91
Okulitch, A.V. (1969): Geology of Mount Kobau, unpublished Ph.D.
Thesis, University of British Columbia, 141 pp.

DATE CODED: 1996/11/29
DATE REVISED: 1996/11/29

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW250**

NATIONAL MINERAL INVENTORY:

NAME(S): **FRENCH (L.2975)**, FRENCH

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 06 46 N
LONGITUDE: 119 40 54 W
ELEVATION: 1710 Metres

NORTHING: 5443456
EASTING: 304310

LOCATION ACCURACY: Within 500M

COMMENTS: The location of a quartz vein stockwork 520 metres southwest of a radio communications tower on the summit of Mount Kobau and in the northwest corner of the French (Lot 2975) Reverted Crown grant (Assessment Report 20638).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
ALTERATION: Limonite
COMMENTS: Heavy manganese staining covers the lower portion of the outcrop.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
DIMENSION: 30 x 15 Metres STRIKE/DIP: 230/
COMMENTS: A quartz vein stockwork strikes 230 to 255 degrees and is exposed in an outcrop 30 by 15 metres. The dip is unknown. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Similkameen Intrusions

LITHOLOGY: Quartzite
Foliated Greenstone
Chlorite Schist
Quartz Sericite Schist
Granodiorite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Chip
COMMODITY: Gold GRADE: 0.0200 Grams per tonne
COMMENTS: Sample 105675, a 1.8-metre chip sample.
REFERENCE: Assessment Report 20638.

CAPSULE GEOLOGY

The French showing is located at about 1710 metres on the summit of Mount Kobau, 520 metres west of the radio communication tower and 1.3 kilometres northwest of the Mak Siccar occurrence (082ESW004). The showing was located during reconnaissance mapping in 1990 by Azimuth Geological Inc., approximately 50 metres east of a radio communications tower.

Regionally, the French showing is hosted by polydeformed regionally metamorphosed sedimentary and volcanic rocks of the Carboniferous to Permian Kobau Group. The areal distribution of Kobau Group rocks is restricted by the Similkameen River to the west and the Okanagan fault to the east. Intruding these rocks are small

CAPSULE GEOLOGY

granodiorite plugs of the Middle Jurassic Similkameen intrusion, lying along the Manery Creek fault. A pluton of the Similkameen intrusion is located 1.5 kilometres to the southwest. Post-Middle Jurassic pyroxenite is also found at the Mak Siccar deposit.

The Kobau Group rocks have been subdivided into up to nine units. However, these generally consist of chlorite schist, foliated greenstone and lesser quartz sericite schist. The Kobau Group rocks have a northwest trending schistosity as well as a major northwest trending fold axis. Shears cut these rocks in three directions: north-south on the eastern portion of the property, and northeast and northwest to the west.

The French showing consists of a 30 by 15 metre outcrop hosting a quartz vein stockwork. The stockwork cuts limonite-altered quartzite along a strike of 230 to 255 degrees. The veins commonly carry pyrite. Heavy manganese staining covers the lower portion of the outcrop. The best geochemical gold results were from grab sample 105904 which yielded 0.03 gram per tonne gold (Assessment Report 20638). Chip sample 105675 yielded 0.02 gram per tonne gold over 1.8 metres (Assessment Report 20638).

BIBLIOGRAPHY

- EMPR AR 1904-225,299; 1907-220; 1927-238; 1928-260; 1929-268;
1930-219; 1931-136; 1933-166; 1934-A25,D15; 1935-A25,D13,G47;
1938-A35; 1939-37; 1966-190
EMPR ASS RPT 8996, 15920, 20115, *20638
EMPR EXPL 1987, pp. B7-15
EMPR FIELDWORK 1983; 1988, pp. 19-25; 355-363
EMPR OF 1989-5
EMPR MR MAP 7 (1934)
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A
GSC MEM 79; 179, pp. 20-26
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CIM Vol. 61, pp. 1326-1334
CJES Vol. 10, p. 1508
GSA Special Paper 218, pp. 55-91
Okulitch, A.V. (1969): Geology of Mount Kobau, unpublished Ph.D.
Thesis, University of British Columbia, 141 pp.

DATE CODED: 1996/11/29
DATE REVISED: 1996/11/29

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW251**

NATIONAL MINERAL INVENTORY:

NAME(S): **BORDER**, MO 1-6

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 00 47 N
LONGITUDE: 119 40 36 W
ELEVATION: 400 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5432359
EASTING: 304283

LOCATION ACCURACY: Within 500M

COMMENTS: The location of an abandoned adit (Assessment Report 14480).

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite
ASSOCIATED: Quartz Pyrite
ALTERATION: Chlorite Malachite
ALTERATION TYPE: Chloritic Sericitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 3 Metres STRIKE/DIP: 120/30S TREND/PLUNGE: /
COMMENTS: The main quartz vein is 0.15 to 3.0 metres wide and strikes 120 degrees and dips 30 to 40 degrees. The vein has been offset by several left-lateral faults.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Kobau	Undefined Formation	Similkameen Intrusions
Middle Jurassic			

LITHOLOGY: Granodiorite
Granite
Syenite

HOSTROCK COMMENTS: The Kobau Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Plutonic Rocks Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Border showing is located near the Canada-United States of America boundary, 5.5 kilometres south of Richter Mountain. The occurrence is located on the Mo 4 claim.

An abandoned 5-metre adit was located during property exploration by Ascent Resources Ltd. From the condition of the workings, the age is estimated as the early 1900s. The ground was restaked and explored in 1985 and 1986 by Ascent Resources Ltd. for the owner, J. King. To the south in the Nighthawk area of Washington State, exploration has been carried out on many properties since the 1880s. From 1989 to 1992, property work was carried out by owner, J. Harris.

The Border showing is hosted by granite and granodiorite of the Similkameen intrusion, bordered by syenite of the Kruger pluton. The Kruger pluton forms an east-west trending band 1.3 to 2.0 kilometres long. Central phases of the Similkameen intrusion consist of quartz monzonite and granodiorite phases. Monzonitic phases crosscut both central phases and outer syenite. Roof pendants of metasediments and metavolcanics of the Carboniferous to Permian Kobau Group occur to the immediate east.

During 1985 and 1986, several quartz veins were discovered on the Mo and Border claims. The veins are mineralized with galena, pyrite, sphalerite, chlorite, malachite and sericite. The main vein, exposed in the abandoned adit, strikes 120 degrees and dips 30 to 40 degrees to the southeast. The vein varies from 0.15 to 3.00 metres and has been offset repeatedly by minor left-lateral faults. The contacts with country rock are sharp and defined by shearing and

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1372
REPORT: RGEN0100

CAPSULE GEOLOGY

gouge.

BIBLIOGRAPHY

EMPR ASS RPT *13652, *14480, *20172, *22405
EMPR OF 1989-2; 1989-5
GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, 58 pp.

DATE CODED: 1996/11/30
DATE REVISED: 1996/11/30

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1374
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 85A; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38, pp. 425-478; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21, 58 pp.

DATE CODED: 1996/11/30
DATE REVISED: 1996/11/30

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW253**

NATIONAL MINERAL INVENTORY:

NAME(S): **QUEEN QUARTZ**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

Underground

MINING DIVISION: Osoyoos

LATITUDE: 49 11 43 N
LONGITUDE: 119 33 46 W
ELEVATION: 620 Metres

UTM ZONE: 11 (NAD 83)

NORTHING: 5452326
EASTING: 313295

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of an abandoned adit, 500 metres south of the No. 2 adit on the Standard occurrence (082ESW091) (Assessment Report 18397).

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Galena Arsenopyrite
ASSOCIATED: Quartz
ALTERATION: Epidote
COMMENTS: Epidote alteration occurs regionally.
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 1 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: The quartz vein is approximately 1 metre wide.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Oliver Plutonic Complex

ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Hornblende Quartz Monzonite
Garnet Muscovite Quartz Monzonite
Biotite Hornblende Quartz Monzonite
Porphyritic Quartz Monzonite
Hornblende Diorite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Plutonic Rocks Okanagan
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 218.5000 Grams per tonne
Gold 14.3500 Grams per tonne
Lead 0.2500 Per cent

COMMENTS: Chip sample Q3A across gouge from the western contact of the quartz vein returned the highest assay values.

REFERENCE: Assessment Report 18397.

CAPSULE GEOLOGY

The Queen Quartz showing is located 2.75 kilometres southeast of Burnell Lake and 2.5 kilometres northwest of Oliver, British Columbia.

In 1989, Gila Bend Resources Corp. made a 50 per cent option agreement with Golden Web Resources Ltd. on the ground covering the Queen Quartz showing. Golden Web Resources Ltd. had optioned the claims covering the Queen Quartz showing from Hiburd Properties Ltd.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To

CAPSULE GEOLOGY

the south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of Penticton Group.

The geology surrounding the Queen Quartz showing area is composed almost entirely of quartz monzonite of the Oliver plutonic complex. Three distinct phases are evident. A central core of massive medium-grained garnet-muscovite quartz monzonite is surrounded by biotite-hornblende quartz monzonite north of the core and porphyritic biotite quartz monzonite to the south. Hornblende diorite occurs in several small areas to the immediate north.

The Queen Quartz showing is hosted by the hornblende-bearing porphyritic quartz monzonite phase of the Oliver plutonic complex. Fine to medium grained quartz monzonite dike swarms locally cut this unit. The area has been extensively faulted and fractured. Regional hydrothermal alteration has resulted in epidote which occurs in seams up to 2.5 centimetres in width.

In 1989, an old adit and a quartz vein was discovered. Galena and arsenopyrite comprise vein sulphides. The vein is approximately 1 metre wide with a 10-centimetre wide gouge zone along the western contact. Several samples taken from this quartz vein yielded high precious and base metal values. Sample Q1, a grab sample from dump material from an old adit, yielded 489.7 grams per tonne silver, 25.24 grams per tonne gold and 1.06 per cent lead (Assessment Report 18397). Chip sample Q3A yielded 218.5 grams per tonne silver, 14.35 grams per tonne gold and 0.25 per cent lead (Assessment Report 18397). Sample Q3C, across the eastern side of the vein, yielded 156.0 grams per tonne silver, 7.25 grams per tonne gold and 0.03 per cent lead (Assessment Report 18397). Higher values were obtained predominantly from gouge on the west side of the vein.

BIBLIOGRAPHY

- EMPR ASS RPT 12971, 15833, *18397
EMPR MAP 65, 1989
EMPR OF 1989-2; 1989-5; 1992-1
GSC MAP 6-1957; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 89-1E
Arnott, E.L. (1963): Mineralogy and Petrology of the Standard Mine, Oliver B.C., University of British Columbia, B.A.Sc. Thesis
Matsen, B.F. (1960): University of British Columbia, B.Sc. Thesis
Richards, G.C. (1968): Petrology of the Oliver Quartz Monzonite, University of British Columbia, B.Sc. Thesis

DATE CODED: 1996/11/30
DATE REVISED: 1996/11/30

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW254**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN WEST**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 11 38 N
LONGITUDE: 119 34 23 W
ELEVATION: 620 Metres

NORTHING: 5452197
EASTING: 312541

LOCATION ACCURACY: Within 500M

COMMENTS: A quartz vein located 250 metres southwest of the Quartz Queen occurrence (082ESW253) (Assessment Report 18397).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Quartz
ALTERATION: Epidote
COMMENTS: Epidote alteration occur regionally.
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
DIMENSION: 1 Metres
COMMENTS: The quartz vein is about 0.60 metre wide.
STRIKE/DIP:
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Oliver Plutonic Complex

ISOTOPIC AGE: 152 +/-3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Hornblende Quartz Monzonite
Garnet Muscovite Quartz Monzonite
Biotite Hornblende Quartz Monzonite
Hornblende Diorite

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
Okanagan
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 3.8000 Grams per tonne
Gold 0.1400 Grams per tonne

COMMENTS: Grab sample S2 from the western contact of the quartz vein.
REFERENCE: Assessment Report 18397.

CAPSULE GEOLOGY

The Golden West showing is located 2.75 kilometres southeast of Burnell Lake and 2.5 kilometres northwest of Oliver, British Columbia.

In 1989, Gila Bend Resources Corp. made a 50 per cent option agreement with Golden Web Resources Ltd. on the ground covering the Golden West showing. Golden Web Resources Ltd. had optioned the claims covering the Golden West showing from Hiburd Properties Ltd.

Regionally, the area is principally underlain by medium grained intrusive rocks that form the Jurassic Oliver plutonic complex. To the south, the complex cuts Carboniferous to Permian Kobau Group metasedimentary rocks. On its northern margin, the intrusive mass is in contact with Eocene volcanics and sediments of Penticton Group.

The geology surrounding the Golden West showing area is composed

CAPSULE GEOLOGY

almost entirely of quartz monzonite of the Oliver plutonic complex. Three distinct phases are evident. A central core of massive medium-grained garnet-muscovite quartz monzonite is surrounded by biotite-hornblende quartz monzonite north of the core and porphyritic biotite quartz monzonite to the south. Hornblende diorite occurs in several small areas to the immediate north.

The Golden West showing is hosted by the hornblende-bearing porphyritic quartz monzonite phase of the Oliver plutonic complex. Fine to medium grained quartz monzonite dike swarms locally cut this unit. The area has been extensively faulted and fractured. Regional hydrothermal alteration has resulted in epidote which occurs in seams up to 2.5 centimetres in width.

In 1989, an old adit and quartz vein were discovered. The vein is approximately 0.60 metre wide, strikes 065 to 070 degrees and dips steeply southeast. No visible mineralization was noted in the vein but several samples taken from this quartz vein yielded high precious metal values. The highest was Sample S2, a grab sample from the west side of the vein which yielded 3.8 grams per tonne silver and 0.14 gram per tonne gold (Assessment Report 18397).

BIBLIOGRAPHY

- EMPR ASS RPT 12971, 15833, *18397
EMPR MAP 65, 1989
EMPR OF 1989-2; 1989-5; 1992-1
GSC MAP 6-1957; 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 89-1E
Arnott, E.L. (1963): Mineralogy and Petrology of the Standard Mine, Oliver B.C., University of British Columbia, B.A.Sc. Thesis
Matsen, B.F. (1960): University of British Columbia, B.Sc. Thesis
Richards, G.C. (1968): Petrology of the Oliver Quartz Monzonite, University of British Columbia, B.Sc. Thesis

DATE CODED: 1996/11/30
DATE REVISED: 1996/11/30

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW255**

NATIONAL MINERAL INVENTORY:

NAME(S): **TESTALINDEN**, RICH 1-13, RICHTER GROUP

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 07 31 N
LONGITUDE: 119 38 14 W
ELEVATION: 1400 Metres

NORTHING: 5444732
EASTING: 307601

LOCATION ACCURACY: Within 500M

COMMENTS: The approximate location of sample RG280 from a strong gossan yielding high precious metal values (Assessment Report 19284).

COMMODITIES: Gold Silver Zinc

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Quartz
ALTERATION: Limonite Silica Oxidation
ALTERATION TYPE: Leaching Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Discordant
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Kobau	Undefined Formation	
Middle Jurassic			Similkameen Intrusions

LITHOLOGY: Quartzite
Phyllite
Calcareous Phyllite
Granodiorite
Gossan

HOSTROCK COMMENTS: Refer to Fieldwork 1988, pages 19-25 for age data. Informally referred to as Testalinden granodiorite.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Testalinden showing is located at about 1400 metres, 3 kilometres northeast of Mount Kobau and north of Testalinden Creek. The showing was located during exploration of the Richter claim group by Minnova Inc. in 1990.

Regionally, the Testalinden showing is hosted by polydeformed regionally metamorphosed sedimentary and volcanic rocks of the Carboniferous to Permian Kobau Group. The aerial distribution of Kobau Group rocks is restricted by the Similkameen River to the west and the Okanagan fault to the east. These rocks have been affected by regional metamorphism reaching greenschist grade, thought to have been attained during the first phase of regional deformation. The Similkameen batholith is located 1.5 kilometres to the southwest. Several satellite stocks including Osoyoos and Testalinden granodiorite of the Similkameen batholith occur in the area.

The Kobau Group rocks have been subdivided into up to three main units; generally consisting of quartzite, phyllite and calcareous phyllite. The Kobau Group rocks have a northwest trending schistosity as well as a major northwest trending fold axis.

The Testalinden showing consists of a gossan along the contact of Kobau Group rocks with Testalinden granodiorite, a stock of the Similkameen batholith. Silicification is intense and quartz veins are common along this contact. The quartz veins are 1 to 5 centimetres wide, lack visible sulphides and form a stockwork. Alteration and quartz veining are generally related to fault structures. Sample RG280 from this gossan yielded 6.8 grams per tonne gold, 1.9 grams per tonne silver and 0.12 per cent zinc (Assessment Report 19284).

RUN DATE: 25-Jun-2003
RUN TIME: 14:51:09

MINFILE MASTER REPORT

PAGE: 1380
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *19284, 20531, 20560
EMPR OF 1989-2; 1989-5
GSC MAP 538A; 539A; 37-21; 15-1961; 1736A; 2389
GSC MEM 79; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
CIM Vol. 61, pp. 1326-1334
Okulitch, A.V. (1969): Geology of Mount Kobau, unpublished Ph.D.
Thesis, University of British Columbia, 141 pp.

DATE CODED: 1996/11/30
DATE REVISED: 1996/11/30

CODED BY: KJM
REVISED BY: KJM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW256**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROCK**

MINING DIVISION: Greenwood

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 01 22 N
LONGITUDE: 119 05 32 W
ELEVATION: 1158 Metres

NORTHING: 5432097
EASTING: 347044

LOCATION ACCURACY: Within 500M

COMMENTS: Outcrop located near 'Springer Creek', a tributary to Budy Creek, south of Highway 3 about 5.5 kilometres east of Bridesville (Assessment Report 23724).

COMMODITIES: Barite

MINERALS

SIGNIFICANT: Barite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: E17 Sediment-hosted barite

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Anarchist	Undefined Formation	

LITHOLOGY: Chert
Greenstone
Barite

HOSTROCK COMMENTS: The Anarchist Group is of Carboniferous to Permian age.

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Okanagan Highland

CAPSULE GEOLOGY

The oldest rocks in the vicinity of the Rock prospect belong to the Permian to Carboniferous Kobau and Anarchist groups. Amphibolite, greenstone, quartzite, chert, chlorite schist and minor marble comprise the Kobau Group and amphibolite, greenstone, quartz chlorite schist, quartz biotite schist and minor serpentized peridotite comprise lithologies of the Anarchist Group. Penticton Group lithologies outcrop to the east while Middle Jurassic porphyritic granite, granodiorite and monzonite intrusions are found to the immediate north. Smaller plugs, dikes and sills of biotite granodiorite, quartz diorite and granite of Middle Jurassic to Cretaceous age intrude the Anarchist Group rocks.

At the Rock showing, a stratiform, bedded barite horizon is found in Anarchist assemblage rocks. The barite occurs as lenses and pods with extensive sections of massive, very finely crystalline grey barite. Initial assays indicate the barite is of commercial grade and does not contain detrimental metallic elements (News Release, Orion International Minerals Corporation, July 15, 1996).

BIBLIOGRAPHY

EMPR ASS RPT 15163, *23724
EMPR OF 1997-16, p. 12; 2000-22
EMPR PF (*News Release, Orion International Minerals Corporation, July 15, 1996)
GSC MAP 84A; 538A; 539A; 15-1961; 1505A; 1736A
GSC MEM 38
GSC OF 1969

DATE CODED: 1997/10/06
DATE REVISED: 1997/10/07

CODED BY: GO
REVISED BY: DH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW257**

NATIONAL MINERAL INVENTORY:

NAME(S): **MCKINNEY CREEK PLACER**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 082E03E
BC MAP:
LATITUDE: 49 03 45 N
LONGITUDE: 119 08 19 W
ELEVATION: 890 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS:

Open Pit

MINING DIVISION: Greenwood

UTM ZONE: 11 (NAD 83)

NORTHING: 5436607
EASTING: 343777

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Paleozoic
Quaternary
Middle Jurassic

GROUP

Anarchist

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Glacial/Fluvial Gravels
Nelson Intrusions

LITHOLOGY: Gravel
Chlorite Schist
Greenstone
Limestone
Chert
Ultramafic
Granodiorite
Granite

HOSTROCK COMMENTS: Anarchist Group is Carboniferous to Permian in age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Okanagan Highland

RELATIONSHIP: Syn-mineralization
Post-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

The McKinney Creek Placer occurrence is located along McKinney Creek at about 890 metres elevation. Bridesville, British Columbia lies 3.5 kilometres to the south.

Bedrock in the area appears to be gneissic or schistose rock of the Carboniferous to Permian Anarchist Group and Middle Jurassic granodiorite and granite of the Nelson intrusions. Chlorite schist, greenstone, limestone, chert and minor ultramafics comprise the main lithologies of the Anarchist Group.

About 558 grams of gold were recovered from gravels in the period 1936-40.

BIBLIOGRAPHY

EMPR BULL *28, pp. 36,37
EMPR MR MAP 7 (1934)
GSC MAP 538A; 539A; 1736A; 15-1961

DATE CODED: 1985/07/24
DATE REVISED: 1997/10/08

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW258**

NATIONAL MINERAL INVENTORY:

NAME(S): **MANUEL CREEK ZEOLITE**

MINING DIVISION: Osoyoos

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E04E 082E05E
BC MAP:

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 14 33 N
LONGITUDE: 119 43 41 W
ELEVATION: 1360 Metres

NORTHING: 5457996
EASTING: 301445

LOCATION ACCURACY: Within 500M

COMMENTS: Fieldwork 1995 and personal communication, Neil Church, 1999.

COMMODITIES: Zeolite

MINERALS

SIGNIFICANT: Clinoptilolite
ALTERATION: Clinoptilolite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Replacement Epigenetic Hydrothermal Industrial Min.
TYPE: D01 Open-system zeolites

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Penticton	Marron	

LITHOLOGY: Tuffaceous Sandstone
Andesite Lava
Andesite
Zeolite

HOSTROCK COMMENTS: Kearns Creek and Kitley Lake members.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Okanagan
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP:
GRADE: Zeolite

CAPSULE GEOLOGY

Zeolite beds occur east of Manuel Creek, between the Kearns Creek and Kitley Lake members of the Eocene Marron Formation (Penticton Group). Clinoptilolite (20 per cent) occurs in tuffaceous sandstones at the base of the Kearns Creek member (Fieldwork 1995, pages 51-54).

BIBLIOGRAPHY

EMPR BULL 61
EMPR *FIELDWORK 1985, pp. 50-55
EMPR PRELIM MAP 35
PERS COMM Neil Church, 1999

DATE CODED: 1999/04/20
DATE REVISED: / /

CODED BY: LDJ
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **082ESW259**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORDIC**, PANORAMA RIDGE, N

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 082E05W
BC MAP:

MINING DIVISION: Osoyoos

UTM ZONE: 11 (NAD 83)

LATITUDE: 49 22 26 N
LONGITUDE: 119 58 05 W
ELEVATION: 1800 Metres

NORTHING: 5473250
EASTING: 284550

LOCATION ACCURACY: Within 500M

COMMENTS: UTM location of Nordic showing as given by Goldcliff Resource Corporation (News Release, November 3, 2000).

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Pyrrhotite Chalcopyrite Pyrite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Vein

CLASSIFICATION: Skarn

TYPE: K04 Au skarn

DIMENSION: Metres

STRIKE/DIP: K01 Cu skarn TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Nicola	Undefined Formation	
Upper Triassic	Nicola	Hedley	
Lower Jurassic			Hedley Intrusions

LITHOLOGY: Andesite Tuff
Diorite
Limestone
Skarn

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Thompson Plateau

TERRANE: Okanagan

Plutonic Rocks

METAMORPHIC TYPE: Regional

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 2001

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold 0.4900 Grams per tonne

REFERENCE: Goldcliff Resource Corporation, New Release, January 22, 2001.

CAPSULE GEOLOGY

The Nordic showing is located on Panorama Ridge between Cahill and Winters creeks, 2.25 kilometres south of Nickel Plate Lake and approximately 18 kilometres east of Hedley, British Columbia.

The Hedley area has been heavily prospected and explored since the discovery of the Hedley Mascott mine (092HSE036) at the turn of the century. Little of significance was done in the area until 1984 when Primont Resources Ltd staked a large area surrounding Nickel Plate Lake. Placer Development Ltd. conducted exploration on the claims in 1984 and Lacana Mining Corp. in 1987.

Outcrops consist of Upper Triassic Nicola Group, Whistle Formation (Nicola Group) tuffs and Hedley Formation sediments that have been altered and intruded by diorite dykes of the Early Jurassic Hedley Intrusions. Limestone fragmental rocks, some altered, along with calcareous sediments are present.

The Nordic showing is situated on the eastern slope of Panorama Ridge, approximately 50 metres down slope from its crest, at an elevation of 1840 metres. The showing is about 500 metres east of the York showing (082ESW052), both presently part of Goldcliff Resource Corporation's Panorama Ridge property.

The Nordic showing is within the Winters Creek drainage basin, which drains to the southwest. A new logging road has exposed the showing for a length of 200 metres in a northeast-southwest direction

CAPSULE GEOLOGY

and vertically for 50 to 75 metres. The Nordic showing is geologically similar to the York showing, as both contain gossan mineralization in altered tuff and sediments. As of early 2001, skarn alteration had not been located in the new Nordic exposures. The showing contains several hand trenches (1900s) with pervasive and fracture related pyrite-pyrrhotite (chalcopyrite) sulphide mineralization. There is no physical evidence of any newer work. Overburden is extensive in the area due to the gentle slope of the terrain off to the east.

The Nordic prospect yielded significant gold values from recent sampling. The gold values ranged from 0.16 to 0.49 gram per tonne gold (Goldcliff Resource Corporation News Release, January 22, 2001). Outcrop sampling by Goldcliff Resources in 2002 yielded 3.349 grams per tonne gold over 5.42 metres (Press Release, December 18, 2002).

BIBLIOGRAPHY

EMPR ASS RPT 15739
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21; 72-53
PR REL Goldcliff Resource Corporation, Oct.19, Nov.3,14, 2000;
*Jan.22, *May 23, July 2, 23, Aug.13, Nov.22,2001; Jan.23, Feb.27,
Dec.18, 2002
*WWW <http://www.goldcliff.com/home.htm>

DATE CODED: 1985/07/24
DATE REVISED: 2001/09/06

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: <u>082ENE001</u>		NAME: <u>MCKINLEY</u>		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1949	132	132	Silver	28,397		
			Gold	62		
			Lead		14,737	
			Zinc		22,523	

SUMMARY TOTALS: 082ENE001

NAME: MCKINLEY

	<u>Metric</u>	<u>Imperial</u>
Mined:	132 tonnes	146 tons
Milled:	132 tonnes	146 tons
Recovery:		
Silver:	28,397 grams	913 ounces
Gold:	62 grams	2 ounces
Lead:	14,737 kilograms	32,490 pounds
Zinc:	22,523 kilograms	49,655 pounds

Comments: 1949: Includes 36 tonnes mined in 1948. Annual Report 1949.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: <u>082ENE003</u>		NAME: <u>UNION</u>		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1989		18,000	Gold	300		
1988		10,900	Silver Gold	243,000 8,000		
1987		13,600	Silver Gold	150,000 5,000		
1947	5	5	Silver Gold	1,337 31		
1942	1,403	1,403	Silver Gold	930,322 8,553		
1941	2,250	2,250	Silver Gold	672,198 18,320		
1940	3,759	3,759	Silver Gold	1,207,667 33,653		
1939	60	60	Silver Gold	11,539 404		
1938	40	40	Silver Gold Lead Zinc	12,317 529		510 697
1937	24	24	Silver Gold Lead Zinc	7,745 3,328		630 786
1936		18,301	Silver Gold Lead Zinc	556,876 18,693		311 4,654
1935		13,369	Silver Gold Lead Zinc	1,362,031 36,204		5,108 9,672
1934		16,459	Silver Gold	365,522 13,188		
1933	2,861	3,342	Silver Gold Lead Zinc	89,857 96,793		3,415 8,700
1932	24,020	24,000	Silver Gold Copper Lead Zinc	4,713,224 597,737		12,665 108,843 192,169
1931	51,465	51,406	Silver Gold Lead Zinc	18,060,921 514,817		27,763 46,948
1930	33,462	33,462	Silver Gold Lead Zinc	11,296,578 293,612		21,947 35,038
1920	24	24	Silver Gold	28,584 342		
1919	73	73	Silver Gold	80,432 715		
1918	139	139	Silver Gold	190,070 1,897		
1917	681	681	Silver Gold	659,446 10,544		
1916	237	237	Silver Gold	301,481 3,235		
1915	469	469	Silver Gold	533,634 13,094		
1914	1,461	1,461	Silver Gold	1,503,239 44,695		
1913	122	122	Silver Gold	327,732 3,328		

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 3
REPORT: RGEN0200

MINFILE NUMBER: **082ENE003**

NAME: **UNION**

STATUS: Past Producer

SUMMARY TOTALS: 082ENE003

NAME: **UNION**

	<u>Metric</u>	<u>Imperial</u>
Mined:	122,555 tonnes	135,094 tons
Milled:	213,586 tonnes	235,438 tons
Recovery:		
Silver:	43,305,752 grams	1,392,310 ounces
Gold:	1,727,012 grams	55,525 ounces
Copper:	12,665 kilograms	27,922 pounds
Lead:	168,527 kilograms	371,538 pounds
Zinc:	298,664 kilograms	658,441 pounds

Comments:

1989: Tailings heap leach. Mineral statistics 1990, p. 29.
1988: Tailings heap leach. Exploration in BC 1988, p. A5.
1987: Tailings heap leach. Exploration in BC 1987, p. A63.
1936: Cyanidation of tailings. Figures from Annual Report 1936, p. D56.
1935: Cyanidation of tailings comprises most of tonnage.
1934: Cyanidation of tailings comprises most of tonnage.
1933: Tonnes mined from Annual Report 1933, p. 149.
1931: Ore mined includes 59 tonnes of high-grade ore shipped to smelter.
1930: Minister of Mines Annual Report 1930, p. 226.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ENE009		NAME: MAPLE LEAF		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1916	15		Silver	1,400		
			Gold	62		
			Copper		813	
1915	21		Silver	4,800		
			Copper		1,922	

SUMMARY TOTALS: 082ENE009

NAME: **MAPLE LEAF**

	<u>Metric</u>	<u>Imperial</u>
Mined:	36 tonnes	40 tons
Milled:	tonnes	tons
Recovery:		
Silver:	6,200 grams	199 ounces
Gold:	62 grams	2 ounces
Copper:	2,735 kilograms	6,030 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ENE017** NAME: **WATERLOO** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1983	11		Silver	25,132	
			Copper		5
			Lead		54
			Zinc		120
1967			Silver	59,531	
			Cadmium		123
			Lead		2,236
			Zinc		22,396
1954	748	1,011	Silver	129,357	
			Lead		6,179
			Zinc		1,780
1949	3		Silver	622	
			Lead		1,183
			Zinc		171
1948	9		Silver	7,309	
			Lead		735
			Zinc		2,094
1939	1		Silver	5,599	
			Lead		72
			Zinc		59
1937	1		Silver	933	
			Lead		71
			Zinc		244
1935	1		Silver	4,603	
			Lead		24
			Zinc		48
1934	54		Silver	95,020	
			Gold	1,711	
			Lead		3,161
			Zinc		2,687
1931	30		Silver	78,939	
			Gold	871	
			Lead		1,837
			Zinc		2,967
1930	60		Silver	579,480	
			Gold	31	
			Lead		3,449
			Zinc		5,979
1929	27		Silver	303,845	
			Gold	31	
			Lead		1,336
			Zinc		2,515
1920	20		Silver	134,303	
			Lead		1,029
1919	12		Silver	187,520	
			Lead		592
1918	5		Silver	111,598	
			Lead		170

SUMMARY TOTALS: 082ENE017

NAME: **WATERLOO**

	<u>Metric</u>	<u>Imperial</u>
Mined:	982 tonnes	1,082 tons
Milled:	1,011 tonnes	1,114 tons
Recovery:		
Silver:	1,723,791 grams	55,421 ounces
Gold:	2,644 grams	85 ounces
Cadmium:	123 kilograms	271 pounds
Copper:	5 kilograms	11 pounds
Lead:	22,128 kilograms	48,784 pounds
Zinc:	41,060 kilograms	90,522 pounds

Comments:

1967: Ore Mined is from clean-up operations.
 1954: 263 tonnes came from existing dumps, 748 tonnes mined underground.
 1949: Ore was shipped from dump, possibly DIRECTOR 5 dump.
 1948: May be from 2 trial shipments from the DIRECTOR 5(082ENE022) dump.
 1931: Includes 17.69 tonnes produced from AU (082ENE027) property.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ENE034		NAME: KILLARNEY		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1959	4		Silver	14,090		
			Lead		1,133	
			Zinc		38	
1919	1		Silver	2,177		
			Lead			360

SUMMARY TOTALS: 082ENE034

NAME: **KILLARNEY**

	<u>Metric</u>	<u>Imperial</u>
Mined:	5 tonnes	6 tons
Milled:	tonnes	tons
Recovery:		
Silver:	16,267 grams	523 ounces
Lead:	1,493 kilograms	3,292 pounds
Zinc:	38 kilograms	84 pounds

Comments:

1959: Crude ore, operated by H.O. Cooper.
 1919: Assessment work by W. Calder for W. Banting.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ENE035		NAME: LIGHTNING PEAK		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1936	2		Silver	6,780	
			Lead		173
			Zinc		122
1935	7		Silver	29,019	
			Lead		693
			Zinc		494
1933	2		Silver	5,194	
			Lead		29
			Zinc		104
1930	8		Silver	10,326	
			Lead		1,003
			Zinc		239
1928	14		Silver	33,622	
			Lead		2,486
1927	32		Silver	15,707	
			Gold	31	
			Lead		12,014
			Zinc		2,403
1923	9		Silver	39,252	
			Lead		3,695
1922	5		Silver	9,113	
			Lead		1,948
1920	5		Silver	16,329	
			Lead		1,240
1919	9		Silver	31,103	
			Lead		454
1918	3		Silver	17,107	
			Gold	62	
			Lead		3,266
1908	19		Silver	102,640	
			Lead		2,667
1907	19		Silver	93,247	
			Lead		5,114
1904	5		Silver	25,504	
			Lead		1,179

SUMMARY TOTALS: 082ENE035

NAME: **LIGHTNING PEAK**

	<u>Metric</u>	<u>Imperial</u>
Mined:	139 tonnes	153 tons
Milled:	tonnes	tons
Recovery:		
Silver:	434,943 grams	13,984 ounces
Gold:	93 grams	3 ounces
Lead:	35,961 kilograms	79,280 pounds
Zinc:	3,362 kilograms	7,412 pounds

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 8
 REPORT: RGEN0200

MINFILE NUMBER: <u>082ENE051</u>		NAME: <u>HOMESTAKE</u>		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1941	418		Silver	11,912		
			Gold	5,039		
			Zinc		205	
1940	35		Silver	1,680		
			Gold	1,897		
			Lead		259	
			Zinc		348	

SUMMARY TOTALS: 082ENE051

NAME: HOMESTAKE

	<u>Metric</u>	<u>Imperial</u>
Mined:	453 tonnes	499 tons
Milled:	tonnes	tons
Recovery:		
Silver:	13,592 grams	437 ounces
Gold:	6,936 grams	223 ounces
Lead:	259 kilograms	571 pounds
Zinc:	553 kilograms	1,219 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 9
REPORT: RGEN0200

MINFILE NUMBER: 082ENW002	NAME: BLUE HAWK	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1934	5		Silver Gold	560 156	

SUMMARY TOTALS: 082ENW002

NAME: **BLUE HAWK**

		<u>Metric</u>		<u>Imperial</u>	
	Mined:	5 tonnes		6 tons	
	Milled:			tons	
Recovery:	Silver:	560 grams		18 ounces	
	Gold:	156 grams		5 ounces	
Comments:	1934:	Minister of Mines Index No. 3, page 190.			

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ENW018		NAME: SILVER KING		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1941	73		Silver	2,426		
			Gold	249		
1940	47		Silver	3,546		
			Gold	280		
1939	124		Silver	9,144		
			Gold	1,089		

SUMMARY TOTALS: 082ENW018

NAME: **SILVER KING**

	<u>Metric</u>	<u>Imperial</u>
Mined:	244 tonnes	269 tons
Milled:	tonnes	tons
Recovery: Silver:	15,116 grams	486 ounces
Gold:	1,618 grams	52 ounces

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ENW028		NAME: KELLY		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1927	1		Silver	1,089		
			Lead		24	
			Zinc		24	
1926	1		Silver	1,680		
			Lead		45	
			Zinc		39	

SUMMARY TOTALS: 082ENW028

NAME: **KELLY**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2 tonnes	2 tons
Milled:	tonnes	tons
Recovery:		
Silver:	2,769 grams	89 ounces
Lead:	69 kilograms	152 pounds
Zinc:	63 kilograms	139 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ENW029		NAME: OKANAGAN		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1952	5		Silver	342		
			Gold	93		
			Lead		133	
			Zinc		143	
1948	3		Silver	187		
			Gold	31		
			Lead		98	
1918	122		Zinc		141	
			Silver	9,020		
			Gold	1,369		
			Copper		735	

SUMMARY TOTALS: 082ENW029

NAME: **OKANAGAN**

	<u>Metric</u>	<u>Imperial</u>
Mined:	130 tonnes	143 tons
Milled:	tonnes	tons
Recovery:		
Silver:	9,549 grams	307 ounces
Gold:	1,493 grams	48 ounces
Copper:	735 kilograms	1,620 pounds
Lead:	231 kilograms	509 pounds
Zinc:	284 kilograms	626 pounds

Comments: 1918: Copper calculated from recovery; Annual Report 1918, page K211.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 13
REPORT: RGEN0200

MINFILE NUMBER: 082ENW031	NAME: BATHFIELD SILVER LODE	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1939	1		Silver	591	
			Lead		29
			Zinc		14

SUMMARY TOTALS: 082ENW031

	NAME: BATHFIELD SILVER LODE	
	<u>Metric</u>	<u>Imperial</u>
Mined:	1 tonnes	1 tons
Milled:	tonnes	tons
Recovery:		
Silver:	591 grams	19 ounces
Lead:	29 kilograms	64 pounds
Zinc:	14 kilograms	31 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ENW040	NAME: LAKEVALE	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
1918	5	
		Commodity
		Silver
		Grams Recovered
		3,110
		Kilograms Recovered

SUMMARY TOTALS: 082ENW040

	NAME: LAKEVALE	
	<u>Metric</u>	<u>Imperial</u>
Mined:	5 tonnes	6 tons
Milled:	tonnes	tons
Recovery:		
Silver:	3,110 grams	100 ounces
Comments:		
1918:	In 1917, 9 tonnes mined, recovered unknown, Annual Report 1917.	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ENW046		NAME: ROSEMONT		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1941	40		Silver	124		
			Gold	155		
1938	30		Silver	933		
			Gold	498		
1937	37		Silver	871		
			Gold	809		

SUMMARY TOTALS: 082ENW046

NAME: **ROSEMONT**

	<u>Metric</u>	<u>Imperial</u>
Mined:	107 tonnes	118 tons
Milled:	tonnes	tons
Recovery:		
Silver:	1,928 grams	62 ounces
Gold:	1,462 grams	47 ounces
Comments:		
1941:	Operated by Highland Bell Limited.	
1937:	Operated by W.R. Fowler.	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ENW105		NAME: MISSION CREEK		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1895			Gold	3,919	
1890			Gold	5,038	
1880			Gold	11,601	

SUMMARY TOTALS: 082ENW105

NAME: **MISSION CREEK**

	<u>Metric</u>	<u>Imperial</u>
Mined:	tonnes	tons
Milled:	tonnes	tons
Gold:	20,558 grams	661 ounces

Comments:

1895: Placer gold production 1891-95 was 126 ounces, Bulletin 28.
 1890: Placer gold production 1886-90 was 162 ounces, Bulletin 28.
 1880: Placer gold production 1876-80 was 373 ounces, Bulletin 28.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: <u>082ESE001</u>		NAME: <u>PROVIDENCE (L.618)</u>		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1973		48	Silver	18,444	
			Gold	249	
			Copper		29
			Lead		242
			Zinc		146
1961	5		Silver	22,674	
			Gold	93	
			Lead		133
			Zinc		129
1960	5		Silver	16,827	
			Gold	62	
			Lead		102
			Zinc		76
1958	12		Silver	73,496	
			Gold	249	
			Lead		415
			Zinc		297
1957	11		Silver	41,367	
			Gold	156	
1956	5		Silver	34,431	
			Gold	93	
			Lead		199
			Zinc		254
1952	6		Silver	69,391	
			Gold	249	
			Lead		421
			Zinc		365
1951	24		Silver	143,634	
			Gold	684	
			Lead		941
			Zinc		982
1950	23		Silver	179,930	
			Gold	498	
			Lead		1,146
			Zinc		1,418
1946	156		Silver	363,843	
			Gold	1,431	
			Lead		2,184
			Zinc		2,532
1945	282		Silver	931,815	
			Gold	3,048	
			Lead		4,431
			Zinc		4,304
1944	393		Silver	1,381,689	
			Gold	10,699	
			Lead		9,283
			Zinc		12,371
1943	388		Silver	1,662,829	
			Gold	6,967	
			Lead		9,806
			Zinc		11,896
1942	737		Silver	2,367,623	
			Gold	11,788	
			Lead		11,505
			Zinc		12,776
1941	1,723		Silver	7,859,977	
			Gold	24,758	
			Lead		35,223
			Zinc		42,360
1940	1,161		Silver	3,066,756	
			Gold	17,667	
			Lead		16,030
			Zinc		19,222
1939	73		Silver	253,116	
			Gold	871	
			Lead		1,297
			Zinc		1,323
1938	131		Silver	648,249	
			Gold	2,768	
			Lead		2,899
			Zinc		3,173

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082ESE001</u>	NAME:	<u>PROVIDENCE (L.618)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1936	24		Silver	77,509	
			Gold	342	
			Lead		432
			Zinc		707
1935	13		Silver	36,328	
			Gold	156	
			Lead		232
			Zinc		169
1934	38		Silver	52,937	
			Gold	249	
			Lead		307
			Zinc		345
1929	91		Silver	383,904	
			Gold	1,773	
			Lead		1,623
			Zinc		3,128
1928	41		Silver	152,125	
			Gold	746	
			Lead		563
1927	11		Silver	33,218	
1926	43		Silver	83,978	
			Gold	342	
			Lead		83
1924	183		Silver	1,084,344	
			Gold	3,328	
			Lead		3,335
1923	2		Silver	4,883	
			Gold	31	
			Lead		8
1921	88		Silver	553,167	
			Gold	1,959	
1920	857		Silver	4,622,310	
			Gold	17,978	
			Lead		14,732
1919	307		Silver	1,210,000	
			Gold	8,305	
			Lead		32,484
1918	213		Silver	699,009	
			Gold	4,821	
1907	635		Silver	1,469,461	
			Gold	5,381	
1906	1,073		Silver	4,416,875	
			Gold	15,209	
			Lead		11,875
1905	708		Silver	3,424,160	
			Gold	12,317	
			Lead		6,173
1904	218		Silver	746,472	
			Gold	3,110	
			Lead		3,175
1903	614		Silver	3,225,257	
			Gold	18,164	
			Lead		9,993
1902	118		Silver	940,804	
			Gold	6,376	
			Lead		1,385
1893	14		Silver	199,059	
			Gold	467	

SUMMARY TOTALS: 082ESE001

NAME: **PROVIDENCE (L.618)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	10,426 tonnes	11,493 tons
Milled:	48 tonnes	53 tons
Recovery:		
Silver:	42,551,891 grams	1,368,073 ounces
Gold:	183,384 grams	5,896 ounces
Copper:	29 kilograms	64 pounds
Lead:	182,657 kilograms	402,690 pounds
Zinc:	117,973 kilograms	260,086 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 19
REPORT: RGEN0200

MINFILE NUMBER: **082ESE001**

NAME: **PROVIDENCE (L.618)**

STATUS: Past Producer

Comments:

Comments:

1973: Siliceous ore from dump.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082ESE002</u>	NAME:	<u>ELKHORN (L.818)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1947	10		Silver	13,032	
			Gold	62	
			Lead		80
			Zinc		70
1939	4		Silver	12,783	
			Gold	62	
			Lead		124
			Zinc		105
1937	16		Silver	14,090	
			Gold	93	
			Lead		147
			Zinc		195
1935	30		Silver	120,991	
			Gold	467	
			Lead		1,630
			Zinc		1,334
1929	5		Silver	37,013	
			Gold	218	
			Lead		253
1928	19		Silver	17,884	
			Gold	373	
1917	7		Silver	8,584	
			Gold	62	
1912	15		Gold	2,799	
1911	22		Silver	115,703	
			Gold	404	
			Lead		4,672
1907	19		Silver	55,550	
			Gold	249	
			Lead		195
1906	24		Silver	32,845	
			Gold	280	
			Lead		237
1905	8		Silver	28,055	
			Gold	124	
			Lead		818

SUMMARY TOTALS: 082ESE002

NAME: **ELKHORN (L.818)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	179 tonnes	197 tons
Milled:	tonnes	tons
Recovery:		
Silver:	456,530 grams	14,678 ounces
Gold:	5,193 grams	167 ounces
Lead:	8,156 kilograms	17,981 pounds
Zinc:	1,704 kilograms	3,757 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE004		NAME: GOLDFINCH (L.820)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1944	65		Silver	21,057	
			Gold	1,991	
			Lead		2,024
			Zinc		131
1941	108		Silver	26,406	
			Gold	5,070	
			Lead		3,970
			Zinc		1,706
1940	9		Silver	3,639	
			Gold	435	
			Lead		259
			Zinc		112
1904	54		Silver	12,939	
			Gold	3,141	
1903	25		Silver	5,599	
			Gold	1,493	
1902	38		Silver	18,786	
			Gold	5,972	
			Lead		1,785

SUMMARY TOTALS: 082ESE004

NAME: **GOLDFINCH (L.820)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	299 tonnes	330 tons
Milled:	tonnes	tons
Recovery:		
Silver:	88,426 grams	2,843 ounces
Gold:	18,102 grams	582 ounces
Lead:	8,038 kilograms	17,721 pounds
Zinc:	1,949 kilograms	4,297 pounds

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 22
 REPORT: RGEN0200

MINFILE NUMBER: 082ESE005		NAME: BAY		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1941	39		Silver	1,617		
			Gold	280		
1937	12		Silver	1,524		
			Gold	373		
1936	32		Silver	778		
			Gold	4,230		
1935	266		Silver	5,972		
			Gold	3,141		
1934	23		Silver	1,026		
			Gold	1,213		
1907	19		Silver	249		
			Gold	1,306		
1905	39		Silver	2,613		
			Gold	4,292		
1904	17		Silver	684		
			Gold	2,146		

SUMMARY TOTALS: 082ESE005

NAME: **BAY**

	<u>Metric</u>	<u>Imperial</u>
Mined:	447 tonnes	493 tons
Milled:		tons
Recovery:		
Silver:	14,463 grams	465 ounces
Gold:	16,981 grams	546 ounces

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE006** NAME: **EPU** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1947	85		Silver	12,970	
			Gold	3,421	
			Lead		2,127
			Zinc		1,141
1915	91		Silver	6,221	
			Gold	5,692	
1905	230		Silver	174,332	
			Gold	16,671	
			Lead		5,497
1904	71		Silver	16,080	
			Gold	5,474	
1903	94		Silver	19,875	
			Gold	13,343	

SUMMARY TOTALS: 082ESE006

NAME: **EPU**

	<u>Metric</u>	<u>Imperial</u>
Mined:	571 tonnes	629 tons
Milled:	tonnes	tons
Recovery:		
Silver:	229,478 grams	7,378 ounces
Gold:	44,601 grams	1,434 ounces
Lead:	7,624 kilograms	16,808 pounds
Zinc:	1,141 kilograms	2,515 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE008** NAME: **DYNAMO (L.2087)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1955	15		Silver	1,897	
			Lead		1,123
			Zinc		526
1951	33		Silver	5,847	
			Lead		4,901
			Zinc		1,418
1950	39		Silver	9,549	
			Gold	31	
			Lead		7,487
			Zinc		3,763
1949	26		Silver	6,003	
			Lead		4,124
			Zinc		1,122
1948	18		Silver	2,830	
			Lead		2,057
			Zinc		126
1947	53		Silver	5,070	
			Lead		3,553
			Zinc		279
1942	33		Silver	6,314	
			Gold	187	
			Lead		755
1940	55		Silver	2,177	
			Gold	404	
1938	22		Silver	4,199	
			Gold	342	
			Lead		426
1936	7		Silver	342	
			Gold	311	
1934	51		Silver	6,843	
			Gold	622	
			Lead		1,714
			Zinc		58
1933	18		Silver	5,599	
			Gold	280	
			Lead		1,057
1932	2		Silver	964	
			Gold	62	
			Lead		183
1914	13		Silver	1,586	
			Gold	778	
			Lead		387

SUMMARY TOTALS: 082ESE008

NAME: **DYNAMO (L.2087)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	385 tonnes	424 tons
Milled:	tonnes	tons
Recovery:	Silver: 59,220 grams	1,904 ounces
	Gold: 3,017 grams	97 ounces
	Lead: 27,767 kilograms	61,216 pounds
	Zinc: 7,292 kilograms	16,076 pounds

Comments: 1942: Starveout.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE010		NAME: HELEN (L.691)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1940	9		Silver	591	
			Gold	31	
			Lead		476
			Zinc		117
1925	18		Silver	4,261	
			Gold	62	
			Lead		849
1906	15		Silver	1,244	
			Gold	93	
			Lead		536

SUMMARY TOTALS: 082ESE010

NAME: **HELEN (L.691)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	42 tonnes	46 tons
Milled:	tonnes	tons
Recovery:		
Silver:	6,096 grams	196 ounces
Gold:	186 grams	6 ounces
Lead:	1,861 kilograms	4,103 pounds
Zinc:	117 kilograms	258 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE011** NAME: **SKYLARK (L.763)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1989	12,242	11,680	Silver	2,916,044	
			Gold	39,100	
			Copper		3,190
			Lead		25,866
			Zinc		38,545
1988	21,056	21,591	Silver	8,835,005	
			Gold	51,103	
			Copper		6,346
			Lead		81,672
			Zinc		5,063
1940	2		Silver	2,582	
			Gold	31	
			Lead		34
			Zinc		47
1936	90		Silver	181,019	
			Gold	964	
			Lead		1,961
			Zinc		2,657
1935	239		Silver	209,417	
			Gold	1,182	
			Lead		1,185
			Zinc		2,104
1920	27		Silver	19,128	
			Gold	187	
1917	24		Gold	93	
1915	139		Silver	142,638	
			Gold	1,120	
1907	192		Silver	411,959	
			Gold	2,613	
			Lead		826
1906	545		Silver	2,089,997	
			Gold	5,847	
			Lead		15,660
1905	485	485	Silver	1,468,342	
			Gold	8,118	
			Lead		4,536
1904	48		Silver	217,317	
			Gold	1,213	
			Lead		1,565
1894	62		Silver	423,001	
			Gold	715	
1893	13		Silver	116,698	
			Gold	435	

SUMMARY TOTALS: 082ESE011

NAME: **SKYLARK (L.763)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	35,164 tonnes	38,762 tons
Milled:	33,756 tonnes	37,210 tons
Recovery:		
Silver:	17,033,147 grams	547,628 ounces
Gold:	112,721 grams	3,624 ounces
Copper:	9,536 kilograms	21,023 pounds
Lead:	133,305 kilograms	293,887 pounds
Zinc:	48,416 kilograms	106,739 pounds

Comments:

1989: Operated by Skylark Resources Ltd.
 1988: Operated by Skylark Resources Ltd.
 1940: Operated by W. Madden.
 1936: Operated by W. McArthur.
 1935: Operated by W. McArthur.
 1920: Operated by C.D. Hunter.
 1917: Blue Jay (included with MM00948).
 1915: Skylark Development Company Limited.
 1904: 1904-1915, Skylark Development Company Limited.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE012		NAME: CRESCENT (L.1711)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1959	1		Silver	5,630	
			Gold	31	
			Lead		54
			Zinc		29
1941	22		Silver	32,938	
			Gold	124	
			Lead		435
			Zinc		913
1940	29		Silver	62,517	
			Gold	187	
			Lead		751
			Zinc		896
1938	24		Silver	41,149	
			Gold	218	
			Lead		398
			Zinc		846
1935	15		Silver	29,081	
			Gold	187	
			Lead		309
			Zinc		762
1928	3		Silver	5,661	
			Gold	31	
			Lead		46
			Zinc		36
1927	4		Silver	13,063	
			Gold	31	
1926	13		Silver	22,301	
			Gold	93	
			Lead		190
1925	5		Silver	4,448	
			Gold	31	
			Lead		64
1923	3		Silver	4,603	
			Lead		38
1920	6		Silver	7,309	
			Gold	62	
			Lead		67
1908	48		Silver	109,203	
			Gold	435	
1905	77		Silver	115,859	
			Gold	467	
			Lead		678

SUMMARY TOTALS: 082ESE012

NAME: **CRESCENT (L.1711)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	250 tonnes	276 tons
Milled:	tonnes	tons
Recovery:		
Silver:	453,762 grams	14,589 ounces
Gold:	1,897 grams	61 ounces
Lead:	3,030 kilograms	6,680 pounds
Zinc:	3,482 kilograms	7,676 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE013** NAME: **BROOKLYN (L.796)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1960	821	27	Silver	6,096	
			Gold	933	
			Copper		8,631
1949	1,913		Silver	21,057	
			Gold	3,670	
			Copper		25,714
1940	1,795		Silver	23,918	
			Gold	19,253	
			Copper		20,969
1939	15,636		Silver	139,030	
			Gold	88,364	
			Copper		142,877
1938	11,691		Silver	79,406	
			Gold	81,241	
			Copper		83,334
1937	1,705		Silver	14,961	
			Gold	19,439	
			Copper		17,449
1936	244		Silver	2,115	
			Gold	591	
			Copper		2,320
1932	29		Silver	995	
			Gold	435	
			Copper		684
1928	93		Silver	3,204	
			Gold	467	
			Copper		1,741
1926	28		Silver	1,462	
			Gold	124	
			Copper		1,125
1919		26	Silver	809	
			Gold	62	
			Copper		1,119
1918		36	Silver	342	
			Gold	93	
			Copper		557
1916	33		Silver	404	
			Gold	31	
			Copper		418
1908	5,456		Silver	39,376	
			Gold	17,200	
			Copper		33,306
1907	50,392		Silver	437,122	
			Gold	103,666	
			Copper		506,440
1906	129,700		Silver	1,687,275	
			Gold	327,982	
			Copper		1,679,974
1905	52,291		Silver	670,077	
			Gold	124,910	
			Copper		717,082
1904	20,898		Silver	303,006	
			Gold	66,249	
			Copper		320,935
1900	109		Gold	280	
			Copper		2,722

SUMMARY TOTALS: 082ESE013

NAME: **BROOKLYN (L.796)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	292,834 tonnes	322,794 tons
Milled:	89 tonnes	98 tons
Recovery:		
Silver:	3,430,655 grams	110,298 ounces
Gold:	854,990 grams	27,489 ounces
Copper:	3,567,397 kilograms	7,864,762 pounds

Comments: 1960: Ore mined after 1960 is combined with Phoenix (82ESE020).
 1949: Ore mined is estimated; operated by Brooklyn-Stemwinder Mines Ltd.
 1939: Brooklyn & Stemwinder (082ESE014).
 1937: Brooklyn operated by W. McArthur.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 29
REPORT: RGEN0200

MINFILE NUMBER: **082ESE013**

NAME: **BROOKLYN (L.796)**

STATUS: Past Producer

Comments:

1936: Brooklyn.
1926: R. Forshaw, Brooklyn; includes ore from Surprise No. 3 (082ESE260).
1919: Stemwinder (082ESE014) dumps.
1918: Stemwinder dumps, operated by New Dominion Copper Company Ltd.
1916: Idaho operated by B.C. Copper Co.
1908: Brooklyn.
1907: Brooklyn & Idaho.
1906: Brooklyn & Idaho.
1905: Dominion Copper Company Ltd. and ore from dumps.
1904: Operators Dominion Copper Company Ltd./Montreal & Boston Cons. M&S
1900: Brooklyn & Stemwinder operated by Dominion Copper Company Ltd.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: <u>082ESE020</u>		NAME: <u>PHOENIX (KNOB HILL)</u>		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1978		237,801	Silver	924,599		
			Gold	120,555		
			Copper			912,728
1977		832,583	Silver	1,748,891		
			Gold	268,238		
			Copper			2,695,517
1976	183,633	965,845	Silver	3,261,367		
			Gold	364,620		
			Copper			4,231,760
1975	332,480	985,875	Silver	3,657,215		
			Gold	366,978		
			Copper			4,220,275
1974	171,149	918,454	Silver	2,661,546		
			Gold	317,344		
			Copper			3,492,966
1973	170,502	910,641	Silver	3,125,914		
			Gold	553,042		
			Copper			4,524,713
1972	803,439	806,724	Silver	3,123,332		
			Gold	480,324		
			Copper			4,398,465
1971	775,085	804,789	Silver	4,177,071		
			Gold	444,960		
			Copper			5,756,490
1970	798,183	782,131	Silver	4,225,747		
			Gold	379,488		
			Copper			5,148,306
1969	714,460	688,821	Silver	2,946,232		
			Gold	489,250		
			Copper			4,299,630
1968	589,712	633,934	Silver	2,830,249		
			Gold	390,996		
			Copper			3,893,053
1967	726,062	647,285	Silver	3,517,625		
			Gold	432,083		
			Copper			4,606,959
1966	605,925	635,700	Silver	3,522,539		
			Gold	429,097		
			Copper			4,207,741
1965	638,129	638,129	Silver	2,920,758		
			Gold	493,356		
			Copper			4,120,956
1964	617,952	622,568	Silver	2,483,979		
			Gold	399,207		
			Copper			3,462,978
1963	585,206	585,206	Silver	2,044,898		
			Gold	372,956		
			Copper			3,242,159
1962	503,212	503,212	Silver	2,029,937		
			Gold	407,045		
			Copper			3,224,548
1961	381,353	381,353	Silver	1,493,224		
			Gold	229,260		
			Copper			2,265,745
1960	314,463	314,463	Silver	1,516,831		
			Gold	242,044		
			Copper			2,321,901
1959	159,614	159,614	Silver	367,451		
			Gold	78,037		
			Copper			560,608
1942	2,047		Silver	61,646		
			Gold	17,542		
			Copper			3,605
1941	13,062		Silver	182,201		
			Gold	47,805		
			Copper			15,852
			Lead			530
1940	8,284		Silver	192,901		
			Gold	25,567		

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082ESE020</u>	NAME:	<u>PHOENIX (KNOB HILL)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1940	8,284		Copper		60,674
1939	657		Silver	21,834	
			Gold	7,620	
			Copper		22,138
1938	3,929		Silver	31,165	
			Gold	10,482	
			Copper		34,123
1937	13,949		Silver	129,233	
			Gold	45,130	
			Copper		204,732
1936	4,092		Silver	41,056	
			Gold	16,080	
			Copper		72,754
1924	548		Silver	89,919	
			Gold	9,393	
			Copper		66,666
1920	539		Silver	92,189	
			Gold	11,788	
			Copper		74,209
1919	129,805		Silver	1,424,766	
			Gold	239,338	
			Copper		1,530,319
1918	402,002		Silver	2,719,771	
			Gold	509,903	
			Copper		3,332,650
1917	446,379		Silver	3,917,361	
			Gold	557,148	
			Copper		4,654,932
1916	891,646		Silver	7,396,013	
			Gold	1,115,540	
			Copper		9,270,639
1915	939,135		Silver	8,192,312	
			Gold	1,417,053	
			Copper		10,557,223
1914	673,118		Silver	5,995,819	
			Gold	901,738	
			Copper		7,873,202
1913	1,113,603		Silver	10,737,409	
			Gold	1,513,348	
			Copper		13,523,564
1912	1,134,600		Silver	10,691,687	
			Gold	1,590,763	
			Copper		14,132,371
1911	551,638		Silver	5,437,302	
			Gold	792,566	
			Copper		6,910,983
1910	975,098		Silver	9,489,308	
			Gold	1,412,201	
			Copper		12,116,138
1909	939,392		Silver	10,749,508	
			Gold	1,562,584	
			Copper		13,004,653
1908	933,260		Silver	10,281,781	
			Gold	1,647,619	
			Copper		13,565,962
1907	556,618		Silver	7,085,512	
			Gold	1,045,652	
			Copper		8,598,300
1906	735,184		Silver	10,091,368	
			Gold	1,528,992	
			Copper		11,277,480
1905	595,959		Silver	8,227,894	
			Gold	1,264,555	
			Copper		9,847,106
1904	493,960		Silver	5,287,510	
			Gold	1,119,708	
			Copper		7,646,946
1903	354,232		Silver	3,643,001	
			Gold	906,621	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082ESE020</u>	NAME:	<u>PHOENIX (KNOB HILL)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1903	354,232		Copper		5,503,660
1902	278,087		Silver	3,375,204	
			Gold	778,104	
			Copper		4,707,669
1901	206,635		Silver	3,338,254	
			Gold	690,860	
			Copper		3,779,530
1900	84,266		Silver	1,532,414	
			Gold	296,039	
			Copper		1,717,127

SUMMARY TOTALS: 082ESE020

NAME: **PHOENIX (KNOB HILL)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	21,552,283 tonnes	23,757,325 tons
Milled:	13,055,128 tonnes	14,390,815 tons
Recovery:		
Silver:	183,035,743 grams	5,884,727 ounces
Gold:	28,340,619 grams	911,171 ounces
Copper:	235,692,705 kilograms	519,613,323 pounds
Lead:	530 kilograms	1,168 pounds

Comments:

- 1978: Production ceased June 30 and mine closed October 4, 1978.
- 1975: Operator name change to Granby Mining Corp.
- 1974: Stockpile milled.
- 1973: Stockpile milled.
- 1972: Old Ironsides (082ESE021).
- 1971: Old Ironsides (082ESE021).
- 1970: Old Ironsides (082ESE021).
- 1969: Old Ironsides (082ESE021).
- 1968: Old Ironsides (082ESE021).
- 1967: Stemminder (082ESE014) and Old Ironsides (082ESE021).
- 1966: Stemminder (082ESE014) and Old Ironsides (082ESE021).
- 1965: Old Ironsides (082ESE021).
- 1964: Idaho, Stemminder, Old Ironsides & Snowshoe-082ESE013,014,021,025.
- 1963: Operated by The Granby Mining Co. Ltd., Phoenix Copper Division.
- 1962: Old Ironsides, Snowshoe and Rawhide (082ESE021,025,026).
- 1961: Idaho, Old Ironsides and Rawhide (082ESE013,021,026).
- 1960: Old Ironsides & Rawhide (082ESE026). Idaho (082ESE013) acquired.
- 1959: Old Ironsides and Snowshoe; Phoenix Copper Company Limited.
- 1939: Old Ironsides (082ESE021).
- 1938: Old Ironsides (082ESE021).
- 1937: Old Ironsides, Gold Drop and Curlew closed.
- 1936: Old Ironsides (082ESE021) operated by W.E. McArthur.
- 1924: Clean-up of Granby Smelter.
- 1920: Clean-up of Granby Smelter.
- 1919: Knob Hill, Old Ironsides, Victoria, Gold Drop, Monarch, Curlew-closed.
- 1918: Includes Victoria and Gold Drop (082ESE023,028).
- 1917: Includes Victoria and Gold Drop (082ESE023,028).
- 1916: Includes Grey Eagle, Victoria and Gold Drop (082ESE018,023,028).
- 1915: Includes Victoria and Gold Drop (082ESE023,028).
- 1914: Includes Victoria, Gold Drop and Snowshoe (082ESE023,025,028).
- 1912: Includes Gold Drop (082ESE028).
- 1910: Gold Drop, Curlew and Monarch (082ESE028,024,027).
- 1907: Includes Victoria. Curlew (082ESE024) acquired by Granby.
- 1906: Includes Victoria (082ESE023).
- 1905: Gold Drop (082ESE028) acquired by Granby.
- 1904: Monarch (082ESE027) acquired by Granby.
- 1903: Knob Hill.
- 1902: Knob Hill, Old Ironsides (082ESE021) and Victoria (082ESE023).
- 1901: Operated by Granby Consolidated Mining, Smelting & Power Co. Ltd.
- 1900: Knob Hill and Old Ironsides (082ESE021).

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE025		NAME: SNOWSHOE (L.891)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1911	25,755		Silver	248,700	
			Gold	57,012	
			Copper		319,788
1910	129,356		Silver	1,066,988	
			Gold	287,547	
			Copper		1,101,317
1909	143,188		Silver	1,160,951	
			Gold	330,936	
			Copper		1,709,151
1908	44,484		Silver	336,628	
			Gold	100,369	
			Copper		546,724
1907	114,819		Silver	1,237,433	
			Gold	238,840	
			Copper		1,533,648
1906	5,769		Silver	58,722	
			Gold	16,329	
			Copper		81,918
1903	63,228		Silver	649,400	
			Gold	181,082	
			Copper		811,995
1902	16,763		Silver	167,770	
			Gold	62,610	
			Copper		190,588
1901	1,509		Silver	19,595	
			Gold	7,993	
			Copper		22,716
1900	258		Silver	3,763	
			Gold	1,275	
			Copper		4,244

SUMMARY TOTALS: 082ESE025

NAME: **SNOWSHOE (L.891)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	545,129 tonnes	600,902 tons
Milled:		
Recovery:		
Silver:	4,949,950 grams	159,144 ounces
Gold:	1,283,993 grams	41,281 ounces
Copper:	6,322,089 kilograms	13,937,816 pounds

Comments:

1911: Closed in April 1911. Subsequent production included with Phoenix.
 1907: Acquired War Eagle (082ESE019).
 1906: Operated by Consolidated Mining & Smelting Company of Canada.
 1901: Operated by Snowshoe Gold and Copper Mines, Ltd.
 1900: Operated by B.C. (Rossland and Slocan) Syndicate, Limited.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE026		NAME: RAWHIDE (L.892)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1916	41		Silver	498		
			Gold	93		
			Copper			630
1914	77,854		Silver	789,550		
			Gold	106,994		
			Copper			756,485
1913	215,756		Silver	1,310,400		
			Gold	260,208		
			Copper			1,882,605
1912	237,185		Silver	1,873,925		
			Gold	274,391		
			Copper			2,498,939
1911	159,984		Silver	1,558,727		
			Gold	213,740		
			Copper			1,702,056
1910	47,727		Silver	368,602		
			Gold	64,352		
			Copper			409,926
1908	10,785		Silver	83,978		
			Gold	12,908		
			Copper			103,414
1907	58,216		Silver	493,014		
			Gold	63,886		
			Copper			588,568
1906	23,195		Silver	246,056		
			Gold	30,512		
			Copper			278,767
1905	22,106		Silver	184,752		
			Gold	28,584		
			Copper			220,056
1904	2,785		Silver			
			Gold			
			Copper			

SUMMARY TOTALS: 082ESE026

NAME: **RAWHIDE (L.892)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	855,634 tonnes	943,175 tons
Milled:	tonnes	tons
Recovery:		
Silver:	6,909,502 grams	222,145 ounces
Gold:	1,055,668 grams	33,940 ounces
Copper:	8,441,446 kilograms	18,610,198 pounds

Comments:

1916: Subsequent production is included with Phoenix (082ESE020).
 1911: Operated by New Dominion Copper Company Ltd.
 1906: Operated by Dominion Copper Company Ltd.
 1904: No recoveries.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE028		NAME: GOLD DROP (L.899)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1900	12		Silver	435	
			Gold	31	
			Copper		417

SUMMARY TOTALS: 082ESE028

NAME: **GOLD DROP (L.899)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	12 tonnes	13 tons
Milled:	tonnes	tons
Recovery:	Silver: 435 grams	14 ounces
	Gold: 31 grams	1 ounces
	Copper: 417 kilograms	919 pounds

Comments: 1900: Operated by Gold Drop Mining Company, Limited.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 36
REPORT: RGEN0200

MINFILE NUMBER:	082ESE029	NAME:	BANK OF ENGLAND (L.1235)	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1938	3		Silver Gold	156 31	

SUMMARY TOTALS: 082ESE029

NAME: **BANK OF ENGLAND (L.1235)**

		<u>Metric</u>		<u>Imperial</u>	
	Mined:	3 tonnes		3 tons	
	Milled:			tons	
Recovery:	Silver:	156 grams		5 ounces	
	Gold:	31 grams		1 ounces	
Comments:	1938:	Operated by R. Forshaw.			

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE031		NAME: MARSHALL (L.2388)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1975	176		Silver	3,017	
			Gold	3,266	
			Lead		176
			Zinc		176
1971	106		Silver	12,503	
			Gold	8,616	
			Copper		472
			Lead		1,979
			Zinc		211
1967	88		Silver	2,115	
			Gold	3,328	
			Lead		163
			Zinc		168

SUMMARY TOTALS: 082ESE031

NAME: **MARSHALL (L.2388)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	370 tonnes	408 tons
Milled:	tonnes	tons
Recovery:		
Silver:	17,635 grams	567 ounces
Gold:	15,210 grams	489 ounces
Copper:	472 kilograms	1,041 pounds
Lead:	2,318 kilograms	5,110 pounds
Zinc:	555 kilograms	1,224 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE032** NAME: **GOLDEN CROWN (L.600)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1941	41		Silver	1,586	
			Gold	809	
			Copper		681
1902	414		Silver	6,998	
			Gold	3,328	
			Copper		2,060
1900	2,033		Silver	61,397	
			Gold	34,400	
			Copper		35,312

SUMMARY TOTALS: 082ESE032

NAME: **GOLDEN CROWN (L.600)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,488 tonnes	2,743 tons
Milled:		
Recovery:		
Silver:	69,981 grams	2,250 ounces
Gold:	38,537 grams	1,239 ounces
Copper:	38,053 kilograms	83,892 pounds

Comments:

1941: Operated by W. MacArthur.
 1902: Operated by Golden Crown Mining Company.
 1900: Operated by W. Ords.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	082ESE033	NAME:	WINNIPEG (L.599)	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1940	132		Silver	6,096	
			Gold	1,617	
			Copper		1,688
			Lead		173
1939	29		Silver	1,742	
			Gold	280	
			Copper		802
1938	25		Silver	560	
			Gold	342	
			Copper		301
1912	9,393		Silver	179,744	
			Gold	49,889	
			Copper		15,892
1911	23,535		Silver	526,512	
			Gold	146,806	
			Copper		36,012
1910	15,630		Silver	384,278	
			Gold	112,220	
			Copper		27,894
1903	2,155		Silver	14,774	
			Gold	9,300	
1902	555		Silver	9,797	
			Gold	7,434	
			Copper		3,874
1901	887		Gold	13,530	
1900	975		Silver	13,312	
			Gold	21,710	

SUMMARY TOTALS: 082ESE033

NAME: **WINNIPEG (L.599)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	53,316 tonnes	58,771 tons
Milled:		
Recovery:		
Silver:	1,136,815 grams	36,549 ounces
Gold:	363,128 grams	11,675 ounces
Copper:	86,463 kilograms	190,618 pounds
Lead:	173 kilograms	381 pounds

Comments:
 1912: Wellington Group.
 1911: Wellington Group.
 1910: Wellington Group.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE034		NAME: MOTHER LODE (L.704)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1962	56,775	56,775	Silver	277,314		
			Gold	54,119		
			Copper		374,417	
1961	182,455	182,455	Silver	468,069		
			Gold	118,534		
			Copper		857,285	
1960	370,813	182,794	Silver	555,189		
			Gold	164,006		
			Copper		1,055,176	
1959	122,575	71,469	Silver	150,414		
			Gold	41,896		
			Copper		302,503	
1957	90,718	90,718	Silver	277,159		
			Gold	56,048		
			Copper		528,810	
1920	18		Silver	4,759		
			Gold	902		
			Copper		4,755	
1919	11		Silver	34,587		
			Gold	2,986		
			Copper		10,342	
1918	140,007		Silver	445,302		
			Gold	166,059		
			Copper		831,150	
1917	160,019		Silver	681,342		
			Gold	196,478		
			Copper		1,070,864	
1916	231,411		Silver	1,266,141		
			Gold	271,809		
			Copper		2,184,954	
1915	98,442		Silver	358,244		
			Gold	108,332		
			Copper		607,601	
1914	151,378		Silver	833,467		
			Gold	166,246		
			Copper		1,291,856	
1913	267,330		Silver	763,672		
			Gold	249,291		
			Copper		1,474,725	
1912	349,850		Silver	1,488,030		
			Gold	351,402		
			Copper		2,401,912	
1911	298,545		Silver	1,960,951		
			Gold	433,918		
			Copper		2,430,281	
1910	320,640		Silver	2,138,331		
			Gold	586,074		
			Copper		2,896,820	
1909	203,880		Silver	1,978,897		
			Gold	490,805		
			Copper		3,563,584	
1908	263,445		Silver	1,816,509		
			Gold	400,731		
			Copper		3,180,024	
1907	191,143		Silver	1,685,720		
			Gold	293,581		
			Copper		2,391,987	
1906	91,782		Silver	424,525		
			Gold	155,235		
			Copper		762,432	
1905	156,780		Silver	906,715		
			Gold	290,471		
			Copper		1,631,606	
1904	156,718		Silver	803,670		
			Gold	230,940		
			Copper		1,543,495	
1903	125,024		Silver	742,304		
			Gold	207,955		
			Copper		1,205,893	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE034		NAME: MOTHER LODE (L.704)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1902	122,405		Silver	744,357	
			Gold	181,268	
			Copper		1,205,048
1901	88,663		Silver	599,852	
			Gold	164,846	
			Copper		1,057,328
1900	5,048		Gold	6,905	
			Copper		50,475

SUMMARY TOTALS: 082ESE034

NAME: **MOTHER LODE (L.704)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	4,245,875 tonnes	4,680,276 tons
Milled:	584,211 tonnes	643,982 tons
Recovery:		
Silver:	21,405,520 grams	688,202 ounces
Gold:	5,390,837 grams	173,319 ounces
Copper:	34,915,323 kilograms	76,975,089 pounds

Comments:

1962: Operation closed April 25, 1962.
 1960: Some ore from the Sunset (082ESE035).
 1959: Operated by Consolidated Woodgreen Mines Limited 1959-1962.
 1957: Operated by Woodgreen Copper Mines Limited.
 1920: Clean-up.
 1919: Clean-up.
 1917: Operated by Canada Copper Corporation, Ltd. 1917-1920.
 1900: Operated by B.C. Copper Co. Ltd. 1900-1916.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE035		NAME: SUNSET (L.788)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1918	2,424		Silver	8,522		
			Gold	2,364		
			Copper		18,101	
1917	1,955		Silver	7,931		
			Gold	2,488		
			Copper		12,640	
1916	8,735		Silver	64,632		
			Gold	9,673		
			Copper		52,822	
1915	1,018		Silver	6,221		
			Gold	1,026		
			Copper		6,011	
1908	3,427		Silver	20,186		
			Gold	3,577		
			Copper		23,367	
1907	28,357		Silver	191,532		
			Gold	34,027		
			Copper		251,523	
1906	37,296		Silver	205,715		
			Gold	44,540		
			Copper		256,519	
1905	2,965		Silver	16,453		
			Gold	3,763		
			Copper		25,223	
1904	2,867		Gold	9,829		
			Copper		28,667	
1903	12,800		Silver	131,659		
			Gold	21,959		
			Copper		115,203	
1902	6,763		Silver	81,086		
			Gold	9,486		
			Copper		70,181	
1901	665		Silver	12,783		
			Gold	1,244		
			Copper		6,220	
1900	33		Silver	218		
			Gold	622		

SUMMARY TOTALS: 082ESE035

NAME: **SUNSET (L.788)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	109,305 tonnes	120,488 tons
Milled:		tons
Recovery:		
Silver:	746,938 grams	24,015 ounces
Gold:	144,598 grams	4,649 ounces
Copper:	866,477 kilograms	1,910,254 pounds

Comments:

1915: Operated by New Dominion Copper Co. Ltd. 1915-1918.
 1905: Operated by Dominion Copper Co. Ltd. 1905-1908.
 1900: Operated by Montreal & Boston Copper Co. 1900-1904.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 43
REPORT: RGEN0200

MINFILE NUMBER:	082ESE037	NAME:	BAILEY SILICA	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1947	8,938		Silica		8,938,312
1946	7,991		Silica		7,991,392
1944	22,069		Silica		22,069,089
1943	34,165		Silica		34,164,587

SUMMARY TOTALS: 082ESE037

NAME: **BAILEY SILICA**

		<u>Metric</u>		<u>Imperial</u>	
	Mined:	73,163 tonnes		80,648 tons	
	Milled:				
Recovery:	Silica:	73,163,380 kilograms		161,297,597 pounds	

Comments:

1947: Flux for trail smelter.
1946: Flux for trail smelter.
1944: Flux for trail smelter.
1943: Flux for trail smelter.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE039	NAME: NORTHWIND	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
1918	75	
		Commodity
		Silver
		Gold
		Copper
		Grams Recovered
		156
		809
		Kilograms Recovered
		191

SUMMARY TOTALS: 082ESE039

	NAME: NORTHWIND	
	<u>Metric</u>	<u>Imperial</u>
Mined:	75 tonnes	83 tons
Milled:	tonnes	tons
Recovery:		
Silver:	156 grams	5 ounces
Gold:	809 grams	26 ounces
Copper:	191 kilograms	421 pounds
Comments:		
1918:	Operated by L.R. Richard.	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE042		NAME: CITY OF PARIS (L.622)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1963	4		Silver	1,120	
			Lead		80
			Zinc		14
1962	4		Silver	10,419	
			Gold	62	
			Lead		293
			Zinc		7
1940	37		Silver	10,544	
			Gold	62	
1939	70		Silver	25,722	
			Gold	156	
			Lead		448
			Zinc		36
1938	125		Silver	30,201	
			Gold	404	
			Lead		67
			Zinc		6
1937	55		Silver	27,060	
			Gold	373	
			Lead		72
			Zinc		88
1900	1,639		Silver	45,815	
			Gold	25,629	
			Copper		60,390

SUMMARY TOTALS: 082ESE042

NAME: **CITY OF PARIS (L.622)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,934 tonnes	2,132 tons
Milled:	tonnes	tons
Recovery:		
Silver:	150,881 grams	4,851 ounces
Gold:	26,686 grams	858 ounces
Copper:	60,390 kilograms	133,137 pounds
Lead:	960 kilograms	2,116 pounds
Zinc:	151 kilograms	333 pounds

Comments:

1963: Lincoln claim, operated by King Midas Mines Ltd.
 1962: Lincoln claim, operated by King Midas Mines Ltd.
 1940: Operated by H. Brinkman.
 1939: Operated by Klemans Bros.
 1937: Operated by H. Brinkman.
 1900: Operated by City of Paris Gold Mining Company, Limited.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE043		NAME: NO. 7 (L.623)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1945	33		Silver	7,869		
			Gold	93		
			Lead			427
			Zinc			33
1941	303		Silver	81,863		
			Gold	3,577		
			Lead			4,823
			Zinc			3,509
1940	656		Silver	281,047		
			Gold	5,754		
			Lead			15,252
			Zinc			2,685
1939	406		Silver	146,495		
			Gold	4,728		
			Lead			7,142
1938	2,225		Silver	31,974		
			Gold	8,958		
			Lead			13,483
1937	169		Silver	32,223		
			Gold	1,058		
			Lead			1,142
1936	961		Silver	181,082		
			Gold	5,972		
			Lead			8,702
1935	2,083		Silver	456,903		
			Gold	14,401		
			Lead			5,692
1934	150		Silver	40,372		
			Gold	1,058		
1913	4,106		Silver	834,556		
			Gold	24,976		
			Lead			17,841
1911	542		Silver	160,554		
			Gold	4,354		
			Lead			8,808
1910	1,069		Silver	469,344		
			Gold	9,518		
			Lead			13,724
1902	476		Silver	186,836		
			Gold	3,888		
1901	569		Silver	198,779		
			Gold	4,074		

SUMMARY TOTALS: 082ESE043

NAME: **NO. 7 (L.623)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	13,748 tonnes	15,155 tons
Milled:		
Recovery:		
Silver:	3,109,897 grams	99,985 ounces
Gold:	92,409 grams	2,971 ounces
Lead:	97,036 kilograms	213,928 pounds
Zinc:	6,227 kilograms	13,728 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 47
REPORT: RGEN0200

MINFILE NUMBER: 082ESE044	NAME: RUBY (L.1333)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1956	28		Silver Copper	591	856

SUMMARY TOTALS: 082ESE044

NAME: **RUBY (L.1333)**

	<u>Metric</u>		<u>Imperial</u>
Mined:	28 tonnes		31 tons
Milled:			tons
Recovery:	Silver:	591 grams	19 ounces
	Copper:	856 kilograms	1,887 pounds
Comments:	1956:	Clean up material	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE045** NAME: **SKOMAC** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1983	1,814	1,633	Silver	158,939	
			Gold	1,173	
			Copper		864
			Lead		11,918
			Zinc		5,193
1982		34	Silver	24,976	
			Gold	311	
			Lead Zinc		2,096 1,082
1981		11	Silver	6,018	
			Gold	63	
			Zinc		5,554
1976	548		Silver	221,355	
			Gold	1,327	
			Lead		16,122
			Zinc		8,651
1975	434		Silver	301,606	
			Gold	2,146	
			Lead		13,067
			Zinc		8,439
1969	17		Silver	8,211	
			Gold	93	
			Lead		774
			Zinc		224
1964	481		Silver	56,950	
			Gold	498	
			Lead		8,062
			Zinc		4,085
1963	38		Silver	41,834	
			Gold	249	
			Lead		1,456
			Zinc		459
1962	151		Silver	25,473	
			Gold	249	
			Lead		4,940
			Zinc		2,224
1915	56		Silver	1,866	
			Gold	529	
1904	18		Silver	4,665	
1903	17		Gold	11,912	

SUMMARY TOTALS: 082ESE045

NAME: **SKOMAC**

	Metric	Imperial
Mined:	3,574 tonnes	3,940 tons
Milled:	1,678 tonnes	1,850 tons
Recovery:		
Silver:	851,893 grams	27,389 ounces
Gold:	18,550 grams	596 ounces
Copper:	864 kilograms	1,905 pounds
Lead:	58,435 kilograms	128,827 pounds
Zinc:	35,911 kilograms	79,170 pounds

Comments:

1983: Lead concentrates 68 tonnes. Robert Mines Ltd.
 1982: Crude ore.
 1981: Crude ore.
 1975: Operated by Robert Mines Ltd.
 1969: Operated by J. Kleman.
 1962: Operated by Skomac Mines Ltd.
 1915: Tipperary operated by M. Buchanan.
 1904: Republic and Nonesuch included with MM00948.
 1903: Republic and Nonesuch included with MM00948.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE047		NAME: ATHELSTAN (L.1065)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1940	80		Silver	2,706	
			Gold	1,586	
			Copper		178
1939	221		Silver	5,505	
			Gold	3,888	
			Copper		166
1938	320		Silver	9,300	
			Gold	5,350	
			Copper		368
			Lead		36
1937	637		Silver	6,532	
			Gold	12,628	
			Copper		1,093
			Lead		78
1936	547		Silver	9,549	
			Gold	11,601	
			Copper		718
1934	115		Silver	4,759	
			Gold	2,022	
1912	367		Silver	2,706	
			Gold	2,550	
			Copper		299
1911	6,661		Silver	84,849	
			Gold	55,146	
			Copper		6,935
1908	121		Silver	1,928	
			Gold	1,524	
1904	4,082		Silver	7,776	
			Gold	13,996	
			Copper		40,823
1903	2,619		Silver	33,964	
			Gold	33,560	
			Copper		171
			Lead		79
1901	499		Silver	6,221	
			Gold	6,221	
			Copper		45
1900	470		Silver	10,886	
			Gold	7,123	

SUMMARY TOTALS: 082ESE047

NAME: **ATHELSTAN (L.1065)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	16,739 tonnes	18,452 tons
Milled:	tonnes	tons
Recovery:		
Silver:	186,681 grams	6,002 ounces
Gold:	157,195 grams	5,054 ounces
Copper:	50,796 kilograms	111,986 pounds
Lead:	193 kilograms	425 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082ESE048</u>	NAME:	<u>GOLD BUG (L.890)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1954	5		Silver	14,867	
			Gold	93	
			Lead		248
			Zinc		185
1940	22		Silver	8,927	
			Gold	249	
			Zinc		65
1939	4		Silver	3,546	
			Gold	124	
			Lead		89
			Zinc		64
1932	6		Silver	6,376	
			Gold	62	
			Lead		85
			Zinc		117
1928	10		Silver	11,415	
			Gold	93	
			Lead		94
1926	1		Silver	1,742	
			Lead		23
1918	3		Silver	1,120	
			Gold	31	
			Copper		233
1903	14		Silver	9,518	
			Gold	311	
1901	24		Silver	10,606	
			Gold	373	

SUMMARY TOTALS: 082ESE048

NAME: **GOLD BUG (L.890)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	89 tonnes	98 tons
Milled:	tonnes	tons
Recovery:		
Silver:	68,117 grams	2,190 ounces
Gold:	1,336 grams	43 ounces
Copper:	233 kilograms	514 pounds
Lead:	539 kilograms	1,188 pounds
Zinc:	431 kilograms	950 pounds

Comments:

1954: Gold Bug.
 1940: D.A.
 1939: Gold Bug.
 1932: D.A.
 1928: D.A.
 1926: D.A.
 1918: Sudbury.
 1903: Gold Bug.
 1901: Gold Bug.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE050		NAME: GREYHOUND (L.1014)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1971			Silver	58,785	
			Gold	2,799	
			Copper		94,398
1970	803,326	183,823	Silver	290,222	
			Gold	12,752	
			Copper		502,530

SUMMARY TOTALS: 082ESE050

NAME: **GREYHOUND (L.1014)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	803,326 tonnes	885,515 tons
Milled:	183,823 tonnes	202,630 tons
Recovery:		
	Silver: 349,007 grams	11,221 ounces
	Gold: 15,551 grams	500 ounces
	Copper: 596,928 kilograms	1,316,001 pounds

Comments:

1971: Mine closed January 8, 1971; MM00900; Copper Conc. 453 tonnes.
 1970: Operated by Greyhound Mines Ltd.; MM00900.

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 52
 REPORT: RGEN0200

MINFILE NUMBER: **082ESE052** NAME: **MORRISON (L.654)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1903	2,261		Silver	17,013	
			Gold	4,976	
			Copper		10,140
1902	193		Silver	6,718	
			Gold	1,182	
1901	193		Silver	2,302	
			Gold	995	
			Copper		577

SUMMARY TOTALS: 082ESE052

NAME: **MORRISON (L.654)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,647 tonnes	2,918 tons
Milled:	tonnes	tons
Recovery:		
Silver:	26,033 grams	837 ounces
Gold:	7,153 grams	230 ounces
Copper:	10,717 kilograms	23,627 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE053		NAME: BIG COPPER		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1918	371		Silver	10,855		
			Copper		14,280	
1917	620		Silver	12,970		
			Copper		23,360	
1916	1,197		Silver	17,915		
			Copper		31,199	
1912	18		Silver	902		
			Copper		2,244	

SUMMARY TOTALS: 082ESE053

NAME: **BIG COPPER**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,206 tonnes	2,432 tons
Milled:		
Recovery:		
Silver:	42,642 grams	1,371 ounces
Copper:	71,083 kilograms	156,711 pounds

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 54
 REPORT: RGEN0200

MINFILE NUMBER: **082ESE054** NAME: **KING SOLOMON (L.388)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1955	147		Silver	7,869	
			Gold	746	
			Copper		7,398
1954	93		Silver	4,634	
			Gold	467	
			Copper		5,587
1917	208		Silver	4,821	
			Gold	1,182	
			Copper		15,878
1901	800		Silver	35,582	
			Gold	5,474	
			Copper		30,298

SUMMARY TOTALS: 082ESE054

NAME: **KING SOLOMON (L.388)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,248 tonnes	1,376 tons
Milled:		
Recovery:		
Silver:	52,906 grams	1,701 ounces
Gold:	7,869 grams	253 ounces
Copper:	59,161 kilograms	130,428 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: <u>082ESE055</u>		NAME: <u>DENTONIA</u>		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1985	400	400	Silver	108,116		
			Gold	14,370		
			Cadmium			57
			Copper			180
			Lead			4,643
			Zinc			701
1984	195	195	Silver	11,726		
			Gold	1,698		
1975	1,859	1,859	Silver	108,643		
			Gold	17,698		
			Lead			4,912
			Zinc			2,122
1974	1,451	659	Silver	44,695		
			Gold	6,936		
			Lead			2,018
			Zinc			718
1948	435		Silver	26,904		
			Gold	4,354		
			Lead			523
			Zinc			57
1947	1,522	1,522	Silver	20,932		
			Gold	3,204		
			Lead			292
			Zinc			32
1943	394		Silver	21,430		
			Gold	3,110		
1942	1,311		Silver	59,220		
			Gold	7,589		
1941	2,305		Silver	139,497		
			Gold	20,435		
1940	1,433		Silver	102,827		
			Gold	12,690		
1939	1,641		Silver	200,925		
			Gold	30,388		
1938	1,699		Silver	161,798		
			Gold	23,607		
			Lead			1,199
			Zinc			94
1937	16,083	16,082	Silver	859,625		
			Gold	129,948		
			Lead			1,169
1936	10,534	10,534	Silver	877,167		
			Gold	129,948		
			Lead			32,299
1935	29,435	29,435	Silver	2,469,454		
			Gold	373,609		
			Lead			103,055
1934	20,510	20,379	Silver	759,908		
			Gold	117,756		
			Lead			17,868
1933	1		Silver	124		
			Gold	31		
			Lead			19
1927	35		Silver	6,687		
			Gold	1,058		
1926	53		Silver	9,797		
			Gold	1,213		
			Zinc			279
1916	2,408		Silver	82,423		
			Gold	43,015		
1915	6,100		Silver	302,477		
			Gold	69,982		
1914	14,992		Silver	1,033,739		
			Gold	202,543		
1913	7,344		Silver	511,893		
			Gold	103,169		
1912	2,064		Silver	134,956		
			Gold	23,203		
			Copper			6,302

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE055** NAME: **DENTONIA** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1901	295		Gold	5,039	
1900	145		Gold	1,866	

SUMMARY TOTALS: 082ESE055

	<u>Metric</u>	<u>Imperial</u>
Mined:	124,644 tonnes	137,396 tons
Milled:	81,065 tonnes	89,359 tons
Recovery:		
Silver:	8,054,963 grams	258,973 ounces
Gold:	1,348,459 grams	43,354 ounces
Cadmium:	57 kilograms	126 pounds
Copper:	6,482 kilograms	14,290 pounds
Lead:	167,997 kilograms	370,370 pounds
Zinc:	4,003 kilograms	8,825 pounds

Comments:

1984: Jewel operated by Dentonia Resources Ltd.
 1974: Denero Grande operated by Colt Resources Ltd.
 1947: Operated by Dentonia Mines Ltd.
 1943: Dentonia operated by W. McArthur.
 1942: Dentonia operated by A. Upton.
 1941: Dentonia (Dentonia Leasing Syndicate); Denero (Jewel Leasing Synd)
 1938: Operated by R. Lee for Dentonia Leasing Syndicate.
 1933: Dentonia operated by Dentonia Mines Ltd.
 1927: Denero operated by G. White.
 1926: Denero.
 1913: Operated by Jewel Denero Mines Ltd.
 1912: Denero operated by Jewel Syndicate Ltd.
 1900: Denero.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: <u>082ESE057</u>		NAME: <u>HUMMINGBIRD (L.1369)</u>		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1950	41		Silver	2,239	
			Gold	995	
			Lead		82
			Zinc		5,144
1943	56		Silver	2,706	
			Gold	404	
			Zinc		6,230
1942	59		Silver	3,204	
			Gold	778	
			Zinc		6,286
1941	45		Silver	2,799	
			Gold	1,275	
			Zinc		4,110
1940	53		Silver	2,706	
			Gold	529	
			Zinc		6,894
1939	85		Silver	5,878	
			Gold	1,586	
			Zinc		9,138
1916	57		Silver	124	
			Gold	62	
			Copper		254
1903	71		Silver	5,630	
			Gold	1,928	
1901	318		Silver	19,906	
			Gold	10,948	
1900	157		Silver	7,309	
			Gold	5,070	

SUMMARY TOTALS: 082ESE057

NAME: HUMMINGBIRD (L.1369)

	<u>Metric</u>	<u>Imperial</u>
Mined:	942 tonnes	1,038 tons
Milled:		
Recovery:		
Silver:	52,501 grams	1,688 ounces
Gold:	23,575 grams	758 ounces
Copper:	254 kilograms	560 pounds
Lead:	82 kilograms	181 pounds
Zinc:	37,802 kilograms	83,339 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082ESE060</u>	NAME:	<u>B.C. (L.882)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1938	120		Silver	2,830	
			Gold	93	
			Copper		2,443
1919	109		Silver	6,221	
			Copper		4,536
1918	781		Silver	42,891	
			Copper		33,061
1917	612		Silver	20,963	
			Gold	31	
			Copper		16,195
1916	201		Silver	7,838	
			Gold	31	
			Copper		5,094
1907	1,529		Silver	48,738	
			Gold	529	
			Copper		29,265
1906	1,350		Silver	43,886	
			Gold	404	
			Copper		31,031
1903	16,119		Silver	805,817	
			Copper		544,366
1902	13,154		Silver	653,163	
			Copper		453,590
1901	42,471		Silver	2,905,673	
			Gold	20,715	
			Copper		1,646,419
1900	17,428		Silver	2,126,574	
			Gold	9,362	
			Copper		1,327,971

SUMMARY TOTALS: 082ESE060

NAME: **B.C. (L.882)**

	<u>Mined:</u>	<u>Metric</u>	<u>Imperial</u>
Recovery:	Mined:	93,874 tonnes	103,478 tons
	Milled:		
	Silver:	6,664,594 grams	214,271 ounces
	Gold:	31,165 grams	1,002 ounces
	Copper:	4,093,971 kilograms	9,025,659 pounds

Comments:

1938: B.C. (Eholt) Mine Ltd.
 1919: Canadian Copper Corporation Ltd.
 1918: Lease J. St. Clair
 1917: Canadian Copper Corporation Ltd.
 1907: B.C. Copper Co. Ltd.
 1906: B.C. Copper Co. Ltd.
 1900: 1898 B.C. Chartered Co. Ltd.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: <u>082ESE062</u>		NAME: <u>EMMA (L.591)</u>		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1927	22		Silver	373	
			Gold	31	
			Copper		466
1921	17,055		Silver	178,687	
			Gold	16,827	
			Copper		196,180
1920	16,393		Silver	205,840	
			Gold	14,059	
			Copper		185,189
1919	19,298		Silver	227,114	
			Gold	16,298	
			Copper		214,879
1918	18,700		Silver	232,588	
			Gold	23,918	
			Copper		267,848
1917	30,822		Silver	308,635	
			Gold	36,422	
			Copper		427,551
1916	14,405		Silver	129,606	
			Gold	13,001	
			Copper		155,303
1912	6,741		Silver	30,325	
			Gold	4,261	
			Copper		62,194
1911	10,387		Silver	72,688	
			Gold	10,295	
			Copper		94,384
1910	442		Silver	2,084	
			Copper		870
1908	477		Copper		954
1907	19,916		Silver	126,558	
			Gold	15,925	
			Copper		211,907
1906	14,107		Silver	129,637	
			Gold	10,730	
			Copper		133,152
1905	9,700		Silver	111,442	
			Gold	8,677	
			Copper		62,366
1904	37,077		Silver	331,713	
			Gold	26,749	
			Copper		180,184
1903	17,744		Silver	232,930	
			Gold	8,678	
			Copper		89,833
1902	7,662		Silver	113,744	
			Gold	5,972	
			Copper		67,088
1901	590		Silver		
			Gold		
			Copper		

SUMMARY TOTALS: 082ESE062

NAME: **EMMA (L.591)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	241,538 tonnes	266,250 tons
Milled:	tonnes	tons
Recovery:		
Silver:	2,433,964 grams	78,254 ounces
Gold:	211,843 grams	6,811 ounces
Copper:	2,350,348 kilograms	5,181,629 pounds

Comments:

- 1927: Emma Bluebell operated by W.W. Ludlow.
- 1916: Emma operated by Consolidated Mining & Smelting Co. of Canada Ltd.
- 1911: Emma operated by B.C. Copper Company Ltd.
- 1910: Mountain Rose operated by New Dominion Copper Company.
- 1908: Mountain Rose operated by Dominion Copper Company.
- 1907: Emma and Mountain Rose.
- 1906: Emma and Mountain Rose.
- 1905: Emma and Mountain Rose.
- 1901: Hall Mining & Smelting Co.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE063		NAME: ORO DENORO (L.692)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1917	220		Silver	2,333		
			Gold	187		
			Copper			1,490
1916	232		Silver	2,426		
			Gold	156		
			Copper			2,409
1910	10,407		Silver	77,633		
			Gold	6,656		
			Copper			102,991
1909	10,357		Silver	55,674		
			Gold	5,941		
			Copper			129,817
1908	52,807		Silver	335,757		
			Gold	41,305		
			Copper			770,824
1907	12,992		Silver	136,760		
			Gold	13,934		
			Copper			186,052
1906	8,146		Silver	93,340		
			Gold	12,192		
			Copper			116,473
1905	2,593		Silver	34,462		
			Gold	4,292		
			Copper			37,897
1904	15,799		Silver	144,847		
			Gold	21,274		
			Copper			240,371
1903	10,229		Silver	70,137		
			Gold	10,513		
			Copper			102,293

SUMMARY TOTALS: 082ESE063

NAME: **ORO DENORO (L.692)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	123,782 tonnes	136,446 tons
Milled:	tonnes	tons
Recovery:		
Silver:	953,369 grams	30,651 ounces
Gold:	116,450 grams	3,744 ounces
Copper:	1,690,617 kilograms	3,727,171 pounds

Comments:

1917: Canada Copper Corporation Ltd.
 1906: B.C. Copper Company Ltd.
 1904: BC METAL MM00907 includes No. 37 (082ESE187).
 1903: Denoro Mines Ltd.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE064** NAME: **R. BELL (L.1506)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1918	20		Silver	2,053	
			Copper		450
1901	267		Silver	110,696	
			Copper		20,832

SUMMARY TOTALS: 082ESE064

NAME: **R. BELL (L.1506)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	287 tonnes	316 tons
Milled:		
Recovery:		
Silver:	112,749 grams	3,625 ounces
Copper:	21,282 kilograms	46,919 pounds

Comments: 1918: Cordick, BC METAL MM00841.
 1901: R. Bell, BC METAL MM00912.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 62
REPORT: RGEN0200

MINFILE NUMBER:	<u>082ESE067</u>	NAME:	<u>O.K. (L.573S)</u>	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1938	5		Silver Gold	187 124	

SUMMARY TOTALS: 082ESE067

NAME: **O.K. (L.573S)**

		<u>Metric</u>		<u>Imperial</u>	
	Mined:	5 tonnes		6 tons	
	Milled:	tonnes		tons	
Recovery:	Silver:	187 grams		6 ounces	
	Gold:	124 grams		4 ounces	
Comments:	1938:	Operated by S. Peterson.			

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 63
 REPORT: RGEN0200

MINFILE NUMBER: **082ESE068** NAME: **MOGUL (L.2857)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1940	13		Silver	1,275	
			Gold	342	
1939	54		Silver	1,928	
			Gold	1,804	
1938	49		Silver	435	
			Gold	2,115	
1937	90		Silver	1,431	
			Gold	4,541	
1936	2		Silver	31	
			Gold	156	
1933	4		Silver	93	
			Gold	622	

SUMMARY TOTALS: 082ESE068

NAME: **MOGUL (L.2857)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	212 tonnes	234 tons
Milled:		
Recovery:		
	Silver: 5,193 grams	167 ounces
	Gold: 9,580 grams	308 ounces

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE070** NAME: **ROCK CANDY** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1942		1,414	Fluorite		1,414,301
1929	16,148	16,148	Fluorite		16,148,000
1925	3,515	3,515	Fluorite		3,514,400
1922	4,576	3,827	Fluorite		3,827,400
1921	6,116	5,844	Fluorite Silica		5,172,000 324,100
1920	20,570	6,783	Fluorite Silica		5,874,000 1,300,000
1919	4,937	815	Fluorite Silica		684,300 48,900
1918	156	125	Fluorite		125,100

SUMMARY TOTALS: 082ESE070

NAME: **ROCK CANDY**

	<u>Metric</u>	<u>Imperial</u>
Mined:	56,018 tonnes	61,749 tons
Milled:	38,471 tonnes	42,407 tons
Fluorite:	36,759,501 kilograms	81,040,805 pounds
Silica:	1,673,000 kilograms	3,688,333 pounds
1921:	Concentrates with assays 88.5 per cent CaF ₂ , 5.3 per cent SiO ₂ .	
1920:	Concentrates with assays 86.6 per cent CaF ₂ , 6.3 per cent SiO ₂ .	
1919:	Concentrates with assays 84 per cent CaF ₂ , 6 per cent SiO ₂ .	

Recovery:

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE074		NAME: LITTLE BERTHA (L.959)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1939	137		Silver	18,382	
			Gold	840	
			Copper		29
			Lead		391
1938	215		Silver	16,547	
			Gold	1,680	
1937	373		Silver	47,712	
			Gold	4,883	
1916	18		Silver	5,599	
			Gold	622	
1915	8		Silver	2,488	
			Gold	280	
1910	12		Silver	5,474	
			Gold	653	
1902	30		Silver	10,731	
			Gold	1,182	
1901	74		Silver	11,508	
			Gold	2,893	
1900	9		Silver	1,835	
			Gold	218	

SUMMARY TOTALS: 082ESE074

NAME: **LITTLE BERTHA (L.959)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	876 tonnes	966 tons
Milled:		tons
Recovery:		
Silver:	120,276 grams	3,867 ounces
Gold:	13,251 grams	426 ounces
Copper:	29 kilograms	64 pounds
Lead:	391 kilograms	862 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 66
REPORT: RGEN0200

MINFILE NUMBER: 082ESE075	NAME: PATHFINDER (L.782)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1916	239		Silver	4,043	
			Gold	746	
			Copper		2,330

SUMMARY TOTALS: 082ESE075

NAME: **PATHFINDER (L.782)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	239 tonnes	263 tons
Milled:	tonnes	tons
Recovery:		
Silver:	4,043 grams	130 ounces
Gold:	746 grams	24 ounces
Copper:	2,330 kilograms	5,137 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE079		NAME: GOLDEN EAGLE (L.1334)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1941	19		Silver	2,239	
			Gold	156	
			Copper		392
1939	31		Silver	1,586	
			Gold	373	
1938	140		Silver	12,099	
			Gold	1,524	
1910	322		Silver	19,159	
			Gold	1,431	
			Copper		4,097
1909	552		Silver	41,585	
			Gold	4,914	
			Copper		9,928
1900	35		Silver	4,945	
			Gold	529	
			Copper		879

SUMMARY TOTALS: 082ESE079

NAME: **GOLDEN EAGLE (L.1334)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,099 tonnes	1,211 tons
Milled:	tonnes	tons
Recovery:	Silver: 81,613 grams	2,624 ounces
	Gold: 8,927 grams	287 ounces
	Copper: 15,296 kilograms	33,722 pounds

Comments:

1941: Operated by A. Crowe.
 1939: Operated by L. Chernenkoff.
 1938: Operated by O. Osing.
 1909: Operated by Golden Eagle Mining & Development Co. Ltd.
 1900: Operated by Royal Victoria Gold Mining Co.

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 68
 REPORT: RGEN0200

MINFILE NUMBER: **082ESE082** NAME: **MOLLY GIBSON (L.595 S)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1940	31		Silver	311	
			Gold	467	
1938	20		Silver	342	
			Gold	995	
1934	47		Silver	746	
			Gold	1,586	
1933	31		Silver	311	
			Gold	995	
1920	64		Silver	653	
			Gold	4,541	
1909	93		Silver	2,022	
			Gold	1,742	

SUMMARY TOTALS: 082ESE082

NAME: **MOLLY GIBSON (L.595 S)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	286 tonnes	315 tons
Milled:		
Recovery:		
	Silver: 4,385 grams	141 ounces
	Gold: 10,326 grams	332 ounces

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE083		NAME: INLAND EMPIRE (L.3880)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1939	481		Silver	26,095	
			Gold	2,208	
1938	542		Silver	39,252	
			Gold	4,074	
1919	6		Silver	2,582	
			Gold	809	
			Copper		53
1918	129		Silver	62,735	
			Gold	13,063	
			Copper		408
1917	54		Silver	30,232	
			Gold	6,749	
			Copper		105
1915	109		Silver	7,091	
			Gold	311	
1913	816		Silver	23,825	
			Gold	1,244	
1912	1,996		Silver	24,851	
			Gold	1,244	

SUMMARY TOTALS: 082ESE083

NAME: **INLAND EMPIRE (L.3880)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	4,133 tonnes	4,556 tons
Milled:	tonnes	tons
Recovery:		
Silver:	216,663 grams	6,966 ounces
Gold:	29,702 grams	955 ounces
Copper:	566 kilograms	1,248 pounds

Comments: 1938: Operated by Inland Empire Mines Syndicate.
 1912: Operated by Inland Mining Co. Ltd.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 70
REPORT: RGEN0200

MINFILE NUMBER:	082ESE084	NAME:	BERLIN (L.11157)	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1940	51		Silver	2,177	
			Gold	218	
1939	332		Silver	19,222	
			Gold	2,084	

SUMMARY TOTALS: 082ESE084

NAME: **BERLIN (L.11157)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	383 tonnes	422 tons
Milled:		
Recovery:		
Silver:	21,399 grams	688 ounces
Gold:	2,302 grams	74 ounces

Comments:

1940: Berlin operated by A.F. Crowe and Inland Empire by W. Schwarz.
1939: Operated by Inland Empire Mines Syndicate.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE085** NAME: **CASCADE (L.5000)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1939	194		Silver	10,326	
			Gold	2,550	
1936	3		Silver	2,395	
			Lead		187
			Zinc		251
1905	113		Silver	6,221	
			Gold	3,110	
1902	315		Silver	28,832	
			Gold	7,403	
			Copper		131

SUMMARY TOTALS: 082ESE085

NAME: **CASCADE (L.5000)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	625 tonnes	689 tons
Milled:	tonnes	tons
Recovery:		
Silver:	47,774 grams	1,536 ounces
Gold:	13,063 grams	420 ounces
Copper:	131 kilograms	289 pounds
Lead:	187 kilograms	412 pounds
Zinc:	251 kilograms	553 pounds

Comments:

1939: Operated by Inland Empire Mines Syndicate.
 1936: Operator unknown.
 1902: Bonanza Gold Mines Ltd. and Cascade Gold Mines & Metal Co. Ltd.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE086		NAME: ALBION NO. 2 (L.12489)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1964	23		Silver	715	
			Gold	218	
			Lead		23
			Zinc		23
1962	138		Silver	4,572	
			Gold	498	
			Lead		140
			Zinc		140
1951	80		Silver	3,546	
			Gold	622	
			Lead		202
			Zinc		151
1950	23		Silver	1,493	
			Gold	249	
			Zinc		23
1940	94		Silver	5,163	
			Gold	1,462	
1939	183		Silver	9,766	
			Gold	1,369	

SUMMARY TOTALS: 082ESE086

NAME: **ALBION NO. 2 (L.12489)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	541 tonnes	596 tons
Milled:	tonnes	tons
Recovery:		
Silver:	25,255 grams	812 ounces
Gold:	4,418 grams	142 ounces
Lead:	365 kilograms	805 pounds
Zinc:	337 kilograms	743 pounds

Comments:
 1962: Operated by Albion Mining Co. Ltd.
 1950: Operated by Granville Mines Corp. Ltd.
 1939: Operated by Joe Kloman.

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 73
 REPORT: RGEN0200

MINFILE NUMBER: **082ESE087** NAME: **ENTERPRISE (L.14563)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1939	16		Silver	715	
			Gold	404	
1932	8		Silver	7,309	
			Gold	467	
			Lead		960
			Zinc		1,671

SUMMARY TOTALS: 082ESE087

NAME: **ENTERPRISE (L.14563)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	24 tonnes	26 tons
Milled:	tonnes	tons
Recovery:		
Silver:	8,024 grams	258 ounces
Gold:	871 grams	28 ounces
Lead:	960 kilograms	2,116 pounds
Zinc:	1,671 kilograms	3,684 pounds

Comments:

1939: Castleton operated by W.C. Holm & H. Fors.
 1932: Shipped by R. Rowe. Does not include 14 tonnes on concentrate.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 74
REPORT: RGEN0200

MINFILE NUMBER: 082ESE088	NAME: CALEDONIA (L.1756)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1939	14		Silver Gold	156 249	

SUMMARY TOTALS: 082ESE088

	NAME: CALEDONIA (L.1756)		
	<u>Metric</u>	<u>Imperial</u>	
	14 tonnes	15 tons	
	Milled:	tons	
Recovery:	Silver:	156 grams	5 ounces
	Gold:	249 grams	8 ounces

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 75
REPORT: RGEN0200

MINFILE NUMBER: 082ESE091	NAME: CASTLE MOUNTAIN NICKEL	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1918	725		Chromium		279,000

SUMMARY TOTALS: 082ESE091

NAME: **CASTLE MOUNTAIN NICKEL**

<u>Metric</u>		<u>Imperial</u>
Mined: 725 tonnes		799 tons
Milled: tonnes		tons

Recovery:

Chromium:	279,000 kilograms	615,090 pounds
-----------	-------------------	----------------

Comments:

1918: About 725 tonnes of chromite ore, grading 38.5 per cent Cr₂O₃.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 76
REPORT: RGEN0200

MINFILE NUMBER: 082ESE097	NAME: FIFE	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1911	27		Gold Copper	93	1,134

SUMMARY TOTALS: 082ESE097

	NAME: FIFE		
	<u>Metric</u>	<u>Imperial</u>	
	27 tonnes	30 tons	
	Milled:	tons	
Recovery:	Gold:	93 grams	3 ounces
	Copper:	1,134 kilograms	2,500 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE099		NAME: HALIFAX (L.3042)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1949	13		Silver	3,888	
			Lead		1,616
			Zinc		1,862
1948	13		Silver	4,603	
			Lead		2,301
			Zinc		2,326

SUMMARY TOTALS: 082ESE099

NAME: **HALIFAX (L.3042)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	26 tonnes	29 tons
Milled:	tonnes	tons
Recovery:	Silver: 8,491 grams	273 ounces
	Lead: 3,917 kilograms	8,636 pounds
	Zinc: 4,188 kilograms	9,233 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 78
REPORT: RGEN0200

MINFILE NUMBER: 082ESE104	NAME: INTERNATIONAL (L.2873)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1916	17		Silver Copper	156	906

SUMMARY TOTALS: 082ESE104

	NAME: INTERNATIONAL (L.2873)	
	<u>Metric</u>	<u>Imperial</u>
	17 tonnes	19 tons
Mined:		
Milled:		
Recovery:	156 grams	5 ounces
	906 kilograms	1,997 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE105** NAME: **MOUNTAIN CHIEF (L.2393)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1922	221		Silver	18,226	
			Gold	93	
			Copper		10,500
1920	35		Silver	1,058	
			Copper		665
1919	131		Silver	7,589	
			Copper		5,522
1918	474		Silver	36,702	
			Copper		12,739
1917	124		Silver	17,044	
			Copper		4,971

SUMMARY TOTALS: 082ESE105

NAME: **MOUNTAIN CHIEF (L.2393)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	985 tonnes	1,086 tons
Milled:		
Recovery:		
	Silver: 80,619 grams	2,592 ounces
	Gold: 93 grams	3 ounces
	Copper: 34,397 kilograms	75,832 pounds

Comments: 1922: Operated by M. McDaniel.
 1919: Operated by Mountain Chief Mining Co. Ltd.
 1917: Operated by O. Wheeler.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE109** NAME: **BARNATO (L.2848)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1967	19		Gold	218	
1966	19		Silver	2,239	
			Gold	218	
			Copper		56
1939	68		Silver	280	
			Gold	2,550	
			Copper		96
1938	113		Silver	995	
			Gold	2,550	
			Copper		190
			Lead		119
1937	77		Silver	622	
			Gold	4,168	
			Copper		65

SUMMARY TOTALS: 082ESE109

NAME: **BARNATO (L.2848)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	296 tonnes	326 tons
Milled:		
Recovery:		
Silver:	4,136 grams	133 ounces
Gold:	9,704 grams	312 ounces
Copper:	407 kilograms	897 pounds
Lead:	119 kilograms	262 pounds

Comments: 1966: Operated by Amcana Gold Mines Ltd.
 1937: Operated by F.O. Peterson.

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 81
 REPORT: RGEN0200

MINFILE NUMBER: 082ESE112		NAME: SPOTTED HORSE (L.887)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1965	53		Silver	1,337	
			Lead		1,121
			Zinc		553
1927	19		Silver	1,991	
			Lead		1,430
			Zinc		733

SUMMARY TOTALS: 082ESE112

NAME: **SPOTTED HORSE (L.887)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	72 tonnes	79 tons
Milled:		
Recovery:		
	3,328 grams	107 ounces
	2,551 kilograms	5,624 pounds
	1,286 kilograms	2,835 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE113		NAME: IMPERIAL		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1949	54		Silver	21,212		
			Gold	280		
			Lead			468
			Zinc			908
1939	24		Silver	22,301		
			Gold	124		
			Lead			718
			Zinc			1,214
1936	30		Silver	6,096		
			Gold	62		
			Lead			423
			Zinc			755
1935	27		Silver	7,309		
			Gold	62		
			Lead			410
			Zinc			601
1934	66		Silver	52,937		
			Gold	467		
			Copper			39
			Lead			1,932
			Zinc			3,495
1926	227		Silver	68,831		
			Gold	342		
			Lead			1,958
			Zinc			714
1925	203		Silver	69,702		
			Gold	404		
			Lead			3,240
			Zinc			4,291
1914	132		Silver	40,216		
			Gold	342		
			Copper			82

SUMMARY TOTALS: 082ESE113

NAME: **IMPERIAL**

	<u>Metric</u>	<u>Imperial</u>
Mined:	763 tonnes	841 tons
Milled:	tonnes	tons
Recovery:		
Silver:	288,604 grams	9,279 ounces
Gold:	2,083 grams	67 ounces
Copper:	121 kilograms	267 pounds
Lead:	9,149 kilograms	20,170 pounds
Zinc:	11,978 kilograms	26,407 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE114		NAME: RIVERSIDE (L.1031) (M-415)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1980		8	Silver	303	
			Gold	61	
			Lead		17
			Zinc		2
1979	85		Silver	16,889	
			Gold	93	
			Lead		460
			Zinc		591
1933	7		Silver	8,958	
			Gold	31	
			Lead		322
			Zinc		230
1913	110		Silver	79,468	
			Gold	156	
1907	61		Silver	159,030	
			Gold	187	

SUMMARY TOTALS: 082ESE114

NAME: **RIVERSIDE (L.1031) (M-415)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	263 tonnes	290 tons
Milled:	8 tonnes	9 tons
Recovery:		
Silver:	264,648 grams	8,509 ounces
Gold:	528 grams	17 ounces
Lead:	799 kilograms	1,761 pounds
Zinc:	823 kilograms	1,814 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE122	NAME: CYCLOPS (L.1244)	STATUS: Prospect
Production Year	Tonnes Mined	Tonnes Milled
1952	259	259
		Commodity
		Zinc
		Grams Recovered
		15,254
		Kilograms Recovered

SUMMARY TOTALS: 082ESE122

NAME: **CYCLOPS (L.1244)**

		<u>Metric</u>		<u>Imperial</u>
Mined:	259	tonnes	285	tons
Milled:	259	tonnes	285	tons
Recovery:	Zinc:	15,254	kilograms	33,629
Comments:				pounds

1952: Based on ore at 5.9 per cent zinc (Annual Report 1952, p. 141).

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 85
REPORT: RGEN0200

MINFILE NUMBER: 082ESE125	NAME: RODERICK DHU (L.598)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1940	25		Silver Gold	6,874 498	

SUMMARY TOTALS: 082ESE125

NAME: **RODERICK DHU (L.598)**

	Mined:	25 tonnes	28 tons
	Milled:		tons
Recovery:	Silver:	6,874 grams	221 ounces
	Gold:	498 grams	16 ounces

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE126** NAME: **AMANDY (L.2795)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1941	263		Silver	46,934	
			Gold	2,613	
1940	470		Silver	76,856	
			Gold	3,950	
1939	112		Silver	27,308	
			Gold	1,524	
1937	127		Silver	30,512	
			Gold	1,617	
1936	87		Silver	14,494	
			Gold	933	

SUMMARY TOTALS: 082ESE126

NAME: **AMANDY (L.2795)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,059 tonnes	1,167 tons
Milled:	tonnes	tons
Recovery:		
Silver:	196,104 grams	6,305 ounces
Gold:	10,637 grams	342 ounces

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 87
 REPORT: RGEN0200

MINFILE NUMBER: 082ESE128		NAME: MIDWAY MINE		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1979			Silver	8,253		
			Gold	105		
1977			Silver	10,940		
			Gold	37		
1969	19		Silver	9,424		
			Gold	124		
			Lead			156
			Zinc			156

SUMMARY TOTALS: 082ESE128

NAME: **MIDWAY MINE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	19 tonnes	21 tons
Milled:	tonnes	tons
Recovery:		
Silver:	28,617 grams	920 ounces
Gold:	266 grams	9 ounces
Lead:	156 kilograms	344 pounds
Zinc:	156 kilograms	344 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 88
REPORT: RGEN0200

MINFILE NUMBER: 082ESE130	NAME: TAM O'SHANTER (L.2405)	STATUS: Prospect			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1922	3		Silver Gold	2,052 12	

SUMMARY TOTALS: 082ESE130

NAME: **TAM O'SHANTER (L.2405)**

	Mined:	3 tonnes	3 tons
	Milled:	tonnes	tons
Recovery:	Silver:	2,052 grams	66 ounces
	Gold:	12 grams	ounces
Comments:	1922:	Ministry of Mines Annual Report 1922, page 176.	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE135		NAME: ELKHORN FR. (L.297S)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1927	31		Silver	8,367	
			Gold	31	
			Lead		2,101
			Zinc		5,299
1926	11		Silver	223,506	
			Gold	156	
			Lead		100
1925	2		Silver	9,891	
			Gold	62	
			Lead		67

SUMMARY TOTALS: 082ESE135

NAME: **ELKHORN FR. (L.297S)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	44 tonnes	49 tons
Milled:	tonnes	tons
Recovery:	Silver: 241,764 grams	7,773 ounces
	Gold: 249 grams	8 ounces
	Lead: 2,268 kilograms	5,000 pounds
	Zinc: 5,299 kilograms	11,682 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE147** NAME: **SAPPHO (L.2039)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1918	18		Silver	1,151	
			Copper		1,217
1917	33		Silver	1,866	
			Copper		1,994
1916	51		Silver	3,110	
			Copper		2,950

SUMMARY TOTALS: 082ESE147

NAME: **SAPPHO (L.2039)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	102 tonnes	112 tons
Milled:		tons
Recovery: Silver:	6,127 grams	197 ounces
Copper:	6,161 kilograms	13,583 pounds

Comments: 1918: Operated by E. Mellrud.
 1917: Operated by C. Johnson.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 91
REPORT: RGEN0200

MINFILE NUMBER: 082ESE149	NAME: MABEL (L.609)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1937	106		Silver	1,244	
			Gold	435	
			Copper		24

SUMMARY TOTALS: 082ESE149

NAME: **MABEL (L.609)**

	<u>Mined:</u>	106 tonnes	<u>Imperial</u>	117 tons
	<u>Milled:</u>	tonnes		tons
Recovery:	Silver:	1,244 grams		40 ounces
	Gold:	435 grams		14 ounces
	Copper:	24 kilograms		53 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 92
REPORT: RGEN0200

MINFILE NUMBER: 082ESE150	NAME: LAKESIDE FR. (L.1023)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1941	61		Silver	2,582	
			Gold	311	
1940	75		Silver	10,637	
			Gold	1,182	
1939	20		Silver	2,924	
			Gold	311	

SUMMARY TOTALS: 082ESE150

NAME: **LAKESIDE FR. (L.1023)**

		<u>Metric</u>		<u>Imperial</u>
	Mined:	156 tonnes		172 tons
	Milled:	tonnes		tons
Recovery:	Silver:	16,143 grams		519 ounces
	Gold:	1,804 grams		58 ounces

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 93
 REPORT: RGEN0200

MINFILE NUMBER: **082ESE151** NAME: **ETHIOPIA (L.932)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1940	4		Silver	902	
			Gold	93	
1939	20		Silver	1,026	
			Gold	125	
1922	10		Silver	21,492	
			Gold	93	

SUMMARY TOTALS: 082ESE151

NAME: **ETHIOPIA (L.932)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	34 tonnes	37 tons
Milled:	tonnes	tons
Recovery:		
Silver:	23,420 grams	753 ounces
Gold:	311 grams	10 ounces

Comments:

1939: Operated by Ethiopia Syndicate.
 1922: Operated by J. Duhamel.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE152		NAME: NORTH STAR (L.1165)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1940	25		Silver	249		
			Gold	404		
1939	128		Silver	10,917		
			Gold	2,115		
1938	224		Silver	6,065		
			Gold	1,244		
1937	429	397	Silver	9,238		
			Gold	1,493		
			Lead		315	
			Zinc		24	
1936	154		Silver	39,283		
			Gold	6,189		
1935	1,893	1,814	Silver	156,044		
			Gold	4,448		
			Lead		3,887	
			Zinc		3,829	
1934	3,174	3,098	Silver	216,259		
			Gold	2,146		
			Lead		965	
			Zinc		1,391	
1933	34		Silver	3,763		
			Gold	778		
			Lead		479	
1932	115		Silver	27,246		
			Gold	4,883		
			Lead		3,509	
			Zinc		63	
1919	2		Silver	6,221		

SUMMARY TOTALS: 082ESE152

NAME: **NORTH STAR (L.1165)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	6,178 tonnes	6,810 tons
Milled:	5,309 tonnes	5,852 tons
Recovery:		
Silver:	475,285 grams	15,281 ounces
Gold:	23,700 grams	762 ounces
Lead:	9,155 kilograms	20,183 pounds
Zinc:	5,307 kilograms	11,700 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE153		NAME: GOLD DROP (L.1415)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1988	1	1	Silver	2,272		
			Gold	75		
			Copper		9	
			Lead		48	
1980	40	40	Silver	4,728		
			Gold	92		
			Copper		44	
			Lead		681	
			Zinc		160	
1941	114		Silver	3,079		
			Gold	560		
1940	18		Silver	1,680		
			Gold	280		
1939	17		Silver	1,120		
			Gold	218		
1938	58		Silver	3,017		
			Gold	467		
1934	16		Silver	3,328		
			Gold	342		
1933	28		Silver	4,914		
			Gold	840		
1932	16		Silver	4,354		
			Gold	746		
1931	15		Silver	2,861		
			Gold	653		
1928	9		Silver	1,991		
			Gold	435		
1927	2		Silver	1,804		
			Gold	156		
			Lead		23	
1926	1		Silver	746		
			Gold	156		
			Lead		6	

SUMMARY TOTALS: 082ESE153

NAME: **GOLD DROP (L.1415)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	335 tonnes	369 tons
Milled:	41 tonnes	45 tons
Recovery:		
Silver:	35,894 grams	1,154 ounces
Gold:	5,020 grams	161 ounces
Copper:	53 kilograms	117 pounds
Lead:	758 kilograms	1,671 pounds
Zinc:	160 kilograms	353 pounds

Comments: 1988: Custom ore; unknown tonnage.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE158** NAME: **SEATTLE (L.652)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1916	239		Silver	4,043	
			Gold	746	
			Copper		2,330
1903	57		Silver	373	
			Gold	156	
			Copper		763

SUMMARY TOTALS: 082ESE158

NAME: **SEATTLE (L.652)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	296 tonnes	326 tons
Milled:	tonnes	tons
Recovery:		
Silver:	4,416 grams	142 ounces
Gold:	902 grams	29 ounces
Copper:	3,093 kilograms	6,819 pounds

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 97
 REPORT: RGEN0200

MINFILE NUMBER: 082ESE163		NAME: WINNER (L.1158)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1940	41		Silver	435	
			Gold	124	
1938	15		Silver	156	
			Gold	187	
1934	3		Silver	435	
			Gold	124	

SUMMARY TOTALS: 082ESE163

NAME: **WINNER (L.1158)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	59 tonnes	65 tons
Milled:	tonnes	tons
Recovery: Silver:	1,026 grams	33 ounces
Gold:	435 grams	14 ounces

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 98
REPORT: RGEN0200

MINFILE NUMBER: 082ESE165	NAME: FREMONT(L.1217)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1918	5		Silver Gold	4,479 31	

SUMMARY TOTALS: 082ESE165

NAME: **FREMONT(L.1217)**

		<u>Metric</u>		<u>Imperial</u>	
	Mined:	5 tonnes		6 tons	
	Milled:			tons	
Recovery:	Silver:	4,479 grams		144 ounces	
	Gold:	31 grams		1 ounces	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE169		NAME: EVA BELL (L.2031)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1976	573	573	Silver	35,209		
			Cadmium			142
			Lead			18,714
			Zinc			27,897
1975	907	786	Silver	49,235		
			Cadmium			253
			Lead			23,223
			Zinc			37,825
1974	907	274	Silver	37,666		
			Cadmium			149
			Lead			11,364
			Zinc			19,884
1973	149	149	Silver	1,306		
			Gold	1,058		
			Lead			255
			Zinc			149
1972	43	43	Silver	9,642		
			Lead			3,374
			Zinc			7,138

SUMMARY TOTALS: 082ESE169

NAME: **EVA BELL (L.2031)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,579 tonnes	2,843 tons
Milled:	1,825 tonnes	2,012 tons
Recovery:		
Silver:	133,058 grams	4,278 ounces
Gold:	1,058 grams	34 ounces
Cadmium:	544 kilograms	1,199 pounds
Lead:	56,930 kilograms	125,509 pounds
Zinc:	92,893 kilograms	204,794 pounds

Comments:

1974: Operated by Alvija Mines Ltd.
 1972: Operated by Donna Mines Ltd.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE170		NAME: BONANZA FR. (L.1617)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1925	25		Silver	498	
			Gold	31	
			Lead		508
			Zinc		1,016

SUMMARY TOTALS: 082ESE170

NAME: **BONANZA FR. (L.1617)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	25 tonnes	28 tons
Milled:	tonnes	tons
Recovery:		
Silver:	498 grams	16 ounces
Gold:	31 grams	1 ounces
Lead:	508 kilograms	1,120 pounds
Zinc:	1,016 kilograms	2,240 pounds

Comments: 1925: Operated by Grand Forks Mining Syndicate.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE185		NAME: COMBINATION (L.1458)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1924	7		Silver	45,255	
			Gold	435	
			Lead		576
1923	4		Silver	15,085	
			Gold	218	
			Lead		146

SUMMARY TOTALS: 082ESE185

NAME: **COMBINATION (L.1458)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	11 tonnes	12 tons
Milled:	tonnes	tons
Recovery:		
Silver:	60,340 grams	1,940 ounces
Gold:	653 grams	21 ounces
Lead:	722 kilograms	1,592 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE187		NAME: SENATOR		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1905	1,492		Silver	4,230		
			Gold	2,675		
			Copper			2,533
1904	3,470		Silver	16,951		
			Gold	6,811		
			Copper			7,544
1903	216		Silver	1,493		
			Gold	498		
			Copper			541

SUMMARY TOTALS: 082ESE187

NAME: **SENATOR**

	<u>Mined:</u>	<u>Milled:</u>	<u>Metric</u>	<u>Imperial</u>
Recovery:			5,178 tonnes	5,708 tons
	Silver:		22,674 grams	729 ounces
	Gold:		9,984 grams	321 ounces
	Copper:		10,618 kilograms	23,409 pounds

Comments: 1904: Includes No. 37 from MM00907.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE188		NAME: BLUEBELL (L.2136)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1939	330		Silver	2,862	
			Gold	8,055	
1938	23		Silver	933	
			Copper		422

SUMMARY TOTALS: 082ESE188

NAME: **BLUEBELL (L.2136)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	353 tonnes	389 tons
Milled:		
Recovery:		
Silver:	3,795 grams	122 ounces
Gold:	8,055 grams	259 ounces
Copper:	422 kilograms	930 pounds

Comments:

1939: Operated independently by L. Hanley and F. Simpson.
 1938: Operated by F. Simpson.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE192** NAME: **KENO (L.1319)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1940	56		Silver	11,944	
			Gold	187	
			Lead		166
1938	88		Silver	31,445	
			Gold	373	
			Lead		813
1936	81		Silver	28,210	
			Gold	249	
			Lead		673
1935	69		Silver	29,486	
			Gold	435	
			Lead		1,059
			Zinc		275

SUMMARY TOTALS: 082ESE192

NAME: **KENO (L.1319)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	294 tonnes	324 tons
Milled:	tonnes	tons
Recovery:		
Silver:	101,085 grams	3,250 ounces
Gold:	1,244 grams	40 ounces
Lead:	2,711 kilograms	5,977 pounds
Zinc:	275 kilograms	606 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE200		NAME: ROCK CREEK		STATUS: Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1992	8,000		Dolomite		8,000,000
1991	8,000		Dolomite		8,000,000
1990	8,000		Dolomite		8,000,000
1989	8,000		Dolomite		8,000,000
1988	8,000		Dolomite		8,000,000
1987	8,000		Dolomite		8,000,000
1986	8,000		Dolomite		8,000,000
1985	6,000		Dolomite		6,000,000
1983	8,845		Dolomite		8,845,051
1982	500		Dolomite		500,000
1981	5,089		Dolomite		5,089,306
1980	2,976		Dolomite		2,975,566
1979	2,644		Dolomite		2,644,443
1978	997		Dolomite		997,468
1977	41		Dolomite		40,823
1972	9,000		Dolomite		9,000,000

SUMMARY TOTALS: 082ESE200

NAME: **ROCK CREEK**

	<u>Mined:</u>	<u>Metric</u>	<u>Imperial</u>
Recovery:	Milled:	92,092 tonnes	101,514 tons
Comments:	Dolomite:	92,092,657 kilograms	203,029,498 pounds
	1992:	Estimate.	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE209		NAME: W.S.		STATUS: Showing		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1954	13		Silver	8,211		
			Lead		4,277	
			Zinc		2,043	
1950	11		Silver	6,532		
			Lead		3,108	
			Zinc		1,334	
1949	5		Silver	4,976		
			Lead		2,325	
			Zinc		974	
1925	18		Silver	4,883		
			Lead		2,633	
			Zinc		680	

SUMMARY TOTALS: 082ESE209

NAME: **W.S.**

	<u>Metric</u>	<u>Imperial</u>
Mined:	47 tonnes	52 tons
Milled:	tonnes	tons
Recovery:		
Silver:	24,602 grams	791 ounces
Lead:	12,343 kilograms	27,212 pounds
Zinc:	5,031 kilograms	11,091 pounds

Comments:

1954: W.S. operated by Cascade Lode Mines Ltd.
 1950: Operated by W. Schwarzenhauer for W.S. Mines.
 1949: Operated by W. Schwarzenhauer for W.S. Mines.
 1925: Carlton operated by H. Breakell.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 107
REPORT: RGEN0200

MINFILE NUMBER: **082ESE212** NAME: **DEFIANCE (L.758)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1924	2		Silver	13,219	
			Gold	62	
			Lead		122
1893	2		Silver	34,835	
			Gold	125	

SUMMARY TOTALS: 082ESE212

NAME: **DEFIANCE (L.758)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	4 tonnes	4 tons
Milled:	tonnes	tons
Recovery:	Silver: 48,054 grams	1,545 ounces
	Gold: 187 grams	6 ounces
	Lead: 122 kilograms	269 pounds

Comments:

1924: R. Lee; MM00929.
1893: MM00929.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE215		NAME: STRATHMORE (L.1018)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1925	5		Silver	22,581	
			Gold	31	
			Lead		418
1924	15		Silver	71,350	
			Gold	373	
			Lead		633
1915	35		Silver	62,019	
			Gold	404	
			Lead		294
1907	47		Silver	160,740	
			Gold	1,680	
			Lead		1,205
1906	96		Silver	215,948	
			Gold	2,302	
			Lead		1,591

SUMMARY TOTALS: 082ESE215

NAME: **STRATHMORE (L.1018)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	198 tonnes	218 tons
Milled:	tonnes	tons
Recovery:	Silver: 532,638 grams	17,125 ounces
	Gold: 4,790 grams	154 ounces
	Lead: 4,141 kilograms	9,129 pounds

Comments:

1924: Operated by The Strathmore Syndicate.
 1915: Operated by D. McIntosh.
 1906: Operated by B.C. Copper Co.

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 109
 REPORT: RGEN0200

MINFILE NUMBER: **082ESE216** NAME: **LAST CHANCE (L.753)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1935	37		Silver	5,785	
			Gold	93	
1920	24		Silver	16,578	
			Gold	249	
1905	575		Silver	2,959,357	
			Gold	3,701	
1904	68		Silver	44,446	
			Gold	622	

SUMMARY TOTALS: 082ESE216

NAME: **LAST CHANCE (L.753)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	704 tonnes	776 tons
Milled:		
Recovery:		
Silver:	3,026,166 grams	97,293 ounces
Gold:	4,665 grams	150 ounces

Comments:

1935: Operated by W.E. McArthur; MM00948.
 1920: Operated by J. Poggi; mainly dump material; MM00948.
 1905: Spokane Boundary Mining Co., MM00948 Skylark Camp.
 1904: Spokane Boundary Mining Co., MM00948 Skylark Camp.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESE238** NAME: **FIFE LIMESTONE** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1957	20,980		Limestone		20,979,553
1956	66,972		Limestone		66,972,003
1955	65,619		Limestone		65,619,390
1954	15,422		Limestone		15,422,139
1953	19,093		Limestone		19,092,609
1952	32,393		Limestone		32,392,844
1951	33,430		Limestone		33,429,756
1950	35,289		Limestone		35,288,577
1949	45,075		Limestone		45,075,286
1948	30,439		Limestone		30,438,768
1947	28,599		Limestone		28,598,906
1946	36,238		Limestone		36,238,400
1945	25,855		Limestone		25,854,763
1944	14,264		Limestone		14,263,891
1943	16,450		Limestone		16,449,980
1942	28,363		Limestone		28,363,220
1941	32,774		Limestone		32,774,315
1940	23,002		Limestone		23,001,668
1939	21,607		Limestone		21,607,325
1938	18,092		Limestone		18,091,984
1937	16,290		Limestone		16,289,934
1936	13,711		Limestone		13,711,189
1935	109,512		Limestone		109,512,070
1934	19,695		Limestone		19,694,979
1933	18,144		Limestone		18,143,694
1932	22,603		Limestone		22,603,413
1931	22,603		Limestone		22,603,123
1930	18,202		Limestone		18,201,753
1929	19,710		Limestone		19,709,830
1928	22,978		Limestone		22,978,289
1927	31,445		Limestone		31,444,836
1926	31,445		Limestone		31,444,836
1925	31,889		Limestone		31,887,905
1924	22,152		Limestone		22,151,636
1923	24,018		Limestone		24,017,840
1922	8,165		Limestone		8,164,662
1921	15,319		Limestone		15,318,720
1920	20,265		Limestone		20,264,691
1919	17,958		Limestone		17,957,721
1918	37,290		Limestone		37,289,827
1917	26,221		Limestone		26,221,266
1916	93,696		Limestone		93,695,850
1915	112,393		Limestone		112,392,920
1914	115,212		Limestone		115,212,450
1913	84,504		Limestone		84,504,254
1911	80,689		Limestone		80,688,635

SUMMARY TOTALS: 082ESE238

NAME: **FIFE LIMESTONE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,646,065 tonnes	1,814,476 tons
Milled:		
Recovery:	Limestone: 1,646,061,700 kilograms	3,628,943,837 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE246		NAME: MAYBE		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1940	130		Silver	4,976		
			Gold	2,582		
1939	144		Silver	5,412		
			Gold	2,613		
1938	169		Silver	6,687		
			Gold	4,603		
			Copper		118	
			Lead		39	

SUMMARY TOTALS: 082ESE246

NAME: **MAYBE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	443 tonnes	488 tons
Milled:	tonnes	tons
Recovery:		
Silver:	17,075 grams	549 ounces
Gold:	9,798 grams	315 ounces
Copper:	118 kilograms	260 pounds
Lead:	39 kilograms	86 pounds

Comments:

1940: S. Berglund; included with MM00947. See Annual Report 1940-62.
 1939: S. Berglund; included with MM00947. See Annual Report 1939-77.
 1938: S. Berglund; included with MM00947. See Annual Report 1938-D36.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 112
REPORT: RGEN0200

MINFILE NUMBER: 082ESE247	NAME: MAVIS (L.2877)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1905	29		Silver Gold	1,742 591	

SUMMARY TOTALS: 082ESE247

NAME: **MAVIS (L.2877)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	29 tonnes	32 tons
Milled:		tons
Recovery:		
Silver:	1,742 grams	56 ounces
Gold:	591 grams	19 ounces
Comments:		
1905:	E.T. Wickwire; MM00948.	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE248		NAME: DON PEDRO (L.2458)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1919	16		Silver	57,976	
			Gold	124	
1906	11		Silver	12,659	
			Gold	62	

SUMMARY TOTALS: 082ESE248

NAME: **DON PEDRO (L.2458)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	27 tonnes	30 tons
Milled:		
Recovery:		
Silver:	70,635 grams	2,271 ounces
Gold:	186 grams	6 ounces
Comments:		
1919:	C. Johnson et al.; MM00948.	
1906:	Chicago B.C. Mining Co.; MM00948.	

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 114
REPORT: RGEN0200

MINFILE NUMBER: 082ESE249	NAME: PRESTON (L.69S)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1923	1		Silver	1,182	
1906	15		Silver	17,262	
			Gold	62	
			Lead		306

SUMMARY TOTALS: 082ESE249

NAME: **PRESTON (L.69S)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	16 tonnes	18 tons
Milled:	tonnes	tons
Recovery:		
Silver:	18,444 grams	593 ounces
Gold:	62 grams	2 ounces
Lead:	306 kilograms	675 pounds
Comments:		
1923:	E.A. Wanke; MM00948.	
1906:	Preston Mining Company; MM00948.	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE250		NAME: PRINCE HENRY (L.2636)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1925	5		Silver	9,766	
			Gold	93	
			Lead		135
1917	6		Silver	13,032	
			Gold	93	
			Lead		356
1906	8		Silver	17,262	
			Gold	218	
			Lead		639

SUMMARY TOTALS: 082ESE250

NAME: **PRINCE HENRY (L.2636)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	19 tonnes	21 tons
Milled:	tonnes	tons
Recovery:		
Silver:	40,060 grams	1,288 ounces
Gold:	404 grams	13 ounces
Lead:	1,130 kilograms	2,491 pounds

Comments:

1925: Prince Henry Mining Co. Ltd.; MM00948.
 1917: Prince Henry Mining Co. Ltd.; MM00948.
 1906: Prince Henry Mining Co.; MM00948.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 116
REPORT: RGEN0200

MINFILE NUMBER: 082ESE251	NAME: TWIN (L.819)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1922	2		Silver Lead	933	528

SUMMARY TOTALS: 082ESE251

NAME: **TWIN (L.819)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2 tonnes	2 tons
Milled:		tons
Recovery:	Silver: 933 grams	30 ounces
	Lead: 528 kilograms	1,164 pounds
Comments:	1922: J. Drum; MM00042 (includes Skylark (082ESE011) data.	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1950	7		Silver Lead Zinc	9,020	9,612 1,877

SUMMARY TOTALS: 082ESE259

NAME: **LEAD KING (L.2071)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	7 tonnes	8 tons
Milled:	tonnes	tons
Recovery:		
Silver:	9,020 grams	290 ounces
Lead:	9,612 kilograms	21,191 pounds
Zinc:	1,877 kilograms	4,138 pounds
Comments:		
1950:	Operated by W. McArthur.	

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 118
REPORT: RGEN0200

MINFILE NUMBER:	082ESE260	NAME:	SURPRISE NO. 3 (L.1776)	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1918	81		Silver	2,177	
			Copper		3,415
1917	6		Silver	280	
			Copper		302

SUMMARY TOTALS: 082ESE260

NAME: **SURPRISE NO. 3 (L.1776)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	87 tonnes	96 tons
Milled:		
Recovery:		
Silver:	2,457 grams	79 ounces
Copper:	3,717 kilograms	8,195 pounds

Comments:

1918: Operated by J. Thompson, silver recovery from Annual Report 1918.
1917: Operated by Cunningham & Kane; MM00042.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESE265	NAME: WINNER QUARRY	STATUS: Producer	
Production Year	Tonnes Mined	Tonnes Milled	
		Commodity	
		Grams Recovered	
		Kilograms Recovered	
2002		50,000 Mineral/Rock Wool	50,000
2001		17,000 Mineral/Rock Wool	17,000
2000	10,000	Mineral/Rock Wool	10,000

SUMMARY TOTALS: 082ESE265

NAME: **WINNER QUARRY**

		<u>Metric</u>	<u>Imperial</u>
Mined:	10,000 tonnes	11,023 tons	
Milled:	67,000 tonnes	73,855 tons	
Recovery:	Mineral/Rock Wool:	77,000 kilograms	169,756 pounds
Comments:	2000: Bulk sample.		

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW001		NAME: DIVIDEND-LAKEVIEW		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1949	35		Silver	5,350	
			Gold	280	
			Lead		71
			Zinc		71
1941	11		Silver	156	
			Gold	933	
1940	8,352	8,352	Silver	7,558	
			Gold	25,193	
			Copper		7,812
1939	46,609	41,696	Silver	25,442	
			Gold	167,054	
			Copper		26,676
1938	23,470	18,723	Silver	18,382	
			Gold	135,951	
			Copper		13,160
1937	21,121	16,090	Silver	9,393	
			Gold	58,971	
			Copper		11,685
1936	6,804	6,450	Silver	13,250	
			Gold	49,329	
			Copper		10,654
1935	3,266	3,220	Silver	6,003	
			Gold	21,088	
			Copper		1,691
1933	36		Silver	124	
			Gold	902	
			Copper		299
1932	201		Silver	31	
			Gold	684	
			Copper		37
1916	9		Silver	62	
			Gold	280	
			Copper		33
1915	34		Gold	560	
1914	123		Gold	3,701	
1913	821		Silver	1,493	
			Gold	30,450	
			Copper		337
1912	307		Gold	6,501	
			Copper		797
1908	25		Gold	902	
1907	28		Gold	1,617	
			Copper		170

SUMMARY TOTALS: 082ESW001

NAME: **DIVIDEND-LAKEVIEW**

	<u>Metric</u>	<u>Imperial</u>
Mined:	111,252 tonnes	122,634 tons
Milled:	94,531 tonnes	104,203 tons
Recovery:		
Silver:	87,244 grams	2,805 ounces
Gold:	504,396 grams	16,217 ounces
Copper:	73,351 kilograms	161,711 pounds
Lead:	71 kilograms	157 pounds
Zinc:	71 kilograms	157 pounds

Comments:

1941: Ore mined is only clean-up material.
 1940: Mine closed down in March.
 1939: Ore milled does not include 4410 tonnes tailings retreated.
 1938: Ore milled does not include 33,924 tonnes tailings retreated.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW002		NAME: HORN SILVER (L.1928)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1984		2,636	Silver Gold Lead Zinc	873,634 5,846		8,114 6,087
1983	3,600	3,600	Silver Gold Copper	282,451 3,296		1,755
1982		2,918	Silver Gold Copper Lead	551,962 7,816		325 1,225
1981	21,468	21,468	Silver Gold Lead Zinc	2,651,520 7,460		4,694 6,882
1980	19,634	19,634	Silver Gold Lead Zinc	2,936,329 7,981		9,275 15,273
1979	25,536	25,536	Silver Gold Copper Lead Zinc	6,084,338 18,755		4,789 17,244 24,299
1978	28,677	28,677	Silver Gold Copper Lead Zinc	7,569,195 23,949		5,518 21,091 27,927
1977	29,030	31,984	Silver Gold Copper Lead Zinc	8,917,790 24,260		4,170 23,759 27,993
1976	23,667	20,936	Silver Gold Copper Lead Zinc	6,988,937 20,292		4,127 17,657 22,143
1975	17,916	17,916	Silver Gold Copper Lead Zinc	8,120,682 11,010		5,013 18,058 25,102
1974	22,316	22,091	Silver Gold Copper Lead Zinc	6,809,660 13,685		4,278 15,980 11,097
1970	17,046	17,046	Silver Gold Lead Zinc	4,051,912 9,953		11,278 9,391
1969	67,961	67,961	Silver Gold Lead Zinc	17,261,512 45,348		50,076 61,446
1968	116,119	116,119	Silver Gold Lead Zinc	33,217,102 84,382		93,407 90,735
1967	34,874	34,874	Silver Gold Lead Zinc	13,130,380 27,744		35,932 43,125
1958	49		Silver Gold Lead Zinc	114,583 467		326 324
1933	3		Silver Gold Lead	13,437 31		

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082ESW002</u>	NAME:	<u>HORN SILVER (L.1928)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1933	3		Zinc		39
1928	24		Silver	92,780	
			Gold	529	
			Lead		288
1926	635		Silver	348,478	
			Gold	1,089	
1925	40		Silver	63,139	
			Gold	187	
1924	43		Silver	105,781	
			Gold	311	
1922	24		Silver	51,538	
			Gold	156	
1921	767		Silver	1,327,538	
			Gold	3,888	
1920	1,382		Silver	2,195,934	
			Gold	5,288	
1919	952		Silver	961,425	
			Gold	2,613	
1918	831		Silver	1,326,885	
			Gold	3,079	
			Copper		59
1917	291		Silver	554,691	
			Gold	1,711	
1916	188		Silver	349,287	
			Gold	1,151	
1915	104		Silver	241,950	
			Gold	715	

SUMMARY TOTALS: 082ESW002

NAME: **HORN SILVER (L.1928)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	433,177 tonnes	477,496 tons
Milled:	433,396 tonnes	477,737 tons
Recovery:		
Silver:	127,194,850 grams	4,089,403 ounces
Gold:	332,992 grams	10,706 ounces
Copper:	30,034 kilograms	66,214 pounds
Lead:	328,458 kilograms	724,126 pounds
Zinc:	371,863 kilograms	819,817 pounds

Comments:

1984: Mining operations ceased October 31, 1984.
 1981: Operations temporarily suspended.
 1974: Operations resumed by Dankoe Mines Ltd.
 1970: Operations ceased by Utica Mines Ltd.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 123
REPORT: RGEN0200

MINFILE NUMBER: **082ESW004** NAME: **MAK SICCAR** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1939	5		Silver	156	
			Gold	31	
1938	83		Silver	809	
			Gold	995	
1935	100		Silver	964	
			Gold	2,893	
1934	1		Silver	31	
			Gold	93	

SUMMARY TOTALS: 082ESW004

NAME: **MAK SICCAR**

	<u>Metric</u>	<u>Imperial</u>
Mined:	189 tonnes	208 tons
Milled:		
Recovery:		
Silver:	1,960 grams	63 ounces
Gold:	4,012 grams	129 ounces

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW005		NAME: TINHORN (L.726)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1942	93		Silver	467		
			Gold	31		
1898	181	181	Gold	1,369		

SUMMARY TOTALS: 082ESW005

NAME: **TINHORN (L.726)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	274 tonnes	302 tons
Milled:	181 tonnes	200 tons
Recovery:	Silver: 467 grams	15 ounces
	Gold: 1,400 grams	45 ounces

Comments:

1942: Probably from old mill tailings (BC METAL MM00368).
 1898: Operated by Tinhorn Quartz Mining Company Ltd.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW006		NAME: MORNING STAR (L.443)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1941	307		Silver	27,526	
			Gold	3,079	
1940	593		Silver	32,254	
			Gold	5,288	
1936	11,757	11,757	Silver	698,480	
			Gold	46,997	
			Copper		926
			Lead		8,558
1935	5,131	4,638	Silver	41,398	
			Gold	18,973	
			Lead		4,660
			Zinc		1,894
1934	2,406	2,406	Silver	98,814	
			Gold	44,913	
1933	1,439		Silver	67,058	
			Gold	29,641	
1898	272	272	Gold	6,220	
1895	1,814	1,814	Gold	62,207	
1894	907	907	Gold	24,883	
1893	349	349	Gold	10,486	

SUMMARY TOTALS: 082ESW006

NAME: **MORNING STAR (L.443)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	24,975 tonnes	27,530 tons
Milled:	22,143 tonnes	24,408 tons
Recovery:		
Silver:	965,530 grams	31,042 ounces
Gold:	252,687 grams	8,124 ounces
Copper:	926 kilograms	2,041 pounds
Lead:	13,218 kilograms	29,141 pounds
Zinc:	1,894 kilograms	4,176 pounds

Comments:

1941: Morning Star.
 1940: Morning Star and Black Diamond.
 1936: Fairview Amalgamated Gold Mines, Ltd. May include Fairview ore.
 1933: 1933-41 production mainly from the Fairview mine (082ESW008).
 1898: Annual Report 1898, page 1115. Calculated at \$15 per ounce.
 1895: Annual Report 1895, page 704. Calculated at \$15 per ounce.
 1894: Annual Report 1894, page 753. Calculated at \$15 per ounce.
 1893: Annual Report 1893, page 1075-1076. Calculated; includes silver.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW007		NAME: STEMWINDER (L.384)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1956	4		Silver	1,089		
			Gold	62		
1949	72	72	Silver	7,527		
			Gold	653		
			Lead			211
			Zinc			249
1946	41	41	Silver	3,484		
			Gold	62		
1938	5		Silver	156		
			Gold	311		
1920	2	2	Silver	3,173		
			Gold	187		
			Lead			82
1904	998	998	Silver	16,205		
			Gold	5,505		
1903	11,563	11,563	Silver	305,338		
			Gold	41,709		
			Lead			601
1902	12,071	12,071	Silver	152,063		
			Gold	25,193		
			Lead			2,776
1901	1,774	1,774	Gold	15,552		
1900	190	190	Silver	35,240		
			Gold	1,120		
1899	320	320	Gold	2,986		
1898	635	363	Silver	8,522		
			Gold	3,235		
1894	181	181	Gold	2,075		
1893	91	91	Gold	1,660		

SUMMARY TOTALS: 082ESW007

NAME: **STEMWINDER (L.384)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	27,947 tonnes	30,806 tons
Milled:	27,666 tonnes	30,497 tons
Recovery:		
Silver:	532,797 grams	17,130 ounces
Gold:	100,310 grams	3,225 ounces
Lead:	3,670 kilograms	8,091 pounds
Zinc:	249 kilograms	549 pounds

Comments:

1956: Little Joe, operated by Joe Barillaro.
 1938: Brown Bear, operated by W. Dalrymple and L. Hozier.
 1894: Brown Bear; Annual Report 1894, page 753. Recovery calculated.
 1893: Brown Bear; Annual Report 1893, page 1074. Recovery calculated.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESW008** NAME: **FAIRVIEW (L.556S)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1961	13,642		Silica		13,642,248
1960	22,292		Silica		22,292,257
1959	24,237		Silica		24,237,261
1958	32,394		Silica		32,393,761
1957	28,916		Silica		28,915,614
1956	47,043		Silica		47,042,985
1955	25,645		Silica		25,645,212
1953	14,798		Silica		14,798,000
1952	18,036		Silica		18,035,744
1951	16,539		Silica		16,538,889
1950	17,754		Silica		17,753,610
1949	22,269		Silica		22,268,670
1948	27,422		Silica		27,422,388
1947	22,422		Silica		22,422,000
1946	272	199	Silica		198,674
1939	14,061	14,061	Silver Gold Copper Lead	673,878 46,717	3,065 15,710
1938	42,465	41,785	Silver Gold Copper Lead	1,600,218 121,955	3,631 31,504
1937	32,114	31,647	Silver Gold Copper Lead	1,500,720 116,543	2,391 28,007

SUMMARY TOTALS: 082ESW008

NAME: **FAIRVIEW (L.556S)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	422,321 tonnes	465,529 tons
Milled:	87,692 tonnes	96,664 tons
Recovery:		
Silver:	3,774,816 grams	121,363 ounces
Gold:	285,215 grams	9,170 ounces
Copper:	9,087 kilograms	20,033 pounds
Lead:	75,221 kilograms	165,834 pounds
Silica:	333,607,313 kilograms	735,478,022 pounds

Comments:

1961: Minister of Mines Annual Report 1961, page A48; production fiche.
 1960: Minister of Mines Annual Report 1960, page A53; production fiche.
 1959: Minister of Mines Annual Report 1959, page A47; production fiche.
 1958: Minister of Mines Annual Report 1958, page A45; production fiche.
 1957: Minister of Mines Annual Report 1957, page A45; production fiche.
 1956: Minister of Mines Annual Report 1956, page A49; production fiche.
 1955: Minister of Mines Annual Report 1955, page A47; production fiche.
 1953: Minister of Mines Annual Report 1953, page A44; production fiche.
 1952: Annual Report 1952, page A41; includes Morning Star.
 1951: Minister of Mines Annual Report 1951, page A42; production fiche.
 1950: Production fiche; includes Morning Star.
 1949: Production fiche; includes Morning Star.
 1948: Production fiche.
 1947: Annual Report 1947, page A153; includes Morning Star.
 1946: Production fiche.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	082ESW010		NAME:	GRANDORO		STATUS:	Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>			
1942	87		Silver	902				
			Gold	1,182				
1941	228		Silver	2,737				
			Gold	5,412				
1940	430	363	Silver	2,022				
			Gold	4,043				
1939	490	280	Silver	3,204				
			Gold	6,376				
1938	1,289	805	Silver	6,501				
			Gold	14,650				
1937	1,342	1,315	Silver	1,991				
			Gold	7,714				
1935	7,232	7,232	Silver	7,838				
			Gold	50,853				
1934	495		Silver	9,424				
			Gold	17,915				
1933	200		Silver	3,110				
			Gold	11,975				
1932	69	69	Gold	1,369				
1930	27	27	Gold	311				
			Lead					31
			Zinc					5
1929	23	1	Silver	124				
			Gold	529				
			Lead					48
1899	136	136	Gold	1,369				

SUMMARY TOTALS: 082ESW010

NAME: **GRANDORO**

	<u>Metric</u>	<u>Imperial</u>
Mined:	12,048 tonnes	13,281 tons
Milled:	10,228 tonnes	11,274 tons
Recovery:		
Silver:	37,853 grams	1,217 ounces
Gold:	123,698 grams	3,977 ounces
Lead:	79 kilograms	174 pounds
Zinc:	5 kilograms	11 pounds

Comments:

- 1940: Includes ore from King.
- 1939: Ore milled includes 210 crude.
- 1938: Ore milled includes 534 crude. Includes ore from King and John.
- 1937: Ore milled is estimated.
- 1932: Grandoro, 1932-1942.
- 1930: Operated by B.E. Mining Co.
- 1929: Operated by B.E. Mining Co.
- 1899: Oro Fino, 1899-1930.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW011		NAME: TWIN LAKES		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1942	93		Silver	1,120		
			Gold	964		
1941	376		Silver	1,586		
			Gold	3,888		
1940	488	308	Silver	7,185		
			Gold	5,567		
1939		930	Silver	9,922		
			Gold	14,214		
1938		1,027	Silver	1,959		
			Gold	9,113		
1937		1,043	Silver	373		
			Gold	2,395		
1936		272	Silver	373		
			Gold	9,424		
1934	4,963	4,963	Silver	6,936		
			Gold	52,191		
1933	748	689	Silver	1,835		
			Gold	14,214		
1932	596	422	Silver	5,288		
			Gold	39,439		
1926	1		Silver	31		
			Gold	62		

SUMMARY TOTALS: 082ESW011

NAME: **TWIN LAKES**

	<u>Metric</u>	<u>Imperial</u>
Mined:	7,265 tonnes	8,008 tons
Milled:	9,654 tonnes	10,642 tons
Recovery:		
Silver:	36,608 grams	1,177 ounces
Gold:	151,471 grams	4,870 ounces

Comments:

1940: Mined at Summit adit. Ore milled estimated and includes tailings.
 1939: Ore milled is estimated.
 1938: Ore milled is estimated.
 1937: Ore milled is estimated.
 1936: Ore milled is estimated.
 1932: Mined at Summit adit.
 1926: Mined at Summit adit.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW012		NAME: DOLPHIN (L.978S)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1918	42		Silver	2,146	
			Copper		2,401
1917	65		Silver	2,364	
			Copper		2,516
1916	38		Silver	1,804	
			Copper		2,308

SUMMARY TOTALS: 082ESW012

NAME: **DOLPHIN (L.978S)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	145 tonnes	160 tons
Milled:	tonnes	tons
Recovery: Silver:	6,314 grams	203 ounces
Copper:	7,225 kilograms	15,928 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW015		NAME: SUNRISE (L.18S)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1948	231		Silver	3,763	
			Gold	4,261	
			Copper		209

SUMMARY TOTALS: 082ESW015

		NAME: SUNRISE (L.18S)	
		<u>Metric</u>	<u>Imperial</u>
Mined:	231 tonnes	255 tons	
Milled:	tonnes	tons	
Recovery:	Silver: 3,763 grams	121 ounces	
	Gold: 4,261 grams	137 ounces	
	Copper: 209 kilograms	461 pounds	
Comments:	1948: Crude ore.		

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW016		NAME: GOLCONDA		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1969	15		Silver	2,457		
			Copper			4,032
			Lead			127
1960	1,361	1,361	Silver	14,307		
			Gold	62		
			Copper			27,696
			Molybdenum			2,456
			Lead			638
1930	13		Silver	715		
			Copper			1,506
1919	18		Silver	12,192		
			Gold	156		
			Copper			2,803
1918	10		Silver	529		
			Copper			1,687
1917	4		Copper			344
			Molybdenum			204

SUMMARY TOTALS: 082ESW016

NAME: **GOLCONDA**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,421 tonnes	1,566 tons
Milled:	1,361 tonnes	1,500 tons
Recovery:		
Silver:	30,200 grams	971 ounces
Gold:	218 grams	7 ounces
Copper:	38,068 kilograms	83,926 pounds
Molybdenum:	2,660 kilograms	5,864 pounds
Lead:	765 kilograms	1,687 pounds

Comments:

1960: National Mineral Inventory 082E5 Cu1.
 1918: See Minister of Mines Annual Report 1918, page 213.
 1917: See Minister of Mines Annual Report 1917, page 206.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 133
REPORT: RGEN0200

MINFILE NUMBER:	082ESW017	NAME:	DIEF	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1956	36		Manganese		14,515

SUMMARY TOTALS: 082ESW017

	Mined:	36 tonnes	Imperial	40 tons
	Milled:	tonnes		tons
Recovery:	Manganese:	14,515 kilograms		32,000 pounds

Comments: 1956: National Mineral Inventory 082E5 Mn1.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESW020** NAME: **CARIBOO-AMELIA** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1962	1,666		Silver	43,762	
			Gold	42,456	
			Lead		6,778
			Silica		1,664,866
			Zinc		8,468
1961	4,614		Silver	187,364	
			Gold	168,951	
			Lead		5,129
			Silica		4,613,943
			Zinc		36,876
1960	3,964		Silver	212,433	
			Gold	161,860	
			Lead		29,731
			Silica		3,964,400
			Zinc		29,701
1946	318		Silver	12,503	
			Gold	13,219	
			Lead		1,710
			Zinc		2,071
1945	278		Silver	11,508	
			Gold	4,479	
			Lead		2,538
			Zinc		7,564
1944	161		Silver	3,515	
			Gold	2,146	
			Lead		686
			Zinc		572
1943	668		Silver	19,533	
			Gold	12,068	
			Lead		3,447
			Zinc		2,872
1942	263		Silver	8,273	
			Gold	8,211	
			Lead		394
1941	266		Silver	9,393	
			Gold	9,611	
1940	256	256	Silver	5,319	
			Gold	1,369	
			Lead		980
			Zinc		1,751
1918	8	8	Silver	435	
			Gold	280	
1907	544	544	Gold	2,675	
1904	1,361	1,361	Silver	14,929	
			Gold	10,513	
1903	13,497	13,497	Silver	62,206	
			Gold	104,040	
1902	14,165	14,165	Silver	66,156	
			Gold	201,827	
1901	15,297	15,297	Silver	54,057	
			Gold	205,560	
1900	13,824	13,824	Silver	213,304	
			Gold	239,929	
1899	11,494	11,494	Silver	84,289	
			Gold	339,956	
1898	6,831	6,831	Gold	366,176	
1897	19,051	19,051	Gold	62,206	
1896	5,857	5,857	Gold	271,934	
1895	7,257	7,257	Gold	225,497	
1894	2,812	2,812	Gold	83,138	

SUMMARY TOTALS: 082ESW020

NAME: **CARIBOO-AMELIA**

	Metric	Imperial
Mined:	124,452 tonnes	137,185 tons
Milled:	112,254 tonnes	123,739 tons
Recovery:		
Silver:	1,008,979 grams	32,439 ounces
Gold:	2,538,101 grams	81,602 ounces
Lead:	51,393 kilograms	113,302 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 135
REPORT: RGEN0200

MINFILE NUMBER: **082ESW020**

NAME: **CARIBOO-AMELIA**

STATUS: Past Producer

Silica:	10,243,209 kilograms	22,582,404 pounds
Zinc:	89,875 kilograms	198,140 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW021	NAME: VICTORIA (L.218)	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
1897	23	
		Commodity
		Silver
		Gold
		Grams Recovered
		4,027
		1,666
		Kilograms Recovered

SUMMARY TOTALS: 082ESW021

NAME: **VICTORIA (L.218)**

		<u>Metric</u>		<u>Imperial</u>
	Mined:	23 tonnes		25 tons
	Milled:			tons
Recovery:	Silver:	4,027 grams		129 ounces
	Gold:	1,666 grams		54 ounces

Comments: 1897: Recovery calculated from Annual Report 1897, page 607.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 137
REPORT: RGEN0200

MINFILE NUMBER: 082ESW022	NAME: DAYTON	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1916	8		Silver	93	
			Gold	684	
			Copper		68

SUMMARY TOTALS: 082ESW022

NAME: **DAYTON**
Metric

Imperial

Mined:	8 tonnes	9 tons
Milled:	tonnes	tons
Recovery:		
Silver:	93 grams	3 ounces
Gold:	684 grams	22 ounces
Copper:	68 kilograms	150 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESW029** NAME: **CARMI (L.2352)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1940	547		Silver	28,957	
			Gold	6,905	
1938	55		Silver	4,976	
			Gold	746	
1937	38		Silver	8,460	
			Gold	871	
1936	50		Silver	7,651	
			Gold	871	
1935	267		Silver	38,506	
			Gold	4,323	
1934	99		Silver	6,594	
			Gold	2,115	
1933	245		Silver	30,979	
			Gold	6,376	
			Lead		2,130
			Zinc		4,503
1932	113		Silver	12,877	
			Gold	2,271	
			Lead		70
			Zinc		2,800
1915	1,501		Silver	20,279	
			Gold	20,590	
			Lead		979
1914	1,025		Silver	15,800	
			Gold	14,059	
1906	91		Silver	1,928	
			Gold	467	
1901	749		Silver	102,578	
			Gold	28,335	

SUMMARY TOTALS: 082ESW029

NAME: **CARMI (L.2352)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	4,780 tonnes	5,269 tons
Milled:		
Recovery:		
Silver:	279,585 grams	8,989 ounces
Gold:	87,929 grams	2,827 ounces
Lead:	3,179 kilograms	7,008 pounds
Zinc:	7,303 kilograms	16,100 pounds

Comments:

1940: Combined with Butcher Boy (082ESW132); BC METAL MM00835.
 1935: Combined with Butcher Boy (082ESW132); BC METAL MM00835.
 1934: Combined with Butcher Boy (082ESW132); BC METAL MM00835.
 1933: Combined with Butcher Boy (082ESW132); BC METAL MM00835.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082ESW030</u>	NAME:	<u>BEAVERDELL</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1991		5,019	Silver	1,686,866	
			Gold	591	
1990	36,225	36,225	Silver	10,591,231	
			Gold	5,785	
			Copper		2,064
			Lead		129,974
			Zinc		152,964
1989	36,550	36,550	Silver	10,018,088	
			Gold	6,470	
			Copper		160
			Lead		118,565
			Zinc		138,120
1988	37,262	37,262	Silver	11,001,891	
			Gold	7,060	
			Copper		689
			Lead		124,274
			Zinc		128,038
1987	36,352	36,352	Silver	10,831,506	
			Gold	9,331	
			Copper		1,572
			Lead		132,444
			Zinc		152,257
1986	34,119	34,119	Silver	10,544,545	
			Gold	3,763	
			Copper		1,266
			Lead		103,535
			Zinc		135,806
1985	36,820	36,820	Silver	10,709,207	
			Gold	3,297	
			Copper		916
			Lead		97,785
			Zinc		135,478
1984	36,795	36,795	Silver	12,019,441	
			Gold	4,043	
			Copper		421
			Lead		109,440
			Zinc		138,317
1983	36,203	36,203	Silver	9,962,164	
			Gold	4,106	
			Cadmium		154
			Lead		89,760
			Zinc		104,317
1982	36,235	36,235	Silver	12,922,904	
			Gold	4,634	
			Cadmium		794
			Copper		278
			Lead		111,629
			Zinc		145,206
1981	35,807	35,801	Silver	12,100,372	
			Gold	10,762	
			Cadmium		1,026
			Copper		319
			Lead		157,293
			Zinc		182,044
1980	42,513	39,457	Silver	10,757,821	
			Gold	3,359	
			Cadmium		1,080
			Copper		389
			Lead		93,278
			Zinc		145,325
1979	35,300	33,664	Silver	10,259,637	
			Gold	4,199	
			Cadmium		1,000
			Copper		613
			Lead		93,324
			Zinc		140,679
1978	35,280	35,280	Silver	11,333,062	
			Gold	4,012	
			Cadmium		977
			Copper		865
			Lead		105,933
			Zinc		139,279
1977	33,977	33,977	Silver	12,030,423	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082ESW030</u>	NAME:	<u>BEAVERDELL</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1977	33,977	33,977	Gold	5,443	
			Cadmium		723
			Copper		328
			Lead		122,710
			Zinc		139,565
1976	34,447	34,447	Silver	11,583,379	
			Gold	5,536	
			Cadmium		1,219
			Lead		147,978
			Zinc		186,168
1975	34,898	34,898	Silver	11,131,172	
			Gold	4,852	
			Cadmium		1,304
			Lead		132,745
			Zinc		136,173
1974	35,509	33,733	Silver	9,743,886	
			Gold	9,206	
			Cadmium		405
			Copper		257
			Lead		126,367
			Zinc		130,549
1973	34,896	33,749	Silver	14,303,741	
			Gold	12,970	
			Cadmium		871
			Copper		525
			Lead		207,619
			Zinc		205,498
1972	33,647	33,647	Silver	21,027,059	
			Gold	12,566	
			Cadmium		1,684
			Copper		995
			Lead		242,965
			Zinc		257,388
1971	34,761	33,025	Silver	19,837,400	
			Gold	10,326	
			Cadmium		1,176
			Lead		232,608
			Zinc		263,229
1970	34,614	30,141	Silver	13,818,099	
			Gold	16,765	
			Cadmium		1,333
			Lead		269,154
			Zinc		268,935
1969	37,325	30,939	Silver	15,867,164	
			Gold	18,102	
			Cadmium		906
			Lead		292,632
			Zinc		313,804
1968	37,232	34,036	Silver	17,499,232	
			Gold	15,147	
			Cadmium		972
			Lead		264,968
			Zinc		238,027
1967	34,516	30,862	Silver	22,204,774	
			Gold	24,260	
			Cadmium		2,167
			Lead		455,198
			Zinc		422,034
1966	23,944	21,898	Silver	23,180,382	
			Gold	27,962	
			Cadmium		2,928
			Lead		479,160
			Zinc		440,716
1965	21,676	21,045	Silver	20,154,526	
			Gold	18,040	
			Cadmium		1,964
			Lead		282,690
			Zinc		270,224
1964	22,761	22,761	Silver	25,187,800	
			Gold	15,272	
			Cadmium		2,540
			Lead		274,492
			Zinc		346,554

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082ESW030</u>	NAME:	<u>BEAVERDELL</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1963	19,676	19,676	Silver	27,304,111	
			Gold	17,760	
			Cadmium		3,656
			Lead		365,602
			Zinc		482,262
1962	17,672	17,672	Silver	25,913,558	
			Gold	18,071	
			Cadmium		3,792
			Lead		412,199
			Zinc		501,286
1961	17,195	17,195	Silver	27,748,635	
			Gold	18,351	
			Cadmium		3,573
			Lead		342,177
			Zinc		440,656
1960	16,514	16,514	Silver	28,105,106	
			Gold	17,729	
			Cadmium		3,797
			Lead		388,510
			Zinc		536,806
1959	16,356	16,356	Silver	27,477,821	
			Gold	19,688	
			Cadmium		3,563
			Lead		404,174
			Zinc		505,819
1958	16,991	16,991	Silver	28,013,508	
			Gold	15,147	
			Cadmium		2,793
			Lead		330,278
			Zinc		389,212
1957	14,314	14,314	Silver	22,286,730	
			Gold	12,472	
			Cadmium		2,110
			Lead		223,554
			Zinc		282,640
1956	12,993	12,993	Silver	19,982,869	
			Gold	6,874	
			Cadmium		1,492
			Lead		138,250
			Zinc		177,057
1955	12,001	12,001	Silver	16,381,390	
			Gold	6,003	
			Cadmium		1,446
			Lead		119,322
			Zinc		172,938
1954	11,597	11,597	Silver	17,768,988	
			Gold	5,474	
			Cadmium		1,609
			Lead		132,608
			Zinc		182,830
1953	13,775	13,775	Silver	20,951,914	
			Gold	6,469	
			Cadmium		1,681
			Lead		142,726
			Zinc		201,363
1952	7,993	7,993	Silver	11,654,605	
			Gold	4,043	
			Cadmium		832
			Lead		80,037
			Zinc		98,525
1951	12,847	12,847	Silver	22,313,728	
			Gold	7,123	
			Cadmium		2,003
			Lead		161,165
			Zinc		230,359
1950	7,605	3,726	Silver	21,665,137	
			Gold	7,371	
			Cadmium		601
			Lead		171,055
			Zinc		224,976
1949	5,924	5,924	Silver	26,412,854	
			Gold	7,651	
			Lead		197,458

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW030		NAME: BEAVERDELL		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1949	5,924	5,924	Zinc		232,647	
1948	4,960	4,960	Silver Gold Lead Zinc	23,019,859 7,434	184,873 238,831	
1947	4,669	4,669	Silver Gold Lead Zinc	18,895,073 5,910	138,035 181,544	
1946	2,193	2,193	Silver Gold Lead Zinc	12,834,529 3,919	89,966 114,247	
1945	1,212	1,212	Silver Gold Lead Zinc	8,354,857 2,084	60,433 59,650	
1944	1,246	1,246	Silver Gold Lead Zinc	9,306,982 3,048	71,092 94,320	
1943	2,040	2,040	Silver Gold Lead Zinc	10,551,008 2,924	96,758 136,527	
1942	4,380	4,380	Silver Gold Lead Zinc	21,865,160 5,163	213,088 331,548	
1941	5,224	5,224	Silver Gold Lead Zinc	28,240,964 5,536	252,434 367,314	
1940	7,032	7,032	Silver Gold Lead Zinc	32,060,537 7,340	275,721 388,635	
1939	6,084	6,084	Silver Gold Lead Zinc	28,072,293 6,065	253,975 374,707	
1938	4,627	4,627	Silver Gold Lead Zinc	25,377,746 4,634	226,187 328,138	
1937	2,849	2,849	Silver Gold Lead Zinc	12,937,728 3,608	147,099 247,923	
1936	2,378	2,378	Silver Gold Lead Zinc	12,382,384 3,360	124,761 200,423	
1935	1,659	1,659	Silver Gold Lead Zinc	6,394,497 1,680	55,295 85,358	
1934	1,654	1,654	Silver Gold Lead Zinc	6,944,927 3,297	64,213 82,808	
1933	1,459	1,459	Silver Gold Lead Zinc	8,655,903 1,617	80,442 104,301	
1932	1,593	1,593	Silver Gold Lead Zinc	9,530,177 1,991	84,131 114,017	
1931	1,707	1,707	Silver Gold	9,750,231 1,586		

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESW030** NAME: **BEAVERDELL** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1931	1,707	1,707	Lead Zinc		71,853 107,243
1930	1,692	1,692	Silver Gold Lead Zinc	11,717,900 1,555	88,073 125,514
1929	1,250	1,250	Silver Gold Lead Zinc	7,907,036 1,524	46,734 89,595
1928	1,095	1,095	Silver Gold Lead	7,561,948 1,275	46,115
1927	1,042	1,042	Silver Gold Lead Zinc	7,348,239 1,306	50,306 11,365
1926	909	909	Silver Gold Lead	6,110,931 1,959	46,178
1925	531	531	Silver Gold Lead	6,224,239 809	48,690
1924	348	348	Silver Gold Lead	4,197,101 591	39,778
1923	427	427	Silver Gold Lead	3,291,662 622	39,846
1922	411	411	Silver Gold Lead	3,623,188 715	42,212
1921	97	97	Silver Gold Lead	1,009,479 156	10,907
1920	239	239	Silver Gold Lead	1,893,582 124	14,533
1919	267	267	Silver Gold Lead	1,636,391 187	8,281
1918	174	174	Silver Gold Lead	852,938 93	3,728
1917	187	187	Silver Lead	880,090	11,975
1916	68	68	Silver Lead	270,907	2,891
1913	9	9	Silver	16,547	

SUMMARY TOTALS: 082ESW030

NAME: **BEAVERDELL**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,198,829 tonnes	1,321,483 tons
Milled:	1,170,226 tonnes	1,289,953 tons
Recovery:		
Silver:	1,076,005,759 grams	34,594,338 ounces
Gold:	520,197 grams	16,725 ounces
Cadmium:	58,171 kilograms	128,245 pounds
Copper:	11,657 kilograms	25,699 pounds
Lead:	11,598,238 kilograms	25,569,731 pounds
Zinc:	13,900,078 kilograms	30,644,418 pounds

Comments:

1991: Jig concentrates; mine closed end of February 1991.
 1971: Operated by Teck Corporation.
 1970: Operated by Leitch Mines Ltd.
 1961: Operator name changed to Mastadon-Highland Bell Mines.
 1936: Bell and Highland Lass (082ESW133) combined to form Highland-Bell.

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 145
 REPORT: RGEN0200

MINFILE NUMBER: 082ESW031		NAME: KOKOMO FR. (L.3067)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1921	9		Silver	76,265	
			Lead		654
1920	1		Silver	964	
			Lead		363
1918	19		Silver	44,882	
1917	22		Silver	231,437	
			Lead		3,108
1916	5		Silver	5,132	
			Lead		1,814

SUMMARY TOTALS: 082ESW031

NAME: **KOKOMO FR. (L.3067)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	56 tonnes	62 tons
Milled:	tonnes	tons
Recovery:		
Silver:	358,680 grams	11,532 ounces
Lead:	5,939 kilograms	13,093 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW032		NAME: DUNCAN (L.2605)		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1930	4		Silver	10,046		
			Lead		139	
1929	4		Silver	19,782		
			Lead		309	
1928	4		Silver	5,599		
			Lead		77	
1919	27		Silver	85,036		
			Lead		956	

SUMMARY TOTALS: 082ESW032

NAME: **DUNCAN (L.2605)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	39 tonnes	43 tons
Milled:	tonnes	tons
Recovery:		
Silver:	120,463 grams	3,873 ounces
Lead:	1,481 kilograms	3,265 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW033		NAME: BOUNTY (L.2348)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1942	25		Silver	103,013	
			Lead		1,960
			Zinc		3,791
1941	25		Silver	91,132	
			Lead		1,719
			Zinc		3,365
1930	30		Silver	230,598	
			Gold	31	
			Lead		2,736
			Zinc		4,327
1929	21		Silver	50,169	
			Lead		506
			Zinc		2,213
1928	16		Silver	148,019	
			Gold	31	
			Lead		1,541
			Zinc		205
1927	53		Silver	276,972	
			Gold	31	
			Lead		2,564
1926	5		Silver	51,444	
			Lead		476
1925	25		Silver	147,739	
			Lead		1,359

SUMMARY TOTALS: 082ESW033

NAME: **BOUNTY (L.2348)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	200 tonnes	220 tons
Milled:	tonnes	tons
Recovery:		
Silver:	1,099,086 grams	35,336 ounces
Gold:	93 grams	3 ounces
Lead:	12,861 kilograms	28,354 pounds
Zinc:	13,901 kilograms	30,646 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW034		NAME: RAMBLER (L.2797)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1950	42		Silver	35,395	
			Lead		605
			Zinc		1,140
1939	3		Silver	7,620	
			Lead		130
			Zinc		225
1938	3		Silver	8,895	
			Lead		129
			Zinc		239
1936	21		Silver	101,738	
			Lead		1,176
			Zinc		2,374
1927	4		Silver	7,807	
			Lead		192
			Zinc		259
1920	11		Silver	32,192	
			Lead		317
1918	5		Silver	20,341	
			Lead		219
1906	32		Silver	355,414	
			Gold	62	
			Lead		3,566
1905	28		Silver	121,302	
			Lead		680

SUMMARY TOTALS: 082ESW034

NAME: **RAMBLER (L.2797)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	149 tonnes	164 tons
Milled:	tonnes	tons
Recovery:	Silver: 690,704 grams	22,207 ounces
	Gold: 62 grams	2 ounces
	Lead: 7,014 kilograms	15,463 pounds
	Zinc: 4,237 kilograms	9,341 pounds

Comments:

1950: Minister of Mines Annual Report 1950, page A117.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW035		NAME: STANDARD FR. (L.3297S)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1949	12		Silver	26,966	
			Lead		764
			Zinc		1,008
1935	10		Silver	26,531	
			Gold	31	
			Lead		445
			Zinc		838
1927	1		Silver	2,395	
			Lead		6
			Zinc		100
1924	7		Silver	53,466	
			Zinc		317
1922	10		Silver	111,784	
			Lead		362
1919	24		Silver	104,506	
			Lead		216
1918	46		Silver	106,777	
			Lead		222
1917	37		Silver	48,987	
1914	14		Silver	50,480	
			Lead		761

SUMMARY TOTALS: 082ESW035

NAME: **STANDARD FR. (L.3297S)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	161 tonnes	177 tons
Milled:	tonnes	tons
Recovery:	Silver: 531,892 grams	17,101 ounces
	Gold: 31 grams	1 ounces
	Lead: 2,776 kilograms	6,120 pounds
	Zinc: 2,263 kilograms	4,989 pounds

Comments: 1949: Production may have come from the Rambler (082ESW034).

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 150
REPORT: RGEN0200

MINFILE NUMBER: 082ESW036	NAME: BUSTER (L.2937)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1919	7		Silver Lead Zinc	19,719	225 813

SUMMARY TOTALS: 082ESW036

	NAME: BUSTER (L.2937)	
	<u>Metric</u>	<u>Imperial</u>
	Mined: 7 tonnes	8 tons
	Milled: tonnes	tons
Recovery:	Silver: 19,719 grams	634 ounces
	Lead: 225 kilograms	496 pounds
	Zinc: 813 kilograms	1,792 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 151
REPORT: RGEN0200

MINFILE NUMBER: 082ESW038	NAME: NEPANEE	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1920	1		Silver	3,608	
			Gold	93	
			Lead		9
1919	1		Silver	2,986	
			Lead		193

SUMMARY TOTALS: 082ESW038

NAME: **NEPANEE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2 tonnes	2 tons
Milled:	tonnes	tons
Recovery: Silver:	6,594 grams	212 ounces
Gold:	93 grams	3 ounces
Lead:	202 kilograms	445 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW040		NAME: BEAVER (L.2342)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1939	142		Silver	379,799	
			Gold	156	
			Lead		4,141
			Zinc		7,982
1938	161		Silver	980,056	
			Gold	187	
			Lead		10,536
			Zinc		20,744
1937	151		Silver	660,845	
			Gold	249	
			Lead		7,576
			Zinc		19,366
1936	76		Silver	531,177	
			Gold	93	
			Lead		5,517
			Zinc		10,082
1935	103		Silver	530,368	
			Lead		5,775
			Zinc		9,480
1934	93		Silver	527,009	
			Gold	93	
			Lead		5,421
			Zinc		7,463
1933	81		Silver	549,901	
			Gold	124	
			Lead		6,663
			Zinc		10,158
1929	48		Silver	298,775	
			Gold	31	
			Lead		2,004
1928	27		Silver	109,172	
			Gold	31	
			Lead		1,388
1926	43		Silver	180,055	
			Lead		1,712
1925	83		Silver	538,953	
			Gold	124	
			Lead		4,401

SUMMARY TOTALS: 082ESW040

NAME: **BEAVER (L.2342)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,008 tonnes	1,111 tons
Milled:	1,008 tonnes	1,111 tons
Recovery:		
Silver:	5,286,110 grams	169,952 ounces
Gold:	1,088 grams	35 ounces
Lead:	55,134 kilograms	121,550 pounds
Zinc:	85,275 kilograms	187,999 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW041		NAME: GOLD DROP (L.1195S)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1951	3		Silver	529	
			Gold	31	
			Lead		313
			Zinc		85
1950	7		Silver	7,776	
			Lead		204
			Zinc		345

SUMMARY TOTALS: 082ESW041

NAME: **GOLD DROP (L.1195S)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	10 tonnes	11 tons
Milled:	tonnes	tons
Recovery:		
Silver:	8,305 grams	267 ounces
Gold:	31 grams	1 ounces
Lead:	517 kilograms	1,140 pounds
Zinc:	430 kilograms	948 pounds

Comments:

1951: Gold Drop Fraction.
 1950: Gold Drop Fraction: Minister of Mines Annual Report 1950, p. A117.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW043		NAME: GOLD HILL		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1935	109		Silver	373	
			Gold	218	
			Lead		111
			Zinc		96
1932	1		Silver	156	
			Gold	217	

SUMMARY TOTALS: 082ESW043

NAME: **GOLD HILL**

	<u>Metric</u>	<u>Imperial</u>
Mined:	110 tonnes	121 tons
Milled:	tonnes	tons
Recovery: Silver:	529 grams	17 ounces
Gold:	435 grams	14 ounces
Lead:	111 kilograms	245 pounds
Zinc:	96 kilograms	212 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 155
REPORT: RGEN0200

MINFILE NUMBER: 082ESW047	NAME: ACACIA (L.694S)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1945	99		Silver	1,680	
			Gold	5,754	
			Copper		689

SUMMARY TOTALS: 082ESW047

NAME: **ACACIA (L.694S)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	99 tonnes	109 tons
Milled:	tonnes	tons
Recovery:		
Silver:	1,680 grams	54 ounces
Gold:	5,754 grams	185 ounces
Copper:	689 kilograms	1,519 pounds

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 156
 REPORT: RGEN0200

MINFILE NUMBER: 082ESW059		NAME: INYO-ACKWORTH		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1927	10		Silver	1,773		
			Gold	62		
			Lead		478	
			Zinc		1,171	
1918	3		Silver	1,866		
			Lead		680	

SUMMARY TOTALS: 082ESW059

NAME: **INYO-ACKWORTH**

	<u>Metric</u>	<u>Imperial</u>
Mined:	13 tonnes	14 tons
Milled:	tonnes	tons
Recovery:		
Silver:	3,639 grams	117 ounces
Gold:	62 grams	2 ounces
Lead:	1,158 kilograms	2,553 pounds
Zinc:	1,171 kilograms	2,582 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW061		NAME: ENTERPRISE (L.1449S)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1962	30		Silver	1,026	
			Gold	124	
			Lead		30
			Zinc		30
1948	9		Silver	1,306	
			Gold	156	
			Lead		369
			Zinc		535
1926	13		Silver	902	
			Gold	93	
1925	1		Silver	156	
1918	34		Silver	871	
			Copper		1,542

SUMMARY TOTALS: 082ESW061

NAME: **ENTERPRISE (L.1449S)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	87 tonnes	96 tons
Milled:	tonnes	tons
Recovery:		
Silver:	4,261 grams	137 ounces
Gold:	373 grams	12 ounces
Copper:	1,542 kilograms	3,400 pounds
Lead:	399 kilograms	880 pounds
Zinc:	565 kilograms	1,246 pounds

Comments:

1962: Minister of Mines Annual Report 1962, page A47; BC METAL MM00875.
 1948: Minister of Mines Annual Report 1948, page 126; BC METAL MM00875.
 1926: Combined with Dentonia; BC METAL MM00875.
 1925: Combined with Dentonia; BC METAL MM00875.
 1918: Combined with Dentonia; BC METAL MM00875.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 158
REPORT: RGEN0200

MINFILE NUMBER: 082ESW062	NAME: COLBY 1 (L.1088S)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1962	44		Silver	1,617	
			Gold	93	
			Lead		43
			Zinc		43

SUMMARY TOTALS: 082ESW062

NAME: **COLBY 1 (L.1088S)**

	Mined:	44 tonnes	49 tons
	Milled:	tonnes	tons
Recovery:	Silver:	1,617 grams	52 ounces
	Gold:	93 grams	3 ounces
	Lead:	43 kilograms	95 pounds
	Zinc:	43 kilograms	95 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESW063** NAME: **BOOMERANG (L.733S)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1962	24		Silver	1,462	
			Gold	187	
			Lead		24
			Zinc		24
1939	30		Silver	1,742	
			Gold	218	

SUMMARY TOTALS: 082ESW063

NAME: **BOOMERANG (L.733S)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	54 tonnes	60 tons
Milled:	tonnes	tons
Recovery:	Silver: 3,204 grams	103 ounces
	Gold: 405 grams	13 ounces
	Lead: 24 kilograms	53 pounds
	Zinc: 24 kilograms	53 pounds

Comments: 1962: See Paddy; BC METAL MM00908.
 1939: Operated by S.G. Peterson.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW064		NAME: CROWN POINT (L.2448)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1952	34		Silver	3,079	
			Lead		1,101
			Zinc		2,570
1951	27		Silver	4,603	
			Lead		1,554
			Zinc		1,313
1950	2		Silver	2,053	
			Lead		123
			Zinc		148
1949	333		Silver	26,997	
			Gold	31	
			Lead		7,694
			Zinc		9,546
1948	5		Silver	6,003	
			Gold	31	
			Lead		326
			Zinc		293
1947	34		Silver	4,665	
			Lead		1,669
			Zinc		2,078
1934	4		Silver	2,115	
			Lead		283
			Zinc		420
1920	3		Silver	5,163	
			Gold	31	
			Lead		209
1919	3		Silver	9,113	
			Gold	31	
			Lead		338
1918	5		Silver	13,312	
			Gold	31	
			Lead		539
1913	30		Silver	51,942	
			Gold	280	
			Lead		2,971

SUMMARY TOTALS: 082ESW064

NAME: **CROWN POINT (L.2448)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	480 tonnes	529 tons
Milled:	tonnes	tons
Recovery:		
Silver:	129,045 grams	4,149 ounces
Gold:	435 grams	14 ounces
Lead:	16,807 kilograms	37,053 pounds
Zinc:	16,368 kilograms	36,085 pounds

Comments:

1950: Combined production; see BC METAL MM00947.
 1949: Combined production; see BC METAL MM00947.
 1934: Operated by R. Forshaw.
 1913: Operated by E. Williamson.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 161
REPORT: RGEN0200

MINFILE NUMBER: 082ESW065	NAME: BLACK DIAMOND (L.1098S)	STATUS: Past Producer		
Production Year	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1918	2	Silver	746	

SUMMARY TOTALS: 082ESW065

	NAME: BLACK DIAMOND (L.1098S)	
	<u>Metric</u>	<u>Imperial</u>
	Mined: 2 tonnes	2 tons
	Milled: tonnes	tons
Recovery:	Silver: 746 grams	24 ounces

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW066		NAME: BOUNTY FR. (L.2962)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1961	12		Silver	47,992	
			Lead		637
			Zinc		1,205
1960	11		Silver	37,977	
			Gold	31	
			Lead		492
			Zinc		1,006
1959	1		Silver	7,651	
			Lead		86
			Zinc		140
1949	7		Silver	31,632	
			Lead		575
			Zinc		1,354
1926	5		Silver	14,307	
			Lead		122
1923	2		Silver	4,354	
			Lead		61
1919	7		Silver	29,392	
			Lead		205
1918	33		Silver	49,920	
			Lead		11,104
1917	15		Silver	17,200	
1916	34		Silver	42,549	
1913	42		Silver	122,919	
1910	5		Silver	26,811	
			Lead		542
1909	70		Silver	377,279	
			Lead		2,424
1907	51		Silver	250,472	
			Lead		833
1906	16		Silver	106,559	
			Lead		1,254

SUMMARY TOTALS: 082ESW066

NAME: **BOUNTY FR. (L.2962)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	311 tonnes	343 tons
Milled:	tonnes	tons
Recovery:		
Silver:	1,167,014 grams	37,520 ounces
Gold:	31 grams	1 ounces
Lead:	18,335 kilograms	40,422 pounds
Zinc:	3,705 kilograms	8,168 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082ESW067</u>	NAME:	<u>TIGER (L.2097)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1940	6		Silver Lead Zinc	29,517	354 496
1939	48		Silver Gold Lead Zinc	213,304 31	3,176 6,495
1938	48		Silver Gold Lead Zinc	321,543 31	5,606 6,228
1937	14		Silver Lead Zinc	81,334	848 1,452
1936	27		Silver Lead Zinc	110,571	1,298 2,540
1935	44		Silver Lead Zinc	249,913	3,202 3,829
1934	23		Silver Gold Lead Zinc	165,312 31	1,540 1,987
1933	17		Silver Gold Lead Zinc	89,950 31	1,173 1,139
1927	5		Silver Lead Zinc	13,219	59 399
1925	3		Silver	5,350	

SUMMARY TOTALS: 082ESW067

NAME: **TIGER (L.2097)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	235 tonnes	259 tons
Milled:	tonnes	tons
Recovery:		
Silver:	1,280,013 grams	41,153 ounces
Gold:	124 grams	4 ounces
Lead:	17,256 kilograms	38,043 pounds
Zinc:	24,565 kilograms	54,157 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 164
REPORT: RGEN0200

MINFILE NUMBER: 082ESW068	NAME: <u>NODAWAY (L.2615)</u>	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1923	6		Silver Lead	22,425	415

SUMMARY TOTALS: 082ESW068

NAME: **NODAWAY (L.2615)**

	Mined:	6 tonnes	7 tons
	Milled:	tonnes	tons
Recovery:	Silver:	22,425 grams	721 ounces
	Lead:	415 kilograms	915 pounds

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 165
 REPORT: RGEN0200

MINFILE NUMBER: 082ESW069		NAME: CASTOR FR. (L.2278)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1922	2		Silver	9,704	
			Lead		187
1921	2		Silver	9,704	
			Gold	62	
			Lead		187
1920	34		Silver	302,570	
1919	32		Silver	200,739	
			Lead		1,600

SUMMARY TOTALS: 082ESW069

NAME: **CASTOR FR. (L.2278)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	70 tonnes	77 tons
Milled:	tonnes	tons
Recovery:		
Silver:	522,717 grams	16,806 ounces
Gold:	62 grams	2 ounces
Lead:	1,974 kilograms	4,352 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW071		NAME: SCANDIE		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1960	5		Silver	10,886		
			Lead			205
			Zinc			381
1951	3		Silver	4,603		
			Lead			83
			Zinc			204

SUMMARY TOTALS: 082ESW071

NAME: **SCANDIE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	8 tonnes	9 tons
Milled:	tonnes	tons
Recovery:	Silver: 15,489 grams	498 ounces
	Lead: 288 kilograms	635 pounds
	Zinc: 585 kilograms	1,290 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>082ESW072</u>	NAME:	<u>WELLINGTON (L.2621)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1954	22		Silver Gold Lead Zinc	97,974 31	1,361 2,347
1953	12		Silver Gold Lead Zinc	48,864 31	602 988
1952	120		Silver Gold Lead Zinc	577,147 280	8,648 13,039
1951	1		Gold Lead Zinc	98	138 112
1949	44		Silver Gold Lead Zinc	227,705 124	2,343 3,246
1948	27		Silver Lead Zinc	116,201	882 1,268
1947	12		Silver Lead Zinc	48,832	360 1,197
1941	2		Silver Lead Zinc	3,359	50 64
1940	25		Silver Gold Lead Zinc	146,933 31	1,682 1,898
1939	113		Silver Gold Lead Zinc	580,266 124	7,181 11,076
1938	587		Silver Gold Lead Zinc	2,946,619 1,306	34,279 49,864
1937	880		Silver Gold Lead Zinc	6,203,993 1,711	63,502 90,141
1936	636		Silver Gold Lead Zinc	4,703,779 1,151	50,343 73,390
1935	480		Silver Gold Lead Zinc	4,450,659 809	43,891 66,545
1934	507		Silver Gold Lead Zinc	2,902,048 1,120	34,109 50,049
1933	638		Silver Gold Lead Zinc	4,202,453 933	40,579 69,142
1932	694		Silver Gold Lead Zinc	5,189,273 964	50,216 76,889
1931	647		Silver Gold Lead Zinc	3,420,543 1,026	25,287 58,939
1930	616		Silver Gold Lead	3,677,551 498	25,294

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW072		NAME: WELLINGTON (L.2621)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1930	616		Zinc		58,566
1929	324		Silver	2,560,189	
			Gold	373	
			Lead		18,207
			Zinc		31,761
1928	201		Silver	928,936	
			Gold	218	
			Lead		8,671
1927	446		Silver	2,495,183	
			Gold	373	
			Lead		7,230
1926	197		Silver	1,286,844	
			Gold	218	
			Lead		10,050
1925	2		Silver	6,034	
			Lead		121
1921	6		Silver	63,700	
			Lead		646
1920	23		Silver	93	

SUMMARY TOTALS: 082ESW072

NAME: **WELLINGTON (L.2621)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	7,262 tonnes	8,005 tons
Milled:		
Recovery:		
Silver:	46,885,178 grams	1,507,391 ounces
Gold:	11,419 grams	367 ounces
Lead:	435,672 kilograms	960,492 pounds
Zinc:	660,521 kilograms	1,456,199 pounds

Comments:

1953: Minister of Mines Annual Report 1953, page 43.
 1951: Silver Dollar operated by N. Puhaty.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESW073** NAME: **SALLY (L.2092)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1941	98		Silver Gold Lead Zinc	401,446 62	5,579 9,703
1940	259		Silver Gold Lead Zinc	1,735,983 560	19,921 30,829
1939	57		Silver Gold Lead Zinc	313,114 156	3,845 7,361
1938	194		Silver Gold Lead Zinc	385,366 62	5,198 11,867
1937	268		Silver Gold Lead Zinc	765,756 187	6,803 12,185
1936	67		Silver Gold Lead Zinc	175,576 93	1,958 3,020
1935	573		Silver Gold Lead Zinc	2,565,842 1,275	31,932 45,312
1934	434		Silver Gold Lead Zinc	1,838,623 435	22,772 33,571
1933	85		Silver Gold Lead Zinc	405,925 156	6,201 6,556
1931	101		Silver Gold Lead Zinc	631,733 62	5,331 8,591
1930	250		Silver Gold Lead Zinc	1,163,314 187	8,970 15,477
1929	326		Silver Gold Lead Zinc	1,436,337 280	9,010 21,507
1928	910		Silver Gold Lead	3,122,990 404	22,664
1927	1,108		Silver Gold Lead Zinc	6,782,911 373	51,138 9,396
1926	1,060		Silver Lead	4,341,170	23,314
1925	729		Silver Gold Lead	8,749,927 156	71,254
1924	626		Silver Gold Lead	7,703,560 93	63,935
1923	357		Silver Gold Lead	3,660,419 218	27,310
1922	235		Silver Gold Lead	2,514,709 93	18,325
1921	160		Silver Gold	1,750,601 31	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW073		NAME: SALLY (L.2092)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1921	160		Lead		10,743
1920	322		Silver Lead	2,289,803	12,932
1919	132		Silver Lead	656,024	3,509
1918	65		Silver Lead	81,770	704
1917	106		Silver Gold Lead	382,816 93	1,495
1916	582		Silver Gold Lead	1,107,111 31	4,274
1915	149		Silver Lead	756,145	1,960
1914	437		Silver	559,045	
1913	64		Silver	176,167	
1910	27		Silver Lead	141,892	1,875
1909	125		Silver Lead	888,302	7,359
1908	113		Silver Lead	830,870	6,956
1907	95		Silver Lead	550,616	3,357
1906	96		Silver Lead	640,411	9,906
1905	132		Silver Lead	1,058,871	12,043
1904	54		Silver Lead	344,808	2,527
1901	17		Silver Lead	88,861	1,087

SUMMARY TOTALS: 082ESW073

NAME: **SALLY (L.2092)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	10,413 tonnes	11,478 tons
Milled:		
Recovery:		
Silver:	60,998,814 grams	1,961,155 ounces
Gold:	5,007 grams	161 ounces
Lead:	486,187 kilograms	1,071,859 pounds
Zinc:	215,375 kilograms	474,820 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW078		NAME: DUSTY MAC		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1976	24,655	53,335	Silver	6,210,336		
			Gold	364,336		
			Copper			1,692
			Lead			1,053
1975	68,640	39,940	Silver	4,293,240		
			Gold	239,431		
			Copper			740
			Lead			1,066
1969		97	Silver	49,174		
			Gold	2,239		
			Lead			193
			Zinc			242

SUMMARY TOTALS: 082ESW078

NAME: **DUSTY MAC**

	<u>Metric</u>	<u>Imperial</u>
Mined:	93,295 tonnes	102,840 tons
Milled:	93,372 tonnes	102,925 tons
Recovery:		
Silver:	10,552,750 grams	339,278 ounces
Gold:	606,006 grams	19,484 ounces
Copper:	2,432 kilograms	5,362 pounds
Lead:	2,312 kilograms	5,097 pounds
Zinc:	242 kilograms	534 pounds

Comments:

1976: Ore milled by Dankoe Mines Ltd.
 1975: Ore milled by Dankoe Mines Ltd.
 1969: Ore shipped and milled by Dankoe Mines Ltd.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW084		NAME: GYPO (L.3098S)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1987		6,349	Silica		6,349,000
1986		7,600	Silica		7,600,000
1984		545	Silica		545,218
1983		1,238	Silica		1,238,308
1982		642	Silica		642,287
1981		1,217	Silica		1,216,535
1980		1,024	Silica		1,024,212
1979		652	Silica		652,266
1978		791	Silica		791,065
1977		917	Silica		917,164
1976		144	Silica		144,242
1975		3,299	Silica		3,299,432
1974		4,126	Silica		4,125,877
1973		3,885	Silica		3,885,473
1972		9,893	Silica		9,892,852
1971		7,671	Silica		7,671,156
1970		3,242	Silica		3,242,279
1969		11,724	Silica		11,723,551
1968	32,097	32,097	Fluorite		35,380
			Silica		32,061,732
1967	45,872	45,872	Fluorite		72,575
			Silica		45,799,234
1966	33,693	33,693	Fluorite		137,892
			Silica		33,554,958
1965	45,423	45,423	Fluorite		63,503
			Silica		45,359,250
1964	49,396	48,873	Silica		48,872,777
1963	45,518	45,518	Silica		45,518,007
1962	50,938	50,938	Silica		50,938,437
1961	32,015	32,015	Silica		32,014,558
1960	45,698	45,698	Feldspar		16,329
			Silica		45,682,207
1959	35,018	35,018	Silica		35,018,248
1958	38,545	38,545	Fluorite		29,366
			Silica		38,545,383
1957	63,464	63,464	Silica		63,463,941
1956	15,083	15,083	Silica		15,082,857
1955	2,427	2,427	Silica		2,427,627
1954	1,595	1,595	Silica		1,594,831
1953	1,177	1,812	Silica		1,720,930
1947	22,407	22,407	Silica		22,407,469
1944	129	118	Mica		117,934
1943	1,157	1,157	Mica		338,380
			Silica		818,281
1942	1,002	1,002	Mica		142,201
			Silica		739,356
1941	707	707	Silver	2,426	
			Gold	187	
			Mica		59,874
			Silica		572,887
1936	231	231	Silica		231,332
1931	471	471	Silica		470,648
1930	390	390	Silica		390,090
1929	201	201	Silica		201,313
1928	310	310	Silica		310,257
1927	353	353	Silica		353,802
1926	230	230	Silica		230,425

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESW084**

NAME: **GYPO (L.3098S)**

STATUS: Past Producer

SUMMARY TOTALS: 082ESW084

NAME: **GYPO (L.3098S)**

	Metric	Imperial
Mined:	565,547 tonnes	623,409 tons
Milled:	630,607 tonnes	695,125 tons
Recovery:		
Silver:	2,426 grams	78 ounces
Gold:	187 grams	6 ounces
Feldspar:	16,329 kilograms	35,999 pounds
Fluorite:	338,716 kilograms	746,741 pounds
Mica:	658,389 kilograms	1,451,499 pounds
Silica:	629,341,754 kilograms	1,387,460,676 pounds

Comments:

- 1987: Reject quartz silica left from previous operations.
- 1986: Reject quartz silica left from previous operations.
- 1978: 1978-1984: From tailings and dump; production fiche.
- 1977: From stockpile; production fiche.
- 1976: New owner (Franklin Martin); from stockpile; production fiche.
- 1973: 1973-1975: From stockpile; production fiche.
- 1969: 1969-1972: From stockpile; production fiche.
- 1968: Minister of Mines Annual Report 1968, pages 300 and 331 and fiche.
- 1967: Minister of Mines Annual Report 1967, page 321, and fiche.
- 1966: Minister of Mines Annual Report 1966, page 276, and fiche.
- 1965: Minister of Mines Annual Report 1965, page 276, and fiche.
- 1964: Minister of Mines Annual Report 1964, page 207, and fiche.
- 1963: Minister of Mines Annual Report 1963, page 152, and fiche.
- 1962: Minister of Mines Annual Report 1962, page 164, and fiche.
- 1961: Minister of Mines Annual Report 1961, page 157, and fiche.
- 1960: Minister of Mines Annual Report 1960, page 155, and fiche.
- 1959: Minister of Mines Annual Report 1959, page 201, and fiche.
- 1958: Minister of Mines Annual Report 1958, pages 104 to 106, and fiche.
- 1957: Minister of Mines Annual Report 1957, page 94, and fiche.
- 1956: Minister of Mines Annual Report 1956, page 159, and fiche.
- 1955: Minister of Mines Annual Report 1955, page 102, and fiche.
- 1954: Stucco Supply Company; production fiche.
- 1953: Stucco Supply Company; Interior Contracting Co. Ltd.
- 1947: Minister of Mines Annual Report 1947, page 222.
- 1944: 1942-44: Operated by R.C. McKay; milled by Fairey & Co.; fiche.
- 1941: Mica (95 tonnes); silica (573 tonnes); Au-Ag ore (39 tonnes).
- 1936: Production fiche; Interior Contracting Co. Ltd.
- 1931: Production fiche.
- 1930: Production fiche.
- 1929: Production fiche.
- 1928: Production fiche.
- 1927: Production fiche.
- 1926: National Mineral Inventory 082E4 Sia1; Annual Report 1926, p. 219.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 174
REPORT: RGEN0200

MINFILE NUMBER:	082ESW085	NAME:	OLALLA CREEK LIMESTONE	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1968	604		Limestone		604,185
SUMMARY TOTALS: 082ESW085		NAME:	OLALLA CREEK LIMESTONE		
	Mined:	<u>Metric</u>		<u>Imperial</u>	
	Milled:	604 tonnes		666 tons	
Recovery:	Limestone:	604,185 kilograms		1,332,000 pounds	

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 175
 REPORT: RGEN0200

MINFILE NUMBER: **082ESW089** NAME: **SMUGGLER** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1973	18		Silver	746	
			Gold	249	
			Lead		18
			Zinc		36
1963	23		Silver	1,182	
			Gold	1,026	
			Lead		75
			Zinc		138
1942	1		Silver	31	
			Gold	31	
1939	95		Silver	1,804	
			Gold	1,337	

SUMMARY TOTALS: 082ESW089

NAME: **SMUGGLER**

	<u>Metric</u>	<u>Imperial</u>
Mined:	137 tonnes	151 tons
Milled:	tonnes	tons
Recovery:		
Silver:	3,763 grams	121 ounces
Gold:	2,643 grams	85 ounces
Lead:	93 kilograms	205 pounds
Zinc:	174 kilograms	384 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESW090** NAME: **SUSIE (L.1917)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1976	3,039		Silver	233,273	
			Gold	12,535	
			Copper		943
			Lead		10,995
			Silica		3,039,070
1975	7,365		Zinc		4,295
			Silver	779,752	
			Gold	43,762	
			Copper		3,080
			Lead		25,434
1974	2,819		Silica		7,365,435
			Zinc		11,974
			Silver	206,771	
			Gold	10,575	
			Copper		378
1973	2,540		Lead		7,399
			Silica		2,818,624
			Zinc		3,081
			Silver	177,412	
			Gold	8,833	
1964	1,099		Lead		6,475
			Silica		2,540,118
			Zinc		3,342
			Silver	76,980	
			Gold	3,919	
1963	214		Lead		2,012
			Silica		1,098,601
			Zinc		1,152
			Silver	11,819	
			Gold	591	
1960	461		Lead		370
			Silica		214,096
			Zinc		214
			Silver	33,498	
			Gold	1,866	
1934	8		Lead		693
			Silica		460,850
			Zinc		461
			Silver	404	
			Gold	156	
1933	3		Silver	62	
			Gold	93	
1932	16		Silver	311	
			Gold	964	

SUMMARY TOTALS: 082ESW090

NAME: **SUSIE (L.1917)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	17,564 tonnes	19,361 tons
Milled:	tonnes	tons
Recovery:		
Silver:	1,520,282 grams	48,878 ounces
Gold:	83,294 grams	2,678 ounces
Copper:	4,401 kilograms	9,703 pounds
Lead:	53,378 kilograms	117,678 pounds
Silica:	17,536,794 kilograms	38,662,002 pounds
Zinc:	24,519 kilograms	54,055 pounds
1934:	Victoria (Oliver) operated by Victoria Fairview Mines Ltd.	
1933:	Victoria (Oliver) operated by A. Carmichael.	
1932:	Operated by P.E. Peterson.	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW091		NAME: STANDARD		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1962	1,876		Silver	137,786	
			Gold	17,511	
			Lead		2,888
			Zinc		1,933
1961	535		Silver	27,557	
			Gold	19,284	
			Lead		586
			Zinc		535

SUMMARY TOTALS: 082ESW091

NAME: **STANDARD**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,411 tonnes	2,658 tons
Milled:	tonnes	tons
Recovery:		
Silver:	165,343 grams	5,316 ounces
Gold:	36,795 grams	1,183 ounces
Lead:	3,474 kilograms	7,659 pounds
Zinc:	2,468 kilograms	5,441 pounds

Comments: 1962: Operated by Continental Consolidated Mines Ltd.
 1961: Operated by Norex Mines Ltd.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW092	NAME: DIVINE	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
1941	21	
		Commodity
		Silver
		Gold
		Grams Recovered
		373
		62

SUMMARY TOTALS: 082ESW092

		NAME: DIVINE	
		<u>Metric</u>	<u>Imperial</u>
	Mined:	21 tonnes	23 tons
	Milled:	tonnes	tons
Recovery:	Silver:	373 grams	12 ounces
	Gold:	62 grams	2 ounces
Comments:	1941:	Operated by W. Bousfield.	

RUN DATE: 25-Jun-2003
 RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 179
 REPORT: RGEN0200

MINFILE NUMBER: **082ESW093** NAME: **EMPIRE (L.611)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1942	123		Silver	10,077	
			Gold	1,089	
1941	327		Silver	25,442	
			Gold	2,550	
1939	132		Silver	8,740	
			Gold	684	
1936	4		Silver	809	
			Gold	62	

SUMMARY TOTALS: 082ESW093

NAME: **EMPIRE (L.611)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	586 tonnes	646 tons
Milled:		
Recovery:		
Silver:	45,068 grams	1,449 ounces
Gold:	4,385 grams	141 ounces

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 180
REPORT: RGEN0200

MINFILE NUMBER: 082ESW095	NAME: KOH-I-NOOR	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1940	16		Silver Gold	1,244 124	

SUMMARY TOTALS: 082ESW095

	NAME: KOH-I-NOOR	
	<u>Metric</u>	<u>Imperial</u>
	Mined: 16 tonnes	18 tons
	Milled: tonnes	tons
Recovery:	Silver: 1,244 grams	40 ounces
	Gold: 124 grams	4 ounces

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 181
REPORT: RGEN0200

MINFILE NUMBER: 082ESW096	NAME: OLALLA	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1935	45	18	Silver Gold	1,400 498	

SUMMARY TOTALS: 082ESW096

	NAME: OLALLA	
	<u>Metric</u>	<u>Imperial</u>
	Mined: 45 tonnes	50 tons
	Milled: 18 tonnes	20 tons
Recovery:	Silver: 1,400 grams	45 ounces
	Gold: 498 grams	16 ounces

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 182
REPORT: RGEN0200

MINFILE NUMBER: 082ESW097	NAME: QUEEN MARY	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1940	73		Silver Gold	1,244 715	

SUMMARY TOTALS: 082ESW097

		NAME: QUEEN MARY	
		<u>Metric</u>	<u>Imperial</u>
	Mined:	73 tonnes	80 tons
	Milled:		tons
Recovery:	Silver:	1,244 grams	40 ounces
	Gold:	715 grams	23 ounces

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 183
REPORT: RGEN0200

MINFILE NUMBER: 082ESW098	NAME: YELLOW VALLEY	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1939	36		Silver Gold	467 311	

SUMMARY TOTALS: 082ESW098

NAME: **YELLOW VALLEY**

	<u>Metric</u>	<u>Imperial</u>
Mined:	36 tonnes	40 tons
Milled:		tons
Recovery:	Silver: 467 grams	15 ounces
	Gold: 311 grams	10 ounces
Comments:	1939: Operated by R.F.C. Stewart.	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESW101** NAME: **MAY** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1973	54		Silver	3,701	
			Gold	840	
			Lead		108
			Zinc		54
1970	9		Silver	2,426	
			Gold	653	
			Lead		9
			Zinc		9

SUMMARY TOTALS: 082ESW101

NAME: **MAY**

	<u>Metric</u>	<u>Imperial</u>
Mined:	63 tonnes	69 tons
Milled:	tonnes	tons
Recovery:		
Silver:	6,127 grams	197 ounces
Gold:	1,493 grams	48 ounces
Lead:	117 kilograms	258 pounds
Zinc:	63 kilograms	139 pounds

Comments: 1970: Operated by Argentia Mines Ltd.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW108		NAME: TORRES		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1973	40		Silver	809		
			Gold	62		
			Lead			80
			Zinc			40
1935	2		Silver	187		

SUMMARY TOTALS: 082ESW108

NAME: **TORRES**

	<u>Metric</u>	<u>Imperial</u>
Mined:	42 tonnes	46 tons
Milled:	tonnes	tons
Silver:	996 grams	32 ounces
Gold:	62 grams	2 ounces
Lead:	80 kilograms	176 pounds
Zinc:	40 kilograms	88 pounds

Recovery:

Comments:

1973: Operated by Topper Mining Ltd. (MM00369).
 1935: Operated by Viking Gold Mines, Ltd. (MM00371).

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW113		NAME: OROFINO MOUNTAIN		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1976		3	Silver	29	
			Gold	31	
			Lead		3
			Zinc		3

SUMMARY TOTALS: 082ESW113

NAME: **OROFINO MOUNTAIN**

	<u>Metric</u>	<u>Imperial</u>
Mined:	3 tonnes	3 tons
Milled:	3 tonnes	3 tons
Recovery:		
Silver:	29 grams	1 ounces
Gold:	31 grams	1 ounces
Lead:	3 kilograms	7 pounds
Zinc:	3 kilograms	7 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW118		NAME: MAYBE		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1950	50		Silver	6,003		
			Lead			2,602
			Zinc			1,952
1949	110		Silver	29,081		
			Gold	155		
			Lead			8,886
			Zinc			7,657

SUMMARY TOTALS: 082ESW118

NAME: **MAYBE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	160 tonnes	176 tons
Milled:	tonnes	tons
Recovery:		
Silver:	35,084 grams	1,128 ounces
Gold:	155 grams	5 ounces
Lead:	11,488 kilograms	25,327 pounds
Zinc:	9,609 kilograms	21,184 pounds

Comments:

1950: Combined production; see BC METAL MM00947.
 1949: Combined production; see BC METAL MM00947.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESW132** NAME: **BUTCHER BOY (L.2353)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1940	66		Silver	6,656	
			Gold	1,400	
1935	26		Silver	4,106	
			Gold	778	
1934	51		Silver	2,830	
			Gold	560	
1933	25		Silver	3,577	
			Gold	871	
			Zinc		634
1931	28		Silver	4,168	
			Gold	1,337	
			Lead		361
1902	4		Gold	249	

SUMMARY TOTALS: 082ESW132

NAME: **BUTCHER BOY (L.2353)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	200 tonnes	220 tons
Milled:	tonnes	tons
Recovery:		
Silver:	21,337 grams	686 ounces
Gold:	5,195 grams	167 ounces
Lead:	361 kilograms	796 pounds
Zinc:	634 kilograms	1,398 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW133		NAME: HIGHLAND LASS (L.2341)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1936	634		Silver	3,563,129	
			Gold	622	
			Lead		40,703
			Zinc		61,023
1935	991		Silver	5,976,473	
			Gold	1,120	
			Lead		67,360
			Zinc		97,937
1934	1,004		Silver	6,412,257	
			Gold	1,182	
			Lead		58,975
			Zinc		104,197
1933	648		Silver	3,734,786	
			Gold	653	
			Lead		43,023
			Zinc		78,745
1932	525		Silver	4,126,559	
			Gold	1,057	
			Lead		37,083
			Zinc		53,296
1931	319		Silver	2,423,110	
			Gold	560	
			Lead		25,240
			Zinc		33,909
1930	341		Silver	2,917,959	
			Gold	373	
			Lead		26,458
			Zinc		34,689
1929	229		Silver	1,432,200	
			Gold	280	
			Lead		10,984
			Zinc		20,581
1928	30		Silver	180,553	
			Gold	62	
			Lead		2,363
			Zinc		3,151
1922	14		Silver	158,003	
			Gold	31	
			Lead		1,182

SUMMARY TOTALS: 082ESW133

NAME: **HIGHLAND LASS (L.2341)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	4,735 tonnes	5,219 tons
Milled:		
Recovery:		
Silver:	30,925,029 grams	994,261 ounces
Gold:	5,940 grams	191 ounces
Lead:	313,371 kilograms	690,865 pounds
Zinc:	487,528 kilograms	1,074,815 pounds

Comments: 1936: Highland Lass and Bell (082ESW030) combined to form Highland Bell.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW136	NAME: DOORN	STATUS: Prospect
Production Year	Tonnes Mined	Tonnes Milled
1938	2	
		Commodity
		Silver
		Gold
		Lead
		Grams Recovered
		871
		62
		Kilograms Recovered
		67

SUMMARY TOTALS: 082ESW136

NAME: **DOORN**

		<u>Metric</u>		<u>Imperial</u>
Mined:	2	tonnes	2	tons
Milled:		tonnes		tons
Recovery:	Silver:	871	grams	28
	Gold:	62	grams	2
	Lead:	67	kilograms	148
				pounds

Comments: 1938: Midnight Group operated by W.T. Hayes.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 191
REPORT: RGEN0200

MINFILE NUMBER: 082ESW140	NAME: SPOTTED LAKE	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1915	1,361		Magnesium Sulphate		707,720

SUMMARY TOTALS: 082ESW140

	NAME: SPOTTED LAKE	
	<u>Metric</u>	<u>Imperial</u>
Mined:	1,361 tonnes	1,500 tons
Milled:		
Recovery:		
Magnesium Sulphat:	707,720 kilograms	1,560,255 pounds
Comments:		
1915:	Magnesium sulphate mined 1915-1919 based on avg. grade of 0.52%	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW145		NAME: HIGHLAND CHIEF (L.2345)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1941	4		Silver	20,652	
			Lead		248
			Zinc		257
1939	4		Silver	14,276	
			Lead		238
			Zinc		540
1938	3		Silver	28,397	
			Lead		233
1922	2		Silver	8,927	
			Lead		117

SUMMARY TOTALS: 082ESW145

NAME: **HIGHLAND CHIEF (L.2345)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	13 tonnes	14 tons
Milled:	tonnes	tons
Recovery:		
Silver:	72,252 grams	2,323 ounces
Lead:	836 kilograms	1,843 pounds
Zinc:	797 kilograms	1,757 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 193
REPORT: RGEN0200

MINFILE NUMBER: 082ESW150	NAME: SILVER STAR	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1926	1		Silver	1,742	
1923	11		Silver	9,797	
SUMMARY TOTALS: 082ESW150		NAME: SILVER STAR			
		<u>Metric</u>	<u>Imperial</u>		
	Mined:	12 tonnes	13 tons		
	Milled:	tonnes	tons		
Recovery:	Silver:	11,539 grams	371 ounces		

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW169		NAME: BEAVERDELL GRANITE		STATUS: Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1972	91		Granite		90,719
1971	1,814		Granite		1,814,370
1967	1,563		Granite		1,563,080
1966	536		Granite		536,328
1965	181		Granite		181,437

SUMMARY TOTALS: 082ESW169

NAME: **BEAVERDELL GRANITE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	4,185 tonnes	4,613 tons
Milled:		
Recovery:	Granite: 4,185,934 kilograms	9,228,402 pounds

Comments:

- 1972: Building stone; production fiche.
- 1971: Building stone; production fiche.
- 1967: Crushed stone; production fiche.
- 1966: Crushed stone; production fiche.
- 1965: Crushed stone; production fiche.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 195
REPORT: RGEN0200

MINFILE NUMBER: 082ESW194	NAME: GOLDEN FR. (L.3289S)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1938	9		Silver Lead Zinc	17,978	353 502

SUMMARY TOTALS: 082ESW194

	NAME: GOLDEN FR. (L.3289S)
	<u>Metric</u> <u>Imperial</u>
Mined:	9 tonnes 10 tons
Milled:	tonnes tons
Recovery:	
Silver:	17,978 grams 578 ounces
Lead:	353 kilograms 778 pounds
Zinc:	502 kilograms 1,107 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 196
REPORT: RGEN0200

MINFILE NUMBER: 082ESW196	NAME: ADVANCE FR. (L.3834S)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1938	3		Silver Lead Zinc	20,372	287 315

SUMMARY TOTALS: 082ESW196

NAME: **ADVANCE FR. (L.3834S)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	3 tonnes	3 tons
Milled:	tonnes	tons
Recovery:		
Silver:	20,372 grams	655 ounces
Lead:	287 kilograms	633 pounds
Zinc:	315 kilograms	694 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW197		NAME: REVENGE (L.3294S)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1935	15		Silver	64,694	
			Gold	31	
			Lead		580
			Zinc		752
1929	34		Silver	117,507	
			Gold	62	
			Lead		951
			Zinc		2,336
1927	11		Silver	56,950	
			Gold	31	
			Lead		381
1923	21		Silver	175,297	
			Gold	62	
			Lead		1,512
1920	10		Silver	70,510	
			Gold	31	
			Lead		686
1919	24		Silver	79,095	
			Gold	93	
			Lead		1,377

SUMMARY TOTALS: 082ESW197

NAME: **REVENGE (L.3294S)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	115 tonnes	127 tons
Milled:	tonnes	tons
Recovery:		
Silver:	564,053 grams	18,135 ounces
Gold:	310 grams	10 ounces
Lead:	5,487 kilograms	12,097 pounds
Zinc:	3,088 kilograms	6,808 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 082ESW202		NAME: O.K. MARL (L.2193)		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1964	318		Marl		317,515
1963	454		Marl		453,592
1952	3,629		Marl		3,628,739
1950	598		Marl		597,835
1949	783		Marl		783,027
1948	109		Marl		108,862

SUMMARY TOTALS: 082ESW202

NAME: **O.K. MARL (L.2193)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	5,891 tonnes	6,494 tons
Milled:		
Recovery:	Marl: 5,889,570 kilograms	12,984,276 pounds

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 199
REPORT: RGEN0200

MINFILE NUMBER: 082ESW203	NAME: ROADSIDE	STATUS: Prospect			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1939	27		Silver	560	
SUMMARY TOTALS: 082ESW203		NAME: ROADSIDE			
		<u>Metric</u>	<u>Imperial</u>		
	Mined:	27 tonnes	30 tons		
	Milled:	tonnes	tons		
Recovery:	Silver:	560 grams	18 ounces		

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **082ESW217** NAME: **WIARTON (L.856)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1941	90		Silver	2,893	
			Gold	1,182	
1940	39		Silver	1,057	
			Gold	175	
			Lead		78
			Zinc		245

SUMMARY TOTALS: 082ESW217

NAME: **WIARTON (L.856)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	129 tonnes	142 tons
Milled:	tonnes	tons
Recovery:		
Silver:	3,950 grams	127 ounces
Gold:	1,357 grams	44 ounces
Lead:	78 kilograms	172 pounds
Zinc:	245 kilograms	540 pounds

Comments:

1941: BC METAL MM00942; operated by Highland-Bell Ltd.
 1940: BC METAL MM00942; operated by Highland-Bell Ltd.

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 201
REPORT: RGEN0200

MINFILE NUMBER: 082ESW234	NAME: OHIO (L.3124)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1928	1		Silver Lead	62	6

SUMMARY TOTALS: 082ESW234

NAME: **OHIO (L.3124)**

	Mined:	1 tonnes	1 tons
	Milled:	tonnes	tons
Recovery:	Silver:	62 grams	2 ounces
	Lead:	6 kilograms	13 pounds
Comments:	1928:	Ohio Syndicate.	

RUN DATE: 25-Jun-2003
RUN TIME: 15:49:40

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 202
REPORT: RGEN0200

MINFILE NUMBER: 082ESW237	NAME: OBSERVATORY (L.1252S)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1940	12		Silver	6,283	

SUMMARY TOTALS: 082ESW237

	NAME: OBSERVATORY (L.1252S)		
	<u>Metric</u>	<u>Imperial</u>	
	12 tonnes	13 tons	
	Milled: tonnes	tons	
Recovery:	Silver:	6,283 grams	202 ounces

