MINFILE NUMBER: **104A 001**

NATIONAL MINERAL INVENTORY: 104A4 Cu2,Au5

NAME(S): **TODD CREEK (SOUTH ZONE)**, TODD 1-6, TOC 10-11, TODD, SOUTH ZONE, PAT

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 13 14 N
LONGITUDE: 129 46 30 W
ELEVATION: 945 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Southwest end of mineralized zone (Assessment Report 18800). See also North zones (104A 105 and 106) and Fall Creek (104A 107).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6230897
EASTING: 451941

COMMODITIES: Gold, Copper

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrite
ASSOCIATED: Quartz, Hematite, Malachite
ALTERATION: Malachite, Quartz, Pyrite, Sericite, Chlorite, Siderite
ALTERATION TYPE: Propylitic, Sericitic, Carbonate, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork, Breccia
CLASSIFICATION: Hydrothermal, Epigenetic, Epithermal
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb), H04 Epithermal Au-Ag-Cu: high sulphidation
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION: Metres
STRIKE/DIP: 030/75W
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Feldspar Porphyry
Andesite Flow
Andesite
Andesite Agglomerate
Feldspar Porphyry Flow
Feldspar Porphyry Intrusive

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SOUTH
REPORT ON: Y

CATEGORY: Inferred
YEAR: 1988
QUANTITY: 207000 Tonnes

COMMODITY	GRADE	
Gold	5.4800	Grams per tonne

COMMENTS: Geological reserves.
REFERENCE: Hemlo Gold Mines Inc. Annual Report, 1988.

CAPSULE GEOLOGY

The Todd Creek (South Zone) prospect is located at the headwaters of Todd Creek, immediately north of the toe of Todd Glacier, 35 kilometres northeast of Stewart.

The prospect was discovered in 1959 by Newmont Mining Corporation. Newmont conducted a limited trenching and drilling program (5 holes?) on the prospect in 1960 (Minister of Mines Annual Report, 1960). W. Christians staked the Todd 1-6 claims over the occurrence for Kerr-Addison Mines in 1969; no work was reported. A.G. Hodgson conducted a geological examination in 1971. In 1986, Noranda Exploration Company Limited staked the Toc 1-12 claims; the prospect lies on the Toc 10-11 claims. During 1986-88, Noranda performed geological mapping, sampling, trenching and drilling (34 holes, totalling 3186 metres) on the zone. Golden Nevada Resources Inc. entered into a joint venture with Noranda to earn 50 per cent in 1987. In 1989, ownership of the Toc claims was Goldnev Resources (50

CAPSULE GEOLOGY

per cent), Noranda Inc. (13.9 per cent), Brenda Mines Ltd. (13.9 per cent) and Hemlo Gold Mines Inc. (13.9 per cent).

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation. The mineralized zone occurs in feldspar porphyry (flows?, intrusive?) which is exposed over an area 950 by 500 metres. The porphyry is bound to the west and north by dark green-grey andesite flows and agglomerates and to the south and east by glacial till. The western contact is not exposed. The northern contact is defined by a north-trending, east-dipping fault.

The feldspar porphyry is pervasively altered. Most of the western portion of the porphyry exhibits quartz-pyrite alteration. Further east, near the mineralization, quartz-sericite alteration prevails over locally developed chloritic and iron carbonate alteration.

Mineralization on surface comprises chalcopyrite, pyrite, specular hematite and malachite. The mineralization is hosted in a 5 to 15-metre wide north-northeast trending, steeply west-dipping fracture zone that cuts the eastern portion of the exposed porphyry. The mineralization occurs along the southern 425 metres and the northern 100 metres of the exposed zone (Assessment Report 18800). The fracture zone is transected by several east-striking post-mineralization faults that exhibit both minor dextral and sinistral displacement.

In the fracture zone there are two types of mineralization: a) massive pyrite-chalcopyrite stringers and veins, 1 to 10 centimetres wide and b) a zone of quartz-hematite-chalcopyrite stringers and breccia veins up to 3 metres wide. The sulphide veins generally exhibit higher molybdenum, copper and arsenic values than the breccia veins.

Typically, the mineralized fracture zone comprises 1 or 2 large quartz breccia veins, separated by a stockwork of narrow quartz-hematite veins. The larger breccia veins generally occur along the footwall and hangingwall of the zone.

A channel sample from taken from trench 13 in 1987 assayed up to 4.35 grams per tonne gold across 1.9 metres. The 1987 drilling program resulted in a sample which assayed up to 6.85 grams per tonne gold and 0.23 per cent copper across 6.15 metres (hole NTC-87-9) (Assessment Report 17423).

The 1988 drilling tested the downdip continuity of the zone in holes NTC-87-2 to 9 and the northward continuity of the higher grade mineralization encountered in NTC-87-9. The best intersection assayed 3.61 grams per tonne gold and 0.27 per cent copper across 29.75 metres in hole NTC-88-19; this included 6.91 grams per tonne gold and 0.36 per cent copper across 8.15 metres (Assessment Report 18800).

The Todd Creek (South Zone) is reported to contain inferred geological reserves of 207,000 tonnes grading 5.48 grams per tonne gold (Hemlo Gold Mines Inc. Annual Report, 1988).

Island-Arc Resources Corp. optioned the property in 1997. Work consisted of geological mapping, rock and soil sampling of the North (104A 105,106) and Fall Creek (104A 107) zones, re-logging and resampling of drill core from 1986/87 Noranda drilling at the South Zone. From the preliminary work it appears the mineralized zones are all part of a larger epithermal gold system striking north to south through the length of the property. The system defined to date is seven kilometres long, up to 1.5 kilometres wide and has a 1.1 kilometre vertical extent. It consists of multiple quartz veins with sulphide, hematite and carbonate minerals commonly associated with a quartz sericite pyrite alteration assemblage. Individual zones exhibit classic epithermal features with thinly banded veins, open space and colloform veins, and vein breccia; the latter suggesting multiple mineralizing pulses.

The metal assemblage of the mineralized zones defined to date seems to further reflect an epithermal system with both vertical and horizontal zonation features. Starting from the south at the lowest elevation the South Zone is characterized by deeper and higher temperature gold-copper mineralization. To the north, the North zone, Fall Creek zone, and Ice Creek zones (104A 108) contain multiple veins with gold mineralization occurring with high copper, but also with increasing lead and silver at some of the higher elevations. This is the widest portion of the system defined to date. The highest and most northerly zone is the Amarillo Zone (104A 104) in which strongly altered volcanics occur over a two square kilometre area about 1.5 kilometres north and up to 900 metres above the North Zone. Here upper level "hot springs" type of mineralization is found consisting of quartz barite veins and stockworks containing high levels of mercury and antimony (GCNL #150(Aug.6), 1997).

CAPSULE GEOLOGY

Okak Bay Resources Ltd. is acquiring interest in the property in 1999.

BIBLIOGRAPHY

EM EXPL 1999-1-11
EMPR AR 1960-7
EMPR ASS RPT 3428, 15988, 17423, *18800, 19922, 21097, *23828, 23849, 25391
EMPR BULL 63
EMPR EXPL 1984-384; 1985-C378; 1987-A15,C368; 1988-A15,A32; 1990-35
EMPR GEM 1972-513
EMPR MAP 8
EMPR MER 1987-13; 1988-51
EMPR PF (In 082M141 - Goldnev Resources Inc., Prospectus, July 1989; Island-Arc News Release Apr.17, June 27, 1997; Island-Arc Resources Corporation (June 1999): Todd Creek Property, 10 p.)
EMR MIN BULL MR 223 B.C. 317
GSC MAP 9-1957; 1418A
GSC OF 2582
CMH 1989-90, p. 226
GCNL #172,#211,#214,#235, 1987; #121,#223, 1988; #127, 1989; #75(Apr.18), *#150(Aug.6), 1997; #78(Apr.23), 1999; #125(June 29), 2000
PR REL Island-Arc Resources Corp., Apr. 17, June 27, 1997; Apr. 21, 1999
WWW http://www.islandarc.com; http://www.infomine.com/
Hemlo Gold Mines Inc., Annual Report, 1988

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1997/05/07 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 002** NATIONAL MINERAL INVENTORY: 104A4 Ag1

NAME(S): **GOAT**, GOAT RIDGE, SURPRISE, F VEIN, G VEIN, GOAT A-H, REMUS 1-6, KEN 2, KEN 1-4, HUGH

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 08 52 N NORTHING: 6222692
LONGITUDE: 129 36 20 W EASTING: 462377
ELEVATION: 1463 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of mineralized veins on the present day Ken 2 claim (Minister of Mines Annual Report, 1965).

COMMODITIES: Silver Gold Zinc Lead Copper

MINERALS

SIGNIFICANT: Sphalerite Arsenopyrite Pyrite Tetrahedrite Freibergite Galena
ASSOCIATED: Quartz Siderite Epidote Calcite
ALTERATION: Carbonate Epidote
ALTERATION TYPE: Carbonate Epidote
MINERALIZATION AGE: Tertiary
ISOTOPIC AGE: DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Mineralization yields a galena-lead isotope ratio of Tertiary age (Fieldwork, 1990 p. 241).

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Schistose Andesitic Agglomerate
Phyllonite
Quartz Monzonite Dike
Siltstone
Volcanic Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEINS REPORT ON: Y

CATEGORY: Combined YEAR: 1979
QUANTITY: 8800 Tonnes

COMMODITY	GRADE	
Silver	4782.9000	Grams per tonne
Gold	10.6000	Grams per tonne

COMMENTS: Proven and probable reserves.
REFERENCE: Northern Miner - March 1, 1979.

CAPSULE GEOLOGY

The Goat deposit is located about 34 kilometres northeast of Stewart, approximately 5 kilometres north of the Stewart highway (37A) and just south of the Goat Glacier.

The showings were staked in 1960 as the Surprise claim group by Newmont Mining and Granby Mining. The claims were restaked in 1963 as the Goat group. Noradco acquired the claims in 1964 and completed trenching, sampling and 3 drillholes on the property. In 1965, 2 adits were driven on the F vein and 2 raises were driven to the G vein. In 1968, an agreement with Shield Minerals Corp. ensured continued underground development. In 1971, Abitibi acquired the Shield Minerals interest and incorporated Nordore Mining Co. In 1974, Nordore rehabilitated the workings now on the Ken 1-4 and Goat A-H claims. In 1974, the Remus claims were acquired as a millsite.

CAPSULE GEOLOGY

About 1770 tonnes of ore was stockpiled. In 1976, about 295 tonnes of ore was milled from a portable concentrator. Development work on the E vein recommenced in 1979 and "some" material was put through the concentrator. In 1980, underground development continued and the mill operated for several months. The mill was destroyed by fire in 1981 and all work ceased. A geophysical survey was carried out over the property by Bond Gold in 1990. In 1991, Cameco conducted geochemical surveys and sampling on the Ken and Hugh claims.

The area is underlain by north-striking, green andesitic agglomerates and minor intercalated siltstones of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Minister of Mines Annual Report, 1965; Bulletin 63). Just west of the mine area thick, massive volcanic breccias occur. Northwest-trending quartz monzonite dikes intrude the volcanics. Several veins occur on the property.

The main veins (the F and G veins) lie along irregular northeast-trending fractures in a 100 to 120 metres wide, northwest-trending shear zone in the volcanics. Rocks in the shear zone consist of variably schistose volcanics and chloritic and sericitic phyllonite (Minister of Mines Annual Report, 1965). The veins average about 15 centimetres in width and transect the shearing and the dikes.

The F vein, traced for more then 120 metres, undulates northeast across the shear zone and dips 35 to 80 degrees northwest. The F vein terminates close to the limits of the shear zone. The G vein, traced for about 75 metres, is a branch vein on the hangingwall side of the F vein.

The veins comprise crudely laminated sulphides and gangue. The sulphides include coarse-grained sphalerite, disseminated and massive arsenopyrite and pyrite, tetrahedrite, freibergite and minor galena. Gangue minerals include siderite, quartz and minor epidote and calcite. Galena-lead isotope analyses indicates a Tertiary age for the mineralization (Fieldwork, 1990 p. 241).

A sample (44439) taken from the millsite in 1991 assayed 3.58 grams per tonne gold, 216.7 grams per tonne silver, 0.153 per cent copper, 0.18 per cent lead and 6.45 per cent zinc (Assessment Report 22040).

Proven and probable reserves in 1979 were 8800 tonnes grading 4782.9 grams per tonne silver and 10.6 grams per tonne gold (Northern Miner - March 1, 1979). Recorded production during the period 1975 and 1979-81 was 1,794,049 grams of silver, 5,475 grams of gold, 52,641 kilograms of zinc, 4,071 kilograms of lead and 153 kilograms of copper.

BIBLIOGRAPHY

EMPR ASS RPT 20200, *22040
EMPR AR 1960-7; 1964-23; *1965-55; 1966-40; 1968-51
EMPR GEM 1974-330; 1975-E179
EMPR EXPL 1975-E179; 1980-454
EMPR FIELDWORK 1990, pp. 235-242
EMPR BULL 63
EMPR MAP 8
EMPR MINING 1975-1980, p. 29
EMR MP CORPFILE (Abitibi Asbestos Mining Company Limited; Noradco Mines Ltd.; Nordore Mining Co. Ltd.; Nor-Quest Resources Ltd.)
EMR MIN RES BR FILE (Goat)
GSC MAP 9-1957; 1418A
GSC OF 2582
N MINER March 1, 1979; April 3, 1980
GCNL #92, #163, 1979
CMH 1985-86, p. 306
EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/29 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 003**
NATIONAL MINERAL INVENTORY: 104A4 Ag9

NAME(S): **LUCKY JIM 2 (L. 5719)**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 09 12 N
LONGITUDE: 129 55 42 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized quartz vein (Assessment Report 21405).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6223533
EASTING: 442332

COMMODITIES: Gold, Silver, Zinc, Lead, Copper

MINERALS
SIGNIFICANT: Galena, Sphalerite, Chalcopyrite, Tetrahedrite
ASSOCIATED: Quartz, Calcite, Barite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Shear
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Fractured

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Volcanic Sandstone
Siltstone
Argillite
Andesite
Tuff
Brecciated Sediment/Sedimentary

HOSTROCK COMMENTS: Mineralization is hosted within the Betty Creek Formation, close to the contact with the underlying Unuk River Formation.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	21.9000	Grams per tonne
Gold	8.4000	Grams per tonne
Lead	8.1400	Per cent
Zinc	5.2400	Per cent

COMMENTS: Grab sample from a trench on the mineralized vein.
REFERENCE: Assessment Report 21405.

CAPSULE GEOLOGY

The Lucky Jim 2 showing is located 6.9 kilometres north-northwest of the confluence of American Creek and the Bear River, about 1000 metres west of American Creek.

The Lucky Jim claim group was located before 1929. That year the owners, Bosence and partners, reported several mineralized occurrences on the claims. Montreal-based interests carried out work, including trenching(?), in 1930; 5 veins were reported at this time (Property File - Mathews, 1942). Pride Resources Ltd. owned the claims in 1980; no work was reported on the showing. White purchased the claims in 1990 and Teuton Resources Corp. subsequently purchased the claims and carried out geological mapping and sampling.

The area is underlain by north-trending, west-dipping Hazelton Group rocks on the west limb of the north-trending American Creek anticline (Bulletin 58, 63). Red to green volcaniclastics, predominantly volcanic sandstone, siltstone and argillite of the

CAPSULE GEOLOGY

Lower Jurassic Betty Creek Formation overlie red to green andesites and intercalated tuffs of the Upper Triassic to Lower Jurassic Unuk River Formation (Assessment Report 21405).

The showing is located in the central portion of the Lucky Jim 2 claim (L. 5719). It consists of a north-northwest trending, 3.7-metre wide, zone of intense fracturing and shearing in the Betty Creek rocks. Mineralization includes quartz, calcite and barite with disseminated galena, sphalerite, chalcopyrite and minor tetrahedrite. Grab samples collected from trenches on the zone in 1990 assayed up to 8.4 grams per tonne gold, 5.24 per cent zinc, 8.14 per cent lead and 21.9 grams per tonne silver; copper values were negligible (Assessment Report 21405).

A grab sample was collected in 1990 from an outcrop of siliceous, graphitic, brecciated sediment about 120 metres south-southwest of the showing. The sample assayed 30.0 grams per tonne silver, 4.46 per cent zinc and 1.63 per cent lead; gold and copper values were anomalous (Assessment Report 21405).

BIBLIOGRAPHY

EMPR AR 1929-104
EMPR BULL 58; 63
EMPR ASS RPT 9184, 20784, *21405
EMPR MAP 8
EMPR PF (In 104A 011 - Mathews, W.H. (1942): Report on the Mountain Boy Mine, Stewart, B.C.)
GSC MEM 175, p. 128
GSC MAP 216A; 217A; 307A; *315A; 9-1957; 1418A

DATE CODED: 1992/02/12 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/02/12 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 004**

NATIONAL MINERAL INVENTORY: 104A12 Cu1

NAME(S): **TREATY CREEK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A12E
BC MAP:
LATITUDE: 56 34 59 N
LONGITUDE: 129 41 19 W
ELEVATION: 667 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Location is uncertain. The Treaty Creek claims are described as being on the north side of Treaty Creek, about 56 kilometres from the confluence of the Bell-Irving and Nass Rivers (Minister of Mines Annual Report 1929).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6271187
EASTING: 457702

COMMODITIES: Gold Silver Copper

MINERALS
SIGNIFICANT: Unknown
ASSOCIATED: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Bowser Lake	Undefined Formation	

LITHOLOGY: Clastic Sediment/Sedimentary

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The specific location of the Treaty Creek occurrence is not known. The showing is reported to be on the north side of Treaty Creek, about 56 kilometres from the confluence of the Bell-Irving and Nass Rivers (Minister of Mines Annual Report, 1929).

The showing plots in, and is assumed to be hosted by, the predominantly clastic sediments of the Middle to Upper Jurassic Bowser Lake Group.

"Values are scattered over a large area and appear to be mainly in gold, silver and copper, although sufficient work has not been done to form a criterion of the possible value of the property" (Minister of Mines Annual Report, 1929, p. 102). Apparently, values were too low grade for the remote location.

BIBLIOGRAPHY

EMPR AR *1929-102; 1930-110
EMPR BULL 63
EMPR MAP 8
EMR MP CORPFILE (Cominco, Annual Report, 1928)
GSC MAP 9-1957; 1418A
GSC OF 2582; 2688
WWW http://www.infomine.com/

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/08/12 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 005**
NATIONAL MINERAL INVENTORY: 104A5 Au1

NAME(S): **MOONLIGHT**, MOONLIGHT 1, NAPCO 1, NAPCO 1-2, SKEENA

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 16 38 N
LONGITUDE: 129 53 04 W
ELEVATION: 1189 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing C on the Moonlight 1 claim (Minister of Mines Annual Report 1937, p. 21). The showing has also been named the Napco No. 1 showing by Tournigan Mining (Assessment Report 7833). The location is incorrect in Bulletin 58.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6237286
EASTING: 445235

COMMODITIES: Silver, Gold, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Galena, Chalcopyrite, Tetrahedrite, Sphalerite, Argentite, Gold
ASSOCIATED: Quartz, Calcite
ALTERATION: Silica, Carbonate, Limonite, Wad
ALTERATION TYPE: Silicific'n, Carbonate, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Discordant
CLASSIFICATION: Epigenetic, Epithermal, Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Faulted, Fractured
DIMENSION: 25 x 7 Metres
STRIKE/DIP: 335/35W
TREND/PLUNGE:
COMMENTS: Fault zone is about 7 metres wide and the mineralization is exposed over a length of approximately 25 metres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Rhyodacite, Fragmental Volcanic, Argillite, Siltstone, Tuff, Mylonite, Felsic Dike, Granodiorite Porphyry Dike

HOSTROCK COMMENTS: Mineralization occurs near the contact between argillic rocks and the overlying volcanics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1979
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	378.5000	Grams per tonne
Gold	0.5500	Grams per tonne
Copper	0.1300	Per cent
Lead	5.8600	Per cent
Zinc	0.1300	Per cent

COMMENTS: Sample across 2.0 metres taken from the hangingwall of the zone.
REFERENCE: Assessment Report 7833.

CAPSULE GEOLOGY

The Moonlight prospect lies about 350 metres west of Kimball Lake, near the headwaters of American Creek.

CAPSULE GEOLOGY

The prospect was known in 1930 and has been intermittently prospected since. Spectacular native gold was discovered about 400 metres north of the showing in 1936 (Minister of Mines Annual Report, 1937, p. 23). Two shipments, totalling 31 kilograms, of high grade material picked up from several properties were shipped to Trail from this showing in 1937. From this material 591 grams of gold and 249 grams of silver were recovered. Northwestern Aerial Prospectors Limited discovered several other showings in the area during 1930-37. These were on the Moonlight, Moonlight 1, Camp and Northern (104A 114) claims (Minister of Mines Annual Report, 1937, p. 21). In 1938, Napco Gold Mines discovered several other showings, especially further northeast on the Pass 3 and 4 (104A 112) claims. In 1955, Great North Mining held the Skeena, American Belle, Ricadonna, AB and RJ claims in the area and drilled several short holes near the Moonlight showing and others on the Pass claims. In 1966, Frontier Exploration carried out further prospecting. In 1979, Tournigan Mining conducted mapping and sampling, especially on the Napco 1 and 2 claims (covering the Moonlight and immediately adjacent showings) and the Liliane (104A 112) claim (covering the previously known showings on the Pass claims). The Moonlight vein was leased for high-grading in 1984 (Assessment Report 18430). During 1986-88, Komody Resources and Square Gold Explorations (later renamed Glacier Resources and then Golden Glacier Resources) performed further work, primarily near the Bugnello prospect (104A 112). The latter work included drill testing of two gold-silver veins in 1988.

The Moonlight showing occurs on the western flank of the north-plunging American Creek anticline. The American Creek fault trends north-northeast along the valley. Other faults are parallel and oblique to the major fault; they trend north-northeast, northwest, northeast, and approximately east. A tri-partite assemblage of Upper Triassic to Middle Jurassic Hazelton Group rocks underlie the west valley wall. These rocks strike north to northeast and dip west. Lowermost argillites and an overlying siltstone-tuff assemblage (Unuk River Formation?) are succeeded upwards by a green, maroon and reddish fragmental assemblage (Betty Creek Formation?). Green felsic and granodiorite porphyry dikes are locally conspicuous.

The showing comprises a north-northwest trending, west-dipping (35 degrees) fault zone. The fault zone is about 7 metres wide and is exposed over a length of approximately 25 metres. The mineralized fault lies oblique to a north-northeast trending extensive zone of faulting (and attendant silicification and carbonatization) that can be traced for more than 2 kilometres to the north. This zone of faulting and alteration lies at, or close to, the contact between the argillic rocks and the overlying volcanics.

Mineralization is formed by two narrow veins on the hangingwall and footwall of the fault zone respectively. The hangingwall vein, up to 0.4 metres wide, comprises quartz-calcite with galena, sphalerite, chalcopyrite, tetrahedrite and argentite. The footwall vein comprises a 0.2 centimetre wide mylonite, mineralized with galena and argentite. The veins are separated by about 6 metres of silicified rhyodacite which is cut by quartz, calcite, galena, sphalerite, chalcopyrite, tetrahedrite and argentite veinlets. A chip sample from the hangingwall of the zone assayed 378.5 grams per tonne silver, 0.55 grams per tonne gold, 0.13 per cent copper, 5.86 per cent lead and 0.13 per cent zinc across a width of 2.0 metres (Assessment Report 7833).

An adit has been developed on a narrow limonitic fault in the zone of faulting and alteration, approximately 400 metres north-northeast of the Moonlight 1 showing. This is assumed to be the location of the 2 to 10 centimetre wide, quartz-calcite stringers that were reported to carry spectacular arborescent gold (Minister of Mines Annual Report, 1937, p. 24, Location B). In 1937, 27.8 kilograms of selected vein material assayed 13,296 grams per tonne gold and 5,637 grams per tonne silver. A further shipment of 1,728.5 grams yielded 305.6 grams of bullion with a fineness of 667.4 parts gold and 287.6 parts silver (Minister of Mines Annual Report, 1937, p. 24).

Three quartz stringers, 2 to 8 centimetres wide, also occur on the Moonlight 1 claim, about 275 metres east of the Moonlight 1 showing. The stringers, mineralized with blebs and patches of tetrahedrite, galena and chalcopyrite, strike northeast and dip northwest in a narrow band of tuff. Another concordant stringer, 2 to 5 centimetres wide and traced by opencuts for about 30 metres, strikes northeast and dips northwest. The stringer is hosted by a 10 metre wide band of limey tuff which is intercalated with calcareous argillite. A combined sample of the stringer from 2 opencuts, mineralized with tetrahedrite, pyrite and galena, assayed trace gold and 2,441.2 grams per tonne silver across 3.8 centimetres (Minister of Mines Annual Report, 1937, p. 22, Location E).

CAPSULE GEOLOGY

On the Moonlight claim, about 70 metres south of the Moonlight 1 showing, a northwest(?)-striking brecciated quartz vein, mineralized with sphalerite, galena and chalcopyrite, outcrops in argillite. The vein has been traced for about 50 metres (Minister of Mines Annual Report, 1937, p. 22, Location D).

BIBLIOGRAPHY

EMPR AR 1930-110; 1931-45; 1932-60; 1935-29; *1937-20; 1938-25; 1939-66; 1955-17; 1966-41
EMPR EXPL 1979-277
EMPR BULL 58, p. 139; 63
EMPR ASS RPT *7833, 15145, 15365, 16888, 17665, 18430, 20074, 20256
EMPR MAP 8
EMPR PF (Golden Glacier Resources Inc., Prospectus, August 22, 1988; Fest Resources Corp., Prospectus, March 18, 1988; Napco Gold Mines Ltd., Map by J.T. Mandy, 1938)
EMR MP CORPFILE (Northwestern Aerial Prospectors, Limited; Napco Gold Mines, Limited; Frontier Exploration Limited)
GSC SUM RPT 1931, Part A, p. 21A
GSC MEM 175, p. 134
GSC MAP 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/08/23 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 006**
NATIONAL MINERAL INVENTORY: 104A4 Ag6

NAME(S): **VIRGINIA K. 1 (L. 5810)**, VIRGINIA K., EXCELSIOR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A05W 104A04W
BC MAP:
LATITUDE: 56 15 17 N
LONGITUDE: 129 52 44 W
ELEVATION: 1158 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Approximate centre of Virginia K. 1 claim (L. 5810) (Mineral Titles Reference Map 104A/5W). Also see 104A 117, 118 and 119.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6234777
EASTING: 445548

COMMODITIES: Lead

MINERALS
SIGNIFICANT: Galena
ASSOCIATED: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Replacement Epigenetic Epithermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn
DIMENSION: 213 x 3 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: The vein trends east.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Argillite
Limestone
Tuff
Rhyolite
Breccia
Agglomerate
Conglomerate
Chert
Sandstone

HOSTROCK COMMENTS: The exact hostrock for this occurrence is not known.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Virginia K. 1 showing is located about 500 metres east of American Creek and 1700 metres south of Kimball Lake. There are several showings on the Virginia K. claims (104A 117, 118, 119).

Mineralization was discovered in the area in 1929. That year the Virginia K., BLK, Bryant and Dundee claim groups were staked and the Excelsior Prospecting Syndicate was formed. The Virginia K. group was staked on the east side of the valley. The exact location of the other claim groups is not known, but they were apparently staked on the west side of the valley and may have extended to the south. Excelsior discovered several silver-lead-zinc occurrences on the Virginia K. claims in 1931 and continued intermittent exploration until 1938. In 1960, Newconex performed geological mapping and sampling on the claims (Assessment Reports 16842 and 18430); the results of this work are not known. In 1980, Komody Resources Ltd. (later renamed Fest Resources Corp.) conducted further geological work, resulting in the discovery of the Dino vein on the Virginia K. 3 claim (104A 119). In 1986, Square Gold Explorations Inc. (later renamed Glacier Resources Inc. and then Golden Glacier Resources Inc.) carried out geological mapping and sampling on part of the Virginia K. group (mainly the Virginia K. 3 and Virginia K. 3 Fraction claims, 104A 118, 119). The following year Carmac Resources performed geological mapping and sampling on part of the claim group (mainly the Virginia K. 5 and Virginia K. Extension 2 claims, 104A 117). In 1990, Northair Mines carried out talus sampling on the claims.

The Virginia K. claims are on the eastern limb of the open, north-plunging American Creek anticline. The American Creek fault

CAPSULE GEOLOGY

trends along the valley. The claims are underlain by rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63). These comprise lowermost black argillites, capped by a thin limestone and overlain by tuff and minor rhyolite. The predominantly argillic sequence is, in turn, overlain by a thick sequence of purple, green and red fragmental rocks that include tuff, breccia, agglomerate and conglomerate with subordinate limestone and chert interlayers (Assessment Report 8982, 15365).

Three types of mineralization occur on the Virginia K. claims (Minister of Mines Annual Report, 1932, p. 59):

1. Replacement shear zone in argillite.
2. Veins between interbedded sandstone, sandy argillite and tuffs near the top of the predominantly sedimentary sequence.
3. Fracture zones consisting of quartz veins and veinlets in reticulated structures.

The Virginia K. 1 showing lies on the Virginia K. 1 claim (L. 5810). The exact location is unknown. A 3-metre wide vein of galena-bearing lime-gangue trends east and can be traced for about 210 metres (Minister of Mines Annual Report 1931, p. 45).

BIBLIOGRAPHY

EMPR AR 1929-104; 1930-109; *1931-44; 1932-59; 1935-B23; 1938-B26; 1956-18
EMPR BULL 58, p. 168; 63
EMPR ASS RPT 8982, 15365, 16842, 18430, 20074, 20256, 20726
EMPR MAP 8
EMPR PF (Excelsior Prospecting Syndicate, Ltd. Preliminary survey of the Virginia K. claims, Map only, c. 1929; In 104A 005 - Golden Glacier Resources Inc., Prospectus, August 22, 1988 and Fest Resources Corp., Prospectus, March 18, 1988)
EMR MP CORPFILE (Excelsior Prospecting Syndicate, Limited)
GSC SUM RPT 1931, Part A p. 21A
GSC MEM 175, p. 114
GSC MAP 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/08/21 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 007**

NATIONAL MINERAL INVENTORY: 104A4 Ag10

NAME(S): **RUBY (L. 887)**, BLUE JAY (L. 3225), MAY BEE (L. 3226),
LOUISE, M. AND M., AX 1-8,
AXEL FR., MAYBEE, AMERICAN CREEK,
DOROTHY 1

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 08 43 N
LONGITUDE: 129 54 57 W
ELEVATION: 518 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Ruby claim (L. 887) (Mineral Titles Reference Map 104A/4W).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6222626
EASTING: 443097

COMMODITIES: Silver, Lead, Copper, Barite

MINERALS
SIGNIFICANT: Galena, Sphalerite, Chalcopyrite, Bornite, Barite
COMMENTS: Silver sulphides are also reported.
ASSOCIATED: Quartz, Jasper, Barite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Breccia
CLASSIFICATION: Hydrothermal, Epigenetic, Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite
Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The exact location of the Ruby showing is not known but is assumed to occur on the Ruby Crown-granted claim (L. 887). The claim is located about 0.5 kilometre west of the point on American Creek that is about 6.0 kilometres north of its confluence with the Bear River.

Stripping, open cutting and tunnelling were apparently done on the Ruby claim during 1904-05. In 1929, Shuniah Mines Ltd. optioned the Ruby and nearby Blue Jay, May Bee, Louise and M. and M. claims. At this time, 3 veins were reported on the Ruby claim. The option was dropped the following year. In 1972, Crest Ventures Limited held the Ruby, Blue Jay, May Bee, Louise, Ax 1-8 and Axel Fraction claims. No work was reported on the claim. In 1990, D. Cremonese (Amphora Resources) flew a heli-borne VLF-EM and magnetometer survey over the Elk 1-2, Bunt 1-4 and Basin 1-4 claims. The survey included the area of the showing. Petro Plus Inc. optioned the American Creek property in 1998.

The area is underlain by rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58,63). North-trending, west-dipping andesites and tuffs lie on the west limb of the north-trending American Creek anticline.

Little is known about the three veins on the Ruby claim. The more developed lower vein, at an elevation of 579 metres, is a somewhat brecciated quartz-jasper-barite zone of unknown width and attitude. Sparse mineralization comprises silver sulphides(?), galena, chalcopyrite and bornite (Minister of Mines Annual Report, 1929 p. C104).

At the Maybee showing, a massive barite vein is exposed over a strike length of 150 metres, with lenses of massive sphalerite, galena and chalcopyrite. A 3-metre chip sample across the southern part of the vein assayed 0.57 per cent copper, 25.27 per cent lead, 19.61 per cent zinc and 9280 grams per tonne silver (Mining Review Fall 1998, page 62).

BIBLIOGRAPHY

EMPR AR 1904-100; 1905-79; 1908-57; 1910-65 and MAP 80; *1929-104;
1930-109
EMPR ASS RPT 20195, 21417
EMPR BULL 58; 63
EMPR MAP 8
GSC MAP 216A; 217A; 307A; 317A; 9-1957; 1418A
GSC MEM 175, pp. 105, 145
GSC OF 2582
MIN REV Fall 1998, p. 62

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/17 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 008** NATIONAL MINERAL INVENTORY: 104A4 Ag4

NAME(S): **BETTY**, BETTY 3 (L. 3449), BETTY 1 (L. 3447), BETTY 1-6 (L. 3447-3452), DIVIDE 1-3

STATUS: Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 12 26 N NORTHING: 6229573
LONGITUDE: 129 58 39 W EASTING: 439363
ELEVATION: 1158 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Lower Betty adit is located on Lot 3449 (Assessment Report 21132).

COMMODITIES: Silver Zinc Lead Gold Copper

MINERALS
SIGNIFICANT: Galena Sphalerite Chalcopyrite Tetrahedrite Naumannite Pyrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Silica Malachite Cerussite Hydrozincite Linarite Brochantite Goethite
ALTERATION TYPE: Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Sheared
COMMENTS: Mineralized quartz veins up to 15 centimetres wide.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	
Jurassic	Hazelton	Mount Dilworth	

LITHOLOGY: Siltstone
Argillite
Volcanic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: PIT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	35.7000	Grams per tonne
Gold	0.0510	Grams per tonne
Lead	1.8500	Per cent
Zinc	7.2200	Per cent

COMMENTS: Highest assay from sampling in 1991. From a 10 centimetre wide vein at the portal of the Betty adit.
REFERENCE: Assessment Report 21132.

CAPSULE GEOLOGY

The Betty showing is located about 3.3 kilometres north of Divide Lake. The showing comprises several showings on the Betty claims (L. 3447-3452).

In 1920, Mahood Mines Ltd. was formed to explore the Divide 1-3 claims. In 1922, the company, renamed the American Mining and Milling Company Ltd., carried out exploration on the Betty 1-6 claims and several other claim groups. It is not known whether the Betty claims were a restaking of the Divide claims or another nearby group. Exploration comprised opencuts, pits, a short tunnel and a slightly inclined shaft. The claims were Crown-granted in 1927. In 1980, prospector A. Ingelson sampled the opencut, tunnel and a pit. In 1985, J. Cox conducted further sampling and petrographic studies. In 1990, Eureka Resources Inc. performed geological work, including

CAPSULE GEOLOGY

rock, silt, and soil sampling, on the Betty 1-3 claims. The Betty claims were also sampled in 1990 during exploration of the surrounding HJV claims (Bear property) owned by Canadian Cariboo Resources Ltd.

The area is underlain by Hazelton Group rocks of the Middle Jurassic Salmon River Formation (Open File 1987-22). The showing lies on the eastern, buckled limb of the north-northwest trending, south-plunging Mitre syncline. A narrow ribbon of the Lower to Middle Jurassic Mount Dilworth Formation, related to the mineralization, trends north, cutting through the crown grants. The Betty Creek Formation outcrops to the east of the showing. The Long Lake fault, marked by a prominent lineament, is about 1 kilometre east of the showing.

Near the showing, the east-southeast striking, north-dipping Salmon River Formation consists mainly of thin bedded siltstones and argillites. Vuggy white quartz and quartz carbonate veins occur at the contact between argillite and volcanic rocks (Mount Dilworth Formation). These veins contain between 2 and 4 per cent pyrite, sphalerite, galena and minor chalcopyrite and tetrahedrite. A variety of secondary minerals, including malachite, cerussite, hydrozincite, linarite, brochantite and goethite have also been reported. The veins are between 10 and 15 centimetres wide and the hangingwall is silicified for up to 1.0 metre. The veins are predominantly semi-concordant to bedding or parallel to shears, faults and fractures. The following vein attitudes have been recognized in the vicinity (Assessment Report 20905): 1. 0.2 to 2.0-metre wide veins parallel to bedding (including stockwork occurrences), 2. 0.2 to 0.5-metre wide vertical veins, parallel to the synclinal axis, 3. 0.05 to 0.1-metre wide, northeast-trending, near vertical veins, and 4. 0.05 to 0.1-metre wide, east-striking and steeply south-dipping veins (including stockwork occurrences). It has been suggested that the veins are related to a late event of probable Eocene age (Assessment Report 21132).

Grab samples assay up to 13,714 grams per tonne silver (Minister of Mines Annual Report, 1922). A chip(?) sample from an opencut assayed 1,968.7 grams per tonne silver and 2.7 grams per tonne gold; a further chip(?) sample from a pit assayed 2,027.7 grams per tonne silver, 1.0 gram per tonne gold, 4.90 per cent zinc, 0.70 per cent lead and 0.18 per cent copper (Assessment Report 8939).

Two narrow quartz carbonate veins are exposed in the Betty adit. The veins are hosted in "pyjama bed" siltstones of the Salmon River Formation. The best assay obtained was from a sample of a 10 centimetre wide quartz vein located at the portal. The sample assayed 0.051 gram per tonne gold, 35.7 grams per tonne silver, 1.85 per cent lead and 7.22 per cent zinc (Assessment Report 21132). The adit ends about 25 metres short of the Salmon River-Mount Dilworth contact.

Vertically above the adit, about 40 metres, several narrow discontinuous quartz veins occur in Mount Dilworth Formation rocks. A total of 4 exploration trenches and pits tested the poddy mineralization. A 10-centimetre wide quartz vein and a 1 metre silicified zone, in the hangingwall of the vein, is exposed in the Betty trench. The vein contains small blebs of pyrite, sphalerite, and galena. The highest assay values were obtained from this trench. A grab sample assayed 1.44 grams per tonne gold, 1,952.6 grams per tonne silver, 0.25 per cent copper, 1.77 per cent lead and 3.83 per cent zinc (Assessment Report 21132).

A vuggy quartz vein occurs 50 metres northward along the Mount Dilworth/Salmon River contact. The sulphide content is approximately 2 per cent. Samples from this vein assayed 0.444 gram per tonne gold, 1071.6 grams per tonne silver, 0.24 per cent copper, 2.42 per cent lead and 18.33 per cent zinc (Assessment Report 21132).

Another quartz vein, 15 centimetres wide, is located on the Bear property, about 400 metres northward along the contact. The bedding changes strike to east-west at this location. A grab sample of this quartz vein assayed 0.019 gram per tonne gold, 43.2 grams per tonne silver and 0.45 per cent zinc (Assessment Report 21132). The veins are geochemically anomalous in molybdenum and mercury.

A veinlet, containing visible galena, is located at the northeast corner of the Betty 1 claim. This veinlet assayed 26.7 grams per tonne silver (Assessment Report 20905).

BIBLIOGRAPHY

EMPR AR 1920-65; *1922-83; 1927-480
EMPR FIELDWORK 1982, p. 188
EMPR BULL 58; 63; 85 (in press)
EMPR ASS RPT 8939, 14851, *20905, 21132
EMPR OF 1987-22
EMPR MAP 8

BIBLIOGRAPHY

EMR MP CORPFILE (American Mining and Milling Company, Limited;
British American Holding and Development Company)
GSC MEM 175, p. 152
GSC MAP 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/06 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 009**

NATIONAL MINERAL INVENTORY: 104A4 Zn1

NAME(S): **ANACONDA**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 10 19 N
LONGITUDE: 129 51 33 W
ELEVATION: 1433 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The location of the showing is not known exactly; it is described as being on the east side of Basin creek (Minister of Mines Annual Report 1928, p. 107). The location in Bulletin 58 is incorrect.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6225549
EASTING: 446655

COMMODITIES: Zinc Lead

MINERALS
SIGNIFICANT: Sphalerite Galena
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: J01 Polymetallic manto Ag-Pb-Zn I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Fractured

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Limestone
Shale
Volcaniclastic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Anaconda showing is located on the east side of the upper part of Basin Creek, a small creek on the east side of American Creek. The Anaconda claims were staked and explored during 1924-28.

The area is underlain by the north-northeast trending, east-dipping Upper Triassic to Lower Jurassic Unuk River Formation, Hazelton Group. The rocks predominantly comprise green, red and purple volcaniclastics with shale and limestone interbeds (Bulletin 58, 63).

The showing occurs in a narrow band, of shale and limestones, which strikes 335 degrees and dips 45 degrees east. The limestone contains a zone, 0.6 to 1.2 metres wide, mineralized with sphalerite and minor galena. About 50 metres to the north, a cross fracture in the limestone, up to 0.6 metres wide, also carries sphalerite and galena.

BIBLIOGRAPHY

EMPR AR 1926-95; *1928-107
EMPR MAP 8
EMPR BULL 58; 63
GSC MEM 175, p. 105
GSC MAP 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/11 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 010** NATIONAL MINERAL INVENTORY: 104A4 Ag3

NAME(S): **SPIDER 3 (L. 4174)**, SPIDER, SPIDER 1-3 (L. 4172-4174)

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 08 11 N NORTHING: 6221694
LONGITUDE: 129 58 58 W EASTING: 438923
ELEVATION: 1060 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Portal of the adit on the No. 2 vein, Spider 3 claim (L. 4174) (Minister of Mines Annual Report 1936, p. B29).

COMMODITIES: Silver Gold Zinc Lead Copper

MINERALS
SIGNIFICANT: Pyrite Sphalerite Galena Argentite Tetrahedrite Silver Chalcopyrite Freibergite Gold
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Tertiary
ISOTOPIC AGE: DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT
CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: 186 x 1 Metres STRIKE/DIP: 319/60S TREND/PLUNGE:
COMMENTS: Mineralization yields a galena-lead isotope ratio of Tertiary age (Fieldwork, 1990 p. 241). Dimensions and attitude are for the No. 2 vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Augite Porphyry Flow
Augite Porphyry
Slate
Basic Dike
Acid Dike

HOSTROCK COMMENTS: The hostrocks are massive augite porphyry flows (Open File 1987-22).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1936
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	658.3000	Grams per tonne
Gold	0.6900	Grams per tonne
Zinc	2.0000	Per cent

COMMENTS: Sample from the adit on the No. 2 vein, 117 metres southeast of the portal; across 0.76 metres. Trace copper and lead.
REFERENCE: Minister of Mines Annual Report, 1936, page B30.

CAPSULE GEOLOGY

The Spider 3 occurrence is located about 500 metres northeast of the northern tip of Long lake, approximately 400 metres east of the Cascade River.

The Spider 1-3 claims (L. 4172-4174) were staked in 1918 by Hamilton and Larsen and optioned briefly the following year to Trites and Wood who carried out minor development work. In 1919, the Algunican Development Company Ltd. optioned the property and commenced exploration work. During 1919-20, a 213-metre long tunnel and a raise were completed on the No. 2 vein (described as the No. 5 vein in 1920), some drilling was performed on the No. 1 vein and open- cutting was done on the No. 3 vein. A southwest-trending

CAPSULE GEOLOGY

crosscut was completed from the southeastern end of the tunnel to intersect the No. 3 vein at depth. The option was dropped in 1920. In 1925, B.C. Bonanza Mines Ltd. acquired the property. Open drifting was carried out that year on the No. 3 vein. The company also sorted and sacked ore, 1.8 tonnes from the dump of the old tunnel (No. 2 vein?) averaged 15.8 grams per tonne gold, 13,176.1 grams per tonne silver, 9 per cent lead and 13 per cent zinc and. From the opencut on the No. 3 vein, 4.5 tonnes assayed 15.1 grams per tonne gold, 12,531.5 grams per tonne silver, 8.4 per cent lead and 13.6 per cent zinc (Minister of Mines Annual Report, 1925, p. 107). In 1927, 1.2 tonnes were shipped and 9,611 grams of silver were recovered. The property subsequently lapsed and was purchased by Collart in 1934. In 1934, drifting to the southeast, from the end of the long tunnel and possibly on the No. 3 vein, and a raise above this drift were reported. In 1936, 2 adits were reported on the No. 3 vein and a small stope was noted in the tunnel on the No. 2 vein. Leasees carried out high grading operations during 1933-35. A total of 16 tonnes were shipped in four shipments which recovered an average of 13.7 grams per tonne gold and 6,449.2 grams per tonne silver (Minister of Mines Annual Report, 1936, p. B31), as well, Mineral Policy records production of 206 kilograms of lead for this period. The claims were held by Campbell in 1963. No further work has been reported on the property.

The area is underlain by northwest-trending, massive augite porphyry flows of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group). These form the crumpled core of the northwest-trending, southeast-plunging Spider anticline (Open File 1987-22). Previous workers mapped these rocks as a small stock of Tertiary (or older) augite diorite porphyry that is part of the Glacier Creek intrusions of the Coast Plutonic Complex (Bulletin 58, 63). The occurrence lies near the contact with overlying slates of the Middle Jurassic Salmon River Formation (Hazelton Group). Basic and acid dikes of the Portland Canal dike swarm are conspicuous in the area.

At least five quartz-calcite veins, 0.3 to 3.7 metres wide, are known. They are mineralized with pyrite, sphalerite, galena and minor argentite, tetrahedrite, native silver, chalcopyrite, freibergite and native gold. The best mineralization occurs in short shoots and lenses in the narrower veins. The veins trend northwest to north-northwest and dip southwest.

The Nos. 1, 4 and 5 veins trend north-northwest, are wider and generally barren. The Nos. 2 and 3 veins trend northwest, are slightly sheared fractures and carry high grade mineralization in places.

The No. 2 vein (referred to in earlier Annual Reports as the No. 5 vein) was drifted on for 186 metres in the long tunnel. It trends 319 degrees and dips 50-70 degrees southwest. The vein is a mineralized shear, 0.6 to 1.5 metres wide, which carries lenses and streaks of quartz grading into shattered wallrock. The best mineralization occurs along the northwestern 100 metres of the vein. A chip sample collected in 1936, across the vein at 117 metres from the portal, assayed 658.3 grams per tonne silver, 0.69 grams per tonne gold and 2.0 per cent zinc over a width of 0.76 metres (Minister of Mines Annual Report, 1936, p. B30).

The No. 3 vein is exposed in two opencuts, that continue into adits, which lie about 240 metres south-southeast of the portal of the tunnel on the No. 2 vein. The vein is 0.1 to 0.5 metres wide, trends 297 degrees and dips 70-80 degrees to the southwest. Although poorly defined, the vein can be traced for about 100 metres. A sample collected in 1936 from one of the opencuts assayed 4.8 grams per tonne gold, 2,290.3 grams per tonne silver, 3.0 per cent zinc and nil copper and lead (Minister of Mines Annual Report, 1936, p. B29).

BIBLIOGRAPHY

EMPR AR 1919-77; 1920-65; 1922-83; 1923-81; 1925-106; 1933-36,60,302; 1934-B27; 1936-B28
EMPR FIELDWORK *1984, pp. 308-315; 1990, pp. 235-242
EMPR BULL 58, p. 168; 63; 85 (in press)
EMPR OF 1987-22
EMPR MAP 8
GSC SUM RPT 1919, Part B, p. 11
GSC MEM 132, p. 49; 175, p. 152
GSC MAP 216A; 217A; 307A; *315A; 1829; 9-1957; 1418A
GSC OF 2582
W MINER Vol. 36, No. 11, p. 20
MINING AND ENGINEERING RECORD 1925 Vol. 28, No. 4, p. 95

MINFILE NUMBER: **104A 011** NATIONAL MINERAL INVENTORY: 104A4 Ag9

NAME(S): **MOUNTAIN BOY (L. 445)**, AMERICAN GIRL (L. 444), HARD MONEY (L. 447), HARD NUT, DALY, FAGAN, HIGH GRADE, MANN, TOLIN, NORTH MANN, SOUTH MANN, NORTHERN BELLE

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 08 20 N NORTHING: 6221921
LONGITUDE: 129 55 21 W EASTING: 442673
ELEVATION: 919 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Daly adit on High Grade or No. 2 vein (Property File - Mathews, 1942).

COMMODITIES: Silver Copper Zinc Gold Lead Antimony

MINERALS
SIGNIFICANT: Sphalerite Galena Chalcopyrite Chalcocite Argentite Stromeyerite Pyrargyrite Silver Stibnite
COMMENTS: Stibnite reported from the Mann vein.
ASSOCIATED: Quartz Jasper Barite Calcite
COMMENTS: Calcite also reported from the Mann vein.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Discordant
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION: 365 x 5 Metres STRIKE/DIP: 320/25W TREND/PLUNGE:
COMMENTS: High Grade vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Porphyritic Andesite
Tuff
Augite Porphyry Dike
Feldspar Porphyry Dike
Lamprophyre Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1929
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	9999.9999	Grams per tonne
Gold	0.5100	Grams per tonne
Copper	1.7000	Per cent
Zinc	4.2000	Per cent

COMMENTS: Actual silver assay of sample is 17,493 grams per tonne. Sample across 0.61 metre from surface exposure about 30 metres north of Daly adit.
REFERENCE: Property File - Mathews, 1942.

CAPSULE GEOLOGY

The Mountain Boy occurrence is located about 1 kilometre west of American Creek, approximately 5 kilometres north of the confluence of American Creek with the Bear River.

The American Girl group (American Girl, Mountain Boy, Northern Belle and Hard Money) was staked in 1902. Some tunnelling was done on the American Girl claim during 1903-05. During 1909-14, Sir Donald Mann optioned the property and his company, Pacific Coast Exploration Co., conducted further tunnelling (on the Mann or No. 1 vein) and discovered a silver-rich boulder. The Mountain Boy Mining

CAPSULE GEOLOGY

Company Limited was formed in 1910(?). In 1927, W. Tolin optioned the property and the Pat Daly Mining Company was organized to develop the property. The following year the High Grade (or No. 2) vein was discovered as the source of the high grade float. During 1928-30, the Daly and Fagan tunnels were driven on the High Grade vein on the Mountain Boy claim and the Tolin tunnel was driven below the Mann tunnel on the Mann vein on the American Girl claim. In 1929, a shipment of about 4 tonnes of hand sorted material produced 124,352 grams of silver, 154 kilograms of copper, 61 kilograms of lead and 80 kilograms of zinc (Property File - Mathews, 1942). During 1936-45, work comprised mainly prospecting, although some drifting and crosscutting was done. In 1936, 4 tonnes produced 77,726 grams of silver, 95 kilograms of copper and 125 kilograms of lead. It is possible that the production recorded for 1937 includes the production listed for 1936. In 1937, 4 shipments, totalling 38.1 tonnes, produced 743,455 grams of silver, 1,334 kilograms of copper and 1,525 kilograms of lead. In 1938, 9 tonnes produced 74,959 grams of silver and 160 kilograms of copper. A shipment of 2.8 tonnes, which assayed 3.1 grams per tonne gold, 8,553 grams per tonne silver, 2.2 per cent copper, 4.9 per cent lead, 5.8 per cent zinc and 0.4 per cent antimony, was sent to the Prince Rupert sampling plant in 1940 (Minister of Mines Annual Report, 1940, p. A42). In 1974, the claims reverted to the Crown and, in 1976, R. Schumacher carried out underground sampling on the Mann tunnel. In 1978, Northern Lights Resources Ltd. reportedly drilled 1 hole but there is no record of this work. In 1980, Pride Resources Ltd. acquired the property, including the surrounding Crown-granted claims, and conducted prospecting and a survey for an access route.

The area is underlain by north-trending, west-dipping rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group). These lie on the west limb of the north-northwest trending American Creek anticline. Red to green porphyritic andesites and tuffs are intruded by numerous dikes of feldspar porphyry, augite porphyry and lamprophyre. Near the mineralization there are several zones of intense shearing and numerous faults and fractures.

There are at least 3 known veins occurring close to each other. The Mann (No. 1) vein is about 150 metres east of, and 150 metres below, the High Grade (No. 2) vein. A third vein (No. 3) outcrops about 100 metres west of the High Grade vein.

The Mann vein, outcropping on the Mountain Boy and Hard Money claims, trends north to northeast and dips 45 to 65 degrees southwest. It can be traced for about 200 metres to the south, where the South Mann tunnel (on the Hard Money claim) exposes the vein (or a branch thereof). In the main Mann tunnel, the vein is 10.7 metres wide and comprises mainly quartz with lesser barite and calcite. Galena and sphalerite form semi-massive ribbons in the vein and stibnite, chalcocite and argentite have also been reported. The best mineralization occurs on the footwall of the vein. Chip samples from the Mann tunnel assayed up to nil gold, 1,848 grams per tonne silver, 1.83 per cent zinc, 0.58 per cent lead and 0.20 per cent copper across 2.1 metres (Property File - Mathews, 1942).

The High Grade vein, outcropping on the Mountain Boy and Hard Money claims, strikes north at its northern end but curves to the southeast at its southern end. It dips 20 to 25 degrees west and can be traced for about 365 metres along strike. The vein is cut off at the south end by a fault. Nearby, east-trending faults exhibit dextral lateral displacement of the vein. The vein, up to 5 metres wide, comprises sparsely mineralized quartz, jasper and barite. The highest grade mineralization occurs across a 0.2 to 0.5-metre width along the footwall where pods and veinlets of sphalerite, galena, chalcopyrite, chalcocite, argentite, native silver, stromeyerite and pyrargyrite occur. Silver values are reported to average 7,217 grams per tonne across 4.1 metres from the discovery outcrop (Property File - Mathews, 1942, p. 6). Chip samples from the surface, immediately north of the Daly tunnel, assayed up to 0.51 grams per tonne gold, 17,493 grams per tonne silver, 4.2 per cent zinc, 1.7 per cent copper and nil lead across 0.61 metres (Property File - Mathews, 1942).

The No. 3 vein, outcropping on the Mountain Boy claim, strikes north to north-northwest and dips 30 degrees west. The vein, lying about 100 metres west of the High Grade vein, can be traced for about 500 metres. Details of the vein are not known. Vertical chip samples across the apparent width assayed up to trace gold and 13,694 grams per tonne silver across 0.9 metres (Property File - Sketch Map, 1936).

In 1998, Ranmar Ventures Ltd. optioned the property from Minvita Enterprises Ltd. A 4.6-metre wide structure north of the Daly Tunnel contains high grade silver, up to 29,600 grams per tonne in grab samples (GCNL #140(July 22), 1998).

BIBLIOGRAPHY

EM EXPL 1999-1-11, 19-31; 2000-1-8; 2001-1-9
EMPR AR 1903-53; 1904-99; 1905-79; 1906-67; 1908-57; 1909-68; 1910-81; 1919-67; 1922-71; 1928-108; *1929-102; 1930-108; 1938-26; 1940-42, 78; 1944-63; 1945-62
EMPR ASS RPT 9184
EMPR BULL 58; 63
EMPR MAP 8
EMPR PF (Report on Mountain Boy Silver Property by Gearex Management Ltd., April 1, 1980; *Mountain Boy Mine, Stewart, B.C. by W. Mathews, December, 1942; Sketch Map, Mountain Boy Group, August 14, 1936)
EMR MP CORPFILE (Mountain Boy Mining Company, Limited; Northern Lights Resources Ltd.)
GSC MAP *216A; 217A; 307A; *315A; 9-1957; 1418A
GSC MEM 32, pp. 29, 51; 175, pp. 105, 128, 133
GSC OF 2582
GCNL #186,#227, 1980; #26, 1983; #119(June 20), 1997; #140(July 22), 1998; #144(Jul.27), #149(Aug.3), #218(Nov.25), 2000
WWW http://www.infomine.com/index/properties/MOUNTAIN_BOY.html
Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/17 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 012**
NATIONAL MINERAL INVENTORY: 104A4 Ag9

NAME(S): **LUCKY JIM 4 (L. 5721)**, LUCKY JIM 3, LUCKY JIM

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 09 08 N
LONGITUDE: 129 55 59 W
ELEVATION: 1280 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized quartz stringers (Assessment Report 21405).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6223414
EASTING: 442037

COMMODITIES: Zinc, Lead, Gold, Silver, Copper

MINERALS
SIGNIFICANT: Galena, Pyrite, Chalcopyrite, Bornite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Shear
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au; J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Volcanic, Sandstone, Siltstone, Argillite, Andesite, Tuff

HOSTROCK COMMENTS: Mineralization is hosted within the Betty Creek Formation, close to the contact with the underlying Unuk River Formation.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1990

COMMODITY	GRADE	
Silver	16.3000	Grams per tonne
Gold	0.3000	Grams per tonne
Lead	3.3000	Per cent
Zinc	13.4000	Per cent

COMMENTS: Grab sample from mineralized quartz stringers.
REFERENCE: Assessment Report 21405.

CAPSULE GEOLOGY

The Lucky Jim 4 showing is located 6.9 kilometres north-northwest of the confluence of American Creek and the Bear River, about 1400 metres west of American Creek.

The Lucky Jim claim group was located before 1929. That year, the owners, Bosence and partners, reported several mineralized occurrences on the claims. Montreal-based interests carried out work, including trenching(?), the following year; 5 veins were reported at this time but their locations are not specified (Property File - Mathews, 1942). Pride Resources Ltd. owned the claims in 1980; no work was reported on the showing. White purchased the claims in 1990. Teuton Resources Corp. subsequently agreed to purchase the claims and carried out geological mapping and sampling on the claims in 1990.

The area is underlain by north-trending, west-dipping Hazelton Group rocks on the west limb of the north-trending American Creek anticline (Bulletin 58, 63). Red to green volcaniclastics, comprising predominantly volcanic sandstone, siltstone and argillite, of the Lower Jurassic Betty Creek Formation overlie red to green

CAPSULE GEOLOGY

andesites and intercalated tuffs of the Upper Triassic to Lower Jurassic Unuk River Formation (Assessment Report 21405).

The showing, located on the west-central portion of the Lucky Jim 4 claim (L. 5721), comprises mineralized quartz stringers in a shear zone in the Betty Creek rocks. The quartz contains semi-massive galena, pyrite and minor chalcopyrite. A grab sample collected in 1990 from the showing assayed 13.4 per cent zinc, 3.3 per cent lead, 0.3 gram per tonne gold and 16.3 grams per tonne silver; copper was slightly anomalous (Assessment Report 21405).

Approximately 200 metres southeast of the showing, on the Lucky Jim 3 claim, is the north end of a south-southeast trending mineralized zone that can be traced for about 1000 metres to the south (Assessment Report 21405). The zone comprises a 4-metre wide silicified replacement zone that hosts a series of narrow quartz veins. The zone is mineralized with chalcopyrite, bornite and minor galena. It was not examined or sampled in 1990.

Three other veins, carrying pyrite and galena, are reported to be on the Lucky Jim claims, but their locations are unknown.

BIBLIOGRAPHY

EMPR AR 1929-104
EMPR BULL 58; 63
EMPR ASS RPT 9184, 20784, *21405
EMPR MAP 8
EMPR PF (In 104A 011 - Mathews, W. H. (1942): Mountain Boy Mine, Stewart, B.C.)
GSC MEM 175, p. 128
GSC MAP 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/02/12 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 013**

NATIONAL MINERAL INVENTORY: 104A4 Ag10

NAME(S): **SILVER KING**, SILVER KING O, SILVER KING M, SILVER KING Q, FREE GOLD FR.

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 10 05 N
LONGITUDE: 129 56 01 W
ELEVATION: 1050 Metres
LOCATION ACCURACY: Within 5 KM

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6225176
EASTING: 442027

COMMENTS: The exact location of the Silver King showing is not known. The camp of the American Creek Mining Co. is reportedly about 3.2 kilometres north of the Mountain Boy occurrence (104A 011). Occurrences on the Silver King claims are reported to be on the west side of American Creek, between 450 and 1430 metres elevation (Minister of Mines Annual Report, 1930 p. 109).

COMMODITIES: Gold, Silver, Copper

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite
ASSOCIATED: Quartz, Hematite
ALTERATION: Silica, Pyrite
ALTERATION TYPE: Silicific'n, Pyrite
MINERALIZATION AGE: Triassic-Jurassic

DEPOSIT

CHARACTER: Disseminated, Shear, Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Argillite
Tuff
Breccia
Andesite Lava

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1930
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	12.7000	Grams per tonne
Gold	0.6900	Grams per tonne

COMMENTS: Grab sample of representative pyritized tuff.
REFERENCE: Minister of Mines Annual Report, 1930, page 109.

CAPSULE GEOLOGY

The exact location of the Silver King showing is not known. The Silver King claims are reported to be on the west side of American Creek. The camp was apparently about 3.2 kilometres north of the Mountain Boy claim (L. 445) (104A 011).

In 1930, the American Creek Mining Co. prospected a group of claims on the west side of American Creek. Several showings were reported on the Silver King claims.

The area is underlain by north-striking, west-dipping Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation and overlying Lower Jurassic Betty Creek Formation. (Bulletin 58, 63).

Argillite, exposed on the valley floor, is overlain by a sequence of tuffs and breccias which is, in turn, overlain by andesite lava and superposed breccias and tuffs (Minister of Mines Annual Report, 1930, p. 109).

CAPSULE GEOLOGY

Tuff beds are, in places (especially on the Silver King M, Silver King O, Silver King Q and Free Gold Fraction claims), extensively pyritized and variably silicified. A grab sample from a typical exposure assayed 0.69 grams per tonne gold and 12.7 grams per tonne silver (Minister of Mines Annual Report, 1930, p. 109).

A weak shear in andesite lava, on the Silver King Fraction, Silver King Q and Silver King M claims, locally contains chalcopyrite, pyrite and hematite in a quartzose gangue. A sample across 1.2 metres assayed 0.3 gram per tonne gold, 9.6 grams per tonne silver and trace copper (Minister of Mines Annual Report, 1930, p. 109).

BIBLIOGRAPHY

EMPR AR 1930-109
EMPR BULL 58; 63
EMPR MAP 8
EMR MP CORPFILE (American Creek Mining Co., Limited)
GSC MEM 175, p. 105
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/10/15 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/18 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 014**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHRIS (L. 4965)**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 08 43 N
LONGITUDE: 129 55 58 W
ELEVATION: 1250 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Approximate centre of the Chris claim (L. 4965) (Mineral Titles Reference Map 104A/4W).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6222641
EASTING: 442044

COMMODITIES: Gold Copper

MINERALS
SIGNIFICANT: Unknown
ASSOCIATED: Unknown
ALTERATION: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Volcanic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The exact location of the Chris showing is not known. The occurrence is assumed to be on the Chris Crown-granted claim (L. 4965), about 1.5 kilometres west of American Creek and approximately 6.2 kilometres north-northwest of the confluence of the creek with the Bear River.

The exploration history of the claim is not known. Mineralization on the claim is mentioned by Mathews, 1942 (Property File).

The area is underlain by northeast-striking, west-dipping Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation and overlying Lower Jurassic Betty Creek Formation (Bulletin 58, 63).

Mineralization comprises a 3.7-metre wide vein carrying values in gold and copper (Property File - Mathews, 1942).

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR MAP 8
EMPR PF (In 104A 011 - Mathews, W.H. (1942): Mountain Boy Mine, Stewart, B.C.)
GSC MAP 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/10/15 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/03 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 015** NATIONAL MINERAL INVENTORY: 104A4 Ag11

NAME(S): **KETCHUM (L. 1075)**, KANSAS, STOP AND REST (L. 1076), SUNSHINE

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 07 36 N NORTHING: 6220524
LONGITUDE: 129 52 40 W EASTING: 445435
ELEVATION: 640 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Old workings (Minister of Mines Annual Report, 1936). The location in Bulletin 58 is incorrect.

COMMODITIES: Silver Zinc Lead Gold Copper

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

DEPOSIT
CHARACTER: Vein Breccia Concordant Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 16 x 1 Metres STRIKE/DIP: 310/45E TREND/PLUNGE:
COMMENTS: Vein.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Argillite
Graphitic Argillite
Brecciated Argillite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: DRIFT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1936
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	1378.0000	Grams per tonne
Gold	0.7000	Grams per tonne
Copper	0.2000	Per cent
Lead	5.0000	Per cent
Zinc	8.0000	Per cent

COMMENTS: Sample taken across the face of the southeastern drift; width of 1.2 metres.
REFERENCE: Minister of Mines Annual Report, 1936 page B33.

CAPSULE GEOLOGY

The Ketchum occurrence is located about 1 kilometre east of American Creek and about 3.5 kilometres north of the confluence of American Creek with the Bear River.

The Ketchum, Sunshine and Stop and Rest claims were recorded in 1905. During 1905-10, when the claims were referred to as the Kansas Group, stripping, open cutting and tunnelling were carried out. In 1914, about 9 tonnes of silver-lead ore were mined by a leasee. In 1915, 3 shipments, comprising 17 tonnes of ore, were shipped; a total of 31 grams of gold, 107,399 grams of silver and 7291 kilograms of lead were recovered. The claims lapsed and were redeemed several times during the ensuing years. In 1936, S. Deschamps leased the Ketchum and Stop and Rest claims. During 1936-37, several small shipments of ore, totalling 32 tonnes, produced 208,453 grams of silver, 93 grams of gold and 10,832 kilograms of lead. A composite(?) chip sample from one 4 tonne shipment assayed 1.0 gram

CAPSULE GEOLOGY

per tonne gold, 11,040 grams per tonne silver, 26 per cent lead, 11 per cent zinc and 2.5 per cent copper (Minister of Mines Annual Report, 1936). In 1990, D. Cremonese (Amphora Resources) flew a heli-borne VLF-EM and magnetometer survey over the Elk 1-2, Bunt 1-4 and Basin 1-4 claims. The survey included the area of the showing.

The area is underlain by north-trending, east-dipping Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) rocks (Bulletin 58, 63).

A concordant, 0.6 to 1.2-metre wide, vein strikes 310 degrees and dips 45 degrees east. Veins and stringers of quartz and calcite, mineralized with galena, sphalerite, tetrahedrite and minor pyrite, are hosted in sheared and brecciated argillite. The vein has been exposed over a length of 12.8 metres in a drift at the bottom of an inclined 16.5-metre long shaft and over a length of 16.5 metres in a sublevel about 6 metres below the shaft collar. The sheared argillite is reported to be graphitic underground. A sample across the face in the southeastern drift assayed 0.7 gram per tonne gold, 1,378 grams per tonne silver, 8.0 per cent zinc, 5.0 per cent lead and 0.2 per cent copper across 1.2 metres (Minister of Mines Annual Report, 1936).

Two other adits have also been reported at about 100 metres southeast and at 200 metres northwest of the workings.

BIBLIOGRAPHY

EMPR AR 1905-80; 1910-65; 1914-156; 1915-444; 1916-521;
*1936-B33,B58; 1937-B41
EMPR MAP 8
GSC MEM 32, p. 53; 175, p. 123
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/18 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 016** NATIONAL MINERAL INVENTORY: 104A4 Ag12

NAME(S): **TERMINUS**, GLENORA (L. 3234), EVANS (L. 3231), AYRSHIRE (L. 3232), CAMP, VANCOUVER, HOPE, BASIN 1, ERNST, PABICIA , NOONDAY FR. (L.4910)

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 08 40 N NORTHING: 6222502
LONGITUDE: 129 52 36 W EASTING: 445529
ELEVATION: 1229 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Portal of Terminus adit/crosscut on the Glenora claim (L. 3234) (Assessment Report 20976). The location in Bulletin 58 is incorrect.

COMMODITIES: Silver Zinc Lead

MINERALS
SIGNIFICANT: Sphalerite Galena Tetrahedrite Pyrite Pyrrhotite
ASSOCIATED: Quartz Carbonate
ALTERATION: Silica Chlorite
ALTERATION TYPE: Silicific'n Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Breccia Shear
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: STRIKE/DIP: 005/50E TREND/PLUNGE:
COMMENTS: Terminus vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite Tuff
Andesite Agglomerate
Calcareous Siltstone
Limestone
Quartz Feldspar Porphyry Dike
Siliceous Dike
Andesite Dike
Diorite
Granodiorite
Basic Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN REPORT ON: Y

CATEGORY: Unclassified YEAR: 1990
QUANTITY: 5182 Tonnes

COMMODITY	GRADE	
Silver	391.9000	Grams per tonne
Lead	0.7600	Per cent
Zinc	0.9200	Per cent

COMMENTS: Inventory based on old Terminus workings; 1.5 metres width.
REFERENCE: Assessment Report 20976.

CAPSULE GEOLOGY

The Terminus (and Vancouver) occurrences are located on the east side of American Creek, about 5.5 kilometres north-northeast of the confluence with the Bear River.

The Terminus occurrence was probably discovered in 1910. During 1910-28, Northern Terminus Mines Ltd. (and later Terminus Mines Ltd.), conducted exploration work on the property. By 1911, a 13.8 metre shaft, an opencut and a short tunnel had been completed. That

CAPSULE GEOLOGY

year a shipment of ore (10.8 tonnes) assayed about $200 per tonne. Most of the underground work was apparently completed in 1924 and comprised a 200 metre long crosscut (adit), 90 metres of drifting, a raise, a winze and, about 50 metres south of these workings, a prospect shaft. The crosscut intersected the Terminus vein about 22 metres below the surface exposure. In 1925, Vancouver Mines Ltd. performed exploration on the immediately contiguous claims. This work included: two adits and several opencuts on the Hope 1 Fraction, about 240 metres north of the portal of the Terminus adit; and pits on the Hope veins on the Hope 2 Fraction (104A 017), about 700 metres east of the portal. From 1925-49, 24.5 tonnes were high graded from the property; 152,312 grams of silver, 3,944 kilograms of lead and 5,036 kilograms of zinc were recovered. No further work was reported until 1981 when Gatrow Resources Inc. conducted a prospecting and sampling program on the Terminus-Vancouver claim groups. Most of the previous workings were resampled. In 1988, D. Cremonese flew a heli-borne VLF-EM and magnetometer survey over the Ernst 1-2 and Pabicia claims, which included the area of the occurrences. In 1990, Hyder Gold Inc. performed geological and geochemical work on the Terminus-Vancouver property; this work was done mainly on the Hope claims. An in-situ mineral inventory of the Terminus vein was estimated in 1990 to be 5,182 tonnes grading 391.9 grams per tonne silver, 0.92 per cent zinc and 0.76 per cent lead (Assessment Report 20976). That same year D. Cremonese (Amphora Resources) flew a heli-borne VLF-EM and magnetometer survey over the Elk 2-3, Bunt 1-4 and Basin 1-4 claims. The survey included the area of the occurrences. In 1991, the Basin 1 claim was staked around the Terminus workings which occur on several Crown grants. The workings and the immediate area were sampled during investigations on the adjacent Basin property.

The area is underlain by north-trending, east-dipping rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58,63). Green andesite tuff and agglomerate, with interbeds of siltstone and minor limestone, lie on the eastern limb of the north-northwest trending American Creek anticline. Several types of dikes and intrusions have been reported. They include quartz feldspar porphyry stockworks and dikes, siliceous dikes, andesite or basalt dikes and diorite and granodiorite stocks and/or dikes.

North to north-northeast trending shears are the most important structural features. They include the mineralized Terminus, Evans and Camp shears. These shears have been traced for 1000, 700 and 200 metres respectively. East-trending shears, faults and joints appear to post date the mineralized shears.

The mineralized shears comprise vuggy to brecciated quartz and quartz-carbonate veins with up to 5 per cent pyrite and small blebs of sphalerite, galena and tetrahedrite. Dikes, especially light coloured siliceous ones, are commonly intimately associated with the mineralization and may also be mineralized.

The Terminus vein (and accompanying dikes) dips 45 to 50 degrees east in the shear and strikes 005 degrees. Discrete mineralized veins are generally less than 0.6 metres wide. A mineralized quartz vein, breccia and gouge zone in the north stope (on the crosscut level) is up to 2.1 metres wide. The host shear zone is silicified; siliceous dikes form both the footwall and hangingwall. The better mineralization lies along the hangingwall. A sample from the surface assayed trace gold, 7,753 grams per tonne silver, 2.24 per cent lead, 0.69 per cent zinc and 0.23 per cent copper across 0.15 metres (Assessment Report 20976).

The Evans veins occur on the Evans claim, about 360 metres southeast of the Terminus portal. Two steeply west-dipping, quartz-carbonate breccia veins are separated by about 10 metres of basic dike and fractured volcanics. A sample from the west vein assayed 27.4 grams per tonne silver, 0.07 gram per tonne gold, 3.49 per cent lead, 0.61 per cent zinc and trace copper across 1.8 metres (Assessment Report 10124).

The Camp vein occurs on the Ayrshire claim, about 300 metres west-southwest of the Terminus portal. A 0.6-metre wide vein of massive sphalerite and galena is hosted in a 0.6-metre wide siliceous dike that trends 150 degrees and dips 55 degrees east. The vein lies adjacent to the north-trending Camp shear. The sulphide vein assayed trace gold, 4,085 grams per tonne silver, 24.2 per cent zinc, 9.79 per cent lead and 0.94 per cent copper (Assessment Report 20976).

The Vancouver adit, about 240 metres north of the Terminus portal, contains massive pyrite-pyrrhotite mineralization associated with siliceous and chloritized volcanics. The sulphide zone has been explored by a line of cuts and a further adit to the northeast. Samples assayed negligible results.

BIBLIOGRAPHY

EMPR AR 1911-75; 1912-73,109; 1916-522; 1924-70; 1925-63,97,98,444;
1926-94,95; 1927-58,93; 1928-107; 1929-102; 1931-44; 1949-41
EMPR ASS RPT 10124, 20784, *20976, 21417
EMPR BULL 58; 63
EMPR MAP 8
EMPR PF (Gatrow Resources Inc., Prospectus, April, 1989)
EMR MP CORPFILE (Vancouver Mines, Limited)
GSC MAP *216A; 217A; 307A; *315A; 9-1957; 1418A
GSC MEM 32, p. 53; 159, pp. 35-36; 175, pp. 148-150
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/09 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 017** NATIONAL MINERAL INVENTORY: 104A4 Ag12

NAME(S): **HOPE 2 FR. (L. 4901)**, HOPE, VANCOUVER, BASIN 1, NOONDAY

STATUS: Showing MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 08 37 N NORTHING: 6222400
LONGITUDE: 129 51 53 W EASTING: 446270
ELEVATION: 1509 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Opencut on Upper Hope showing (Assessment Report 20976). The location in Bulletin 58 is incorrect.

COMMODITIES: Silver Gold Copper Zinc Lead

MINERALS
SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite Sphalerite Galena
COMMENTS: Mineralization assumed from assay results.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Podiform Disseminated Vein
CLASSIFICATION: Replacement Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Calcareous Sediment/Sedimentary
Limestone
Chert
Argillite
Volcaniclastic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

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

COMMODITY	GRADE	
Silver	120.8000	Grams per tonne
Gold	0.0300	Grams per tonne
Copper	0.0300	Per cent
Lead	0.1000	Per cent
Zinc	0.3000	Per cent

COMMENTS: Upper Hope showing.
REFERENCE: Assessment Report 10124.

CAPSULE GEOLOGY

The Hope showings are located about 2.5 kilometres east of American Creek, between Champion and Basin Creeks, and approximately 700 metres east of the Terminus adit (104A 016).

In 1925, Vancouver Mines Limited acquired the Hope claim group surrounding the Terminus claims. During 1925-26, the company conducted prospecting and underground exploration on the Hope group. This work included opencuts on the Upper and Lower Hope showings on the Hope 2 Fr. claim. No further work was reported until 1981 when Gatrow Resources Inc. carried out an exploration program in the area. In 1988, D. Cremonese flew a heli-borne VLF-EM and magnetometer survey in the area. In 1990, Hyder Gold Inc. performed geological and geochemical work in the area and D. Cremonese (Amphora Resources) flew a heli-borne VLF-EM and magnetometer survey over the Elk 1-2, Bunt 1-4 and Basin 1-4 claims. The survey included the area of the showing.

The area is underlain by the north-northwest trending, east-dipping Upper Triassic to Lower Jurassic Unuk River Formation

CAPSULE GEOLOGY

(Hazelton Group) (Bulletin 58,63). Green volcaniclastics with interbeds of limestone, argillite and chert lie on the eastern limb of the American Creek anticline.

The Hope showings consist of pyrite-pyrrhotite pods and bands in calcareous sediment interlayers. A grab sample from the Upper Hope showing assayed 120.8 grams per tonne silver, 0.30 per cent zinc, 0.10 per cent lead, 0.03 per cent copper and 0.03 gram per tonne gold (Assessment Report 10124). A grab sample from the Lower Hope showing (about 150 metres west-southwest of the Upper showing) assayed 57.6 grams per tonne silver, 3.35 per cent copper and 0.10 grams per tonne gold (Assessment Report 10124).

BIBLIOGRAPHY

EMPR AR *1925-97; 1926-95
EMPR ASS RPT *10124, 17629, 21417, 20195, 20784, *20976
EMPR BULL 58; 63
EMPR MAP 8
EMR MP CORPFILE (Vancouver Mines, Limited)
GSC MAP 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC MEM 175, p. 150
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/11 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 018**

NATIONAL MINERAL INVENTORY:

NAME(S): **LODE 6**, LODE 3-6, LODE 8,
LODE, HOPE NO. 5 (L.4899), HOPE NO. 1 (L.4900),
HOPE NO. 6 (L.4902)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 09 13 N
LONGITUDE: 129 51 58 W
ELEVATION: 975 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop (Assessment Report 19723).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6223514
EASTING: 446198

COMMODITIES: Copper Silver Gold

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Volcaniclastic
Dacitic Dike
Dacite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1989

COMMODITY	GRADE	
Silver	2.2000	Grams per tonne
Gold	0.0700	Grams per tonne
Copper	16.8000	Per cent

COMMENTS: Nature of the sample is not clear; possibly a chip sample across 0.3 metre.
REFERENCE: Assessment Report 19723.

CAPSULE GEOLOGY

The Lode 6 showing is located on the north side of a tributary of Basin Creek, about 2.8 kilometres east of American Creek.

In 1989, White Channel Resources Inc. conducted a geological-geochemical exploration program on the Lode 3-6 and Lode 8 claims. Mineralization was located on the Lode 6 claim.

The area is underlain by the north-northwest trending, east-dipping Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63). These rocks, predominantly volcaniclastics, lie on the eastern limb of the American Creek anticline.

The showing is described as a series of veins, containing pyrite, quartz and chalcopyrite, related to northwest-trending dacitic dikes. Vein widths up to 1 metre have been reported. A chip(?) sample was taken across 0.3 metre, comprising 20 per cent quartz, 5 per cent chalcopyrite and 5 per cent pyrite. This sample assayed 16.80 per cent copper, 0.07 gram per tonne gold and 2.2 grams per tonne silver (Assessment Report 19723).

BIBLIOGRAPHY

EMPR ASS RPT *19723

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR MAP 8
GSC MAP 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/09/11 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/18 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 019**

NATIONAL MINERAL INVENTORY: 104A4 Ag13

NAME(S): **RUFUS 6 (L. 3792)**, RUFUS, ERICKSON, VETERAN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 07 35 N
LONGITUDE: 129 47 52 W
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Upper adit (Geological Survey of Canada Map 217A).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6220433
EASTING: 450407

COMMODITIES: Silver Zinc Lead Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite Tetrahedrite Pyrite
ASSOCIATED: Quartz Dolomite Hematite Jasper Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite
Quartz Hornblende Porphyry Dike
Porphyry
Quartz Diorite Dike
Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1978

COMMODITY	GRADE	
Silver	3.1000	Grams per tonne
Lead	0.3000	Per cent
Zinc	16.6000	Per cent

COMMENTS: Grab from a vein 100 metres east of the upper adit. Also trace gold.
REFERENCE: Assessment Report 7201.

CAPSULE GEOLOGY

The Rufus 6 showing is located just east of the west branch of Rufus Creek, approximately 2 kilometres north of the Bear River and the Stewart highway.

The Rufus claim group was first mentioned in 1916. Minor work was reported during 1916-24. In 1924, Rufus Silver-Lead Mines Limited was incorporated and acquired the Rufus and Rufus 1-6 claims. That year prospecting, tunnelling and geological work were reported. In 1928, Rufus Argenta Mines Limited (a consolidation of Rufus Silver-Lead Mines and Argenta Mines) was incorporated and the following year a 244 metres long tunnel was reported. It is not clear whether this tunnel was driven on the Rufus or the Argenta claims. A further 46 metres of tunnelling was reported in 1937. New Rufus-Argenta Mines Limited was formed in 1955; further work was conducted during 1956-57 and 1964-65. Crest Copper Company Limited carried out geological mapping and trenching in 1966. Crest Metals Limited was incorporated the following year to acquire the Rufus group and adjacent ground. In 1976, Tournigan Mining Explorations Ltd. carried out reconnaissance studies in the area and, in 1978, acquired the Rufus, Rufus 3 and Rufus 5 claims and conducted some geological work. Kingdom Resources Ltd. was formed in 1978 and

CAPSULE GEOLOGY

carried out geological and geochemical (soil and rock) work in the area during 1980-84; some sampling was done on the Rufus showing. The name of Kingdom Resources was changed to KRL Resources Inc. in 1989. In 1991, KRL and Tournigan entered into an agreement whereby Tournigan could acquire certain interests in the Rufus claim group.

The area is underlain by subhorizontal to gently north-dipping Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) rocks (Bulletin 63). Fine-grained, variably pyritic andesites are intruded by sporadic, northwest-trending quartz (-hornblende) porphyry dikes (Assessment Report 7201) and quartz diorite dikes (Assessment Report 10634). Numerous rusty, north-northeast trending fracture/shear zones occur in the area.

The mineralization is poorly documented and reports are confusing. For example, a vein (named the Erickson vein) is described on both the Rufus claims (Minister of Mines Annual Report, 1928; Assessment Report 10634) and the Veteran claims (Minister of Mines Annual Report, 1925; Assessment Reports 6382, 7201). This vein may not be a true vein, but a chalcopyrite and pyrite-bearing, hematitic, chloritic and siliceous tuff unit (Assessment Report 6382). Two adits are indicated in the area of the Rufus claims (Geological Survey of Canada Map 217A); it is not clear why these tunnels were driven.

Mineralization in the area of the Rufus, Rufus 3, 5 and 6 claims, covering the headwaters of the west fork of Rufus Creek, comprises mainly north-northwest to north-northeast trending, steeply dipping dolomite-hematite-quartz veins (Assessment Report 7201). These veins are mainly barren but locally carry minor pyrite and chalcopyrite. Grab samples have assayed up to 0.6 per cent copper (Assessment Report 7201). The veins are mostly narrow, about 0.3 metre wide, although 1 vein is reported to be up to 3 metres wide. This vein contains hematite, jasper and calcite with minor chalcopyrite and galena (Assessment Report 8912, p. 5).

Only one significantly mineralized vein has been reported in the area, it occurs on the Rufus 6 claim, about 100 metres east of the upper adit. This quartz-dolomite vein dips gently south, is a few centimetres to 0.6 metre wide and is mineralized with sphalerite, galena, chalcopyrite and tetrahedrite (Minister of Mines Annual Report, 1922). This vein is assumed to be the same one repeatedly referred to later (in Assessment Reports 6382, 7201 and 8912). Silver assays, assumed to originate from this vein, have assayed up to 1,234 grams per tonne (Assessment Report 6382, p. 25). Sample results are generally less than 30 to 50 grams per tonne silver. A grab sample from the vein in 1978 assayed trace gold, 3.1 grams per tonne silver, 16.6 per cent zinc and 0.3 per cent lead (Assessment Report 7201).

BIBLIOGRAPHY

EMPR AR 1916-86; 1917-85; 1919-67; 1920-56; 1922-75; 1924-69; 1925-96; 1928-108; 1929-99; 1937-B41; 1966-40
EMPR EXPL 1978-E256
EMPR BULL 63
EMPR ASS RPT *6382, *7201, 8912, 10634, 11675, 12651, 20379, 22172
EMPR MAP 8
EMPR PF (In 104A 054 - KRL Resources Corp., SMF, #16/91, February 21, 1991)
EMR MP CORPFILE (Argenta Mines, Limited; Rufus-Argenta Mines, Limited; Crest Ventures Limited; Tournigan Mining Explorations Ltd.)
GSC MEM 175, p. 144
GSC MAP *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582
GCNL #222, 1981; #4, 1984
CMH 1966-67, p. 103

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/25 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 020**

NATIONAL MINERAL INVENTORY: 104A4 Ba1

NAME(S): **BARITE 2 (L. 5344)**, BARITE, HUB, BARITE 1

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 08 04 N
LONGITUDE: 129 45 43 W
ELEVATION: 1656 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Approximate centre of Barite 2 claim (L. 5344) (Mineral Titles Reference Map 104A/4W).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6221305
EASTING: 452645

COMMODITIES: Silver, Lead, Barite

MINERALS
SIGNIFICANT: Galena, Barite
ASSOCIATED: Barite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic, Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1925
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	445.7000	Grams per tonne
Lead	29.0000	Per cent

COMMENTS: Trace gold.
REFERENCE: Minister of Mines Annual Report, 1925, page 96.

CAPSULE GEOLOGY

The Barite showing is about 1.1 kilometres east of the headwaters of the eastern fork of Rufus Creek and 2 kilometres north of the Stewart highway.

In 1924, Barite Gold Mines Limited acquired the Barite, Barite 1 and Hub claims from H. Quickstad. Tunnelling was reported that year. No further work has been reported on the showing. In 1978, Tournigan Mining Explorations Ltd. did some reconnaissance work in the area.

The area is underlain by east-striking, north-dipping Upper Triassic to Lower Jurassic Unuk River Formation andesites (Hazelton Group) (Bulletin 63).

Near the mountain top (at 1600 metres elevation) a zone, about 9 metres wide and 150 metres long, contains a network of small gash veins of barite. The latter strike in all directions and dip at all angles.

One vein, 0.36 metre wide, contains 5 centimetres of galena on each side. A grab(?) sample assayed 445.7 grams per tonne silver, 29 per cent lead and trace gold (Minister of Mines Annual Report, 1925). Further down the hill, 0.3 metre wide barite veins are both shallow and steeply dipping.

BIBLIOGRAPHY

EMPR AR 1924-70; 1925-95; 1929-505
EMPR BULL 63
EMPR ASS RPT 7201, 20379, 20784

BIBLIOGRAPHY

EMPR MAP 8
EMR MP CORPFILE (Barite Gold Mines, Limited)
GSC MEM 175, p. 106
GSC MAP 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/25 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 021**

NATIONAL MINERAL INVENTORY: 104A4 Cu3

NAME(S): **RED TOP (L. 4803)**, SUPERIOR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 07 32 N
LONGITUDE: 129 44 15 W
ELEVATION: 899 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit (Assessment Report 7201).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6220299
EASTING: 454153

COMMODITIES: Copper Silver Gold

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ALTERATION: Chlorite
ALTERATION TYPE: Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stratabound Disseminated
CLASSIFICATION: Volcanogenic Exhalative
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn L01 Subvolcanic Cu-Ag-Au (As-Sb)
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Chert
Argillite
Felsic Volcanic
Chloritic Tuff
Dike

HOSTROCK COMMENTS: Hostrocks could be Mount Dilworth Formation.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1978
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	32.9000	Grams per tonne
Gold	0.5000	Grams per tonne
Copper	4.9000	Per cent

COMMENTS: Surface grab sample from between faults.
REFERENCE: Assessment Report 7201.

CAPSULE GEOLOGY

The Red Top showing is located 500 metres west of the sharp bend in Cullen Creek and about 900 metres north of the Stewart highway.

In 1910, the Red Top showing was located on the Red Top claim (part of the Superior group), owned by Erickson and McNeil. During 1910-16, tunnelling and open cutting were carried out. In 1916, the Red Top group was owned by McNeil and Connors and was expanded to 14 claims by 1919. During 1919-20, Sieffert and associates drove about 40 metres of tunnel on the showing. The original owners continued the tunnel in 1921-23 and the tunnel was reported to be 102 metres long in 1927. The claims were subsequently acquired by the Quickstad family. No further work was reported until 1967 when a United Asbestos Corporation Limited-Price Bros. joint venture optioned the property. They retimbered the adit and drilled 4 holes (totalling 44.5 metres). The following year, the joint venture conducted surveying, geological mapping and drilled 8 holes (totalling 608 metres) in the area. Seven of the holes were drilled near the adit; the other hole was drilled to the west, near the Vet (104A 124) showing. In 1977, Tournigan Mining Explorations acquired the claims

CAPSULE GEOLOGY

from the Quickstad family. Tournigan carried out trenching and geological mapping in 1978. In 1991, Orequest sampled the area for Tournigan Mining Explorations Ltd.

The area of the showing is underlain by east-striking, south-dipping Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) rocks (Bulletin 63). The predominantly andesitic tuffs with intercalated thin (5 to 10 metres) rusty chert and argillite beds, are intruded by dikes.

Near the showing, the geology is very complex. At the surface, intercalated felsic volcanics and cherts strike east-northeast to northeast and mainly dip gently south. Buckling of the bedding is evident and, in places, the bedding is vertical. An interlayered unit of rusty, chloritized tuff can be traced for about 50 metres along strike. The unit contains 1 to 15 per cent chalcopyrite and 1 to 10 per cent pyrite and is faulted by 2 southeast-striking, east-dipping faults that display dextral displacement. These faults are also mineralized in places.

In the adit, about 60 metres below the surface, one southeast-trending fault separates andesite (on the footwall) from weakly mineralized chert (on the hangingwall). The relationships between the surface and underground are not clear (Assessment Report 7201). It is believed that the Red Top occurs in the iron formation unit which can be traced to the George Gold-Copper (104A 029, 129) deposit.

Grab(?) samples from the mineralized tuff between the faults on surface assayed up to 4.9 per cent copper, 32.9 grams per tonne silver and 0.5 gram per tonne gold (Assessment Report 7201). Grab samples from mineralized chert in the adit assayed up to 0.8 per cent copper, 6.9 grams per tonne silver and 0.4 gram per tonne gold (Assessment Report 7201).

Continuous 2 metre chip samples collected in 1991, along a portion of the face, assayed up to 1.76 per cent copper over 12 metres including 6 metres of 2.53 per cent copper (Assessment Report 22172).

BIBLIOGRAPHY

EMPR AR 1910-62; 1913-92; 1916-86; 1917-68; 1919-67; 1920-56; 1921-66; 1922-77; 1923-75; 1925-95; *1927-95; 1928-109; 1929-99,507; 1967-36; 1968-51
EMPR EXPL 1978-E256; 1979-276
EMPR BULL 63
EMPR ASS RPT 6382, *7201, 20379, 22172
EMPR MAP 8
EMPR PF (Red Top Property: Summary Report, United Asbestos Corporation Limited, December 2, 1968)
EMR MP CORPFILE (United Asbestos Corporation Limited; Tournigan Mining Explorations Limited)
GSC MEM 159, p. 29; 175, p. 141
GSC MAP 28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582
GCNL #18, 1980

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/25 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 022**

NATIONAL MINERAL INVENTORY: 104A4 Cu3

NAME(S): **BLACK BEAR**, BORNITE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 07 52 N
LONGITUDE: 129 45 18 W
ELEVATION: 1372 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The exact location of the Black Bear showing is not known. The Bornite claim group, a restaking of the Black Bear claims, was reported to adjoin the Red Top (104A 021) and Barite (104A 020) claim groups (Geological Survey of Canada Memoir 175).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6220929
EASTING: 453072

COMMODITIES: Copper Gold Silver Lead

MINERALS
SIGNIFICANT: Galena Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Volcanic
Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The exact location of the Black Bear showing is not known. The Bornite claims, a restaking of the Black Bear claims (Minister of Mines Annual Report, 1930), were reported to adjoin the Red Top (104A 021) and Barite (104A 020) claim groups. The showing is assumed to lie northwest of the Red Top showing.

The Black Bear claims were staked before 1916 when Black Bear claim was Crown-granted to Robertson. Gillof and associates restaked the claims as the Bornite group of 6 claims in 1930. Surface exploration was reported that year. The subsequent history of the showing is unknown.

The area is underlain by east-striking, north-dipping andesitic volcanics of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 63).

Galena and chalcopyrite showings, carrying values in copper, gold, silver and lead, are reported (Minister of Mines Annual Report, 1930). No details are available on the mineralization.

BIBLIOGRAPHY

EMPR AR *1930-108
EMPR BULL 63
EMPR MAP 8
EMPR ASS RPT 20379
GSC MEM *175, p. 109
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/30 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 023**

NATIONAL MINERAL INVENTORY: 104A4 Cu3

NAME(S): **DOCIA**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 07 51 N
LONGITUDE: 129 43 42 W
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The exact location of the Docia showing is not known. The Docia property was reported to adjoin the Red Top (104A 021) property to the east (Minister of Mines Annual Report 1929).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6220880
EASTING: 454729

COMMODITIES: Lead Copper

MINERALS
SIGNIFICANT: Galena Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Volcanic
Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The exact location of the Docia showing is not known. The Docia property was reported to lie east of, and adjoining, the Red Top property (104A 021) (Minister of Mines Annual Report, 1929).

The Docia property was reported to be owned by the McNeil brothers in 1929. Two small opencuts, about 15 vertical metres apart, were reported that year. The subsequent history of the showing is unknown.

The area is underlain by east-striking, north-dipping andesitic volcanics of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 63).

A vein of nearly solid galena, 30 to 36 centimetres wide, trends east and dips south. The vein contains minor chalcopyrite and pyrite (Minister of Mines Annual Report, 1929).

BIBLIOGRAPHY

EMPR AR *1929-99
EMPR BULL 63
EMPR MAP 8
EMPR ASS RPT 20379
GSC MEM 175, p. 111
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/30 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 024** NATIONAL MINERAL INVENTORY: 104A4 Cu

NAME(S): **ENTERPRISE (L. 5346)**, LUCKY FRENCHMAN, GEORGE, FRENCHMAN

STATUS: Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 07 19 N NORTHING: 6219873
LONGITUDE: 129 42 03 W EASTING: 456429
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Frenchman tunnel (Assessment Report 6382).

COMMODITIES: Copper Gold Silver Lead Zinc
Barite

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite Galena Sphalerite Tetrahedrite
COMMENTS: Barite from assay values of barium.
ASSOCIATED: Quartz Calcite
ALTERATION: Chlorite Malachite Sericite
ALTERATION TYPE: Chloritic Oxidation Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stockwork Shear Breccia
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Fractured

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Andesitic Flow
Andesite
Pyritic Pyroclastic
Pyritic Volcaniclastic
Dacitic Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: ADIT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1978
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	24.0000	Grams per tonne
Gold	3.4000	Grams per tonne
Copper	7.0000	Per cent

COMMENTS: Highest values from grab samples of fault gouge in the Frenchman tunnel.
REFERENCE: Assessment Report 7201.

CAPSULE GEOLOGY

The Enterprise showing is located on Lot 5346, near the headwaters of the Bear River, about 2.3 kilometres northwest of Strohn Lake and 850 metres north of the Stewart highway.

Considerable work, including an adit (30 metres long) was reported on the Lucky Frenchman claim group before 1919; the work may have been done in 1910-11. George restaked the ground in 1919, and again in 1922, as the Enterprise claims. High grade silver-bearing float was reported west of the Frenchman tunnel in 1922 and 1925. Mineralized zones were reported in this area in 1927. In 1928, the George Enterprise Mining Company Ltd. was formed to acquire the claims. During 1928-31, considerable tunnelling and open cutting were reported. At least 6 further adits were emplaced.

CAPSULE GEOLOGY

Tunnel A was driven about 260 metres southwest of the Frenchman tunnel. The 100-metre long Enterprise tunnel was driven about 40 metres northwest of the Frenchman tunnel. A drift was driven to connect the Frenchman and Enterprise tunnels. Several other tunnels were driven along a northwest-trending zone of mineralization, above and to the northwest of the Frenchman tunnel. Further work, mainly prospecting, was reported in 1946 and 1950. Tournigan Mining Explorations Ltd. conducted reconnaissance mapping in the area in 1976 and prospecting and sampling in 1978.

The area is underlain by east-trending, gently north-dipping Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) andesitic tuffs and flows. The main workings are in pyritic pyroclastic or volcaniclastic felsic rocks that are variably chloritized. The iron formation unit which hosts the George Gold-Copper deposit (104A 029, 129) lies below the workings.

Small veins, stringers, pods, disseminations, mineralized shear zones and stockworks contain chalcopyrite that is accompanied in places by galena, sphalerite, chlorite, quartz and calcite. Mineralization does not appear to be continuous from outcrop to outcrop.

The best mineralization is in the Frenchman tunnel, where a northwest-striking, vertical fault gouge is well mineralized with chalcopyrite, pyrite and malachite. Grab samples collected from this zone in 1978 assayed up to 7.0 per cent copper, 3.4 grams per tonne gold and 24.0 grams per tonne silver (Assessment Report 7201).

Samples from fault and fracture zones in the Enterprise tunnel assayed 0.1 to 0.2 per cent copper and 3 to 14 grams per tonne silver; one sample assayed 1.0 gram per tonne gold (Assessment Report 7201).

In tunnel A, pyritic felsic tuff-agglomerate is mineralized with stringers and disseminations of chalcopyrite and veinlets of quartz and calcite. A grab sample collected in 1978 assayed 1.86 per cent copper, 15.8 grams per tonne silver and 13.8 per cent barium (Assessment Report 7201).

Above and northwest of the Enterprise tunnel, the country rock is pyritic, andesitic or dacitic tuff. Several small mineralized zones are exposed in pits and tunnels. The zones comprise narrow veins, stringers or disseminations in fault breccia and shear zones. Wallrocks are variably sericitized and chloritized. A channel sample, collected in 1946(?) across a northeast-striking, east-dipping fracture contained pyrite, chalcopyrite, tetrahedrite, galena and sphalerite. The sample assayed 1.8 per cent copper, 1.0 gram per tonne gold and 147.4 grams per tonne silver across 0.28 metre (Minister of Mines Annual Report, 1946).

Several silver-rich boulders have been located southwest of these showings. The source has not been found. In 1946, samples of one boulder assayed 10.3 grams per tonne gold and 5,136 grams per tonne silver (Minister of Mines Annual Report, 1946).

Significant, but sporadic, gold values have been reported over the years from the Enterprise showing. In 1928, a sample across 1.5 metres, from a cut 27 metres above the Frenchman tunnel, assayed 27.4 grams per tonne gold, 68.6 grams per tonne silver and 2.3 per cent copper (Minister of Mines Annual Report, 1928).

BIBLIOGRAPHY

EMPR AR 1919-67; 1922-77; 1925-94; 1927-95; 1928-110; *1929-100, 506; 1930-108; 1931-43; *1946-79; 1950-78
EMPR ASS RPT *6382, *7201, 20379, 22172
EMPR BULL 63
EMPR EXPL 1977-E221; 1978-E256
EMPR MAP 8
EMPR OF 1999-2; 1999-14
EMPR PF (Plan of 1943 Sampling, Enterprise Showing)
EMR MP CORPFILE (George Enterprise Mining Company, Limited; Keith Copper Ltd.; Tournigan Mining Explorations Ltd.)
GSC MAP 28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC MEM 159, p. 32; 175, p. 118
GSC OF 2582
GCNL #127, #136, 1976; #161, 1978

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/27 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 025**

NATIONAL MINERAL INVENTORY: 104A4 Mo1

NAME(S): **FITZGERALD**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 06 32 N
LONGITUDE: 129 33 15 W
ELEVATION: 457 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Approximate centre of the Strohn Creek pluton (Bulletin 63).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6218337
EASTING: 465535

COMMODITIES: Molybdenum

MINERALS
SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	
Tertiary			Coast Plutonic Complex

LITHOLOGY: Porphyritic Quartz Monzonite
Sediment/Sedimentary

HOSTROCK COMMENTS: The Strohn Creek pluton is a satellite pluton that lies east of the Coast Plutonic Complex.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1917
SAMPLE TYPE: Bulk Sample

COMMODITY	GRADE	
Molybdenum	6.0000	Per cent

COMMENTS: A sample, weighing several hundred kilograms (200 assumed), averaged 6 per cent molybdenite.
REFERENCE: Minister of Mines Annual Report ,1917, page 68.

CAPSULE GEOLOGY

The exact location of the Fitzgerald showing is not known. The property is described as being about 9.7 kilometres east of the Bear River divide (Minister of Mines Annual Report, 1917).

Three claims were located over the showing by the Fitzgerald brothers in 1917.

The area is underlain by the porphyritic Tertiary(?) Strohn Creek pluton (Bulletin 63), which intrudes Hazelton Group sediments of the Middle Jurassic Salmon River Formation. The Strohn Creek pluton is a massive, coarse-grained quartz monzonite that contains large phenocrysts of potash feldspar, minor biotite, lesser hornblende and accessory apatite, zircon and magnetite. Mineralization in the pluton consists of molybdenite, typically associated with quartz, along joint surfaces and fractures (Bulletin 63, p. 80).

The Fitzgerald showing consists of a 1 to 2-metre wide quartz vein, in the quartz monzonite, that contains molybdenite (Minister of Mines Annual Report, 1917, p. 68). A sample, weighing several hundred kilograms, was reported to average about 6 per cent molybdenite (Minister of Mines Annual Report, 1917, p. 68).

BIBLIOGRAPHY

EMPR AR *1917-68; 1921-72
EMPR BULL 9, p. 91; 63

BIBLIOGRAPHY

EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582
WWW http://www.infomine.com/

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/10/21 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 026** NATIONAL MINERAL INVENTORY: 104A4 Ag14

NAME(S): **MONTREAL 1-8**, MURDOCK (L. 3440-3446), DOUVILLE

STATUS: Showing MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 06 44 N NORTHING: 6218720
LONGITUDE: 129 34 42 W EASTING: 464035
ELEVATION: 762 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The location given lies immediately east of the Murdock (104A 128) claim group (L. 3440-3446) (Minister of Mines Annual Report, 1928).

COMMODITIES: Silver Zinc Lead

MINERALS
SIGNIFICANT: Sphalerite Galena Pyrite
COMMENTS: Trace gold.
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Shear Disseminated
CLASSIFICATION: Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: North-striking, west-dipping zone in greenstone.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Greenstone
Volcanic Breccia

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1928
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	68.6000	Grams per tonne

COMMENTS: Sample from silicified zone in greenstone. Trace gold.
REFERENCE: Minister of Mines Annual Report, 1928, page 111.

CAPSULE GEOLOGY

The location of the Montreal showings is not known exactly. Several showings are reported on the Montreal 1-8 claims, which are reported to lie immediately east of the Murdock claims (Minister of Mines Annual Report 1925, p. 94). The claims are assumed to have been staked on the north side of Strohn Creek, about 4.5 kilometres east of the Bear River Pass.

The claims were located in 1925 by Douville and others. Four veins, 1.8 to 7.6 metres wide, were reported that year. During 1925-29, the owners emplaced several opencuts and at least 2 tunnels.

The area is underlain by north-striking Hazelton Group rocks. The Upper Triassic to Lower Jurassic Unuk River Formation is unconformably overlain to the east by the Middle Jurassic Salmon River Formation (Bulletin 63). The Salmon River Formation rocks are intruded by an Eocene(?) stock of quartz monzonite to the east of the showings. Several showings have been reported on the Montreal claims.

At about 594 metres elevation (immediately below the old camp) several opencuts expose disseminations and stringers of galena and sphalerite in volcanic breccia. A chip sample assayed trace gold, 13.7 grams per tonne silver, nil lead and 1.5 per cent zinc across 4.6 metres (Minister of Mines Annual Report 1928, p. 111).

CAPSULE GEOLOGY

At about 617 metres elevation, argentiferous galena occurs in a shear zone in a 6-metre long tunnel.

At 640 metres elevation, a silicified zone in greenstone carries minor pyrite, sphalerite and rare galena stringers. The zone strikes north, dips west and is up to 10 metres wide. A grab sample from a tunnel, 13.7 metres long, assayed 68.6 grams per tonne silver and trace gold (Minister of Mines Annual Report 1928, p. 111).

At 732 metres elevation, a 6-metre wide pyritic silicified zone is exposed in a creek.

Float samples of highly leached material, containing quartz and galena, assayed 0.7 grams per tonne gold, 1,542.9 grams per tonne silver and 43 per cent lead (Minister of Mines Annual Report 1928, p. 111).

BIBLIOGRAPHY

EMPR AR 1925-94; 1926-95; *1928-111; 1929-102
EMPR BULL 63
EMPR MAP 8
EMPR ASS RPT 20200
GSC MEM 175, p. 132
GSC MAP 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/10/21 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 027**

NATIONAL MINERAL INVENTORY: 104A4 Cu5

NAME(S): **SOUTHERN CROSS**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 06 29 N
LONGITUDE: 129 37 53 W
ELEVATION: 762 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Exact location unknown; the Southern Cross claim group is reported to be on the east side of the Bear River glacier (now Strohn Lake?) at 762 metres elevation (Minister of Mines Annual Report 1929, p. 102).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6218286
EASTING: 460732

COMMODITIES: Copper, Gold, Silver, Zinc, Lead

MINERALS
SIGNIFICANT: Chalcopyrite, Tetrahedrite, Sphalerite, Silver, Galena, Pyrite
ASSOCIATED: Quartz, Hematite, Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Volcanic
Tuff
Breccia
Argillite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1972

COMMODITY	GRADE	
Gold	1.1000	Grams per tonne
Copper	0.6200	Per cent

COMMENTS: This sample, collected just east of the Bear River Pass, about 30 metres from the highway, may have been from this showing.
REFERENCE: Assessment Report 6303.

CAPSULE GEOLOGY

The exact location of the Southern Cross showing is not known. The Southern Cross claims are reported to lie on the east side of the Bear River glacier. The former position of the glacier in the Bear River valley is now occupied by Strohn Lake.

Morris and Lake carried out stripping and open cutting on the Southern Cross claims during 1929-30. In 1972, Keith Copper Mines Ltd. conducted a geophysical survey on the nearby Mina claims.

The area is underlain by Hazelton Group volcanics of the Upper Triassic to Lower Jurassic Unuk River Formation. These rocks strike east-southeast and dip north (Bulletin 63).

Several showings have been reported on the claims. One of the showings comprises quartz veinlets carrying chalcopyrite, tetrahedrite and minor sphalerite and native silver(?). These occur across a width of 6 metres in tuffs, breccias and argillites (Minister of Mines Annual Report, 1930).

Elsewhere on the claims, 4 parallel veins contain hematite, magnetite, pyrite and some galena along small fractures (Minister of Mines Annual Report, 1930).

A rock sample collected just east of the Bear River Pass, about 30 metres from the highway, may have been from the Southern Cross

CAPSULE GEOLOGY

showing. The sample assayed 0.62 per cent copper and 1.1 grams per tonne gold (Assessment Report 6303).

BIBLIOGRAPHY

EMPR AR 1929-102; *1930-108
EMPR BULL 63
EMPR MAP 8
GSC MEM 175, p. 147
GSC MAP 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/10/21 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 028**

NATIONAL MINERAL INVENTORY: 104A4 Ag15

NAME(S): **BEAR PASS MINING**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 05 59 N
LONGITUDE: 129 34 43 W
ELEVATION: 457 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: South side of Strohn Creek, about 4.8 kilometres east of the Bear River Pass (Minister of Mines Annual Report, 1928).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6217329
EASTING: 464006

COMMODITIES: Silver Lead Zinc Gold

MINERALS
SIGNIFICANT: Sphalerite Galena Pyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: One mineralized zone trends north.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Greenstone
Andesite
Feldspar Porphyry

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: MAIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1928

COMMODITY	GRADE	
Silver	82.3000	Grams per tonne

COMMENTS: Across 2.4 metres. Trace gold.
REFERENCE: Minister of Mines Annual Report, 1928, page 111.

CAPSULE GEOLOGY

The exact location of the Bear Pass Mining showing is not known. The showing is reported to lie at an elevation of 457 metres on the south side of Strohn Creek, about 4.8 kilometres east of the Bear River Pass.

The Bear Pass Mining Syndicate held the property in 1928. Exploration work consisted of open cutting and 2 short adits.

The area is underlain by north(?)-striking, steeply dipping andesites(?) of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 63). Small stocks of feldspar porphyry intrude the volcanics.

Several silicified zones, carrying quartz stringers and minor pyrite, sphalerite and galena, occur in greenstone. A chip sample from the 7.6 metres wide, north-trending main zone assayed trace gold and 82.3 grams per tonne silver across 2.4 metres (Minister of Mines Annual Report, 1928).

BIBLIOGRAPHY

EMPR AR *1928-111
EMPR BULL 63
EMPR MAP 8
GSC MEM 175, p. 107
GSC MAP 307A; *315A; 9-1957; 1418A

BIBLIOGRAPHY

GSC OF 2582

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/16

CODED BY: GSB
REVISED BY: WC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104A 029** NATIONAL MINERAL INVENTORY: 104A4 Cu1

NAME(S): **GEORGE GOLD-COPPER LOWER**, COPPER QUEEN (L. 4788), GEORGE GOLD-COPPER, BEAR PASS, GEORGE COPPER

STATUS: Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 06 27 N NORTHING: 6218306
LONGITUDE: 129 45 42 W EASTING: 452629
ELEVATION: 991 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit (Geological Survey of Canada Map 217A).

COMMODITIES: Copper Silver Gold Zinc Lead
Iron

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite Magnetite
ASSOCIATED: Hematite Magnetite Chlorite Epidote
ALTERATION: Epidote Pyrite
ALTERATION TYPE: Epidote Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stratabound Concordant Podiform Disseminated
CLASSIFICATION: Volcanogenic Exhalative Industrial Min.
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
SHAPE: Tabular
DIMENSION: 110 x 30 Metres STRIKE/DIP: 070/ TREND/PLUNGE:
COMMENTS: Dimensions and attitude of the lens. Dip not known, probably gentle to the north.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Cherty Iron Formation
Argillite
Mafic Tuff
Andesitic Flow
Andesitic Pyroclastic
Feldspar Porphyry Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1976
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	8.2000	Grams per tonne
Gold	0.2000	Grams per tonne
Copper	0.6200	Per cent
Lead	0.0300	Per cent
Zinc	0.0300	Per cent

COMMENTS: Hole 103, 26.0 to 28.9 metres.
REFERENCE: Assessment Report 6382.

CAPSULE GEOLOGY

The George Gold-Copper Lower showing is located about 1 kilometre south of the Stewart highway and about 2 kilometres southeast of the confluence of Rufus Creek with the Bear River.

The showing is on the Copper Queen 1 claim, which was staked in about 1911. By 1914, W. George and F. Strohn had expanded the property to 9 claims and fractions, including the Helena claim covering the George Copper Upper showing (104A 129). Several open-cuts and at least 1 adit, 25 metres long, were emplaced before 1919. The property was optioned in 1920 by the Algunican Development Company and again, in 1922-23, by the Granby Mining, Smelting and Power Company; no work was reported. In 1925, the George Gold-Copper

CAPSULE GEOLOGY

Mining Company was incorporated and in 1927, Cominco optioned the property. At least 2 holes (Nos. 4 and 6) were drilled by Cominco during 1927-29. By 1930, the property comprised 46 claims. The holdings were reduced to 12 claims by the 1960s. In 1971, Keith Copper Mines Ltd. acquired the 28 Mina claims and 23 Crown-granted claims in the immediate area and performed magnetometer surveys; the work did not cover the showing. In 1976, Tournigan Mining Explorations Ltd. purchased the 12 George Gold-Copper claims, including the Copper Queen. Tournigan carried out mapping and drilled 2 short holes (totalling 51.2 metres) on the showing in 1976 and performed reconnaissance work in the area in 1978. Tournigan Mining conducted sampling on their Bear Pass property, which includes the George Gold-Copper adit, in 1991.

The area is underlain by Hazelton Group rocks comprising the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 63). These rocks consist predominantly of subhorizontal to gently dipping andesitic flows and pyroclastics. At the elevation of the adit, a unit of intercalated sulphide-bearing cherty iron formation, argillite and mafic tuff, 7 to 30 metres thick, occurs in the sequence. These rocks are cut by a northwest-trending feldspar porphyry dike.

Mineralization comprises a stratabound lens, striking 070 degrees, that can be traced for about 110 metres and is approximately 30 metres thick at the centre. The lens is formed by iron formation, variably rich in pyrite, chalcopyrite, hematite, magnetite, chlorite, epidote and chert, and mafic tuff, and epidote-rich rock. Pyrite and chalcopyrite occur as disseminations, laminae parallel to bedding, cross-cutting stringers and occasionally as massive pods. The upper part of the lens grades into a well-banded, sulphide-poor, magnetite-rich iron formation, to the northeast. Footwall andesitic rocks are epidotized and pyritized and contain a stockwork of pyrite and epidote stringers. The iron formation unit has been traced along strike for nearly 5 kilometres on the south side of the valley and for over 3 kilometres on the north side of the valley. Other showings of interest are the: Red Top (104A 021), New York (104A 063), Veteran 2 (104A 124) and Comet (104A 125).

Grab samples, taken near the portal, have assayed from 0.04 to 1.26 per cent copper, 0.7 to 6.2 grams per tonne silver, 0.1 grams per tonne gold and 0.07 per cent zinc (Assessment Report 6382). Channel samples assayed up to 0.35 per cent copper, 0.05 per cent zinc, 0.02 per cent lead, 1.4 grams per tonne silver and 0.2 grams per tonne gold across 5 metres (Assessment Report 6382). The best intersection from the drilling was a 4.3 metre wide section of semi-massive pyrite in hole 103. Samples of this section assayed 0.62 per cent copper, 0.03 per cent zinc, 0.03 per cent lead, 8.2 grams per tonne silver and 0.2 gram per tonne gold across 2.9 metres (Assessment Report 6382). The highest assay from sampling the adit area in 1991 was more than 1 per cent copper and 14 grams per tonne silver (Sample #24402, Assessment Report 22172).

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EMPR AR 1914-155; 1915-72; 1916-86; 1917-67,85; 1918-79; 1919-66; 1920-57; 1921-66; 1922-77; 1923-75; 1924-69; 1925-94; 1926-95; 1927-94,480; 1928-109; 1929-99,508; 1930-442
EMPR ASS RPT *6382, 7201, 20379, *22172
EMPR BULL 63
EMPR EXPL 1977-E221
EMPR GEM 1972-512
EMPR MAP 8
EMPR OF 1998-9
EMR MIN BULL MR 223, 1989
EMR MP CORPFILE (The Algunican Development Company, Limited; The George Gold-Copper Mining Company, Limited; Keith Copper Mines Ltd.; Tournigan Mining Explorations Ltd.)
GSC MAP 28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC MEM 159, p. 27; 175, p. 115
GSC OF 2582
GSC SUM RPT 1911, p. 67
ECON GEOL 1928, V.23, No.2, pp. 193-208
GCNL #160, 1976; #161, 1978; #18, 1980
N MINER Apr.2, 1928; Sept. 9, 1976; July 23, 1990
Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/30 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 030** NATIONAL MINERAL INVENTORY: 104A4 Pb5

NAME(S): **VICTOR**, VICTOR 1-2, INDEPENDENCE, PASCO, KENNIWICK, PROVIDENT

STATUS: Showing Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 06 24 N NORTHING: 6218277
LONGITUDE: 129 51 01 W EASTING: 447117
ELEVATION: 230 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit (Geological Survey of Canada Map 217A).

COMMODITIES: Silver Lead Zinc

MINERALS
SIGNIFICANT: Sphalerite Galena
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Podiform Massive
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 6 x 5 x 1 Metres STRIKE/DIP: 320/ TREND/PLUNGE:
COMMENTS: The adit was driven at 140 degrees, presumably along the strike of the mineralization. The dimensions are for the northwestern lens; the width is 0.25 metre.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Argillite
Porphyry Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1910
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	582.9000	Grams per tonne
Lead	44.0000	Per cent
Zinc	22.6000	Per cent

COMMENTS: Grab from dump by adit. Trace gold.
REFERENCE: Minister of Mines Annual Report 1910, page 82.

CAPSULE GEOLOGY

The Victor showing is located on the south side of the Bear River, about 1.6 kilometres northeast of the forks in the river, which are immediately above the confluence of the Bear River with American Creek.

The showing was covered by the Victor claim group (Victor 1-2, Pasco, Independence, Kenniwick and Provident claims) during 1909-10. During that time Bear River Canyon Mining Co. Ltd. explored the property and emplaced a series of opencuts and at least 1 tunnel, 43 metres long.

The area is underlain by north-trending, steeply dipping Hazelton Group rocks of the Middle Jurassic Salmon River Formation and underlying Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 63). These rocks lie on the west limb of a north-trending syncline.

Mineralization at the adit, on the Independence claim, comprises a northwest(?)-trending fracture zone. The zone lies at the contact of a porphyry dike in argillite and hosts at least 2 lenses of nearly massive sphalerite-galena. The northwestern lens is 6.1 metres long, 4.6 metres deep and 0.25 metre wide. The southeastern lens is about 4.6 metres long and 0.1 to 0.2 metre wide (Minister of Mines Annual

CAPSULE GEOLOGY

Report, 1910). Dimensions of the fracture zone are not known.
A grab sample from the adit dump assayed trace gold, 582.9 grams per tonne silver, 44.0 per cent lead and 22.6 per cent zinc (Minister of Mines Annual Report, 1910).

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EMPR AR 1909-66; 1910-62,82; 1912-107
EMPR BULL 58; 63
EMPR MAP 8
GSC MEM 32, p. 54; 175, p. 107
GSC MAP *28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/10/16 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 031** NATIONAL MINERAL INVENTORY: 104A4 Ag17

NAME(S): **PORTLAND**, IBEX 6, PORTLAND 1-6, RUBY FR. 1-2, IBEX 1-2, SIGNAL, SICKER, EUREKA, HARROLD, SNOWSLIDE, ROCK CREEK

STATUS: Showing Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 07 01 N NORTHING: 6219423
LONGITUDE: 129 51 09 W EASTING: 446993
ELEVATION: 838 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit (Geological Survey of Canada Map 217A).

COMMODITIES: Gold Silver Copper Lead Zinc

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

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Brecciated Argillite
Diorite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: ADIT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1935
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	432.0000	Grams per tonne
Gold	8.6000	Grams per tonne

COMMENTS: Grab sample from the adit.
REFERENCE: Geological Survey of Canada Memoir 175, page 136.

CAPSULE GEOLOGY

The Portland showing is located about 3.2 kilometres northeast of the confluence of American Creek and the Bear River.

The Portland Bear River Mining Co. Ltd. acquired the Ruby Fr. 1, Ruby Fr. 2, Signal, Sicker, Eureka, Harrold, Snowslide and Rock Creek claims in 1910. During 1910-12 the company carried out tunnelling and open cutting. In 1925(?), S. Deschamps acquired the Portland 1-3, 4 Fr., 5-6 and Ibex 1-2 claims covering the showing. Prospecting and further open cutting were reported on Ibex 6 claim in 1931.

The area is underlain by Hazelton Group rocks. The Upper Triassic to Lower Jurassic Unuk River Formation lies on the west limb of the north-trending Bromley syncline (Bulletin 63) and is unconformably overlain to the east of the showing by the Middle Jurassic Salmon River Formation. North-trending diorite dikes are conspicuous in the area (Bulletin 58).

The showing comprises a narrow, north-striking, steeply west-dipping quartz vein, up to 0.6 metres wide, in a zone of brecciated argillite. The vein is exposed in a tunnel, 60 metres long. Pyrite is reported to be the principal sulphide present. A grab sample assayed 8.6 grams per tonne gold and 432 grams per tonne silver (Geological Survey of Canada Memoir 175).

CAPSULE GEOLOGY

On the Ibex 6 claim, a 6-metre wide shear zone, showing quartzose replacement, contains disseminated chalcopyrite, galena and sphalerite. A sample across 4.3 metres assayed only traces of gold and silver (Minister of Mines Annual Report, 1931).

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EMPR AR 1910-62; 1912-107; *1925-96; 1931-44; 1934-B28; 1939-66; 1940-52; 1946-72
EMPR BULL 58; 63
EMPR MAP 8
GSC MEM 32, p. 53; 175, p. 136
GSC MAP 28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1991/09/20	REVISED BY:	WC	FIELD CHECK:	N

MINFILE NUMBER: **104A 032** NATIONAL MINERAL INVENTORY: 104A4 Pb6

NAME(S): **BONANZA**, GALENA FARM, KEYSTONE, GALENA , MORNING, MORNING CANYON, MORNING JUBILEE

STATUS: Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 06 36 N NORTHING: 6218671
LONGITUDE: 129 52 48 W EASTING: 445273
ELEVATION: 305 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location 50 (Geological Survey of Canada Map 28A). The adit on Geological Survey of Canada Map 217A is assumed to be at the Bonanza.

COMMODITIES: Silver Lead Zinc Copper

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

DEPOSIT
CHARACTER: Vein Breccia Concordant Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 300 x 1 Metres STRIKE/DIP: 360/45E TREND/PLUNGE:
COMMENTS: Vein.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Argillite
Andesite
Calcareous Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

CAPSULE GEOLOGY

The exact location of the Bonanza showing is not clear. It is assumed to be about 300 metres east of American Creek, approximately 1.5 kilometres north of the confluence with the Bear River. An adit is shown at this location on Geological Survey of Canada Maps 216A and 217A.

The original workings were first reported in 1910. At that time 2 shafts and some stripping were done on a vein, 76 metres long. Open cutting and trenching were reported in 1912. During 1925-31, the showing was included in the Galena Farm (Galena Farm 1?) claims, which formed part of the earlier (1925) Galena Farm and later (1927-31) Keystone claim groups. Tunnelling appears to have been done during this period, but the exact location and nature of the work is unclear.

The area is underlain by north-trending, east-dipping argillites of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63). These rocks lie on the east limb of the north-trending American Creek anticline.

A conformable quartz-calcite vein, trending north and dipping 45 degrees east, is hosted in sheared argillite. The vein, 0.25 to 0.60 metre wide, contains fragments of argillite and is sparingly mineralized with galena, sphalerite, chalcopyrite and pyrite. The vein may extend over a length of 300 metres (Geological Survey of Canada Memoir 159). Several other weakly mineralized veins have been reported in the vicinity. One of these (the Keystone showing?) comprises a 1.2-metre wide quartz vein. The vein, hosted in andesite, is mineralized with sphalerite, chalcopyrite and minor galena (Minister of Mines Annual Report, 1929).

About 1.5 kilometres up American Creek, mineralization has been reported on the Morning claim. This claim was included in the variously named Morning, Morning Canyon and Morning Jubilee claim

CAPSULE GEOLOGY

groups during 1925-31. Two short adits have been driven on calcareous tuff containing minor pyrite and sphalerite (Geological Survey of Canada Memoir 159 and 175). The Morning produced 1337 grams of silver and 32 kilograms of lead from 1 tonne of ore in 1936.

BIBLIOGRAPHY

EMPR AR 1910-64; 1912-109; 1925-97; 1927-93; 1929-102;
*1930-108; 1931-44
EMPR BULL 58; 63
EMPR MAP 8
GSC MEM 32, p. 52; 159. p. 36; 175, pp. 115,132
GSC MAP *28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/20 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 033** NATIONAL MINERAL INVENTORY:

NAME(S): **MONTROSE (L. 76)**, WATERLOO (L. 79), WATERPUMP, RED CLIFF

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 06 28 N NORTHING: 6218444
LONGITUDE: 129 54 17 W EASTING: 443732
ELEVATION: 594 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Prospect 48 (Geological Survey of Canada Map 28A); adit on the No. 1 lens (Assessment Report 17465).

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS
SIGNIFICANT: Pyrite Sphalerite Galena Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Silica Sericite Carbonate
ALTERATION TYPE: Silicific'n Sericitic Carbonate
MINERALIZATION AGE: Tertiary

DEPOSIT
CHARACTER: Vein Podiform Disseminated Massive
CLASSIFICATION: Epithermal Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins
SHAPE: Irregular
MODIFIER: Sheared
DIMENSION: 11 x 9 x 3 Metres STRIKE/DIP: 350/80W TREND/PLUNGE:
COMMENTS: No. 1 lens, Montrose zone.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Andesitic Agglomerate
Andesitic Flow
Andesite
Quartz Monzonite Dike
Diorite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	8.5000	Grams per tonne

COMMENTS: Hole 87-M-2, intersection 188.3-190.0 metres (1.7 metres). Quartz-pyrite veins which project west of the No. 2 lens.
REFERENCE: Assessment Report 17465.

CAPSULE GEOLOGY

The Montrose occurrence is located on the northeast side of Lydden Creek, about 1.9 kilometres northwest of the confluence of Lydden Creek with American Creek. The prospect straddles the boundary between the Montrose (L. 76) and Waterloo (L. 79) claims.

The Montrose and Waterloo claims were originally held by Lydden, Pederson, McDonald and Peardon as part of the Red Cliff group in 1908. The Montrose, Waterloo and Waterpump zones were likely discovered at that time. That year the claims were sold to Smith who formed the Red Cliff Mining Company. No further work was reported on the Montrose and Waterloo claims until 1921 when Trites, Woods and Wilson purchased the claims and conducted minor work on the Montrose and Waterloo occurrences. During 1939-41, Haywood purchased the claims and worked on the Montrose occurrence, including the emplacement of two(?) adits. The following shipments were made from

CAPSULE GEOLOGY

the Montrose zone during 1939-41 (Assessment Report 17465): a) 4.8 tonnes grading 102.5 grams per tonne gold, 349.7 grams per tonne silver and 0.2 per cent copper, b) 35.4 tonnes grading 91.9 grams per tonne gold, 95.7 grams per tonne silver, 0.69 per cent copper, 4.98 per cent lead and 4.53 per cent zinc, and c) 19.3 tonnes grading 65.5 grams per tonne gold, 49.4 grams per tonne silver, 1.50 per cent copper, 1.80 per cent lead and 5.30 per cent zinc. A shipment of 31 tonnes in 1940 produced 2,537 grams of gold, 1,190 grams of silver and 248 kilograms of copper. In 1946, the Yale Mining Company Limited sampled the Montrose and Waterloo zones. In 1950, Yale Lead and Zinc Mines Limited conducted about 600 metres of drilling, mainly on the Montrose zone. In 1959, Oro Fino Mines Ltd. optioned the property but no work was reported. In 1968, the claims were owned by International Mogul Mines Limited. In 1972, Citex Mines Ltd. acquired a three year lease on the property. No further work was reported on the Montrose and Waterloo zones until 1979 when Page and Skimming sampled the zones. In 1987, Joutel Resources Ltd. carried out a comprehensive program on the zones comprising trenching, mapping, soil, silt and rock geochemical surveys and diamond drilling (3 holes, totalling 581.1 metres) on the Montrose zone.

The area is underlain predominantly by north-striking, west-dipping andesitic tuffs, agglomerates and minor flows of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63). North to northwest-trending diorite and lesser quartz monzonite dikes of the Portland Canal dike swarm are conspicuous near the Montrose, Waterloo and Waterpump zones (Assessment Report 17465). The area is intensely fractured and faulted. Both north and east-trending faults are present; east-trending faults are especially prominent and exhibit sinistral transcurrent movement. These faults may have disrupted a previously continuous mineralized zone into the Montrose and Waterpump (and Waterloo?) zones (Assessment Report 17465).

The Montrose zone, reflected by a conspicuous 25 by 35 metres gossan zone, comprises two lenses, the Nos. 1 and 2 lenses. These are separated by a series of faults and a 3 to 6-metre wide diorite dike. The lenses contain 5 to 50 per cent fine-grained disseminated to massive pyrite, lesser sphalerite and galena, and minor chalcopyrite in a quartz-sericite-carbonate alteration zone.

The No. 1 (main) lens, striking 350 degrees and dipping 80 degrees west, outcrops over a length of 11 metres, height of 9 metres and width of 3 metres. The No. 2 lens lies about 10 metres northwest of the No. 1 lens (Property File - Mandy, 1939).

The No. 1 lens contains the best values. Sampling near the adit in 1987 assayed up to 7.2 grams per tonne gold, 7.2 grams per tonne silver, 0.94 per cent lead, 0.44 per cent zinc and 0.26 per cent copper across 3.8 metres (Assessment Report 17465). A sample from the fault gouge separating the Nos. 1 and 2 lenses assayed 19.2 grams per tonne gold across 0.70 metres (Assessment Report 17465).

Drilling encountered subvertical quartz-pyrite veins, with minor chalcopyrite, that apparently project west of the No. 2 Lens. The best drill results were from hole 87-M-2 which intersected up to 8.5 grams per tonne gold over 1.7 metres (Assessment Report 17465). Minor sphalerite-galena veins, in association with amethystine quartz, also occur near these drill intersections.

Several other mineralized occurrences are known in the area of the Montrose prospect. The more important of these are the Waterloo and Waterpump zones.

The Waterloo zone lies about 150 metres northwest of the Montrose zone. It comprises a series of mineralized occurrences, along a east-northeast trend for 250 metres, parallel to the local faulting. The individual occurrences mainly comprise 2 to 7 per cent (locally up to 40 per cent) coarse-grained pyrite as disseminations and locally, massive veins, in silicified and sericitized volcanics.

Silicification consists mainly of quartz veining, but also includes quartz flooding. Chalcopyrite is conspicuous in the more pyrite-rich areas. Towards the east end of the zone, mineralization is formed mainly by quartz-pyrite veins and shear zones containing massive fine-grained pyrite. The main quartz-pyrite vein, 0.4 to 0.8 metres wide, can be traced for about 7 metres vertically. Samples from the Waterloo zone in 1987 assayed up to 1.920 grams per tonne gold and 240.2 grams per tonne silver (Assessment Report 17465). Elevated copper, silver, lead, arsenic and bismuth values are associated with the anomalous gold values (Assessment Report 17465).

The Waterpump zone is about 100 metres southeast of the Montrose zone. The North Waterpump zone is located about 25 metres north of Lydden Creek. It comprises a 10-centimetre wide, massive, pyrite vein which strikes 122 degrees and dips vertically. The vein is hosted in pyritic and sericitic mafic tuff. A sample across the vein in 1987 assayed 50.4 grams per tonne gold across 0.50 metre; silver and base

CAPSULE GEOLOGY

metal values were negligible (Assessment Report 17465).
The main portion of the Waterpump zone straddles Lydden Creek. Higher grade mineralization occurs on the south side of the creek where mineralization is hosted in sericitic mafic tuffs. Alteration is most intense adjacent to a north-northwest trending 2-3 metre wide diorite dike. Alteration, accompanied by 1 to 3 per cent finely disseminated pyrite, extends about 10 metres from the dike margins. Adjacent to the dike, 1 to 3-centimetre wide quartz-pyrite veins form a stockwork. Pyrite in these veins is coarse-grained and accompanied by minor chalcopyrite. In 1987, samples from east of the dike assayed up to 21.2 grams per tonne gold across 4.2 metres; the high gold values are associated with high copper and elevated zinc, silver and arsenic values (Assessment Report 17465).

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EMPR EXPL 1987-A15; 1988-A15,A32
EMPR BULL 58, p. 151; 63
EMPR ASS RPT *17465
EMPR MAP 8
EMPR PF (Mandy, J.T. (1939): Red Cliff Group; In 104A General File - Knobel, H.E. (1909?): Report upon the mineral district of Bear River)
EMR MP CORPFILE (Red Cliff Mining Company, Limited; Citex Mines Ltd.; Adam Milling Ltd.)
GSC MEM 32, p. 47; 175, p. 141
GSC MAP *28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582
N MINER 73, #45

DATE CODED: 1991/10/22 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1991/12/11 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 034** NATIONAL MINERAL INVENTORY: 104A4 Cu8

NAME(S): **BIG CASINO (L. 4529)**, LITTLE CASINO (L. 4532), OURAY (L. 4533), JACK OF CLUBS (L. 4530), LOOKOUT FR. (L. 4531)

STATUS: Showing Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 06 14 N NORTHING: 6218016
LONGITUDE: 129 54 40 W EASTING: 443329
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit (Geological Survey of Canada Map 217A).

COMMODITIES: Copper Zinc Lead

MINERALS
SIGNIFICANT: Sphalerite Galena Chalcopyrite Pyrite
ASSOCIATED: Quartz Barite Jasper Calcite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Andesitic Flow
Andesite
Granite Dike
Granodiorite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

CAPSULE GEOLOGY

The Big Casino showing is located on the south valley wall, about 1850 metres northwest of the confluence of Lydden Creek with the Bear River and 18 kilometres north-northeast of Stewart. The Red Cliff (104A 037) showing occurs to the southeast.

In 1908, the Big Casino group (Big Casino, Jack of Clubs, Little Casino, Lookout Fr. and Ouray claims) was owned by Neff, Carpenter and Rabb. During 1910-11, the Big Casino Mining Company Ltd. explored the property in a series of opencuts and a 33-metre long adit. The claims were Crown-granted to A.J. Martin in 1925. No further work was reported. Leemac Mines Ltd. acquired the claims in 1973.

The area is underlain by north-striking, steeply dipping andesitic tuffs and flows of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63). Northwest-trending granite and granodiorite dikes, of the Portland Canal dike swarm, intrude the volcanics.

Mineralization comprises northwest-trending veins, stockworks and stringers of quartz-barite-jasper-calcite mineralized with minor pyrite, sphalerite and rare galena and chalcopyrite. Discontinuous zones occur in volcanic screens between a multitude of dikes (Bulletin 58). The showing, 10.5 metres wide, has been stripped for 18 metres.

On the Ouray claim, a fissure zone, 4.5 metres wide, strikes south, dips east and is hosted in greenstone. The hostrock is weakly silicified and mineralized with galena, pyrite and "some" chalcopyrite.

BIBLIOGRAPHY

EMPR AR 1908-57; 1910-65; 1911-75; 1925-447
EMPR BULL 58, p. 124; 63

BIBLIOGRAPHY

EMPR MAP 8
EMR MP CORPFILE (Citex Mines Ltd.; Leemac Mines Ltd.)
GSC MEM 32, p. 50; 175, p. 108
GSC MAP *28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/10/04 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 035**

NATIONAL MINERAL INVENTORY:

NAME(S): **WATERLOO N**, JOU, TEL

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 06 44 N
LONGITUDE: 129 54 15 W
ELEVATION: 655 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop on the Jou claim (Assessment Report 17465).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6218938
EASTING: 443773

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz, Pyrite
ALTERATION: Limonite, Goethite, Quartz, Sericite
ALTERATION TYPE: Oxidation, Sericitic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Shear
CLASSIFICATION: Epigenetic, Hydrothermal, Epithermal
TYPE: I01 Au-quartz veins
DIMENSION:
STRIKE/DIP: 040/75W
TREND/PLUNGE:
COMMENTS: Shear zones strike northeast; 0.2 metre wide.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Andesitic Agglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	6.9000	Grams per tonne

COMMENTS: Across 20 centimetres.
REFERENCE: Assessment Report 17465.

CAPSULE GEOLOGY

The Waterloo N showing is located on the Jou claim, immediately northeast of the Waterloo Crown-granted claim (L. 79) (104A 033), about 1000 metres west of American Creek and 550 metres north of Lydden Creek.

The showing was discovered during a comprehensive geological evaluation of the Red Cliff (104A 037) claim group and the Jou and Tel claims by Joutel Resources Ltd. in 1987.

The area is underlain by north-striking, west-dipping Hazelton Group andesitic tuffs and agglomerates of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 58, 63).

Mineralization occurs in a conformable zone of quartz-sericite alteration intercalated in tuff beds. A small gossanous outcrop contains several shear zones, 0.2 to 0.6 metre wide, that mostly strike 300 degrees and dip 85 degrees west. The shears are heavily oxidized and contain minor pyrite.

A chip sample was taken across a narrow shear zone, striking 040 degrees and dipping 75 degrees northwest, and containing minor quartz veins with a little disseminated pyrite. The sample assayed 6.9 grams per tonne gold over a width of 0.20 metre and was not anomalous in any other metals (Assessment Report 17465).

BIBLIOGRAPHY

EMPR EXPL 1987-A15; 1988-A15,A32

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR ASS RPT *17465
EMPR MAP 8
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/10/22 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/19 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 036**
NATIONAL MINERAL INVENTORY: 104A4 Cu9

NAME(S): **RED CLIFF EXTENSION**, COPPER HILL 1, COMBINATION FR.

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 06 28 N
LONGITUDE: 129 54 59 W
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Opencuts(?); location 49 (Geological Survey of Canada Map 28A).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6218453
EASTING: 443007

COMMODITIES: Copper Lead

MINERALS
SIGNIFICANT: Chalcopyrite Galena Pyrite
ASSOCIATED: Quartz Calcite Jasper
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au L01 Subvolcanic Cu-Ag-Au (As-Sb)
DIMENSION: 4 Metres STRIKE/DIP: 090/ TREND/PLUNGE:
COMMENTS: Silicification zone.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Andesitic Flow
Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Red Cliff Extension showing is located on the north side of Lydden Creek, about 2.4 kilometres northwest of the confluence of the Bear River.

The Red Cliff Extension claims (the Red Cliff Extension, Copper Hill 1 and Combination Fr. claims) were staked before 1909. That year the Red Cliff Extension Mining Company Limited was formed and acquired the property. Work by the company included one 24-metre long adit and several opencuts.

The area is underlain predominantly by andesitic tuffs and flows of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63). The volcanics are cut by an east-trending zone of fracturing.

A 3.6-metre wide zone of silicification, is exposed at the upper opencut. The zone, comprising quartz, jasper and calcite, contains pyrite, minor galena and chalcopyrite. A lens of chalcopyrite-rich material is exposed in the lower opencut.

BIBLIOGRAPHY

EMPR AR 1910-62; 1911-74
EMPR BULL 58; 63
EMPR MAP 8
GSC MEM 32, p. 51; 175, p. 140
GSC MAP *28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/10/02 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 037** NATIONAL MINERAL INVENTORY: 104A4 Cu10

NAME(S): **RED CLIFF (L. 75)**, REDCLIFF, MOUNT LYELL, MAC FR., DOT FR.

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 05 54 N NORTHING: 6217388
LONGITUDE: 129 53 54 W EASTING: 444116
ELEVATION: 260 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: North portal (1000 level?) (Assessment Report 17465).

COMMODITIES: Copper Gold Silver Zinc

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite Sphalerite
ASSOCIATED: Quartz
ALTERATION: Sericite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Podiform
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 76 x 6 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: The vertical dimensions of the discrete ore lenses are not known and their attitude is highly variable. Dimensions of the largest lens on the 700 level.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Andesitic Agglomerate
Andesitic Flow
Andesite
Amygdaloidal Feldspar Porphyry
Quartz Monzonite Dike
Diorite Dike
Hornblende Porphyry Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: RED CLIFF REPORT ON: Y

CATEGORY: Unclassified YEAR: 1912
QUANTITY: 18856 Tonnes

COMMODITY	GRADE	
Gold	2.8000	Grams per tonne
Copper	3.1900	Per cent

COMMENTS: Estimate by J.L. Parker in 1912.
REFERENCE: Assessment Report 17465, page 35.

CAPSULE GEOLOGY

The Red Cliff mine is on the west bank of Lydden Creek, immediately west of the confluence of American Creek and the Bear River. The portal to a lower, 425-metre long access tunnel (700 level) is at an elevation of 146 metres and is located on the east bank of Lydden Creek, about 700 metres west of the Stewart highway. Two portals (North and South) access the 1000 level and are located on the west bank of Lydden Creek, about 500 metres north-northwest of the portal of the lower tunnel. A fourth portal (Upper portal) lies about 30 metres above the North and South portals.

The Red Cliff group (Red Cliff, Montrose (104A 033), Mount Lyell, Little Pat (104A 062), Waterloo (104A 033) and Mac and Dot

CAPSULE GEOLOGY

Fractions) were originally held by Lydden, Pederson, McDonald and Peardon who did some open cutting and drove tunnels in 1908. Apparently, other zones were discovered at the same time (Montrose, Waterloo). That year the property was sold to A.E. Smith, who formed the Red Cliff Mining Company. Between 1908-12, about 2,385 metres of underground development was carried out on 5(?) levels on the Red Cliff mineralization, including 4 portals, a long access tunnel and raises. The Red Cliff mine was the first significant mine in the Stewart area; it was linked to Stewart by road and rail. About 200 tonnes of ore grading 5 per cent copper was stockpiled in 1910; an additional 1.4 tonnes was shipped to the Tyee smelter and yielded 8.25 per cent copper, 83.7 grams per tonne silver and $5 per ton gold (1910 prices). In 1912, upon completion of the railway, a further 1,133 tonnes of ore was shipped to the Tacoma smelter and another 2,030 tonnes was placed on ore dumps. A total of 2,411 grams of gold and 40,100 kilograms of copper was recovered. The mine closed in 1912.

The property remained idle until 1921, when Trites, Woods and Wilson purchased the property and carried out minor work on the Montrose and Waterloo zones. Little further work was reported until 1939, when H.D. Haywood purchased the claims from the estate of Wilson. That year a camp and trail were built and during 1939-40 Haywood worked on the Montrose zone; about 40 tonnes of ore were shipped from the Montrose zone during this period. In 1941, 10 tonnes (averaging 9.23 per cent copper, 1.09 per cent zinc, 8.9 grams per tonne gold and 75.4 grams per tonne silver) was high graded from the 700 level(?) of the Red Cliff deposit and a 19.3 tonnes of ore was high graded from the Montrose zone. In 1946, the Yale Mining Company, Limited optioned the property and sampled the Montrose and Waterloo zones. In 1950, Yale Lead and Zinc Mines Limited completed about 600 metres of drilling on the Montrose(?) zone. In 1959, Oro Fino Mines Ltd. optioned the property; no work was reported.

In 1968, International Mogul Mines Limited acquired the property through amalgamation of several companies, including Yale Lead and Zinc. In 1972, Citex Mines Ltd. acquired a three year lease on the property from International Mogul and subsequently entered into an agreement with Adam Milling Ltd. The latter company built a 110 tonnes per day mill at the mouth of Bitter Creek and reopened the Red Cliff mine in April, 1973. The 700 level was rehabilitated and open stoping commenced. However, due to unsafe conditions, the Ministry closed the mine in September, 1973. Apparently, 3,768 tonnes of ore were shipped to the mill from the mine and old dumps. (This tonnage may include some ore from the Roosevelt deposit (104A 069)). Some drilling was also reported in area of the Red Cliff deposit that year. Little further work has been reported since 1973. In the late 1970s, limited work was done underground and, in 1979, Page and Skimming carried out sampling on the Red Cliff, Montrose and Waterloo zones.

In 1987, Joutel Resources Ltd. entered into a joint venture agreement with B.L. Carlson and V.N. Harbinson on the Red Cliff claim group and staked two grid claim blocks. That year Joutel conducted a comprehensive program, focusing mainly on the Montrose and Waterloo zones, comprising trenching, geological mapping, soil, silt and rock sampling and diamond drilling (6 holes, totalling 1,007 metres) on the Montrose and Ridley Road zones.

The area is underlain predominantly by north-striking, west-dipping andesitic tuffs, agglomerates and minor flows, of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63). Immediately east of Lydden Creek a conformable body of amygdaloidal feldspar porphyry, containing phenocrysts of feldspar and augite, may represent a sill or a flow. Tertiary(?) quartz monzonite, diorite and hornblende porphyry dikes are common. These trend northwest and northeast and are part of the Portland Canal dike swarm (Bulletin 58). The area is intensely fractured and faulted. North-trending, west-dipping dip-slip faults are most conspicuous and appear to be younger than east-trending faults.

Mineralization comprises irregular veins and pods of quartz, pyrite, chalcopyrite and minor sphalerite. The ore bodies, irregular and lenticular, are commonly enclosed in weakly developed sericitic alteration. The largest ore body, 76 metres long and averaging 6 metres in width, occurs on the 700 level.

Most of the mineralized pods appear to lie along locally east-trending, steeply dipping shears that transect all rock types except the diorite dikes. The mineralization is most conspicuous adjacent to, and on the hangingwall of, a prominent north-trending, west-dipping fault along Lydden Creek.

Estimated reserves for the Red Cliff deposit are reported to be 18,856 tonnes of sorted ore containing 3.19 per cent copper and 2.8 grams per tonne gold (J.L. Parker, 1912; cited in Assessment Report

CAPSULE GEOLOGY

17465, p. 35).

BIBLIOGRAPHY

EMPR AR 1908-56; 1909-67; 1910-62; 1911-72, 74; 1912-104,107;
1921-66; 1939-66; 1940-52; 1946-79; 1950-78; 1959-8
EMPR ASS RPT *17465, 20379
EMPR BULL 58, p. 151; 63
EMPR EXPL 1987-A15; 1988-A15,A32
EMPR GEM *1973-494
EMPR MAP 8
EMPR PF (In 104A General - Knobel, H.E. (1909): Report upon the
mineral district of Bear River)
EMR MP CORPFILE (Red Cliff Mining Company, Limited; Citex Mines Ltd.;
Adam Milling Ltd.)
GSC MAP *28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC MEM 32, p. 47; 175, p. 141
GSC OF 2582
WWW http://www.infomine.com/index/properties/REDCLIFF_PROJECT.html

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/10/04 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 038** NATIONAL MINERAL INVENTORY: 104A4 Ag18,Cu7

NAME(S): **INDEPENDENCE**, INDEPENDENCE 2, INDEPENDENT 1-5, INITIAL, BIG CASINO

STATUS: Developed Prospect MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 05 13 N NORTHING: 6216135
LONGITUDE: 129 55 00 W EASTING: 442959
ELEVATION: 930 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit 1 (main adit) (Assessment Report 15581).

COMMODITIES: Silver Copper Gold Lead Zinc

MINERALS
SIGNIFICANT: Pyrite Sphalerite Galena Chalcopyrite Argentite Tetrahedrite
ASSOCIATED: Jasper Barite Magnetite
ALTERATION: Silica Limonite Wad Hydrozincite
ALTERATION TYPE: Silicific'n Oxidation
MINERALIZATION AGE: Eocene

DEPOSIT
CHARACTER: Vein Discordant Breccia
CLASSIFICATION: Mesothermal Hydrothermal Replacement Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 180 x 6 Metres STRIKE/DIP: 135/80E TREND/PLUNGE:
COMMENTS: Main vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Flow
Andesitic Tuff
Andesite
Quartz Monzonite Dike
Andesite Dike
Felsic Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: MAIN VEIN REPORT ON: Y

CATEGORY: Inferred YEAR: 1991
QUANTITY: 177809 Tonnes

COMMODITY	GRADE	
Silver	240.0000	Grams per tonne

COMMENTS: Preliminary possible geological reserves grading 240 to 343 grams per tonne silver.
REFERENCE: Assessment Report 21950.

CAPSULE GEOLOGY

The Independence prospect is located about 550 metres east of Fitzgerald Creek, on the west side of the Bear River valley, 16 kilometres north of Stewart. These showings are located on the new Big Casino claim, which is different from the Big Casino Crown-granted claim (104A 034). The property includes a showing on the Independence 1 claim (104A 132).

The area of the showing may have originally been covered by the Initial claim group (Geological Survey of Canada Map 28A), located before 1913 (Geological Survey of Canada Memoir 32, p. 51). The Independent and Independent 1-5 claims were owned by the Fitzgerald brothers from about 1919. The Algunican Development Company Ltd. optioned the property in 1920 and drilled 2 holes; results were disappointing. In 1921, the owners commenced an exploration adit. In 1924, the Independence Gold Mining Company was formed. Revenue

CAPSULE GEOLOGY

Mining Company Ltd. acquired a majority interest in the company in 1926. In 1928, about 1000 metres of drilling was done on the main vein; the results are not known. Several (4?) exploration adits were driven before 1929. Two adits were driven on the main area; two other adits were emplaced about 220 metres to the northeast. Several opencuts were made above adits 1 and 2 on the main vein. Canex Aerial Exploration apparently did some work in 1965; the results are not available. No further work was reported until 1980 when Tournigan Mining Explorations Ltd. conducted geological mapping in the area of the showings and underground on the Independence claims. In 1984, Tournigan conducted further geological mapping and stream sediment surveys in the area; no work was reported on the showing. In 1986, Moche Resources Inc. acquired the Rock of Ages (104A 133-135, 137) group, including the Big Casino and Independence claims. The showings were included in the Big Casino claim. That year Moche Resources flew a heli-borne VLF-EM and magnetometer survey over the area and carried out soil, silt and rock sampling and conducted geological mapping. In 1988, Moche conducted follow-up exploration to increase the strike length of the veins. Remington Creek Resources Inc. subsequently acquired the Independence-Big Casino property and entered into an agreement with Armeno Resources Inc.-Armenex Resources Canada Inc. in 1990. Further exploration work, including diamond drilling, was conducted in 1990. Armenex drilled 11 holes, mapped and sampled the area in 1991.

The area is underlain by north to northeast-striking, steeply dipping andesitic flows and tuffs of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63). The volcanics are intruded by several closely spaced north-northwest trending quartz monzonite and andesite dikes that form part of the Portland Canal dike swarm (Bulletin 58).

There are two types of veins on the property: 1) simple - represented by narrow veins such as those seen in adit 6 and 2) complex - represented by mesothermal veins with replacement characteristics such as the main vein or vein 1.

The main vein, exposed in the 190-metre long adit 1 and in trenches above the adit, lies along the footwall(?) of an anastomosing quartz monzonite dike. The vein strikes at 135 degrees and dips 80 degrees east. The vein, 2 to 6.6 metres wide, can be traced nearly continuously for 180 metres. Mineralization comprises banded silica-jasper-barite- magnetite with up to 30 per cent pyrite and lesser sphalerite, galena and argentite(?). The mineralization is variably oxidized; wad, limonite and hydrozincite(?) have been reported from the vein. Wallrocks are silicified. The average silver assay from underground samples of adit 1 was 54.2 grams per tonne silver over 2.1 metres (Assessment Report 21950). Adit 2 explored the main vein for a distance of 50 metres.

The main vein is exposed at surface in trench 7 and the weighted average sample assayed 604 grams per tonne silver over 5 metres (Assessment Report 21950). One channel sample taken in 1980 assayed 0.8 grams per tonne gold, 93.3 grams per tonne silver, 4.66 per cent copper, 0.27 per cent lead and 0.52 per cent zinc across 2.0 metres (Assessment Report 8968).

Vein 2, parallel to the main vein, is exposed in trench 6. The weighted average sample assayed 133.7 grams per tonne silver over 3 metres (Assessment Report 21950).

To the east, a third parallel vein occurs in trench 5. The weighted average sample assayed 104.55 grams per tonne silver over 6.5 metres (Assessment Report 21950).

North of trench 5, about 150 metres, mineralized and silicified breccia zones are exposed in trenches 2, 3 and 4. These zones, in sheared felsic dikes, are parallel to vein 1. A sample, taken across a 2 metre wide breccia zone, assayed 116.5 grams per tonne silver (Assessment Report 21950).

About 220 metres northeast of adit 1, two other adits (adits 3 and 4) have been emplaced on a mineralized zone, flanked by two dikes, in andesitic tuff. Mineralization comprises jasper, pyrite and sphalerite. A chip sample from adit 4 (the upper adit) assayed 4.1 grams per tonne gold and 93.9 grams per tonne silver across 5.0 metres (Assessment Report 15581).

Veins 1 and 2 and the parallel structure to the north were the focus of the 1990 drilling program. Veins 1 and 2 and the parallel structure to the south (104A 132?) were the focus of the 1991 drilling program.

The drilling programs have outlined the presence of a potential "ore shoot" in the explored portion of the main vein, located in the area north of adit 2. An estimate of the reserves in the area between trench 7 on the surface and adit 1 (95 to 99 metres below surface), which is part of the "ore shoot", was made in 1990. Preliminary possible geological reserves for the main vein were

CAPSULE GEOLOGY

177,809 tonnes grading 240 to 343 grams per tonne silver (Assessment Report 21950).

BIBLIOGRAPHY

EMPR AR 1919-65; 1920-58; 1921-66; 1922-71; 1923-76; 1924-70; 1925-98; 1926-94; 1927-392; 1928-106; 1929-98; 1930-107
EMPR EXPL 1990-35
EMPR BULL 58, p. 132; 63
EMPR ASS RPT *8968, 12973, *15581, 16082, 20379, 21367, *21950
EMPR MAP 8
EMPR MER 1990-35
EMR PF (Moche Resources Inc., Prospectus, May, 1988)
EMR MP CORPFILE (Independence Gold Mining Company, Limited; Revenue Mining Company, Limited; Algunican Development Company, Limited)
GSC MEM 32, p. 51; 159, p. 338; 175, pp. 121,123
GSC MAP *28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582
GCNL #69, #130, #136, #145, 1990
EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/10/03 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 039** NATIONAL MINERAL INVENTORY:

NAME(S): **RUBY SILVER**, RUBY (L. 4764), RUBY 1, RUBY 2-5, STAR, STIRLING, PERSHING

STATUS: Showing Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 05 14 N NORTHING: 6216120
LONGITUDE: 129 51 32 W EASTING: 446554
ELEVATION: 350 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Ruby Silver adit ((Geological Survey of Canada Map 217A).

COMMODITIES: Copper Gold Silver

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
COMMENTS: Possibly also galena and sphalerite present.
ASSOCIATED: Quartz Carbonate
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Discordant
CLASSIFICATION: Epithermal Hydrothermal
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: STRIKE/DIP: 110/68S TREND/PLUNGE:
COMMENTS: Vein, up to 1.5 metres wide.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Siltstone
Andesitic Volcaniclastic
Dacitic Volcaniclastic
Porphyritic Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1929
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	115.2000	Grams per tonne
Gold	11.0000	Grams per tonne
Copper	9.3000	Per cent

COMMENTS: Highest values from samples of the vein mineralization in the tunnels, across 0.3 to 1.8 metres.
REFERENCE: Property File - Cited in Thios Resources Inc. Prospectus, April, 1987.

CAPSULE GEOLOGY

The Ruby Silver showing is located on the east side of a tributary of Le Sueur (Mosquito) Creek, about 1500 metres east of the confluence of American Creek and the Bear River.

In 1910, the Portland Dreadnought Mining Company carried out tunnelling and open cutting on a group of 3 claims which presumably covered the showing. In 1920, Le Sueur held the Ruby Silver group over the showing and conducted further work. In 1924, Ruby Silver Mines, was formed and acquired the Ruby Silver claims (Ruby, Ruby 1, Star, Stirling, Pershing and Pershing 1) and Ruby Silver Extension claims (Ruby 2-5). That year the Ruby Silver adit, on the Ruby claim, had been driven at least 46 metres; several crosscuts were also driven. Further work was done the following year; this work

CAPSULE GEOLOGY

probably included extension of the adit to about 62 metres. The company name was changed in 1929 to Ruby Silver Copper Mines. No further work was reported until 1984 when D. Brownlee acquired the Ruby Silver group and conducted an evaluation the following year. In 1986, Thios Resources Inc. acquired the property and subsequently entered into a joint venture with Adrian Resources Ltd. The joint venture conducted geological, geochemical and geophysical (VLF-EM and magnetometer) surveys on the property in 1990.

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation unconformably overlain, to the east, by the Middle Jurassic Salmon River Formation (Bulletin 58, 63). An augite diorite stock intrudes the Unuk River Formation, north of the property.

The immediate area of the showing is underlain by Unuk River Formation argillites and siltstones that are locally overlain by andesitic to dacitic volcaniclastics. A prominent north-northeast trending fault lies just west of the showing.

The adit has been emplaced on a quartz-carbonate vein containing blebs and disseminations of pyrite and chalcopyrite, locally forming up to 10 per cent of the vein. Malachite and azurite staining is present (Assessment Report 20308). The vein is up to 1.5 metres wide, strikes 110 degrees and dips 68 degrees southwest. The adit follows the footwall of the vein, which, in turn, appears to follow a porphyritic dike (Minister of Mines Annual Report 1924, p. 69).

There is some ambiguity regarding the nature of the mineralization at the showing. Geological Survey of Canada Memoir 175 does not mention chalcopyrite, but instead describes the mineralization as comprising "pyrite, galena and sphalerite in a gangue of quartz and calcite" (p. 69). A report by P.E. Peterson, written for Ruby Silver Copper Mines in 1929 and cited in a prospectus of Thios Resources (Property File - April, 1987), mentions 3 tunnels on the property. The locations of these tunnels, presumably driven to explore an east-trending structure, are not known. Tunnel No. 3 may be the Ruby Silver adit. Samples of the vein mineralization in the tunnels assayed from 0.7 to 11.0 grams per tonne gold, 15.4 to 115.2 grams per tonne silver and trace to 9.3 per cent copper over widths of 0.3 to 1.8 metres (Property File - Cited in Thios Resources Inc., Prospectus April, 1987).

No significant assay values came from vein samples taken in 1990.

BIBLIOGRAPHY

EMPR AR 1910-61; 1920-55; *1924-69,366; 1925-94
EMPR BULL 58; 63
EMPR ASS RPT 14504, 20308, 20379, *21172
EMPR MAP 8
EMPR PF (Thios Resources Inc., Prospectus, April 7, 1987)
EMR MP CORPFILE (Ruby Silver Copper Mines, Limited)
GSC MEM 159, p. 36; 175, p. 144
GSC MAP *28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582
GCNL #118, 1990; #24, 1991

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/10/18 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 040**

NATIONAL MINERAL INVENTORY: 104A4 Cu12

NAME(S): **A & T**, INDEPENDENCE 1, INDEPENDENCE, BIG CASINO

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 04 23 N
LONGITUDE: 129 55 35 W
ELEVATION: 853 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6214597
EASTING: 442333

COMMENTS: Location deduced from Minister of Mines Annual Report, 1929; A&T showings are located on the Independence 1 claim (Assessment Report 12973, 21950).

COMMODITIES: Gold, Copper, Silver

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrite, Pyrrhotite
ALTERATION: Silica, Sericite
ALTERATION TYPE: Silicific'n, Oxidation, Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear, Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Andesitic Breccia
Granitic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1930
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	44.6000	Grams per tonne
Gold	6.2000	Grams per tonne
Copper	2.7000	Per cent

COMMENTS: Sample across 0.9 metre in the lower zone.
REFERENCE: Minister of Mines Annual Report, 1930, page 107.

CAPSULE GEOLOGY

The A & T showings are located in the canyon of the first west fork of Fitzgerald (Goose) Creek, about 1.8 kilometres west of the confluence of Fitzgerald Creek with the Bear River. These showings occur on the Big Casino claim (previously Independence 1), to the southwest of the 4 vein structures currently of interest (104A 038). The Big Casino claim is different from the Big Casino Crown-grant L. 4529 (104A 034).

The A & T claim group was prospected by Tooth, Armstrong and Howse in 1928. The following year Cominco carried out about 470 metres of drilling; results were disappointing and Cominco terminated the option. The owners carried out prospecting in 1930. No work was reported until 1984 when Tournigan Mining Explorations Ltd. conducted geological mapping and stream sediment surveys on the Independence 1 claim, which covered the A & T showings. No work was reported on the showings. In 1986, Moche Resources Inc. acquired the Rock of Ages group (104A 133-135, 137) (which included the Independence 1 claim); no work was reported on the showings.

The area is underlain by north-striking, west-dipping Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation. The rocks predominantly comprise andesitic tuffs and

CAPSULE GEOLOGY

breccias (Bulletin 58, 63), intruded by northwest-trending granitic dikes (Minister of Mines Annual Report, 1930).

Two north-northeast trending mineralized shear zones occur. The upper zone lies at about 1070 metres elevation; the lower one occurs at about 730 to 910 metres elevation. The shear zones are irregularly mineralized with chalcopyrite, pyrite and pyrrhotite. A sample, assumed to be from the lower zone, assayed 294.9 grams per tonne silver, 0.7 gram per tonne gold and 4.6 per cent copper across a vein width of 1.7 metres (Minister of Mines Annual Report, 1928). A sample from the junction of a weak cross-structure with the lower zone, assayed 6.2 grams per tonne gold, 44.6 grams per tonne silver and 2.7 per cent copper across 0.9 metre (Minister of Mines Annual Report, 1930).

At an elevation of 730 metres, a gossan zone, up to 30 metres wide, is exposed in the creek bed. Here, sericitic schist contains pyrite and a silicified zone is mineralized with pyrite and chalcopyrite (Minister of Mines Annual Report, 1928).

BIBLIOGRAPHY

EMPR AR *1928-106; 1929-98; *1930-107
EMPR BULL 58; 63
EMPR ASS RPT 12973, 20379, 21367, 21950
EMPR MAP 8
GSC MEM 175, p. 104
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/11/01 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 041** NATIONAL MINERAL INVENTORY: 104A4 Pb4

NAME(S): **DALHOUSIE (L. 4924)**, NO. 1, AZTEC

STATUS: Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 03 34 N NORTHING: 6213088
LONGITUDE: 129 55 57 W EASTING: 441932
ELEVATION: 730 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Tunnel No. 1 (No. 1 showing), Dalhousie claim (L. 4924) (Assessment Report 7841).

COMMODITIES: Gold Silver Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Quartz Magnetite
ALTERATION: Silica Epidote Chlorite Amphibole Pyrite
ALTERATION TYPE: Silicific'n Propylitic Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Podiform Stratiform Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) K04 Au skarn
l01 Au-quartz veins
DIMENSION: 38 x 7 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Mineralization trends north and dips west.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite
Andesitic Tuff
Andesitic Breccia
Andesitic Flow
Dacitic Tuff
Rhyolitic Flow
Feldspar Porphyry Dike
Siliceous Greenstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1979
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	6.9000	Grams per tonne
Gold	25.0000	Grams per tonne
Copper	0.3000	Per cent

COMMENTS: Highest assays from samples taken of cut no. 2, 8 metres north of the portal of tunnel 1; width 3.0 metres.
REFERENCE: Assessment Report 7841.

CAPSULE GEOLOGY

The Dalhousie (or No.1) showing is located in the southeastern part of the Dalhousie claim (L. 4924), on the east side of the Bear River Ridge, about 1600 metres east-southeast of Mount Shorty Stevenson and 750 metres west of the Bear River.

During 1925-28, the Dalhousie Mining Company Limited acquired and explored the Dalhousie group, including the Dalhousie claim. The claim group included the Tillamook claim (L. 4926)(104A 043), which earlier (1920-22) had been included in the Aztec (104A 042, 043) claim group (Minister of Mines Annual Reports, 1920, 1922). Two veins, the Iron and Copper veins, were reported on the Aztec group. It is not clear whether these are the same veins described on the Dalhousie group or are separate ones. Work conducted by Dalhousie

CAPSULE GEOLOGY

Mining on the Dalhousie claim comprised several opencuts and 2 tunnels: tunnel No.1 on the No.1 showing and tunnel No.2, about 220 metres north of tunnel No.1. No further work was reported until 1979 when Tournigan Mining Explorations Ltd. conducted geological mapping, trenching, prospecting, sampling and a limited magnetometer survey in near tunnels No. 1 and 2. No further work has been reported.

The area is underlain by north-striking, west-dipping Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 58, 63). These rocks comprise mainly andesitic tuffs, breccias and flows that are intruded by north to northwest-trending dikes.

Mineralization at the No. 1 showing is hosted in altered and pyritized (0.5 to 1.0 per cent pyrite) fine-grained dacitic and andesitic tuffs that immediately overlie rhyolitic flows. These rocks are intruded by north-northwest trending feldspar porphyry dikes (Assessment Report 7841).

The general trend of the mineralization is north, dipping west and approximately conformable with the bedding. The mineralization has a width of 7 metres and extends over a length of 38 metres. Several opencuts, immediately east of tunnel No.1, expose veinlets and irregular pods of mineralization in tuffs. These consists of 5 to 40 per cent pyrite, 0.5 to 5 per cent chalcopyrite and 2 to 10 per cent magnetite in quartz-epidote-chlorite-amphibole rock. Chip samples in 1979 from cut No. 2, 8 metres north of the tunnel No. 1 portal, assayed up to 25.0 grams per tonne gold, 6.9 grams per tonne silver and 0.3 per cent copper across 3.0 metres (Assessment Report 7841). The mineralized zone was not intersected in the tunnel.

Tunnel No.2, 220 metres north of the No.1 showing, has been driven about 110 metres northwest. The tunnel exposes andesite flows and tuffs, containing minor disseminated pyrite, and intercalated rhyolite. A 30-metre long crosscut has been driven to the southwest, 100 metres from the portal. The crosscut exposes disseminated chalcopyrite in andesite over a length of 10 metres. The mineralization lies close to the eastern flank of a feldspar porphyry dike. A grab sample from the mineralization in 1979 assayed 1.7 grams per tonne gold, 10.3 grams per tonne silver and 0.33 per cent copper (Assessment Report 7841).

Just south of the No.1 showing (assumed to be the No.1 vein; Minister of Mines Annual Report, 1927, p. 92), a broad gossan trends northwest. At 975 metres elevation, a 0.9-metre wide zone of silicified greenstone is well mineralized with pyrite and chalcopyrite. The zone trends 290 degrees and dips 50 degrees south. A sample assayed 27.4 grams per tonne gold, 41.1 grams per tonne silver and 2.1 per cent copper across 0.9 metre (Minister of Mines Annual Report 1927, p. 92).

BIBLIOGRAPHY

EMPR AR 1920-55; 1922-70; 1925-99; 1926-93; *1927-91; 1928-105
EMPR ASS RPT *7841, 20379
EMPR BULL 58; 63
EMPR MAP 8
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC MEM 32, p. 46; 159, p. 33; 175, p. 111
GSC OF 2582
WWW http://www.infomine.com/

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/11/05 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 042**
NATIONAL MINERAL INVENTORY: 104A4 Pb7

NAME(S): **PALMEY**, H & T, PREMONITION, B.G., AZTEC

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 03 11 N
LONGITUDE: 129 56 49 W
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Exact location of the showing is uncertain; a trench is mentioned in Assessment Report 759, p. 5.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6212389
EASTING: 441023

COMMODITIES: Lead, Zinc, Gold, Silver, Copper

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

DEPOSIT
CHARACTER: Vein, Shear
CLASSIFICATION: Replacement, Epigenetic, Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, J01 Polymetallic manto Ag-Pb-Zn
SHAPE: Tabular
DIMENSION: 50 x 4 Metres
STRIKE/DIP: 308/85S
TREND/PLUNGE:
COMMENTS: Eastern mineralization zone.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Tuff
Slate
Porphyritic Granodiorite
Agglomerate
Breccia
Sandstone
Quartz Monzonite Dike
Quartz Diorite Dike
Lamprophyre Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1936

COMMODITY	GRADE	
Silver	69.6000	Grams per tonne
Gold	1.0000	Grams per tonne
Lead	13.3000	Per cent
Zinc	6.0000	Per cent

COMMENTS: A selected grab sample from an open cut at 1245 metres elevation.
REFERENCE: Minister of Mines Annual Report, 1936, page B32.

CAPSULE GEOLOGY

The exact location of the Palmey showings is not known. The Palmey group of claims apparently adjoined the Dalhousie (104A 041) and International or Mammoth (104A 044) groups to the north and the M.C. (104A 045) group to the south (Minister of Mines Annual Report, 1935, p. B28). The claims covered an area immediately west-northwest of the confluence of Bitter Creek with the Bear River.

The Palmey group, owned by Tooth and associates, was a restaking of the old H & T group. There is no record of any work on the H & T claims. During 1930-36, prospecting and open cutting was conducted

CAPSULE GEOLOGY

on the Palmey group. In 1965, Canex Aerial Exploration Ltd. examined the Aztec group of B.G. claims and performed geological, magnetometer and soil geochemical surveys; the B.G. claims likely covered, at least in part, the Palmey ground. The Aztec group of B.G. claims was not the same Aztec group staked in the 1920s further to the north (104A 043). In 1983 and 1984, Rich Lode Gold Corporation and Tournigan Mining Explorations Ltd. carried out prospecting and geological mapping in the area. No work was reported on the showings.

The area is underlain by north to north-northwest striking, west-dipping Hazelton Group rocks that lie near the crumpled core of the north-northwest trending Dilworth syncline (Open File 1987-22). These rocks comprise mainly red and green volcanic agglomerates, breccias, tuffs, sandstones and slates. They belong to the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 58, 63) or the Lower Jurassic Betty Creek Formation (Open File 1987-22). The volcanic rocks are intruded by small stocks of granodiorite (Bulletin 58, 63) and north and northwest-trending dikes of quartz monzonite (or quartz diorite) and lamprophyre (Assessment Report 759). Several northwest-trending faults, parallel to the dikes, are conspicuous in the immediate area of the mineralization.

Three main northwest-striking, southwest-dipping quartz replacement zones, 0.6 to 4.6 metres wide, have been reported on the Palmey ground (Minister of Mines Annual Report, 1936, p. B31). Their exact locations are unknown. A northwest-trending mineralized fault, about 150 metres south of Main (or Dundee) Creek, can be traced from 1,219 metres elevation to the peak of Mount Shorty Stevenson, a distance of approximately 1.4 kilometres (Assessment Report 759). This fault zone is assumed to correspond to one of the earlier reported zones. Mineralization consists of sphalerite, galena, pyrite, and, locally, some chalcopyrite, in irregular patches, blebs and seams in a quartzose gangue. The zones are hosted predominantly in tuffs and slates; at the highest elevation one zone is hosted in porphyritic granodiorite.

The eastern zone trends 308 degrees and dips 85 degrees to the southwest. It is hosted in tuffs and is mineralized over a width of 2.1 to 4.3 metres for a length of 50 metres. A selected grab(?) sample collected in 1936 from an opencut at 1245 metres elevation, assayed 1.0 gram per tonne gold, 69.6 grams per tonne silver, 13.3 per cent lead and 6.0 per cent zinc (Minister of Mines Annual Report, 1936).

The western zone is exposed at elevations of 1720 to 1768 metres near the peak of Mount Shorty Stevenson. A mineralized shear zone trends 310 degrees and dips 60 degrees to the southwest. It is hosted in porphyritic granodiorite and is 1.2 to 2.1 metres wide. A sample collected in 1936 from 1727 metres elevation, assayed 1.4 grams per tonne gold, 514.3 grams per tonne silver, 5.0 per cent lead and 12.7 per cent zinc across 2.1 metres (Minister of Mines Annual Report, 1936).

BIBLIOGRAPHY

EMPR AR 1930-107; 1931-42; 1935-B28; *1936-B31
EMPR ASS RPT *759, 11546, 12973, 20379
EMPR BULL 58; 63; 85 (in press)
EMPR MAP 8
EMPR OF 1987-22
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC MEM 175, p. 135
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/12/27 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 043**

NATIONAL MINERAL INVENTORY: 104A4 Pb4

NAME(S): **AZTEC**, TILLAMOOK (L. 4926), B.G., IRON, COPPER, DALHOUSIE, BELLEROPHON, WALLABY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 03 40 N
LONGITUDE: 129 56 38 W
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The exact location of the Aztec showings is not known; identified location is the approximate centre of the Tillamook claim (L. 4926) (Mineral Titles Reference Map 104A/4W).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6213283
EASTING: 441226

COMMODITIES: Gold, Silver, Copper

MINERALS
SIGNIFICANT: Pyrite, Chalcopyrite
ASSOCIATED: Quartz, Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Breccia
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Volcanic
Lamprophyre Dike
Augite Feldspar Porphyry Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1922
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	27.4000	Grams per tonne
Gold	8.0000	Grams per tonne
Copper	1.3700	Per cent

COMMENTS: Gold converted at $20.5/oz. Sample from the Iron vein over 2.7 metres may be the same vein as reported on the Dalhousie/Rock of Ages claims.
REFERENCE: Minister of Mines Annual Report, 1922, page 70.

CAPSULE GEOLOGY

The exact location of the Aztec showings is not known; the showings may be the same as the Dalhousie showings (104A 041). The showings are assumed to be within 1 kilometre of the centre of the Tillamook claim (L. 4926), which is located on the east side of the Bear River Ridge about 2.5 kilometres north-northwest of the junction of Bitter Creek and the Bear River.

The Aztec group of four claims (including the Tillamook claim) was owned by Cameron, Pratt and Watt in 1920. Open cutting was conducted on the veins during 1920-22. In 1925, the Dalhousie Mining Company Limited acquired the Dalhousie group (which included the Tillamook claim) from Cameron and Pratt. The fate of the other three Aztec claims (Aztec, Bellerophon and Wallaby) is not known; they may have been restaked as part of the Dalhousie group. No further work has been reported specifically on the Tillamook claim. In 1965, Canex Aerial Exploration Limited carried out geological mapping and soil sampling on the B.G. claims which were then described as the Aztec group. Mineralization was noted in several places to the west of the tongue of the glacier, about 1 kilometre east of Mount Shorty Stevenson (on the Tillamook and adjacent Alpine (104A 136) claims).

CAPSULE GEOLOGY

Both Rich Lode Gold Corporation and Moche Resources Inc. indicated extensive gossan zones on the Tillamook claim in 1983 and 1986, respectively.

The area is underlain by generally north-striking, west-dipping Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 58, 63). Near the Tillamook claim the andesitic volcanics are intruded by north-northwest to northwest-trending lamprophyre and augite-hornblende-feldspar porphyry dikes. Several northwest and east-northeast trending faults are conspicuous in the area (Assessment Report 759).

Two veins have been reported on the Aztec claims. The 2.7-metre wide Iron vein, at an elevation of 701 metres, comprises quartz containing abundant pyrite and minor chalcopyrite. A sample taken in 1922 across the vein (2.7 metres?) assayed 8 grams per tonne gold ($4.80 per tonne), 27.4 grams per tonne silver and 1.37 per cent copper (Minister of Mines Annual Report 1922, p. 70).

The Copper quartz breccia vein, at an elevation of 792 to 1173 metres, is 0.6 to 3.7 metres wide and is mineralized with pyrite, chalcopyrite and minor magnetite (Minister of Mines Annual Report 1922, p. 70). In 1920, a sample, from the 792 metres elevation, assayed 2.34 grams per tonne gold ($1.40 per tonne), 78.9 grams per tonne silver and 0.3 per cent copper across 0.9 metres (Minister of Mines Annual Report 1920, p. 55). At 1173 metres elevation a 0.6-metre wide vein contains 13 per cent copper ore (Minister of Mines Annual Report 1920, p. 55).

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EMPR AR 1920-55; 1922-70; 1965-52
EMPR BULL 58, p. 123; 63
EMPR ASS RPT *759, 11546, 15581, 16082, 20379
EMPR MAP 8
GSC MEM 175, p. 106
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582
GCNL #109, #110, 1983

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/11/05 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 044**

NATIONAL MINERAL INVENTORY: 104A4 Pb4

NAME(S): **MAMMOTH (L. 1488)**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 02 34 N
LONGITUDE: 129 55 59 W
ELEVATION: 300 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Approximate centre of Mammoth claim (L. 1488) (Mineral Titles Reference Map 104A/4W).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6211233
EASTING: 441873

COMMODITIES: Lead Zinc

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

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Argillite
Andesite
Granodiorite
Lamprophyre Dike
Quartz Diorite Dike
Quartz Monzonite Dike
Augite Hornblende Feldspar Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The exact location of the Mammoth showing is not known. It is assumed to be on the Mammoth Crown-granted claim (L. 1488), about 300 metres northwest of the confluence of Bitter Creek and the Bear River.

During 1910-11, the International (Portland) Mining Co. held the Mammoth group of 8 claims, including the Mammoth claim, and carried out tunnelling and open cutting. No further work has been reported. In 1965, Canex Aerial Exploration conducted geological mapping on the adjacent B.G. claims, Aztec group (104A 043); this work included parts of the Mammoth group. In 1984, Tournigan Mining Explorations Ltd. carried out geological mapping and a stream sediment survey in the area.

The area is underlain by Hazelton Group rocks. A northwest-trending conspicuous zone of shearing traverses the claims (Geological Survey of Canada Map 216A). The zone cuts the generally north-striking, west-dipping Upper Triassic to Lower Jurassic Unuk River Formation andesitic volcanics. These are intruded by stocks of Jurassic(?) granodiorite (Bulletin 58, 63). Several north to north-northwest trending lamprophyre, quartz diorite or quartz monzonite, and augite-hornblende-feldspar porphyry dikes have been mapped on the Mammoth claim group (Assessment Report 759).

Mineralization comprises a 6-metre wide fracture zone which cuts a band of argillite, intercalated with the volcanics. Parts of the zone are mineralized with pyrite, galena and sphalerite (Geological Survey of Canada Memoir 32 and 175).

BIBLIOGRAPHY

EMPR AR 1910-62; 1911-73; 1912-324
EMPR BULL 58; 63
EMPR ASS RPT *759, 12972, 20379
EMPR MAP 8

BIBLIOGRAPHY

GSC MEM 32, p. 46; 175, p. 123
GSC MAP *28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/11/01 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 045** NATIONAL MINERAL INVENTORY: 104A4 Cu11

NAME(S): **M.C. 1 (L. 4407)**

STATUS: Prospect MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 02 33 N NORTHING: 6211236
LONGITUDE: 129 58 20 W EASTING: 439432
ELEVATION: 1618 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Shaft on east trending quartz vein (Assessment Report 7637).

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Tetrahedrite Argentite Ruby Silver Pyrite Chalcocite Gold
COMMENTS: Native gold and chalcocite are also reported.
ASSOCIATED: Quartz Carbonate
COMMENTS: Secondary copper minerals reported.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: STRIKE/DIP: 270/60S TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Clastic Sediment/Sedimentary
Andesite Tuff
Andesite Breccia
Dacite Tuff
Dacite Breccia
Granodiorite Dike
Andesite Dike
Felsite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: TRENCH REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1971
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	1477.7000	Grams per tonne
Gold	1.3000	Grams per tonne
Lead	14.0000	Per cent
Zinc	25.4000	Per cent

COMMENTS: Across width of 0.4 metre. Bulletin 58 reports grab samples also contain 1.47 per cent copper.
REFERENCE: Assessment Report 3293.

CAPSULE GEOLOGY

The M.C. showing is located on the Bear River Ridge, about 2.5 kilometres west of the confluence of Bitter Creek and the Bear River, on the slopes above the Premier mine open pit (104B 054).

The M.C. claims were staked by Mackenzie in 1920. In 1922, the M.C. Mining Company Limited was formed and acquired the claims. Exploration that year comprised opencuts and pits; 2 holes were drilled on the upper showings. The M.C. Mining Company of British Columbia Limited was formed in 1923 and acquired the claims. No further work was reported until 1968 when Erin Explorations Ltd. carried out trenching and sampling on the old showings and located several more veins. In 1970, Marlex Mining Corp. Ltd. acquired the

CAPSULE GEOLOGY

M.C. claims and carried out soil geochemical and magnetometer surveys. The following year Marlex Enviro-Systems and Resources Ltd. carried out further soil geochemical surveys, a VLF-EM survey, geological mapping and sampling. In 1979, Ocean Home Exploration Ltd. conducted further geological mapping and sampling. In 1983, Esso Resources Canada Limited performed further mapping and sampling on the M.C. claims.

The area is underlain by north-striking, steeply west-dipping Hazelton Group rocks of the Lower Jurassic Betty Creek Formation (Open File 1987-22). These rocks comprise maroon to purple clastic sediments intercalated with andesite to dacite tuffs and breccias. North-northwest to northwest-trending granodiorite, andesite and felsite dikes are conspicuous in the area (Assessment Report 7637).

The M.C. showing is exposed in a trench and a shaft, 3 metres deep. Mineralization comprises a 0.3-metre wide quartz-carbonate vein, trending east and dipping 60 degrees south, containing up to 60 per cent sulphides. The sulphides comprise galena, sphalerite, chalcopyrite, tetrahedrite and minor pyrite; native gold and chalcocite have also been reported. A chip sample in 1971 assayed 1,477.7 grams per tonne silver, 1.3 grams per tonne gold, 25.4 per cent zinc and 14.0 per cent lead across 0.4 metre (Assessment Report 3293). Bulletin 58 reports that selected samples assayed 5.5 grams per tonne gold, 17,314 to 18,857 grams per tonne silver, 1.47 per cent copper, 35.2 per cent lead and 19.2 per cent zinc. In 1974, 21 tonnes of ore, listed as production for the View Fr. occurrence (104A 075), may have come from this showing.

About 250 metres southwest of the M.C. showing, a quartz-carbonate vein, 0.2 metre wide and 5 metres long, occurs in a fault zone. The fault zone trends 340 degrees and dips 65 degrees north-east. The vein contains pods of tetrahedrite that form up to 5 per cent of the vein (Assessment Report 12236).

Approximately 100 to 250 metres southwest of the last mentioned location, several narrow barren(?) quartz veins trend north-northwest, parallel to granodiorite dikes (Assessment Report 3293). The vein is reported to contain pyrite, galena, sphalerite, tetrahedrite and minor argentite and ruby silver. Secondary copper minerals were also identified in these veins (Bulletin 58).

BIBLIOGRAPHY

EMPR AR 1921-67; 1922-70; 1923-78; 1924-366
EMPR GEM 1970-74; 1971-33
EMPR EXPL 1979-274
EMPR BULL 58, p. 135; 63; 85 (in press)
EMPR ASS RPT 2754, *3293, *7637, *12236, 20379, 21993
EMPR OF 1987-22
EMPR MAP 8
EMR MP CORPFILE (Trans-Canada Enviro-Systems Limited)
GSC MEM 175, p. 128
GSC MAP 216A; 217A; 307A; *315A; 1829; 9-1957; 1418A
GSC OF 2582
THE CANADIAN MINING BOOK 1928, p. 119

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/10/29 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 046**
NATIONAL MINERAL INVENTORY: 104A4 Ag21

NAME(S): **JUTLAND**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 03 50 N
LONGITUDE: 129 46 48 W
ELEVATION: 945 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Exact location is uncertain; the showing is reported to be on the east side of the glacier (Minister of Mines Annual Report, 1919). The Jutland claims were located on the north fork of Bitter Creek, 4.0 kilometres beyond the Roosevelt occurrence (104A 069).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6213465
EASTING: 451434

COMMODITIES: Silver Lead

MINERALS
SIGNIFICANT: Galena Tetrahedrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
STRIKE/DIP: 310/90
TREND/PLUNGE:
COMMENTS: Vein, 0.46 metres wide.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Andesite
Sediment/Sedimentary
Dike
Schistose Slate

HOSTROCK COMMENTS: Mineralization occurs close to the contact between Unuk River Formation andesites and Salmon River Formation sediments.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1919
SAMPLE TYPE: Grab

COMMODITY	GRADE
Silver	6857.0000 Grams per tonne

COMMENTS: Sample of the best material, reported to assay greater than 6,857 grams per tonne silver.
REFERENCE: Minister of Mines Annual Report, 1919, page 69.

CAPSULE GEOLOGY

The exact location of the Jutland showing is not known. The Jutland claims were reported to lie at the head of the north fork of Bitter Creek (now Roosevelt Creek), 14.5 kilometres from the mouth of Bitter Creek and 4.0 kilometres beyond the Roosevelt occurrence (104A 069).

The Jutland 2-3 claims were owned by Cowan, McGinnis and Watkins in 1919; little work was done on the showing. No further work has been reported.

The area is underlain by Hazelton Group rocks that comprise andesites of the Upper Triassic to Lower Jurassic Unuk River Formation and sediments of the unconformably overlying Middle Jurassic Salmon River Formation (Bulletin 63).

A 0.46-metre wide quartz vein trends 310 degrees and dips vertically. It contains 2 to 20 centimetres width(?) of galena and tetrahedrite. The best material was reported to assay greater than 6,857 grams per tonne silver (Minister of Mines Annual Report, 1919).

CAPSULE GEOLOGY

At about 100 metres higher elevation, another small quartz vein contains high grade galena and tetrahedrite. The vein lies along the footwall of a schistose slaty unit in the andesite/greenstone.

BIBLIOGRAPHY

EMPR AR *1919-69; 1920-57
EMPR BULL 63
EMPR MAP 8
GSC MEM 175, p. 123
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/15 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 047** NATIONAL MINERAL INVENTORY: 104A4 Pb2

NAME(S): **LUCKY DATE**, LEAD MOUNTAIN, I.X.L., GOAT

STATUS: Prospect MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 04 21 N NORTHING: 6214424
LONGITUDE: 129 46 55 W EASTING: 451324
ELEVATION: 1372 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The exact location of the showings is not known. They are assumed to be close to the headwaters of Roosevelt Creek, a tributary of Bitter Creek, and about 1 kilometre south-southeast of the peak of Mount Gladstone (Minister of Mines Annual Report 1946, p. 80).

COMMODITIES: Zinc Silver Lead Gold Copper

MINERALS
SIGNIFICANT: Galena Sphalerite Tetrahedrite Pyrite
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Shear Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 15 x 1 Metres STRIKE/DIP: 360/40W TREND/PLUNGE:
COMMENTS: I.X.L. vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Porphyritic Andesite
Slate
Dike
Massive Volcanic
Fragmental Volcanic
Argillite
Greywacke
Conglomerate

HOSTROCK COMMENTS: The showings lie close to the contact between the Unuk River Formation and the unconformably overlying Salmon River Formation (Bulletin 63).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1946
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	185.1000	Grams per tonne
Gold	0.3400	Grams per tonne
Copper	0.1500	Per cent
Lead	1.6000	Per cent
Zinc	6.9000	Per cent

COMMENTS: Channel sample across I.X.L. vein; width of 0.71 metre. Also 0.13 per cent cadmium.
REFERENCE: Minister of Mines Annual Report, 1946.

CAPSULE GEOLOGY

The exact location of the Lucky Date (Lead Mountain) showings is not known. Both the Lucky Date and, later, Lead Mountain claim was reported to lie near the head of the north fork (Roosevelt Creek) of Bitter Creek. The showings are assumed to be about 1 kilometre south-southeast of the peak of Mount Gladstone.

The Lucky Date claim group was owned by McInnes, Younkin and McFadden in 1928. During 1930-34, a 17-metre long crosscut tunnel,

CAPSULE GEOLOGY

open cutting and stripping were reported. Showings of both quartz-pyrite-tetrahedrite and quartz-galena-sphalerite-pyrite were reported at different locations on the property. The main showing was described as a mineralized, fractured and sheared dike (Minister of Mines Annual Report, 1930). In 1935, Hepson owned the Lucky Date claims. The claims subsequently lapsed and no further work was reported until 1945 when the area was restaked as the Lead Mountain claims, owned by McFadden and Bunn. Minor work was reported in 1946. No further work has been done on the showings.

The area is underlain by Hazelton Group rocks. The mineralization occurs near the northwest-trending contact between volcanics of the Upper Triassic to Lower Jurassic Unuk River Formation and sediments of the Middle Jurassic Salmon River Formation (Bulletin 63). The volcanics predominantly consist of massive and fragmental volcanics. The unconformably overlying sediments comprise argillite, greywacke and conglomerate.

Several erratically mineralized shear zones and quartz veins are reported in the area.

The I.X.L. quartz vein is irregularly mineralized with galena, sphalerite and tetrahedrite. The vein trends north, dips 40 degrees west and lies between porphyritic andesite on the hangingwall and slate on the footwall. In an opencut, at 1,387 metres elevation, the vein is 0.76 metres wide and can be traced for 15 metres. Along strike the vein abruptly passes into a zone of narrow stringers. A channel sample collected in 1946(?) assayed 0.34 gram per tonne gold, 185.1 grams per tonne silver, 0.15 per cent copper, 1.6 per cent lead, 6.9 per cent zinc and 0.13 per cent cadmium across a width of 0.76 metre (Minister of Mines Annual Report 1946, p. 80).

A 0.9 to 3.7-metre wide quartz-carbonate breccia zone occurs about 460 metres east of the I.X.L. vein, at an elevation of 1,433 metres. The zone follows the contact, striking 075 degrees and dipping 45 degrees north, between volcanics and argillite. The zone is sparsely mineralized with galena and sphalerite.

The Goat vein, comprising a 0.1 to 0.8 metre wide quartz stringer vein, is located elsewhere on the property (location unknown). The vein extends over a length of 240 metres between elevations of 1,067 and 1,189 metres. The quartz contains disseminated to semi-massive pyrite, galena and sphalerite. A channel sample, taken in 1946(?) from an adit at 1,067 metres elevation, assayed nil gold, 75.4 grams per tonne silver, 0.07 per cent copper, 2.90 per cent lead, 3.9 per cent zinc and 0.05 per cent cadmium across a width of 0.71 metre (Minister of Mines Annual Report 1946, p. 80).

BIBLIOGRAPHY

EMPR AR 1928-104; *1930-106; 1931-43; 1932-59; 1934-B24; 1935-B26; *1946-80
EMPR BULL 63
EMPR MAP 8
GSC MEM 175, p. 128
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/16 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 048** NATIONAL MINERAL INVENTORY: 104A4 Ag22

NAME(S): **ST. ELMO**, BINGO

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 04 07 N NORTHING: 6213991
LONGITUDE: 129 46 53 W EASTING: 451353
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The exact location of the St. Elmo occurrence is not known. The St. Elmo claims are reported to be on the west side of the glacial tongue descending from the area between the peaks of Mt. Gladstone and Mt. Disraeli, and higher up than the Jutland claims (104A 046).

COMMODITIES: Silver Zinc Lead Gold Copper

MINERALS
SIGNIFICANT: Galena Sphalerite Tetrahedrite Chalcopyrite
ASSOCIATED: Calcite Quartz
ALTERATION: Pyrite
ALTERATION TYPE: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: STRIKE/DIP: 070/S TREND/PLUNGE:
COMMENTS: Mineralized fracture.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Intrusive

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1947
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	2972.6000	Grams per tonne
Gold	0.6900	Grams per tonne
Copper	0.8000	Per cent
Lead	8.3000	Per cent
Zinc	4.6000	Per cent

COMMENTS: Sample from the upper cut across a width of 18 centimetres.
REFERENCE: Minister of Mines Annual Report, 1947.

CAPSULE GEOLOGY

The exact location of the St. Elmo occurrence is not known. The St. Elmo claims were reported to lie on the west side of the glacier, across from the Jutland showing (104A 046), at the head of the north fork of Bitter Creek (now Roosevelt Creek).

The St. Elmo claims were owned by Cowan, McGinnis and Watkins in 1919. The latter also owned the nearby Jutland 2-3 claims. Little work was reported during 1919-20 but, evidently, a 6-metre long adit was driven at this time. In 1946, Cameron and Robichaud held the Bingo claim group in the area; the Bingo claims may have been a restaking of the St. Elmo claims. The following year the owners drove a short adit on the lower of two lenses and mined 14.5 tonnes of sorted ore. A shipment of 13.6 tonnes of ore was made that year; 57,354 grams of silver, 2,374 kilograms of lead and 3,101 kilograms of zinc were recovered. No further work has been reported on the occurrence.

The area is underlain by northeast-striking, southeast-dipping

CAPSULE GEOLOGY

argillites of the Middle Jurassic Salmon River Formation(?) (Hazelton Group) (Bulletin 63). These rocks are intruded by grey-green, medium-grained sill-like intrusives (Minister of Mines Annual Report 1947, p. 91).

A mineralized fracture has been traced for about 150 metres in a bleached and pyritized zone, 3 to 6 metres wide. The vein strikes 070 degrees and dips steeply south. The vein is generally less than 5 centimetres wide, but is up to 0.3 metre wide where the vein crosses intrusive rocks. It comprises coarse-grained calcite, galena and sphalerite with minor quartz, tetrahedrite and chalcopyrite.

Two opencuts expose the upper and lower lenses in the vein. The old adit was driven in the upper lens and shows that the vein decreases from a maximum width of 0.3 metre to 1 centimetre in a length of 6 metres. The adit driven in 1947 was emplaced on the lower lens.

A chip sample from the upper lens assayed 2,972.6 grams per tonne silver, 8.3 per cent lead, 4.6 per cent zinc, 0.8 per cent copper and 0.69 grams per tonne gold across 18 centimetres (Minister of Mines Annual Report 1947, p. 91).

BIBLIOGRAPHY

EMPR AR 1919-69; 1920-57; *1947-91
EMPR BULL 63
EMPR MAP 8
GSC MEM 175, p. 147
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/15 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 049** NATIONAL MINERAL INVENTORY: 104A4 Ag20

NAME(S): **MAYOU 1-2 (L. 5864-5865)**

STATUS: Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 03 00 N NORTHING: 6211945
LONGITUDE: 129 48 57 W EASTING: 449185
ELEVATION: 1640 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized breccia zone (Assessment Report 19242).

COMMODITIES: Copper Silver Gold Zinc Lead

MINERALS
SIGNIFICANT: Chalcopyrite Sphalerite Galena
ASSOCIATED: Quartz Carbonate
ALTERATION: Limonite Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)
DIMENSION: STRIKE/DIP: 312/70W TREND/PLUNGE:
COMMENTS: The attitude of the mineralized quartz-carbonate breccia zone.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Feldspar Porphyry Dike
Quartz Monzonite Dike
Lamprophyre Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	3.8000	Grams per tonne
Gold	0.0300	Grams per tonne
Copper	0.5700	Per cent
Lead	0.0100	Per cent
Zinc	0.0100	Per cent

COMMENTS: Chip(?) sample across 1.5 metres.
REFERENCE: Assessment Report 19242.

CAPSULE GEOLOGY

The Mayou showing lies about 2.8 kilometres due north of the confluence of Roosevelt and Bitter Creeks.

In 1928, the Mayou Gold Copper Company acquired a group of claims, including the Mayou 1-2 claims, north of Bitter Creek. During 1928-30, the company carried out open cutting and emplaced 2(?) adits on the claims. Reported production in 1929 was 7247 grams of silver, 432 kilograms of lead and 602 kilograms of zinc from 2 tonnes of ore.

No further work was reported until 1983 when Nor-Con Exploration Ltd. conducted a prospecting and geological mapping program. In 1984, Maralgo Mines Limited flew an airborne VLF-EM and magnetometer survey over the area. No more work was reported until 1989 when Grey Silver Mines performed geological mapping, sampling and soil surveys in the area. The latter work included sampling on the showing. The following year Varitech Resources Ltd. conducted a program of geological mapping, sampling, prospecting and soil, VLF-EM and magnetometer surveys in the area. The showing was sampled again that

CAPSULE GEOLOGY

year.

The area is predominantly underlain by north to north-northeast striking, folded argillites of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63). The sediments are cut by several north to northwest-trending feldspar porphyry, quartz monzonite and lamprophyre dikes that belong to the Portland Canal dike swarm. Mineralization comprises several en echelon(?), limonitic zones across a width of about 100 to 150 metres and over an exposed length of approximately 300 metres.

A quartz-carbonate breccia zone is hosted in a feldspar porphyry dike. The zone, striking 312 degrees and dipping 70 degrees south, carries up to 5 per cent chalcopyrite and minor malachite. A chip sample across a width of 1.5 metres assayed 0.57 per cent copper, 3.8 grams per tonne silver, 0.03 gram per tonne gold, 0.01 per cent zinc and 0.01 per cent lead (Assessment Report 19242).

About 50 metres west of the breccia zone a parallel(?) quartz vein, containing malachite and chalcopyrite, is hosted in black argillite. A grab sample from the vein assayed 20.92 per cent copper, 42.2 grams per tonne silver, 0.10 gram per tonne gold, 0.05 per cent zinc and 0.01 per cent lead (Assessment Report 19242).

Minor galena and sphalerite are also present locally (Assessment Report 12399).

BIBLIOGRAPHY

EMPR AR *1928-102; 1929-49,97,433; 1930-106,361; 1935-134
EMPR BULL 63
EMPR ASS RPT *12399, 13352, *19242, 20379, *20622
EMPR MAP 8
EMR MP CORPFILE (Mayou Gold Copper Co. Ltd.)
GSC MEM 175, p. 131
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/27 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 050**

NATIONAL MINERAL INVENTORY: 104A4 Au1

NAME(S): **LITTLE WONDER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 03 22 N
LONGITUDE: 129 51 18 W
ELEVATION: 1189 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The exact location of the Little Wonder showings is not known. The Little Wonder claims were reported to lie north of Bitter Creek, on the south side of Blackcurrent Creek. The showings are presumed to lie about 1.2 kilometres north of the summit of Ore Mountain.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6212654
EASTING: 446754

COMMODITIES: Silver, Copper, Lead, Zinc

MINERALS

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

DEPOSIT

CHARACTER: Vein, Shear
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
STRIKE/DIP: 315/45W
TREND/PLUNGE:
COMMENTS: Main quartzose zone.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY:
Acid Dike
Feldspar Porphyry Dike
Graphitic Argillite
Argillite
Quartzite
Quartz Porphyry Dike
Diorite Dike
Felsite Dike
Rhyolite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1928
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	6.9000	Grams per tonne

COMMENTS: Across 1.5 metres. Trace gold.
REFERENCE: Minister of Mines Annual Report, 1928, page 105.

CAPSULE GEOLOGY

The exact location of the Little Wonder showings is not known. The Little Wonder claims were reported to lie north of Bitter Creek, on the south side of Blackcurrent Creek, a north flowing tributary of the Bear River, just southwest of Mosquito Creek. The main showings are assumed to lie near the headwaters of Blackcurrent Creek.

The Little Wonder claims were owned by Suppelca and Hunter in 1926. Several opencuts and tunnels were reported during 1926-32. No further work has been reported.

The area is underlain by north-striking, contorted argillites and quartzites of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63). These rocks are extensively invaded by, predominantly northwest-trending, dikes of quartz porphyry, feldspar porphyry, diorite, felsite and rhyolite. These belong to

CAPSULE GEOLOGY

the Portland Canal dike swarm (Bulletin 58, 63).

Mineralization principally comprises quartzose fracture zones, containing galena, sphalerite, pyrite and some tetrahedrite. The zones occur in sheared and silicified argillite close to the contact with intrusive acidic dikes. Pyritized quartz replacement zones, mineralized with pyrite, galena, sphalerite and chalcopyrite, also occur in feldspar porphyry.

The main quartzose fracture zone trends 315 degrees and dips 45 degrees west. At 1,158 metres elevation, an opencut exposes a width of 2 metres of brecciated quartzose vein with pyrite, sphalerite, galena and chalcopyrite. A 3.7-metre wide acidic dike, overlying graphitic argillite, forms the footwall. The hangingwall comprises pyritized and silicified feldspar porphyry containing some galena and chalcopyrite. A sample collected in 1928 from the main zone(?) assayed 6.9 grams per tonne silver and trace gold across 1.5 metres (Minister of Mines Annual Report, 1928). Immediately to the east, a 0.4-metre wide branch vein trends north and dips 70 degrees west. The vein is hosted in sheared argillite and lies along the contact of a quartz porphyry dike. The vein is mineralized with sphalerite, galena and pyrite.

At 1,283 metres elevation, stripping and open cutting have exposed another zone of pyritized and silicified feldspar porphyry across a width of 3.7 metres. The zone trends 280 degrees and dips 70 degrees. Mineralization comprises sphalerite and galena; low gold values are reported (Minister of Mines Annual Report, 1931).

BIBLIOGRAPHY

EMPR AR 1926-93; *1928-105; *1931-42; 1932-59
EMPR BULL 58; 63
EMPR MAP 8
EMPR ASS RPT 20379
GSC MEM 175, p. 128
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1992/01/16	REVISED BY:	WC	FIELD CHECK:	N

MINFILE NUMBER: **104A 051** NATIONAL MINERAL INVENTORY: 104A4 Ag19

NAME(S): **LAKE SHORE (L. 4808)**, ORE MOUNTAIN

STATUS: Showing Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 02 40 N NORTHING: 6211372
LONGITUDE: 129 52 31 W EASTING: 445474
ELEVATION: 1021 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Portal of adit (Assessment Report 13352).

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Arsenopyrite Sphalerite Galena Chalcopyrite
ASSOCIATED: Pyrite Pyrrhotite Arsenopyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Podiform
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Fractured

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Slate
Felsic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: ADIT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	139.5000	Grams per tonne
Gold	3.4000	Grams per tonne
Copper	0.1900	Per cent
Lead	1.0000	Per cent
Zinc	0.6200	Per cent

COMMENTS: Chip(?) sample across 27 centimetres in the adit; 4.95 metres from the portal.
REFERENCE: Assessment Report 13352.

CAPSULE GEOLOGY

The Lake Shore showing is located about 13 kilometres northeast of Stewart, about 3.5 kilometres east-northeast of the confluence of Bitter Creek and the Bear River, on the west side of Ore Mountain.

In 1925, the Ore Mountain Mining Co. Ltd. acquired the Lake Shore claim (L. 4808). During 1925-28, 2 crosscut tunnels, 18 metres and 116 metres long, respectively, and several opencuts were emplaced on the mineralization. Only minor surface work was reported during 1929-32. In 1955, the claim was acquired by Rufus-Argenta Mines Limited. In 1966, the company name was changed to Crest Ventures Limited. During 1966-67, Crest Silver Company Limited, a subsidiary of Crest Ventures, acquired the claim and carried out some geological mapping. During 1970-73, Ardo Mines Ltd. optioned the property and carried out prospecting, magnetometer and electro- magnetic surveys. During 1979-80, Beaver Gold Resources Inc. acquired the property in and carried out mapping, prospecting and sampling. In 1984, the property was owned by Grey Silver Mines Ltd. That year Maralgo Mines

CAPSULE GEOLOGY

Limited optioned the property and flew an airborne VLF-EM and magnetometer survey over the area and conducted geological mapping, prospecting and sampling on the occurrence. No further work was reported until 1989 when Grey Silver Mines performed geological mapping, sampling and soil surveys in the area. The following year Varitech Resources Ltd. conducted a program of geological mapping, prospecting, sampling and soil, VLF-EM and magnetometer surveys in the area. The showing was resampled that year.

The area is underlain by north to north-northeast striking, steeply dipping argillites and slates of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63). The showing lies close to the unconformable contact of these rocks with the underlying volcanics of the Upper Triassic to Lower Jurassic Unuk River Formation. The rocks are cut by several north to northwest-trending narrow felsic dikes that belong to the Portland Canal dike swarm. A prominent north to northeast trending fault lies immediately east of the showing. The dikes and mineralization appear to terminate against this fault (Assessment Report 13352).

Most of the mineralization occurs in the sediments, close to the contacts with a series of felsic dikes. Some mineralization occurs in the dikes themselves as fracture fillings and along joints. Mineralization comprises predominantly pyrite and pyrrhotite with lesser arsenopyrite, sphalerite, galena and chalcopyrite in a siliceous gangue. The sulphides form discontinuous, north-trending and west-dipping gash veins and pods up to 3 metres across; widths are typically less than 0.5 metre. The discrete mineral accumulations extend over a north to northeast length of about 150 metres, approximately parallel to the fault. The individual gash veins and pods, especially those hosted in dikes, tend to trend slightly oblique to the fault.

A chip(?) sample was collected in 1984 from the adit, 4.95 metres from the portal, near the south end of the exposed mineralization. The sample assayed 3.4 grams per tonne gold, 139.5 grams per tonne silver, 0.19 per cent copper, 1.0 per cent lead and 0.62 per cent zinc across a width of 27 centimetres (Assessment Report 13352).

A grab sample collected from a new discovery, approximately 210 metres south-southeast of the adit, in 1979 assayed 26.4 grams per tonne gold, 1,033.7 grams per tonne silver, 0.21 per cent copper, 11.75 per cent lead and 6.93 per cent zinc (Assessment Report 8095).

BIBLIOGRAPHY

EMPR AR 1925-93; 1926-93; *1928-104; 1929-433; 1931-43; 1932-43; 1966-41; 1967-34
EMPR GEM 1970-74; 1971-32; 1972-512; 1973-494
EMPR EXPL 1979-273
EMPR BULL 63
EMPR ASS RPT *8095, 10489, *13352, 19242, 20379, *20622
EMPR MAP 8
EMR MP CORPFILE (Ardo Mines Ltd.; Crest Ventures Limited; Ore Mountain Mining Company, Limited; Van-Sea Resources Limited)
GSC MEM 159, p. 40; 175, p. 134
GSC MAP 28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/17 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 052**

NATIONAL MINERAL INVENTORY:

NAME(S): **SARAH 7**, SARAH 3-10

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 03 50 N
LONGITUDE: 129 44 18 W
ELEVATION: 1817 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of sample 45241B on the Sarah 7 claim (Assessment Report 21942).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6213436
EASTING: 454028

COMMODITIES: Silver Gold Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Breccia Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Brecciated Volcanic
Agglomerate
Volcanic
Intrusive

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1991

COMMODITY	GRADE	
Silver	4.9000	Grams per tonne
Gold	0.0430	Grams per tonne
Copper	0.0043	Per cent

COMMENTS: Sample 45241B of maroon agglomerate hosting a lens or shear containing 2-20 per cent pyrite and 2 per cent chalcopyrite.
REFERENCE: Assessment Report 21942.

CAPSULE GEOLOGY

The Sarah 7 showing is located 17 kilometres northwest of Mt. Andreas Vogt, 22 kilometres east-southeast of Stewart.

Mineralization was discovered by Bond Gold Canada Inc. while conducting a reconnaissance mapping and lithogeochemical sampling program in 1991.

The area is underlain by volcanic and sedimentary rocks of the Triassic to Jurassic Hazelton Group. These are intruded by dikes and plutons of undetermined age.

Anomalous silver values, with good correlation in lead and arsenic, resulted from the sampling program. Mineralization, hosted in variably altered and/or sheared and brecciated volcanics, consists of disseminated pyrite (up to 20 per cent) and chalcopyrite (up to 3 per cent).

A sample (45241B) of maroon agglomerate, hosting a lens or shear and containing 2-20 per cent pyrite and 2 per cent chalcopyrite, assayed 4.9 grams per tonne silver, 0.043 gram per tonne gold and 0.0043 per cent copper (Assessment Report 21942).

BIBLIOGRAPHY

EMPR BULL 63
EMPR MAP 8
EMPR ASS RPT *21942

BIBLIOGRAPHY

GSC MEM 175
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1993/03/01 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: 1993/03/08 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 053**

NATIONAL MINERAL INVENTORY: 104A4 Cu13

NAME(S): **GOLD BAR NO. 1**, AMERICA'S GIRL, AMERICUS GIRL, GOOD ENOUGH, GOLDBAR, BLUE BELL, BIG BOULDER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 01 54 N
LONGITUDE: 129 54 42 W
ELEVATION: 305 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Location of showing #59 (Geological Survey of Canada Memoir 175).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6209979
EASTING: 443189

COMMODITIES: Gold Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Tertiary			Coast Plutonic Complex

LITHOLOGY: Quartz Monzonite
Greenstone

HOSTROCK COMMENTS: The hostrocks are not clear; GSC Map 28A indicates that the showing occurs in the Tertiary Bitter Creek quartz monzonite pluton.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1925
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	5.8000	Grams per tonne

COMMENTS: Vein on the Americus Girl claims reported to contain $3.50 per tonne gold.
REFERENCE: Minister of Mines Annual Report, 1925, page 92.

CAPSULE GEOLOGY

The exact location of the Gold Bar No. 1 occurrence is not known. The Gold Bar claim was reported to lie on the south side of Bitter Creek, about 1.6 kilometres above its mouth (Geological Survey of Canada Map 28A and Memoir 175).

The Good Enough claim group, which included the Gold Bar No. 1 claim, was owned by Crosset and associates in 1910. That year 12 metres (40 feet) of tunnelling was reported. The America's (Americus) Girl claim group, staked in about 1925, covered approximately the same area. This claim group was owned by Duke, Campbell and Cullen who completed some open cutting and stripping and emplaced 2(?) short tunnels during 1925-27. The recent Tenajon Goldbar property is located just to the east of these showings.

The area is underlain by greenstones of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group), close to the contact with the Tertiary(?) Bitter Creek quartz monzonite pluton (Geological Survey of Canada Memoir 175; Bulletin 58, 63).

Since the exact location is uncertain, the nature of the host rocks is not clear. According to Geological Survey of Canada Map 28A, the mineralization is hosted in the Bitter Creek pluton. The showing comprises a quartz vein, up to 3 metres wide, that is reported to carry gold (Geological Survey of Canada Memoir 32, 175).

CAPSULE GEOLOGY

On the Americus Girl claims, at an elevation of 500 metres, a 0.8 to 1.2-metre wide quartz vein contains minor chalcopyrite and pyrite. It is reported to contain gold values of about 5.8 grams per tonne ($3.50 per tonne) (Minister of Mines Annual Report, 1925). Another narrower, roughly parallel quartz vein lies about 60 metres lower.

BIBLIOGRAPHY

EMPR AR 1910-64; *1925-92; 1927-92
EMPR BULL 58; 63
EMPR MAP 8
EMPR ASS RPT 20379
GSC MEM 32, p. 58; *175, p. 105,119
GSC MAP *28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1992/01/17	REVISED BY:	WC	FIELD CHECK:	N

MINFILE NUMBER: **104A 054** NATIONAL MINERAL INVENTORY: 104A4 Ag24

NAME(S): **TYEE (L. 4467)**, MAYFLOWER (L. 4468), MOTHER LODE, FRANKLIN, SURPRISE, MM 100, MM

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 00 21 N NORTHING: 6207121
LONGITUDE: 129 55 58 W EASTING: 441834
ELEVATION: 120 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Portal of the Tyee adit (Assessment Report 20975).

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite Galena Sphalerite
COMMENTS: Minor molybdenite and scheelite.
ASSOCIATED: Quartz Carbonate
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: 25 x 1 Metres STRIKE/DIP: 327/60S TREND/PLUNGE:
COMMENTS: Vein in Tyee shaft.

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Middle Jurassic	Hazelton	Salmon River	
Cretaceous-Tertiary			Coast Plutonic Complex

LITHOLOGY: Quartz Monzonite
Tuffaceous Sediment/Sedimentary
Granodiorite
Tuff
Lamprophyre Dike

HOSTROCK COMMENTS: The hostrock is a small quartz monzonite/granodiorite stock which is part of the Hyder pluton of the Coast Plutonic Complex.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SHAFT REPORT ON: N

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

COMMODITY	GRADE	
Silver	164.6000	Grams per tonne
Gold	2.7000	Grams per tonne

COMMENTS: Chip(?) sample from the Tyee shaft.
REFERENCE: Assessment Report 10190.

ORE ZONE: ADIT REPORT ON: N

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

COMMODITY	GRADE	
Silver	1961.2000	Grams per tonne
Gold	78.2000	Grams per tonne

COMMENTS: From the Mayflower No. 1 adit.
REFERENCE: Assessment Report 10190.

CAPSULE GEOLOGY

The Tyee occurrence is located about 8.5 kilometres

CAPSULE GEOLOGY

north-northeast of Stewart, approximately 400 metres east of the Stewart highway (37A).

Early records indicate the Mother Lode claim, owned in 1906 by McKay, was restaked in about 1909 as the Tyee claim to protect a gold-silver showing. Opencuts were reported in 1909. The following year Northern Consolidated Mining and Development Co., apparently did some work on the Tyee claim; a shaft is mentioned but it is not clear whether it is the Tyee shaft or not. The Franklin (Surprise) group apparently covered another showing (the Surprise), later renamed the Mayflower(?) immediately to the east in 1908. Franklin Consolidated Mines, was formed in 1910 to acquire the claims and emplaced opencuts and an adit. The Mayflower claim group was first mentioned in 1911 and may have been a restaking of the Franklin group; no work was reported at this time. In 1917, 6 metres of tunnel were reported on the Mayflower group, then owned by Gibson and Woodmore. A few tonnes of ore, assaying $60 per tonne gold (1918 gold price), was apparently shipped in 1918; it is not known whether the ore was from the Tyee or one of the veins on the Mayflower group. Gibson carried out intermittent exploration during 1917-28. Meanwhile, McKay and Bibeau had commenced driving a crosscut tunnel on the Tyee; in 1921 a shaft at the Tyee was reported to be 12.2 metres deep. In 1928, the Tyee and Mayflower properties were consolidated under the Mayflower Mining Company; the crosscut tunnel on the Tyee claim was reported to be 36.6 metres long at this time. The company charter was surrendered in 1931. Gibson and leasees conducted intermittent exploration during 1931-36. In 1936, 8.2 tonnes of ore were shipped from the property, from which 124.4 grams of gold and 4,478.8 grams of silver were recovered. The source of the ore is not known; it may have been from the Tyee or Mayflower veins.

No further work was reported until 1980 when Hopper staked the MM100 claim over the occurrences. Kingdom Resources Ltd. (later renamed KRL Resources Corp.) subsequently acquired the property and, during 1981-83, carried out geological mapping, prospecting, trenching, sampling and soil and rock geochemical surveys in the area. No further work was done until 1990 when KRL conducted airborne and ground VLF-EM and magnetometer surveys and geological mapping and prospecting; most of this work was done along Victoria Creek, about 900 metres east of the Tyee occurrence.

The area is underlain by a small Tertiary(?) stock of quartz monzonite/granodiorite which may be part of the Hyder pluton of the Coast Plutonic Complex (Bulletin 58, 63). The stock intrudes north-striking, west-dipping tuffaceous sediments and tuffs (Geological Survey of Canada Memoir 175) of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63). The latter rocks are unconformably overlain to the east by the Middle Jurassic Salmon River Formation. The Unuk River Formation rocks are also intruded to the east by north-northwest trending lamprophyre dikes (Bulletin 58, 63). Northeast-trending shear zones are conspicuous in the area.

The Tyee occurrence is hosted in the quartz monzonite stock, close to the eastern contact with the tuffaceous rocks. Quartz veins and lenses, mineralized with pyrite, chalcopyrite and minor galena and sphalerite, occur along north to northwest-trending joints and shears. Minor molybdenite and scheelite have also been reported (Assessment Report 10190). The shaft was emplaced on a 0.3 to 1.5-metre wide, 25 metres long, northwest-trending, vertical vein. The vein comprises approximately equal amounts of quartz and sulphides; pyrite predominates but some chalcopyrite is present (Geological Survey of Canada Memoir 175). A chip(?) sample collected in 1981 from the shaft assayed 2.7 grams per tonne gold and 164.6 grams per tonne silver across 0.6 metres (Assessment Report 10190).

Three veins are exposed in the adit, immediately northwest of the shaft. At the portal, a 30-centimetre wide quartz-pyrite vein trends 345 degrees and dips 30 degrees to the northeast. At 21.6 metres from the portal, a 0.8 to 1.4-metre wide, well mineralized vein trends 327 degrees and dips 60 degrees to the southwest. A chip(?) sample across this vein assayed 5.5 grams per tonne gold, 178.3 grams per tonne silver and nil copper across 1.4 metres (Minister of Mines Annual Report, 1936, p. B19). At 30 metres from the portal, a sparsely mineralized vein, 36 centimetres wide and trending 350 degrees and dipping 70 degrees west, assayed negligible gold, silver and copper values.

The Mayflower occurrences lie east of the Tyee occurrence. Several northwest-trending, southwest-dipping quartz-carbonate fissure veins and shears are hosted in Unuk River Formation tuffaceous sediments and tuffs, just east of the intrusive that hosts the Tyee occurrence (Geological Survey of Canada Memoir 175, Assessment Report 10190). Three short adits are reported along Mayflower Creek (Assessment Report 10190). The adits have been

CAPSULE GEOLOGY

driven along well mineralized veins, 0.3 to 0.9 metre wide, that carry pyrite, galena, sphalerite and chalcopyrite (Geological Survey of Canada Memoir 175).

The No. 1 adit lies about 240 metres east of the Tyee adit on the south side of the creek. A grab sample collected from the No. 1 adit in 1981 assayed 78.2 grams per tonne gold and 1,961.2 grams per tonne silver (Assessment Report 10190).

The No. 2 adit lies about 40 metres east-southeast of the No. 1 adit, also on the south side of the creek. A grab sample from an outcrop about 20 metres downstream from the No. 2 adit assayed 93.3 grams per tonne gold and 421.7 grams per tonne silver across 18 centimetres of quartz and sulphide (Assessment Report 10190).

The No. 3 adit lies about 110 metres east of the No. 1 adit, on the north side of the creek. A grab sample from a 10-centimetre wide sulphide vein(?) above the No. 3 adit, assayed 33.6 grams per tonne gold, 1,306.3 grams per tonne silver, 0.99 per cent copper, 3.65 per cent lead and 2.65 per cent zinc (Assessment Report 10190).

BIBLIOGRAPHY

EMPR AR 1909-65; 1910-64; 1911-74; 1917-85; 1918-77; 1919-65; 1921-65; 1922-71; 1923-74; 1925-92; 1928-101; 1934-24; 1935-26; *1936-B17
EMPR ASS RPT 8391, *10190, 11915, 20379, *20975
EMPR BULL 58; 63
EMPR MAP 8
EMPR PF (KRL Resources Corp., Statement of Material Facts #16/91, February, 1991)
EMR MP CORPFILE (Mayflower Mining Company, Limited)
GSC MAP *28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC MEM 32, p. 43; 159, p. 40; 175, pp. 130, 149
GSC OF 2582
GCNL #222, 1981; #4, 1984
WWW http://www.infomine.com/

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/12/30 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 055**

NATIONAL MINERAL INVENTORY:

NAME(S): **518 ZONE**, STAR, MM, HILL TOP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 00 32 N
LONGITUDE: 129 54 52 W
ELEVATION: 670 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrops (Assessment Report 20975).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6207446
EASTING: 442982

COMMODITIES: Gold, Silver, Lead, Copper, Arsenic

MINERALS

SIGNIFICANT: Arsenopyrite, Pyrite, Pyrrhotite
ASSOCIATED: Quartz
ALTERATION: Silica, Sericite, Pyrite
ALTERATION TYPE: Silicific'n, Sericitic, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb), H04 Epithermal Au-Ag-Cu: high sulphidation
DIMENSION:
STRIKE/DIP: 100/90
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Cherty Argillite
Chert
Granodiorite
Siltstone
Feldspathic Sill
Altered Volcanic
Andesite
Intrusive

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1990

COMMODITY	GRADE	
Silver	270.0000	Grams per tonne
Arsenic	14.5000	Per cent
Gold	21.3000	Grams per tonne
Copper	0.0955	Per cent
Lead	0.3550	Per cent

COMMENTS: Assay result for gold; geochemical analytical results for other metals have been converted to grams per tonne and per cent respectively.
REFERENCE: Assessment Report 20975.

CAPSULE GEOLOGY

The 518 zone is located on Victoria Creek, about 9 kilometres north-northeast of Stewart and approximately 1.5 kilometres east of the Stewart highway (37A). The showing lies about 750 metres northeast of the Main Reef occurrence (104A 067).

A showing may have been known at this location in the 1920s (or earlier), when the area was covered by the Star 1-2 claims, owned initially by Horstman and then later Victoria Mines, Limited (see 104A 067). The mineralization was rediscovered during prospecting and geological mapping on the MM 100 claim by KRL Resources Corp. in 1990. Airborne and ground VLF-EM and magnetometer surveys were also completed at this time. Drilling on the 518 zone was done in 1991 by

CAPSULE GEOLOGY

KRL Resources and the Hill Top zone was discovered at this time.

The area is underlain by north-northeast striking, west-dipping argillites, cherts and siltstones of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 58, 63).

The 518 zone is exposed in a cliff on the west side of Victoria Creek. North-striking, west-dipping pyritic and cherty bedded argillite is intruded by a 30 metres thick feldspathic sill. The upper and lower contacts of the sill are bleached and mineralized with patchy sulphides. A massive vein of quartz and arsenopyrite cuts the sill. The vein is up to 0.8 metre wide, trends 100 degrees and dips vertically. Narrow wallrock alteration comprises sericite, quartz and disseminated pyrite.

Grab samples from the showing collected in 1990 assayed up to 21.3 grams per tonne gold, 270 grams per tonne silver, 14.47 per cent arsenic, 0.0955 per cent copper, 0.355 per cent lead and 0.0127 per cent zinc (Assessment Report 20975). Drillholes intersected hydrothermally altered rocks with disseminated mineralization in altered mafics. Drilling results in 1991 were disappointing.

The Hill Top zone occurs about 270 metres east of the 518 zone on a hill underlain by silicified and mineralized argillites, andesites and intrusive rocks. Mineralization consists of arsenopyrite, pyrite, and pyrrhotite in a quartz stockwork cutting granodiorite. A wide zone of gold enrichment was intersected in drillhole MM-1. Assay values were 0.544 gram per tonne over 29.5 metres (Assessment Report 22053).

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR ASS RPT 20379, *20975, *22053
EMPR MAP 8
EMPR PF (In 104A 054 - KRL Resources Corp., Statement of Material Facts #16/91, February, 1991)
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/12/30 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/01/10 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 056** NATIONAL MINERAL INVENTORY: 104A4, 103P13 Ag8

NAME(S): **EMPEROR**, NORTH, SOUTH, KING

STATUS: Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 00 08 N NORTHING: 6206684
LONGITUDE: 129 53 23 W EASTING: 444514
ELEVATION: 954 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Upper adit (Assessment Report 20975).

COMMODITIES: Gold Zinc Silver Copper Lead

MINERALS
SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite Jamesonite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: 300 x 10 Metres STRIKE/DIP: 015/50W TREND/PLUNGE:
COMMENTS: Dimensions of eastern vein. Attitude of both veins.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Quartz Diorite Dike
Gabbro Dike
Lamprophyre Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1934
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	133.7000	Grams per tonne
Gold	1.4000	Grams per tonne
Copper	0.1000	Per cent
Lead	0.5000	Per cent
Zinc	14.0000	Per cent

COMMENTS: A chip(?) sample across 1.5 metres of the best part of the vein on the east side of the lower crosscut (elevation 878 metres).
REFERENCE: Minister of Mines Annual Report, 1934, page B23.

CAPSULE GEOLOGY

The Emperor prospect is located about 8.5 kilometres northeast of Stewart on the divide between Bitter and Glacier Creeks, approximately 3.2 kilometres east of the Stewart highway (37A).

The occurrence was first covered by the North and South claims, owned by McKay in 1923. That year Sieffert organized the North and South Syndicate to develop the property. The Syndicate emplaced opencuts, drove a 37-metre long crosscut and drifted 20 metres on the hangingwall of the vein in 1924. Emperor Mines was incorporated late that year and purchased the claims. In 1925, the company drove a second, 143-metre long crosscut tunnel 76 metres lower in elevation and 100 metres south of the upper tunnel. The latter tunnel intersected a second, parallel vein about 60 metres west of the main vein. The Emperor property was subsequently allowed to lapse and was restaked as the King claim group by Rochfort in 1934. No further work was reported until 1965 when Silver Arrow Mines Ltd. conducted some stripping on the main vein. No more work was reported until

CAPSULE GEOLOGY

1980 when Hopper staked the MM 100 claim over the area and carried out prospecting near of the Emperor occurrence. Kingdom Resources Ltd. (later renamed KRL Resources Corp.) subsequently acquired the property. During 1981-83, Kingdom carried out geological mapping, prospecting, trenching, sampling and soil and rock geochemical surveys in the area, mostly west of the occurrence. No further work was done until 1990 when KRL conducted airborne and ground VLF-EM and magnetometer surveys and geological mapping and prospecting; most of this work was done along Victoria Creek, west of the prospect.

The area is underlain by north-striking, west-dipping argillites of the Middle Jurassic Salmon River Formation (Hazelton Group). The argillites are intruded by numerous north-trending dikes of quartz diorite, gabbro and lamprophyre (Geological Survey of Canada Memoir 175, Bulletin 58, 63).

Mineralization comprises two parallel quartz veins, 60 metres apart, that trend north (or 015 degrees, Minister of Mines Annual Report 1934) and dip 50 degrees west (Geological Survey of Canada Memoir 175). They apparently follow a fault between two dikes. The quartz veins, accompanied by minor calcite, are sparingly mineralized with disseminated pyrite, galena, sphalerite, chalcopyrite and rare jamesonite.

The eastern vein is 1.5 to 10 metres wide and has been traced for about 300 metres. It comprises closely spaced drusy quartz veins separated by argillite. In 1934, a sample was collected from the best section of the eastern vein on the east side of the lower crosscut. The sample assayed 1.4 grams per tonne gold, 133.7 grams per tonne silver, 0.1 per cent copper, 0.5 per cent lead and 14.0 per cent zinc across a width of 1.5 metres (Minister of Mines Annual Report, 1934 p. B23).

The western vein, exposed only in the lower crosscut tunnel, is 1.8 metres wide.

BIBLIOGRAPHY

EMPR AR 1923-74; 1924-64; 1925-86; 1926-92; 1927-90; 1928-426; *1934-B23; 1965-52
EMPR BULL 58; 63
EMPR ASS RPT *8391, 10190, 11915, 20379, *20975
EMPR MAP 8
EMPR PF (In 104A 054 - KRL Resources Corp., Statement of Material Facts #16/91, February, 1991)
EMR MP CORPFILE (Emperor Mines, Ltd.; Silver Arrow Explorations Ltd.)
GSC MEM 159, p. 41; 175, p. 113
GSC MAP 28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/09 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 057** NATIONAL MINERAL INVENTORY: 104A4 Ag7

NAME(S): **GOLDIE**

STATUS: Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 00 12 N NORTHING: 6206794
LONGITUDE: 129 52 22 W EASTING: 445572
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: The exact location of the Goldie occurrence is not known. The Goldie claims were apparently located east of the Emperor Mines (104A 056) property (Geological Survey of Canada Map 315A).

COMMODITIES: Lead Silver Zinc

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

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

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Slate
Argillite
Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1925
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	2880.0000	Grams per tonne
Lead	80.0000	Per cent

COMMENTS: Assays from 2 tonnes of selected clean galena.
REFERENCE: Minister of Mines Annual Report, 1925, page 88.

CAPSULE GEOLOGY

The exact location of the Goldie occurrence is not known. The Goldie claims are variously reported as being north or east of the Emperor deposit (104A 056). The occurrence is assumed to lie about 9 kilometres northeast of Stewart, about 4.2 kilometres east of the Stewart highway (37A), on the divide between Glacier and Bitter Creeks.

The Goldie claims were staked by Tooth, McLeod and Howse in 1924. A shallow, 6-metre long tunnel was driven on a galena-bearing quartz vein in 1925. Two tonnes of clean galena were shipped that year producing 2,550 grams of silver, 294 kilograms of lead and 122 kilograms of zinc. Assays values were 80 per cent lead and 2,880.0 grams per tonne silver (Minister of Mines Annual Report, 1925, p. 88). No further work has been reported.

The area is underlain by north-striking, west-dipping slates and argillites of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 58, 63; Geological Survey of Canada Memoir 175). North-trending dikes are conspicuous in the area (Minister of Mines Annual Report, 1926). Small quartz veins, striking in all directions, cut the fractured slates and are variably mineralized with pyrite, galena and sphalerite.

Mineralization occurs in a 9-metre wide belt of slate lying between two dikes. At 1219 metres elevation, another dike cuts diagonally across the slates and dikes. Galena occurs along a shear

CAPSULE GEOLOGY

that post-dates the latter dike, filling the vein for the width of the dike (about 5.5 metres).

BIBLIOGRAPHY

EMPR AR *1925-63,88,444; *1926-92
EMPR BULL 63
EMPR MAP 8
EMPR ASS RPT 20379
GSC MEM 175, p. 119
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/10 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 058**

NATIONAL MINERAL INVENTORY: 104A4 Ag7

NAME(S): **SUPERIOR**, B.C., O.H. 1-2,
ALBERT, MM 100

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 00 23 N
LONGITUDE: 129 53 18 W
ELEVATION: 1036 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The exact location of the showing is not known; the property covered the postulated northern extension of the Emperor vein and adjoined the property of Emperor Mines (104A 056). The location of the adit is shown on a compilation map of the area (Property File - KRL Resources Corp., 1991).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6207147
EASTING: 444607

COMMODITIES: Silver

MINERALS
SIGNIFICANT: Unknown
ASSOCIATED: Unknown
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Dike

HOSTROCK COMMENTS: The showing possibly occurs near the contact between sediments and the Tertiary(?) Bitter Creek quartz monzonite pluton.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The exact location of the Superior showing is not known. It lies about 9 kilometres northeast of Stewart and approximately 3.1 kilometres east of the Stewart highway (37A).

In 1925, Superior Mines was formed and purchased the B.C., O. & H. 1-2, and Albert claims that lay immediately north of the Emperor Mines property (104A 056). No work was done on the postulated extension of the Emperor vein, but some opencuts and a 6-metre long tunnel were emplaced on a cross vein at 1036 metres elevation. No further work has been reported on the showing. In 1980, Hopper staked the MM 100 claim over the area and carried out prospecting. Kingdom Resources Ltd. (later renamed KRL Resources Corp.) subsequently acquired the property. During 1981-83, Kingdom Resources carried out geological mapping, prospecting, trenching, sampling and soil and rock geochemical surveys in the area, mostly west of the occurrence. In 1990, KRL conducted prospecting, geological mapping, airborne and ground VLF-EM and magnetometer surveys. Most of this work was done along Victoria Creek, west of the prospect.

The area is predominantly underlain by north-striking, west-dipping argillites of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 58, 63). North-trending dikes are conspicuous in the area. The showing may lie close to the southern contact of the Tertiary Bitter Creek quartz monzonite pluton.

Few details are available regarding the mineralization. Mineralization occurs in small shears on either side of a light coloured, fine-grained dike. The tunnel was emplaced along the footwall of the dike. High silver values have been reported. The dike may be related to the Bitter Creek pluton (Property File - KRL Resources Ltd., Statement of Material Facts, February, 1991).

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EMPR AR *1925-87
EMPR BULL 58; 63
EMPR ASS RPT 8391, 10190, 11915, 20379, 20975
EMPR MAP 8
EMPR PF (In 104A 054 - KRL Resources Corp., SMF #16/91, February, 1991)
GSC MEM 175, p. 148
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/10 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 059** NATIONAL MINERAL INVENTORY: 104A4 Ag23

NAME(S): **BON ACCORD**, BON ACCORD 2 (L. 5738), BON ACCORD 1-10, L.L. & H., FIDELITY, KAI, KROHMAN, HARTLEY GULCH

STATUS: Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 00 20 N NORTHING: 6206947
LONGITUDE: 129 44 36 W EASTING: 453647
ELEVATION: 1045 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The No. 1 tunnel, at the approximate centre of the No. 2 vein (Assessment Report 10392).

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS
SIGNIFICANT: Galena Sphalerite Chalcopyrite Arsenopyrite Pyrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Pyrite
ALTERATION TYPE: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
SHAPE: Tabular
DIMENSION: 120 x 1 Metres STRIKE/DIP: 310/60N TREND/PLUNGE:
COMMENTS: Dimensions and attitude of the No. 1 or Lower vein.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Argillite
Siltstone
Tuffaceous Sandstone
Andesite
Diorite
Augite Porphyry
Granitic Dike

HOSTROCK COMMENTS: The augite porphyry has been mapped as fine-grained diorite (Assessment Report 21975).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	6.1000	Grams per tonne

COMMENTS: Drillhole 81-2, sample across 0.5 metre from the No. 1 vein.
REFERENCE: Assessment Report 10392.

CAPSULE GEOLOGY

The Bon Accord prospect is about 16.5 kilometres northeast of Stewart, on the north side of Hartley Gulch and approximately 3 kilometres west of Otter Mountain.

The L.L. & H. claim group was staked before 1910 by Lydden, Lade and Hartley. Stripping, open cutting and 2 tunnels were completed in 1910-11 and 1920-21. In 1928, Bitter Creek Mines Ltd. acquired the property, then comprising the Fidelity claims. The Marmot Metal Company Ltd. optioned the property late that year and carried out further tunnelling. The following year the Northern Metals Holding Syndicate performed more tunnelling on the No. 1 (upper) and No. 2 (lower) tunnels. The Bitter Creek Mines charter was surrendered in 1931. In 1931-32 the property was restaked by

CAPSULE GEOLOGY

Harkley, as the Bon Accord claim group and the No. 1 tunnel was extended. In 1934, Playfair Gold Mines Ltd. acquired the property. No further development work was done until 1941 when a third, 137-metre long tunnel (No. 3) was driven below the other 2 crosscuts. The crosscut intersected both the No. 1 and No. 2 veins; both veins were drifted on for 20 to 25 metres. No further work was done until 1981 when Northair Mines optioned the property. Northair carried out surface mapping, sampling and drilled 3 short surface holes (totalling 315 metres) about 125 metres south of the No. 1 tunnel. One of the drillholes penetrated the mineralized structures; the others failed to reach the targets. Prospecting was carried out on the property in 1983 by Norcan Exploration Ltd. In 1988, Ibex Energy Inc. did geochemical and geophysical surveys on the claims. Bond Gold Canada Inc. optioned the property in 1989 and did some prospecting and sampling in 1990 and 1991.

The area is predominantly underlain by west-northwest striking, northeast-dipping, variably pyritized argillites, siltstones, tuffaceous sandstones and andesite of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Assessment Report 10392). The argillites are cut by lenticular masses (sills? or dikes?), up to 30 metres thick, of augite porphyry (diorite?). Granitic dikes intrude both the supracrustals and the porphyry.

Two well defined shears cut across the sediments and the porphyry. The shears are 50 to 60 metres apart, trend north-northwest and dip 55 to 80 degrees northeast. The shears are marked by white gouge, 0.3 to 0.6-metre wide, and have been traced for more than 350 metres. Fracturing and brecciation extend up to 12 metres into the footwall where the shears cross the porphyry but are essentially absent where the shears cross argillite. Similarly, mineralization extends the full width of the brecciation in the porphyry but is confined to a quartz-sulphide vein in the argillite. Mineralization comprises quartz, carbonate, pyrite, arsenopyrite, galena, sphalerite and chalcopyrite.

There are 2 main structurally controlled quartz veins exposed in 3 crosscut tunnels.

The No. 1 tunnel (the uppermost one) exposes the No. 2 (or Upper) vein only. The No. 2 tunnel (the middle one) exposes the No. 1 (or Lower) vein at the portal and the No. 2 vein about 64 metres from the portal. The No. 3 tunnel (the lowermost one) exposes the Nos. 1 and 2 veins at 121 metres and 182 metres from the portal respectively. Mineralization extends over a width of more than 12 metres in the No. 2 vein exposed in the No. 2 tunnel; this mineralization is mainly on the footwall side of the shear. The 2 lower adits are buried by talus but the uppermost adit is still accessible.

The No. 1 vein can be traced for about 120 metres, has an average strike of about 310 degrees and dips 60 degrees to the north. The No. 1 vein, on surface, consists of a zone of ferricrete (0.5 to 1.0 metre thick) with a central portion of grey clay hosting sulphides. Samples from the No. 1 vein have assayed up to 45.3 grams per tonne gold and 105.6 grams per tonne silver across 1.2 metres (Property File - Mathews, 1942). Drillhole 81-2 assayed 6.1 grams per tonne gold and trace silver across 0.5 metre from the No. 1 vein (Assessment Report 10392).

The No. 2 vein system has an average trend of 290 degrees and dips about 60 degrees north. The vein is less than 10 centimetres wide and the host shear zone is 3 to 10 metres wide. The northern splay of the vein, traced for about 70 metres, strikes roughly east-west and dips steeply northward. The vein is 190 metres long and the east end is covered by talus. Mapping indicates that the rear part of the vein is hosted by intermediate to felsic(?) intrusive rock and the front part is in a light green rock which appears to be bleached argillite or fine-grained epiclastic rock. In the upper adit, the No. 2 vein consists of quartz with irregular concentrations of sulphides. The vein appears to contain 5 per cent galena, 2 per cent sphalerite and 5 per cent combined pyrite and arsenopyrite. Galena and sphalerite are concentrated on the southern margin. Samples from the No. 2 vein have assayed up to 18.5 grams per tonne gold, trace silver, 0.1 per cent zinc, nil lead and trace copper across 1.0 metre (Property File - Mathews, 1942). Samples from drillhole 81-2 assayed 3.6 grams per tonne gold and trace silver across 0.2 metre from a footwall splay of the No. 2 vein and 5.3 grams per tonne gold and 112.8 grams per tonne silver across 0.3 metre from the No. 2 vein (Assessment Report 10392).

Samples taken in 1990 assayed up to 4.9 grams per tonne gold and 23 grams per tonne silver (Assessment Report 21975). Surface samples taken in 1991 from the upper adit area assayed up to 37.4 grams per tonne gold over narrow widths (Assessment Report 21975). The 1991 program concluded that the values in the veins were spotty and the

CAPSULE GEOLOGY

veins were limited in extent.

BIBLIOGRAPHY

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1928-103; *1929-97; 1931-43; 1932-59; 1934-B23; 1941-54
EMPR BULL 63
EMPR ASS RPT *10392, 12400, 20200, *21975
EMPR MAP 8
EMPR PF (*Mathews, W. H., 1942: L.L. & H. Mine - Stewart, B.C.,
Report and Map)
EMR MP CORPFILE (Bitter Creek Mines, Limited; Playfair Gold Mines,
Limited)
GSC MEM 32, p. 56; 175, p. 126
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582
N MINER 9 April, 1981; 9 July, 1981; 17 December, 1981; 4 March, 1982
GCNL #184, #191, #228, 1980; #130, 1981

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/24 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 060**

NATIONAL MINERAL INVENTORY: 104A4 Ag23

NAME(S): **OLD CHUM**, KAI, KIM,
OTTER MOUNTAIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 00 10 N
LONGITUDE: 129 44 55 W
ELEVATION: 1006 Metres
LOCATION ACCURACY: Within 1 KM

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6206642
EASTING: 453315

COMMENTS: The location of the Old Chum showing is uncertain; the Old Chum claims extended along the south side of Hartley Gulch between elevations of 600 and 1200 metres. A tunnel was reported in 1910 at 1006 metres elevation (Minister of Mines Annual Report, 1910). The showing is presumed to lie near the approximate centre of the former claims.

COMMODITIES: Silver Gold Lead Copper

MINERALS

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

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Argillite
Volcaniclastic
Sandstone
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1910

COMMODITY	GRADE	
Silver	226.3000	Grams per tonne
Gold	1.6700	Grams per tonne

REFERENCE: Minister of Mines Annual Report, 1910.

CAPSULE GEOLOGY

The exact location of the Old Chum showing is not known. The showing is assumed to be close to the centre of the former Old Chum claims that were located along the south side of Hartley Gulch, about 16 kilometres east-northeast of Stewart.

The Old Chum claim group was staked before 1910 by Lydden, Hartley and Lade. During 1910-12, a 10-metre long tunnel and at least 4 opencuts were emplaced on the claims. No further work has been reported. Bond Gold optioned the Kai property in 1989 and conducted mapping and sampling in 1991. It is assumed that the Old Chum workings occur on the Kim claims of the Kai property, though no workings were located.

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 63). These rocks comprise mainly north-striking volcaniclastics, sandstones, siltstones and argillites.

At an elevation of 1,006 metres a tunnel exposes an east-trending, crushed zone in argillite. A 1.2-metre wide quartz vein, accompanied by fault gouge along the vein margins, occurs in the zone. The vein carries arsenopyrite, galena and chalcopyrite. A sample across 1.2 metres of the vein assayed 226.3 grams per tonne

CAPSULE GEOLOGY

silver and 1.67 grams per tonne gold ($1 per ton gold) (Minister of Mines Annual Report, 1910).

About 37 metres above the tunnel, and 50 metres to the south, an opencut exposes a 2 to 3-metre wide crushed zone containing chalcopyrite and less galena. Gold and copper values have been reported from this location (Minister of Mines Annual Report, 1910).

BIBLIOGRAPHY

EMPR AR *1910-64,77; *1912-109
EMPR ASS RPT 19398, 21975
EMPR BULL 63
EMPR MAP 8
GSC MEM 32, p. 56; 175, p. 134
GSC MAP *28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582
Placer Dome File

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1992/01/24	REVISED BY:	WC	FIELD CHECK:	N

MINFILE NUMBER: **104A 061**

NATIONAL MINERAL INVENTORY: 104A4 Pb3

NAME(S): **STRIKE**, SILVER CROWN, M.J., STRIKE 1-3, ELK, MOOSE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 07 34 N
LONGITUDE: 129 57 36 W
ELEVATION: 1402 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Northwest trending vein at the approximate centre of the vein swarm (Assessment Report 19747).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6220531
EASTING: 440323

COMMODITIES: Silver, Lead, Gold, Copper, Zinc

MINERALS

SIGNIFICANT: Pyrite, Galena, Sphalerite, Chalcopyrite, Tetrahedrite
ASSOCIATED: Quartz, Calcite, Barite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Discordant, Breccia
CLASSIFICATION: Epithermal, Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: 100 x 2 Metres
STRIKE/DIP: 315/75W
TREND/PLUNGE:
COMMENTS: Veins strike northwest to north; dip is predominantly steeply west.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillaceous Siltstone
Greywacke
Felsic Dike
Intermediate Dike
Mafic Dike
Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1989

COMMODITY	GRADE	
Silver	262.8000	Grams per tonne
Gold	0.6300	Grams per tonne
Copper	0.0400	Per cent
Lead	13.3000	Per cent
Zinc	0.0100	Per cent

REFERENCE: Assessment Report 19747.

CAPSULE GEOLOGY

The Silver Crown showing is located about 2 kilometres east-southeast of the north end of Long Lake.

In about 1951, several large boulders containing galena, sphalerite and pyrite in quartz were traced from near Long Lake up to the ridge containing the showing (Property File - Plumb, 1956). Mineralized veins were discovered in rock outcrops projecting through the ice. In 1956, the M.J. Mining Syndicate owned the M.J. claims over the veins. That year Plumb examined the mineralization on behalf of Dorreen Mines Limited. No further work was reported until 1965, when D. Collison owned the Silver Crown claim group over the area. During 1965-68, surface work and sampling were conducted on the mineralization. In 1983, Teuton Resources performed work on the Elk and Moose claims in the area, but failed to locate the showing because of poor weather. In 1988, D. Cremonese flew a heli-borne VLF-EM and magnetometer survey over the area which included the

CAPSULE GEOLOGY

showing. In 1989, White Channel Resources Inc. acquired the Strike 1-3 claims over the area and conducted a more comprehensive evaluation of the showing. In 1990, D. Cremonese flew another heli-borne VLF-EM and magnetometer survey over the area.

The area is underlain by the Middle Jurassic Salmon River Formation (Hazelton Group) that occupies the buckled core region of a north to northwest-trending, north-plunging syncline (Open File 1987-22).

Banded argillaceous siltstones and massive greywackes predominate and are intruded by a dike and high level stock complex. An older dike swarm, part of the Portland Canal dike swarm (Bulletin 58), comprises mafic to intermediate dikes, some with hornblende phenocrysts. Younger feldspar porphyry stocks and green-grey felsic dikes, averaging 6 metres wide, cut all of the above rocks. The dikes predominantly trend northwest, but north-trending ones also occur. The north-trending veins may post date the northwest-trending dikes, and associated veins, since they appear to offset the dikes (Assessment Report 19747, Map 1).

Many quartz, and minor carbonate, breccia veins (17 or more) occur along a north-trending zone about 1000 metres long and 250 metres wide. They range from 15 centimetres to 2.1 metres wide; the majority are about 100 metres long. The veins are commonly spatially associated with the felsic dikes. In places, the latter grade into quartz-sulphide stringers and veins along strike and at the dike contacts. The veins trend northwest to north and are mainly steeply dipping. The northwest-trending veins are subparallel to the dikes; north-trending veins are subparallel to the strike of the bedding (and fold axial planes?).

Sulphides, typically forming 5 per cent but locally up to 50 per cent of the veins, comprise medium to coarse-grained pyrite, galena and sphalerite and fine-grained chalcopyrite and tetrahedrite. Gangue minerals include quartz, calcite and barite. Angular fragments of siltstone, 1 to 10 centimetres in diameter, commonly form about 5 per cent of the veins. In places crystalline quartz lines cavities in the veins.

The northwest-trending veins, closely associated with felsic dikes, typically assay 30 to 60 grams per tonne silver and 0.1 to 0.2 gram per tonne gold; increased precious metal values are associated with increased base metal content (Assessment Report 19747). One sample from the northwest-trending vein on the base line assayed 262.8 grams per tonne silver, 0.63 gram per tonne gold, 13.30 per cent lead, 0.01 per cent zinc and 0.04 per cent copper across 0.3 metre (Assessment Report 19747). In the more pyrite-rich, north-trending veins, hosted in siltstone-greywacke rocks, samples assayed up to 447.3 grams per tonne silver, 22.4 grams per tonne gold, 1.50 per cent lead, 0.96 per cent zinc and 0.01 per cent copper across 0.40 metre (Assessment Report 19747).

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EMPR ASS RPT 11800, 17609, *19747, 20195
EMPR BULL 58, p. 165; 63; 85
EMPR GEM 1969-57 and Fig. 9
EMPR MAP 8
EMPR OF 1987-22
EMPR PF (In 104A 091 - *Plumb, W.N., 1956: Report on the M.J. Mineral Deposits)
GSC MAP 216A; 217A; 307A; 315A; 1829; 9-1957; 1418A
GSC OF 2582
WWW http://www.infomine.com/

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/02/14 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 062**

NATIONAL MINERAL INVENTORY: 104A4 W1

NAME(S): **LITTLE PAT**, BADLAND, HOGBACK, GOLDBAR, ART

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 01 59 N
LONGITUDE: 129 53 22 W
ELEVATION: 366 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6210115
EASTING: 444575

COMMENTS: Mineralized vein showings located southeast of the Bitter Creek bridge on the north side of Bitter Creek, in the northeast corner of the present day Goldbar claim (Property File - Mathews, 1942).

COMMODITIES: Tungsten, Gold, Silver, Copper, Molybdenum, Lead, Zinc

MINERALS

SIGNIFICANT: Chalcopyrite, Scheelite, Pyrite, Molybdenite, Sphalerite, Galena, Tetrahedrite, Cosalite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic, Porphyry
TYPE: I12 W veins
I02 Intrusion-related Au pyrrhotite veins
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary			Coast Plutonic Complex

LITHOLOGY: Quartz Monzonite

HOSTROCK COMMENTS: The hostrock is a Tertiary(?) Bitter Creek quartz monzonite pluton, a satellite intrusive of the Coastal Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1943

COMMODITY	GRADE	
Tungsten	0.1100	Per cent

REFERENCE: Bulletin 10, page 52.

CAPSULE GEOLOGY

The Little Pat showing is about 500 metres north of Bitter Creek and approximately 2.9 kilometres east-southeast of the confluence of Bitter Creek with the Bear River.

The property has been intermittently explored since 1908, when a number of narrow fissure veins containing quartz, pyrite, chalcopyrite and scheelite were located on the north side of Bitter Creek. During the 1940s the showings, comprising the Little Pat, Badland and Hogback claims, were known as the Little Pat. Open cutting was done during this time. Beaver Gold Resources Inc. conducted prospecting and rock sampling near the showing in 1979. The showing was then covered by the Art group of claims. The showings are presently located on the Goldbar claim held by Tenajon Resources.

The area is underlain by the Tertiary(?) Bitter Creek pluton, a quartz monzonite intrusive that is a satellite to the Coast Plutonic Complex (Bulletin 58, 63).

Several narrow quartz veins occur in the pluton. They typically contain pyrite, chalcopyrite and scheelite; molybdenite, sphalerite, galena, tetrahedrite and cosalite occur locally. The veins trend from 290 to 330 degrees and dip vertically to steeply northeast.

At the main showing (Hogback) the vein is about 15 centimetres

CAPSULE GEOLOGY

wide but decreases to less than 2 centimetres wide in a distance of 30 metres. A sample across 7.5 centimetres assayed 0.11 per cent WO3 (Bulletin 10 p. 52).

About 300 metres to the north, a 7.5 to 15 centimetre wide quartz vein is mineralized with pyrite, sphalerite, scheelite and some galena and tetrahedrite. Samples of this vein are reported to have assayed 8.6 grams per tonne gold and 377.1 grams per tonne silver (Bulletin 10, p. 53). A composite sample of the vein assayed 0.01 per cent W03 (Bulletin 10, p. 53)

At least 3 other similar vein showings occur in the area to the north of the main showing.

BIBLIOGRAPHY

EM OF 1999-3
EMPR ASS RPT 8095, 20379, 20682, 21909
EMPR BULL *10, p. 52; 58; 63
EMPR MAP 8
EMPR OF 1999-3
EMPR PF (In 104A General - Mathews, W.H. (1943): *Tungsten in the Portland Canal Area; Mathews, W.H. (1942): *Geology and Scheelite Deposits of the Portland Canal Area, Map)
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/16 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 063**

NATIONAL MINERAL INVENTORY: 104A4 Cu6

NAME(S): **NEW YORK (L. 1485)**, LONDON (L. 1480)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 06 17 N
LONGITUDE: 129 48 24 W
ELEVATION: 853 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit (Assessment Report 7201).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6218028
EASTING: 449827

COMMODITIES: Copper, Silver, Gold

MINERALS

SIGNIFICANT: Pyrrhotite, Pyrite, Chalcopyrite
ALTERATION: Chlorite, Actinolite, Epidote
ALTERATION TYPE: Chloritic, Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound, Disseminated
CLASSIFICATION: Volcanogenic, Exhalative
TYPE: G04 Besshi massive sulphide Cu-Zn
SHAPE: Tabular
DIMENSION: 5 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Mineralization occurs over a 5-metre width.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Flow
Andesitic Pyroclastic
Andesite
Argillite
Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1978

COMMODITY	GRADE	
Silver	3.4000	Grams per tonne
Gold	0.2000	Grams per tonne
Copper	0.5700	Per cent

COMMENTS: Highest assay values from grab samples of T 3; andesite with 70 per cent pyrrhotite.
REFERENCE: Assessment Report 7201.

CAPSULE GEOLOGY

The New York showing is located about 1150 metres south of the Stewart highway and approximately 5 kilometres east-northeast of the confluence of American Creek with the Bear River.

The New York and London claims were held by Erickson and McNeill in 1908. The Bear River Mining Co. Limited was formed to explore the property and, in 1910, held 8 claims in the area, including the New York and London. Work reported in 1910 comprised a 32 metre long tunnel and several opencuts. The claims were Crown-granted to the company in 1913. In 1929, Atlas Gold Copper Mining Company carried out drilling on the nearby Bear Valley claim; the drilling was designed to test the extension of the George Gold-Copper Lower (104A 029) zone on the Elgin claim, immediately east of the London claim. Drilling failed to intersect anything of significance. Some drilling may have also been done near the workings on the New York claim; results are not available. In 1955, New Rufus-Argenta Mines Limited acquired the New York-London property and reported a limited amount of work in 1956 and 1964. In 1966, the company name was changed to

CAPSULE GEOLOGY

Crest Ventures Limited. That year a subsidiary, Crest Copper Company Ltd. was incorporated and took over the property. In 1967, Cominco optioned the property and carried out geological mapping, a magnetometer survey and drilling (11 holes, totalling 117 metres); the option was subsequently dropped. In 1971, Keith Copper Mines Ltd. performed a magnetometer survey, trenching and drilling (4 holes, totalling 244 metres) on part of the property and adjacent Mina claim group; no work was reported on the showing. In 1978, Tournigan Mining Explorations Ltd. acquired the New York-London property of 5 claims and carried out geological mapping and trenching. In 1984, Tournigan conducted further geological work on the property.

The area is underlain by Hazelton Group rocks comprising the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 63). These rocks consist predominantly of subhorizontal to gently north-dipping andesitic flows and pyroclastics. A prominent reddish-brown weathering argillite-tuff unit occurs in the extreme southeastern corner of the New York claim. It can be traced east through the London, Kensington Fr. and Elgin claims and is probably the same unit that hosts the George Gold-Copper Lower showing (104A 029). Similarly, it can be traced to the southwest, and then southeast through the Grey Copper claims (104A 066).

Mineralization occurs mainly in sheared andesitic rocks, immediately below(?) the argillite-tuff unit. Alteration minerals include chlorite, actinolite and epidote. The altered rocks contain up to 50 per cent pyrrhotite and pyrite with minor chalcopyrite over a 5 to 10-metre thickness.

Grab samples from the showing assayed from 0.05 to 0.57 per cent copper, 2.7 to 3.4 grams per tonne silver and trace to 0.2 grams per tonne gold (Assessment Report 7201).

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EMPR AR 1908-56; 1910-62; 1917-67; 1928-112; 1929-99; 1967-35
EMPR ASS RPT *1109, 3603, 6382, *7201, *12827, 20379, 22172
EMPR BULL 63
EMPR GEM 1972-512
EMPR MAP 8
EMPR OF 1998-9
EMR MP CORPFILE (Bear River Mining Company; Atlas Gold and Copper Mining Company, Limited; Crest Ventures Limited; Keith Copper Mines Ltd.; Tournigan Mining Explorations Ltd.)
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC MEM 32, p. 54; 175, pp. 106, 107
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/10/01 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 064**

NATIONAL MINERAL INVENTORY: 104A4 Cu14

NAME(S): **OLGA**, HILL 60

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 01 26 N
LONGITUDE: 129 50 53 W
ELEVATION: 396 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit (Geological Survey of Canada Map 217A).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6209063
EASTING: 447142

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Quartzite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Olga showing is located on the north side of Bitter Creek, about 1 kilometre west of the confluence with Radio Creek.

Opencuts and a 91-metre long adit were emplaced before 1910. That year the Olga claim group was owned by Olga Mines Limited. Exploration work comprised 18 metres of tunnelling. No further work has been reported on the showing.

The area is underlain by north-striking, west-dipping argillites and quartzites of the Middle Jurassic Salmon River Formation (Hazelton Group) (Geological Survey of Canada Memoir 175, Bulletin 63).

A northeast-trending, northwest-dipping vein of quartz and brecciated argillite crosscuts the strike of the rocks at a low angle. The vein averages 0.6 metre wide and has been traced for 76 metres on surface; it is exposed over a length of about 46 metres in the adit. The vein is mostly barren except for small shoots of chalcopyrite. One lens of nearly pure chalcopyrite is up to 7.6 metres long and 20 centimetres wide.

BIBLIOGRAPHY

EMPR AR 1905-80; 1910-64,79; 1914-512; 1925-84
EMPR EXPL 1979-273
EMPR BULL 63
EMPR MAP 8
EMPR ASS RPT 20379
GSC MEM 32, p. 58; 159, p. 34; 175, p. 120
GSC MAP 28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/14 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 065**

NATIONAL MINERAL INVENTORY: 104A4 Au2

NAME(S): **ROYAL IRISH**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 03 49 N
LONGITUDE: 129 54 58 W
ELEVATION: 122 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Royal Irish showing is presumed to correspond with a showing on Geological Survey of Canada Map 217A.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6213538
EASTING: 442959

COMMODITIES: Silver, Lead, Molybdenum, Gold

MINERALS
SIGNIFICANT: Pyrite, Galena, Molybdenite
COMMENTS: Also "blackish sulphides".
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic Tertiary	Hazelton	Unuk River	Coast Plutonic Complex

LITHOLOGY: Augite Diorite Porphyry
Andesitic Tuff
Crystal Tuff
Lithic Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1991
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	185.1100	Grams per tonne

COMMENTS: Sample 134206, across 10 centimetres of a quartz vein with trace pyrite, galena, "blackish sulphides" and molybdenum.
REFERENCE: Assessment Report 21910.

CAPSULE GEOLOGY

The Royal Irish showing is located on the east bank of the Bear River, about 2.8 kilometres north of the confluence of Bitter Creek with the Bear River.

In 1920, Miller and associates owned several claims along the Bear River between Bitter and Fitzgerald (Goose) creeks, including the Royal Irish claim. Some open cutting was reported that year. In 1990, Tenajon Resources completed geochemical sampling over portions of the property.

The area is underlain by Hazelton Group andesitic crystal and lithic tuffs that have been intruded by augite diorite porphyry (Tertiary?).

The Royal Irish showing is hosted in the diorite, close to the northwestern contact with Hazelton Group rocks. It comprises a wide quartz vein, or several parallel veins, trending parallel to the long axis of the diorite. Low gold values have been reported from the quartz (Minister of Mines Annual Report, 1920).

Geochemical sampling in 1990 outlined a gold anomaly and an arsenic anomaly. A 1991 chip sample assayed 185.11 grams per tonne silver over 10 centimetres of a quartz vein containing trace pyrite, galena, "blackish sulphides" and molybdenum (Sample 134206, Assessment Report 21910).

BIBLIOGRAPHY

EMPR AR *1920-55
EMPR BULL 58; 63
EMPR MAP 8
EMPR ASS RPT 20379, *21910
GSC MEM 175, p. 143
GSC MAP 28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/11/01 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 066** NATIONAL MINERAL INVENTORY: 104A4 Ag16

NAME(S): **GREY COPPER (L. 4187)**, GREY COPPER 1-2

STATUS: Prospect Open Pit MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 05 45 N NORTHING: 6217031
LONGITUDE: 129 47 47 W EASTING: 450455
ELEVATION: 1372 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Approximate centre of the Grey Copper claim (L. 4187) (Mineral Titles Reference Map 104A/4W). Exact location of brecciated zone is not known.

COMMODITIES: Silver Copper Lead Gold

MINERALS
SIGNIFICANT: Tetrahedrite Pyrrhotite Chalcopyrite Pyrite
ASSOCIATED: Calcite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: G04 Besshi massive sulphide Cu-Zn I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 2 Metres STRIKE/DIP: 060/60S TREND/PLUNGE:
COMMENTS: The vein may lie within a stratabound sulphidic unit.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Argillite
Andesitic Tuff
Andesitic Flow
Andesite

HOSTROCK COMMENTS: The hostrocks are unclear, sulphidic argillite-tuff unit may lie at the contact of the Unuk River and Betty Creek Formations.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

CAPSULE GEOLOGY

The Grey Copper occurrence is located about 2.2 kilometres south of the Stewart highway and approximately 5.7 kilometres east of the confluence of American Creek and the Bear River.

The occurrence, on the Grey Copper claim(?), was first reported in 1916. Some open cutting was done that year and 1 tonne of ore was shipped from the property; 1 gram of gold, 11,235 grams of silver and 185 kilograms of lead were recovered. The Grey Copper, and contiguous Grey Copper 1 and 2 claims, were Crown-granted in 1922. Stewart High Grades Limited optioned the property in 1925; no work was reported. In 1967, Cominco carried out detailed geological mapping over a large group of claims south of the Bear River, including the Grey Copper and Grey Copper 2 claims. No further work has been reported.

The area is underlain by east to east-southeast striking, gently north-dipping andesitic tuffs and flows of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 63). A prominent, reddish-brown weathering, argillite-tuff unit can be traced southeast across the centre of the Grey Copper claim. Pyrrhotite, with minor chalcopyrite and pyrite, commonly occurs near the top of the unit.

A brecciated zone strikes 060 degrees and dips about 60 degrees south. It is about 1.8 metres wide and occurs in argillite. The zone is cemented with calcite and contains a 15 centimetre wide(?) streak of tetrahedrite in the hangingwall.

BIBLIOGRAPHY

EMPR AR 1916-515; 1917-68; 1922-353; 1925-94
EMPR BULL 63
EMPR ASS RPT 1109, 20379

BIBLIOGRAPHY

EMPR MAP 8
GSC MEM 175, p. 120
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/29 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 067** NATIONAL MINERAL INVENTORY: 104A4 Pb9

NAME(S): **MAIN REEF**, DANDY 1-2, STAR 1-2, VICTORIA, MM

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 00 15 N NORTHING: 6206926
LONGITUDE: 129 55 14 W EASTING: 442594
ELEVATION: 457 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Portal of No. 2 adit on the Main Reef vein (Geological Survey of Canada Memoir 175, Figure 1, p. 46).

COMMODITIES: Silver Gold Lead Zinc Copper Arsenic

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

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: 210 x 67 x 1 Metres STRIKE/DIP: 335/63W TREND/PLUNGE:
COMMENTS: Main Reef vein.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Felsite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	30.4000	Grams per tonne
Arsenic	8.7000	Per cent
Gold	2.5000	Grams per tonne
Copper	0.0370	Per cent
Lead	0.6700	Per cent
Zinc	0.6400	Per cent

COMMENTS: Sample from mineralized bedrock a few metres east of the southernmost adit on the west bank.
REFERENCE: Property File - KRL Resources, February, 1991.

CAPSULE GEOLOGY

The Main Reef vein (No. 2 adit) is located about 8 kilometres north-northeast of Stewart and approximately 1.2 kilometres east of the Stewart highway (37A), on the north side of a prominent bend in Victoria Creek.

The Main Reef claims were first mentioned in 1908 when they were held by Ranch and Horstman. Two short tunnels, each about 10 metres long, were emplaced during 1908-09; one of these was probably the No. 2 adit. A shipment of 3.6 tonnes in 1909 from the latter tunnel assayed 2.4 grams per tonne gold, 686 grams per tonne silver and 23.0 per cent lead (Minister of Mines Annual Report 1909). The Main Reef Mining Company was formed the following year. That year about 210 metres of tunnelling, a 13.7 metres long winze and several opencuts were reported on the claims. Most of the work was done on the Main Reef vein which was drifted on for approximately 122 metres in the No. 2 adit. In the winze, sunk on the Main Reef vein, gold values

CAPSULE GEOLOGY

were reported to average 25.7 grams per tonne (Minister of Mines Annual Report, 1910). No further work was reported and the claims subsequently lapsed. In 1921, the occurrence was covered by the Dandy claim group, comprising the Dandy 1-2 and Star 1-2 claims, owned by Horstman. In 1924, the property was optioned by Martin and associates who conducted some open cutting and drove another 21-metre long crosscut tunnel. That year, Victoria Mines was formed and commenced a long crosscut tunnel (No. 4) west of the No. 2 adit to intersect the postulated northern extension of the Sunbeam/Dunwell veins. The No. 4 tunnel was reported to be 131 metres long in 1925. A vein encountered at 75 metres from the portal was assumed to be the Main Reef vein. The company conducted about 25 metres of drifting from the No. 4 crosscut tunnel on the latter vein. That same year at least 2 other short tunnels were driven in the area of the Main Reef vein. A shipment of 6 tonnes in 1925, assumed to be from the Main Reef vein, assayed 20.6 grams per tonne gold, 1,028.6 grams per tonne silver, 35 per cent lead and 10 per cent zinc (Geological Survey of Canada Memoir 175). A total of 112 grams of gold, 7,042 grams of silver, 2,477 kilograms of lead and 902 kilograms of zinc were recovered that year (presumably from the same shipment). Victoria Mines extended the long crosscut tunnel in 1926 but failed to encounter more veins. No further work was reported until 1980 when Hopper staked the MM 100 claim over the area. Kingdom Resources Ltd. (later renamed KRL Resources Corp.) subsequently acquired the property. During 1981-83, Kingdom Resources carried out geological mapping, prospecting, trenching, sampling and soil and rock geochemical surveys near the occurrence. No further work was done until 1990 when KRL conducted airborne and ground VLF-EM and magnetometer surveys and geological mapping and prospecting; most of this work was done along Victoria Creek.

The area is underlain predominantly by north-striking, west-dipping argillites of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 58, 63; Geological Survey of Canada Memoir 175). North-northeast to northeast-trending faults are conspicuous in the area. One of these faults, along the upper part of Victoria Creek, has been termed the Victoria structure (Property File - KRL Resources, February, 1991). These faults form part of the Portland Canal fissure zone (Geological Survey of Canada Memoir 32 and 175, p. 47).

Several north-trending, west-dipping veins are known in the area of the bend in Victoria Creek (on the old Dandy claims) and further northeast along the creek (on the old Star claims). At least 9 adits/tunnels have been emplaced to explore the veins (Geological Survey of Canada Memoir 175).

The 0.3 to 1.2-metre wide Main Reef vein trends 335 degrees and dips 63 degrees west. It has been traced for about 210 metres (122 metres underground in the No. 2 adit) along strike and extends from surface to a depth of about 67 metres (assuming the vein encountered in the No. 4 tunnel is the Main Reef vein). A felsite dike lies along the footwall of the vein (Minister of Mines Annual Report 1909). The vein comprises quartz mineralized with pyrite, galena and sphalerite. Another vein, exposed in the No. 4 crosscut tunnel, is 0.9 metre wide and is also associated with a narrow, parallel dike.

Other nearby veins are similar in character. About 250 to 350 metres northeast of the No. 2 adit, 3 adits have been emplaced on the Star claims. Two of the adits are on the west side of Victoria Creek (Assessment Report 20975) and 1 adit is on the east side (Assessment Report 10190).

The two uppermost veins contain a little chalcopyrite and arsenopyrite in addition to pyrite, galena and sphalerite (Geological Survey of Canada Memoir 175). A chip(?) sample was collected in 1981 across a 20 centimetre wide quartz-sulphide vein from a pit near the adits on the west side of the creek. This sample assayed 12.3 grams per tonne gold, 172.8 grams per tonne silver, 5.4 per cent lead and 0.65 per cent zinc (Assessment Report 10190).

A grab sample was collected in 1990(?) from mineralized bedrock a few metres east of the southernmost adit on the west bank. The sample assayed 2.5 grams per tonne gold, 30.4 grams per tonne silver, 8.7 per cent arsenic, 0.037 per cent copper, 0.67 per cent lead and 0.64 per cent zinc (Property File - KRL Resources, February, 1991).

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EMPR BULL 58; 63
EMPR ASS RPT 8391, 10190, 11915, 20379, *20975, 22053
EMPR MAP 8
EMPR PF (In 104A 054 - KRL Resources Corp., SMF #16/91, February, 1991)

BIBLIOGRAPHY

EMR MP CORPFILE (Victoria Mines, Limited)
GSC MEM 32, p. 42; 159, pp. 51-54; 175, pp. 47-49, p. 150
GSC MAP *28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/10 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 068**
NATIONAL MINERAL INVENTORY: 104A4 Ag5

NAME(S): **LOIS (L. 3687)**, EDITH (L. 3686)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 07 43 N
LONGITUDE: 129 59 10 W
ELEVATION: 1036 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: No. 1 cut on the mineralized shear zone (Property File - Plumb, 1956).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6220832
EASTING: 438704

COMMODITIES: Zinc, Lead, Silver, Copper

MINERALS
SIGNIFICANT: Pyrite, Galena, Sphalerite, Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Chlorite, Epidote
ALTERATION TYPE: Chloritic, Epidote
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Shear
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: 100 x 2 Metres
STRIKE/DIP: 320/60E
TREND/PLUNGE:
COMMENTS: Mineralized shear.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Andesitic Tuff
Tuff
Granitic Dike
Felsite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SHEAR
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1956
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	10.3000	Grams per tonne
Copper	0.0700	Per cent
Lead	1.3500	Per cent
Zinc	1.5000	Per cent

COMMENTS: Chip(?) sample across 1.8 metres from No. 1 cut on the mineralized shear; also trace gold.
REFERENCE: Property File - Plumb, 1956.

CAPSULE GEOLOGY

The Lois showing is located close to the east shore of Long Lake, about 1 kilometre south of the north end of the lake.

The Lois (and nearby Edith) claims were Crown-granted to McDonald and Winkler in 1917. In 1922, American Mining and Milling Company Limited (name changed that year from Mahood Mines Limited) acquired a one-half interest in the Lois and Edith claims. In 1956, the M.J. Mining Syndicate held a lease on the Lois claim. That year Plumb examined the showing on behalf of Dorreen Mines Limited. Three opencuts were reported on the property at that time. No further activity was reported until 1983, when Nor-Con Exploration Ltd. carried out a mapping and prospecting program on the Lois claim.

The area is underlain by the Lower Jurassic Betty Creek Formation (Hazelton Group) (Open File 1987-22). These rocks lie on the west limb of the north-northwest trending Spider anticline. The showing is hosted in andesitic tuffs and purple tuffs. Northwest-trending granitic and felsitic dikes intrude the country rocks. The

CAPSULE GEOLOGY

latter belong to the Portland Canal dike swarm (Bulletin 58).

The showing comprises a mineralized shear zone, up to 1.8 metres wide, that trends 320 degrees and dips 60 degrees to the northeast. In the shear, altered andesitic tuff contains chlorite, epidote and some quartz, carrying fine-grained pyrite, galena, sphalerite and minor chalcopyrite. The shear can be traced for 210 metres to the southeast, where it ends against a contact between purple tuffs and a granitic dike. The mineralization appears to be present over a length of 100 metres at the northwestern exposed end of the shear. A chip(?) sample collected in 1956 from an opencut on the shear (No. 1 cut) assayed 1.50 per cent zinc, 1.35 per cent lead, 0.07 per cent copper, 10.3 grams per tonne silver and trace gold across 1.8 metres (Property File - Plumb, 1956).

About 120 metres southwest of the shear a 15-metre wide, light green, felsitic dike also trends northwest and dips 58 degrees to the northeast. In the No. 2 cut the dike is mineralized with pyrite and minor copper stain. In the nearby No. 3 cut a 0.6-metre wide shear zone lies along the footwall of the dike and is mineralized with sphalerite, galena and minor chalcopyrite. Samples collected in 1956 from the Nos. 2 and 3 cuts assayed negligible values (Property File - Plumb, 1956).

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EMPR AR 1917-84,451; 1920-65; 1922-83; 1926-93
EMPR BULL 58, p. 168; 63; 85
EMPR ASS RPT *12394
EMPR OF 1987-22
EMPR MAP 8
EMPR PF (In 104A 091 - Plumb, W.N. (1956): *Report on the M.J. Mineral Deposits)
EMR MP CORPFILE (American Mining and Milling Company, Limited; British American Holding and Development Company)
GSC MEM 175, p. 152
GSC MAP 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/02/14 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 069** NATIONAL MINERAL INVENTORY: 104A4 Pb8

NAME(S): **ROOSEVELT 1 (L. 896)**, SILVER ADIT, COPPER ADIT, GRIZZLY

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 01 57 N NORTHING: 6209983
LONGITUDE: 129 47 47 W EASTING: 450373
ELEVATION: 427 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Portal of Silver adit, Roosevelt 1 claim (Assessment Report 13352).

COMMODITIES: Silver Lead Zinc Gold Copper

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

DEPOSIT
CHARACTER: Vein Shear Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins
L01 Subvolcanic Cu-Ag-Au (As-Sb)
SHAPE: Tabular
MODIFIER: Faulted Sheared

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Slate
Argillite
Porphyritic Granodiorite Dike
Breccia
Granite Dike
Quartz Monzonite Dike
Diabase Dike
Lamprophyre Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	429.2000	Grams per tonne
Gold	0.5000	Grams per tonne
Copper	0.5800	Per cent
Lead	9.6000	Per cent
Zinc	1.1000	Per cent

COMMENTS: A composite muck sample (grab) from the stope in the Silver adit.
REFERENCE: Assessment Report 13352.

CAPSULE GEOLOGY

The Roosevelt occurrence lies approximately 15 kilometres northeast of Stewart and consists of the Silver and Copper adits. The Silver adit is on the west bank of Roosevelt Creek, a tributary of Bitter Creek, about 1.5 kilometres upstream from the confluence of Roosevelt and Bitter Creeks. The Copper adit is also on the west bank, about 200 metres further upstream than the Silver adit.

The Grizzly group of 4 claims, the first claims to be staked in the Stewart area, was staked over the occurrence by Connor and partners in May, 1899. The property was subsequently acquired by the Grizzly Mining Company who carried out extensive exploration and shipped about 10 tonnes of ore to Tacoma in about 1900. The claims were then allowed to lapse and were restaked as the Roosevelt group of 4 claims by Chambers, Stark and Rainey in 1901. During 1901-10,

CAPSULE GEOLOGY

intermittent exploration, primarily on the Roosevelt 1 claim, comprised open cutting and 3 short adits. The Roosevelt Mining Company was formed in 1910; the company charter was surrendered in 1932. A shipment of about 13.5 tonnes, probably from the Silver adit, was sent to Trail in 1915. Assays from the shipment were 8.9 grams per tonne gold, 3,462.9 grams per tonne silver, 34 per cent lead and 8 per cent zinc (Assessment Report 8095). The claims were purchased by Feezey and Oliver in 1933. Minor exploration, including some drifting, was done during 1934-35. The claims were subsequently acquired by Rufus-Argenta Mines, formed in 1955. In 1966, the company name was changed to Crest Ventures Limited. During 1966-67, Crest Silver Company Limited, a subsidiary of Crest Ventures, acquired the claims and carried out geological mapping and cleaned out the old adits. In 1968, a 45 kilogram bulk sample, from the Silver adit, assayed 56.2 grams per tonne gold, 3,737.2 grams per tonne silver, 1.03 per cent copper, 23.42 per cent lead and 12.28 per cent zinc (Assessment Report 8095). During 1970-73, Ardo Mines Ltd. optioned the property and carried out prospecting, magnetometer and electromagnetic surveys and surface drilling near the Silver adit (3 holes, totalling 40 metres), underground drilling in the Silver (7 holes, totalling about 285 metres) and Copper (5 holes) adits and underground development on both the Silver and Copper adits. The latter work included the emplacement of 2 drifts, for mining and haulage, about 7.5 metres below the Silver adit. An estimated 5000 tonnes was mined from a single shrinkage stope in the Silver adit during 1972-73. An unknown quantity was shipped to the Adams Milling Ltd. mill at the mouth of Bitter Creek in 1973. The operations ceased in mid-1973 due to severe dilution in the stope. During 1979-80, Beaver Gold Resources Inc. optioned the property and carried out mapping, rock and soil sampling, and drilled 3 holes (totalling 95 metres) from the haulage drift to test the mineralization below the lower drift. In 1984, the property was owned by Grey Silver Mines Ltd. That year Maralgo Mines Limited optioned the property and flew an airborne VLF-EM and magnetometer survey over the area and conducted geological mapping, prospecting and sampling near the occurrence. No further work was reported until 1989 when Grey Silver Mines performed geological mapping, sampling and soil surveys in the area. The following year Varitech Resources Ltd. conducted a program of geological mapping, prospecting, sampling and soil, VLF-EM and magnetometer surveys in the area. This work included resampling of the Silver and Copper adits.

The area is underlain by north to north-northwest striking, predominantly west-dipping slates and argillites of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63). These rocks are commonly deformed by north-trending folds and faults. Dikes are conspicuous in the area. Granite, granodiorite and quartz monzonite dikes, typically up to 30 metres wide, trend northwest and dip west. Crosscutting, much narrower diabase or lamprophyre, dikes are less common.

Two mineralized veins have been developed in the past: the Silver adit vein and, about 200 metres to the northeast, the Copper adit vein.

The Silver adit vein has been developed by 2 adits: an upper (older) one and a lower one. The latter provided access to a mining level and haulage drift. The north-northwest trending vein is in sheared and crushed argillite and slate along the hangingwall of a parallel, fresh porphyritic granodiorite dike. The dike, dipping southwest at 54 to 67 degrees, is cut by small cross faults. The vein comprises quartz-calcite-sulphide stringers and lenses that range up to 0.5 metre wide. Sphalerite, galena, pyrite, chalcopyrite and tetrahedrite are erratically distributed. Breccia, formed by argillite clasts in a quartz-calcite-sulphide matrix, is common.

The Silver adit vein was mined over a length of about 35 metres from a stope about 3 to 5 metres wide and 15 to 20 metres high. A sample was collected in 1984 from a sulphide-rich lens in the back of the crown pillar, 15.1 metres from the portal. This sample assayed 0.8 gram per tonne gold, 446.7 grams per tonne silver, 10.8 per cent lead, 16.0 per cent zinc and 0.63 per cent copper across a width of 0.63 metre (Assessment Report 13352). A composite muck sample from the stope (representative of hand sorted ore) assayed 0.5 grams per tonne gold, 429.2 grams per tonne silver, 9.6 per cent lead, 1.1 per cent zinc and 0.58 per cent copper (Assessment Report 13352).

The Copper adit vein has been developed by 2 old adits in the past: a lower adit, about 30 metres long, and a short, upper adit about 12 metres above the lower one. The west-northwest trending, steeply southwest-dipping Copper adit vein comprises quartz containing disseminated pyrite and chalcopyrite. It is 12 to 48 centimetres wide, but averages 28 centimetres in width. The vein lies along the hangingwall of an intensely altered and silicified,

CAPSULE GEOLOGY

parallel, light green dike that contains chalcopyrite and pyrite. A parallel fault zone, containing crushed and sheared argillite and quartz veinlets, forms the hangingwall to the quartz vein and separates the vein from well-bedded, relatively undeformed argillite to the west. The vein-dike-fault system cuts across the strike of the bedding at a shallow angle. In places, the hangingwall fault and vein transect the dike itself. The vein extends the length of the adit. The sulphide content of the vein varies from 2 to 20 per cent.

A channel sample collected in 1984 from the back of the lower adit and near the face assayed 38.9 grams per tonne gold, 14.4 grams per tonne silver and 0.17 per cent copper across 40 centimetres(?) (Assessment Report 13352). The Copper adit vein contains potential reserves of 18 tonnes per vertical metre over a length of 24 metres (Assessment Report 13352).

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EMPR GEM 1970-74; 1971-32; 1972-512; 1973-494
EMPR EXPL 1979-273
EMPR BULL 63
EMPR ASS RPT 8095, 10489, *13352, 19242, *20622
EMPR MAP 8
EMR MP CORPFILE (Crest Ventures Limited)
GSC MEM 32, p. 57; 175, p. 143
GSC MAP *28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/17 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 070**

NATIONAL MINERAL INVENTORY: 104A4 Cu11

NAME(S): **BRITON (L. 4414)**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 02 56 N
LONGITUDE: 129 57 06 W
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Outcrop on the Briton claim (L. 4414) (Assessment Report 9624).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6211929
EASTING: 440723

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Pyrite Malachite
ASSOCIATED: Quartz
ALTERATION: Malachite Silica
ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Volcaniclastic
Hematitic Sediment/Sedimentary
Andesitic Tuff
Andesitic Breccia
Dacitic Tuff
Dacitic Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Briton showing is located about 1.6 kilometres northwest of the confluence of Bitter Creek and the Bear River.

The Briton claim was staked by Mackenzie in 1920. The M.C. Mining Company Limited was formed in 1922 to acquire the property. At that time an east-trending, highly silicified vein, "carrying values", was reported. Ownership of the company was acquired by the M.C. Mining Company of British Columbia Limited the following year. The claim was Crown-granted to the company in 1924. No further work was reported until 1981 when D. Kretschmar carried out a limited geological examination.

The area is underlain by Hazelton Group rocks of the Lower Jurassic Betty Creek Formation (Open File 1987-22). These comprise hematitic sediments interbedded with andesitic to dacitic tuffs and breccias.

A small silicified zone in maroon volcaniclastics contains minor pyrite and abundant malachite. The zone is about 1 metre thick and 2 metres long (Assessment Report 9624). It is not known whether this is the same mineralization referred to in the Minister of Mines Annual Report 1922 (p. 70).

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EMPR AR 1921-67; 1922-70; 1923-78
EMPR BULL 58, p. 135; 63; 85 (in press)
EMPR ASS RPT *9624, 20379
EMPR OF 1987-22
EMPR MAP 8
GSC MEM 175, p. 128
GSC MAP 216A; 217A; 307A; *315A; 1829; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/10/30
DATE REVISED: 1992/01/30

CODED BY: WC
REVISED BY: WC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104A 071**

NATIONAL MINERAL INVENTORY: 104A4 Cu15

NAME(S): **RADIO (L. 4571)**, SWEDE AMERICAN, MAGGIE, CUPRUM

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 01 59 N
LONGITUDE: 129 49 13 W
ELEVATION: 533 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized quartz lens (Assessment Report 13352).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6210062
EASTING: 448885

COMMODITIES: Silver Gold Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1984
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	41.8000	Grams per tonne
Gold	0.4000	Grams per tonne
Copper	0.3600	Per cent

COMMENTS: Chip(?) sample across 30 centimetres of well mineralized quartz.
REFERENCE: Assessment Report 13352.

CAPSULE GEOLOGY

The Radio showing is located on the Radio claim (L. 4571), about 13 kilometres northeast of Stewart. The showing is on a small creek on the north side of Bitter Creek, approximately 1.1 kilometres northeast of the confluence of Radio and Bitter Creeks.

The early history of the showing is not clear. The Crown Mining Company held ground in the area before 1910 (Geological Survey of Canada Map 28A); according to early records this company held both the Swede American and Maggie claim groups in the area. Exploration work, including tunnelling, was reported in 1910. The company was dissolved in 1918. In 1923, Erickson and Peterson restaked the area as the Radio claim group. Radio-Stewart Mines was formed in 1924 and acquired the Radio claims. Intermittent prospecting and open cutting were done during 1925-29. The Radio claims were Crown-granted to the company in 1930. The claims were subsequently acquired by Rufus-Argenta Mines, formed in 1955. In 1966, the company name was changed to Crest Ventures Limited. That year Crest Silver Company Limited, a subsidiary of Crest Ventures, acquired the claims and carried out some geological mapping during 1966-67. During 1970-73, Ardo Mines Ltd. optioned the property and carried out prospecting, magnetometer and electromagnetic surveys. During 1979-80, Beaver Gold Resources Inc. acquired the property and carried out mapping, prospecting and sampling. No further work was reported on the showing until 1984 when the property was owned by Grey Silver Mines Ltd. That year Maralgo Mines Limited optioned the property and flew an airborne

CAPSULE GEOLOGY

VLF-EM and magnetometer survey over the area and conducted geological mapping, prospecting and sampling on the occurrence. No more work was reported until 1989 when Grey Silver Mines performed geological mapping, sampling and soil surveys in the area. The following year Varitech Resources Ltd. conducted a program of geological mapping, prospecting, sampling and soil, VLF-EM and magnetometer surveys in the area. The showing was resampled that year.

The area is underlain by north to north-northeast striking, folded argillites of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63). The sediments are cut by several north to northwest-trending dikes that belong to the Portland Canal dike swarm.

Mineralization comprises 2 quartz lenses, exposed near the creek, containing pyrite and chalcopyrite. Both occurrences are hosted in sheared argillite and altered and fractured dike rock.

At the first locality, a fault zone, containing crushed and altered dike rocks and contorted argillite, forms the west wall of the creek canyon. A chip(?) sample across 30 centimetres of well-mineralized quartz assayed 0.36 per cent copper, 41.8 grams per tonne silver and 0.4 gram per tonne gold (Assessment Report 13352).

About 50 metres east of the creek, a trench exposes another occurrence of quartz-pyrite-chalcopyrite. A chip(?) sample collected in 1979, presumably from the showing, assayed 1.25 per cent copper, 10.6 grams per tonne silver and 0.2 gram per tonne gold across 5.5 metres (Assessment Report 8095).

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EMPR EXPL 1979-273
EMPR BULL 63
EMPR ASS RPT 8095, 10489, *13352, 19242, 20379, *20622
EMPR MAP 8
EMR MP CORPFILE (Ardo Mines Ltd.; Crest Silver Company Limited; Crest Ventures Limited; Radio-Stewart Mines, Limited)
GSC MEM 32, p. 57; 175, p. 140
GSC MAP *28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/21 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 072**

NATIONAL MINERAL INVENTORY: 104A4 Au3

NAME(S): **RED BLUFF (L. 4396)**, RED BLUFF 1-3

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 00 30 N
LONGITUDE: 129 58 37 W
ELEVATION: 850 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit on the Red Bluff claim (L. 4396) (Assessment Report 18769).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6207438
EASTING: 439084

COMMODITIES: Gold, Zinc, Lead, Copper

MINERALS

SIGNIFICANT: Sphalerite, Pyrite, Pyrrhotite, Galena, Chalcopyrite
ASSOCIATED: Quartz, Calcite
ALTERATION: Silica, Malachite
ALTERATION TYPE: Silicific'n, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Andesitic Breccia
Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: DUMP

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1988

COMMODITY	GRADE	
Gold	7.4000	Grams per tonne

COMMENTS: A selected grab sample from the adit dump; also yielded significant silver, lead and zinc values.
REFERENCE: Assessment Report 18769.

CAPSULE GEOLOGY

The Red Bluff showing is located about 1.5 kilometres west of the Bear River, approximately 4.5 kilometres southwest of the confluence of Bitter Creek with the Bear River.

The Red Bluff claims were acquired by the Prince John Mining Company in 1923. That year the company drove a 56-metre long adit on the showing. The Red Bluff 1-3 claims were Crown-granted in 1926. No further work was reported until 1988 when Tri-Gold Industries Inc. examined the showing.

The area is underlain by variably striking and dipping Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation. These rocks comprise mainly andesitic tuffs and breccias. They are intruded by northwest-trending dikes of the Mount Weller dike swarm (Open File 1987-22).

The adit was driven on a 15-metre wide, north-northwest trending zone of shearing and quartz-pyrite alteration. Within this zone, small quartz lenses and veins carry sphalerite, galena and minor chalcopyrite. A chip sample was taken from a 10 centimetre wide quartz-sphalerite-galena vein at the portal, trending 300 degrees and dipping 80 degrees southwest. The sample assayed 1.3 grams per tonne gold (Assessment Report 18769).

About 40 metres south of the adit, a grab sample of a quartz vein, mineralized with sphalerite, galena, chalcopyrite and malachite, assayed 1.4 grams per tonne gold (Assessment Report

CAPSULE GEOLOGY

18769).
Samples of wallrocks, carrying disseminated pyrite and/or pyrrhotite, calcite and drusy quartz vein material came from the adit dump. All samples assayed highly anomalous gold values. A selected grab sample of quartz, containing sphalerite and minor chalcopyrite, assayed 7.4 grams per tonne gold (Assessment Report 18769).

BIBLIOGRAPHY

EMPR AR 1923-76
EMPR ASS RPT *18769, 20379, 21993
EMPR BULL 58; 63; 85 (in press)
EMPR OF 1987-22
EMPR MAP 8
GSC MEM 175, p. 51
GSC MAP 28A; 216A; 217A; 307A; 315A; 1829; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/10/30 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 073** NATIONAL MINERAL INVENTORY: 104A4 Ag2

NAME(S): **DALY-SULLIVAN (L. 3684-3685)**, DALY, SULLIVAN, VANDAL FR. (L. 3785), SLATE, MAHOOD, S AND D FR.

STATUS: Showing Underground
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 05 10 N
LONGITUDE: 129 58 32 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit (Assessment Report 7640).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6216092
EASTING: 439293

COMMODITIES: Silver Gold

MINERALS
SIGNIFICANT: Pyrite Arsenopyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Mount Dilworth	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Volcaniclastic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

CAPSULE GEOLOGY

The Daly-Sullivan adit is located near the headwaters of Lesley (Cooper) Creek, on a tributary creek about 325 metres east of Lesley Creek and approximately 1.9 kilometres southeast of the south end of Long Lake.

The Daly (L. 3684), Sullivan (L. 3685), S. and D. and Mahood Fraction claims were located in 1910. The Daly and Sullivan claims were Crown-granted to McDonald and Winkler in 1917. The fractional claims (and one-half interest in the Daly and Sullivan claims) were acquired by Mahood Mines Limited in 1920(?). In 1922, the company name was changed to American Mining and Milling Company Limited. Open cutting and 1 adit were reported on the property. The Daly and Sullivan claims (and the Vandal Fraction, formerly the S. and D. Fraction?) were included in the Slate group in 1979. That year, Ocean Home Exploration Ltd. conducted geological mapping on the claims. Esso Resources acquired the claims from Houston Oil and Minerals in 1982. In 1987, Claimer Resources Inc. entered into an option agreement with Esso.

The area is underlain by Hazelton Group rocks of the Lower to Middle Jurassic Mount Dilworth Formation and overlying Middle Jurassic Salmon River Formation (Open File 1987-22). These rocks lie on the crumpled west limb of the north-northwest trending Dilworth syncline. Near the showing, brick red to purple volcaniclastics predominate (Assessment Report 7640).

The nature of the mineralization is not clear. A southeast-trending quartz vein, dipping 50 degrees southwest, has been reported to be near the adit (Assessment Report 7640). On the S. and D. Fraction (now the Vandal Fraction?), a 2.4 to 6.0-metre wide, vein has been traced for about 200 metres. The west-trending vein comprises quartz fillings and silicified schist mineralized with pyrite and arsenopyrite. Assays are reported at up to $20 per ton in gold and silver. A second vein, striking northwest across the Daly claim, is reported to have assayed high in silver (Corpfile - American Mining and Milling Company).

BIBLIOGRAPHY

EMPR AR 1917-451; 1922-83; 1923-81
EMPR BULL 58; 63; 85 (in press)
EMPR ASS RPT *7640, 20379
EMPR OF 1987-22
EMPR MAP 8
EMPR PF (In 104A 092 - Claimer Resources Inc., Prospectus, July 29, 1987)
EMR MP CORPFILE (American Mining and Milling Company, Limited; British American Holding and Development Company)
GSC MEM 175, p. 152
GSC MAP 216A; 217A; 307A; 315A; 1829; 9-1957; 1418A
GSC OF 2582

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1991/10/28	REVISED BY:	WC	FIELD CHECK:	N

MINFILE NUMBER: **104A 074**

NATIONAL MINERAL INVENTORY: 104A4 Pb4

NAME(S): **DUNDEE (L. 1491)**, MAMMOTH

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 02 54 N
LONGITUDE: 129 56 02 W
ELEVATION: 518 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Approximate centre of Dundee claim (L. 1491) (Mineral Titles Reference Map 104A/4W).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6211852
EASTING: 441829

COMMODITIES: Lead Zinc

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

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

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Argillite
Andesite
Granodiorite
Lamprophyre Dike
Quartz Diorite Dike
Quartz Monzonite Dike
Augite Hornblende Feldspar Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The exact location of the Dundee showing is not known. It is assumed to be on the Dundee Crown-granted claim (L. 1491), about 1 kilometre north-northwest of the confluence of Bitter Creek and the Bear River.

During 1910-11, the International (Portland) Mining Co. held the Mammoth group of 8 claims, including the Dundee claim, and carried out tunnelling and open cutting. In 1965, Canex Aerial Exploration conducted geological mapping on the adjacent B.G. claims (Aztec group); this work included parts of the Mammoth group. In 1984, Tournigan Mining Explorations Ltd. carried out geological mapping and a stream sediment survey in the area.

The area is underlain by Hazelton Group rocks. A northwest-trending conspicuous zone of shearing traverses the claims (Geological Survey of Canada Map 216A). Shearing cuts the generally north- striking, west-dipping Upper Triassic to Lower Jurassic Unuk River Formation andesitic volcanics. These are intruded by stocks of Jurassic(?) granodiorite (Bulletin 58, 63). Several north to north-northwest trending lamprophyre, quartz diorite or quartz monzonite, and augite-hornblende-feldspar porphyry dikes have been mapped on the Mammoth claim group (Assessment Report 759).

A band of argillites, intercalated with the volcanics, is seamed with quartz veins over a width of 3 metres. Mineralization comprises sparse pyrrhotite, galena, sphalerite and pyrite. The argillite band is the same one that hosts the mineralization on the Mammoth claim (L. 1488, 104A 044) (Geological Survey of Canada Memoir 32 and 175).

BIBLIOGRAPHY

EMPR AR 1910-62; 1911-73; 1912-324
EMPR BULL 58; 63
EMPR ASS RPT 759, 20379
EMPR MAP 8

BIBLIOGRAPHY

GSC MEM 32, p. 46; 175, p. 123
GSC MAP *28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/11/01 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/20 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 075** NATIONAL MINERAL INVENTORY:

NAME(S): **VIEW FRACTION**, VIEW FR. (L. 1805)

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 02 32 N NORTHING: 6211195
LONGITUDE: 129 57 40 W EASTING: 440124
ELEVATION: 1160 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Approximate centre of Lot 1805 (Mineral Titles Reference Map 104A/4W).

COMMODITIES: Silver Gold Zinc Lead Copper

MINERALS
SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Andesite Tuff
Andesite Breccia
Dacite Tuff
Dacite Breccia
Clastic Sediment/Sedimentary
Granodiorite Dike
Andesite Dike
Felsite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

CAPSULE GEOLOGY

The exact location of the View Fraction occurrence is not known. It is assumed to be on the View Fr. claim (L. 1805) which is located about 2 kilometres west-northwest of the confluence of Bitter Creek with the Bear River.

The history of the showing is unknown. In 1974-75, Benkovich shipped 157 tonnes of ore from the property. The 1974, shipment (21 tonnes) may have been mined from the M.C. occurrence (104A 045) The 1975 shipment (136 tonnes) was mined from various locations in the immediate area.

The area is underlain by north-striking, steeply west-dipping Hazelton Group rocks of the Lower Jurassic Betty Creek Formation (Open File 1987-22). These rocks comprise maroon to purple clastic sediments intercalated with andesite to dacite tuffs and breccias. North-northwest to northwest-trending granodiorite, andesite and felsite dikes are conspicuous in the area.

Details regarding the mineralization are unknown.

BIBLIOGRAPHY

EMPR GEM 1974-26
EMPR MINING *1975-1980 p. 56
EMPR BULL 58; 63
EMPR MAP 8
EMPR ASS RPT 20379
GSC MAP 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/30 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 076**

NATIONAL MINERAL INVENTORY: 104A4 Pb4

NAME(S): **BEN LOMOND (L. 1487)**, MAMMOTH, ORIENT (L.4925)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 03 16 N
LONGITUDE: 129 56 20 W
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Approximate centre of Lot 1487 (Mineral Titles Reference Map 104A/4W).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6212537
EASTING: 441527

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
COMMENTS: Rusty areas.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite
Granodiorite
Lamprophyre Dike
Quartz Diorite Dike
Quartz Monzonite Dike
Augite Hornblende Feldspar Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The exact location of the Ben Lomond showing is not known. It is assumed to be on the Ben Lomond Crown-granted claim (L. 1487), about 1.7 kilometres north-northwest of the confluence of Bitter Creek with the Bear River.

During 1910-11, the International (Portland) Mining Co. Limited held the Mammoth group of 8 claims, including the Ben Lomond claim, and carried out tunnelling and open cutting. No further work has been reported. In 1965, Canex Aerial Exploration conducted geological mapping on the adjacent B.G. claims (104A 042, Aztec group); this work included parts of the Mammoth group. In 1984, Tournigan Mining Explorations Ltd. carried out geological mapping and a stream sediment survey in the area.

The area is underlain by Hazelton Group rocks. A northwest-trending conspicuous zone of shearing traverses the claims (Geological Survey of Canada Map 216A). The shearing cuts the generally north-striking, west-dipping Upper Triassic to Lower Jurassic Unuk River Formation andesitic volcanics. These are intruded by stocks of Jurassic(?) granodiorite (Bulletin 58, 63). Several north to north-northwest trending lamprophyre, quartz diorite or quartz monzonite, and augite-hornblende-feldspar porphyry dikes have been mapped on the Mammoth claim group (Assessment Report 759).

Mineralization comprises pyrite and chalcopyrite in rusty areas and bands in the volcanic rocks (Geological Survey of Canada Memoir 32 and 175).

BIBLIOGRAPHY

EMPR AR 1910-62; 1911-73; 1912-324
EMPR ASS RPT *759, 12973, 20379
EMPR BULL 58; 63
EMPR MAP 8
GSC MAP *28A; 216A; 217A; 307A; *315A; 9-1957; 1418A

BIBLIOGRAPHY

GSC MEM 32, p. 46; 175, p. 123
GSC OF 2582

DATE CODED: 1991/11/01
DATE REVISED: 1993/03/20

CODED BY: WC
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104A 077**

NATIONAL MINERAL INVENTORY: 104A3,4 Au1

NAME(S): **BULLION**, CROESUS 1, DEL NORTE, MEZIADIN, NMG

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04E 103P13E
BC MAP:
LATITUDE: 56 00 37 N
LONGITUDE: 129 30 13 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Bullion area, sample DNLGR-306 (Assessment Report 21535).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6207338
EASTING: 468599

COMMODITIES: Gold, Silver, Lead, Zinc

MINERALS

SIGNIFICANT: Galena, Sphalerite
ASSOCIATED: Quartz, Pyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
G04 Besshi massive sulphide Cu-Zn
L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Pyritic Tuff
Volcanic Flow
Argillite
Plagioclase Porphyry Andesite
Intermediate Tuff
Intermediate Volcaniclastic
Argillite
Sandstone
Siltstone
Plagioclase Hornblende Porphyry Dike

HOSTROCK COMMENTS: Mineralization occurs near the contact between the Hazelton and Bowser Lake groups.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	54.8500	Grams per tonne
Gold	1.1400	Grams per tonne
Lead	0.1300	Per cent

COMMENTS: Sample DNLGR-306, a 1 metre chip sample across a fault zone with abundant quartz stringers. Also 0.012% zinc and 0.003% copper.
REFERENCE: Assessment Report 21535.

CAPSULE GEOLOGY

The Bullion showing is located about 30 kilometres east-northeast of Stewart, 900 metres north of Del Norte Creek, and approximately 1.3 kilometres northeast of the toe of the Del Norte Glacier. The Porter showings occur to south (103P 005).

The showing was originally staked and explored by Porter and Mowat before 1913. A short adit (Porter?) was driven between 1913 and 1922. In 1922, Green and Ficklin restaked the ground as the Del Norte claim group. In 1939, the Premier Gold Mining Company completed a series of 15 opencuts in and around the Porter and Bullion showings. At this point the property was known as the

CAPSULE GEOLOGY

Meziadin group. In 1982, Viscount Resources conducted limited prospecting, mapping and trenching on Willoughby Creek and Del Norte Creek and several EM anomalies were delineated from a geophysical survey. In 1987, Teuton Resources staked the Croesus 1-4 claims over the area and conducted rock and silt geochemical sampling the following year. In 1988, Teuton conducted follow-up exploration in the Bullion and Hardpan Creek areas. In 1989, Goodgold Resources Ltd. optioned the property and performed a heli-borne VLF-EM and magnetometer survey over the area. In 1991 and 1992, Goodgold conducted mapping, sampling, trenching, geochemical and geophysical surveys and diamond drilling (in the Hardpan Creek area).

According to Bulletin 63 the area is underlain by Hazelton Group rocks comprising a north-trending strip of volcaniclastics (Lower Jurassic Betty Creek Formation), flanked to the east and west by sediments (Middle Jurassic Salmon River Formation). More recently, the showing has been reported to lie close to the contact between Hazelton Group volcanics to the west and overlying Bowser Lake Group argillites to the east (Assessment Report 17660).

Geochemical sampling in 1988 outlined anomalous gold and silver values in pyritized tuff. Silt samples from a stream draining the tuff assayed anomalous gold, silver, copper, lead, zinc and molybdenum (Assessment Report 17660).

Boulders containing massive pyrite, pyrrhotite, sphalerite and galena have been found in Del Norte Creek (Assessment Report 17660). The source of these boulders is not known.

Float at the Bullion zone contained pyrite, chalcopyrite and galena. The zone occurs in intermediate ash lapilli and plagioclase crystal tuffs near a belt of strongly phyllic and argillically altered volcanics and plagioclase hornblende porphyry dikes.

A 1-metre chip sample taken from the Bullion area in 1991 assayed 1.14 grams per tonne gold, 54.85 grams per tonne silver, 0.13 per cent lead, 0.012 per cent zinc and 0.003 per cent copper (Sample DNLGR-306, Assessment Report 21535). The sample came from a fault zone with abundant quartz stringers.

In 1992, a quartz sulphide vein, the NMG vein, was discovered about 150 metres north of the Bullion showing. The vein outcrops intermittently over a distance of 225 metres and lies along the sedimentary-volcanic contact, similar to the LG vein (104A 161) discovered in 1990. The highest assay came from a 1 metre chip sample across the vein at its southern exposure. The sample assayed 10.6 grams per tonne gold and 571.45 grams per tonne silver (Sample DM-MR-82646, Assessment Report 22103).

A copper-gold zone on the Croesus 2 claim (103P), in the Hardpan Creek area to the south of the Bullion showing, assayed 8.7 per cent copper across 8.1 metres; one sample assayed 22.6 grams per tonne gold across 2.7 metres (Northern Miner March 6, 1989). The Bullion area is probably the northern extension of the altered belt of rocks that hosts this zone.

BIBLIOGRAPHY

EMPR AR 1922-77; 1939-67
EMPR ASS RPT 17660, 19168, *21535, *22103
EMPR BULL 63
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC MEM 32, p. 75
GSC OF 2582
N MINER March 6, 1989
WWW http://www.infomine.com/

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/27 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 078** NATIONAL MINERAL INVENTORY:

NAME(S): **DISCOVERY**, LOWER DISCOVERY CREEK, UPPER DISCOVERY CREEK, DISCOVERY CREEK, EVANS CREEK, DAVIS CREEK, GROUNDHOG

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104A16W
BC MAP:
LATITUDE: 56 51 34 N
LONGITUDE: 128 17 32 W
ELEVATION: 1150 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Lower Discovery Creek seam located 4.0 kilometres west-northwest of the junction between Currier Creek and the Skeena River (Coal Assessment Report 098).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6301963
EASTING: 543158

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
ASSOCIATED: Pyrite
MINERALIZATION AGE: Lower Cretaceous
ISOTOPIC AGE: 136 +/- 12 Ma DATING METHOD: Fossil MATERIAL DATED: Fossils

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A05 Anthracite
SHAPE: Tabular
MODIFIER: Folded Faulted
DIMENSION: STRIKE/DIP: 068/09S TREND/PLUNGE:
COMMENTS: Includes multiple seams exposed in the Evans, Davis and Abraham creeks.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Bowser Lake	Currier	

ISOTOPIC AGE: 136 +/- 12 Ma
DATING METHOD: Fossil
MATERIAL DATED: Fossils

LITHOLOGY: Carbonaceous Shale
Siltstone
Sandstone
Coal

HOSTROCK COMMENTS: The Currier Formation is the main coal bearing unit in the Groundhog coalfield, upwards of 25 individual seams have been documented.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Skeena Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Anthracite

INVENTORY

ORE ZONE: DISCOVERY REPORT ON: Y

CATEGORY: Inferred YEAR: 1970
QUANTITY: 343000000 Tonnes

COMMODITY	GRADE
Coal	100.0000 Per cent

COMMENTS: Combined surface (53,000,000 tonnes) and underground (290,000,000 tonnes) accessible inferred reserves.
REFERENCE: Coal Assessment Report 98.

CAPSULE GEOLOGY

The Discovery occurrence comprises the Lower Discovery Creek, Upper Discovery Creek, Evans Creek and Davis Creek seams. The discovery outcrop lies 4 kilometres west-northwest of the junction between Currier Creek and the Skeena River.

The occurrence forms part of the southeast Groundhog coalfield, an oblong (roughly 30 by 80 kilometres) area extending southeast from the headwaters of the Klappan and Little Klappan rivers to Groundhog Mountain.

CAPSULE GEOLOGY

The Lower Discovery Creek coal seams were the first authentic discovery in the Groundhog coalfield. The first claims were staked in 1903. Extensive prospecting, surveying, trenching and drifting was conducted on various coal exposures in the southeast Groundhog coalfield up to 1912. In 1948, Buckham and Latour (Geological Survey of Canada Bulletin 16) conducted a mapping and data collection program of the Groundhog coalfield wherein they documented 192 coal showings. Recent interest in the coal potential of the area began in 1966 and continues to the present. Various companies have conducted mapping, sampling and diamond drilling programs.

The Groundhog coalfield lies in the northern Bowser basin. The basin, which is bounded to the north and south by the Stikine and Skeena arches, was open to the west during the Middle Jurassic. Uplift of the Coast Mountains during the Upper Jurassic created an inland basin from which the sea regressed. The Bowser Lake Group (and related formations) in the northern basin comprise marine to alluvial clastic sediments deposited from the Middle Jurassic to the Lower Cretaceous. MacLeod and Hills (1990) proposes that sediment-ation was continuous and derived from the northern Cache Creek Terrane. Five formations have been defined comprising the fully marine Ashman and coeval Mt. Jackson formations, the alternating marine and fluvial Currier Formation, the dominantly fluvial McEvoy Formation and the fully fluvial and alluvial Devil's Claw Formation. Formation contacts are gradational and established by the pre-dominance of rock type, ranging from mostly shale in the upper Ashman to mostly conglomerate in the upper Devil's Claw.

Two phases of post sedimentary deformation and the lack of marker horizons complicate correlation of beds from location to location in the Groundhog coalfield. Phase 1 deformation resulting from a northeast-southwest compression produced a major northwest-trending synclinorium with associated lesser folds and thrust faults. Phase 2 deformation generated open folds having a northeast orientation. Deformation is most intense in the less competent, coal bearing sequences.

Three stratigraphic intervals of good coal development have been defined (Fieldwork 1989, 1990). The oldest and thickest seams (10 metre seams have been reported but are likely tectonically thickened) are found in the dominantly shale and sandstone beds of the Currier Formation and are generally of anthracite to meta-anthracite grade. Upwards of 25 individual seams have been documented (MacLeod and Hills, 1990). A paleontological study (MacLeod and Hills, 1990) of the fauna and flora fossil assemblage found in the Currier Formation indicates sedimentation occurred from the Upper Tithonian (148 Ma) to Upper Hauterivian (124 Ma). Pervasive marine influence suggests the deposits accumulated in the subaqueous delta and lower delta plain. Coal seams in the McEvoy Formation are generally thinner (rarely exceeding 1 metre) and of subanthracite to anthracite rank. The greater proportion of siltstone, sandstone and conglomerate in the McEvoy Formation indicates a dominantly fluvial delta system wherein deposits accumulated in interchannel paralic marine or brackish water environments. Thin seams of high volatile bituminous coal have been encountered amongst the dominantly fluvial sandstone and conglomerate beds of the Lower to Upper Cretaceous Sustut Group which unconformably overlies the eastern margin of the Bowser Basin.

Assessment of the Groundhog coalfield potential by a consortium of companies in 1970 estimated upwards of 3.6 billion tonnes of speculative coal reserves in the southeastern Groundhog coalfield (Coal Assessment Report 098). Testing of samples from trenches and drill core, for seams exceeding a 0.5 metre thickness, gave the following results:

Fixed Carbon	82.4 per cent
Ash Content	9.8 per cent
Volatile Matter	7.2 per cent
Sulphur Content	.6 per cent
Calorific Value	7,414 calories per gram

The above results are based on washed samples using a specific gravity of 1.75 grams per cubic centimetre; float yield was 38.8 per cent.

Drilling of the Lower and Upper Discovery Creek seams has defined 12 seams totalling 10.8 metres and 9 seams totalling 8.3 metres respectively. There are 42 million and 11 million tonnes of inferred coal reserves in the Lower and Upper Discovery Creek seams respectively, accessible by open pit. An additional 290 million tonnes, amenable to underground mining, occurs in the gently dipping strata between Discovery and Evans Creek (Coal Assessment Report 098). Testing of the most prominent seams gave the following results:

CAPSULE GEOLOGY

	Lower Discovery Creek Seams		Upper Discovery Creek Seam
Float yield	23.7	38.9	58.3
Seam thickness	2.0	1.5	1.9
Fixed carbon	75.3	80.7	84.9
Ash content	17.1	13.1	9.4
Volatile matter	7.6	6.2	5.7
Sulphur content	1.0	0.8	0.4
Calorific value	6,652	7,025	7,529

Thickness is in metres; calorific value is in calories per gram; all other values are in per cent. The float yield is based on a specific gravity of 1.75 grams per cubic centimetre. Coal rank is anthracite to subanthracite based on fixed carbon to volatile ratios (Coal Assessment Report 098).

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EMPR P 1986-5, pp. 19-21
GSC P 79-1B, pp. 411-414; 88-1E, pp. 91-96; 89-1E, pp. 133-138
GSC BULL 16
GSC OF 2582
BULL CAN SOC PET GEOL, Vol. 31, No.4, pp. 231-245
MacLeod, S.E. and Hills, L.V. (1990): *Conformable Late Jurassic (Oxfordian) to Early Cretaceous Strata, Northern Bowser Basin, British Columbia: a sedimentological and Paleontological Model; Canadian Journal of Earth Science, Vol. 27, pp. 988-998.

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/06 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104A 079**

NATIONAL MINERAL INVENTORY: 104A4 Au4

NAME(S): **FLORENCE**, FLORENCE 1 (L. 3459), FLORENCE 2 (L. 3460), FLORENCE 3 (L. 3465), LEADVILLE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 01 09 N
LONGITUDE: 129 50 24 W
ELEVATION: 366 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Approximate centre of the Florence 1-3 claims (L. 3459, 3460, and 3465) (Mineral Titles Reference Map 104A4/W).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6208531
EASTING: 447638

COMMODITIES: Copper Silver

MINERALS
SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Siltstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1915
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	5.0000	Grams per tonne
Copper	5.0000	Per cent

COMMENTS: Silver was $3 per tonne, 1915 prices.
REFERENCE: Minister of Mines Annual Report, 1915, page 73.

CAPSULE GEOLOGY

The exact location of the Florence showing is not known. It is assumed to be on the Florence group of claims, on the south side of Bitter Creek, about 6 kilometres east-southeast of the confluence of Bitter Creek with the Bear River.

The showing is first mentioned in 1912 when 24 metres of tunnel were reported on the Florence and Leadville claims, then owned by Harper. In 1915, it was reported that the owners, then Harper and Watkins, opened up a 4.9-metre wide body of ore. The Florence claims were Crown-granted to Stewart Central Mines Limited in 1929. The company name was changed to Victor Gold Mines Limited in 1934. No further work has been reported.

The area is underlain by north-striking, gently dipping argillites and siltstones of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63).

No details are available regarding the mineralization. A sample of the mineralization assayed 5 per cent copper and 5 grams per tonne silver ($3, 1915 prices) (Minister of Mines Annual Report, 1915).

BIBLIOGRAPHY

EMPR AR 1912-108; *1915-73
EMPR BULL 63
EMPR MAP 8
EMPR ASS RPT 20379
EMPR PF (Little, M. (1935): Report for Victor Gold Mines Ltd.)
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A

BIBLIOGRAPHY

GSC OF 2582

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/15

CODED BY: GSB
REVISED BY: WC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104A 080**

NATIONAL MINERAL INVENTORY:

NAME(S): **SURPRISE**, PRISE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 13 58 N
LONGITUDE: 129 33 05 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The exact location of the showing is not known but is assumed to lie close to the ice cap on the Prise claim (Mineral Titles Reference Map 104A/4E).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6232124
EASTING: 465818

COMMODITIES: Molybdenum Copper

MINERALS

SIGNIFICANT:	Pyrite	Pyrrhotite	Molybdenite	Chalcopyrite
ASSOCIATED:	Quartz	Calcite	Fluorite	
ALTERATION:	Biotite	Sericite	Kaolinite	
ALTERATION TYPE:	Biotite		Sericitic	Argillic
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER:	Vein	Stockwork	Disseminated
CLASSIFICATION:	Porphyry	Hydrothermal	
TYPE:	L05 Porphyry Mo (Low F- type)		
SHAPE:	Irregular		
MODIFIER:	Fractured		

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic-Cretaceous	Bowser Lake	Undefined Formation	

LITHOLOGY: Shale
Siltstone
Greywacke
Porphyritic Quartz Monzonite
Graphitic Siltstone
Lamprophyre Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Bowser Lake

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1981

COMMODITY	GRADE	
Molybdenum	0.1000	Per cent

COMMENTS: Visual estimate: 0.1 per cent molybdenum over 2.0 metres in drill hole 81-2.
REFERENCE: Assessment Report 9618.

CAPSULE GEOLOGY

The Surprise showing is located near the headwaters of the west fork of Surprise Creek, about 6.5 kilometres east of Mount Pattullo. The exact location is not known, but is assumed to lie close to an ice cap on the Prise claim.

Falconbridge discovered molybdenite-bearing boulders in the area in 1977. In 1979, Wesfrob Mines Limited conducted geological, geochemical and geophysical surveys in the area. Only the geophysical surveys are on record (Assessment Report 7576). The location of the surveys is not clear. In 1981, Riocanex Inc. optioned the property and drilled 3 holes (1,038.5 metres) to test the mineralization.

The area is underlain by shale, greywacke and siltstone of the Middle Jurassic to Lower Jurassic Bowser Lake Group. The sediments are intruded by a small stock of porphyritic quartz monzonite (Assessment Report 7576).

Two separate rusty zones (800 by 300 metres and 1800 by 900

CAPSULE GEOLOGY

metres) coincide with areas of biotitic alteration of siltstone and greywacke. The smaller zone is associated with the exposed stock. In the larger rusty zone, biotite alteration is coincident with anomalous fluorine values. The alteration zonation was considered to be centred on a small ice cap in the centre of the Prise claim. Molybdenite-bearing quartz veinlets, in outcrop and float adjacent to the ice cap, suggested the presence of a mineralized stock beneath the ice (Assessment Report 9618).

The 3 drillholes intersected sediments and, in hole 81-1, two lamprophyre dikes. The sediments are variably altered; biotite, sericitic and argillic alterations are reported.

Mineralization in the drillholes consists mainly of disseminated pyrite and/or pyrrhotite that averages 1 to 2 per cent but is locally up to 50 per cent over short core lengths. Molybdenite and minor chalcopyrite accompany pyrite, pyrrhotite, variably present calcite and rare fluorite in quartz veinlets. The veinlets are commonly less than 1 millimetre wide but do occur up to 1.5 centimetres wide. Molybdenite occurs rarely in sections of graphitic siltstone. Chalcopyrite is typically associated with pyrrhotite.

The best molybdenum grades occur in the argillic alteration. One section, 2 metres wide, in hole 81-2 was visually estimated to contain 0.1 per cent molybdenum (Assessment Report 9618).

BIBLIOGRAPHY

EMPR EXPL 1978-E256
EMPR BULL 63
EMPR ASS RPT 7576, *9618
EMPR MAP 8
GSC OF 2582

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/09/05 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 081**

NATIONAL MINERAL INVENTORY:

NAME(S): **ICE 3(A)**, ICE 1-4

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 04 04 N
LONGITUDE: 129 57 07 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized quartz vein (Assessment Report 20429).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6214032
EASTING: 440734

COMMODITIES: Lead, Silver, Zinc, Gold, Copper

MINERALS

SIGNIFICANT:	Galena, Sphalerite		
ASSOCIATED:	Quartz, Ankerite		
ALTERATION:	Silica, Sericite, Pyrite		
ALTERATION TYPE:	Silicific'n	Sericitic	Pyrite
MINERALIZATION AGE:	Unknown		

DEPOSIT

CHARACTER:	Vein	Shear	Disseminated
CLASSIFICATION:	Hydrothermal	Epigenetic	
TYPE:	I05 Polymetallic veins Ag-Pb-Zn±Au		
SHAPE:	Tabular		
MODIFIER:	Sheared		
DIMENSION:		STRIKE/DIP: 330/75E	TREND/PLUNGE:

COMMENTS: Quartz-ankerite vein.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Sandstone
Tuffaceous Sandstone
Siltstone
Dacitic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1990

COMMODITY	GRADE	
Silver	60.3000	Grams per tonne
Gold	0.0700	Grams per tonne
Copper	0.0500	Per cent
Lead	21.4600	Per cent
Zinc	1.6600	Per cent

COMMENTS: Chip(?) sample across 0.5 metre from the quartz-sulphide vein zone.
REFERENCE: Assessment Report 20429.

CAPSULE GEOLOGY

The Ice 3(A) showing is located on the Bear River Ridge, about 3.4 kilometres north-northwest of the confluence of Bitter Creek and the Bear River and 800 metres north-northeast of Mount Shorty Stevenson.

The Ice 1-4 claims were recorded in 1986. In 1990, Navarre Resources Corp. conducted geological mapping, trenching, sampling, soil geochemical surveys, a pulse-EM survey and diamond drilling (1 hole, 99 metres). The showing was described that year.

The area is underlain by north-northwest striking, folded volcanics and sediments of the Lower Jurassic Betty Creek Formation (Hazelton Group) (Open File 1987-22). Near the showing, the hostrocks comprise deformed red and green sandstone, tuffaceous sandstone and siltstone. Narrow, north-northwest trending dacitic dikes, containing 1 to 5 per cent hornblende, cut these rocks (Assessment Report 20429). The rocks are bleached and altered in

CAPSULE GEOLOGY

several locations. The alteration, comprising silica, sericite and disseminations and veins of pyrite, appears to be associated with a northwest-trending zone of folding and shearing (Assessment Report 20429).

The showing occurs in a narrow shear zone and consists of a 0.3 to 1.0-metre wide quartz-ankerite vein that trends 330 degrees and dips 70 degrees east. Immediately south-southeast of the showing, the shear lies along the east side of an alteration lens.

The vein contains up to 20 per cent galena and sphalerite. A chip(?) sample assayed 21.46 per cent lead, 1.66 per cent zinc, 60.3 grams per tonne silver, 0.05 per cent copper and 0.07 gram per tonne gold across 0.5 metre (Assessment Report 20429).

BIBLIOGRAPHY

EMPR EXPL 1990-35
EMPR BULL 58; 63; 85 (in press)
EMPR ASS RPT 20379, *20429
EMPR OF 1987-22
EMPR MAP 8
GSC MAP 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/02/07 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/20 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 082** NATIONAL MINERAL INVENTORY:

NAME(S): **PANORAMA SOUTH**, PANORAMA , GROUNDHOG

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104A16W
BC MAP:
LATITUDE: 56 45 59 N
LONGITUDE: 128 27 07 W
ELEVATION: 1585 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Centre of the block containing inferred reserves on the Panorama South property, approximately 3 kilometres southeast of Panorama Lake (Coal Assessment Report 113).

MINING DIVISION: Omineca
Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6291516
EASTING: 533501

COMMODITIES: Coal

MINERALS
SIGNIFICANT: Coal
ASSOCIATED: Pyrite
MINERALIZATION AGE: Lower Cretaceous
ISOTOPIC AGE: 136 +/- 12 Ma DATING METHOD: Fossil MATERIAL DATED: Fossils

DEPOSIT
CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A05 Anthracite
SHAPE: Tabular
MODIFIER: Folded Faulted

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Bowser Lake	Currier	

ISOTOPIC AGE: 136 +/- 12 Ma
DATING METHOD: Fossil
MATERIAL DATED: Fossils

LITHOLOGY: Carbonaceous Shale
Siltstone
Sandstone
Coal

HOSTROCK COMMENTS: The Currier Formation is the principal coal bearing unit within the Groundhog coalfield. Up to 25 individual seams have been documented.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Skeena Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Anthracite

INVENTORY

ORE ZONE: PANORAMA REPORT ON: Y

CATEGORY: Inferred YEAR: 1981
QUANTITY: 240000000 Tonnes

COMMODITY	GRADE
Coal	100.0000 Per cent

COMMENTS: Combined inferred reserves from the Panorama South and North (104A 085) deposits based on trenching and favourable geology.
REFERENCE: Coal Assessment Report 113.

CAPSULE GEOLOGY

The Panorama South prospect extends from latitude 56 degrees 43 minutes to 56 degrees 47 minutes and longitude 128 degrees 20 minutes to 128 degrees 38 minutes covering the Panorama Creek drainage basin. The occurrence forms part of the southeast Groundhog coalfield, an oblong (roughly 30 by 80 kilometres) area extending from the headwaters of the Klappan and Little Klappan rivers southeast to Groundhog Mountain.

Refer to the Discovery deposit (104A 078) for an overview of the exploration history, and regional and local geology of the Groundhog coalfield. The coal seams form part of the Lower Cretaceous Currier Formation (Bowser Lake Group) comprising carbonaceous shale, siltstone and sandstone.

Prospecting, mapping and trenching of the Panorama South

CAPSULE GEOLOGY

occurrence in 1980 resulted in a speculative reserve estimation of 218 million tonnes. Upwards of 9 coal seams were encountered, however the above reserve estimation was based on the dimensions of the Currier and Leach seams (average thickness of 2.10 and 1.97 metres respectively). In 1981, a revised inferred estimate of 240 million tonnes for the combined Panorama South and North (104A 085) properties was made. The most favourable area on the Panorama South property lies on Cushing Ridge approximately 3 kilometres southeast of Panorama Lake.

Coal quality tests (Coal Assessment Report 112) based on trench samples gave the following average values:

	Raw Coal	Washed Coal
Fixed carbon	55.9	65.6
Ash content	22.6	14.0
Volatile matter	17.8	18.2
Sulphur content	0.5	0.6
Calorific value	5,205	5,833

All values are in per cent except for the calorific value which is in calories per gram. Washed values are based on a specific gravity separation of 1.8 grams per cubic centimetre which gave a float yield of 82.5 percent. Vitrinite reflectance indicates anthracite rank.

BIBLIOGRAPHY

EMPR COAL ASS RPT 096, *112, *113
EMPR FIELDWORK 1984, pp. 342-351; 1985, pp. 225-229; *1989, pp. 472-477; *1990, pp. 415-418
EMPR P 1986-5, pp. 19-21
GSC P 79-1B, pp. 411-414; 88-1E, pp. 91-96; 89-1E, pp. 133-138
GSC BULL 16
GSC OF 2582
BULL CAN SOC PET GEOL, Vol. 31, No. 4, pp. 231-245
MacLeod, S.E. and Hills, L.V. (1990): *Conformable Late Jurassic (Oxfordian) to Early Cretaceous Strata, Northern Bowser Basin, British Columbia: A Sedimentological and Paleontological Model; Canadian Journal of Earth Sciences, Vol. 27, pp. 988-998.

DATE CODED: 1986/02/10 CODED BY: EVFK FIELD CHECK: N
DATE REVISED: 1991/09/09 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104A 083**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT JACKSON**, MCEVOY FLATS, TRAIL CREEK, GROUNDHOG

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A16E
BC MAP:
LATITUDE: 56 49 39 N
LONGITUDE: 128 14 17 W
ELEVATION: 945 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Trail Creek seams are located approximately 1.6 kilometres due south of the junction between Currier Creek and the Skeena River (Coal Assessment Report 098).

MINING DIVISION: Omineca
UTM ZONE: 09 (NAD 83)
NORTHING: 6298443
EASTING: 546500

COMMODITIES: Coal

MINERALS
SIGNIFICANT: Coal
ASSOCIATED: Pyrite
MINERALIZATION AGE: Lower Cretaceous
ISOTOPIC AGE: 136 +/- 12 Ma DATING METHOD: Fossil MATERIAL DATED: Fossils

DEPOSIT
CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A05 Anthracite
SHAPE: Tabular
MODIFIER: Folded Faulted

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Bowser Lake	Currier	

ISOTOPIC AGE: 136 +/- 12 Ma
DATING METHOD: Fossil
MATERIAL DATED: Fossils

LITHOLOGY: Carbonaceous Shale
Siltstone
Sandstone
Coal

HOSTROCK COMMENTS: The Currier Formation is the main coal bearing unit in the Groundhog coalfield. More than 25 individual seams have been documented.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Skeena Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Anthracite
COMMENTS: In places, the coal is meta-anthracite.

CAPSULE GEOLOGY

The Mount Jackson occurrence comprises coal showings found on Mount Jackson, Jackson Flats and McEvoy Flats. The occurrence forms part of the southeast Groundhog Coalfield, an oblong (roughly 30 by 80 kilometres) area extending from the headwaters of the Klappan and Little Klappan rivers southeast to Groundhog Mountain.

Refer to the Discovery deposit (104A 078) for an overview on the exploration history, regional geology and local geology of the southeast Groundhog coalfield. The coal seams form part of the Lower Cretaceous Currier Formation (Bowser Lake Group) comprising carbonaceous shale, siltstone and sandstone.

Multiple coal seams have been documented (Coal Assessment Report 098) on the upper north slope of Mount Jackson (8 to 10 seams), in the lower reaches of Trail and Jackson creeks (6 seams each), Little Creek (3 seams), Falconer Creek and Abraham Creek. Seam widths vary from 0.5 to 3.0 metres thick. Approximately 45 samples were collected between 1982 and 1983, the coal quality analyses varied widely (Coal Assessment Report 107, 108):

	Range for Raw Coal
Fixed carbon	12 - 89
Ash Content	7 - 84
Volatile matter	4 - 23
Calorific value	800 - 7,720

CAPSULE GEOLOGY

All values are in per cent except for the calorific value which is in calories per gram. Coal rank varies from anthracite to meta-anthracite.

A single diamond drillhole in the McEvoy Flats near Abraham Creek encountered 10 coal seams for an aggregate thickness of 6.25 metres (Coal Assessment Report 098). Coal quality testing of the two thickest seams (each exceeding 1.5 metres) gave the following values:

	Upper Seam	Lower Seam
Float yield	55.7	69.7
Fixed carbon	70.8	80.6
Ash content	19.8	12.5
Volatile Matter	9.5	6.9
Sulphur content	0.7	0.9
Calorific value	6,526	7,193

The float yield is based on a specific gravity separation of 1.75 grams per cubic centimetre.

BIBLIOGRAPHY

EMPR COAL ASS RPT 096, 097, *098, 100, *107, 108
EMPR FIELDWORK 1984, pp. 342-351; 1985, pp. 225-229; *1989, pp. 473-477; 1990, pp. 415-418
EMPR P 1986-5, pp. 19-21
GSC P 79-1B, pp. 411-414, 88-1E, pp. 91-96; 89-1E, pp. 133-138
GSC BULL *16
GSC OF 2582
BULL CAN SOC PET GEOL, Vol. 31, No. 4, pp. 231-245
MacLeod, S.E. and Hills, L.V. (1990): *Conformable Late Jurassic (Oxfordian) to Early Cretaceous Strata, Northern Bowser Basin, British Columbia: a Sedimentological and Paleontological Model; Canadian Journal of Earth Sciences, Vol. 27, pp. 988-998

DATE CODED: 1986/04/17 CODED BY: EVFK FIELD CHECK: N
DATE REVISED: 1991/09/09 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104A 084**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRUDENTIAL**, GROUNDHOG

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A16E 104H01E
BC MAP:
LATITUDE: 56 56 54 N
LONGITUDE: 128 06 02 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location given for prominent coal seams found on the southern face of Mount Laidlaw approximately 1 kilometre north of Kluatantan Lakes (Coal Assessment Report 097).

MINING DIVISION: Omineca
UTM ZONE: 09 (NAD 83)
NORTHING: 6311995
EASTING: 554714

COMMODITIES: Coal

MINERALS
SIGNIFICANT: Coal
ASSOCIATED: Pyrite
MINERALIZATION AGE: Lower Cretaceous
ISOTOPIC AGE: 136 +/- 12 Ma DATING METHOD: Fossil MATERIAL DATED: Fossils

DEPOSIT
CHARACTER: Stratiform Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A05 Anthracite
SHAPE: Tabular
MODIFIER: Folded Faulted

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Bowser Lake	Currier	

ISOTOPIC AGE: 136 +/- 12 Ma
DATING METHOD: Fossil
MATERIAL DATED: Fossils

LITHOLOGY: Carbonaceous Shale
Siltstone
Sandstone
Coal

HOSTROCK COMMENTS: The Currier Formation is the main coal bearing unit in the Groundhog coalfield. More than 25 individual seams have been documented.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Skeena Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Anthracite
COMMENTS: The rank is meta-anthracite to semi-graphite.

CAPSULE GEOLOGY

The Prudential occurrence comprises coal showings found on Mount Laidlaw, Prudential Mountain and Kluayaz Lake. The Prudential occurrence forms part of the Groundhog coalfield. The Groundhog coalfield is an oblong (30 by 80 kilometres), northwest oriented area which extends from the headwaters of the Klappan and Little Klappan rivers to Groundhog Mountain.

Refer to the Discovery deposit (104A 078) for an overview of the work history, regional geology and local geology of the Groundhog coalfield.

Locally, the Prudential Member hosts the majority of coal seams and is likely correlative with the more widely recognized Currier Formation. Seams are generally narrow and rarely exceed 1.0 metre, however, a 4-metre seam was observed. The thickest seams occur on the east flank of Mt. Laidlaw where seams measuring 1.0 and 1.5 metres were documented, and on eastern Prudential Mountain with a 1.0-metre thick seam (Coal Assessment Report 106).

The area has undergone considerable deformation resulting in high amplitude, short wavelength, chevron style folds which are upright to overturned to the northeast. Most coal seams are pervasively sheared, contain abundant pyrite and are strongly oxidized. Coal rank varies from meta-anthracite to semi-graphite. Few samples have been collected from this area.

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EMPR P 1986-5, pp. 19-21
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GSC BULL *16
GSC OF 2582
BULL CAN SOC PET GEOL, Vol. 31, No. 4, pp. 231-245
MacLeod, S.E. and Hills, L.V. (1990): *Conformable Late Jurassic (Oxfordian) to Early Cretaceous Strata, Northern Bowser Basin, British Columbia: a Sedimentological and Paleontological Model: Canadian Journal of Earth Sciences, Vol. 27, pp. 988-998.

DATE CODED: 1986/04/10 CODED BY: EVFK FIELD CHECK: N
DATE REVISED: 1991/09/10 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104A 085**

NATIONAL MINERAL INVENTORY:

NAME(S): **PANORAMA NORTH**, PANORAMA , GROUNDHOG

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104A15E
BC MAP:
LATITUDE: 56 49 56 N
LONGITUDE: 128 34 24 W
ELEVATION: 1475 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Location given for centre of block containing inferred coal reserves (Coal Assessment Report 113).

MINING DIVISION: Omineca
UTM ZONE: 09 (NAD 83)
NORTHING: 6298791
EASTING: 526036

COMMODITIES: Coal

MINERALS
SIGNIFICANT: Coal
ASSOCIATED: Pyrite
MINERALIZATION AGE: Lower Cretaceous
ISOTOPIC AGE: 136 +/- 12 Ma DATING METHOD: Fossil MATERIAL DATED: Fossils

DEPOSIT
CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A05 Anthracite
SHAPE: Tabular
MODIFIER: Folded Faulted
COMMENTS: The coal seams are relatively flat lying.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Bowser Lake	Currier	

ISOTOPIC AGE: 136 +/- 12 Ma
DATING METHOD: Fossil
MATERIAL DATED: Fossils

LITHOLOGY: Mudstone
Carbonaceous Shale
Sandstone
Coal

HOSTROCK COMMENTS: The Currier Formation is the main coal bearing unit in the Groundhog coalfield. More than 25 individual seams have been documented.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Skeena Ranges
RELATIONSHIP: Syn-mineralization
GRADE: Anthracite

INVENTORY

ORE ZONE: PANORAMA
REPORT ON: Y

CATEGORY: Inferred
YEAR: 1981
QUANTITY: 240000000 Tonnes

COMMODITY	GRADE
Coal	100.0000 Per cent

COMMENTS: The above estimate is based on combined inferred reserves for the Panorama North and South (104A 082) deposits.
REFERENCE: Coal Assessment Report 113.

CAPSULE GEOLOGY

The Panorama North occurrence comprises coal showings found above Beirnes Creek and in Wolf Meadows (an informally named, northwest oriented valley found south of Beirnes Creek).

The occurrence forms part of the southern Groundhog coalfield. The coalfield is an oblong (30 by 80 kilometres), southeast oriented area extending from the headwaters of the Klappan and Little Klappan rivers to Groundhog Mountain.

Refer to the Discovery deposit (104A 078) for an overview on exploration history, regional geology and local geology of the southern Groundhog coalfield. The coal seams form part of the Lower Cretaceous Currier Formation (Bowser Lake Group) comprising carbonaceous shale, mudstone and sandstone.

Prospecting, mapping, trenching and sampling of the Panorama

CAPSULE GEOLOGY

North occurrence in 1980 resulted in a speculative reserve estimation of 108 million tonnes (Coal Assessment Report 112). Upwards of 9 seams were encountered, however, the above estimation is based on the dimensions of the Currier and Leach seams (average thickness of 2.10 and 1.97 metres respectively). Exploration in 1981 resulted in a revised inferred estimate of 240 million tonnes (Coal Assessment Report 113) for the combined Panorama North and South (104A 082) deposits. The most favourable area on the Panorama North property underlies Wolf Meadows where the coal seams are relatively flat lying.

Coal quality tests (Coal Assessment Report 112) based on trench samples gave the following average values:

	Raw Coal	Washed Coal
Fixed carbon	55.9	65.6
Ash content	22.6	14.0
Volatile matter	17.8	18.2
Sulphur content	0.5	0.6
Calorific value	5,205	5,833

All values are in per cent except for the calorific value which is in calories per gram. Washed values are based on a specific gravity separation of 1.8 grams per cubic centimetre which gave a float yield of 82.5 per cent. Vitrinite reflectance indicates anthracite rank.

BIBLIOGRAPHY

EMPR COAL ASS RPT 097, 098, 100, *112, *113
EMPR FIELDWORK 1984, pp. 342-351; 1985, pp. 225-229; *1989, pp. 473-477; *1990, pp. 415-418
EMPR P 1986-5, pp. 19-21
GSC P 79-1B, pp. 411-414; 88-1E, pp. 91-96; 89-1E, pp. 133-138
GSC BULL 16
GSC OF 2582
BULL CAN SOC PET GEOL, Vol. 31, No. 4, pp. 231-245
MacLeod, S.E. and Hills, L.V. (1990): *Conformable Late Jurassic (Oxfordian) to Early Cretaceous Strata, Northern Bowser Basin, British Columbia: A sedimentological and Paleontological Model; Canadian Journal of Earth Sciences, Vol. 27, pp. 988-998.

DATE CODED: 1986/04/10 CODED BY: EVFK FIELD CHECK: N
DATE REVISED: 1991/09/10 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104A 086**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEIRNES-ANTHRACITE**, SCOTT, ROSS, GROUNDHOG

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A16W
BC MAP:
LATITUDE: 56 56 39 N
LONGITUDE: 128 23 17 W
ELEVATION: 1035 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of drill hole 70-1, roughly 400 metres southwest of the junction between Beirnes Creek and the Skeena River (Coal Assessment Report 098).

MINING DIVISION: Omineca
UTM ZONE: 09 (NAD 83)
NORTHING: 6311337
EASTING: 537230

COMMODITIES: Coal

MINERALS
SIGNIFICANT: Coal
ASSOCIATED: Pyrite
MINERALIZATION AGE: Lower Cretaceous
ISOTOPIC AGE: 136 +/- 12 Ma DATING METHOD: Fossil MATERIAL DATED: Fossils

DEPOSIT
CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A05 Anthracite
SHAPE: Tabular
MODIFIER: Folded Faulted

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Bowser Lake	Currier	

ISOTOPIC AGE: 136 +/- 12 Ma
DATING METHOD: Fossil
MATERIAL DATED: Fossils

LITHOLOGY: Mudstone
Carbonaceous Shale
Sandstone
Coal

HOSTROCK COMMENTS: The Currier Formation is the main coal bearing unit in the Groundhog coalfield. More than 25 individual seams have been documented.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Skeena Ranges
RELATIONSHIP: Syn-mineralization
GRADE: Anthracite

CAPSULE GEOLOGY

The Beirnes-Anthracite occurrence comprises the coal showings exposed along the lower valley of the Skeena River between Beirnes Creek and Langlois Creek.

The Beirnes-Anthracite occurrence forms part of the southern Groundhog coalfield. The coalfield is an oblong (30 by 80 kilometres) area extending southeast from the headwaters of the Klappan and Little Klappan rivers to Groundhog Mountain.

Refer to the Discovery deposit (104A 078) for an overview on the exploration history, regional geology and local geology of the southern Groundhog coalfield.

Multiple coal seams are located in the lower Beirnes Creek, Anthracite Creek and Langlois Creek. Best documented are the 6 seams along the lower 850 metres of Beirnes Creek which were explored by short adits in 1911. Thicknesses at surface range from 1 metre to 4.8 metres. The seams strike 300 degrees and dip 30 degrees to the northeast. The 178 metre drillhole 70-1 (Coal Assessment Report 098) located near the mouth of Beirnes Creek intersected 10 seams for an aggregate 9.6 metres of coal. Six seams totalling 6.7 metres were intersected between 45 and 111 metres depth. The most prominent seams are the Scott and Ross; coal quality testing gave the following results:

	Scott Seam	Upper Ross Seam	Lower Ross Seam

CAPSULE GEOLOGY

Thickness	1.74	2.29	0.76
Fixed carbon	78.1	83.4	82.5
Ash content	15.2	11.0	11.1
Volatile matter	6.6	5.7	6.4
Sulphur content	0.5	0.5	0.8
Calorific value	6,746	7,163	7,283

Thickness is in metres, calorific value is in calories per gram, other values are in per cent. The above values are based on washed samples using a 1.75 grams per cubic centimetre specific gravity float separation. Fixed carbon to volatile matter ratios indicate anthracite rank coal.

Drillholes 81-5 and 81-6 were located adjacent to Anthracite Creek (Coal Assessment Report 114) approximately 4.5 kilometres southeast of drillhole 70-1. Hole 81-5 intersected 3 seams in excess of 0.5 metres, the thickest being 1.8 metres. Hole 81-6 encountered 10 seams over 0.3 metre thick with none exceeding 1 metre, however multiple seams separated by thin shale partings were intersected at two depths. Coal quality test results were not reported.

BIBLIOGRAPHY

EMPR COAL ASS RPT *095, 096, 097, *098, 100, 104, *114
EMPR FIELDWORK 1984, pp. 342-351; 1985, pp. 225-229;
*1989, pp. 473-477; *1990, pp. 415-418
EMPR P 1986-5, pp. 19-21
GSC P 79-1B, pp. 411-414, 88-1E, pp. 91-96; 89-1E, pp. 133-138
GSC BULL *16
GSC OF 2582
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DATE CODED: 1986/04/23 CODED BY: EVFK FIELD CHECK: N
DATE REVISED: 1991/09/10 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104A 087**

NATIONAL MINERAL INVENTORY:

NAME(S): **TELFER**, GROUNDHOG

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A16W 104A16E
BC MAP:
LATITUDE: 56 52 29 N
LONGITUDE: 128 13 07 W
ELEVATION: 1175 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of drill hole 70-5, roughly 3.5 kilometres north-northeast of the junction between Currier Creek and the Skeena River (Coal Assessment Report 098).

MINING DIVISION: Omineca
UTM ZONE: 09 (NAD 83)
NORTHING: 6303713
EASTING: 547627

COMMODITIES: Coal

MINERALS
SIGNIFICANT: Coal
ASSOCIATED: Pyrite
MINERALIZATION AGE: Lower Cretaceous
ISOTOPIC AGE: 136 +/- 12 Ma DATING METHOD: Fossil MATERIAL DATED: Fossils

DEPOSIT
CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A05 Anthracite
SHAPE: Tabular
MODIFIER: Folded Faulted

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Bowser Lake	Currier	

ISOTOPIC AGE: 136 +/- 12 Ma
DATING METHOD: Fossil
MATERIAL DATED: Fossils

LITHOLOGY: Mudstone
Carbonaceous Shale
Sandstone
Coal

HOSTROCK COMMENTS: The Currier Formation is the main coal bearing unit in the Groundhog coalfield. More than 25 individual seams have been documented.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Skeena Ranges
RELATIONSHIP: Syn-mineralization GRADE: Anthracite

CAPSULE GEOLOGY

The Telfer occurrence comprises coal showings on the western, southern and eastern face of Mount Moss. The Telfer occurrence forms part of the southern Groundhog coalfield. The coalfield is an oblong (30 by 80 kilometres) area extending southeast from the headwaters of the Klappan and Little Klappan Rivers to Groundhog Mountain.

Refer to the Discovery deposit (104A 078) for an overview of the exploration history, regional geology and local geology of the Groundhog coalfield.

Multiple coal seams have been located in the upper reaches of Telfer, Duke and Langlois creeks as well as on the eastern face of Mount Moss. The best documented showing consists of the eight Telfer Creek seams which were explored by trenches and short adits in 1911 (Geological Survey of Canada Bulletin 16). Seam widths vary from 0.5 to 1.8 metres and have a general attitude of strike 340 degrees and dip 28 degrees northeast. Drillhole 70-5 (Coal Assessment Report 098), located adjacent to the Telfer Creek showing, intersected 10 seams over a length of 177 metres. The best intersection included an aggregate 5.8 metres of coal between 56 and 111 metres depth. Coal quality testing of two prominent seams gave the following results:

	Seam 1	Composite Seam 2
Thickness	0.88	2.65
Fixed carbon	80.3	77.9
Ash content	14.0	15.9
Volatile matter	5.7	6.3

CAPSULE GEOLOGY

Sulphur content	0.5	0.7
Calorific value	6,829	6,708
Float yield	36	28

Values are in per cent except for thickness which is in metres and calorific value which is in calories per gram. Float yield is based on a 1.75 grams per cubic centimetre specific gravity separation. The fixed carbon to volatile matter ratio indicates anthracite rank for both seams.

Drillhole 81-1, located 800 metres to the south-southeast of drillhole 70-5, encountered 11 seams exceeding 0.4 metres, the thickest is 2 metres. Coal quality results were not reported.

BIBLIOGRAPHY

EMPR COAL ASS RPT 096, 097, *098, 100, 103, *114
EMPR P 1986-5, pp. 19-21
EMPR FIELDWORK 1984, pp. 342-351; 1985, pp. 225-229; *1989, pp. 473-477; *1990, 415-418
GSC P 79-1B, pp. 411-414; 88-1E, 91-96; 89-1E, 133-138
GSC BULL *16
GSC OF 2582
BULL CAN SOC PET GEOL, Vol. 31, No. 4, pp. 231-245
MacLeod, S.E. and Hills, L.V. (1990): *Conformable Late Jurassic (Oxfordian) to Early Cretaceous Strata; Northern Bowser Basin, British Columbia: A Sedimentological and Paleontological Model; Canadian Journal of Earth Sciences, Vol. 27, pp. 988-998.

DATE CODED: 1986/04/23 CODED BY: EVFK FIELD CHECK: N
DATE REVISED: 1991/09/10 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104A 088**

NATIONAL MINERAL INVENTORY:

NAME(S): **OPERATOR MOUNTAIN**, GROUNDHOG

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A16E
BC MAP:
LATITUDE: 56 50 59 N
LONGITUDE: 128 06 19 W
ELEVATION: 1385 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Approximate position given for the coal seams in Grizzly Creek, roughly 3.8 kilometres southwest of Operator Mountain (Coal Assessment Report 107).

MINING DIVISION: Omineca
UTM ZONE: 09 (NAD 83)
NORTHING: 6301015
EASTING: 554570

COMMODITIES: Coal

MINERALS
SIGNIFICANT: Coal
ASSOCIATED: Pyrite
MINERALIZATION AGE: Lower Cretaceous
ISOTOPIC AGE: 136 +/- 12 Ma DATING METHOD: Fossil MATERIAL DATED: Fossils

DEPOSIT
CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A05 Anthracite
SHAPE: Tabular
MODIFIER: Folded Faulted

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Bowser Lake	Currier	

ISOTOPIC AGE: 136 +/- 12 Ma
DATING METHOD: Fossil
MATERIAL DATED: Fossils

LITHOLOGY: Mudstone
Carbonaceous Shale
Sandstone
Coal

HOSTROCK COMMENTS: The Currier Formation is the main coal bearing unit in the Groundhog coalfield. More than 25 individual seams have been documented.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Skeena Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Anthracite
COMMENTS: The rank is based on the fixed carbon to volatile matter ratios.

CAPSULE GEOLOGY

The Operator Mountain occurrence comprises 14 separate coal showings in the Taylor Creek and Grizzly Gulch headwaters. The occurrence is part of the southern Groundhog coalfield. The coalfield is an oblong (30 by 80 kilometres) area extending southeast from the headwaters of the Klappan and Little Klappan rivers to Groundhog Mountain.

Refer to the Discovery deposit (104A 078) for an overview of the exploration history, regional geology and local geology of the southern Groundhog coalfield.

The coal seams form part of the Lower Cretaceous Currier Formation (Bowser Lake Group) comprising carbonaceous shale, mudstone and sandstone.

The most prominent seams are the Grizzly No.1 and Grizzly No.2 which are 0.85 and 1.8 metres thick respectively. Seams exposed elsewhere in the area are generally less than 1 metre and contain abundant shale partings. Analysis of 9 samples collected from Operator Mountain in 1982 (Coal Assessment Report 107) gave widely varying coal quality results:

Fixed carbon	37 - 62
Ash content	26 - 56
Volatile matter	3 - 11
Calorific value	2,672 - 5,312

The above values are in per cent except for calorific value

CAPSULE GEOLOGY

which is in calories per gram. Coal rank is predominantly anthracite but may range up to meta-anthracite in places.

BIBLIOGRAPHY

EMPR COAL ASS RPT 96, *97, 107
EMPR FIELDWORK 1984, pp. 342-351; 1985, pp. 225-229; *1989, pp. 473-477; *1990, pp. 415-418
EMPR P 1986-5, pp. 19-21
GSC P 79-1B, pp. 411-414; 88-1E, 91-96; 89-1E, 133-138
GSC BULL *16
GSC OF 2582
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MacLeod, S.E. and Hills, L.V. (1990): Conformable Late Jurassic (Oxfordian) to Early Cretaceous Strata, Northern Bowser Basin, British Columbia: A Sedimentological and Paleontological Model; Canadian Journal of Earth Sciences, Vol. 27, pp. 988-998.

DATE CODED: 1986/04/23 CODED BY: EVFK FIELD CHECK: N
DATE REVISED: 1991/09/11 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104A 089**

NATIONAL MINERAL INVENTORY:

NAME(S): **DAVE-UPPER CURRIER**, GROUNDHOG

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A16W
BC MAP:
LATITUDE: 56 50 54 N
LONGITUDE: 128 27 37 W
ELEVATION: 1540 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Approximate position given for the coal seams exposed in Dave Creek located 5.6 kilometres southwest of Devil's Claw Mountain (Coal Assessment Report 098).

MINING DIVISION: Omineca
UTM ZONE: 09 (NAD 83)
NORTHING: 6300633
EASTING: 532920

COMMODITIES: Coal

MINERALS
SIGNIFICANT: Coal
ASSOCIATED: Pyrite
MINERALIZATION AGE: Lower Cretaceous
ISOTOPIC AGE: 136 +/- 12 Ma DATING METHOD: Fossil MATERIAL DATED: Fossils

DEPOSIT
CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Fossil Fuel
TYPE: A05 Anthracite
SHAPE: Tabular
MODIFIER: Folded Faulted
DIMENSION: STRIKE/DIP: 316/55S TREND/PLUNGE:

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Bowser Lake	Currier	

ISOTOPIC AGE: 136 +/- 12 Ma
DATING METHOD: Fossil
MATERIAL DATED: Fossils

LITHOLOGY: Mudstone
Carbonaceous Shale
Sandstone
Coal

HOSTROCK COMMENTS: The Currier Formation is the main coal beraing unit in the Groundhog coalfield. More than 25 individual seams have been documented.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Skeena Ranges
RELATIONSHIP: Syn-mineralization
GRADE: Anthracite

CAPSULE GEOLOGY

The Dave-Upper Currier occurrence comprises multiple coal seams in the upper reaches of Dave Creek and on Coal Licence 815 approximately 2.5 kilometres west of Dave Creek and 2 kilometres north of Currier Creek. The Dave-Upper Currier occurrence comprises part of the southern Groundhog coalfield. The coalfield is an oblong (30 by 80 kilometres) area extending to the southeast from the headwaters of the Klappan and Little Klappan rivers to Groundhog Mountain.

Refer to the Discovery deposit (104A 078) for an overview of the exploration history, regional geology and local geology of the Groundhog Coalfield. The coal seams form part of the Lower Cretaceous Currier Formation (Bowser Lake Group) comprising mudstone, carbonaceous shale and sandstone.

Five seams in Dave Creek and six seams in a small gully above Currier Creek have been documented (Geological Survey of Canada Bulletin 16). At Dave Creek, seam thicknesses vary from 1.5 to 3.2 metres. Clean coal (exclusive of shale layers or partings) may account for upwards of 2.3 metres in the thickest seams. The seams have a general strike of 316 degrees and dip 55 southwest. A sample of Dave Creek No. 3 seam gave the following coal quality results (Coal Assessment Report 100):

Fixed Carbon	82.04
Ash Content	5.19

CAPSULE GEOLOGY

Volatile Matter	11.45
Moisture	1.32
Sulphur Content	0.50
Calorific Value	7,319

The above values are based on a 1.58 specific gravity float separation and are in per cent except for calorific value which is in calories per gram. The coal is anthracite rank.

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EMPR COAL ASS RPT 096, 097, *098, 100
EMPR FIELDWORK 1984, pp. 342-351; 1985, pp. 225-229; *1989, pp. 473-477; *1990, 415-418
EMPR P 1986-5, pp. 19-21
GSC BULL *16
GSC P 79-1B, 411-414; 88-1E, 91-96; 89-1E, pp. 133-138
GSC OF 2582
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DATE CODED: 1986/05/20 CODED BY: EVFK FIELD CHECK: N
DATE REVISED: 1991/09/10 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104A 090**

NATIONAL MINERAL INVENTORY:

NAME(S): **IRON CAP**, MJ

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 07 37 N
LONGITUDE: 129 58 09 W
ELEVATION: 1347 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop (Open File 1987-22).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6220631
EASTING: 439755

COMMODITIES: Silver Copper Lead Zinc

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite Galena Sphalerite
ASSOCIATED: Chalcedony
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated Stratiform
CLASSIFICATION: Unknown
TYPE: D03 Volcanic redbed Cu
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Mount Dilworth	

LITHOLOGY: Dacitic Ash Tuff
Felsic Volcanic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1956
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	6.9000	Grams per tonne

COMMENTS: Channel sample across 2.4 metres in the upper cut; trace gold.
REFERENCE: Property File - Plumb, 1956.

CAPSULE GEOLOGY

The Iron Cap showing is about 1.3 kilometres southeast of the north end of Long Lake and about 1.1 kilometres east of the east shore of the lake. The mineralized horizon is exposed along the south side of Joan Creek.

The history of the showing is unknown. The extensive gossan probably attracted many prospectors over the years. In 1956, the showing was covered by the M.J. claims, owned by the M.J. Mining Syndicate. The owners emplaced at least 2 opencuts. In 1956, Plumb examined the showing for Dorreen Mines Limited.

The area is underlain predominantly by Hazelton Group volcanics that lie in the crumpled core region of the north-northwest trending Spider anticline. In the core of the fold, Upper Triassic to Lower Jurassic Unuk River Formation rocks are successively overlain by the Lower Jurassic Betty Creek and overlying Mount Dilworth formations. The mainly volcanic rocks are overlain by the predominantly sedimentary rocks of the Lower to Middle Jurassic Salmon River Formation. Northwest-trending dikes of the Portland Canal dike swarm, intrude all rock types. Several north-northwest trending faults are conspicuous in the area (Open File 1987-22).

Mineralization is hosted in a south-southeast striking, gently east-dipping dacitic ash tuff of the Lower to Middle Jurassic Mount Dilworth Formation. The iron-stained outcrop can be traced for about 1000 metres. The uppermost 1 metre of the flow is heavily impregnated with fine-grained pyrite that appears to form vesicle fillings. Minor chalcopyrite, galena and sphalerite are also reported. Pale blue chalcedony forms minute blebs and veinlets.

CAPSULE GEOLOGY

Low but consistent silver, lead and zinc values are reported from 2 opencuts on the zone. A channel sample collected in 1956 from the upper cut assayed 6.9 grams per tonne silver and trace gold across 2.4 metres (Property File - Plumb, 1956).

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GSC MAP 216A; 217A; 307A; 315A; 1829; 9-1957; 1418A
GSC OF 2582
Alldrick, D.J (1991): Geology and Ore Deposits of the Stewart Mining Camp, British Columbia, Ph.D. Thesis, University of British Columbia, April, 1991

DATE CODED:	1992/01/31	CODED BY:	WC	FIELD CHECK:	N
DATE REVISED:	1992/02/14	REVISED BY:	WC	FIELD CHECK:	N

MINFILE NUMBER: **104A 091**

NATIONAL MINERAL INVENTORY:

NAME(S): **M.J.**, STRIKE 1-3, ELK, MOOSE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 07 23 N
LONGITUDE: 129 57 12 W
ELEVATION: 1554 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Vein 6A (Property File - Plumb, 1956).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6220185
EASTING: 440733

COMMODITIES: Lead, Zinc, Silver, Gold, Copper

MINERALS
SIGNIFICANT: Pyrite, Galena, Sphalerite
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: 40 x 2 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Vein 6A.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Conglomerate
Feldspar Porphyry Dike
Felsite
Lamprophyre Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1956

COMMODITY	GRADE	
Silver	318.9000	Grams per tonne
Gold	1.0000	Grams per tonne
Copper	0.1000	Per cent
Lead	17.0500	Per cent
Zinc	11.7500	Per cent

COMMENTS: Highest assays from chip(?) samples taken from vein 6A; across 0.76 metre.
REFERENCE: Property File - Plumb, 1956.

CAPSULE GEOLOGY

The M.J. showing is located about 2.1 kilometres east of the central east shore of Long Lake.

In about 1951, several large boulders, containing galena, sphalerite and pyrite in quartz, were traced from the Long Lake area up to the ridge containing the showing (Property File - Plumb, 1956). Mineralized veins were discovered in outcrops projecting through the ice. In 1956, the M.J. Mining Syndicate owned the M.J. claims over the veins. That year Plumb examined the mineralization on behalf of Dorreen Mines Limited. The immediately adjacent Silver Crown showing (104A 061) was staked in 1965 and explored during 1965-68. It is not known if the M.J. showing was explored at this time. In 1983, Teuton Resources performed work on the Elk and Moose claims in the area. In 1988, Cremonese flew an airborne geophysical survey over the area.

CAPSULE GEOLOGY

The following year White Channel Resources Inc. acquired the Strike 1-3 claims over the area and explored the Silver Crown showing. In 1990, Cremonese flew another airborne geophysical survey over the area.

The area is underlain by Hazelton Group rocks in the crumpled core of a north-northwest trending, north-plunging syncline. The mainly volcanic rocks of the Lower Jurassic Betty Creek and overlying Mount Dilworth formations are overlain by the predominantly sedimentary rocks of the Middle Jurassic Salmon River Formation. A thick, west-northwest trending, feldspar porphyry dike (an Eocene Hyder dike), part of the Portland Canal dike swarm, is just south of the showing (Open File 1987-22). Narrow, northwest-trending lamprophyre dikes have been reported near the mineralization (Property File - Plumb, 1956).

The mineralization is hosted in alternating argillites and conglomerates of the Salmon River Formation and the intrusive dike. A north-trending, vertically dipping shear zone, about 300 metres wide, cuts the rocks and contains subparallel mineralized veins that are spaced about 90 to 120 metres apart. These veins, up to 2.1 metres wide, appear to be part of the same swarm that forms the Silver Crown showing immediately to the northwest. The veins are persistent where they cut the more brittle conglomerates and feldspar porphyry dike, but form sheeted zones, up to 6 metres wide, of anastomosing veinlets in the incompetent argillites.

The veins comprise felsite (dike rock?) that is impregnated and bordered by white quartz containing pyrite, galena and sphalerite. Minor malachite also occurs.

The richest vein is the easternmost exposed vein (6A). This vein is 0.8 to 1.8 metres wide and can be traced for about 40 metres. The extensions are covered by ice. Chip(?) samples collected across the vein in 1956 assayed up to 11.75 per cent zinc, 17.05 per cent lead, 318.9 grams per tonne silver, 1.0 gram per tonne gold and 0.10 per cent copper over a width of 0.76 metres (Property File - Plumb, 1956).

Other subparallel veins lie about 40 metres (vein 6B), 135 metres (vein 6C), 260 metres (vein 2, 2A, 2B) and 380 metres (vein 1) west of vein 6A. These probably form part of the Silver Crown vein swarm (104A 061). Samples taken in 1956 assayed low values; elevated lead values came from samples of veins 2, 2A, 2B and 7A. The 7A vein is about 425 metres north-northwest of vein 6A.

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EMPR OF 1987-22
EMPR MAP 8
EMPR PF (Plumb, W.N. (1956): *Report on the M.J. Mineral Deposits)
GSC MAP 216A; 217A; 307A; 315A; 1829; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/01/31 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/02/14 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 092**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAKESHORE (L. 4176)**, MONITOR, SLATE, BUSH

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 05 13 N
LONGITUDE: 129 59 16 W
ELEVATION: 1052 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Lakeshore adit (Assessment Report 7640).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6216196
EASTING: 438534

COMMODITIES: Silver, Copper, Zinc, Lead, Gold

MINERALS
SIGNIFICANT: Pyrite, Galena, Tetrahedrite, Sphalerite, Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Breccia, Discordant
CLASSIFICATION: Epithermal, Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION:
STRIKE/DIP: 300/35S
TREND/PLUNGE:
COMMENTS: Quartz breccia vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Mount Dilworth	

LITHOLOGY: Felsic Tuff
Felsic Breccia
Dacitic Lapilli Tuff
Siliceous Dolomite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1979

COMMODITY	GRADE	
Silver	270.2000	Grams per tonne
Gold	0.1000	Grams per tonne
Copper	1.1000	Per cent
Lead	3.5000	Per cent
Zinc	3.4000	Per cent

COMMENTS: Sample from a trench above the adit; across 1.5 metres. Also 0.08 per cent cadmium.
REFERENCE: Assessment Reports 7640, 8245.

CAPSULE GEOLOGY

The Lakeshore showing is located about 450 metres south of the south end of Monitor Lake, a small lake approximately 500 metres south of Long Lake.

Bush Consolidated Gold Mines Ltd. consolidated several claims and claim groups in the area south of Long Lake in 1927, including the Monitor group (which included the Lakeshore claim). Little work was reported but an adit was likely driven at this time. In 1962, New Indian Mines Ltd. conducted geological mapping in the area, including the Lakeshore claim. The following year this company drilled 5 holes (totalling 396 metres) and resampled showings on the Lakeshore claim; results of this work are not known. In 1979, Ocean Home Explorations Ltd. carried out further geological mapping and sampling on the Lakeshore claim, then part of the Slate group. Esso Resources acquired the claim from Houston Oil and Minerals in 1982. In 1987, Claimer Resources Inc. entered into an option agreement with Esso.

CAPSULE GEOLOGY

The area is underlain by Hazelton Group rocks of the Lower to Middle Jurassic Mount Dilworth Formation and overlying Middle Jurassic Salmon River Formation (Open File 1987-22). These rocks lie on the crumpled west limb of the north-northwest trending Dilworth syncline.

Mineralization is hosted in east-southeast striking, south-dipping intercalated felsic tuff and breccia and black dacitic lapilli tuff of the Mount Dilworth Formation (Assessment Report 7640). Conspicuous faults trend mainly north-northwest to northeast.

In a trench, immediately above the adit, a quartz breccia vein, striking 300 degrees and dipping 35 degrees southwest, contains pyrite, galena, tetrahedrite and minor sphalerite and chalcopyrite. The vein strikes parallel to bedding but dips in the opposite sense.

A chip sample from the trench assayed 270.2 grams per tonne silver, 0.1 gram per tonne gold, 3.4 per cent zinc, 3.5 per cent lead, 1.1 per cent copper and 0.08 per cent cadmium across 1.5 metres (Assessment Report 7640). In the adit, disseminated pyrite and minor tetrahedrite occur in grey siliceous dolomite.

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EMPR ASS RPT 448, 7640, *8245, 20379
EMPR OF 1987-22
EMPR MAP 8
EMPR PF (Claimer Resources Inc., Prospectus, July 29, 1987)
EMR MP CORPFILE (Bush Consolidated Gold Mines, Inc.)
GSC MAP 216A; 217A; 307A; 315A; 1829; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/10/28 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/20 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 093**

NATIONAL MINERAL INVENTORY: 104A4 Pb1

NAME(S): **SUNSHINE (L. 4194)**, BUSH

STATUS: Showing Underground
REGIONS: British Columbia
NTS MAP: 104A04W 104B01E
BC MAP:
LATITUDE: 56 04 45 N
LONGITUDE: 129 59 15 W
ELEVATION: 980 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit (Assessment Report 448).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6215330
EASTING: 438539

COMMODITIES: Silver Zinc Lead

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

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Betty Creek	
Jurassic	Hazelton	Mount Dilworth	

LITHOLOGY: Greenstone
Clastic Sediment/Sedimentary
Andesite Tuff
Andesite Flow
Dacite Tuff
Dacite Flow

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1928
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	34.3000	Grams per tonne

COMMENTS: Also trace gold.
REFERENCE: Minister of Mines Annual Report, 1928, page 113.

CAPSULE GEOLOGY

The Sunshine showing is located about 100 metres west of Lesley (Cooper) Creek and approximately 2.5 kilometres south of the south end of Long Lake.

Bush Consolidated Gold Mines Ltd. consolidated several claims and claim groups in the area south of Long Lake in 1927, including the Sunshine claim (L. 4194). A 143-metre long adit was driven on the showing in 1928. In 1962, New Indian Mines Ltd. conducted geological mapping in the area, including the Sunshine claim. In 1986, Esso Minerals entered into an option agreement with Azure Resources Ltd. (formerly New Indian Mines), which included the Sunshine claim. The same year Tri Gold Industries Inc. (formerly Ocean Gold Resources Limited) entered into an option agreement with Esso.

The area is underlain by Hazelton Group rocks of the Lower Jurassic Betty Creek Formation and overlying Lower to Middle Jurassic Mount Dilworth Formation (Open File 1987-22). These rocks lie on the crumpled west limb of the north-northwest trending Dilworth syncline.

According to Open File 1987-22, the immediate area of the showing is underlain by maroon to purple clastic sediments, interbedded with minor andesite to dacite tuffs and flows. Mapping by New Indian Mines reports greenstones and tuffs.

Mineralization reportedly consists of a 0.9-metre wide

CAPSULE GEOLOGY

quartz-calcite vein in pyritized greenstone. The greenstone occurs in a 6-metre wide zone of highly sheared volcanics. The nature of the mineralization and the type of sulphides present are not clear. A grab sample of the mineralization assayed 34.3 grams per tonne silver and trace gold (Minister of Mines Annual Report, 1928). Sparsely distributed pyrite, sphalerite and galena have also been reported in the area (Geological Survey of Canada Memoir 175, p. 156).

BIBLIOGRAPHY

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EMPR BULL 58; 63; 85 (in press)
EMPR ASS RPT *448, 20379
EMPR OF 1987-22
EMPR MAP 8
EMPR PF (Tri Gold Industries Inc., Prospectus, May 2, 1987)
EMR MP CORPFILE (Bush Consolidated Gold Mines, Ltd.)
GSC MEM 175, p. 156
GSC MAP 216A; 217A; 307A; 315A; 1829; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/10/28 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/20 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 094** NATIONAL MINERAL INVENTORY:

NAME(S): **LESLEY M (L. 3838)**, LESLIE, BUSH

STATUS: Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 03 56 N NORTHING: 6213825
LONGITUDE: 129 59 55 W EASTING: 437825
ELEVATION: 658 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: No. 4 tunnel on the Lesley M claim (L. 3838) (Bulletin 58, Fig. 52).

COMMODITIES: Silver

MINERALS
SIGNIFICANT: Argentite Pyrite
COMMENTS: Silver sulphides are also reported.
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Shear
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: STRIKE/DIP: 010/45W TREND/PLUNGE:
COMMENTS: Vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Andesitic Breccia
Hematitic Sediment/Sedimentary
Porphyritic Granodiorite Dike
Lamprophyre Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: ADIT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1930
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	210.9000	Grams per tonne

COMMENTS: Exact nature and date of the sample is not known. Sample from the No. 4 tunnel; across 0.7 metre.
REFERENCE: Bulletin 58, Fig. 52.

CAPSULE GEOLOGY

The Lesley M prospect is located on the northwest bank of Lesley (Cooper) Creek, about 1.7 kilometres above the confluence with Cascade Creek, and approximately 4.0 kilometres south of the south end of Long Lake.

In 1918, Bush Mines Limited held the Leslie claim group. The following year 3 tunnels (Nos. 2, 3 and 4) were emplaced. In 1925, National Silver Mines Ltd. took over the development of the property and carried out some drilling (9 holes, totalling 888 metres?). That year Sebakwe and District Mines acquired control of the property. Subsequently, Selukwe Gold Mining and Finance Company gained control of Sebakwe. Sebakwe carried out further drifting and cross cutting in 1928. In 1936, Sebakwe was amalgamated with Premier Gold Mining Co. Ltd. and B.C. Silver Mines Ltd. to form Silbak Premier Mines Limited. No further work has been reported on the prospect since the 1920s.

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Open File 1987-22). These rocks, striking mainly north to northeast, comprise

CAPSULE GEOLOGY

predominantly andesitic tuffs and breccias with, in places, intercalated hematitic sediment lenses. Northwest-trending porphyritic granodiorite dikes (Premier Porphyry dikes) and north-trending lamprophyre dikes occur in the area (Bulletin 58).

The No. 4 (upper) and No. 3 (lower) tunnels were driven on a 0.7 to 1.2-metre wide vein which strikes 010 degrees and dips 45 degrees west (Bulletin 58, Fig. 52). Few details are available on the mineralization. The vein apparently lies in a 28-metre wide shear zone that also strikes 010 degrees and dips 45 degrees west. The zone is more altered, silicified and mineralized on the hangingwall and footwall sides. Randomly oriented stringers of mainly argentite occur across widths of about 1.8 metres on the hangingwall and footwall. Stringers of massive sulphide, 2 to 5 centimetres wide, locally mark the hangingwall. The central portion of the zone, about 24 metres wide, is pyritic but contains few argentite stringers.

Samples across the vein in the No. 4 tunnel assayed up to 210.9 grams per tonne silver and trace gold across 0.7 metre (Bulletin 58, Fig. 52).

The No. 2 tunnel, about 205 metres west of the No. 4 tunnel, was driven on north-northeast and east-northeast trending veins. The best sample assayed 519.1 grams per tonne silver and trace gold across 0.2 metre (Bulletin 58, Fig. 52).

BIBLIOGRAPHY

EMPR AR 1915-71; 1917-84; 1918-81; *1919-75; 1922-83; 1923-81;
1925-107; 1926-98; 1927-98; 1928-112
EMPR BULL *58 (Figs. 39, 41 and *52); 63; 85 (in press)
EMPR OF 1987-22
EMPR MAP 8
EMPR ASS RPT 20379, 21993
GSC MEM 175, p. 168
GSC MAP *216A; *217A; 307A; *315A; 1829; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/10/28 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/20 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 095**

NATIONAL MINERAL INVENTORY:

NAME(S): **KNIP**, KNIPPLE LAKE, KL 1-3,
TREATY 12, TREATY 9-11, TREATY 13-15

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 24 12 N
LONGITUDE: 129 59 28 W
ELEVATION: 488 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location is for the centre of the vein system on the north shore of Knipple Lake (Assessment Report 14606).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6251412
EASTING: 438833

COMMODITIES: Silver, Lead, Zinc, Copper, Gold

MINERALS

SIGNIFICANT: Galena, Sphalerite, Pyrite, Chalcopyrite, Tetrahedrite
ASSOCIATED: Quartz, Carbonate
ALTERATION: Pyrite, Silica
COMMENTS: Extensive pyrite is associated with the Knipple Porphyry.
ALTERATION TYPE: Pyrite, Silicific'n
MINERALIZATION AGE: Tertiary
ISOTOPIC AGE: DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein, Discordant, Stockwork
CLASSIFICATION: Epithermal, Hydrothermal, Epigenetic
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION: 150 x 50 Metres STRIKE/DIP: 040/80W TREND/PLUNGE:
COMMENTS: Several parallel veins pinch and swell along strike. Dimensions are for the vein system. Mineralization yields a galena-lead isotope ratio that indicates a Tertiary age (Fieldwork, 1990).

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Mount Dilworth	
Lower Jurassic	Hazelton	Betty Creek	
Eocene			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Felsic Volcanic
Andesitic Tuff
Feldspar Porphyry
Andesitic Porphyry
Dacitic Porphyry

HOSTROCK COMMENTS: There are rocks from both the Mount Dilworth and Betty Creek formations on the property. These are intruded by Eocene(?) porphyry.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	1028.9000	Grams per tonne
Copper	0.2400	Per cent
Lead	21.8400	Per cent
Zinc	4.7300	Per cent

COMMENTS: Channel sample across 0.61 metre at a depth of 0.91 metre in trench 1987-2.
REFERENCE: Assessment Report 17694.

CAPSULE GEOLOGY

The Knip prospect is located just west of the toe of Knipple Glacier on the north side of Knipple Lake about 60 kilometres north of Stewart.

CAPSULE GEOLOGY

The mineralization was discovered in 1980 during prospecting by Can-Lake Explorations Ltd. Can-Lake and E & B Explorations Ltd. conducted prospecting and sampling during 1980-81. The occurrence was deemed uneconomic. During 1983-85, Teuton Resources Corp. optioned the property and conducted sampling, trenching and a heli-borne geophysical survey. There was no geophysical response over the mineralization. In 1987, Crystal Cove Resources Ltd. (later renamed Pennilane Development Corp.) collected 10.1 tonnes from four different sites: 9.65 tonnes from trench 1987-2, 136 kilograms from each of trenches 1987-3 and 1987-4, and 181 kilograms from trench 1987-1. Trench 1987-2 was channel sampled at depths of 0.46, 0.61 and 0.91 metres during excavation. In 1988, Pennilane drilled 4 holes from two setups to test the vein system. The results were disappointing.

To the northeast of the Knip claims, Noranda staked the KL 1-3 claims in 1988 and the Treaty 12 was acquired in 1990. Geological and geochemical surveys were completed in 1990. The work was attempting to locate the source of highgrade float boulders. In 1991, Noranda drilled 6 holes and conducted a geochemical survey on the property. This program was unsuccessful. Prospecting in 1991 failed to locate the source of the boulders.

In 1990, geochemical surveys were completed on the Treaty 13-15 and 9-11 claims which occur to the north and northwest of the Knip claim. The results were generally poor except in the northwestern portion of the Treaty 11 claim where several samples were anomalous in mercury, arsenic and antimony.

The Knipple Lake area is underlain by Hazelton Group rocks comprising the Lower Jurassic Betty Creek Formation, the overlying Lower to Middle Jurassic Mount Dilworth Formation and the Middle Jurassic Salmon River Formation (Open Files 1988-4; 1991-21). The rocks are deformed by east-trending "warping"; a synclinal axis has been mapped close to the mineralization. North, northeast and north-northwest faults transect the rocks.

The hostrocks to the mineralization have been variably described as andesitic tuff (Assessment Report 9555), Betty Creek Formation rocks (Assessment Report 17694) or air-fall tuffs of the Mount Dilworth Formation (Open File 1988-4). The dacitic to andesitic Knipple porphyry body lies immediately east of the exposed mineralization. It has been interpreted as an Eocene (or older) intrusive (Bulletin 63), as part of the Mount Dilworth Formation (Open File 1988-4) or as a volcanic intrusion of the Texas Creek plutonic suite (Open File 1991-21). Disseminated pyrite is conspicuous in the porphyry body and subjacent rocks.

The Knip prospect consists of an anastomosing system of narrow, northeast-trending, steeply dipping quartz-carbonate veins. The system consists of multiple veins across a width of about 50 metres and a length of 150 metres. Individual veins are 2 to 20 centimetres in width and are exposed for up to 50 metres in length. The veins contain scattered pods and lenses of galena, sphalerite, pyrite and minor chalcopyrite and tetrahedrite. Wallrock alteration is apparently inconspicuous.

Channel sampling in 1987 assayed up to 1,028.9 grams per tonne silver, 21.84 per cent lead, 4.73 per cent zinc and 0.24 per cent copper across 0.61 metre at a depth of 0.91 metre in trench 1987-2 (Assessment Report 17694). Composite grab samples in 1987 from trenches 1987-1, 1987-3 and 1987-4 assayed 325.0, 1,282.3 and 3,766.7 grams per tonne silver respectively (Assessment Report 17694). The highest silver value, from samples taken during the 1988 drilling (6.4 grams per tonne silver over 1.35 metres), was reported in hole 88-1 which was drilled southwest of trench 1987-2. Base metal values encountered in the drilling were negligible.

Other mineral occurrences in the area, are as follows:

1. About 150 metres south of the Knip prospect, northeast-trending veins have been exposed. Composite chip samples from 1 narrow vein assayed up to 2,208.0 grams per tonne silver, 2.5 grams per tonne gold, 46.40 per cent lead, 2.35 per cent zinc and 1.15 per cent copper (Assessment Report 14606).
2. Approximately 200 metres east of the prospect, a selected grab sample from a vein carrying pods of tetrahedrite assayed 7,776.1 grams per tonne silver, 16.10 per cent lead, 0.37 per cent zinc and 3.44 per cent copper (Assessment Report 14606). This location corresponds to trench 1987-1.
3. About 300 metres north-northeast of the prospect, north of a small pond, a grab sample from a north-northwest trending vein assayed 83.7 grams per tonne silver (Assessment Report 14606).
4. A further 550 metres north-northwest of location 3, a northwest striking quartz-calcite vein contains sparse galena, chalcopyrite and pyrite. A grab sample assayed 296.2 grams per tonne silver (Assessment Report 14606).

CAPSULE GEOLOGY

5. About 750 metres northeast of the Knip prospect minor chalcopyrite occurs in an east-trending quartz-epidote-calcite vein (Assessment Report 14606).

6. Approximately 1500 metres northeast of the prospect, on the KL claims?, a prominent quartz-sericite-chlorite-pyrite-clay alteration zone is exposed on the east side of Knipple Glacier. Sampling yielded negligible results (Assessment Report 14606, Open File 1988-4).

BIBLIOGRAPHY

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EMPR FIELDWORK 1990, pp. 235-242
EMPR BULL 63
EMPR ASS RPT 9555, 13403, *14606, 16634, *17694, 17897, 19550, 19997, 20074, 20256, 20543, 20545, 20546, 20556, 22074
EMPR OF 1988-4; 1991-21
EMPR MAP 8
EMPR PF (*Pennilane Development Corp., Prospectus, July, 1988)
GSC MAP 9-1957; 1418A
GSC OF 2582

DATE CODED: 1986/08/19 CODED BY: AFW FIELD CHECK: N
DATE REVISED: 1991/08/28 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 096**

NATIONAL MINERAL INVENTORY:

NAME(S): **STEWART**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 05 59 N
LONGITUDE: 129 31 07 W
ELEVATION: 330 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Pegmatitic phase in a small pluton on the Stewart highway (Geological Survey of Canada Paper 79-1A).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6217300
EASTING: 467739

COMMODITIES: Uranium Thorium

MINERALS
SIGNIFICANT: Uraninite Cyrtolite
ASSOCIATED: Pyrite Quartz Feldspar Muscovite Biotite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Pegmatite
TYPE: O02 Rare element pegmatite - NYF family

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary			Coast Plutonic Complex

LITHOLOGY: Quartz Feldspar Biotite Pegmatite
Porphyritic Quartz Monzonite

HOSTROCK COMMENTS: The host is a pegmatitic phase of the Tertiary(?) Strohn Creek pluton, a satellite pluton of the Coast Plutonic Complex.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Bowser Lake

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1979
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Thorium	0.0200	Per cent
Uranium	0.0988	Per cent

REFERENCE: Geological Survey of Canada Paper 79-1A, page 398.

CAPSULE GEOLOGY

The Stewart uranium-thorium occurrence lies about 33 kilometres northeast of Stewart, about 7.5 kilometres east of the Bear River Pass and along the Stewart highway (37A).

The area has been explored since about 1917, when an adjacent area was staked over the Fitzgerald molybdenum showing (104A 025). The occurrence was discovered in 1978 during a car-borne scintillometer survey along the highway.

The Tertiary(?) Strohn Creek porphyritic quartz monzonite pluton cuts Jurassic Hazelton Group sediments. The pluton contains radioactive coarse quartz-feldspar muscovite-biotite pegmatitic phases containing pyrite, uraninite and cyrtolite.

A selected sample assayed 0.0988 per cent uranium and 0.02 per cent thorium (Geological Survey of Canada Paper 79-1A).

BIBLIOGRAPHY

EMPR MAP 8
EMPR OF 1990-32, p. 27
GSC OF 551
GSC P *79-1A, pp. 397-399
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1987/09/01
CODED BY: LDJ
FIELD CHECK: N
DATE REVISED: 1992/01/29
REVISED BY: WC
FIELD CHECK: N

MINFILE NUMBER: **104A 097**

NATIONAL MINERAL INVENTORY: 104A4 Pb1

NAME(S): **BUSH 1 (L. 5196)**, BUSH 1-4 (L. 5196-5199), SLATE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W 104B01E
BC MAP:
LATITUDE: 56 05 38 N
LONGITUDE: 129 59 26 W
ELEVATION: 1030 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Northern trench (Assessment Report 7640). This showing lies about 3.2 kilometres north-northeast of the Lesley M (104A 094) occurrence.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6216971
EASTING: 438372

COMMODITIES: Silver, Lead, Gold, Copper, Zinc

MINERALS
SIGNIFICANT: Pyrite, Galena, Sphalerite, Chalcopyrite, Tetrahedrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Breccia
CLASSIFICATION: Epithermal, Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION:
STRIKE/DIP: 068/30S
TREND/PLUNGE:
COMMENTS: Quartz breccia vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Mount Dilworth	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Felsic Tuff
Felsic Breccia

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1979

COMMODITY	GRADE	
Silver	189.9000	Grams per tonne
Gold	0.1000	Grams per tonne
Copper	0.2000	Per cent
Lead	2.8000	Per cent
Zinc	0.2000	Per cent

COMMENTS: North trench; across 1.2 metres.
REFERENCE: Assessment Report 8245.

CAPSULE GEOLOGY

The Bush 1 showing is located about 75 metres west of the central western shore of Monitor Lake, a small lake approximately 500 metres south of Long Lake.

Bush Consolidated Gold Mines consolidated several claims and claim groups in the area southwest of Long Lake and staked the Bush 1-4 claims (L. 5196-5199) at the south end of the lake in 1927. Work done during 1927-28 included prospecting, tunnelling and some drilling (3 holes?). In 1962, New Indian Mines Ltd. carried out geological mapping in the area, including work on the Bush 3 and 4 claims. In 1979, Ocean Home Explorations Ltd. carried out further geological mapping and sampling on the Bush claims (then part of the Slate group). Esso Resources acquired the Bush 1 claim from Houston Oil and Minerals in 1982. In 1987, Claimer Resources Inc. entered into an option agreement with Esso.

The area is underlain by Hazelton Group rocks of the Lower to Middle Jurassic Mount Dilworth Formation and overlying Middle Jurassic Salmon River Formation (Open File 1987-22). These rocks lie on the crumpled west limb of the north-northwest trending Dilworth

CAPSULE GEOLOGY

syncline.

The mineralization is hosted in north-striking felsic tuffs and breccias of the Mount Dilworth Formation. Faulting is conspicuous in the area, trending mainly north-northeast to northeast.

In the northern trench a quartz breccia vein, containing fragments of black tuff, strikes east-northeast and dips 30 degrees north. It contains pyrite, galena and sphalerite and minor chalcopyrite and tetrahedrite(?). Some sections of the vein are banded. A sample, from the trench, across 1.2 metres assayed 189.9 grams per tonne silver, 0.1 gram per tonne gold, 2.8 per cent lead, 0.2 per cent zinc and 0.2 per cent copper (Assessment Report 8245).

A grab sample from a north-striking, west-dipping, quartz vein about 100 metres south of the trench, assayed 569 grams per tonne silver, 0.2 gram per tonne gold, 11.0 per cent lead, 1.5 per cent copper and 0.9 per cent zinc (Assessment Report 8245).

BIBLIOGRAPHY

EMPR AR 1927-97; 1928-113
EMPR BULL 58, p. 135; 63; 85 (in press)
EMPR ASS RPT 448, 7640, *8245, 20379
EMPR OF 1987-22
EMPR MAP 8
EMPR PF (In 104A 092 - Claimer Resources Inc., Prospectus, July 29, 1987)
EMR MP CORPFILE (Bush Consolidated Gold Mines, Inc.; Bush-Cobalt Mines, Limited)
GSC MAP *216A; *217A; 307A; 315A; 1829; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/10/24 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/15 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 098**

NATIONAL MINERAL INVENTORY: 104A4 Ag3

NAME(S): **SPIDER 1 (L. 4172)**, SPIDER, SPIDER 1-3 (L. 4172-4174)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 07 56 N
LONGITUDE: 129 58 51 W
ELEVATION: 1128 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized vein (Property File - Plumb, 1956).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6221229
EASTING: 439038

COMMODITIES: Gold, Silver, Lead, Copper

MINERALS

SIGNIFICANT: Galena, Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Augite Porphyry Flow
Augite Diorite Porphyry
Slate
Basic Dike
Acid Dike

HOSTROCK COMMENTS: The augite porphyry flow was previously mapped as augite diorite porphyry of the Tertiary(?) Glacier Creek intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1956

COMMODITY	GRADE	
Silver	418.3000	Grams per tonne
Gold	10.3000	Grams per tonne
Copper	0.1200	Per cent
Lead	1.9000	Per cent

COMMENTS: Chip(?) sample across 0.46 metre.
REFERENCE: Property File - Plumb, 1956.

CAPSULE GEOLOGY

The Spider 1 occurrence is located on the Spider 1 claim (L. 4172) about 350 metres east of the northeastern end of Long Lake.

The Spider 1-3 claims (L. 4172-4174) were staked in 1918 by Hamilton and Larsen and optioned briefly the following year to Trites and Wood who carried out minor development work. In 1919, the Algunican Development Company optioned the property and commenced exploration work, mainly on the Spider 3 claim. The option was dropped in 1920. In 1925, B.C. Bonanza Mines Ltd. acquired the property; further work was conducted on the Spider 3 claim (104A 010). The property subsequently lapsed and was purchased by Collart in 1934. Leasees carried out high grading operations on the Spider 3 claim during 1933-35. In 1956, Plumb examined and described the showing on the Spider 1 claim while investigating the adjacent M.J. claims. The Spider claims were held by Campbell in 1963. No further work has been reported on the property.

The area is underlain by northwest-trending, massive augite porphyry flows of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group). These form the crumpled core of the

CAPSULE GEOLOGY

northwest-trending, southeast-plunging Spider anticline (Open File 1987-22). Previous workers mapped these rocks as a small stock of Tertiary (or older) augite diorite porphyry that is part of the Glacier Creek intrusions of the Coast Plutonic Complex (Bulletin 58, 63). The occurrence is near the contact with overlying slates of the Middle Jurassic Salmon River Formation (Hazelton Group). Basic and acid dikes of the Portland Canal dike swarm are conspicuous in the area.

The showing consists of a narrow quartz vein that occurs intermittently along a southeast-trending fissure which is up to 3 metres wide. The fissure, dipping 55 degrees southwest, can be traced for about 135 metres in the augite porphyry flows but dies out in slates. The 5 to 60 centimetre wide quartz vein is weakly mineralized with galena and chalcopyrite.

A chip(?) sample collected in 1956 assayed 10.3 grams per tonne gold, 418.3 grams per tonne silver, 1.90 per cent lead and 0.12 per cent copper across a width of 0.46 metre; zinc was negligible (Property File - Plumb, 1956).

BIBLIOGRAPHY

EMPR AR 1919-77; 1920-65; 1922-83; 1923-81; 1925-106; 1934-B27; 1936-B28
EMPR FIELDWORK 1984, pp. 308-315
EMPR BULL 58, p. 168; 63; 85 (in press)
EMPR OF 1987-22
EMPR MAP 8
EMPR PF (In 104A 091 - Plumb, W.N. (1956): *Report on the M.J. Mineral Deposits)
GSC SUM RPT 1919, Part B, p. 11
GSC MEM 132, p. 49; 175, p. 152
GSC MAP 216A; 217A; 307A; *315A; 1829; 9-1957; 1418A
GSC OF 2582
W MINER Vol. 36, No. 11, p. 20
MINING AND ENGINEERING RECORD 1925 Vol. 28, No. 4, p. 95

DATE CODED: 1992/02/14 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/15 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 099**

NATIONAL MINERAL INVENTORY: 103P14 Au2

NAME(S): **NELSON CREEK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A03W 103P14W
BC MAP:
LATITUDE: 56 03 01 N
LONGITUDE: 129 30 04 W
ELEVATION: 564 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Near the foot of the Nelson Glacier; location taken from the diagram of the Portland Canal Mining District, Nass Valley portion (Geological Survey of Canada Memoir 32).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6211789
EASTING: 468788

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Gold
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

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
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Bowser Lake

CAPSULE GEOLOGY

The Nelson Creek placer showing is located on Nelson Creek near the foot of the Nelson Glacier, approximately 7 kilometres southwest of the northwest end of Meziadin Lake.

Several placer mining leases were recorded on Nelson Creek in the late 1920s (Property File - Placer Mining Lease, 1928).

Bedrock in the area consists of volcanic and sedimentary rocks of the Lower to Middle Jurassic Hazelton Group, close to the contact with the overlying Middle Jurassic to Lower Cretaceous Bowser Lake Group (Bulletin 63). The Jurassic rocks are blanketed, along stream valleys, by unconsolidated Quaternary sediments.

Moderately fine, flaky, but still rough gold has been panned from the creek near the foot of the glacier and at other locations along the creek (Geological Survey of Canada Memoir 32).

BIBLIOGRAPHY

EMPR BULL 63
EMPR MAP 8
EMPR PF (Placer Mining Lease on Nelson Creek, 1928)
EMPR ASS RPT 20379
GSC MEM *32, p. 76
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1989/11/27
DATE REVISED: 1992/01/27
CODED BY: DEJ
REVISED BY: WC
FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104A 100**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOW 15**, BRUCEJACK GOLD

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 20 12 N
LONGITUDE: 129 55 06 W
ELEVATION: 1097 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Outcrop on Bow 15 claim (Assessment Report 18820).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6243929
EASTING: 443225

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Pyrite
COMMENTS: Pyrite is disseminated in altered volcanics.
ASSOCIATED: Quartz
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stockwork Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L02 Porphyry-related Au
SHAPE: Irregular

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Altered Volcanic

HOSTROCK COMMENTS: The mineralization may be hosted by the Lower to Middle Jurassic Mount Dilworth Formation.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	1.2000	Grams per tonne
Gold	3.4000	Grams per tonne

COMMENTS: Sample TCGR-4; a composite chip sample taken over an area of one square metre.
REFERENCE: Assessment Report 18820.

CAPSULE GEOLOGY

The Bow 15 showing is located just west of Haimila Glacier, approximately 6.5 kilometres south of the Bowser River.

The showing was discovered during reconnaissance exploration by Brucejack Gold Ltd. on the Bow 15 claim in 1988.

The area is underlain by Hazelton Group rocks that comprise the Lower Jurassic Betty Creek Formation and Middle Jurassic Salmon River Formation (Bulletin 63). Southeast-trending faults are conspicuous in the area.

The mineralization may be hosted by the Lower to Middle Jurassic Mount Dilworth Formation (Assessment Report 20089, p. 2).

Mineralization comprises a quartz stockwork in green, altered volcanics. Quartz veinlets, up to 40 centimetres wide, occur. There are no visible sulphides in the quartz, but pyrite is disseminated (1 to 2 per cent) in the volcanic rock. The hostrocks are limonite stained (Assessment Report 18820).

A composite chip sample, over a 1 square metre area, (sample TCGR-4) assayed 1.2 grams per tonne silver and 3.4 grams per tonne gold (Assessment Report 18820).

BIBLIOGRAPHY

EMPR BULL 63
EMPR ASS RPT 17477, *18820, 20074, *20089, 20256
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/08/29 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/20 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 101**

NATIONAL MINERAL INVENTORY:

NAME(S): **COW**, PAT, TODD CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 20 21 N
LONGITUDE: 129 52 18 W
ELEVATION: 1402 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Northwest trending mineralized shear (Assessment Report 20173).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6244170
EASTING: 446114

COMMODITIES: Silver, Lead, Zinc

MINERALS
SIGNIFICANT: Sphalerite
ASSOCIATED: Quartz
ALTERATION: Limonite, Hematite, Wad, Silica
ALTERATION TYPE: Oxidation, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stockwork, Shear, Vein, Discordant
CLASSIFICATION: Epithermal, Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 100 x 1 Metres
STRIKE/DIP: 317/73W
TREND/PLUNGE:
COMMENTS: Shear.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Tuff
Lithic Tuff
Volcanic Breccia
Sandstone
Siltstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SHEAR
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1989
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	294.5000	Grams per tonne
Lead	0.3300	Per cent
Zinc	0.1500	Per cent

COMMENTS: Best sample; across a width of 1.3 metres. Also 0.05 per cent arsenic and trace copper.
REFERENCE: Assessment Report 20173.

CAPSULE GEOLOGY

The Cow showing is located about midway between Haimila and Jim Bradshaw glaciers, about 5 kilometres south of the Bowser River.

Teuton Resources Corp. staked the Cow claims in 1987 and conducted stream sediment and rock geochemical surveys in 1987 and 1989. The mineralization was discovered in 1989. In 1990, Teuton performed a heli-borne VLF-EM and magnetometer survey over the area. The results were disappointing. The following year the company carried out a rock geochemical program northeast of the showing, on the Cow 1 and 2 claims. Results were negligible. No work was done on the showing.

The area is underlain by green, red, purple and black volcanic breccia, conglomerate, sandstone and siltstone of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 63).

Mineralization comprises a strongly limonitic, northwest-

CAPSULE GEOLOGY

trending shear which has been traced for about 100 metres. The shear strikes 317 degrees and dips 73 degrees southwest. It varies up to 1.3 metres in width and contains 10 to 15 per cent, 3 to 5-centimetre wide, quartz stringers. The quartz is vuggy and contains traces of sphalerite. Wallrocks comprise variably silicified tuff and lithic tuff. In places the shear is intensely hematized and contains manganese stain (wad?); boxworks are locally developed.

Chip samples assayed anomalous values across widths of 0.4 to 1.3 metres. The best sample assayed 294.5 grams per tonne silver, 0.33 per cent lead. 0.15 per cent zinc, 0.05 per cent arsenic and trace copper across 1.3 metres (Assessment Report 20173).

In 1987, about 300 metres east-southeast of the showing, several anomalous rock chips were identified over an area of 100 by 200 metres. A strongly oxidized and moderately silicified andesitic tuff assayed 17.9 grams per tonne silver, 0.08 per cent lead, 0.41 per cent zinc and traces of arsenic and copper across a width of 1.2 metres (Assessment Report 20173).

BIBLIOGRAPHY

EMPR ASS RPT 17634, 20074, *20173, 20256, 21383
EMPR BULL 63
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/09/01 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1999/06/17 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104A 102**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOW 32**, BOW 1-41, TODD CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 17 21 N
LONGITUDE: 129 45 16 W
ELEVATION: 826 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Approximate centre of the area containing mineralized outcrops on the east side of Todd Creek (Assessment Report 18820).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6238520
EASTING: 453299

COMMODITIES: Silver Gold Lead

MINERALS
SIGNIFICANT: Pyrite
ASSOCIATED: Quartz Barite Carbonate
ALTERATION: Hematite Chlorite
ALTERATION TYPE: Hematite Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stockwork Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Altered Felsic Tuff
Volcanic Breccia
Conglomerate
Siltstone
Sandstone
Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	2262.9000	Grams per tonne

COMMENTS: Composite chip sample(?) from a 20 to 30-centimetre wide quartz-barite stockwork.
REFERENCE: Assessment Report 18820.

CAPSULE GEOLOGY

The Bow 32 showing is located on the east bank of Todd Creek, approximately 13 kilometres south of the confluence of Todd Creek with the Bowser River.

Brucejack Gold Ltd. staked the Bow 1-41 claims during 1987-88 and conducted reconnaissance exploration and trenching. An area of anomalous gold and silver values, in bedrock, was outlined in 1987 on the boundary of the Bow 31 and 32 claims. In 1990, Marlin Developments analyzed the previously collected silts and rocks for base metals.

The area of the showing is underlain by the Upper Triassic to Lower Jurassic Unuk River Formation of the Hazelton Group (Bulletin 63). The Formation comprises red, purple and green volcanic breccia, conglomerate, siltstone, sandstone and lithic and crystal tuffs. The tuffaceous rocks are weakly to strongly silicified along sheared or faulted zones, especially along valley bottoms. Several well silicified, gossanous zones occur along Todd Creek (Assessment Report 17477).

Mineralized outcrops occur on both sides of Todd Creek over a north-south distance of about 200 metres. Silver values from the

CAPSULE GEOLOGY

outcrops typically range from 34.3 to 343 grams per tonne. The highest grade mineralization occurs on the east bank of the creek and is hosted in a hematite-chlorite altered felsic tuff. It consists of a 20 to 30-centimetre wide stockwork of quartz, barite and carbonate containing 15 per cent pyrite as disseminations and stringers. A grab sample of this mineralization assayed 2,262.9 grams per tonne silver (Assessment Report 18820).

Immediately west of the showing, on the west bank of the creek, a grab sample assayed 233.1 grams per tonne silver, 0.14 gram per tonne gold and 0.54 per cent lead (Assessment Report 18820).

The reconnaissance work by Brucejack outlined several areas of anomalous gold values in stream sediments. One area was outlined west of the Bow 31 claim (on the Toc 7 claim). In 1987, Brucejack also sampled old trenches west of the Bow 31 claim, on the Todd Creek North gold-copper zone (104A 106). Grab samples assayed up to 5.49 grams per tonne gold (Assessment Report 17477).

BIBLIOGRAPHY

EMPR ASS RPT 17477, *18820, 20074, 20089, 20256
EMPR BULL 63
EMPR MAP 8
GSC MAP 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/08/29 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/22 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 103**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOW 31**, BOW 1-41, TODD CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 17 03 N
LONGITUDE: 129 45 23 W
ELEVATION: 853 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop on the east bank of Todd Creek (Assessment Report 18820).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6237964
EASTING: 453173

COMMODITIES: Silver Zinc Lead

MINERALS
SIGNIFICANT: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Felsic Tuff
Volcanic Breccia
Conglomerate
Siltstone
Sandstone
Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1988

COMMODITY	GRADE	
Silver	175.9000	Grams per tonne
Lead	0.4100	Per cent
Zinc	0.5200	Per cent

COMMENTS: Grab sample from a pyritic felsic tuff.
REFERENCE: Assessment Reports 18820, 20089.

CAPSULE GEOLOGY

The Bow 31 showing is located on the east bank of Todd Creek, approximately 13.5 kilometres south of the confluence of Todd Creek with the Bowser River.

Brucejack Gold Ltd. staked the Bow 1-41 claims during 1987-88 and conducted reconnaissance exploration and trenching. An area of anomalous gold and silver values, in bedrock, was outlined in 1987 on the boundary of the Bow 31 and 32 claims. In 1990, Marlin Developments analyzed the previously collected silts and rocks for base metals.

The area of the showing is underlain by the Upper Triassic to Lower Jurassic Unuk River Formation of the Hazelton Group (Bulletin 63). The Formation comprises red, purple and green volcanic breccia, conglomerate, siltstone, sandstone and lithic and crystal tuffs. The tuffaceous rocks are weakly to strongly silicified along sheared or faulted zones, especially along valley bottoms. Several well silicified, gossanous zones occur along Todd Creek (Assessment Report 17477).

The showing consists of a massive to weakly foliated fine-grained felsic tuff that contains 7 to 10 per cent finely disseminated pyrite. A grab sample assayed 175.9 grams per tonne silver, 0.52 per cent zinc and 0.41 per cent lead (Assessment Reports

CAPSULE GEOLOGY

18820, 20089).
The reconnaissance work by Brucejack outlined several areas of anomalous gold values in stream sediments. One area was outlined west of the Bow 31 claim (on the Toc 7 claim). In 1987, Brucejack also sampled old trenches west of the Bow 31 claim, on the Todd Creek North gold-copper zone (104A 106). Grab samples assayed up to 5.49 grams per tonne gold (Assessment Report 17477).
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EMPR BULL 63
EMPR MAP 8
EMPR OF 1999-2
GSC MAP 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/12/12 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/22 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 104**

NATIONAL MINERAL INVENTORY:

NAME(S): **WOODCOCK**, ORANGE MOUNTAIN, TODD 2-3, MAIN, CAMP CREEK, FAULT CREEK, GLACIER CREEK, TODD CREEK, AMARILLO ZONE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 17 11 N
LONGITUDE: 129 46 51 W
ELEVATION: 1646 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: West end of the jasper-barite zone (Assessment Report 10404).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6238229
EASTING: 451662

COMMODITIES: Lead, Silver, Zinc, Barite

MINERALS

SIGNIFICANT: Galena, Pyrite, Barite
ASSOCIATED: Quartz, Barite, Jasper, Mercury, Antimony, Arsenic
ALTERATION: Silica, Sericite, Carbonate, Hematite, Chlorite, Kaolinite, Jarosite
ALTERATION TYPE: Silicific'n, Sericitic, Propylitic, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork
CLASSIFICATION: Hydrothermal, Epigenetic, Epithermal, Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, H04 Epithermal Au-Ag-Cu: high sulphidation

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Intermediate Volcanic
Basic Dike
Agglomerate
Tuff
Volcanic Breccia
Carbonaceous Pyritic Tuff
Trachytic Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1981

COMMODITY	GRADE	
Silver	232.5000	Grams per tonne
Lead	12.8000	Per cent

COMMENTS: Unspecified type of sample, probably a chip sample, across 0.7 metre of the jasper-barite zone. Negligible copper and zinc values.
REFERENCE: Assessment Report 10404, page 12.

CAPSULE GEOLOGY

The Woodcock (Orange Mountain) showing is located about 1500 metres west of Todd Creek, approximately 13 kilometres south of the confluence of Todd Creek with the Bowser River.

The showing was discovered in 1981 during a prospecting-mapping program by J.R. Woodcock on behalf of Riocanex Incorporated. This work outlined widespread barite mineralization, in places associated with jasper and galena, on the Todd 2 and 3 claims. Woodcock conducted analytical and petrographic work during 1984-85. In 1985, he dropped all the claims except two units on Todd 2. During 1986-90, both Brucejack Gold Ltd. and Noranda Exploration Company Limited carried out work near the showing. No further work was reported on the showing itself.

The area is underlain by the Upper Triassic to Lower Jurassic Unuk River Formation of the Hazelton Group (Bulletin 63). Near the

CAPSULE GEOLOGY

showing, the rocks trend north and dip east. The rocks consist predominantly of volcanics, intruded by basic dikes; rare limestone has been reported. The volcanics are formed by intermediate volcanics, red agglomerate and tuff. Light grey siliceous tuff, carbonate-rich tuff, volcanic breccia and carbonaceous pyritic tuff have been reported approximately 1500 metres to the south, near Fall Creek (Assessment Report 10404).

Three main sets of faults have been recognized: a) a northwest-trending set dips about 60 degrees west, b) an east trending set dips vertically, and c) an east trending set dips 25 degrees north.

The volcanics are variably altered over an area of approximately 1500 by 1200 metres west of Todd Creek. In this large alteration zone 4 separate areas of medium to intense alteration have been reported: the Main, Camp Creek, Fault Creek and Glacier Creek zones. The Main zone, about 1000 by 500 metres in size, encompasses much of the barite mineralization and includes a jasper-barite zone.

Petrographic work indicates that the alteration coincides with a pile of trachytic volcanics. Outlying volcanics are predominantly propylitized andesites; carbonate, hematite and chlorite are typical alteration minerals. The trachytic volcanics themselves are typically variably sericitized and silicified. Kaolinite accompanies sericite in places. Silicification, possibly post dating the sericitization, is represented by: 1) fine-grained matrix replacement of the trachytes, 2) coarse-grained quartz lenses and veinlets, often with barite, and 3) in at least one location, banded opaline quartz (Assessment Report 13684).

Mineralization comprises pyrite, barite and galena. Pyrite is widespread throughout the alteration, mainly as disseminations, with lesser amounts along fractures or in barite veins. Much of the pyrite has been leached from the surface rocks. Abundant jarosite, in the more intensely altered rocks, suggests an original high pyrite content; limonite prevails in the lesser altered areas.

Barite is also widespread but is found mainly in the alteration zones but barite lenses and veins do occur well beyond the alteration. Barite is commonly accompanied by minor galena and pyrite together with varying amounts of calcite, jasper and jasper breccia. The barite forms pods (up to 30 by 7 metres), veins (0.1 to 2 metres wide and typically 10 to 20 metres long) and small concentrations (4 centimetres across).

The jasper-barite zone consists of jasper, barite, jasper breccia and minor galena and pyrite. It is characterized by convoluted banding of alternating jasper (or jasper breccia) and barite layers. Proportions of jasper and barite vary widely. Barite predominates in the western section. The jasper breccia includes fragments of jasper in a variable silica-hematite-barite matrix (Assessment Report 13684). The alteration zones are anomalous in lead, zinc, silver, arsenic, mercury and, locally, antimony. Copper and molybdenum are sporadically anomalous. The few gold analyses are low. A 0.7-metre wide chip(?) sample at the western end of the jasper-barite zone assayed 232.5 grams per tonne silver and 12.80 per cent lead with negligible copper and zinc values.

Approximately 190 metres to the east-northeast of the showing, grab samples from a southeast-trending series of barite pods assayed up to 199.5 grams per tonne silver and 27.7 per cent lead (Assessment Report 10404).

About 250 metres to the northeast of the showing a grab sample assayed 0.22 per cent copper, 0.28 per cent lead and greater than 100 grams per tonne silver (Assessment Report 10404).

Approximately 1800 metres south-southeast of the showing, at Fall Creek, quartz-calcite veins contain chalcopyrite and pyrite (the Todd Creek North Zone, 104A 106). Samples assayed up to 2.16 per cent copper and 0.41 grams per tonne gold (Assessment Report 10404).

Island-Arc Resources Corp. optioned the property in 1997. See South Zone (104A 001) for interpretation of work.

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EMPR BULL 63
EMPR MAP 8
GSC MAP 9-1957; 1418A
GSC OF 2582
GCNL #150(Aug.6), 1997; #78(Apr.23), 1999
WWW http://www.islandarc.com

MINFILE NUMBER: **104A 105**

NATIONAL MINERAL INVENTORY:

NAME(S): **TODD CREEK (NORTH ZONE EAST)**, FALL CREEK, TOC 8, NORTH ZONE EAST

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 16 21 N
LONGITUDE: 129 45 59 W
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized vein (Assessment Report 15988).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6236673
EASTING: 452539

COMMODITIES: Lead Zinc Silver

MINERALS
SIGNIFICANT: Galena
ASSOCIATED: Barite Quartz
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Feldspar Porphyry
Andesite Flow
Andesite
Andesitic Agglomerate
Andesitic Flow Breccia
Andesitic Tuff
Dacitic Flow
Dacite
Dacitic Flow Breccia
Mafic Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1986
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	39.3000	Grams per tonne
Lead	12.0000	Per cent
Zinc	6.2000	Per cent

COMMENTS: Grab sample from barite-quartz-galena vein.
REFERENCE: Assessment Report 15988.

CAPSULE GEOLOGY

The Todd Creek (North Zone East) showing is located 200 metres west of Todd Creek and 300 metres north of Fall Creek. Fall Creek is a tributary of Todd Creek that lies about 15 kilometres south of the confluence of Todd Creek with the Bowser River. The showing is about 550 metres east-northeast of the Todd Creek (North Zone) (104A 106).

In 1986, Noranda Exploration Company Limited staked the Toc 1-12 claims to cover showings in the Todd Creek area. That year Noranda carried out mapping, reconnaissance prospecting and silt sampling in the area. This showing, on the Toc 8 claim, was discovered at the same time.

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 63). The rocks comprise green flows, agglomerates/flow breccias and tuffs and purple, green to buff fragmental flows and flow breccias. The andesite and andesite-dacite units commonly exhibit propylitic alteration comprising variable chlorite, carbonate, sericite and 2 to

CAPSULE GEOLOGY

5 per cent disseminated pyrite. The contact between the andesite and andesite-dacite units trends north-northwest and dips vertically. The volcanics are intruded by narrow, coeval(?) fine-grained mafic dikes. A feldspar porphyry intrusive(?) is exposed near the showing. East-trending shearing is locally conspicuous and jointing is well developed in the andesites.

Mineralization consists of a west-northwest trending barite-quartz-galena vein that cuts the feldspar porphyry body. Grab(?) samples, collected in 1986, assayed up to 12.0 per cent lead, 6.2 per cent zinc and 39.3 grams per tonne silver; copper and gold values were negligible (Assessment Report 15988).

Island-Arc Resources Corp. optioned the property in 1997. See South Zone (104A 001) for interpretation of work.

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EMPR MAP 8
EMPR MER 1990-36
EMPR PF (In 082M 141 - Goldnev Resources Inc., SMF No.34/89, July 1989)
GSC MAP 9-1957; 1418A
GSC OF 2582
GCNL #150(Aug.6), 1997
WWW http://www.islandarc.com

DATE CODED: 1991/12/12 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/22 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 106**

NATIONAL MINERAL INVENTORY: 104A4 Cu2,Au5

NAME(S): **TODD CREEK (NORTH ZONE)**, FALL CREEK, TOC 8, NEWMONT, NORTH ZONE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 16 13 N
LONGITUDE: 129 46 25 W
ELEVATION: 960 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The westernmost vein (zone A) in the North Zone crosses Fall Creek (Assessment Report 15988).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6236430
EASTING: 452089

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT:	Chalcopyrite	Pyrite		
ASSOCIATED:	Quartz	Pyrite	Hematite	Calcite
ALTERATION:	Chlorite	Carbonate	Sericite	Pyrite

ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Discordant Breccia
CLASSIFICATION: Hydrothermal Epigenetic Epithermal
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
H04 Epithermal Au-Ag-Cu: high sulphidation
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION: 320 x 2 Metres STRIKE/DIP: 315/W TREND/PLUNGE:
COMMENTS: Drilling indicates that the dip is subvertical.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite Flow
Andesite Agglomerate
Andesitic Flow Breccia
Andesitic Tuff
Flow
Dacitic Flow
Dacitic Flow Breccia
Mafic Dike
Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	3.4700	Grams per tonne
Copper	0.7500	Per cent

COMMENTS: Intersection in A Zone, across 31.85 metres in drill hole NTC 88-22 (29.3 to 61.15 metres).
REFERENCE: Assessment Report 18800.

CAPSULE GEOLOGY

The Todd Creek (North Zone) is located on Fall Creek, a tributary of Todd Creek, about 15 kilometres south of the confluence of Todd Creek with the Bowser River.

The prospect was discovered in 1959 by prospectors O. Olsen and F. Hasselberg Jr. on behalf of Newmont Mining Corporation. Newmont conducted a limited trenching and drilling program (3 holes?) on the prospect in 1960. Samples from trenching assayed up to 3.8 grams per tonne gold across 14.3 metres (Property File - Goldnev Resources, 1989). No further work was reported until 1981 when Woodcock,

CAPSULE GEOLOGY

working for Riocanex Incorporated, sampled the trenches. In 1987, Brucejack Gold sampled the old trenches. In 1986, Noranda Exploration Company Limited staked the Toc 1-12 claims to cover showings in the Todd Creek area. That year Noranda resampled the Newmont A and B zones and carried out mapping, reconnaissance prospecting and silt sampling in the area. In 1987, Noranda conducted further sampling in the trenches and extended the mineralized veins farther to the south. In 1988, a grid was established and detailed mapping was carried out. That year Noranda drilled 11 holes (NTC-88-20 to 25 and 40 to 44) on the North Zone (A zone only) and conducted a Mise-a-la-Masse survey.

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 63). Green andesite flows, agglomerates, tuffs and purple, green to buff fragmental flows and flow breccias are intruded by narrow, coeval(?) fine-grained mafic dikes.

The andesite and andesite-dacite units commonly exhibit propylitic alteration comprising variable chlorite, carbonate, sericite and 2 to 5 per cent disseminated pyrite. The contact between the andesite and andesite-dacite units trends north-northwest and dips vertically. A feldspar porphyry intrusive is exposed about 600 metres east of the prospect. East-trending shearing is locally conspicuous and jointing is well developed in the andesites.

The North Zone mineralization comprises several north-northwest to northwest-trending, vertical to steeply southwest-dipping, quartz and breccia veins. The veins, 0.1 to 2 metres wide, contain quartz, calcite, chalcopyrite, pyrite, and hematite. The veins have been divided into two zones: the A and B zones.

The western A zone is formed by two parallel veins separated by a quartz-chalcopyrite-hematite stringer zone. The veins, commonly banded and brecciated, have sulphides distributed throughout. The A zone has been traced for 320 metres on the surface. At the A zone surface chip samples have assayed up to 5.25 grams per tonne gold and 0.18 per cent copper across 3 metres (Assessment Report 15988). Drilling tested the A zone over a length of 150 metres and indicated that the zone is discontinuous downdip and along strike. Values encountered were generally low and over narrow widths, except in drillholes 88-22 and 88-41. Samples from drillhole 88-22 assayed 3.47 grams per tonne gold and 0.75 per cent copper across 31.85 metres (including 14.47 grams per tonne gold and 2.06 per cent copper across 5.95 metres)(Assessment Report 18800).

Samples from drillhole 88-41 assayed 6.21 grams per tonne gold and 0.60 per cent copper across 1.75 metres respectively (Assessment Report 18800). Holes drilled downdip and immediately along strike of hole 88-22 failed to intersect significant mineralization.

The B zone, 200 to 550 metres east of the A zone, consists of several north-northwest trending. These veins are identical in character to those in the A zone except for the absence of the stringer zone. One of the veins in the B zone has been traced for 170 metres. Chip samples from the B zone assayed up to 9.53 grams per tonne gold and 0.35 per cent copper across 1.0 metre (Assessment Report 18800).

Island-Arc Resources Corp. optioned the property in 1997. See South Zone (104A 001) for interpretation of work.

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EMPR MAP 8
EMPR MER 1990-36
EMPR PF (In 082M 141 - Goldnev Resources Inc., SMF No. 34/89, July 1989; Island-Arc News Release Feb.4, 1997)
GSC MAP 9-1957; 1418A
GSC OF 2582
GCNL #150(Aug.6), 1997; #78(Apr.23), 1999
WWW http://www.islandarc.com

DATE CODED: 1991/09/03 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/22 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 107**

NATIONAL MINERAL INVENTORY:

NAME(S): **FALL CREEK**, F 1 ZONE, TOC 8-9,
TODD CREEK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 15 58 N
LONGITUDE: 129 46 37 W
ELEVATION: 1234 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of drill holes NTC-88-47 and 48 (Assessment Report 18800).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6235969
EASTING: 451878

COMMODITIES: Gold Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz Calcite Barite
ALTERATION: Chlorite Sericite Quartz Pyrite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Breccia Discordant Shear
CLASSIFICATION: Epigenetic Hydrothermal Epithermal
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
H04 Epithermal Au-Ag-Cu: high sulphidation
SHAPE: Tabular
MODIFIER: Fractured Sheared
DIMENSION: 400 x 300 x 3 Metres STRIKE/DIP: 315/90 TREND/PLUNGE:
COMMENTS: Mineralized zone.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite Flow
Andesite
Andesite Breccia
Mafic Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	2.7300	Grams per tonne
Copper	0.5900	Per cent

COMMENTS: Intersection across 13.0 metres in drill hole NTC-88-47 (36.65 to 49.65 metres).
REFERENCE: Assessment Report 18800.

CAPSULE GEOLOGY

The F 1 zone (Fall Creek) is located about 450 metres south of Fall Creek, a tributary of Todd Creek that lies approximately 15 kilometres south of the confluence of Todd Creek with the Bowser River.

In 1986, Noranda Exploration Limited staked the Toc 1-12 claims to cover showings in the Todd Creek area. The mineralization was discovered that year during reconnaissance prospecting near the Todd Creek (North Zone) (104A 106). During 1986-89, Noranda completed: geological mapping, silt and soil geochemical surveys, induced polarization and magnetometer surveys, and diamond drilling (4 holes, totalling 368 metres).

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 63). Pervasively altered andesite flows and breccias are intruded by 1 to 3-metre wide fine-grained mafic dikes. Alteration comprises

CAPSULE GEOLOGY

chlorite-sericite-quartz-pyrite; strongly altered quartz-sericite-pyrite zones appear related to east and north-trending structures. The andesites likely trend northwest. North to northwest-trending, vertically dipping fractures, shears and faults are the most conspicuous structural elements in the area (Assessment Report 18800).

Mineralization consists of two types of veins: 1) pyrite-quartz veins, up to 1 metre wide, with 1 to 5 per cent disseminated pyrite and 2) pyrite-chalcopyrite-quartz-calcite-barite veins, up to 3 metres wide. Mineralization occurs over a 700 by 200 metre area, but the main zone of interest (to date) lies in the eastern portion of this area. Here, a zone of quartz-pyrite-chalcopyrite-barite veins and breccias occurs in a northwest-striking, vertical to steeply dipping shear/fracture zone. The zone (zone A) appears to be at least 3 metres wide and has been traced for 400 metres along strike and 300 metres vertically. Surface grab(?) samples from the zone assayed from traces of gold and copper to 24.2 grams per tonne gold and 2.24 per cent copper (Assessment Report 18800). The drilling tested the zone over a length of 100 metres and to a depth of 50 metres. The zone intersected in the drillholes is 1.25 to 11 metres wide and comprises chlorite-sericite-quartz altered andesite. The andesite contains chalcopyrite-pyrite blebs and veins and quartz-calcite-chalcopyrite-barite veins and breccias. The barite forms cross cutting features in the zone and is apparently late. The best intersection was encountered in hole NTC-88-47 which assayed 2.73 grams per tonne gold and 0.59 per cent copper across 13.0 metres (including 5.41 grams per tonne gold and 0.50 per cent copper across 5.25 metres) (Assessment Report 18800).

The induced polarization and soil surveys outlined an anomalous area, 900 metres long by 450 metres wide, which encompasses the F 1 Zone and several other mineralized outcrop and float occurrences to the west.

Island-Arc Resources Corp. optioned the property in 1997. See South Zone (104A 001) for interpretation of work.

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EMPR MAP 8
EMPR MER 1990-36
EMPR PF (In 082M 141 - Goldnev Resources Inc., SMF No. 34/89, July 1989)
GSC MAP 9-1957; 1418A
GSC OF 2582
GCNL #150(Aug.6), 1997; #78(Apr.23), 1999
WWW http://www.islandarc.com

DATE CODED: 1991/09/04 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1998/10/29 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104A 108**

NATIONAL MINERAL INVENTORY:

NAME(S): **ICE CREEK**, TOC 9, TODD CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 15 32 N
LONGITUDE: 129 46 57 W
ELEVATION: 1585 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized vein (Assessment Report 15988).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6235169
EASTING: 451525

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ALTERATION: Sericite Silica Pyrite
ALTERATION TYPE: Sericitic Silicific'n Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic Epithermal
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
H04 Epithermal Au-Ag-Cu: high sulphidation
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Altered Feldspar Porphyry
Andesite Flow
Andesite
Andesite Breccia
Mafic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1986

COMMODITY	GRADE	
Gold	32.9000	Grams per tonne
Copper	3.0800	Per cent

COMMENTS: Grab sample from a narrow chalcopyrite vein.
REFERENCE: Assessment Report 15988.

CAPSULE GEOLOGY

The Toc 9 or Ice Creek showing is located about 1800 metres southwest of the confluence of Fall and Todd Creeks which, in turn, lies approximately 15 kilometres south of the confluence of Todd Creek with the Bowser River.

In 1986, Noranda Exploration Limited staked the Toc 1-12 claims to cover showings in the Todd Creek area. The mineralization was discovered that year during reconnaissance prospecting near the Todd Creek (North Zone) (104A 106) deposit. During 1986-89, Noranda completed: geological mapping, silt and soil geochemical surveys, induced polarization and magnetometer surveys and diamond drilling. The work was done mainly on the Todd Creek North and F 1 zones (104A 107).

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 63). Pervasively altered northwest(?)-trending andesite flows and breccias are intruded by fine-grained mafic dikes, 1 to 3 metres wide. An altered feldspar porphyry body (intrusive?) occurs near the showing (Assessment Report 15988). North to northwest-trending, vertically dipping fractures, shears and faults are the most conspicuous structural elements in the area (Assessment Report 18800).

CAPSULE GEOLOGY

Mineralization consists of narrow chalcopyrite veins that occur in 1 to 2-metre wide, discontinuous, north-northwest trending shear zones. The veins are hosted in the altered feldspar porphyry. Alteration consists of quartz, sericite and pyrite.

Grab samples assayed up to 32.9 grams per tonne gold and 3.08 per cent copper (Assessment Report 15988).

Island-Arc Resources Corp. optioned the property in 1997. See South Zone (104A 001) for interpretation of work.

BIBLIOGRAPHY

EMPR ASS RPT 10404, 12345, 13684, *15988, 17423, 17477, *18800, 18820, 19922, 20074, 20089, 20256
EMPR BULL 63
EMPR EXPL 1987-A15; 1988-A15,A32; 1990-35
EMPR MAP 8
EMPR PF (In 082M 141 - Goldnev Resources Inc., SMF No. 34/89, July 1989)
GSC MAP 9-1957; 1418A
GSC OF 2582
GCNL #150(Aug.6), 1997; #78(Apr.23), 1999
WWW http://www.islandarc.com

DATE CODED: 1991/12/16 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1998/10/29 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104A 109**

NATIONAL MINERAL INVENTORY:

NAME(S): **KNOB 1**, TOC 15, TODD CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 15 33 N
LONGITUDE: 129 45 21 W
ELEVATION: 942 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: One of several narrow mineralized veins within a large gossanous area (Assessment Report 17423).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6235182
EASTING: 453177

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite
ALTERATION: Silica Sericite
ALTERATION TYPE: Silicific'n Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite Flow
Andesite
Andesite Breccia
Mafic Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Copper	0.3700	Per cent

COMMENTS: Grab sample from a narrow chalcopyrite vein.
REFERENCE: Assessment Report 17423.

CAPSULE GEOLOGY

The Knob 1 zone is located about 1300 metres south-southeast of the confluence of Fall and Todd creeks. This confluence is approximately 15 kilometres south of the confluence of Todd Creek and the Bowser River.

In 1986, Noranda Exploration Limited staked the Toc 1-12 claims to cover showings in the Todd Creek area. During 1986-89, Noranda completed: geological mapping, silt and soil geochemical surveys, induced polarization and magnetometer surveys, and diamond drilling. The work was done mainly mostly on the Todd Creek North (104A 106) and F 1 zones (104A 107). The Knob 1 zone was discovered in 1987.

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 63). Pervasively altered northwest(?)-trending andesite flows and breccias are intruded by fine-grained mafic dikes, 1 to 3 metres wide. North to northwest-trending, vertically dipping fractures, shears and faults are the most conspicuous structural elements in the area (Assessment Report 18800).

Mineralization consists of several, narrow (1-10 centimetres wide), chalcopyrite veins that occur in a large prominent gossan. The gossan includes extensive areas of quartz-sericite-pyrite alteration.

A grab sample from one of the veins assayed 0.37 per cent

CAPSULE GEOLOGY

copper; values for other metals were negligible (Assessment Report 17423).

BIBLIOGRAPHY

EMPR ASS RPT 10404, 12345, 13684, 15988, *17423, 17477, *18800, 18820, 19922, 20074, 20089, 20256
EMPR BULL 63
EMPR EXPL 1987-A15; 1988-A15,A32; 1990-35
EMPR MAP 8
EMPR PF (In 082M 141 - Goldnev Resources Inc., SMF No. 34/89, July 1989)
GSC MAP 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/12/16 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/02/07 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 110** NATIONAL MINERAL INVENTORY:

NAME(S): **RIDGE**, TOC 9, MJ 3-4,
MT. JOHNSON, TODD CREEK, YELLOW BOWL

STATUS: Showing MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 14 46 N NORTHING: 6233753
LONGITUDE: 129 47 30 W EASTING: 450940
ELEVATION: 1585 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: West-central part of mineralized outcrop area (Assessment Report 17423).

COMMODITIES: Copper Silver Gold Lead Zinc

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite
Feldspar Porphyry
Andesite Flow
Andesite Agglomerate
Rhyolite Flow
Rhyolite Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	5.2000	Grams per tonne
Gold	0.3400	Grams per tonne
Copper	14.1400	Per cent

COMMENTS: Highest assays from grab(?) samples of mineralized outcrops.
REFERENCE: Assessment Report 17423.

CAPSULE GEOLOGY

The Ridge showing lies about 1700 metres west of Todd Creek and approximately 17.5 kilometres south of the confluence of Todd Creek and the Bowser River.

In 1986, Noranda Exploration Limited staked the Toc 1-12 claims to cover showings in the Todd Creek area. During 1986-88, Noranda completed reconnaissance exploration work, including geological mapping, prospecting and silt and soil geochemical surveys. The showing was discovered in 1987.

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 63). Predominant, north to northwest-trending, andesite flows and agglomerates are interbedded with feldspar porphyry (intrusive?) and rhyolite flows and tuffs.

The showing consists of several mineralized outcrops that cover an area of about 300 by 200 metres. Mineralization is formed by pyrite, chalcopyrite and malachite. Details on the mineralization are unavailable. The mineralized outcrops, assumed to be andesitic volcanics, lie immediately west of a large gossan that approximately

CAPSULE GEOLOGY

coincides with a feldspar porphyry intrusive(?) (Assessment Report 18800).

Grab(?) samples assayed up to 14.14 per cent copper, 0.34 grams per tonne gold and 5.2 grams per tonne silver (Assessment Report 17423).

Approximately 200 metres to the north of the showing, a grab(?) sample from an outcrop assayed 1.17 per cent lead, 1.71 per cent zinc and 12.7 grams per tonne silver with negligible molybdenum, copper, arsenic, cadmium and antimony values (Assessment Report 17423).

Island-Arc Resources Corp. optioned the property in 1997. See South Zone (104A 001) for interpretation of work.

BIBLIOGRAPHY

EMPR ASS RPT 15988, *17423, 18800, 20835
EMPR BULL 63
EMPR EXPL 1987-A15; 1988-A15,A32; 1990-35
EMPR MAP 8
GSC MAP 9-1957; 1418A
GSC OF 2582
GCNL #150(Aug.6), 1997
WWW http://www.islandarc.com

DATE CODED: 1991/12/16 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/05 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 111**

NATIONAL MINERAL INVENTORY:

NAME(S): **YELLOW BOWL**, MID, RHYOLITE CREEK,
TOC 10, MJ 3-4, MT. JOHNSON,
TODD CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 14 18 N
LONGITUDE: 129 47 36 W
ELEVATION: 1539 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: West-southwest trending quartz-pyrite-chalcopyrite vein (Assessment Report 15988).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6232889
EASTING: 450827

COMMODITIES: Copper

MINERALS

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

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Hydrothermal Epigenetic Epithermal
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
H04 Epithermal Au-Ag-Cu: high sulphidation
SHAPE: Tabular
DIMENSION: Metres STRIKE/DIP: 260/ TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite Flow
Andesite Tuff
Andesite Agglomerate
Andesite Breccia
Andesite
Feldspar Porphyry
Dacitic Volcaniclastic
Rhyolite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Copper	1.6800	Per cent

COMMENTS: Grab sample from a west-southwest trending quartz-pyrite-chalcopyrite vein.
REFERENCE: Assessment Report 15988.

CAPSULE GEOLOGY

The Mid zone is located about 1900 metres west of Todd Creek and near the headwaters of Rhyolite Creek. Rhyolite Creek is a tributary of Todd Creek located about 18.5 kilometres south of the confluence of Todd Creek and the Bowser River.

In 1986, Noranda Exploration Limited staked the Toc 1-12 claims to cover showings in the Todd Creek area. The showing was discovered that year. During 1986-88, Noranda completed reconnaissance exploration work, including geological mapping, prospecting and silt and soil geochemical surveys.

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 63). Predominant, north to northwest-striking and northeast-dipping,

CAPSULE GEOLOGY

maroon and grey andesite flows, agglomerates, tuffs and breccias are intercalated with lesser feldspar porphyry, dacitic volcaniclastics and rhyolite. The feldspar porphyry may include both intrusive and extrusive varieties. The felsic volcanics are moderately to strongly altered. Alteration consists of quartz-sericite-pyrite (Assessment Report 18800).

The Mid zone, comprising an area about 500 by 250 metres, encompasses several west-southwest to northwest trending quartz-pyrite-chalcopyrite veins. The veins are 0.01 to 6 metres wide and 1 to 108 metres long. Grab samples from the veins assayed up to 1.68 per cent copper with negligible molybdenum, lead, zinc, silver, arsenic, cadmium, antimony and gold values (Assessment Report 15988, 17423).

Island-Arc Resources Corp. optioned the property in 1997. See South Zone (104A 001) for interpretation of work.

BIBLIOGRAPHY

EMPR ASS RPT *15988, *17423, *18800, 20835
EMPR BULL 63
EMPR EXPL 1987-A15; 1988-A15,A32; 1990-35
EMPR MAP 8
GSC MAP 9-1957; 1418A
GSC OF 2582
GCNL #150(Aug.6), 1997; #78(Apr.23), 1999
WWW http://www.islandarc.com

DATE CODED: 1991/09/04 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/05 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 112**

NATIONAL MINERAL INVENTORY:

NAME(S): **BUGNELLO**, PASS 1-4, LILIANE, AM 1, PROTECTOR, PRECIOUS 1-3

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 17 37 N
LONGITUDE: 129 52 52 W
ELEVATION: 1280 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location is for the No. 1 vein; the No. 2 vein lies about 100 metres further east (Assessment Report 18430).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6239107
EASTING: 445465

COMMODITIES: Gold, Silver, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Galena, Sphalerite
ASSOCIATED: Quartz, Ankerite, Calcite
ALTERATION: Ankerite, Calcite, Silica, Wad
ALTERATION TYPE: Carbonate, Silicific'n, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Discordant
CLASSIFICATION: Epithermal, Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Altered Tuff
Dike
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
YEAR: 1988

COMMODITY	GRADE	
Silver	546.5000	Grams per tonne
Gold	5.2000	Grams per tonne
Copper	0.4000	Per cent
Lead	0.0600	Per cent
Zinc	0.0100	Per cent

COMMENTS: Drill hole 88-4, depth 40.54 to 41.45 metres (0.91 metre).
REFERENCE: Assessment Report 18430.

CAPSULE GEOLOGY

The Bugnello prospect is located on the west side of American Creek, about 1500 metres north of Kimball Lake.

The exact date of the discovery of the mineralization is unknown, but work has been done intermittently in the area since 1938. That year Napco Gold Mines Ltd. held the Northern 1-8 (104A 114), Pass 1-4, Moonlight (104A 005), Moonlight 1, Northern 10, Camp A, Protector, Precious and Precious 1-3 claims in the area. Several new showings were located by prospecting on the northern part of the claims, especially on the Pass claims. Great North Mining Company conducted some drilling in the immediate area in 1955. In 1979, Tournigan Mining Explorations Ltd. performed sampling on the Liliane claim. During 1986-88, Square Gold Explorations (later renamed Glacier Resources) carried out geological mapping, sampling and drilling (6 holes, totalling 456 metres) on the AM 1 claim. The drilling tested 2 subparallel, north-northwest trending veins (Nos. 1 and 2), spaced about 100 metres apart.

The west side of American Creek is underlain by Hazelton Group

CAPSULE GEOLOGY

rocks in the north-trending, faulted core of the American Creek anticline (Bulletin 63). Lowermost black argillites and overlying siltstones of the Upper Triassic to Lower Jurassic Unuk River Formation are overlain by green and maroon fragmental volcanics of the Lower Jurassic Betty Creek Formation. A major north-trending fault lies oblique to the fold axis; axial planar faults or shears lie parallel to the fold axial plane. Later, east-trending, faults strike across the fold-fault zone. The late stage epithermal mineralization may be related to the Eocene Hyder intrusive suite (Assessment Report 18430, p. 13).

Mineralization consists of quartz, quartz-ankerite and quartz-calcite veins in altered volcanic tuffs. Pyrite, sphalerite, galena and chalcopyrite occur in quartz-carbonate veins in a zone of silicification and carbonatization that is related to green intrusive dikes. The veins are variably vuggy and heavily manganese stained; surface oxidation of sulphides is prominent.

The Bugnello veins (Nos. 1 and 2) trend north and dip west. They pinch and swell to widths of about 1 metre and are crosscut by younger east-trending quartz veins. The 1988 drilling confirmed the continuity of the quartz-carbonate veins downdip, however grades were significantly lower than from surface samples. The best intersection came from drillhole 88-4 and assayed 5.2 grams per tonne gold, 546.5 grams per tonne silver, 0.40 per cent copper, 0.06 per cent lead and 0.01 per cent zinc across 0.91 metre from the No. 1 vein (Assessment Report 18430).

Several other mineralized occurrences were located during the 1986-88 work. The more interesting of these is about 300 metres east of the No. 1 vein, adjacent to the eastern boundary of the AM 1 claim. Here, several, east-trending, irregular quartz veins are locally well mineralized with pyrite, chalcopyrite and galena. Chip samples assayed up to 9.9 grams per tonne gold and 3,056.6 grams per tonne silver over a width of 0.27 metre (Assessment Report 15365, p. 11).

BIBLIOGRAPHY

EMPR AR 1931-45; 1932-60; 1935-29; 1937-20; *1938-25; 1939-66; 1955-17; 1966-41
EMPR EXPL 1988-A15,A32
EMPR BULL 58, p. 139; 63
EMPR ASS RPT 7833, 15145, 15365, 16888, 17665, *18430, 20074, 20256
EMPR MAP 8
EMPR PF (In 104A 005 - Golden Glacier Resources Inc., Prospectus, August, 1988; Fest Resources Corp., Prospectus, March, 1988; Napco Gold Mines Ltd., Map by J.T. Mandy, 1938)
EMR MP CORPFILE (Northwestern Aerial Prospectors, Limited; Napco Gold Mines, Limited; Frontier Exploration Limited)
GSC SUM RPT 1931, Part A, p. 21A
GSC MEM 175, p. 134
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582
GCNL #224, 1988

DATE CODED: 1991/08/24 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1991/12/18 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 113**

NATIONAL MINERAL INVENTORY:

NAME(S): **AM 1**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 17 37 N
LONGITUDE: 129 53 26 W
ELEVATION: 1565 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized limestone fragments(?) (Assessment Report 15365).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6239115
EASTING: 444881

COMMODITIES: Silver, Zinc, Lead, Gold, Copper

MINERALS
SIGNIFICANT: Galena, Sphalerite, Tetrahedrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Limestone
Fragmental Volcanic
Argillite
Siltstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1986

COMMODITY	GRADE	
Silver	547.2000	Grams per tonne
Gold	0.5500	Grams per tonne
Copper	0.0600	Per cent
Lead	3.0600	Per cent
Zinc	7.5800	Per cent

COMMENTS: Chip sample across 1.25 metres.
REFERENCE: Assessment Report 15365, page 12.

CAPSULE GEOLOGY

The AM 1 showing is located 1200 metres west of American Creek and about 1800 metres north-northwest of the north end of Kimball Lake.

Exploration has been conducted intermittently in the area since 1938. In 1979, Tournigan Mining Explorations Ltd. performed sampling on the Liliane claim (104A 112). During 1986-88, Square Gold Explorations (later renamed Glacier Resources and then Golden Glacier Resources) carried out geological mapping, sampling and drilling on the AM 1 claim. The drilling was done on the Bugnello prospect (104A 112). The showing was discovered in 1986.

The west side of American Creek is underlain by Hazelton Group rocks in the north-trending, faulted core of the American Creek anticline (Bulletin 63). Lowermost black argillites and overlying siltstones of the Upper Triassic to Lower Jurassic Unuk River Formation are overlain by green and maroon fragmental volcanics of the Lower Jurassic Betty Creek Formation. A major north-trending fault is oblique to the fold axis; axial planar faults or shears are parallel to the fold axial plane. Later, east-trending, faults strike across the fold-fault zone.

The showing consists of mineralized limestone fragments(?), a few to several metres across, in the maroon to green fragmental volcanic unit. The fragments are mineralized with disseminated

CAPSULE GEOLOGY

galena, sphalerite and tetrahedrite(?). Chip sampling in 1986 assayed up to 0.55 gram per tonne gold, 547.2 grams per tonne silver, 0.06 per cent copper, 3.06 per cent lead and 7.58 per cent zinc across 1.25 metres (Assessment Report 15365).

BIBLIOGRAPHY

EMPR AR 1931-45; 1932-60; 1935-29; 1937-20; 1938-25; 1939-66; 1955-17; 1966-41
EMPR BULL 58, p. 139; 63
EMPR ASS RPT 7833, 15145, *15365, 16888, 17665, 18430, 20074, 20256
EMPR MAP 8
EMPR PF (In 104A 005 - Golden Glacier Resources Inc., Prospectus, August, 1988; Fest Resources Corp., Prospectus, March, 1988; Napco Gold Mines Ltd., Map by J.T. Mandy, 1938)
GSC SUM RPT 1931, Part A, p. 21A
GSC MEM 175, p. 134
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/12/17 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/26 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 114**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTHERN NO. 7**, AM 1, NORTHERN 1-8

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 17 12 N
LONGITUDE: 129 53 35 W
ELEVATION: 1585 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Locations F and G (Minister of Mines Annual Report, 1937 p. 21).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6238344
EASTING: 444716

COMMODITIES: Silver, Zinc, Lead, Gold

MINERALS

SIGNIFICANT: Sphalerite, Galena, Pyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear, Discordant
CLASSIFICATION: Replacement, Epithermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 20 x 3 Metres
STRIKE/DIP: 310/W
TREND/PLUNGE:
COMMENTS: Dimensions and attitude of mineralization located 70 metres northwest of the showing.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Greenstone
Fragmental Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1937

COMMODITY	GRADE	
Silver	582.9000	Grams per tonne
Gold	0.6900	Grams per tonne
Lead	2.9000	Per cent
Zinc	4.5000	Per cent

COMMENTS: Selected mineralization across 2.7 metres width. Trace copper.
REFERENCE: Minister of Mines Annual Report, 1937, page 21.

CAPSULE GEOLOGY

The Northern No. 7 showing is located about 1200 metres west of American Creek, just below the Mitre Mountain icefield, and approximately 1300 metres northwest of the north end of Kimball Lake.

During 1931-37, Northwestern Aerial Prospectors Limited held a group of claims on the west side of American Creek, including the Northern 1-8 claims. The showing was discovered on the Northern No. 7 claim in 1931. Work was conducted intermittently on the showing until 1937. In 1938, Napco Gold Mines Ltd. acquired the claims. No further work has been reported.

The showing is on the western flank of the north-plunging American Creek anticline. The American Creek fault trends north-northeast along the course of the valley. Other faults are parallel and oblique to the major fault; they trend north-northeast, northwest, northeast and approximately east. A tri-partite assemblage of Upper Triassic to Middle Jurassic Hazelton Group rocks underlie the west valley wall. These rocks strike north to northeast and dip west. Lowermost argillites and an overlying siltstone-tuff assemblage (Unuk River Formation?) are succeeded upwards by a green,

CAPSULE GEOLOGY

maroon and reddish fragmental assemblage (Betty Creek Formation?). Green felsic and granodiorite porphyry dikes are locally conspicuous.

The showing consists of a siliceous replacement zone in sheared greenstone. Mineralization, striking northwest and apparently dipping southwest, consists of sphalerite, galena and pyrite. Selected mineralization assayed 582.9 grams per tonne silver, 0.69 grams per tonne gold, 4.5 per cent zinc, 2.9 per cent lead and trace copper (Minister of Mines Annual Report 1937, p. 21).

Approximately 70 metres to the northwest, and possibly on strike with the showing, similar mineralization is up to 5.2 metres wide over a length of 20 metres. A composite chip sample from 3 opencuts, representing a width of 2.7 metres, assayed trace gold, 480 grams per tonne silver, 4.2 per cent zinc, 1.0 per cent lead and trace copper (Minister of Mines Annual Report 1937, p. 21).

BIBLIOGRAPHY

EMPR AR 1931-45; 1932-60; 1935-29; *1937-20; 1938-25; 1939-66; 1955-17; 1966-41
EMPR BULL 58, p. 139; 63
EMPR ASS RPT 7833, 15145, 15365, 16888, 17665, 18430, 20074, 20256
EMPR MAP 8
EMPR PF (In 104A 005 - Golden Glacier Resources Inc., Prospectus, August, 1988; Fest Resources Corp., Prospectus, March, 1988; Napco Gold Mines Ltd., Map by J.T. Mandy, 1938)
EMR MP CORPFILE (Northwestern Aerial Prospectors, Limited; Napco Gold Mines, Limited)
GSC SUM RPT 1931, Part A, p. 21A
GSC MEM 175, p. 134
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/08/23 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/22 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 115**

NATIONAL MINERAL INVENTORY:

NAME(S): **EDITH**, MCLEOD

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 18 07 N
LONGITUDE: 129 52 43 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The exact location of the Edith showing is not known, it assumed to be on the Edith claim and the location given is the approximate centre of the claim (Property File - Mandy, 1938).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6240033
EASTING: 445632

COMMODITIES: Silver Zinc Lead Gold Copper

MINERALS
SIGNIFICANT: Unknown
ASSOCIATED: Unknown
ALTERATION: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Volcanic Breccia
Conglomerate
Sandstone
Siltstone
Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1932

COMMODITY	GRADE	
Silver	4114.3000	Grams per tonne
Gold	3.4000	Grams per tonne
Copper	1.2000	Per cent
Lead	12.6000	Per cent
Zinc	19.2000	Per cent

REFERENCE: Minister of Mines Annual Report, 1932, page 60.

CAPSULE GEOLOGY

The exact location of the Edith showing is not known. It is assumed to be on the Edith claim, about 2.5 kilometres north of Kimball Lake and approximately 700 metres west of American Creek.

In 1932, K. McLeod owned the Edith claim group. The showing was discovered during intensive prospecting that year. No further work has been reported on the showing.

The area is underlain by Hazelton Group rocks of the Lower Jurassic Betty Creek Formation (Bulletin 63). These rocks comprise green, red, purple and black volcanic breccia, conglomerate, sandstone, siltstone and tuff. They strike north-northeast and lie on the west limb of the faulted, north-northeast trending, American Creek anticline.

There is no information available on the nature of the mineralization. A grab(?) sample collected in 1932 assayed 4,114.3 grams per tonne silver, 19.2 per cent zinc, 12.6 per cent lead, 3.4 grams per tonne gold and 1.2 per cent copper (Minister of Mines Annual Report, 1932, p. 60).

BIBLIOGRAPHY

EMPR AR *1932-60
EMPR BULL 63
EMPR ASS RPT 20074, 20256
EMPR MAP 8
EMPR PF (In 104A 005 - Napco Gold Mines Ltd., Map by J.T. Mandy, 1938)
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/12/18 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/22 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 116**

NATIONAL MINERAL INVENTORY:

NAME(S): **GLACIER GIRL**, LENAHAN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A05W
BC MAP:
LATITUDE: 56 16 36 N
LONGITUDE: 129 52 31 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location of the vein is approximate, it is shown to be about 340 metres east of Kimball Lake (Property File - Mandy, 1938).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6237217
EASTING: 445802

COMMODITIES: Zinc Silver Lead

MINERALS
SIGNIFICANT: Unknown
ASSOCIATED: Quartz
ALTERATION: Unknown
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Argillite
Tuff
Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1938

COMMODITY	GRADE	
Silver	27.4000	Grams per tonne
Lead	0.9000	Per cent
Zinc	4.0000	Per cent

COMMENTS: Chip(?) sample across 0.66 metre. Trace gold and nil copper.
REFERENCE: Property File - Map by J.T. Mandy, 1938.

CAPSULE GEOLOGY

The Glacier Girl showing is located 100 to 350 metres east of the central part of Kimball Lake, a small lake on American Creek.

There are no details available regarding the history of the showing. It is shown on a map of the Napco Gold Mines Limited property by J.T. Mandy in 1938 (Property File). No further work has been reported on the showing.

The area is predominantly underlain by argillites and lesser tuffs of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 63). These rocks lie on the east limb of the north-trending American Creek anticline.

Mineralization consists of a northeast-trending quartz(?) vein that dips 15 degrees southeast. The host argillites are intruded by a west-trending dike in the area of the showing. A chip(?) sample assayed trace gold, 27.4 grams per tonne silver, nil copper, 0.9 per cent lead and 4.0 per cent zinc across a width of 66 centimetres (Property File - Mandy, 1938).

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR ASS RPT 20074, 20256
EMPR MAP 8
EMPR PF (In 104A 005 - *Napco Gold Mines, Ltd., Map by J.T. Mandy,

BIBLIOGRAPHY

1938)
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/10/08 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/02/19 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 117** NATIONAL MINERAL INVENTORY: 104A4 Ag6

NAME(S): **VIRGINIA K. 5 (L. 5821)**, VIRGINIA K EXTENSION 2, VIRGINIA K., EXCELSIOR

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A05W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 16 11 N NORTHING: 6236442
LONGITUDE: 129 52 22 W EASTING: 445947
ELEVATION: 1158 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: No. 2 adit, located in the southwest part of the Virginia K. 5 claim (L. 5821) (Assessment Report 15145).

COMMODITIES: Silver Copper Lead Gold Zinc

MINERALS
SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Wad Carbonate Limonite Silica
COMMENTS: Manganese staining.
ALTERATION TYPE: Oxidation Carbonate Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Concordant
CLASSIFICATION: Replacement Epithermal Epigenetic
TYPE: J01 Polymetallic manto Ag-Pb-Zn I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Fractured
DIMENSION: 2 Metres STRIKE/DIP: 320/16N TREND/PLUNGE:
COMMENTS: Fracture zone.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Argillite
Greywacke
Limestone
Tuff
Rhyolite
Breccia
Agglomerate
Conglomerate
Chert
Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: ADIT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	607.6000	Grams per tonne
Gold	0.1400	Grams per tonne
Copper	0.1300	Per cent
Lead	0.8300	Per cent
Zinc	0.6800	Per cent

COMMENTS: Chip sample across the face of the No. 2 adit; width of 0.80 metre.
REFERENCE: Assessment Report 15145.

CAPSULE GEOLOGY

The Virginia K. 5 occurrence is located about 500 metres east of the south end of Kimball Lake, a small lake that is part of American Creek and which lies about 19 kilometres north of the confluence of the creek with the Bear River.

D. Kimball discovered mineralization in the area in 1929. That year the Virginia K. (104A 006, 118), BLK, Bryant and Dundee (104A

CAPSULE GEOLOGY

074) claim groups were staked and the Excelsior Prospecting Syndicate was formed. The Virginia K. group was staked on the east side of the valley. The exact location of the other claim groups is not known, but they were apparently staked on the west side of the valley and may have extended to the south. Excelsior discovered several silver-lead-zinc occurrences on the Virginia K. claims in 1931 and continued intermittent exploration until 1938. In 1935, 15 tonnes of ore were shipped from the property; 48,956 grams of silver, 57 kilograms of copper and 1765 kilograms of lead, were recovered. The source(s) of the ore is uncertain, but is assumed to be adit 2. In 1960, Newconex performed geological mapping and sampling on the claims (referred to in Assessment Reports 16842 and 18430); the results of this work are not known. In 1980, Komody Resources Ltd. (later renamed Fest Resources Corp.) conducted further geological work, resulting in the discovery of the Dino vein (104A 119) on the Virginia K. 3 claim. In 1986, Square Gold Explorations Inc. (later renamed Glacier Resources Inc. and then Golden Glacier Resources Inc.) carried out geological mapping and sampling on part of the Virginia K. group (mainly the Virginia K. 3 (104A 119) and Virginia K. 3 Fraction (104A 118) claims). The following year Carmac Resources performed geological mapping and sampling on part of the claim group (mainly the Virginia K. 5 and Virginia K. Extension 2 claims). In 1990, Northair Mines carried out talus sampling on the claims.

The Virginia K. claims are on the eastern limb of the open, north-plunging, American Creek anticline. The American Creek fault trends along the valley. The claims are underlain by rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63). The rocks comprise lowermost black argillites, capped by a thin limestone, overlain by tuff and minor rhyolite. The predominantly argillic sequence is overlain by a thick sequence of purple, green and red fragmental rocks that include tuff, breccia, agglomerate and conglomerate with subordinate limestone and chert interlayers (Assessment Report 8982, 15365).

Three types of mineralization occur on the Virginia K. claims (Minister of Mines Annual Report 1932, p. 59):

1. Replacement shear zone in argillite.
2. Veins between interbedded sandstone, sandy argillite and tuffs near the top of the predominantly sedimentary sequence.
3. Fracture zones consisting of quartz veins and veinlets in reticulated structures.

The Virginia K. 5 showing is located at the southwest part of the Virginia K. 5 claim (L. 5821). Mineralization was discovered by Excelsior Prospecting in 1931. A 12-metre(?) long adit (No. 2 adit) and nearby opencuts (Nos. 7 and 8) were probably emplaced soon after the discovery. The mineralization was examined in 1980, 1986 and 1987.

The adit exposes a 1 to 2-metre wide manganese and limonite-stained concordant fracture zone that strikes 320 degrees and dips 16 degrees northeast. Mineralization comprises stringers of quartz with galena, sphalerite, chalcopyrite and pyrite in carbonate-altered argillite and greywacke hostrocks.

Grab samples of siliceous vein material from the No. 2 adit assayed up to 1,177.7 grams per tonne silver; a grab sample from the immediately adjacent No. 7 cut assayed 433.4 grams per tonne silver (Assessment Report 16842). A chip sample across the face of the adit assayed 607.6 grams per tonne silver, 0.14 gram per tonne gold, 0.83 per cent lead, 0.68 per cent zinc and 0.13 per cent copper across 0.80 metres (Assessment Report 15145).

The Virginia K. 5 showing may correspond to the No. 2 vein mentioned in the 1931 Minister of Mines Annual Report (p. 44). The location of this vein is not clear. The No. 2 vein is described as being southeast striking and about 3.7 metres wide. A chip(?) sample assayed 9.6 grams per tonne gold, 1,522.3 grams per tonne silver and 8.01 per cent lead across 3.7 metres (Minister of Mines Annual Report 1931, p. 44).

On the Virginia K. Extension 2 claim, near the southeastern corner, and about 400 metres north of the No. 2 adit, the No. 6 cut exposes andesitic and porphyritic dikes in a fault. The fault strikes at 300 degrees and dips steeply north (Assessment Report 8982, p. 11). Galena and sphalerite occur in a 30 centimetre wide zone between the dikes. A composite chip (grab) sample assayed 783.1 grams per tonne silver, 0.04 grams per tonne gold, 1.76 per cent lead and 2.61 per cent zinc (Assessment Report 8982). This showing may correspond to an occurrence described in Annual Report, 1932, p. 60.

BIBLIOGRAPHY

EMPR AR 1929-104; 1930-109; *1931-44; 1932-59; 1935-B23; 1938-B26; 1956-18

BIBLIOGRAPHY

EMPR BULL 58, p. 168; 63
EMPR ASS RPT 8982, *15145, 15365, 16842, 18430, 20074, 20256, 20726
EMPR MAP 8
EMPR PF (In 104A 006 - Excelsior Prospecting Syndicate Ltd.,
Preliminary survey of the Virginia K. claims, Map only, c. 1929;
In 104A 005 - Golden Glacier Resources Inc., Prospectus, August
22, 1988 and Fest Resources Corp., Prospectus, March 18, 1988)
EMR MP CORPFILE (Excelsior Prospecting Syndicate, Limited)
GSC SUM RPT 1931, Part A, p. 21A
GSC MEM 175, p. 114
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/08/20 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/03/15 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 118** NATIONAL MINERAL INVENTORY: 104A4 Ag6

NAME(S): **VIRGINIA K. 3 FR. (L. 5817)**, VIRGINIA K., EXCELSIOR

STATUS: Prospect MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A05W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 15 57 N NORTHING: 6236009
LONGITUDE: 129 52 20 W EASTING: 445976
ELEVATION: 1158 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: No. 1 adit (Assessment Report 15145).

COMMODITIES: Silver Gold Copper Lead Zinc

MINERALS
SIGNIFICANT: Galena Sphalerite
ASSOCIATED: Quartz
ALTERATION: Wad
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn
SHAPE: Tabular
DIMENSION: 1 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Argillite
Felsic Dike
Limestone
Tuff
Rhyolite
Breccia
Agglomerate
Conglomerate
Chert
Sandstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: ADIT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	695.0000	Grams per tonne
Gold	0.1400	Grams per tonne
Copper	0.0200	Per cent
Lead	1.4100	Per cent
Zinc	0.6700	Per cent

COMMENTS: Chip sample across 1.3 metres.
REFERENCE: Assessment Report 15145.

CAPSULE GEOLOGY

The Virginia K. 3 Fr. showing is located about 700 metres southeast of the south end of Kimball Lake. Kimball Lake is a small lake which is part of American Creek located about 19 kilometres north of the confluence of the creek with the Bear River.

D. Kimball discovered mineralization in the area in 1929. That year the Virginia K., BLK, Bryant and Dundee (104A 074) claim groups were staked and the Excelsior Prospecting Syndicate was formed. The Virginia K. group was staked on the east side of the valley. The exact location of the other claim groups is not known, but they were apparently staked on the west side of the valley and may have extended to the south. Excelsior discovered several silver-lead-zinc

CAPSULE GEOLOGY

occurrences on the Virginia K. claims in 1931 and continued intermittent exploration until 1938. In 1960, Newconex performed geological mapping and sampling on the claims (referred to in Assessment Reports 16842 and 18430); the results of this work are not known. In 1980, Komody Resources Ltd. (later renamed Fest Resources Corp.) conducted further geological work, resulting in the discovery of the Dino vein (104A 119) on the Virginia K. 3 claim. In 1986, Square Gold Explorations Inc. (later renamed Glacier Resources Inc. and then Golden Glacier Resources Inc.) carried out geological mapping and sampling on part of the Virginia K. group (mainly the Virginia K. 3 (104A 119) and Virginia K. 3 Fraction claims). The following year Carmac Resources performed geological mapping and sampling on part of the claim group (mainly the Virginia K. 5 and Virginia K. Extension 2 claims, (104A 117). In 1990, Northair Mines carried out talus sampling on the claims.

The Virginia K. claims are on the eastern limb of the open, north-plunging American Creek anticline. The American Creek fault trends along the valley. The claims are underlain by rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63). The rocks comprise lowermost black argillites, capped by a thin limestone, overlain by tuff and minor rhyolite. The predominantly argillic sequence is overlain by a thick sequence of purple, green and red fragmental rocks that include tuff, breccia, agglomerate and conglomerate with subordinate limestone and chert interlayers (Assessment Report 8982, 15365).

Three types of mineralization occur on the Virginia K. claims (Minister of Mines Annual Report, 1932, p. 59):

1. Replacement shear zone in argillite.
2. Veins between interbedded sandstone, sandy argillite and tuffs near the top of the predominantly sedimentary sequence.
3. Fracture zones consisting of quartz veins and veinlets in reticulated structures.

The Virginia K. 3 Fr. showing is located near the central part of the Virginia K. 3 Fr. claim (L. 5817). Mineralization was discovered by Excelsior Prospecting in 1931. A short adit (No. 1 adit) and two opencuts (Nos. 1 and 2) were emplaced soon after the discovery.

The adit follows the eastern contact of a north-northeast trending green felsic dike with argillite. The manganese stained argillite contains minor quartz veining. The zone is mineralized with galena and sphalerite. Chip samples assayed up to 0.14 gram per tonne gold, 695 grams per tonne silver, 0.02 per cent copper, 1.41 per cent lead and 0.67 per cent zinc across 1.3 metres (Assessment Report 15145, p. 5).

The showing is also referred to in early Minister of Mines Annual Reports. This showing may correspond to the assumed northeastern portion of the No. 1 vein which trends southwest across the Virginia K. 3 claim.

Samples from the Nos. 1 and 2 cuts, immediately southwest of the adit, assayed up to 5.5 grams per tonne gold, 11,191 grams per tonne silver and 55.12 per cent lead across 1.1 metres (Minister of Mines Annual Report, 1931, p. 44).

BIBLIOGRAPHY

EMPR AR 1929-104; 1930-109; *1931-44; 1932-59; 1935-B23; 1938-B26; 1956-18
EMPR BULL 58, p. 168; 63
EMPR ASS RPT *8982, *15145, 15365, *16842, *18430, 20074, 20256, 20726
EMPR MAP 8
EMPR PF (In 104A 006 - Excelsior Prospecting Syndicate, Ltd., Preliminary survey of the Virginia K. claims, Map only, c. 1929; In 104A 005 - Golden Glacier Resources Inc., Prospectus, August 22, 1988 and Fest Resources Corp., Prospectus, March 18, 1988)
EMR MP CORPFILE (Excelsior Prospecting Syndicate, Limited)
GSC SUM RPT 1931, Part A, p. 21A
GSC MEM 175, p. 114
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/10/09 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/02/17 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 119**
NATIONAL MINERAL INVENTORY: 104A4 Ag6

NAME(S): **DINO**, VIRGINIA K. 3 (L.5816), VIRGINIA K., EXCELSIOR

STATUS: Prospect
MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A05W
UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 15 41 N
NORTHING: 6235517
LONGITUDE: 129 52 35 W
EASTING: 445712
ELEVATION: 1158 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Dino vein (Assessment Report 8982).

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS
SIGNIFICANT: Galena Sphalerite Pyrite Chalcopyrite
ALTERATION: Carbonate
ALTERATION TYPE: Carbonate Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epithermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: STRIKE/DIP: 320/35N TREND/PLUNGE:
COMMENTS: The fault containing the vein steepens to the southeast.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Limestone
Argillite
Tuff
Rhyolite
Breccia
Agglomerate
Conglomerate
Chert

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1980
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	6231.1000	Grams per tonne
Gold	0.1700	Grams per tonne
Lead	28.3800	Per cent
Zinc	6.9100	Per cent

COMMENTS: Grab (composite) sample from 680 kilograms bulk sample.
REFERENCE: Assessment Report 8982.

CAPSULE GEOLOGY

The Dino prospect is located about 400 metres east of American Creek and 1000 metres south-southeast of the south end of Kimball Lake. Kimball Lake is a small lake, part of American Creek, about 19 kilometres north of the confluence of the creek with the Bear River.

D. Kimball discovered mineralization in the area in 1929. That year the Virginia K., BLK, Bryant and Dundee (104A 074) claim groups were staked and the Excelsior Prospecting Syndicate was formed. The Virginia K. group was staked on the east side of the valley. The exact location of the other claim groups is not known, but they were apparently staked on the west side of the valley and may have extended to the south. Excelsior discovered several silver-lead-zinc occurrences on the Virginia K. claims in 1931 and continued

CAPSULE GEOLOGY

intermittent exploration until 1938. In 1960, Newconex performed geological mapping and sampling on the claims (referred to in Assessment Reports 16842 and 18430); the results of this work are not known. In 1980, Komody Resources Ltd. (later renamed Fest Resources Corp.) conducted further geological work, resulting in the discovery of the Dino vein on the Virginia K. 3 claim. In 1986, Square Gold Explorations Inc. (later renamed Glacier Resources Inc. and then Golden Glacier Resources Inc.) carried out geological mapping and sampling on part of the Virginia K. group (mainly the Virginia K. 3 and Virginia K. 3 Fraction (104A 118) claims). The following year Carmac Resources performed geological mapping and sampling on part of the claim group (mainly the Virginia K. 5 and Virginia K. Extension 2 claims (104A 117)). In 1990, Northair Mines carried out talus sampling on the claims.

The Virginia K. claims are on the eastern limb of the open, north-plunging American Creek anticline. The American Creek fault trends along the valley. The claims are underlain by rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63). The rocks comprise lowermost black argillites, capped by a thin limestone, overlain by tuff and minor rhyolite. The predominantly argillic sequence is, in turn, overlain by a thick sequence of purple, green and red fragmental rocks that include tuff, breccia, agglomerate and conglomerate with subordinate limestone and chert interlayers (Assessment Report 8982, 15365).

Three types of mineralization occur on the Virginia K. claims (Minister of Mines Annual Report, 1932, p. 59):

1. Replacement shear zone in argillite.
2. Veins between interbedded sandstone, sandy argillite and tuffs near the top of the predominantly sedimentary sequence.
3. Fracture zones consisting of quartz veins and veinlets in reticulated structures.

The Dino prospect is located at the southern part of the Virginia K. 3 claim (L. 5816). The vein, in a small fault trending 320 degrees and dipping 35 degrees northeast, is hosted in a folded limestone unit. Mineralization comprises a 2.5 to 15 centimetre wide vein of argentiferous galena on the footwall of the fault, overlain by about 30 centimetres of fault rubble containing lead-zinc mineralization and oxidized material in the limestone (Assessment Report 8982). A composite sample from a bulk sample (680 kilograms) of the vein material assayed 6,231.1 grams per tonne silver, 0.17 grams per tonne gold, 28.38 per cent lead and 6.91 per cent zinc (Assessment Report 8982).

Several other mineralized occurrences have been reported on the Virginia 3 claim.

A northeast-striking, west-dipping replacement zone (referred to in early reports as the No. 1 vein; Minister of Mines Annual Report, 1931) is 3 to 6 metres wide and can be traced for about 300 metres. The zone contains "black cherty streaks of argillaceous limestone and numerous oxidized bands of sulphides. The deposit is so oxidized that it is difficult to obtain samples of unaltered primary vein matter, but pyrite, galena, and sphalerite can be distinguished" (Minister of Mines Annual Report, 1931, p. 44). The exact location of this mineralization is not known, but it is assumed to be in the western part of the Virginia K. 3 claim. Cuts 3, 4 and 5 were probably emplaced on this zone (Property File - Map, 1929). A sample from the No. 4 cut, probably close to the southwest corner of the Virginia K. 3 claim, assayed trace gold, 170.1 grams per tonne silver and 6.14 per cent lead across 4.6 metres (Minister of Mines Annual Report 1931, p. 44).

A vein (referred to in early reports as the No. 3 vein) lies in the east-central portion of the Virginia K. 3 claim. The vein, northwest-striking and steeply south-dipping, is 0.76 metre wide. Samples from the vein assayed 2.1 grams per tonne gold, 4,439 grams per tonne silver and 49.12 per cent lead across 0.76 metre (Minister of Mines Annual Report, 1931, p. 45).

Another vein, about 210 metres east of the No. 4 cut on the No. 1 vein, strikes northeast and dips north. Mineralization comprises chalcopyrite in a quartz gangue (Minister of Mines Annual Report, 1931, p. 45).

BIBLIOGRAPHY

EMPR AR 1929-104; 1930-109; 1931-44; 1932-59; 1935-B23; 1938-B26; 1956-18
EMPR ASS RPT *8982, 15145, 15365, *16842, *18430, 20074, 20256, 20726
EMPR BULL 58, p. 168; 63
EMPR MAP 8
EMPR PF (In 104A 006 - Excelsior Prospecting Syndicate, Ltd., Preliminary survey of the Virginia K. claims, Map only, c. 1929;

BIBLIOGRAPHY

In 104A 005 - Golden Glacier Resources Inc., Prospectus, August 22, 1988 and Fest Resources Corp., Prospectus, March 18, 1988)
EMR MP CORPFILE (Excelsior Prospecting Syndicate, Limited)
GSC MAP 307A; 315A; 9-1957; 1418A
GSC MEM 175, p. 114
GSC OF 2582
GSC SUM RPT 1931, Part A, p. 21A

DATE CODED: 1991/08/20 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/03 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 120**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOONLIGHT GLACIER 1**, RICH 3, BRYANT 7, DUNDEE 8

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 13 20 N
LONGITUDE: 129 55 24 W
ELEVATION: 1173 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Trenching on the north flank of the Moonlight Glacier (Assessment Report 19746).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6231196
EASTING: 442746

COMMODITIES: Silver, Gold, Copper, Zinc, Lead

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite, Galena
ASSOCIATED: Quartz, Carbonate
ALTERATION: Chlorite, Silica
ALTERATION TYPE: Chloritic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork
CLASSIFICATION: Hydrothermal, Epigenetic, Replacement
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Lithic Greywacke
Breccia
Dacitic Dike
Porphyry
Carbonate Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1989
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	504.5000	Grams per tonne
Gold	0.2800	Grams per tonne
Copper	0.2600	Per cent

COMMENTS: Highest assays from samples across a width of 1.0 metre.
REFERENCE: Assessment Report 19746.

CAPSULE GEOLOGY

The Moonlight Glacier 1 showing is located on the north side of Moonlight Glacier, about 1 kilometre west of American Creek. The Moonlight Glacier is a tongue that extends eastward from the Betty Glacier, about 15 kilometres north of the confluence of American Creek with the Bear River.

The early history of the showing is unknown. It may have been covered by the Camp, BLK, Bryant and Dundee claim groups staked by Bryant, Little and Kimball in 1929. In 1988, D. Cremonese conducted a heli-borne VLF-EM and magnetometer survey over the area. In 1989, White Channel Resources Inc. carried out a program of geological mapping, prospecting and sampling, silt and soil geochemical surveys, ground VLF-EM and magnetometer surveys on the Rich 1-4 claims. Trenching was done on the showing on the Rich 3 claim. There are 2 other showings on the Rich 3 claim: the Moonlight Glacier 2 (104A 121) and the Moonlight Glacier 3 (104A 122).

The area is underlain by north-northeast trending, west-dipping Upper Triassic to Lower Jurassic rocks of the Unuk River Formation

CAPSULE GEOLOGY

(Hazelton Group). These lie on the west limb of the American Creek anticline (Bulletin 58, 63). Lithic greywacke and breccia are intruded by northwest-trending dacitic dikes.

The showing consists of a 20 to 40-metre wide zone containing 20 to 30 per cent quartz as veinlets, 1 to 10 centimetres wide, forming stockworks. Mineralization consists of 3 to 5 per cent chlorite, 3 to 5 per cent pyrite and trace to 1 per cent chalcopyrite. Samples assayed up to 504.5 grams per tonne silver, 0.28 gram per tonne gold and 0.26 per cent copper across 1 metre; negligible lead and zinc values were reported (Assessment Report 19746).

Showings on the Bryant 7 and Dundee 8 claims may lie close to the Moonlight Glacier 1 showing; their exact locations are not known.

On the Bryant 7 claim, at 1280 metres elevation, a siliceous replacement zone is mineralized with stringers and veinlets of sphalerite and minor galena. A grab sample assayed trace gold and silver.

About 300 metres farther northeast a pyritized porphyry assayed 0.7 gram per tonne gold and 9.6 grams per tonne silver (Minister of Mines Annual Report, 1930. p. 110). On the Dundee 8 claim galena occurs in the hangingwall and in cross veinlets of a carbonate tuff bed (Minister of Mines Annual Report, 1930, p. 110).

BIBLIOGRAPHY

EMPR AR 1929-104; 1930-109; 1931-44
EMPR BULL 58; 63
EMPR ASS RPT 17607, 17608, *19746
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/09/11 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/26 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 121**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOONLIGHT GLACIER 2**, RICH 3, CAMP 2

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 13 03 N
LONGITUDE: 129 54 32 W
ELEVATION: 533 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Trenching on the west side of American Creek (Assessment Report 19746).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6230659
EASTING: 443634

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Pyrite Arsenopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
SHAPE: Tabular
DIMENSION: 75 x 1 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Breccia
Dacitic Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: TRENCH REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	0.5000	Grams per tonne
Gold	3.5400	Grams per tonne

COMMENTS: Highest assay from chip samples across 1.0 metre.
REFERENCE: Assessment Report 19746.

CAPSULE GEOLOGY

The Moonlight Glacier 2 showing is located about 100 metres west of American Creek, near the toe of the Moonlight Glacier. The Moonlight Glacier is a tongue that extends eastward from the Betty Glacier about 15 kilometres north of the confluence of American Creek with the Bear River.

The early history of the showing is unknown. It may have been covered by the Camp, BLK, Bryant and Dundee claim groups staked by Bryant, Little and Kimball in 1929. In 1988, D. Cremonese conducted a heli-borne VLF-EM and magnetometer survey over the area. In 1989, White Channel Resources Inc. carried out a program of geological mapping, prospecting and sampling, silt and soil geochemical surveys, and ground VLF-EM and magnetometer surveys on the Rich 1-4 claims. Trenching was done on the showing on the Rich 3 claim. There are 2 other showings on the Rich 3 claim: the Moonlight Glacier 1 (104A 120) and the Moonlight Glacier 3 (104A 122).

The area is underlain by north-northeast trending, west-dipping Upper Triassic to Lower Jurassic rocks of the Unuk River Formation (Hazelton Group). These lie on the west limb of the American Creek anticline (Bulletin 58, 63). Breccia is intruded by northwest-trending dacitic dikes.

The showing comprises a quartz-pyrite-arsenopyrite vein, 0.5 to 1.1 metres wide, exposed over a length of 75 metres. The vein

CAPSULE GEOLOGY

typically comprises 60 per cent quartz, 3 to 5 per cent pyrite and 1 per cent arsenopyrite. Chip samples across the vein assayed up to 3.54 grams per tonne gold and 0.50 gram per tonne silver across 1.0 metre; negligible copper, lead and zinc values were reported (Assessment Report 19746).

A showing on the Camp 2 claim may lie close to the Moonlight Glacier 2 showing; the exact location is unknown. A 3.7-metre wide quartz vein, mineralized with pyrite, outcrops on the west side of American Creek (Minster of Mines Annual Report, 1930, p. 110). A sample from the vein assayed trace gold and 8.2 grams per tonne silver across 1.2 metres (Minister of Mines Annual Report, 1930, p. 110).

BIBLIOGRAPHY

EMPR AR 1929-104; *1930-109,110; 1931-44
EMPR BULL 58; 63
EMPR ASS RPT 17607, *19746
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/09/11 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/26 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 122**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOONLIGHT GLACIER 3**, RICH 3

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 12 47 N
LONGITUDE: 129 54 22 W
ELEVATION: 549 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop (Assessment Report 19746).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6230162
EASTING: 443800

COMMODITIES: Silver Gold

MINERALS
SIGNIFICANT: Pyrite Tetrahedrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Podiform Shear
CLASSIFICATION: Replacement Epigenetic Hydrothermal
TYPE: l01 Au-quartz veins

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Lithic Greywacke

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: OUTCROP
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1989
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	2390.0000	Grams per tonne
Gold	2.5100	Grams per tonne

COMMENTS: Chip sample across 0.60 metres.
REFERENCE: Assessment Report 19746.

CAPSULE GEOLOGY

The Moonlight Glacier 3 showing is located about 100 metres east of American Creek and 600 metres southeast of the toe of the Moonlight Glacier. The Moonlight Glacier is a tongue that extends eastwards from the Betty Glacier about 15 kilometres north of the confluence of American Creek with the Bear River.

The early history of the showing is unknown. It may have been covered by the Camp, BLK, Bryant and Dundee claim groups staked by Bryant, Little and Kimball in 1929. In 1988, D. Cremonese conducted a heli-borne VLF-EM and magnetometer survey over the area. In 1989, White Channel Resources Inc. carried out a program of geological mapping, prospecting and sampling, silt and soil geochemical surveys, and ground VLF-EM and magnetometer surveys on the Rich 1-4 claims. The showing was reported at this time on the Rich 3 claim. There are 2 other showings on the Rich 3 claim: the Moonlight Glacier 1 (104A 120) and the Moonlight Glacier 2 (104A 121).

The area is underlain by north-northeast trending, east-dipping Upper Triassic to Lower Jurassic rocks of the Unuk River Formation (Hazelton Group). These lie on the east limb of the American Creek anticline (Bulletin 58, 63).

The showing comprises a north(?)-trending, east-dipping silicified shear zone in lithic greywacke. Mineralization consists of pyrite and minor tetrahedrite. A chip sample across 0.6 metre assayed 2,390 grams per tonne silver and 2.51 grams per tonne gold with negligible copper, lead and zinc values (Assessment Report 19746).

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR ASS RPT 17607, *19746
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/09/11 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/26 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 123**

NATIONAL MINERAL INVENTORY:

NAME(S): **BUCK 87**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 07 12 N
LONGITUDE: 129 46 44 W
ELEVATION: 475 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop (Assessment Report 12651).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6219709
EASTING: 451574

COMMODITIES: Gold Silver Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Porphyritic Andesite
Andesite Tuff
Andesite Breccia
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: OUTCROP

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1984

COMMODITY	GRADE	
Silver	3.4000	Grams per tonne
Gold	2.9000	Grams per tonne
Zinc	0.2700	Per cent

COMMENTS: Grab sample from the mineralized outcrop. Also 0.01 per cent copper and 0.02 per cent lead.
REFERENCE: Assessment Report 12651.

CAPSULE GEOLOGY

The Buck 87 showing is located about 700 metres east of Rufus Creek and 350 metres north of the Stewart highway.

In 1983, Kingdom Resources Ltd. carried out reconnaissance soil and rock sampling in the southern part of the Buck 87 claim. This work outlined coincident copper-lead-zinc soil anomalies. Prospecting in 1984 located weakly mineralized outcrops near the anomalies.

The area is underlain by subhorizontal to gently dipping Upper Triassic to Lower Jurassic rocks of the Unuk River Formation (Hazelton Group). These rocks comprise mainly andesite tuffs and breccias (Bulletin 63).

The showing consists of an outcrop of silicified, porphyritic andesite, containing disseminated pyrite and chalcopyrite. A grab sample assayed 2.9 grams per tonne gold, 3.4 grams per tonne silver, 0.01 per cent copper, 0.02 per cent lead and 0.27 per cent zinc (Assessment Report 12651).

A grab sample was taken from an argillite band, mineralized with disseminated pyrite, about 150 metres west-southwest of the showing. The sample assayed 0.82 per cent zinc, 0.14 per cent lead, 3.1 grams per tonne silver and 0.2 gram per tonne gold (Assessment Report 12651).

BIBLIOGRAPHY

EMPR BULL 63
EMPR ASS RPT 11675, *12651, 20379
EMPR MAP 8
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/09/25 CODED BY: WC FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK: N

MINFILE NUMBER: **104A 124**
NATIONAL MINERAL INVENTORY: 104A4 Ag13

NAME(S): **VET**, VETERAN 2 (L. 3425), VETRON, ERICKSON, ARGENTA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 07 32 N
LONGITUDE: 129 45 46 W
ELEVATION: 975 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop in the southeastern corner of the Veteran 2 claim (L. 3425) (Assessment Report 7201).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6220316
EASTING: 452582

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Hematite Quartz Chalcedony
ALTERATION: Chlorite
ALTERATION TYPE: Chloritic
MINERALIZATION AGE: Jurassic

DEPOSIT
CHARACTER: Stratabound Disseminated
CLASSIFICATION: Volcanogenic Exhalative
TYPE: G04 Besshi massive sulphide Cu-Zn L01 Subvolcanic Cu-Ag-Au (As-Sb)
SHAPE: Tabular
DIMENSION: 3 Metres STRIKE/DIP: 080/50N TREND/PLUNGE:
COMMENTS: Siliceous tuff unit.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Hematitic Chloritic Siliceous Tuff
Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1966
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Copper	3.0200	Per cent

COMMENTS: Chip sample across 1.5 metres, trace zinc and 0.15 per cent lead.
REFERENCE: Assessment Reports 6382, 8912.

CAPSULE GEOLOGY

The Vet showing is located 1700 metres east of Rufus Creek and 1000 metres north of the Stewart highway.

The showing is on the Vet (Veteran, Vetron) claims which were first mentioned in 1919. Surface work was reported during 1921-24. In 1925, Argenta Mines Limited acquired the claims and some geological work was conducted that year. Rufus Argenta Mines Limited was formed in 1928. During 1928-29(?), a tunnel was driven on the property. Further tunnelling was reported in 1937. In 1955, New Rufus-Argenta Mines Limited was formed and carried out further surface work during 1956-57 and 1964-65. In 1966, Crest Copper Company Limited conducted geological mapping and trenching. In 1976, Tournigan Mining Explorations Ltd. carried out reconnaissance studies in the area. In 1978, Tournigan performed geological mapping and sampling on the Veteran 1 and 2 claims. Kingdom Resources Ltd. (renamed KRL Resources Corp. in 1989) carried out work in the area during 1980-84, but no work was reported on the Vet claims. In 1991, KRL and Tournigan entered into an agreement whereby Tournigan would purchase the Veteran and Veteran 3 claims.

The area is predominantly underlain by subhorizontal to gently north-dipping andesitic rocks of the Upper Triassic to Lower Jurassic

CAPSULE GEOLOGY

Unuk River Formation(?) (Hazelton Group) (Bulletin 63).

Mineralization occurs in a chalcopyrite and pyrite-bearing, hematitic, chloritic and siliceous tuff unit (Assessment Report 6382). The unit is 3 to 4 metres thick, strikes east and dips north at 15 to 80 degrees. The unit is bedded to massive and principally comprises beds of chert, quartz-hematite and thinly laminated chloritic tuff. Chalcopyrite is typically present in the hematite-rich layers.

The mineralized unit has been referred to in the earlier literature as the Veteran or Erickson vein (Minister of Mines Annual Report, 1925). The best section is exposed a few hundred metres east of the northwest corner of the Veteran claim. A 1.2-metre wide sample assayed 3.0 per cent copper and traces of gold and silver (Minister of Mines Annual Report, 1928).

The mineralized unit may extend about 2500 metres to the west, near the Rufus showing (104A 019), and 1500 metres to the east, into the Red Top showing (104A 021) (Assessment Report 6382).

Chip(?) samples collected in 1966(?) assayed up to 3.02 per cent copper, 0.15 per cent lead and trace zinc across 1.5 metres (cited in Assessment Reports 6382, 8912).

BIBLIOGRAPHY

EMPR AR 1919-67; 1920-56; 1921-66; 1922-76; *1925-96; *1928-108; 1929-99; 1937-41; 1966-40
EMPR ASS RPT *6382, *7201, 8912, 20379
EMPR BULL 63
EMPR EXPL 1978-E256
EMPR MAP 8
EMPR OF 1999-2
EMPR PF (In 104A 054 - *KRL Resources Corp., SMF No. 16/91, February 21, 1991)
EMR MP CORPFILE (Argenta Mines, Limited; Rufus Argenta Mines, Limited; Crest Ventures Limited; Tournigan Mining Explorations Ltd.)
GSC MAP 28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC MEM 175, p. 144
GSC OF 2582

DATE CODED: 1991/09/25 CODED BY: WC FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK: N

MINFILE NUMBER: **104A 125** NATIONAL MINERAL INVENTORY: 104A4 Ag13

NAME(S): **COMET 1 (L. 3419)**, BLUE, ARGENTA, COMET 2, COMET 4, COMET

STATUS: Showing MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 07 52 N NORTHING: 6220942
LONGITUDE: 129 46 25 W EASTING: 451916
ELEVATION: 1372 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Location corresponds with the approximate centre of the Comet 1 claim (L. 3419) (Mineral Titles Reference Map 104A/4W).

COMMODITIES: Gold Lead Copper Silver

MINERALS
SIGNIFICANT: Galena Arsenopyrite Chalcopyrite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins I05 Polymetallic veins Ag-Pb-Zn±Au
G04 Besshi massive sulphide Cu-Zn
DIMENSION: 250 x 12 Metres STRIKE/DIP: 020/90 TREND/PLUNGE:
COMMENTS: Comet vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1935
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	54.9000	Grams per tonne

REFERENCE: Geological Survey of Canada Memoir 175, page 144.

CAPSULE GEOLOGY

The exact location of the Comet showing is unknown. Old records suggest that the mineralization is principally on the Comet 1 claim, about 1000 metres east of Rufus Creek and 1500 metres north of the Stewart highway.

The Comet claims were first referred to in 1919, when a high grade discovery was reported on the claims. Shaft sinking proceeded the following year. In 1920, the silver-rich Blue vein was described to the west of the Comet showing. Little further work has been reported since 1922. The Comet claims were included in the Argenta group of: Argenta Mines Limited in 1924, Rufus Argenta Mines Limited in 1927, Crest Copper Company Limited in 1966 and Tournigan Mining Explorations Ltd. in 1978. Tournigan Mining carried out geological mapping on the Comet 2 claim in 1978. Kingdom Resources Ltd. (renamed KRL Resources Corp. in 1989) performed work in the area during 1980-84; no work was reported on the Comet claims. In 1991, Tournigan and KRL entered into an agreement whereby Tournigan would purchase certain interests, including the Comet 4 claim.

The area is predominantly underlain by subhorizontal to gently north-dipping andesitic rocks of the Upper Triassic to Lower Jurassic Unuk River Formation(?) (Hazelton Group) (Bulletin 63).

The Comet vein is a quartz-calcite vein, up to 12 metres wide, that has been traced for about 250 metres. The vein strikes 020 degrees and dips vertically. Mineralization comprises arsenopyrite and galena (Minister of Mines Annual Report, 1920; Assessment Report

CAPSULE GEOLOGY

8912). Selected samples assayed up to 54.9 grams per tonne gold (Geological Survey of Canada Memoir 175, p. 44). The vein may be part of the mineralized tuff unit that extends through the Vet showing (104A 124).

The Blue vein, lying west of the Comet vein, is 0.15 to 0.5-metre wide and carries galena and chalcopyrite. High silver values have been reported from the vein (Minister of Mines Annual Report, 1920). Several other veins have been reported in the vicinity (Assessment Report 8912).

BIBLIOGRAPHY

EMPR AR 1919-67; *1920-56; 1921-66; 1922-76; 1925-96; 1928-108; 1929-99; 1937-41; 1966-40
EMPR EXPL 1978-E256
EMPR BULL 63
EMPR ASS RPT 6382, 7201, *8912, 20379
EMPR MAP 8
EMPR PF (In 104A 054 - *KRL Resources Corp., SMF No. 16/91, February 21, 1991)
EMR MP CORPFILE (Argenta Mines, Limited; Rufus Argenta Mines, Limited; Crest Ventures Limited; Tournigan Mining Explorations Ltd.)
GSC MEM 175, p. 144
GSC MAP 28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/09/25 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/23 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 126**
NATIONAL MINERAL INVENTORY: 104A4 Cu3

NAME(S): **SUPERIOR (L. 4801)**, SUPERIOR 1, SUPERIOR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 07 45 N
LONGITUDE: 129 44 29 W
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Outcrop of the mineralized vein (Assessment Report 7201).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6220703
EASTING: 453916

COMMODITIES: Silver, Lead, Zinc, Copper, Barite

MINERALS
SIGNIFICANT: Galena, Sphalerite, Chalcopyrite, Pyrite
ASSOCIATED: Quartz, Barite, Siderite, Calcite, Jasper
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Discordant
CLASSIFICATION: Epithermal, Hydrothermal, Epigenetic, Industrial Min.
TYPE: I04 Iron formation-hosted Au
SHAPE: Tabular
DIMENSION: 260 Metres
STRIKE/DIP: 295/60S
TREND/PLUNGE:
COMMENTS: Vein system hosted in a fracture zone.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite
Andesitic Tuff
Quartz Porphyry Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1978
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	545.0000	Grams per tonne
Copper	1.0000	Per cent
Lead	50.0000	Per cent
Zinc	3.0000	Per cent

COMMENTS: Grab sample from a 5 by 0.5-1.0 metre pod of massive galena at the southeast end of the showing.
REFERENCE: Assessment Report 7201.

CAPSULE GEOLOGY

The Superior showing, on the Superior and Superior 1 claims, is about 700 metres northwest of the sharp turn in Cullen Creek and 1350 metres north of the Stewart highway.

The Superior claim group, owned by Erickson and McNeil, was staked before 1910. Surface work was carried out during 1910-19. In 1919-20, Sieffert and associates drove an adit about 60 vertical metres below the showing. The adit had been driven 55 metres by 1920. The property reverted to the original owners that year. Little further work has been reported; the adit was reported to be 60 metres long in 1927 and 113 metres long in 1929. Apparently, drifting to the west was commenced in 1929, but the vein was not found in the adit. The claims were subsequently acquired by the Quickstad family. No further work was reported until 1978 when Tournigan Mining Explorations Ltd., having acquired the claims the previous year, carried out some geological mapping and sampling.

The area is underlain by east-striking, south(?)-dipping Upper Triassic to Lower Jurassic rocks of the Unuk River Formation (Hazelton Group) (Bulletin 63). The rocks are predominantly andesites and andesitic tuffs, intruded in places by northwest-

CAPSULE GEOLOGY

trending quartz porphyry dikes.

The adit on the Superior claim followed a vein system in a fracture zone. The system consists of west-northwest trending, south-dipping veins over a length of 260 metres. Discontinuous veins, up to 2.0 metres wide, are exposed over lengths up to 20 metres. The veins consist of broken volcanic material, quartz, calcite, siderite, barite, galena, sphalerite, chalcopyrite and pyrite. The proportions of these minerals vary considerably. The veins locally exhibit sulphide banding.

A grab sample from a, 5 by 0.5 to 1.0 metre, pod of massive galena assayed 545 grams per tonne silver, 50.0 per cent lead, 3.0 per cent zinc and 1.0 per cent copper (Assessment Report 7201).

Assay values range from 1.3 to 15.9 grams per tonne silver, 1.4 to 50 per cent lead, 0.7 to 15 per cent zinc and trace to 1 per cent copper (Assessment Report 22172).

BIBLIOGRAPHY

EMPR AR 1910-62; 1913-92; 1916-86; 1917-68; 1920-56; 1921-66; 1922-77; 1923-75; 1925-95; 1927-95; 1928-109; *1929-99
EMPR EXPL 1978-E256; 1979-276
EMPR BULL 63
EMPR ASS RPT *7201, 20379, *22172
EMPR MAP 8
EMR MP CORPFILE (Tournigan Mining Explorations Ltd.)
GSC MEM 159, p. 29; 175, p. 141
GSC MAP 28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/09/26 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/23 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 127**
NATIONAL MINERAL INVENTORY: 104A4 Cu4

NAME(S): **HEATHER 4 (L. 5365)**, HEATHER 1, HEATHER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 06 45 N
LONGITUDE: 129 42 10 W
ELEVATION: 442 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Approximate centre of Heather 4 claim (L. 5365) (Mineral Titles Reference Map 104A/4E).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6218823
EASTING: 456297

COMMODITIES: Zinc, Lead, Silver, Copper

MINERALS
SIGNIFICANT: Pyrite, Chalcopyrite, Galena
ASSOCIATED: Quartz, Calcite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: G04 Besshi massive sulphide Cu-Zn; I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: ADIT
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1949
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	24.0000	Grams per tonne
Lead	1.1000	Per cent
Zinc	36.7000	Per cent

COMMENTS: A 1.4 kilogram sample, 10.7 metres from the portal of the adit.
REFERENCE: Assessment Report 6382.

CAPSULE GEOLOGY

The Heather 4 showing is located near the head of the Bear River valley, just west of the Bear River Pass. The showing is about 1800 metres west-northwest of Strohn Lake and 200 metres south of the Stewart highway.

The George Enterprise Mining Company Ltd. acquired the Heather claims in 1928 and conducted prospecting that year. Work, including tunnelling, was carried out intermittently between 1928 and 1950. In 1950, the tunnel was reported to be 15 metres long. No further work was reported. During 1976-78, Tournigan Mining Explorations Ltd. conducted reconnaissance geological studies in the area.

The area is underlain by subhorizontal to gently dipping andesitic rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 63). The iron formation unit which hosts the George Gold-Copper deposit (104A 029, 129), to the west, reportedly extends to the Heather area. The adit was emplaced below this unit.

Mineralization has been reported in several places on the Heather claims, but few details are available.

On the Heather 4 claim, a tunnel was driven on a north to north-northwest trending, steeply east-dipping zone. The zone contains a stringer of semi-massive sulphides up to 25 centimetres wide. Selected grab samples collected from the tunnel during 1949-52 assayed up to 36.7 per cent zinc, 1.1 per cent lead and 24.0 grams per tonne silver (cited in Assessment Report 6382).

On the Heather 1 claim, about 1000 metres to the south-

CAPSULE GEOLOGY

southwest, 2 east-trending shears, up to 2.4 metres wide, are mineralized with pyrite, chalcopyrite and minor galena in a gangue of quartz and calcite (Minister of Mines Annual Report, 1928).

BIBLIOGRAPHY

EMPR AR *1928-110; 1929-100; 1930-108; 1931-43; 1950-A78
EMPR ASS RPT *6382, 7201, 20379, 22172
EMPR BULL 63
EMPR EXPL 1977-E221
EMPR MAP 8
EMPR OF 1999-2
EMR MP CORPFILE (Tournigan Mining Explorations Ltd.)
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/09/26 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/23 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 128**

NATIONAL MINERAL INVENTORY: 104A4 Ag14

NAME(S): **MURDOCK (L. 3440-3446)**, HUGH 9-10, HUGH 4

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 06 52 N
LONGITUDE: 129 35 39 W
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Approximate centre of Murdock claims (L. 3440-3446) (Mineral Titles Reference Map 104A/4E).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6218976
EASTING: 463053

COMMODITIES: Lead

MINERALS
SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Volcanic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Murdock showing is located on the Murdock claims (L. 3440 to 3446 inclusive), on the north side of Strohn Creek about 3 kilometres east of the Bear River Pass.

The Murdock claims were staked in 1921 by McHugo and Douville. Work was reported on the claims during 1923-25. No further activity has been reported.

The area is underlain by Hazelton Group volcanics of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 63). The volcanics strike north to northeast and dip to the west.

An occurrence of galena is reported on the claims (Minister of Mines Annual Report, 1923, 1925). No details on the mineralization are available.

BIBLIOGRAPHY

EMPR ASS RPT 22040
EMPR AR 1923-75; *1925-94
EMPR BULL 63
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/10/21 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/02/17 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 129** NATIONAL MINERAL INVENTORY: 104A4 Cu1

NAME(S): **GEORGE GOLD-COPPER UPPER**, HELENA (L. 4783), GEORGE GOLD-COPPER, GRAND VIEW, BLUE-JASPER, BLUE, JASPER, GREEN, WHITE, BEAR PASS, GEORGE COPPER

STATUS: Developed Prospect MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 06 16 N NORTHING: 6217961
LONGITUDE: 129 45 16 W EASTING: 453074
ELEVATION: 1311 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Blue-Jasper vein, which is the upper showing on Geological Survey of Canada Map 217A.

COMMODITIES: Gold Copper Silver

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite Arsenopyrite
ASSOCIATED: Hematite Magnetite Quartz Jasper Barite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stockwork Discordant
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)
SHAPE: Tabular
DIMENSION: 210 x 2 Metres STRIKE/DIP: 280/ TREND/PLUNGE:

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite Flow
Andesite
Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: BLUE-JASPER REPORT ON: Y

CATEGORY: Combined YEAR: 1956
QUANTITY: 180000 Tonnes

COMMODITY	GRADE	
Silver	17.1000	Grams per tonne
Gold	2.1000	Grams per tonne
Copper	2.0000	Per cent

COMMENTS: Total indicated (90,000 tonnes) plus inferred (90,000 tonnes).
REFERENCE: Assessment Report 6382, page 12.

ORE ZONE: BLUE-JASPER REPORT ON: Y

CATEGORY: Unclassified YEAR: 1956
QUANTITY: 453550 Tonnes

COMMODITY	GRADE	
Silver	17.1000	Grams per tonne
Gold	2.0000	Grams per tonne
Copper	2.0000	Per cent

COMMENTS: Report by McEachern, 1956.
REFERENCE: SMF July 12, 1979 - Tournigan Mining Explorations Ltd., Keyte, 12/88.

CAPSULE GEOLOGY

The George Gold-Copper Upper prospect is located about 1.3 kilometres south of the Stewart highway, 2.5 kilometres southeast of the confluence of Rufus Creek with the Bear River.

The prospect is on the Helena and Grand View claims, staked by W. George and F. Strohn in about 1911. Several opencuts had been emplaced by 1919. The property was optioned in 1920 by the Algunican Development Company Limited and in 1922-23 by the Granby Consolidated

CAPSULE GEOLOGY

Mining, Smelting and Power Company, Limited; no work was reported. In 1925, the George Gold-Copper Mining Company Limited was incorporated and Cominco optioned the property in 1927. At least 6 holes were drilled before 1929. In 1971, Keith Copper Mines Ltd. acquired property near the showing and performed magnetometer surveys. In 1976, Tournigan Mining Explorations Ltd. purchased the 12 George Gold-Copper claims, including the Helena and Grand View claims. Tournigan carried out work in the area during 1976-78, but no specific work was reported on the showing. Tournigan Mining conducted sampling on their Bear Pass property, which includes this prospect, in 1991.

The area is underlain by flat lying to gently dipping Upper Triassic to Lower Jurassic andesite flows of the Unuk River Formation (Hazelton Group) (Bulletin 63). Northwest-trending dikes are common in the area.

Several east-trending, steeply south-dipping quartz-jasper-barite veins occur. The veins are up to 6 metres wide, but average 1 to 2 metres in width. They comprise mainly quartz, with lesser amounts of jasper, barite and included country rock. Metallic minerals consist predominantly of chalcopyrite and pyrite with sporadically developed hematite, magnetite and arsenopyrite. Metallics form up to 50 per cent of the vein material.

The western Blue and Jasper veins form a continuous vein more than 335 metres long. The vein strikes at 110 degrees and dips 65 degrees south. Mineralization occurs continuously over a length of 145 metres and consists of pyrite, pyrrhotite, hematite, arsenopyrite and chalcopyrite.

The Green vein, east of the Blue-Jasper vein complex, consists of several veins and intervening stockworks. The vein is about 60 to 70 metres long and may be the extension of the Blue-Jasper vein.

The White vein, about 50 metres north of the Green vein, can be traced for a length of about 150 metres.

Channel samples across the veins range from less than 1 per cent up to 10 per cent copper and trace to 8.6 grams per tonne gold (Geological Survey of Canada Memoir 175, p. 117).

Assuming continuity of the mineralization along the veins, reserves have been reported to total (indicated and inferred) 180,000 tonnes grading 2.0 per cent copper, 17.1 grams per tonne silver and 2.1 grams per tonne gold (Assessment Report 6382, page 12). Unclassified reserves were reported to be 453,550 tonnes grading 17.1 grams per tonne silver, 2.0 grams per tonne gold and 2.0 per cent copper (Statement of Material Facts July 12, 1979 - Tournigan Mining Explorations Ltd., G. Keyte, December 1978).

BIBLIOGRAPHY

EMPR AR 1914-155; 1915-72; 1916-86; 1917-67,85; 1918-79; 1919-66; 1920-57; 1921-66; 1922-77; 1923-75; 1924-69; 1925-94; 1926-95; 1927-94,480; 1928-109; 1929-99,508; 1930-442
EMPR ASS RPT *6382, 7201, 20379, *22172
EMPR BULL 63
EMPR EXPL 1977-E221
EMPR GEM 1972-512
EMPR MAP 8
EMR MIN BULL MR 223 B.C. 316
EMR MP CORPFILE (The Algunican Development Company, Limited; The George Gold-Copper Mining Company, Limited; Keith Copper Mines Ltd.; Tournigan Mining Explorations Ltd.)
GSC MAP 28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC MEM 159, p. 27; *175, p. 115
GSC OF 2582
GSC SUM RPT 1911, p. 67
ECON GEOL 1928, Vol. 23, No. 2, pp. 193-208
GCNL #127, #136, #160, 1976; #161, 1978; #18, 1980
N MINER Apr.2, 1928; Sept. 9, 1976; July 23, 1990
Placer Dome File
EMPR OF 1998-10

DATE CODED: 1991/09/30 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/08 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 130**

NATIONAL MINERAL INVENTORY:

NAME(S): **PERSHING (L. 4762)**, RUBY SILVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 04 52 N
LONGITUDE: 129 51 23 W
ELEVATION: 625 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: No. 2 adit, Pershing claim (L. 4762) (Assessment Report 20308).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6215438
EASTING: 446702

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Siltstone
Andesitic Volcaniclastic
Dacitic Volcaniclastic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Pershing showing is located on a tributary of Le Sueur (Mosquito) Creek, about 1800 metres east-southeast of the confluence of American Creek and the Bear River.

In 1910, the Portland Dreadnought Mining Company carried out tunnelling and open cutting on a group of three claims which presumably covered the showing. It is not clear whether the adit on the Pershing claim (the No. 2 adit) was driven at this time or later. In 1920, Le Sueur held the Ruby Silver group over the showing and conducted further work. In 1924, Ruby Silver Mines, was formed and acquired the Ruby Silver claims (Ruby, Ruby 1, Star, Stirling, Pershing and Pershing 1) and Ruby Silver Extension claims (Ruby 2-5). The company name was changed in 1929 to Ruby Silver Copper Mines Limited. No further work was reported until 1984 when D. Brownlee acquired the Ruby Silver group and conducted an evaluation the following year. In 1986, Thios Resources Inc. acquired the property and subsequently entered into a joint venture with Adrian Resources Ltd. The joint venture conducted geological, geochemical and geophysical (VLF-EM and magnetometer) surveys on the property in 1990.

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation that are unconformably overlain to the east by the Middle Jurassic Salmon River Formation (Bulletin 58, 63). A stock of augite diorite intrudes the Unuk River Formation north of the property.

The immediate area of the showing is underlain by Unuk River Formation argillites and siltstones that are locally overlain by andesitic to dacitic volcaniclastics. A prominent north-northeast trending fault lies just west of the showing.

The No. 2 adit was driven on a quartz-carbonate vein containing blebs and disseminations of pyrite and chalcopyrite that locally form up to 10 per cent of the vein. Malachite and azurite staining is present in places (Assessment Report 20308).

BIBLIOGRAPHY

EMPR AR 1910-61; 1920-55; 1924-69; 1925-94
EMPR BULL 58; 63
EMPR ASS RPT 20308, 20379, *21172
EMPR MAP 8
EMPR PF (In 104A 039 - Thios Resources Inc., Prospectus, April 7, 1987)
EMR MP CORPFILE (Ruby Silver Copper Mines, Limited)
GSC MEM 159, p. 36; 175, p. 144
GSC MAP *28A; *216A; *217A; *315A; 9-1957; 1418A
GSC OF 2582
GCNL #118, 1990; #24, 1991

DATE CODED: 1991/10/18 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/15 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 131**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOURNIGAN**, INDEPENDENCE 2, BIG CASINO, INDEPENDENCE, ROCK OF AGES

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 05 21 N
LONGITUDE: 129 54 11 W
ELEVATION: 330 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Old prospect pit on the new Big Casino claim which is different from the Big Casino Crown-grant L. 4539 (104A 034) (Assessment Report 12973).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6216371
EASTING: 443809

COMMODITIES: Gold Copper Silver

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)
SHAPE: Tabular
DIMENSION:
STRIKE/DIP: 080/85S
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Flow
Andesitic Tuff
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1984
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	53.8000	Grams per tonne
Gold	4.5000	Grams per tonne
Copper	1.2700	Per cent

COMMENTS: Chip sample across 30 centimetres.
REFERENCE: Assessment Report 12973.

CAPSULE GEOLOGY

The Tournigan showing is located about 1 kilometre southwest of the confluence of American Creek with the Bear River, 900 metres northwest of the Stewart highway. The showing occurs on the new Big Casino claim which is different from the Big Casino Crown-grant L. 4529 (104A 034). Four major vein structures have been identified, to the west of this showing, on the Independence property (104A 038).

Little is known about the early exploration work on the showing. It was probably covered by the Independence group of claims during the 1920s. The old prospect pit may have been emplaced during that period. In 1984, Tournigan Mining Explorations Ltd. carried out a geological mapping program and stream sediment survey over the Independence claims and reported on the showing. In 1986, Moche Resources Inc. acquired the Rock of Ages group, including the Big Casino and Independence claims. The showing was included in the Big Casino claim. That year Moche Resources flew a heli-borne VLF-EM and magnetometer survey over the area, carried out soil, silt and rock sampling and conducted geological mapping. In 1988, Moche conducted

CAPSULE GEOLOGY

follow-up exploration. Remington Creek Resources Inc. subsequently acquired the Independence-Big Casino property and entered into an agreement with Armeno Resources Inc.-Armenex Resources Canada Inc. in 1990. Further exploration work, including diamond drilling, was conducted in 1990. Armenex drilled 11 holes, mapped and sampled the area in 1991.

The area is underlain by andesitic tuffs and flows of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63).

A fissure vein is exposed in an old prospect pit about 750 metres northeast of adit 1 (104A 038). The 30-centimetre wide vein, contains quartz, pyrite, chalcopyrite and malachite, strikes 080 degrees and dips 85 degrees south. A chip sample across the width of the vein assayed 4.5 grams per tonne gold, 53.8 grams per tonne silver and 1.27 per cent copper over 30 centimetres (Assessment Report 12973).

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR ASS RPT *12973, 20379, 21367, 21950
EMPR MAP 8
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/10/02 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/11 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 132**

NATIONAL MINERAL INVENTORY: 104A4 Ag18,Cu7

NAME(S): **INDEPENDENCE 1**, INDEPENDENT 1-5, INITIAL, BIG CASINO, ROCK OF AGES

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 05 00 N
LONGITUDE: 129 54 41 W
ELEVATION: 533 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit 5 (Assessment Report 15581).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6215729
EASTING: 443282

COMMODITIES: Gold Silver Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) I01 Au-quartz veins
COMMENTS: The attitude is unknown, possibly northwest trending.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Greenstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: ADIT
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1986

COMMODITY	GRADE	
Silver	40.1000	Grams per tonne
Gold	7.7800	Grams per tonne

COMMENTS: Grab sample from Adit 5.
REFERENCE: Assessment Report 15581.

CAPSULE GEOLOGY

The Independence 1 showing is located about 700 metres northeast of Fitzgerald Creek and approximately 1200 metres northwest of the Stewart highway on the Independence 1 claim. The claim is part of the Independence property which includes the new Big Casino claim (this claim is different from the Big Casino Crown-granted claim, 104A 034) and the 4 vein structures that occur on it (104A 038).

The area of the showing may have originally been covered by the Initial claim group (Geological Survey of Canada Map 28A), probably on the Big Casino (104A 038) claim to the north, located before 1913 (Geological Survey of Canada Memoir 32, p. 51). From about 1919, the showing was covered by the Independent and Independent 1-5 claims which were owned by the Fitzgerald brothers. In 1924, the Independence Gold Mining Company Ltd. was formed. Revenue Mining Company Ltd. acquired a majority interest in the company in 1926. A 9-metre long exploration adit (No. 5 adit) was driven on the showing probably before 1929(?). Canex Aerial Exploration apparently did some work in the area in 1965; the results are not available. In 1980, Tournigan Mining Explorations Ltd. conducted geological mapping near the showing on the Independence property. In 1984, Tournigan conducted further geological mapping and stream sediment surveys in the area; no work was reported on the showing. In 1986, Moche Resources Inc. acquired the Rock of Ages group, including the Big Casino and Independence claims, and reported on the showing. The

CAPSULE GEOLOGY

occurrence was included in the new Big Casino claim. That year Moche Resources flew a heli-borne VLF-EM and magnetometer survey over the area, carried out soil, silt and rock sampling and conducted geological mapping. Remington Creek Resources Inc. subsequently acquired the Independence-Big Casino property and entered into an agreement with Armeno Resources Inc.-Armenex Resources Canada Inc. in 1990. Further exploration work was conducted in 1990. Armenex drilled 11 holes, mapped and sampled the area in 1991, primarily on the Big Casino claim (104A 038) to the north.

The area is underlain by north to northeast-striking, steeply dipping andesitic tuffs of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63).

Adit 5 is about 500 metres southeast of adit 1 (104A 038). The adit has been driven for 9 metres in sheared greenstone. A selected sample of sheared and silicified greenstone, mineralized with pyrite and chalcopyrite, assayed 7.78 grams per tonne gold and 40.1 grams per tonne silver (Assessment Report 15581). The mineralization is discontinuous with an average width of about 4 metres. The adit could not be found during the exploration in 1990 and 1991.

BIBLIOGRAPHY

EMPR AR 1919-65; 1920-58; 1921-66; 1922-71; 1923-76; 1924-70; 1925-98; 1926-94; 1927-392; 1928-106; 1929-98; 1930-107
EMPR EXPL 1990-35
EMPR BULL 58, p. 132; 63
EMPR ASS RPT 8968, 12973, *15581, 16082, 20379, 21367, 21950
EMPR MAP 8
EMPR PF (In 104A 038 - Moche Resources Inc., Prospectus, May, 1988)
EMPR MER 1990-35
EMR MP CORPFILE (Independence Gold Mining Company, Limited; Revenue Mining Company, Limited; Algunican Development Company, Limited)
GSC MEM 32, p. 51; 159, p. 338; 175, pp. 121,123
GSC MAP *28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582
GCNL #69, #130, #136, #145, 1990

DATE CODED: 1991/10/02 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/11 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 133**

NATIONAL MINERAL INVENTORY: 104A4 Pb4

NAME(S): **CARRIN**, ROCK OF AGES 6 (L. 4938)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 04 21 N
LONGITUDE: 129 56 24 W
ELEVATION: 1525 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Opencut on the Rock of Ages 6 claim (L. 4938) (Assessment Report 16082).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6214547
EASTING: 441485

COMMODITIES: Gold Silver Lead Zinc

MINERALS
SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Dike
Volcaniclastic
Andesitic Tuff
Andesitic Flow
Andesite
Limestone
Dacite Porphyry Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1986
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	373.0000	Grams per tonne
Gold	7.8000	Grams per tonne
Lead	33.1000	Per cent
Zinc	8.9000	Per cent

COMMENTS: Grab sample from an opencut, Carrin showing.
REFERENCE: Assessment Report 16082.

CAPSULE GEOLOGY

The Carrin showing is located about 1.6 kilometres northeast of Mount Shorty Stevenson, 2.7 kilometres west of the Bear River, on the east side of the Bear River Ridge.

The history of the showing is not known but was likely found and pitted in the 1920s when Dalhousie Mining Company Limited owned the Rock of Ages claim group in the area. The showing was first reported in 1986, when Moche Resources Inc. conducted reconnaissance geological, geophysical and geochemical surveys on the Independence (104A 038) project. This work included sampling of the showing.

The area is underlain by north-striking, west-dipping Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 58, 63). These rocks comprise mainly andesitic tuffs and flows, minor intercalated limestone occurs near the showing. Northwest trending dacite porphyry dikes are also present locally (Assessment Report 16082).

Mineralization comprises a small discontinuous zone of galena and sphalerite along the fractured contact of an andesitic dike in volcaniclastic rocks. A selected grab sample of high-grade galena assayed 7.8 grams per tonne gold, 373.0 grams per tonne silver, 33.1

CAPSULE GEOLOGY

per cent lead and 8.9 per cent zinc (Assessment Report 16082).
The mineralization may be related to a northwest trending fault that extends from the nearby Rock of Ages Fr. N showing (104A 134).

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR ASS RPT 15581, *16082, 20379
EMPR MAP 8
EMPR PF (In 104A 038 - Moche Resources Inc., Prospectus, May 9, 1988)
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/11/04 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/23 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 134**

NATIONAL MINERAL INVENTORY: 104A4 Pb4

NAME(S): **ROCK OF AGES FR. N (L. 4940)**, NO. 3, GLACIER,
ROCK OF AGES 1 (L. 4939)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 03 58 N
LONGITUDE: 129 56 05 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Tunnel 3, Rock of Ages fraction (L. 4940) (Assessment Report 16082).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6213831
EASTING: 441804

COMMODITIES: Silver, Zinc, Lead, Copper

MINERALS
SIGNIFICANT: Galena, Sphalerite, Pyrite, Chalcopyrite, Bornite
ASSOCIATED: Magnetite, Jasper, Hematite
ALTERATION: Chlorite, Hematite, Silica, Pyrite, Malachite, Azurite
ALTERATION TYPE: Chloritic, Hematite, Silicific'n, Pyrite, Propylitic, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stratiform, Concordant, Massive
CLASSIFICATION: Volcanogenic
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
I05 Polymetallic veins Ag-Pb-Zn±Au
J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY:
Dacitic Tuff
Dacite Flow
Dacite
Limestone
Chert
Porphyritic Rhyolite
Argillite
Andesite
Andesite Porphyry Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1986
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	5.5000	Grams per tonne
Lead	0.2900	Per cent
Zinc	0.7300	Per cent

COMMENTS: Sample from tunnel No. 3 across a true width of 3.5 metres. Trace gold.
REFERENCE: Assessment Report 16082, page 12.

CAPSULE GEOLOGY

The Rock of Ages Fr. N showing is located in the northern part of the Rock of Ages Fr. claim (L. 4940), about 1.5 kilometres east-northeast of Mount Shorty Stevenson and approximately 1.5 kilometres west of the Bear River.

The Dalhousie Mining Company Limited acquired the Rock of Ages claim group and conducted work during 1925-28. The showing, or the nearby Glacier showing, was probably discovered during this time and may be the vein referred to as the No. 4 vein in the Minister of Mines Annual Report 1929 (p. 92). No further work was reported until 1979 when Tournigan Mining Explorations Ltd. carried out geological mapping, prospecting, trenching and sampling. In 1983, Rich Lode

CAPSULE GEOLOGY

Gold Corporation entered into an agreement with Tournigan and performed some prospecting near the showing. In 1986, Moche Resources Inc. acquired the Rock of Ages claims and conducted a program comprising airborne and ground VLF-EM and magnetometer surveys, soil and silt geochemical surveys and geological mapping.

The area is underlain by north-striking, west-dipping Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 58, 63). These rocks comprise mainly andesitic tuffs, breccias and flows; a unit of porphyritic rhyolite to dacite flows and tuffs, about 150 metres thick, lies at or about the stratigraphic level of the mineralization (Assessment Report 7841). North-northwest trending andesite porphyry dikes and associated faulting cut the felsic rocks near the showing (Assessment Report 16082). Both andesitic and felsic rocks are extensively pyritized near the mineralization.

Mineralization comprises magnetite, galena, sphalerite and pyrite in dacitic tuffs and intercalated lenses of limestone, chert and argillite. Beds of chert and argillite have been replaced by banded jasper-magnetite-hematite. The dacitic rocks have been fractured, chloritized, hematized and weakly silicified. Sulphide content of the mineralized zone varies from 1 to 35 per cent. The zone ranges from 5 to 10 metres wide and trends to the southwest for 70 metres. A sample from the tunnel (No. 3) assayed trace gold, 5.5 grams per tonne silver, 0.73 per cent zinc and 0.29 per cent lead across 3.5 metres (Assessment Report 16082).

The Glacier showing is located about 250 metres southwest of the Rock of Ages Fr. N showing. Mineralization comprises irregular pods of massive sulphide in propylitized andesites. The sulphides are associated with fractures related to a northwest-trending fault zone (Assessment Report 16082). Sulphide minerals comprise pyrite, sphalerite, galena, chalcopyrite and bornite; malachite and azurite have also been reported (Assessment Report 11546). A sample collected across 2.0 metres of massive sulphide assayed 5.7 grams per tonne gold, 31.7 grams per tonne silver and 28.3 per cent zinc (Assessment Report 16082).

BIBLIOGRAPHY

EMPR AR 1925-99; 1926-93; 1927-91; 1928-105
EMPR ASS RPT 7841, *11546, 15581, *16082, 20379
EMPR BULL 58; 63
EMPR MAP 8
EMPR OF 1999-2
EMPR PF (In 104A 038 - Moche Resources Inc., Prospectus, May 9, 1988)
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC MEM 32, p. 46; 159, p. 33; 175, p. 111
GSC OF 2582
GCNL #109, #110, 1983

DATE CODED: 1991/11/04 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/10 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 135**
NATIONAL MINERAL INVENTORY: 104A4 Pb4

NAME(S): **ROCK OF AGES FR. S (L 4940)**, NO. 2, IRON VEIN

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 03 48 N
LONGITUDE: 129 55 47 W
ELEVATION: 800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing No. 2, Rock of Ages fraction (L. 4940) (Assessment Report 16082).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6213518
EASTING: 442111

COMMODITIES: Gold, Silver, Copper, Zinc

MINERALS
SIGNIFICANT: Chalcopyrite, Sphalerite, Pyrite
ASSOCIATED: Magnetite, Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Discordant
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn; L01 Subvolcanic Cu-Ag-Au (As-Sb)
SHAPE: Tabular
DIMENSION: 25 x 2 Metres
STRIKE/DIP: 090/80S
TREND/PLUNGE:
COMMENTS: Vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Flow
Andesite
Rhyolitic Flow
Rhyolite
Dacitic Flow
Dacite
Andesitic Tuff
Andesitic Breccia
Quartz Diorite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1979

COMMODITY	GRADE	
Silver	13.7000	Grams per tonne
Gold	2.1000	Grams per tonne
Copper	0.5200	Per cent

COMMENTS: Chip sample from the northwestern end of the vein across a width of 1.5 metres.
REFERENCE: Assessment Report 7841.

CAPSULE GEOLOGY

The Rock of Ages Fr. S (No. 2) showing is located in the southeastern part of the Rock of Ages Fr. claim (L. 4940) on the east side of the Bear River Ridge, about 1.7 kilometres east of Mount Shorty Stevenson and approximately 750 metres west of the Bear River.

The Dalhousie Mining Company Limited acquired the Rock of Ages claim group and conducted work during 1925-28. The showing was probably discovered during this time. It is not clear what type of work was done. One report (Assessment Report 15581, 16082) indicates an adit at the showing, but another report (Assessment Report 7841) does not show the presence of an adit. No further work was reported until 1979 when Tournigan Mining Explorations Ltd. carried out geological mapping, prospecting, trenching, sampling and a limited magnetometer survey over the showing. In 1986, Moche Resources Inc.

CAPSULE GEOLOGY

acquired the Rock of Ages claims and conducted a program comprising airborne and ground VLF-EM and magnetometer surveys, soil and silt geochemical surveys and geological mapping.

The area is underlain by north-striking, west-dipping Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 58, 63). These rocks comprise mainly andesitic tuffs, breccias and flows. Northwest-trending quartz diorite dikes occur near the showing (Assessment Report 16082).

The mineralization occurs just above a contact with a stratigraphically lower unit of rhyolitic to dacitic flows. It comprises a siliceous magnetite-pyrite vein, about 2 metres wide and 25 metres long, that trends east and dips 80 degrees south. Pyrite and quartz each form about 5 per cent of the magnetite vein; chalcopyrite forms up to 1 per cent. A sample taken in 1979 assayed 2.1 grams per tonne gold, 13.7 grams per tonne silver and 0.52 per cent copper across 1.5 metres (Assessment Report 7841). A nearby sample across a section of mineralized andesitic flow returned 0.860 gram per tonne gold, 93.9 grams per tonne silver, 1.69 per cent copper and 1.10 per cent zinc over a width of 2.0 metres (Assessment Report 16082).

The showing may correspond to the No. 2 Iron Vein referred to in the Minister of Mines Annual Report for 1926 (p. 94).

BIBLIOGRAPHY

EMPR AR 1925-99; 1926-93; 1927-91; 1928-105
EMPR BULL 58; 63
EMPR ASS RPT *7841, 15581, *16082, 20379
EMPR MAP 8
EMPR PF (In 104A 038 - Moche Resources Inc., Prospectus, May 9, 1988)
GSC MEM 32, p. 46; 159, p. 33; 175, p. 111
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/11/04 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1991/12/27 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 136**

NATIONAL MINERAL INVENTORY: 104A Pb4

NAME(S): **ALPINE (L. 4927)**, ROCK ROYAL, DALHOUSIE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 03 50 N
LONGITUDE: 129 56 24 W
ELEVATION: 1190 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop, on the north part of the Alpine claim (L. 4927) (Assessment Report 20744).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6213589
EASTING: 441472

COMMODITIES: Silver Lead

MINERALS
SIGNIFICANT: Galena
ASSOCIATED: Quartz
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: 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
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Breccia
Andesitic Flow
Andesite
Andesitic Tuff
Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1990

COMMODITY	GRADE	
Silver	34.3000	Grams per tonne
Lead	1.2100	Per cent

COMMENTS: Grab sample from a limonite-altered quartz vein containing 1 per cent disseminated galena.
REFERENCE: Assessment Report 20744.

CAPSULE GEOLOGY

The Alpine showing is located in the north-central part of the Alpine claim (L. 4927). The claim is on the east side of the Bear River Ridge, about 1200 metres east-northeast of Mount Shorty Stevenson and 1400 metres west of the Bear River.

The Dalhousie Mining Company Limited acquired the Dalhousie group, including the Alpine claim, and conducted exploration on the claims during 1925-28. No work was reported on the showing. No further work was reported until 1979 when Tournigan Mining Explorations Ltd. conducted geological mapping, trenching, prospecting and sampling in the area. In 1983, Rich Lode Gold Corporation entered into an agreement with Tournigan and performed some prospecting near the showing. In 1986, Moche Resources Inc. acquired the immediately contiguous Rock of Ages claims and conducted a program comprising geological mapping, airborne, ground VLF-EM and magnetometer surveys and soil and silt geochemical surveys. No work was reported on the showing. In 1990, the Alpine claim was included in the Rock Royal claim group, owned by D. Javorski. The group was optioned to Calnor Resources Ltd. and Tenajon Resources Corp. who subsequently carried out a rock, silt and soil geochemical survey on

CAPSULE GEOLOGY

the claim group in 1990. The showing was described that year.

The area is underlain by north-striking, west-dipping Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 58, 63). These rocks comprise mainly andesitic tuffs, breccias and flows that are intruded by north to northwest-trending dikes.

Mineralization is hosted in intercalated andesitic breccias and flows. A strongly limonite-altered quartz vein contains 1 per cent disseminated galena (Assessment Report 20744). A grab sample of the mineralization assayed 34.3 grams per tonne silver and 1.21 per cent lead (Assessment Report 20744).

BIBLIOGRAPHY

EMPR AR 1920-55; 1922-70; 1925-99; 1926-93; 1927-91; 1928-105
EMPR BULL 58; 63
EMPR ASS RPT 7841, 11546, 15581, 16082, 20379, *20744
EMPR MAP 8
GSC MEM 32, p. 46; 159, p. 33; 175, p. 111
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582
GCNL #109, #110, 1983

DATE CODED: 1992/01/06 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/23 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 137**

NATIONAL MINERAL INVENTORY: 104A Pb4

NAME(S): **ROCK OF AGES 6 (L. 4938)**, ROCK ROYAL

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 04 09 N
LONGITUDE: 129 56 12 W
ELEVATION: 1390 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop, at the southeast part of Rock of Ages claim 6 (L. 4938) (Assessment Report 20744).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6214173
EASTING: 441688

COMMODITIES: Copper Silver

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite
Porphyritic Feldspar Rhyolite Flow
Porphyritic Feldspar Rhyolite Tuff
Rhyolite
Andesitic Breccia
Andesitic Flow
Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1990

COMMODITY	GRADE	
Silver	69.2000	Grams per tonne
Copper	1.4300	Per cent

COMMENTS: Grab sample from a sheared, siliceous, quartz-flooded andesite.
REFERENCE: Assessment Report 20744.

CAPSULE GEOLOGY

The Rock of Ages 6 showing is located in the southeastern part of the Rock of Ages 6 claim (L. 4938). The claim is about 1.5 kilometres northeast of Mount Shorty Stevenson and approximately 2.2 kilometres west of the Bear River.

The Dalhousie Mining Company Limited acquired the Rock of Ages claim group and conducted work during 1925-28. No further work was reported until 1979 when Tournigan Mining Explorations Ltd. carried out geological mapping, prospecting, trenching and sampling. No work was reported on the showing. In 1983, Rich Lode Gold Corporation entered into an agreement with Tournigan and performed some prospecting near the showing. In 1986, Moche Resources Inc. acquired the Rock of Ages claims and conducted a program comprising: geological mapping, airborne, ground VLF-EM and magnetometer surveys, and soil and silt geochemical surveys. No work was reported on the showing. In 1990, the Rock of Ages claims were included in the Rock Royal claim group, owned by D. Javorski. The group was optioned to Calnor Resources Ltd. and Tenajon Resources Corp. who subsequently carried out a rock, silt and soil geochemical survey on the claim

CAPSULE GEOLOGY

group in 1990. The showing was described that year.

The area is underlain by north-striking, west-dipping Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 58, 63). These rocks comprise mainly andesitic breccias and flows that are intruded by north to northwest-trending dikes.

Mineralization is hosted in a unit of intercalated porphyritic feldspar rhyolite flows and tuffs (Assessment Report 20744). A sheared, siliceous, quartz-flooded andesite carries 1-10 per cent pyrite and 1 to 3 per cent disseminated chalcopyrite. A grab sample of the mineralization assayed 69.2 grams per tonne silver and 1.43 per cent copper (Assessment Report 20744).

BIBLIOGRAPHY

EMPR AR 1925-99; 1926-93; 1927-91; 1928-105
EMPR BULL 58; 63
EMPR ASS RPT 7841, 11546, 15581, 16082, 20379, *20744
EMPR MAP 8
EMPR PF (In 104A 038 - Moche Resources Inc., Prospectus, May 9, 1988)
GSC MEM 32, p. 46; 159, p. 33; 175, p. 111
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582
GCNL #109, #110, 1983

DATE CODED: 1992/01/06 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/23 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 138** NATIONAL MINERAL INVENTORY: 104A4 Pb1

NAME(S): **START 2 (L. 5206)**, START 1-4, BUSH, SLATE

STATUS: Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 05 51 N NORTHING: 6217383
LONGITUDE: 130 00 05 W EASTING: 437704
ELEVATION: 1006 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: No. 1 adit on the Start 2 claim (L. 5206) (Assessment Report 7640).

COMMODITIES: Silver Zinc Lead Copper

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

DEPOSIT
CHARACTER: Vein Breccia
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: STRIKE/DIP: 090/70S TREND/PLUNGE:
COMMENTS: Vein in opencut above the No. 1 adit.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Mount Dilworth	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Felsic Volcanic
Tuff
Siltstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1979
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	99.4000	Grams per tonne
Copper	0.0200	Per cent
Lead	1.7000	Per cent
Zinc	7.0000	Per cent

COMMENTS: Opencut above No. 1 adit; sample across 2.1 metres. Trace gold and 0.09 per cent cadmium.
REFERENCE: Assessment Report 8245.

CAPSULE GEOLOGY

The Start 2 showing is located about 500 metres east of the Big Missouri mine road and about 800 metres southwest of the south end of Long Lake.

The Start 1-4 claims were acquired by Chief Metals Company in 1924(?). About 60 metres of underground work was reported in 1926. In 1927, Bush Consolidated Gold Mines, Inc. acquired the claims and carried out further work. New Indian Mines Ltd. performed geological mapping over a large group of claims, including the Start claims, in 1962. In 1979, Ocean Home Exploration Ltd. conducted further geological mapping on the Start claims which were then part of the Slate group. Esso Resources acquired the Start 2 claim from Houston Oil and Minerals in 1982. In 1987, Claimer Resources entered into an option agreement with Esso.

The area is underlain by folded and faulted Hazelton Group rocks. Mineralization is hosted in predominantly felsic volcanics, of the Lower to Middle Jurassic Mount Dilworth Formation. These rocks are overlain by siltstones of the Middle Jurassic Salmon River

CAPSULE GEOLOGY

Formation (Open File 1987-22). The felsic volcanics, comprising mainly tuffs, generally strike north and dip east. They lie on the west limb, near the core, of the north-trending Dilworth syncline. Faults in the area trend mainly north-northeast to northeast.

Mineralization on the Start 2 claim comprises vuggy quartz breccia veins containing coarse-grained sphalerite, galena and pyrite. In an opencut, above the No. 1 adit, an east-trending quartz vein, dipping 70 degrees south, contains lenses and blebs of sphalerite, galena, minor pyrite and fragments of felsic tuff. A sample across the vein assayed 99.4 grams per tonne silver, trace gold, 7.0 per cent zinc, 1.7 per cent lead, 0.02 per cent copper and 0.09 per cent cadmium over 2.1 metres (Assessment Report 7640, 8245). The vein was not intersected in the adit. Other, non-mineralized veins in the adit trend northwest.

At the No. 2 adit, about 60 metres south of the No. 1 adit, northwest-trending quartz and quartz-carbonate breccia veins are exposed in the adit. A grab sample of quartz breccia vein material, from the muck pile, containing sphalerite, galena and minor pyrite, assayed 68.6 grams per tonne silver, 0.5 gram per tonne gold, 9.3 per cent zinc, 1.5 per cent lead, 0.03 per cent copper and 0.12 per cent cadmium (Assessment Report 8245).

Two other adits, southwest of the No. 2 adit, contain no significant mineralization.

BIBLIOGRAPHY

EMPR AR 1926-98; 1927-97; 1928-113
EMPR BULL 58; 63; 85 (in press)
EMPR ASS RPT 448, *7640, *8245, 20379
EMPR OF 1987-22
EMPR MAP 8
EMPR PF (In 104A 092 - Claimer Resources Inc., Prospectus, July 29, 1987)
EMR MP CORPFILE (Chief Metals Company, Bush Consolidated Gold Mines, Inc.)
GSC MEM 175, p. 156
GSC MAP 216A; 217A; 307A; 315A; 1829; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1991/10/23 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/15 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 139**
NATIONAL MINERAL INVENTORY: 104A4 Au4

NAME(S): **S.D.**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W 103P13W
BC MAP:
LATITUDE: 56 00 51 N
LONGITUDE: 129 51 24 W
ELEVATION: 488 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Approximate centre of S.D. claim group (L. 4560-4563) (Mineral Titles Reference Map 104A4/W).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6207987
EASTING: 446592

COMMODITIES: Gold Copper Silver

MINERALS
SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic Tertiary	Hazelton	Salmon River	Coast Plutonic Complex

LITHOLOGY: Quartz Monzonite
Sediment/Sedimentary

HOSTROCK COMMENTS: The hostrock may be the Tertiary(?) Bitter Creek pluton, a satellite intrusion at the eastern margin of the Coast Plutonic Complex.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1935
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	137.1000	Grams per tonne
Gold	21.3000	Grams per tonne
Copper	2.0000	Per cent

COMMENTS: Chip(?) sample across 1.2 metres taken about 60 metres south of the south end of the No. 1 vein.
REFERENCE: Property File - Little, 1935.

CAPSULE GEOLOGY

The exact location of the S.D. showing is not known. It is assumed be on the S.D. claims (L. 4560-4563), on the south side of Bitter Creek, about 5.5 kilometres east-southeast of the confluence of Bitter Creek with the Bear River.

The S.D. claims, owned by Erickson, were first reported in 1925. That year they were acquired by Stewart Central Mines Limited which had been incorporated the previous year. Two veins were reported on the property at that time. No work other than open cutting was reported. The claims were Crown-granted to the company in 1929. The company name was changed to Victor Gold Mines Limited in 1934. The following year a crosscut tunnel was reported, but the location is not given. At least 4 veins were reported that year. In 1973, the property was owned by Stewart Development Ltd. That year Totem Uranium Ltd. assigned a 90 per cent interest in an option on the property to Whipsaw Mines Ltd. No further work has been reported.

The area is underlain by the Tertiary(?) Bitter Creek quartz monzonite pluton that intrudes gently dipping sediments of the Middle Jurassic Salmon River Formation (Bulletin 63).

Because of the uncertainty of the exact location of the showing, the nature of the hostrocks are unknown. Several mineralized quartz

CAPSULE GEOLOGY

veins are reported to be on the S.D. claims (Property File - Little, 1935).

The main (No. 1) vein trends approximately northwest, parallel to Cable Creek, and dips southwest. It consists of quartz mineralized with chalcopyrite(?). In 1935, a chip(?) sample was collected about 60 metres south of the south end of the No. 1 vein. The sample assayed 21.3 grams per tonne gold, 2.0 per cent copper and 137.1 grams per tonne silver across 1.2 metres (Property File - Little, 1935).

Three other small veins, carrying lead and zinc values, are approximately parallel to the No. 1 vein (Property File - Little,

BIBLIOGRAPHY

EMPR AR 1925-92; 1928-102, 519; 1929-505
EMPR MAP 8
EMPR BULL 63
EMPR PF (In 104A 079 - *Little, M (1935): A Report for Victor Gold Mines, Limited)
EMPR ASS RPT 20379
EMR MP CORPFILE (Whipsaw Mines Ltd.)
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/01/15 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/25 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 140** NATIONAL MINERAL INVENTORY: 104A4 Ag19

NAME(S): **LEAD COIL A (L. 4811)**, SILVER BAND (L. 4810), ORE MOUNTAIN

STATUS: Showing MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 02 33 N NORTHING: 6211146
LONGITUDE: 129 51 47 W EASTING: 446233
ELEVATION: 1341 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Portal of adit (Assessment Report 13352).

COMMODITIES: Gold Silver Lead Zinc Copper

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

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Faulted

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Granodiorite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: TRENCH REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	231.7000	Grams per tonne
Gold	4.4600	Grams per tonne
Copper	0.0800	Per cent
Lead	0.4400	Per cent
Zinc	0.1200	Per cent

COMMENTS: Channel sample across a width of 30 centimetres from trench 46N.
REFERENCE: Assessment Report 13352.

CAPSULE GEOLOGY

The Lead Coil A showing is located about 13 kilometres northeast of Stewart and 4.2 kilometres east of the confluence of Bitter Creek and the Bear River, on the west flank of Ore Mountain.

In 1925, the Ore Mountain Mining Co. acquired the Lead Coil (L. 4811) and Silver Band (L. 4810) claims. During 1925-28, an adit, 21 metres long, was driven on the Silver Band claim and several opencuts were emplaced on the exposed mineralization in the western part of the adjacent Lead Coil claim. Only minor surface work was reported during 1929-32. The claims were subsequently acquired by Rufus-Argenta Mines. In 1966, the company name was changed to Crest Ventures Limited. That year Crest Silver Company Limited, a subsidiary of Crest Ventures, acquired the claims and during 1966-67 carried out some geological mapping. During 1970-73, Ardo Mines Ltd. optioned the property carried out prospecting, magnetometer and electromagnetic surveys. During 1979-80, Beaver Gold Resources Inc. acquired the property and carried out mapping, prospecting and sampling. In 1984, the property was owned by Grey Silver Mines Ltd. That year Maralgo Mines Limited optioned the property and flew an airborne VLF-EM and magnetometer survey over the area and conducted geological mapping, prospecting and sampling on the occurrence. No further work was reported until 1989 when Grey Silver Mines performed

CAPSULE GEOLOGY

geological mapping, sampling and soil surveys in the area. The following year Varitech Resources Ltd. conducted a program of geological mapping, prospecting, sampling and soil, VLF-EM and magnetometer surveys in the area. The showing was resampled that year.

The area is underlain by north to northeast-striking, folded argillites of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63). The rocks are cut by several northwest-trending granodiorite dikes that belong to the Portland Canal dike swarm.

Discontinuous mineralization occurs along both the faulted, vertical contacts of a 20-metre wide, northwest-trending granodiorite dike. This dike can be traced for about 400 metres and appears to split into two 5 to 15-metre wide dikes to the southeast. The mineralization comprises quartz veins and lenses, containing pyrite, galena, sphalerite and chalcopyrite, hosted in crushed and sheared argillite. The lenses, or swelling of the veins, appear to coincide with flexures in the dike walls.

The longest continuous vein is exposed over a length of about 45 metres in the adit; channel sampling in 1980 indicated negligible values for this vein (Assessment Report 10489). In 1984, channel samples were taken from a trench on the mineralization between the east and west branches of the dike (trench 46N), about 350 metres south-southeast of the adit. One sample, assayed 4.46 grams per tonne gold, 231.7 grams per tonne silver, 0.08 per cent copper, 0.44 per cent lead and 0.12 per cent zinc across a width of 30 centimetres (Assessment Report 13352).

BIBLIOGRAPHY

EMPR AR 1925-93; 1926-93; *1928-104; 1929-433; 1931-43; 1932-43; 1966-41; 1967-34
EMPR GEM 1970-74; 1971-32; 1972-512; 1973-494
EMPR EXPL 1979-273
EMPR BULL 63
EMPR ASS RPT 8095, *10489, *13352, 19242, 20379, *20622
EMPR MAP 8
EMR MP CORPFILE (Ardo Mines Ltd.; Crest Ventures Limited; Ore Mountain Mining Company, Limited; Van-Sea Resources Limited)
GSC MEM 159, p. 40; 175, p. 134
GSC MAP 28A; *216A; *217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/01/20 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/01/20 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 141**

NATIONAL MINERAL INVENTORY: 104A4 Ag19

NAME(S): **LEAD COIL B (L. 4811)**, ORE MOUNTAIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 02 24 N
LONGITUDE: 129 51 19 W
ELEVATION: 1493 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop (Assessment Report 19242).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6210861
EASTING: 446714

COMMODITIES: Copper, Silver, Tungsten

MINERALS
SIGNIFICANT: Chalcopyrite, Scheelite
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stockwork, Breccia
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb); L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1989
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	14.4000	Grams per tonne
Copper	0.4900	Per cent
Tungsten	0.0100	Per cent

COMMENTS: Grab sample from the 3-metre wide breccia zone.
REFERENCE: Assessment Report 19242.

CAPSULE GEOLOGY

The Lead Coil B showing is located about 13 kilometres northeast of Stewart and 4.7 kilometres east of the confluence of Bitter Creek and the Bear River, on the south flank of Ore Mountain. The showing is near the northeast corner of the Lead Coil claim (L. 4811).

The showing may have been known previously, but it was first reported in 1989 when Grey Silver Mines performed geological mapping, sampling and soil surveys in the area. The following year Varitech Resources Ltd. conducted a program of geological mapping, prospecting, sampling and soil, VLF-EM and magnetometer surveys in the area.

The area is underlain by north to northeast-striking, folded argillites of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63).

Mineralization comprises a breccia zone, 3 metres wide, hosted in black argillite. The zone trends north and dips 46 degrees west. It contains quartz stockworks carrying chalcopyrite, malachite and minor scheelite(?).

A grab sample collected in 1989 assayed 0.49 per cent copper, 14.4 grams per tonne silver and 0.01 per cent tungsten; lead, zinc and gold values were negligible (Assessment Report 19242).

BIBLIOGRAPHY

EMPR BULL 63
EMPR ASS RPT *19242, 20379, 20622

BIBLIOGRAPHY

EMPR MAP 8
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/01/20 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/15 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 142**

NATIONAL MINERAL INVENTORY: 104A4 Ag19

NAME(S): **ORE HILL 6 (L. 4821)**, ORE MOUNTAIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 02 16 N
LONGITUDE: 129 53 34 W
ELEVATION: 260 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized vein (Assessment Report 13352).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6210644
EASTING: 444375

COMMODITIES: Gold Silver Copper Zinc

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

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary			Coast Plutonic Complex

LITHOLOGY: Quartz Porphyry
Diabase Dike

HOSTROCK COMMENTS: The host quartz porphyry, is a grey-pink phase of the Tertiary(?) Bitter Creek pluton (a satellite of the Coast Plutonic Complex).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel
YEAR: 1984

COMMODITY	GRADE	
Silver	165.2000	Grams per tonne
Gold	11.4000	Grams per tonne

COMMENTS: Channel sample across the maximum vein width of 12 centimetres.
REFERENCE: Assessment Report 13352.

CAPSULE GEOLOGY

The Ore Hill 6 showing is located about 11 kilometres north-northeast of Stewart, just east of the Stewart highway (37A), and approximately 4.2 kilometres east of the confluence of Bitter Creek with the Bear River. The showing is in the southeastern part of the Ore Hill 6 claim (L. 4821).

The showing may have been known in the 1920s when the Ore Hill claim group was explored by the Ore Mountain Mining Company Limited. In 1984, the property was owned by Grey Silver Mines Ltd. That year Maralgo Mines Limited optioned the property and flew an airborne VLF-EM and magnetometer survey over the area and conducted geological mapping, prospecting and sampling on the Ore Hill claims. The showing was reported at that time. In 1989, Grey Silver Mines performed geological mapping, sampling and soil surveys in the general area; no work was reported on the showing. The following year Varitech Resources Ltd. conducted a program of geological mapping, prospecting, sampling and soil, VLF-EM and magnetometer surveys in the area.

The area is underlain by the Tertiary(?) Bitter Creek pluton, a satellite intrusion of the Coastal Plutonic Complex (Bulletin 58, 63). The immediate hostrocks to the mineralization comprise 'quartz porphyry', a greyish-pink phase of the pluton (Assessment Report 13352).

A narrow, 5 to 12-centimetre wide, quartz vein follows a fault

CAPSULE GEOLOGY

zone that lies along the south wall of an east-northeast trending, narrow diabase dike. The vein can be traced for about 10 metres. It contains pyrite, chalcopyrite and minor sphalerite. A channel sample collected in 1984 assayed 11.4 grams per tonne gold and 165.2 grams per tonne silver across 12 centimetres (Assessment Report 13352).

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR ASS RPT *13352, 19242, 20379, 20622
EMPR MAP 8
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/01/20 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/23 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 143** NATIONAL MINERAL INVENTORY: 104A4 Ag20

NAME(S): **MORGAN 6 (L. 5862)**, MORGAN (L. 5881)

STATUS: Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 02 56 N NORTHING: 6211837
LONGITUDE: 129 50 13 W EASTING: 447868
ELEVATION: 1585 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Upper adit, Morgan 6 claim (Assessment Report 13352).

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS
SIGNIFICANT: Pyrite Galena Sphalerite Tetrahedrite Chalcopyrite
ASSOCIATED: Quartz Pyrite
ALTERATION: Limonite Smithsonite Cerussite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Faulted
COMMENTS: The Morgan vein-fault trends north-northwest and dips 70 to 80 degrees east.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Siltstone
Quartz Diorite Dike
Granodiorite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	6411.5000	Grams per tonne
Gold	1.5000	Grams per tonne
Copper	0.9000	Per cent
Lead	23.2000	Per cent
Zinc	4.4000	Per cent

COMMENTS: Weighted average of two channel(?) samples across 32.5 centimetres width of the vein at the portal.
REFERENCE: Assessment Report 13352.

CAPSULE GEOLOGY

The Morgan 6 showing lies about 14 kilometres northeast of Stewart and about 1 kilometre northeast of the peak of Ore Mountain, on the ridge that runs from Ore Mountain to Radio Mountain. The upper adit is in the south-central part of the Morgan 6 claim (L. 5862).

The Mayou Gold Copper Company acquired the Morgan claim group in 1928. During 1928-30, 3 adits and several opencuts were emplaced on the mineralization on the Morgan 6 claim. In 1929, 2.1 tonnes were shipped from the Mayou property, presumably from the Morgan 6 showing. This ore produced 1 gram of gold, 7,246 grams of silver, 432 kilograms of lead and 602 kilograms of zinc. The claims were subsequently acquired by Rufus-Argenta Mines, formed in 1955. In 1966, the company name was changed to Crest Ventures Limited. During 1966-67, Crest Silver Company Limited, a subsidiary of Crest

CAPSULE GEOLOGY

Ventures, acquired the claims and carried out some geological mapping. During 1970-73, Ardo Mines Ltd. optioned the property and carried out prospecting, magnetometer and electromagnetic surveys. During 1979-80, Beaver Gold Resources Inc. acquired the property and carried out mapping, prospecting and sampling. No further work was reported on the showing until 1984 when the property was owned by Grey Silver Mines Ltd. That year Maralgo Mines Limited optioned the property and flew an airborne VLF-EM and magnetometer survey over the area and conducted geological mapping, prospecting and sampling on the occurrence. No more work was reported until 1989 when Grey Silver Mines performed geological mapping, sampling and soil surveys in the area. The following year Varitech Resources Ltd. conducted a program of geological mapping, prospecting, sampling and soil, VLF-EM and magnetometer surveys in the area. The prospect was resampled that year.

The area is underlain by north to northeast-striking, folded argillites and siltstones of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63). The sediments are cut by several north to northwest-trending quartz diorite and granodiorite dikes that belong to the Portland Canal dike swarm.

Mineralization lies along a north-northwest trending fault that dips 70 to 80 degrees east. A north-trending granodiorite dike lies a few metres to the east of the fault. The fault system is marked by a rusty fracture zone containing quartz lenses and pods; the system can be traced for about 100 metres. Two tunnels have been emplaced along the footwall of the fault: a 29-metre long upper tunnel and a lower tunnel, 46 metres south and 30 metres below the upper tunnel. In the upper tunnel the vein averages 27 centimetres in width and can be traced for 24 metres before it pinches out. Mineralization consists of highly oxidized vein material carrying limonite, smithsonite, cerussite, pyrite, galena, sphalerite and tetrahedrite.

The weighted average of two channel(?) samples collected in 1984 from the portal of the upper tunnel, representing a vein width of 32.5 centimetres, is 6,411.5 grams per tonne silver, 1.5 grams per tonne gold, 23.2 per cent lead, 4.4 per cent zinc and 0.9 per cent copper (Assessment Report 13352). The weighted average silver grade, over an average width of 27 centimetres for a length of 20.7 metres, of the vein in the upper tunnel is 6,941.9 grams per tonne (Assessment Report 13352).

The best channel sample from the lower tunnel assayed 116.9 grams per tonne silver, 0.3 gram per tonne gold, 1.4 per cent lead, 1.05 per cent zinc and 0.18 per cent copper across a width of 2.9 metres (Assessment Report 13352).

About 200 metres south of the lower tunnel, on the Morgan claim (L. 5881), a quartz vein is associated with a northwest-trending dike. The vein pinches and swells and is exposed on the east wall of the gulch. The vein carries pyrite, galena and minor sphalerite and chalcopyrite. A channel sample, taken in 1984 across the 30-centimetre wide vein, assayed 172 grams per tonne silver, 0.75 gram per tonne gold, 5.1 per cent lead, 0.28 per cent zinc and 0.10 per cent copper (Assessment Report 13352).

BIBLIOGRAPHY

EMPR AR 1928-102; 1929-97; 1930-106; 1966-41; 1967-34
EMPR GEM 1970-74; 1971-32; 1972-512; 1973-494
EMPR EXPL 1979-273
EMPR BULL 63
EMPR ASS RPT 8095, 10489, *13352, 19242, 20379, *20622
EMPR MAP 8
EMR MP CORPFILE (Ardo Mines Ltd.; Crest Ventures Limited; Mayou Gold Copper Company, Limited; Van-Sea Resources Limited)
GSC MEM 175, p. 131
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/01/21 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/01/29 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 144**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROB 2(A)**, ROB 2, RADIO CREEK, MAGGIE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 02 09 N
LONGITUDE: 129 50 14 W
ELEVATION: 670 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized stringers (Assessment Report 19725).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6210384
EASTING: 447833

COMMODITIES: Copper Zinc Lead

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

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

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillaceous Siltstone
Sandstone
Pebble Conglomerate
Diorite Dike
Granodiorite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Rob 2(A) showing is about 13.5 kilometres northeast of Stewart, on Radio Creek, approximately 900 metres north of the confluence of Radio and Bitter creeks.

The showing was known probably before 1910, when the Maggie claim group was held over the area by the Crown Mining and Development Company Limited. The company was dissolved in 1918. The showing was covered by the Rob 2 claim, held by Kikauka, in 1989. That year Kikauka carried out some geological mapping and prospecting on the claim. The showing was mentioned at that time.

The area is underlain by generally north-striking, folded argillaceous siltstone and intercalated sandstone and pebble conglomerate of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63). These rocks are intruded by northwest-trending, 3 to 30-metre wide, equigranular and porphyritic diorite and granodiorite dikes. A north-trending fault lies along Radio Creek.

The showing consists of quartz stringers, 1 to 5 centimetres wide, that occur along dike contacts. The stringers contain pyrite, chalcopyrite, sphalerite and galena (Assessment Report 19725). The mineralization is similar to that of the Rob 2(B) showing (104A 145), located about 1070 metres to the south and 280 metres to the east of this showing.

BIBLIOGRAPHY

EMPR AR 1910-64
EMPR BULL 63
EMPR ASS RPT *19725, 20379
EMPR MAP 8
GSC MAP *28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/01/21
DATE REVISED: 1992/01/21

CODED BY: WC
REVISED BY: WC

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104A 145**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROB 2(B)**, ROB 2, RADIO CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 01 35 N
LONGITUDE: 129 49 57 W
ELEVATION: 300 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized stringers (Assessment Report 19725).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6209329
EASTING: 448115

COMMODITIES: Copper Zinc Lead

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

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

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillaceous Siltstone
Sandstone
Pebble Conglomerate
Diorite Dike
Granodiorite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Rob 2(B) showing is about 13.5 kilometres northeast of Stewart, on Radio Creek, approximately 150 metres north of the confluence of Radio and Bitter creeks.

The showing was probably known previously, but no work was reported on it until 1989. That year the showing was covered by the Rob 2 claim, held by Kikauka. Kikauka carried out some geological mapping and prospecting on the claim. The showing was mentioned at that time.

The area is underlain by generally north-striking, folded argillaceous siltstone and intercalated sandstone and pebble conglomerate of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63). These rocks are intruded by northwest-trending, 3 to 30-metre wide, equigranular and porphyritic diorite and granodiorite dikes. A north-trending fault lies along Radio Creek.

The showing comprises quartz stringers, 1 to 5 centimetres wide, that occur along dike contacts. The stringers contain pyrite, chalcopyrite, sphalerite and galena (Assessment Report 19725). The mineralization is similar to that of the Rob 2(A) showing (104A 144), located about 1070 metres to the north and 280 metres to the west of this showing.

BIBLIOGRAPHY

EMPR BULL 63
EMPR ASS RPT *19725, 20379
EMPR MAP 8
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/01/21 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/24 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 146**

NATIONAL MINERAL INVENTORY: 104A4 Cu15

NAME(S): **RADIO 3 (L. 4574)**, WHITE MIKE, CUPRUM, SWEDE AMERICAN, MAGGIE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 02 34 N
LONGITUDE: 129 49 23 W
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Upper showing (Assessment Report 13352).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6211146
EASTING: 448725

COMMODITIES: Gold, Silver, Copper, Zinc, Lead

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

DEPOSIT
CHARACTER: Vein, Stockwork, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: 20 x 1 Metres
STRIKE/DIP: 112/90
TREND/PLUNGE:
COMMENTS: Upper vein showing.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1984
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	208.4000	Grams per tonne
Gold	4.3900	Grams per tonne
Copper	0.1300	Per cent
Lead	0.6200	Per cent
Zinc	0.6000	Per cent

COMMENTS: A well mineralized grab sample from the upper showing.
REFERENCE: Assessment Report 13352.

CAPSULE GEOLOGY

The Radio 3 showing is located about 14 kilometres northeast of Stewart, on a small creek on the north side of Bitter Creek, approximately 1.8 kilometres east of Ore Mountain. The showing is located in the south-central part of the Radio 3 claim (L. 4574).

The early history of the showing is not clear. Crown Mining Company held ground in the area before 1910 (Geological Survey of Canada Map 28A). According to early records this company held both the Swede American and Maggie claim groups in the area. The Bitter Creek Mining Company held the White Mike and Cuprum claim groups. Exploration work, including tunnelling, was reported on both the Crown Mining and Bitter Creek Mining properties in 1910-11. In 1923, Erickson and Peterson restaked the area (White Mike and Cuprum groups?) as the Radio claim group. Radio-Stewart Mines was formed in 1924 and acquired the Radio claims. Intermittent prospecting and open cutting were done during 1925-29. An old tunnel, about 25 metres long, was reported on the showing in 1928; presumably, this tunnel was driven in 1910-11. The Radio claims were Crown-granted to the company in 1930. The claims were subsequently acquired by Rufus-Argenta Mines Limited, formed in 1955. In 1966, the company

CAPSULE GEOLOGY

name was changed to Crest Ventures Limited. During 1966-67, Crest Silver Company Limited, a subsidiary of Crest Ventures, acquired the claims and carried out some geological mapping. During 1970-73, Ardo Mines Ltd. optioned the property and carried out prospecting, magnetometer and electromagnetic surveys. During 1979-80, Beaver Gold Resources Inc. acquired the property in 1979 and carried out mapping, prospecting and sampling. No further work was reported on the showing until 1984 when the property was owned by Grey Silver Mines Ltd. That year Maralgo Mines Limited optioned the property and flew an airborne VLF-EM and magnetometer survey over the area and conducted geological mapping, prospecting and sampling on the occurrence. No more work was reported until 1989 when Grey Silver Mines performed geological mapping, sampling and soil surveys in the area. The following year Varitech Resources Ltd. conducted a program of geological mapping, prospecting, sampling and soil, VLF-EM and magnetometer surveys in the area. The showing was resampled that year.

The area is underlain by north to northeast-striking, folded argillites of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63). The sediments are cut by several north to northwest-trending dikes that belong to the Portland Canal dike swarm.

Two occurrences are exposed in the canyon of the creek. Both lie on the west wall and are hosted in fractured and sheared argillite that is intruded by several small dikes.

The upper showing is an east-southeast trending, vertical, 50 to 75-centimetre wide, quartz vein. The vein contains disseminated galena, sphalerite, pyrite and minor chalcopyrite. The vein is hosted in argillite near a narrow, northwest-trending dike and is exposed for a length of 15 to 20 metres. A well mineralized grab sample assayed 4.39 grams per tonne gold, 208.4 grams per tonne silver, 0.6 per cent zinc, 0.62 per cent lead and 0.13 per cent copper (Assessment Report 13352).

The lower showing is about 40 metres below the upper one. It comprises a 10-metre wide stockwork zone of quartz, sphalerite and galena in shattered argillite. The zone can be traced for about 30 metres up the canyon wall. It apparently terminates against an east-trending dike near the top of the exposure. A grab sample collected in 1984 assayed 0.55 gram per tonne gold, 37.4 grams per tonne silver, 0.92 per cent zinc, 0.44 per cent lead and 0.24 per cent

BIBLIOGRAPHY

EMPR AR 1910-64; 1925-93; *1928-102; 1929-97; 1930-444;
1966-41; 1967-34
EMPR GEM 1970-74; 1971-32; 1972-512; 1973-494
EMPR EXPL 1979-273
EMPR BULL 63
EMPR ASS RPT 8095, 10489, *13352, 19242, 20379, *20622
EMPR MAP 8
EMR MP CORPFILE (Ardo Mines Ltd.; Crest Silver Company Limited; Crest
Ventures Limited; Radio-Stewart Mines, Limited)
GSC MEM 32, p. 57; 175, p. 140
GSC MAP *28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/01/21 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/01/21 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 147**

NATIONAL MINERAL INVENTORY:

NAME(S): **HD**, RON

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 01 51 N
LONGITUDE: 129 48 25 W
ELEVATION: 420 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized pod (Assessment Report 13352).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6209805
EASTING: 449713

COMMODITIES: Zinc Silver Gold Tungsten

MINERALS
SIGNIFICANT: Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Podiform
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Siltstone
Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1984

COMMODITY	GRADE	
Silver	229.3000	Grams per tonne
Zinc	44.0000	Per cent

COMMENTS: Grab sample from a pod of semi-massive sphalerite. Trace gold.
REFERENCE: Assessment Report 13352.

CAPSULE GEOLOGY

The HD showing is located about 14.5 kilometres northeast of Stewart, on the north side of Roosevelt Creek, approximately 900 metres northeast of the confluence of Roosevelt and Bitter creeks.

The showing may have been known earlier, but it was first reported in 1979 when it was covered by the Ron claims, then owned by Schumacher. That year, Beaver Gold Resources Inc. optioned the property and carried out geological mapping, prospecting and geochemical surveys in the area. No further work was done until 1984 when the showing was covered by the HD claim, owned by Maralgo Mines Limited. That year Maralgo conducted airborne geophysical surveys and geological mapping and sampling in the area. This work included sampling of the showing. In 1990, Varitech Resources Ltd. conducted a program of geological mapping, prospecting, sampling and soil, VLF-EM and magnetometer surveys in the area.

The area is underlain by north-striking, folded argillites of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63). Several north to northwest-trending dikes are conspicuous in the area.

Mineralization comprises a small pod, 30 by 5 centimetres, of nearly massive sphalerite that occurs in a narrow northwest-trending fault. A grab(?) sample collected in 1984 assayed 44 per cent zinc, 229.3 grams per tonne silver and trace gold (Assessment Report 13352).

A grab sample (outcrop?) collected in 1979, from the same location or nearby, assayed 1.7 grams per tonne silver, 1.2 grams per tonne gold and 0.05 per cent tungsten (WO3) (Assessment Report 8095).

BIBLIOGRAPHY

EMPR EXPL 1979-273
EMPR BULL 63
EMPR ASS RPT *8095, 10489, *13352, 20379, 20622
EMPR MAP 8
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582
Placer Dome File

DATE CODED: 1992/01/21 CODED BY: WC FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK: N

MINFILE NUMBER: **104A 148**

NATIONAL MINERAL INVENTORY:

NAME(S): **ART**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 01 19 N
LONGITUDE: 129 52 00 W
ELEVATION: 305 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop (Assessment Report 8095).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6208861
EASTING: 445979

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	
Tertiary			Coast Plutonic Complex

LITHOLOGY: Quartz Monzonite
Sediment/Sedimentary

HOSTROCK COMMENTS: The hostrock is unclear; they may be Tertiary(?) Bitter Creek plutonic rocks or Jurassic Salmon River Formation sediments.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1979
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	4.8000	Grams per tonne
Gold	3.4000	Grams per tonne

COMMENTS: Grab sample from mineralized outcrop(?).
REFERENCE: Assessment Report 8095.

CAPSULE GEOLOGY

The Art showing is located about 10.5 kilometres north-northeast of Stewart, on the north side of Bitter Creek, and approximately 4.5 kilometres east-southeast of the confluence of Bitter Creek and the Bear River.

In 1979, the showing was covered by the Art claims, owned by Beaver Gold Resources Inc. That year, the company carried out a program of geological mapping, prospecting, sampling and geochemical surveys in the area. The showing was sampled at that time. No further work has been reported on the showing.

The area is underlain by the Tertiary(?) quartz monzonite Bitter Creek pluton, a satellite intrusion of the Coast Plutonic Complex. The pluton intrudes Middle Jurassic sediments of the Salmon River Formation (Hazelton Group) (Bulletin 58, 63). The nature of the hostrock is not clear; it may be granitoid or sedimentary.

No details on the mineralization are available. A grab sample, from mineralized outcrop?, collected in 1979 assayed 3.4 grams per tonne gold and 4.8 grams per tonne silver (Assessment Report 8095).

BIBLIOGRAPHY

EMPR EXPL 1979-273
EMPR BULL 58; 63
EMPR ASS RPT *8095, 20379
EMPR MAP 8
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A

BIBLIOGRAPHY

GSC OF 2582

DATE CODED: 1992/01/22 CODED BY: WC FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK: N

MINFILE NUMBER: **104A 149** NATIONAL MINERAL INVENTORY: 103P13 Ag4

NAME(S): **SUNBEAM (L. 869)**, SULPHIDE, DUNWELL, SUNBEAM FR. (L.4469)

STATUS: Past Producer Open Pit MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04W 103P13W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 00 04 N NORTHING: 6206584
LONGITUDE: 129 55 06 W EASTING: 442728
ELEVATION: 518 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit on the Sunbeam claim (Geological Survey of Canada Memoir 175, Fig. 1).

COMMODITIES: Gold Silver Lead Zinc

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

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: 240 x 2 Metres STRIKE/DIP: 010/50W TREND/PLUNGE:
COMMENTS: Sunbeam vein.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Siltstone
Granodiorite Dike
Lamprophyre Dike
Felsic Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: VEIN REPORT ON: N

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

COMMODITY	GRADE	
Silver	42.5000	Grams per tonne
Gold	4.1000	Grams per tonne
Lead	2.7400	Per cent
Zinc	1.0600	Per cent

COMMENTS: Chip(?) sample across a 20-centimetre wide vein in the Sunbeam adit.
REFERENCE: Assessment Report 10190.

CAPSULE GEOLOGY

The Sunbeam vein is located about 7.5 kilometres north-northeast of Stewart, near the headwaters of Dunwell Creek and approximately 1,350 metres east of the Stewart highway (37A).

The Sunbeam claim (L. 869) was staked before 1907 by the Stewart brothers and Noble, who had carried out considerable exploration work. That year the Stewart Mining and Development Company acquired the claim. Nass River Lands subsequently acquired the property and the company was reorganized and became Dunwell Mines in 1922. The property was intermittently explored during 1922-41; most of the activity focused on the Dunwell mine, about 550 metres to the south (103P 052). Before 1937, at least 4 adits (the 150 metre long Sunbeam crosscut adit and 3 other short adits) and several opencuts had been emplaced on the mineralization. During 1932-33, about 100 tonnes of ore was high graded from pits on the exposed Sunbeam vein, this is likely included in the production figures for the Dunwell

CAPSULE GEOLOGY

mine (Minister of Mines Annual Report 1937, p. B8). During 1964-66, Silver Arrow Explorations Ltd. explored the property; results of the work are unknown. In 1979, Tournigan Mining Explorations Ltd. conducted geological mapping in the area. In 1981, Kingdom Resources Ltd. performed an exploration program on the MM 100 (104A 054) property to the north. The Sunbeam adit area was sampled that year. No further work has been reported on the showing.

The area is underlain predominantly by north-striking, west-dipping argillites and siltstones of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 58, 63). The contact with the underlying volcanics of the Upper Triassic to Lower Jurassic Unuk River Formation lies about 300 metres to the west. The argillaceous sediments are intruded by north to northwest-trending granodiorite and lamprophyre dikes. Several conspicuous north to north-northeast trending, west-dipping faults traverse the area and belong to the Portland Canal fissure zone (Geological Survey of Canada Memoir 32). These faults are associated with precious metal veins in several locations in the immediate area. There are several en echelon, north to north-northeast trending, west-dipping quartz veins exposed on the Sunbeam claim.

The Sunbeam vein is about 100 metres east of the portal of the Sunbeam adit. The north-trending vein dips 40 to 50 degrees west and has been traced south from the boundary of the former Dandy 1 claim (104A 067) along Dunwell Creek for a distance of about 240 metres. The vein is 1.2 to 1.8 metres wide and carries pyrite, galena, sphalerite, tetrahedrite, argentite and native silver. Argentite and native silver locally occur as 20-centimetre wide streaks along the hangingwall of the vein. For much of the exposed length, the vein is associated with a grey dike. The vein may split into two separate branches at the southern limit of the exposure.

The Sulphide vein (possibly the northern extension of the Dunwell vein) is about 60 metres east of the Sunbeam vein. The variably oxidized, 0.6 to 1.8-metre wide vein carries pyrite, galena and sphalerite. The vein, approximately parallel to the Sunbeam vein, dipping 50 degrees west, lies on the east side of a wide felsite dike.

Two veins were encountered in the Sunbeam adit, which was driven about 50 metres below the exposed Sunbeam vein. At 52 metres from the portal, a 0.6-metre wide zone of barren quartz veins and stringers occurs. At 91 metres from the portal, a 1.2-metre wide, sheared and brecciated, siliceous zone is sparsely mineralized. It is not known whether these veins are the downdip extensions of the Sunbeam and Sulphide veins respectively.

A chip(?) sample collected in 1981 from a vein, presumably in the Sunbeam adit, assayed 4.1 grams per tonne gold, 42.5 grams per tonne silver, 2.74 per cent lead and 1.06 per cent zinc across 20 centimetres (Assessment Report 10190). A grab sample from the adit(?) dump assayed 4.1 grams per tonne gold, 32.9 grams per tonne silver, 1.35 per cent lead and 4.70 per cent zinc (Assessment Report 10190).

BIBLIOGRAPHY

EMPR AR 1907-73; 1909-63; 1914-157,158; 1920-58; 1921-66; 1922-72; 1923-71,72; 1924-62,366; 1925-90,91,93,447; 1926-89,363; 1927-96,97,392; 1928-100,101,426; 1932-58; *1933-54,303; 1934-B19; 1935-B26,G48; 1936-B57; *1937-B6; 1938-B25; 1940-52; 1951-75; 1964-22; 1965-51; 1966-41
EMPR ASS RPT 7706, *10190, 16622, 20379
EMPR BULL *58, p. 129; 63
EMPR EXPL 1979-261
EMPR MAP 8
EMPR PF (In 103P 052 - Clippings, Maps of Underground Workings, 1925, 1933)
EMR MP CORPFILE (Dunwell Mines, Limited; Silver Arrow Explorations Ltd.; Stewart Mining and Development Company, Limited)
GSC MEM 32, p. 42; 159, pp. 49, *54; *175, pp. 47, 112, *147
GSC MAP *28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582
GCNL #222, 1979; #42, 1980; #94, 1986; #41, #52, 1989

DATE CODED: 1992/01/22 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/03/15 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 150** NATIONAL MINERAL INVENTORY: 104A4 Ag23

NAME(S): **MONTREAL 4**, MONTREAL 1-4, MONTREAL 1-7 (L. 6282-6288), HARKLEY SILVER, KAI, OTTER MOUNTAIN, PARVATI 1-8

STATUS: Prospect Open Pit MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104A04E 103P13E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 00 07 N NORTHING: 6206534
LONGITUDE: 129 43 36 W EASTING: 454682
ELEVATION: 1510 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Approximate centre of mineralized area (No. 1 or main showing) located on the Montreal 1-4 claims junction (Assessment Report 19398).

COMMODITIES: Silver Gold Zinc Lead Copper Antimony

MINERALS
SIGNIFICANT: Pyrite Sphalerite Galena Chalcopyrite Tetrahedrite
ASSOCIATED: Quartz Calcite Ankerite
ALTERATION: Carbonate
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: 95 x 75 Metres STRIKE/DIP: 270/90 TREND/PLUNGE:
COMMENTS: Main showing.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Calcareous Tuff
Tuff
Augite Porphyry
Argillite
Quartzite
Volcanic Breccia
Tuffaceous Limestone
Lava
Acid Dike
Basic Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1936
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	225.0000	Grams per tonne
Gold	0.3500	Grams per tonne

COMMENTS: Average of 13 surface samples from the Main showing.
REFERENCE: Assessment Report 21975.

CAPSULE GEOLOGY

The Montreal 4 showing is located about 16.5 kilometres east-northeast of Stewart, on the south side of Hartley Gulch near the headwaters of the creek that drains the west side of Otter Mountain.

The showings were originally covered by the Parvati 1-8 claims, staked by Rolston and associates in 1934. By 1936, two opencuts had been emplaced on 2 of the exposed veins (Nos. 3 and 7) and 15 sacks of high grade ore were shipped from these veins (Property File - Mandy, 1936). The claims subsequently lapsed. In 1944, the Montreal

CAPSULE GEOLOGY

claim group was staked over the area; these 8 claims may have been a restaking of the Parvati claims. During 1944-46, some open cutting was conducted and in 1949 the claims were surveyed. In 1965, Hepson and Fegan shipped about 2,182 kilograms of selected material to Trail (Assessment Report 19398). Mineral Policy does not have any production recorded for this property, it is likely included with some other property because they were all shipping to the same smelter. In 1979, Harkley Silver Mines Ltd. acquired the claims and carried out intermittent exploration during 1979-89. The latter work included prospecting, drilling and a geochemical soil survey. In 1989, Bond Gold Canada Inc. optioned the property (called the Kai property) and conducted mapping and sampling in 1991.

The area is underlain by a belt, 1000 metres wide, of north-striking, east-dipping sedimentary and tuffaceous rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 63). These rocks comprise a sequence of argillites and quartzites overlain by volcanic breccias, calcareous tuffs, tuffaceous limestones and a capping of lavas. The belt is flanked on the east and west by intrusive augite porphyry. On the west side, the augite porphyry forms a 500-metre wide sill-like body; on the east side the porphyry may form a local stock. The supracrustals may form a roof pendant in the porphyry (Property File - Mandy, 1936). Acid and basic dikes intrude both the supracrustals and the porphyry.

Mineralization is formed by 7, generally parallel, east-trending, vertical, narrow, shear-hosted quartz-calcite-ankerite veins. The veins are 5 to 25 centimetres wide and can be traced for up to 50 metres in length. The Nos. 1 to 5 veins occur over a width of 30 metres and are about 10 metres apart. The Nos. 6 and 7 veins, about 15 metres apart, are located about 300 metres south of the centre of the above vein swarm. The veins are hosted mainly in dark calcareous tuff and tuffaceous rocks, but at least 3 of the veins (Nos. 2, 3 and 4) also cut the augite porphyry intrusive at their eastern(?) ends. The better grade mineralization in the veins occurs in the intrusive, near the contact with the supracrustals. The veins contain disseminations, blebs and pods of pyrite, sphalerite, galena, chalcopyrite and tetrahedrite.

A grab sample collected in 1936 from sacked ore from the No. 3 vein assayed 24,000 grams per tonne silver, 2.1 grams per tonne gold, 4.5 per cent antimony, 23.0 per cent zinc, 18.0 per cent lead and 7.0 per cent copper (Property File - Mandy, 1936).

In 1990 and 1991, the showing (No. 1 or Main) was described and investigated, but no workings were located. The Main showing consists of east-west trending shears hosting milky quartz, less carbonate and wallrock inclusions. Mineralization consists of local masses and disseminations of sphalerite, argentiferous galena, chalcopyrite and tetrahedrite. The zone, up to 95 metres wide and 75 metres long, is characterized by carbonate alteration of the hostrock. Thirteen surface samples averaged 0.35 gram per tonne gold and 225.0 grams per tonne silver (Assessment Report 21975).

Several similar occurrences have been documented on the Pam claims, which are part of the Otter Mountain or Kai property, to the south in the 103P mapsheet.

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EMPR AR 1946-81
EMPR BULL 63
EMPR ASS RPT *19398, *21975
EMPR MAP 8
EMPR PF (*Mandy, J.T. 1936: Parvati and Silver Den groups, a special report)
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582
Placer Dome File

DATE CODED: 1992/01/24 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/03/15 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 151**

NATIONAL MINERAL INVENTORY:

NAME(S): **NELSON 2**, NELSON, NEL 1-4

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 03 05 N
LONGITUDE: 129 30 57 W
ELEVATION: 600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop (Sample 17105, Assessment Report 19424).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6211919
EASTING: 467871

COMMODITIES: Gold, Copper, Silver

MINERALS

SIGNIFICANT: Pyrite
ALTERATION: Malachite, Sericite
ALTERATION TYPE: Oxidation, Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Andesitic Flow
Andesite
Mudstone
Siltstone
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1989

COMMODITY	GRADE	
Silver	3.4000	Grams per tonne
Gold	1.9300	Grams per tonne
Copper	0.6000	Per cent

COMMENTS: Sample 17105 from an outcrop of sericitized andestic tuff with 2 per cent pyrite and traces of malachite.
REFERENCE: Assessment Report 19424.

CAPSULE GEOLOGY

The Nelson 2 showing is located about 32 kilometres east-northeast of Stewart, immediately east of the toe of Nelson Glacier on the north side of Nelson Creek. The Nelson property also includes the Nelson 3 (104A 152) and Nelson 2 South (104A 167) showings.

The area may have been explored in the late 1970s for porphyry-type mineralization but there are no records available. In 1986(?), Noranda Exploration Company Ltd. acquired the Nel 1-4 claims over the area and carried out prospecting and silt sampling. The work failed to encounter any significant mineralization with the exception of an anomalous gold value in a silt sample from the north side of the Nelson Glacier. In 1988, Bond Gold Canada Inc. staked the Nelson 1-3 claims over the area and, in 1989, performed reconnaissance geological mapping and sampling. The showing, on the Nelson 2 claim, was described that year. In 1991, Bond prospected the Nelson property.

The area is underlain by Hazelton Group rocks. The showing occurs in andesitic volcanics of the Upper Triassic to Lower Jurassic Unuk River Formation. The rocks comprise andesitic tuffs and flows

CAPSULE GEOLOGY

intercalated with mudstones, siltstones and conglomerates (Assessment Report 19424). These lie close to the contact with Bowser Lake Group sediments to the east.

The showing is hosted in sericitized andesitic tuff containing 2 per cent pyrite and traces of malachite. A grab sample from the mineralized outcrop assayed 1.93 grams per tonne gold, 0.60 per cent copper and 3.4 grams per tonne silver (Sample #17105, Assessment Report 19424).

Just to the south of this showing eight float samples, containing semi-massive to massive pyrite and chalcopyrite, were taken. Seven of these samples were anomalous in gold ranging from 0.160 to 0.835 gram per tonne (Assessment Report 21813).

BIBLIOGRAPHY

EMPR BULL 63
EMPR ASS RPT 16126, *19424, 20200, 20379, 21813
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/01/27 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/03 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 152**

NATIONAL MINERAL INVENTORY:

NAME(S): **NELSON 3**, NELSON, NEL 1-4

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 03 01 N
LONGITUDE: 129 32 46 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Gossanous outcrop area (Sample #8857, Assessment Report 19424).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6211810
EASTING: 465985

COMMODITIES: Silver Gold Copper

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) G04 Besshi massive sulphide Cu-Zn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite
Andesitic Flow
Andesitic Tuff
Andesitic Dike
Porphyritic Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	5.6000	Grams per tonne
Gold	0.1800	Grams per tonne
Copper	0.1500	Per cent

COMMENTS: Grab sample (#8857), across 0.20 metre, from gossanous area within andesitic volcanics.
REFERENCE: Assessment Report 19424.

CAPSULE GEOLOGY

The Nelson 3 showing is located about 30 kilometres east-northeast of Stewart, just south of the Nelson Glacier. The Nelson property also includes the Nelson 2 (104A 151) and Nelson 2 South (104A 167) showings.

The area may have been explored in the late 1970s for porphyry-type mineralization but there are no records available. In 1986(?), Noranda Exploration Company Ltd. acquired the Nel 1-4 claims over the area and carried out prospecting and silt sampling. The work failed to encounter any significant mineralization with the exception of an anomalous gold value in a silt sample from the north side of the Nelson Glacier. In 1988, Bond Gold Canada Inc. staked the Nelson 1-3 claims over the area and, in 1989, performed reconnaissance geological mapping and sampling. The showing, on the Nelson 3 claim, was described that year. In 1991, Bond prospected the Nelson property.

The area is underlain by Hazelton Group rocks. The showing occurs in andesitic volcanics of the Upper Triassic to Lower Jurassic Unuk River Formation. The rocks comprise andesitic tuffs and flows that are intruded by a northwest-trending swarm of dikes of similar composition (Assessment Report 19424). A previously unmapped

CAPSULE GEOLOGY

porphyritic granodiorite stock lies about 1.5 kilometres to the west.
An extensive gossanous area is developed in the andesitic volcanics on the south side of the Nelson Glacier. A sample of the limonitic rocks, containing 70 to 85 per cent pyrite and pyrrhotite, assayed 0.15 per cent copper, 0.18 gram per tonne gold and 5.6 grams per tonne silver (Assessment Report 19424).

BIBLIOGRAPHY

EMPR BULL 63
EMPR ASS RPT 16126, *19424, 20200, 21813
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED:	1992/01/27	CODED BY:	WC	FIELD CHECK:	N
DATE REVISED:	1993/03/04	REVISED BY:	DEJ	FIELD CHECK:	N

MINFILE NUMBER: **104A 153**

NATIONAL MINERAL INVENTORY:

NAME(S): **ICE 3(B)**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 03 26 N
LONGITUDE: 129 57 14 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized quartz vein (Assessment Report 20429).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6212859
EASTING: 440597

COMMODITIES: Silver, Gold, Zinc, Lead, Copper

MINERALS

SIGNIFICANT:	Galena	Sphalerite	Pyrite	Tetrahedrite
ASSOCIATED:	Quartz			
ALTERATION:	Silica	Sericite	Pyrite	
ALTERATION TYPE:	Silicific'n	Sericitic	Pyrite	
MINERALIZATION AGE:	Unknown			

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Volcanic Breccia
Conglomerate
Sandstone
Tuffaceous Sandstone
Siltstone
Dacitic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1990

COMMODITY	GRADE	
Silver	896.0000	Grams per tonne
Gold	2.9300	Grams per tonne
Copper	0.0100	Per cent
Lead	1.3500	Per cent
Zinc	7.5600	Per cent

COMMENTS: Chip(?) sample, across 0.7 metre, from the mineralized quartz vein.
REFERENCE: Assessment Report 20429.

CAPSULE GEOLOGY

The Ice 3(B) showing is located on the east side of the Bear River Ridge, about 2.4 kilometres northwest of the confluence of Bitter Creek and the Bear River and 550 metres south-southeast of Mount Shorty Stevenson.

The Ice 1-4 claims were recorded in 1986. In 1990, Navarre Resources Corp. conducted geological mapping, trenching, sampling, soil geochemical surveys, a pulse-EM survey and diamond drilling (1 hole, 99 metres). The showing was described that year.

The area is underlain by northwest to north-northwest striking, folded volcanics and sediments of the Lower Jurassic Betty Creek Formation(?) (Hazelton Group) (Open File 1987-22). Near the showing, the hostrocks comprise deformed conglomerate, volcanic breccia, red and green sandstone, tuffaceous sandstone and siltstone. Narrow, northwest to north-northwest trending dacitic dikes, containing 1-5 per cent hornblende, cut these rocks (Assessment Report 20429).

The rocks are bleached and altered in several locations. The

CAPSULE GEOLOGY

alteration, comprising silica, sericite and disseminations and veins of pyrite, appears to be associated with a northwest-trending zone of folding and shearing (Assessment Report 20429).

The showing comprises a 0.7-metre wide, north-northwest trending quartz vein that dips 70 degrees west. The vein contains up to 5 per cent galena and sphalerite. It occurs in an altered area, 200 by 250 metres, of conglomerate and volcanic breccia. The alteration includes grey-black quartz (due to finely disseminated carbonaceous material) and disseminations and veins of pyrite, sphalerite, galena and tetrahedrite (Assessment Report 20429).

A chip(?) sample from the vein assayed 896.0 grams per tonne silver, 7.56 per cent zinc, 2.93 grams per tonne gold, 1.35 per cent lead and 0.01 per cent copper across 0.7 metre (Assessment Report 20429).

A hole was drilled to test the alteration zone but failed to reach the target depth but did intersect 2 mineralized zones. The better zone, comprising grey-black quartz with galena and tetrahedrite, occurred at the end of the hole. Samples assayed 343.0 grams per tonne silver, 1.79 grams per tonne gold, 9.24 per cent zinc and 0.37 per cent lead across 0.2 metre (Assessment Report 20429).

BIBLIOGRAPHY

EMPR EXPL 1990-35
EMPR BULL 58; 63; 85 (in press)
EMPR ASS RPT 20379, *20429
EMPR OF 1987-22
EMPR MAP 8
EMPR MER 1990-35
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/02/07 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/25 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 154**

NATIONAL MINERAL INVENTORY:

NAME(S): **KNOB 2**, TOC 15, TODD CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A05E
BC MAP:
LATITUDE: 56 15 07 N
LONGITUDE: 129 44 35 W
ELEVATION: 1378 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized vein (Assessment Report 21097).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6234369
EASTING: 453960

COMMODITIES: Silver Lead Zinc

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

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite
Andesite Flow
Andesite Breccia

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1990

COMMODITY	GRADE	
Silver	78.1000	Grams per tonne
Lead	3.1300	Per cent
Zinc	0.1100	Per cent

COMMENTS: Grab sample from a mineralized vein.
REFERENCE: Assessment Report 21097.

CAPSULE GEOLOGY

The Knob 2 showing is located about 37 kilometres north-northeast of Stewart, 1000 metres east of the headwaters of Todd Creek and 17 kilometres south of the confluence of Todd Creek and the Bowser River.

In 1986-87, Noranda Exploration Limited staked the Toc 1-15 claims to cover showings in the Todd Creek area. During 1986-90, Noranda completed geological mapping, silt and soil geochemical surveys, induced polarization and magnetometer surveys, and diamond drilling in the area (mainly on the Todd Creek North (104A 105, 106) and F 1 Zones (104A 107)). In 1990, Noranda conducted a heli-borne VLF-EM and magnetometer survey over the claims and reconnaissance mapping and soil and rock geochemical surveys on the Toc 13-15 claims. The showing was reported that year.

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation (Bulletin 63). These rocks predominantly comprise a thick sequence of green and maroon andesite flows and breccias.

Mineralization consists of a narrow (15-centimetre wide) quartz vein containing about 8 per cent galena and 2 per cent pyrite. The vein is hosted in light green-grey andesite. A grab sample from the vein assayed 3.13 per cent lead, 78.1 grams per tonne silver and 0.11 per cent zinc; copper and gold values were negligible (Assessment Report 21097).

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EMPR ASS RPT 10404, 12345, 13684, 15988, 17423, 17477, *18800, 18820, 19922, 20089, *21097
EMPR BULL 63
EMPR MAP 8
EMPR PF (In 082M 141 - Goldnev Resources Inc., SMF No. 34/89, July 1989)
GSC MAP 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/02/07 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1999/06/17 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104A 155**
NATIONAL MINERAL INVENTORY: 104A4 Ag20

NAME(S): **OPHIR 2 (L. 5871)**, MAYOU

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 03 07 N
LONGITUDE: 129 49 41 W
ELEVATION: 1752 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop (Assessment Report 20622).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6212170
EASTING: 448426

COMMODITIES: Silver, Zinc, Lead, Gold, Copper

MINERALS
SIGNIFICANT: Unknown
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Feldspar Porphyry Dike
Diorite Dike
Andesite Dike
Dacite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1990

COMMODITY	GRADE	
Silver	1156.1000	Grams per tonne
Gold	0.4100	Grams per tonne
Copper	0.1700	Per cent
Lead	1.7800	Per cent
Zinc	3.5200	Per cent

COMMENTS: Chip sample from quartz vein across 10 centimetres.
REFERENCE: Assessment Report 20622.

CAPSULE GEOLOGY

The Ophir 2 showing is located about 15 kilometres northeast of Stewart and 3 kilometres north-northwest of the confluence of Roosevelt and Bitter creeks.

The Mayou Gold Copper Company acquired a group of claims, including the Ophir 2 claim, north of Bitter Creek in 1928. During 1928-30, the company explored the area. The showing may have been discovered during this time but no work was reported. In 1990, Varitech Resources Ltd. carried out a program of geological mapping, prospecting, sampling and soil, VLF-EM and magnetometer surveys in the area. The showing was sampled at that time.

The area is predominantly underlain by north to north-northeast striking, folded argillites of the Middle Jurassic Salmon River Formation (Hazelton Group) (Bulletin 63). The sediments are cut by several north to northwest-trending feldspar porphyry, diorite, andesite and dacite dikes (Assessment Report 20622) that belong to the Portland Canal dike swarm.

A quartz vein occurs on the west contact of a north-northwest trending feldspar porphyry dike. Details on the mineralization are not available. A chip sample across 10 centimetres assayed 1,156.1 grams per tonne silver, 3.52 per cent zinc, 1.78 per cent lead, 0.17

CAPSULE GEOLOGY

per cent copper and 0.41 gram per tonne gold (Assessment Report 20622).

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EMPR AR *1928-102; 1929-49,97,433; 1930-106,361; 1935-134
EMPR BULL 63
EMPR ASS RPT 12399, 13352, 19242, 20379, *20622
EMPR MAP 8
EMR MP CORPFILE (Mayou Gold Copper Co. Ltd.)
GSC MEM 175, p. 131
GSC MAP 28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/02/07 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/15 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 156**

NATIONAL MINERAL INVENTORY: 104A4 Cu13

NAME(S): **GOLDBAR NW**, GOLDBAR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 02 09 N
LONGITUDE: 129 54 48 W
ELEVATION: 122 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6210444
EASTING: 443091

COMMENTS: Mineralized outcrop west of the Goldbar property (104A 157), near the historical Gold Bar No. 1 showings (104A 053) (Assessment Report 20682).

COMMODITIES: Silver, Copper, Zinc, Lead, Molybdenum, Bismuth

MINERALS

SIGNIFICANT: Chalcopyrite, Molybdenite
ASSOCIATED: Quartz, Pyrite, Chlorite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Shear
CLASSIFICATION: Hydrothermal, Epigenetic, Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary			Coast Plutonic Complex

LITHOLOGY: Quartz Monzonite

HOSTROCK COMMENTS: The showing occurs within the Tertiary(?) Bitter Creek quartz monzonite pluton.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1990

COMMODITY	GRADE	
Silver	1779.4000	Grams per tonne
Bismuth	0.9100	Per cent
Copper	1.0000	Per cent
Molybdenum	0.0400	Per cent
Lead	0.2100	Per cent
Zinc	0.2200	Per cent

COMMENTS: Grab sample (88657) from a quartz-chlorite vein.
REFERENCE: Assessment Report 20682.

CAPSULE GEOLOGY

The Goldbar NW showing is located approximately 11 kilometres north-northeast of Stewart, on the south side of the Stewart highway (37A) about 600 metres west of the Bitter Creek bridge. This showing is just west of Tenajon's Goldbar property and is located in the same area as the historical Gold Bar No. 1 showings (104A 053).

The history of the showing is unclear. The area was explored during 1910 and, again, in 1925 when the area was covered by the Good Enough (including the Gold Bar claim) and America's (or Americus) Girl claim groups. In 1990, Tenajon Resources Corp. carried out a limited rock, soil and silt sampling program on the Goldbar group owned by Javorsky. The showing was reported at that time.

The area is underlain by the Tertiary(?) Bitter Creek quartz monzonite pluton, a satellite body of the Coast Plutonic Complex. The pluton intrudes Upper Triassic to Lower Jurassic Unuk River Formation volcanics of the Hazelton Group (Bulletin 58, 63). The volcanics comprise crystal and lithic tuffs and cherty sediments that form large inclusions in the pluton (Assessment Report 20682).

Narrow, 1 to 20-centimetre wide, quartz veins occupy narrow

CAPSULE GEOLOGY

shears in the pluton and contain semi-massive pyrite and chalcopyrite and up to 3 per cent molybdenite. A grab sample (88657) taken in 1990 assayed about 1.0 per cent copper, 1,779.4 grams per tonne silver, 0.91 per cent bismuth, 0.22 per cent zinc, 0.21 per cent lead and 0.04 per cent molybdenum; gold, antimony and tungsten values were also anomalous (Assessment Report 20682).

The reported assays are confusing as to which results belong with which sample/showing. Subsequent sampling (Assessment Report 21909) of the Goldbar showing (104A 157) to the southeast, fails to duplicate the results reported for that showing in Assessment Report 20682, but the values are very similar to the results quoted for this showing.

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EMPR AR 1910-64; 1925-92; 1927-92
EMPR BULL 58; 63
EMPR ASS RPT 20379, *20682, 21909
EMPR MAP 8
GSC MEM 32, p. 58; 175, pp. 105,119
GSC MAP *28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED:	1992/02/14	CODED BY:	WC	FIELD CHECK:	N
DATE REVISED:	1993/03/01	REVISED BY:	DEJ	FIELD CHECK:	N

MINFILE NUMBER: **104A 157**
NATIONAL MINERAL INVENTORY: 104A4 Cu13

NAME(S): **GOLDBAR**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 01 48 N
LONGITUDE: 129 54 05 W
ELEVATION: 130 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized quartz vein located in the northwest corner of the Goldbar claim (Assessment Report 20682).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6209785
EASTING: 443827

COMMODITIES: Silver, Gold, Copper, Lead, Molybdenum, Bismuth

MINERALS
SIGNIFICANT: Pyrite, Stibnite, Chalcopyrite, Molybdenite
ASSOCIATED: Quartz, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic, Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au; I09 Stibnite veins and disseminations

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Tertiary			Coast Plutonic Complex

LITHOLOGY: Augite Diorite Porphyry
Tuff
Volcanic
Cherty Sediment/Sedimentary

HOSTROCK COMMENTS: The showing occurs within augite diorite porphyry (Tertiary?) near the contact with Hazelton Group rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	1779.7000	Grams per tonne
Gold	0.3428	Grams per tonne

COMMENTS: Sample across 0.3 metre of the mineralized quartz vein.
REFERENCE: Assessment Report 21909.

CAPSULE GEOLOGY

The Goldbar showing is located approximately 11 kilometres north-northeast of Stewart, on the west side of Bitter Creek about 700 metres south-southeast of the Bitter Creek bridge. The Goldbar NW (104A 156) showing occurs to the northwest and the historical Gold Bar No. 1 showings (104A 053) also occur in the area.

The history of the showing is unclear. The area was explored during 1910 and, again, in 1925 when the area to the west was covered by the Good Enough (including the Gold Bar claim) and America's (or Americus) Girl claim groups (104A 053). No further work was reported in the area until 1990 when Tenajon Resources Corp. carried out a limited rock, soil and silt sampling program on the Goldbar group owned by Javorsky. The showing was reported at that time.

The area is underlain by the Tertiary(?) Bitter Creek quartz monzonite pluton, a satellite body of the Coast Plutonic Complex. The pluton intrudes Upper Triassic to Lower Jurassic Unuk River Formation volcanics of the Hazelton Group (Bulletin 58, 63). The volcanics comprise crystal and lithic tuffs and cherty sediments that form large inclusions in the pluton (Assessment Report 20682). The volcanic and sedimentary rocks are intruded by augite diorite

CAPSULE GEOLOGY

porphyry.

Several narrow (less than 10 centimetres wide) quartz veins contain variable amounts of pyrite, chalcopyrite, stibnite and molybdenite. One quartz vein, 30 centimetres wide, is well mineralized with stibnite, molybdenite and pyrite. A chip(?) sample collected in 1990 assayed 17.0 grams per tonne gold, 4.04 per cent bismuth, 21.7 grams per tonne silver and 0.16 per cent lead (Assessment Report 20682).

A sampling program was conducted to follow this vein; the highest value was 1779.7 grams per tonne silver and 0.3428 gram per tonne gold (Assessment Report 21909).

The reported assays are confusing as to which results belong with which sample/showing. Subsequent sampling (Assessment Report 21909) of this showing southeast, fails to duplicate the results reported in Assessment Report 20682, but the values are very similar to the results quoted for the Goldbar NW (104A 156) showing.

BIBLIOGRAPHY

EMPR AR 1910-64; 1925-92; 1927-92
EMPR BULL 58; 63
EMPR ASS RPT 20379, *20682, *21909
EMPR MAP 8
GSC MEM 32, p. 58; 175, pp. 105, 119
GSC MAP *28A; 216A; 217A; 307A; *315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/02/14 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/01 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 158**

NATIONAL MINERAL INVENTORY: 104A4 Pb1

NAME(S): **X 10U 8 FR. (L. 5195)**, EXTENUATE, BUSH

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W 104B01E
BC MAP:
LATITUDE: 56 04 57 N
LONGITUDE: 129 59 16 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Opencut; described as being 350 metres north of the Sunshine adit (104A 093) (Minister of Mines Annual Report, 1936).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6215701
EASTING: 438527

COMMODITIES: Zinc

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

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: 3 Metres STRIKE/DIP: 270/50N TREND/PLUNGE:
COMMENTS: Vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Mount Dilworth	

LITHOLOGY: Felsic Tuff
Felsic Breccia
Lapilli Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The X 10U 8 Fr. showing is located about 900 metres south of Monitor Lake, a small lake approximately 500 metres south of Long Lake.

The Portland Canal Goldfields Syndicate Limited owned the X 10U 8 (Extenuate) claim group in the area. The name of the company was changed to Extenuate Gold Mines Ltd. in 1926. Little work was reported at this time. Bush Consolidated Gold Mines Ltd. consolidated several claims and claim groups in the area south of Long Lake in 1927, including the Extenuate group. In 1962, New Indian Mines Ltd. conducted geological mapping in the area. In 1979, Ocean Home Explorations Ltd. carried out further geological mapping and sampling in the area.

The area is underlain by Hazelton Group rocks of the Lower to Middle Jurassic Mount Dilworth Formation and overlying Middle Jurassic Salmon River Formation (Open File 1987-22). These rocks lie on the crumpled west limb of the north-northwest trending Dilworth syncline. These rocks comprise felsic tuff and breccia and lapilli tuff.

Few details are available on the mineralization. A shallow opencut, 350 metres north of the Sunshine adit (104A 093), exposes a 3-metre wide quartz vein. The vein strikes west, dips 50 degrees north and contains irregular disseminations and blebs of pyrite and sphalerite. A sample across 0.61 metre of the best exposed mineralization assayed nil gold and nil silver (Minister of Mines Annual Report, 1936).

BIBLIOGRAPHY

EMPR AR 1926-98; *1936-Part B
EMPR BULL 58, p. 135; 63; 85 (in press)
EMPR ASS RPT 448, 7640, 8245, 20379
EMPR OF 1987-22
EMPR MAP 8

BIBLIOGRAPHY

EMR MP CORPFILE (Bush Consolidated Gold Mines, Inc.; Bush-Cobalt Mines, Limited; Extenuate Gold Mines, Limited)
GSC MEM 175, p. 156
GSC MAP 216A; 217A; 307A; *315A; 1829; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/02/17 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/24 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 159**

NATIONAL MINERAL INVENTORY:

NAME(S): **LODE 3**, KELLY GIRL

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 11 06 N
LONGITUDE: 129 56 02 W
ELEVATION: 884 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized quartz vein (Assessment Report 21244).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6227062
EASTING: 442035

COMMODITIES: Gold Silver Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Quartz Chlorite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Fragmental Andesite
Volcanic Breccia
Volcanic Conglomerate
Sandstone
Siltstone
Dacitic Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	3.4000	Grams per tonne
Gold	3.2100	Grams per tonne

COMMENTS: Chip sample across 0.8 metre taken from the quartz stockwork; neglible copper, lead and zinc values.
REFERENCE: Assessment Report 21244.

CAPSULE GEOLOGY

The Lode 3 showing is located about 10.2 kilometres north-northwest of the confluence of American Creek with the Bear River. It lies on a small creek (Baseline Creek), approximately 1.1 kilometres west of American Creek.

The area was covered by the Kelly Girl claims in 1988 when Cremonese flew a heli-borne VLF-EM and magnetometer survey over the area. The following year White Channel Resources Inc. staked the Lode 1-8 claims over the area and carried out some geological mapping, prospecting and silt sampling. In 1990, White Channel discovered the showing and conducted further geological mapping, sampling and a geochemical soil survey in the area.

The area is underlain by north-striking, west-dipping fragmental andesites, volcanic breccias, volcanic conglomerates, sandstones and siltstones of the Upper Triassic to Lower Jurassic Unuk River Formation (Hazelton Group) (Bulletin 58, 63). These rocks lie on the west limb of the north-northwest trending American Creek anticline. West-trending dacitic dikes intrude these rocks in places (Assessment Report 21244). A north-northwest trending fault is associated with the showing. Large gossan zones, 0.5 to 3.0 kilometres long and 100

CAPSULE GEOLOGY

to 500 metres wide, occur along the fault. The fault appears to be a branch of a fault along American Creek.

The showing consists of a, 0.2 to 1.0-metre wide, quartz vein or stockwork in the fault(?), trending north-northwest and dipping 80 degrees west. The quartz contains sparse (average 3 per cent) pyrite and chalcopyrite and 1-5 per cent chlorite. The vein can be traced for about 60 metres and is immediately north of a, 700 metres long by 100 metres wide, gossan zone.

An 80-centimetre chip sample collected in 1990 assayed 3.21 grams per tonne gold and 3.4 grams per tonne silver; copper, lead and zinc values were negligible (Assessment Report 21244). A grab sample from nearby float assayed 4.54 grams per tonne gold, 71.8 grams per tonne silver, 7.92 per cent copper, 0.05 per cent lead and 0.04 per cent zinc (Assessment Report 21244).

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR ASS RPT 17607, 19723, *21244
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/02/10 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/25 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 160**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOND 4**, BOND 1-7, NELSON, STEWART

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 02 24 N
LONGITUDE: 129 35 10 W
ELEVATION: 1330 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop (Assessment Report 21535).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6210686
EASTING: 463484

COMMODITIES: Copper Silver Lead

MINERALS
SIGNIFICANT: Unknown
ASSOCIATED: Quartz
ALTERATION: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Argillite
Porphyritic Granodiorite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	42.9000	Grams per tonne
Copper	0.7200	Per cent
Lead	0.1200	Per cent

COMMENTS: A grab sample from a brecciated quartz vein.
REFERENCE: Assessment Report 21535.

CAPSULE GEOLOGY

The Bond 4 showing is located about 27 kilometres east-northeast of Stewart, approximately 7 kilometres south of Strohn Creek, on the north side of the Nelson Glacier.

In 1988, Bond Gold Canada Inc. staked the Nelson 1-3 claims and conducted some geological mapping and prospecting to the east of the showing. A porphyritic granodiorite stock was reported to the northeast of the showing. That same year Teuton Resources Corp. staked the Bond 1-7 claims to the west and south of the Nelson claims. In 1989, Goodgold Resources Ltd. entered into an option agreement with Teuton and flew a heli-borne VLF-EM and magnetometer survey over the southern part of Bond claims. In 1990, Goodgold conducted reconnaissance geological mapping and prospecting on the property. The showing was reported at that time.

The area is underlain by north-striking argillites of the Middle Jurassic Salmon River Formation(?) (Hazelton Group) (Bulletin 63). Northeast, north to north-northwest and east-northeast trending faults have been reported in the area (Assessment Report 21535).

The showing consists of a 50-centimetre wide brecciated quartz vein in argillites. A grab sample collected in 1990 assayed 0.72 per cent copper, 42.9 grams per tonne silver and 0.13 per cent lead; zinc and gold values are anomalous (Assessment Report 21535).

BIBLIOGRAPHY

EMPR BULL 63
EMPR ASS RPT 19168, 19424, *21535
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/02/11 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/24 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 161**

NATIONAL MINERAL INVENTORY:

NAME(S): **LG**, BOND 2, CROESUS, DEL NORTE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 01 38 N
LONGITUDE: 129 30 55 W
ELEVATION: 1250 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized quartz vein (Assessment Report 21535).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6209229
EASTING: 467886

COMMODITIES: Gold, Silver, Copper, Lead, Zinc

MINERALS
SIGNIFICANT: Galena, Sphalerite, Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Malachite, Azurite, Silica
ALTERATION TYPE: Oxidation, Silicific'n
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Argillite
Felsic Dike
Plagioclase Porphyry Andesite
Intermediate Tuff
Intermediate Volcaniclastic
Sandstone
Siltstone
Plagioclase Hornblende Porphyritic Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1990

COMMODITY	GRADE	
Silver	1428.0000	Grams per tonne
Gold	30.3000	Grams per tonne
Copper	0.4500	Per cent
Lead	2.1200	Per cent
Zinc	0.3800	Per cent

COMMENTS: Chip sample across 1 metre.
REFERENCE: Assessment Report 21535.

CAPSULE GEOLOGY

The LG showing is located about 31 kilometres east-northeast of Stewart, midway between Nelson and Del Norte Creeks. The LG vein is possibly the extension of the NMG vein discovered in 1992 (104A 077) near the Bullion zone.

In 1988, Teuton Resources Corp. staked the Bond 1-7 claims over the area. The following year Goodgold Resources Ltd. entered into an option agreement with Teuton and flew a heli-borne VLF-EM and magnetometer survey over the southern part of the Bond claims. In 1990, Goodgold conducted reconnaissance geological mapping and prospecting on the property. The showing was reported at that time on the Bond 2 claim.

The area is underlain by north-striking(?) Lower Jurassic Betty Creek Formation(?) rocks (Hazelton Group) (Bulletin 63). These rocks comprise predominantly plagioclase porphyry andesites that are

CAPSULE GEOLOGY

interbedded with intermediate tuffs and volcaniclastics. Argillite, sandstone and siltstone form thin bands in the volcanics. Northwest-trending, northeast-dipping plagioclase and hornblende porphyritic dikes of the Portland Canal dike swarm intrude all rock types, especially in the area north of the Del Norte Glacier. Northeast, north to north-northwest and east-northeast trending faults have been reported in the area (Assessment Report 21535).

The showing consists of a north-trending, 60-centimetre wide, quartz vein that dips 80 degrees west and is exposed over a length of 8 metres. The vein occurs near the contact between volcanics and sediments and is hosted in argillite at the eastern contact of a north-trending(?) silicified felsic dike. Quartz forms subparallel stringers and crosscutting stockworks in the footwall and hangingwall argillites and overlying dike. The quartz is well mineralized with galena, sphalerite and chalcopyrite; malachite and azurite have also been reported. A chip sample collected in 1990 assayed 30.3 grams per tonne gold, 1,428.0 grams per tonne silver, 2.12 per cent lead, 0.45 per cent copper and 0.38 per cent zinc across 1 metre (Assessment Report 21535).

BIBLIOGRAPHY

EMPR BULL 63
EMPR ASS RPT 19168, *21535, 22103
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/02/11 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/12 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 162**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHUL 4**, SHUL 1-6, DUG 1-2

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 06 19 N
LONGITUDE: 129 48 38 W
ELEVATION: 908 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of sample 45909B on the Shul 4 claim (Assessment Report 22002).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6218093
EASTING: 449586

COMMODITIES: Silver Gold Copper

MINERALS
SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Podiform Massive Disseminated
CLASSIFICATION: Volcanogenic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unnamed/Unknown Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Andesitic Pyroclastic
Andesitic Flow
Andesite
Wacke
Tuff
Intrusive

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	3.8000	Grams per tonne
Gold	0.1180	Grams per tonne
Copper	0.0300	Per cent

COMMENTS: Sample 45909B across 15 centimetres, taken from a massive pyrite pod 3 to 5 per cent pyrite and hosted in andesite.
REFERENCE: Assessment Report 22002.

CAPSULE GEOLOGY

The Shul 4 showing is located 19 kilometres northeast of Stewart, just west of the Grey Copper (104A 066) showing.

The area is underlain by volcanic and sedimentary rocks of the Upper Triassic to Lower Jurassic Hazelton Group. These consist of andesitic pyroclastics and flows intercalated with wackes and tuffs. An intermediate to felsic pluton of unknown age outcrops in the area.

In 1990, Bond Gold conducted geophysical surveys on the property. This program identified 3 targets, 1 was tested by drilling with no significant gold values encountered. In 1991, Bond Gold conducted mapping and lithogeochemical and stream sediment sampling.

Twenty surface samples were taken from a green pyroclastic unit at the southeast corner of the Shul 4 claim. Mineralization consists of disseminated and fine to coarse-grained small pods of pyrite, pyrrhotite and chalcopyrite hosted in andesitic pyroclastics and flows. The pyrite content averages 4 to 5 per cent but is up to 50 per cent where it is massive. Pyrite and chalcopyrite occur in pods; pyrrhotite occurs with pyrite and averages 1 to 2 per cent in content.

CAPSULE GEOLOGY

A sample (45909B), taken from a massive pyrite pod in andesite containing 3 to 5 per cent pyrite, assayed 3.8 grams per tonne silver, 0.118 gram per tonne gold and 0.03 per cent copper (Assessment Report 22002).

BIBLIOGRAPHY

EMPR ASS RPT 20200, 21260, *22002
EMPR BULL 63
EMPR MAP 8
GSC MEM 175
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1993/03/09 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK: N

MINFILE NUMBER: **104A 163**

NATIONAL MINERAL INVENTORY:

NAME(S): **CROESUS 4**, CROESUS 1-4

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 00 07 N
LONGITUDE: 129 31 23 W
ELEVATION: 980 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop (Assessment Report 21535).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6206419
EASTING: 467380

COMMODITIES: Gold Silver Zinc

MINERALS
SIGNIFICANT: Unknown
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Argillite
Massive Flow

HOSTROCK COMMENTS: The hostrocks may be Salmon River Formation argillites (Bulletin 63) or Betty Creek Formation volcanics (Assessment Reports 17660, 21535).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1990

COMMODITY	GRADE	
Silver	20.8000	Grams per tonne
Gold	1.0000	Grams per tonne
Zinc	4.2400	Per cent

COMMENTS: Grab sample from a 15-centimetre wide quartz vein; also elevated copper and lead values.
REFERENCE: Sample DNMBR-012, Assessment Report 21535.

CAPSULE GEOLOGY

The Croesus 4 showing is located about 30 kilometres east-northeast of Stewart, immediately north of the toe of Del Norte Glacier.

In 1987, Teuton Resources Corp. staked the Croesus 1-4 claims over the area and conducted geological mapping and rock and silt sampling. No work was reported on the showing. In 1989, Goodgold Resources Ltd. entered into an option agreement with Teuton and flew a heli-borne VLF-EM and magnetometer survey over the Croesus and adjacent Bond claims. In 1990, Goodgold conducted reconnaissance geological mapping, prospecting and rock and silt sampling on the property. The showing was reported on the Croesus 4 claim at that time.

The area is underlain by Hazelton Group rocks. The hostrocks may be north-striking argillites of the Middle Jurassic Salmon River Formation (Bulletin 63) or massive flows of the Lower Jurassic Betty Creek Formation (Assessment Reports 17660, 21535). Northeast, north to north-northwest and east-northeast trending faults are locally conspicuous (Assessment Report 21535).

Few details are available regarding the showing. The showing consists of a 15 centimetre wide quartz vein. A grab sample collected in 1990 from the vein assayed 4.24 per cent zinc, 1.0 gram

CAPSULE GEOLOGY

per tonne gold and 20.8 grams per tonne silver; copper and lead values are negligible (Sample DNMBR-012, Assessment Report 21535).

BIBLIOGRAPHY

EMPR ASS RPT *17660, 19168, *21535, 22103
EMPR BULL 63
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582
PR REL Teuton Resources Corp., Sept.26, Oct.11, 2002

DATE CODED: 1992/02/11 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/03/12 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 164**

NATIONAL MINERAL INVENTORY: 104A4 Pb3

NAME(S): **SLIPPERY IAN**, STRIKE 1-3, ELK, MOOSE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04W
BC MAP:
LATITUDE: 56 07 16 N
LONGITUDE: 129 57 30 W
ELEVATION: 1433 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized quartz vein (Assessment Report 21457).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6219973
EASTING: 440419

COMMODITIES: Zinc, Lead, Copper, Gold, Silver, Tungsten

MINERALS

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

DEPOSIT

CHARACTER: Vein, Breccia
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Volcaniclastic
Conglomerate
Sandstone
Felsic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	57.9000	Grams per tonne
Gold	0.9000	Grams per tonne
Copper	0.5000	Per cent
Lead	6.6000	Per cent
Tungsten	0.3000	Per cent
Zinc	8.5000	Per cent

COMMENTS: Average assay from 12 chip samples of the mineralized quartz vein; across 0.6 metre. Also 0.2 per cent cadmium.
REFERENCE: Assessment Report 21457.

CAPSULE GEOLOGY

The Slippery Ian showing is located about 1.8 kilometres east of the central part of the east shore of Long Lake.

The showing is part of the southern extension of the mineralized vein zone at the Silver Crown showing (104A 061). The Silver Crown showing was staked in 1965 and explored during 1965-68. In 1983, Teuton Resources performed work on the Elk and Moose claims in the area. In 1988, D. Cremonese flew an airborne geophysical survey over the area. The following year White Channel Resources Inc. acquired the Strike 1-3 claims over the area and explored the Silver Crown showing. In 1990, Cremonese flew another airborne geophysical survey over the area. That year Navarre Resources Corporation did some work on the Strike claims. This work included geological mapping, trenching, sampling, drilling, geochemical (soil and stream sediment) and geophysical (pulse-EM) surveys. The showing was trenched at this time. One hole (35 metres) was drilled on the showing; mechanical problems prevented the hole from reaching the target.

CAPSULE GEOLOGY

The area is underlain by Hazelton Group rocks that lie in the core region of north-northwest trending, north-plunging folds. These rocks comprise lowermost predominantly sedimentary rocks of the Lower Jurassic Betty Creek Formation overlain by felsic volcanics of the Lower to Middle Jurassic Mount Dilworth Formation and uppermost sediments of the Middle Jurassic Salmon River Formation (Open File 1987-22).

The showing is hosted in north-striking, west-dipping intercalated volcaniclastics, conglomerate and sandstone of the Betty Creek Formation. These rocks are intruded by north-trending felsic dikes (Assessment Report 21457). A north-trending, 0.2 to 0.8-metre wide, quartz-breccia vein dips 80 degrees west and lies along the eastern contact of a felsic dike. It can be traced for about 35 metres along strike.

The vein contains pyrite, galena, sphalerite and minor chalcopyrite and tetrahedrite(?). The average assay from 12 samples taken of the vein in 1990 was 8.5 per cent zinc, 6.6 per cent lead, 0.5 per cent copper, 0.9 gram per tonne gold, 57.9 grams per tonne silver, 0.3 per cent tungsten and 0.2 per cent cadmium across 0.6 metres width (Assessment Report 21457). The best sample assayed 38.6 per cent zinc, 6.58 per cent lead, 0.56 per cent copper, 3.14 grams per tonne gold, 69.8 grams per tonne silver and 0.5 per cent tungsten across 0.80 metre (Assessment Report 21457).

BIBLIOGRAPHY

EMPR AR 1965-50
EMPR GEM 1969-57 and Fig. 9
EMPR BULL 58, p. 165; 63; 85 (in press)
EMPR ASS RPT 11800, 17609, 19747, 20195, *21457
EMPR OF 1987-22
EMPR MAP 8
GSC MAP 216A; 217A; 307A; 315A; 1829; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1992/02/10 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1992/02/10 REVISED BY: WC FIELD CHECK: N

MINFILE NUMBER: **104A 165**

NATIONAL MINERAL INVENTORY:

NAME(S): **FOX**, DELTA 1, STEWART, DELTAIC

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A12E
BC MAP:
LATITUDE: 56 36 39 N
LONGITUDE: 129 30 42 W
ELEVATION: 1463 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop (Assessment Report 21745).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6274184
EASTING: 468594

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite
ASSOCIATED: Pyrite
ALTERATION: Pyrite Kaolinite Quartz Malachite Azurite
ALTERATION TYPE: Pyrite Argillic Propylitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Volcanic Conglomerate
Volcanic Flow
Siltstone
Mudstone
Limestone
Felsic Lapilli Tuff
Tuff Breccia
Felsic Crystal Lithic Tuff

HOSTROCK COMMENTS: The property is underlain by Lower to Middle Jurassic Hazelton Group volcanics and sediments in the Oweegee Dome.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1991

COMMODITY	GRADE	
Copper	0.9500	Per cent
Zinc	0.2400	Per cent

COMMENTS: Grab(?) sample from gossan.
REFERENCE: Assessment Report 21745.

CAPSULE GEOLOGY

The Delta 1 showing is located about 80 kilometres northeast of Stewart, near the headwaters of the west branch of Deltaic Creek, a tributary of the Bell-Irving River, immediately southeast of the Delta Glacier.

Cominco Ltd. staked the Delta 1-2 claims in 1989. Geological mapping and rock and soil sampling in 1990 outlined a, 700 by 600 metres, gold-copper-zinc anomaly. The following year Cominco performed further mapping, prospecting and sampling; the showing was reported that year.

The area is underlain by Lower to Middle Jurassic Hazelton Group volcanics and sediments of uncertain stratigraphic position that are exposed in the Oweegee Dome, an inlier in the Upper Jurassic Bowser Lake Group. Green volcanic conglomerate is overlain by green volcanic flows, brown-black siltstone, mudstone, limestone, felsic to intermediate lapilli tuff, tuff breccia and crystal lithic tuff.

CAPSULE GEOLOGY

Northeast-trending faults and shears cut the rocks.

Several north-trending alteration zones, up to 1000 metres long and 100 metres wide, occur in the area along north to northeast-trending faults and shears in the volcanic conglomerate. They consist mainly of weathered pyrite, but kaolinite and hairline quartz veining is present in the more intensely altered areas. Surrounding rocks have undergone propylitic alteration.

Mineralization comprises mainly disseminated pyrite, which forms 2 to 7 per cent of the alteration zones, and localized chalcopyrite, malachite and azurite with traces of sphalerite. A grab sample assayed 0.95 per cent copper and 0.24 per cent zinc, lead, silver and arsenic values were negligible and gold was slightly anomalous (Assessment Report 21745).

BIBLIOGRAPHY

EMPR ASS RPT 20399, *21745, 23254
EMPR OF 1994-14
GSC MAP 9-1957; 1418A
GSC OF 2582; 2688

DATE CODED: 1992/02/10 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1995/03/15 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104A 166**

NATIONAL MINERAL INVENTORY:

NAME(S): **DELTA 2**, FOX, STEWART, DELTAIC

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A12E
BC MAP:
LATITUDE: 56 36 22 N
LONGITUDE: 129 30 20 W
ELEVATION: 1372 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized outcrop (Assessment Report 21745).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6273656
EASTING: 468965

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite
ASSOCIATED: Pyrite
ALTERATION: Pyrite Kaolinite Quartz Malachite Azurite
ALTERATION TYPE: Pyrite Argillic Propylitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Volcanic Conglomerate
Volcanic Flow
Siltstone
Mudstone
Limestone
Felsic Lapilli Tuff
Tuff Breccia
Felsic Crystal Lithic Tuff

HOSTROCK COMMENTS: The property is underlain by Lower to Middle Jurassic Hazelton Group volcanics and sediments exposed in the Oweegee Dome.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1991
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Copper	0.3100	Per cent

COMMENTS: Grab(?) sample from gossan.
REFERENCE: Assessment Report 21745.

CAPSULE GEOLOGY

The Delta 2 showing is located about 80 kilometres northeast of Stewart, just east of the headwaters of the west branch of Deltaic Creek, a tributary of the Bell-Irving River, and southeast of the Delta Glacier.

Cominco Ltd. staked the Delta 1-2 claims in 1989. Geological mapping and sampling in 1990 outlined an area, 700 by 600 metres, containing a gold-copper-zinc anomaly. The following year Cominco performed further mapping, prospecting and rock and soil sampling. The showing was reported that year.

The area is underlain by Lower to Middle Jurassic Hazelton Group volcanics and sediments, of uncertain stratigraphic position, exposed in the Oweegee Dome. The Oweegee Dome is an inlier in the Upper Jurassic Bowser Lake Group. Green volcanic conglomerate is overlain by green volcanic flows, brown-black siltstone, mudstone, limestone, felsic to intermediate lapilli tuff, tuff breccia and crystal lithic tuff. Northeast-trending faults and shears cut the rocks.

CAPSULE GEOLOGY

Several north-trending alteration zones, up to 1000 metres long and 100 metres wide, occur in the area along north to northeast-trending faults and shears in the volcanic conglomerate. These zones consist mainly of weathered pyrite but kaolinite and hairline quartz veining is present in the more intensely altered areas. Surrounding rocks have undergone propylitic alteration.

Mineralization consists mainly of disseminated pyrite, which forms 2 to 7 per cent of the alteration zones, and localized chalcopyrite, malachite and azurite with traces of sphalerite. A grab sample assayed 0.31 per cent copper, anomalous zinc and gold and negligible lead, silver and arsenic (Assessment Report 21745).

BIBLIOGRAPHY

EMPR ASS RPT 20399, *21745, 23254
EMPR OF 1994-14
GSC MAP 9-1957; 1418A
GSC OF 2582; 2688

DATE CODED: 1992/02/11 CODED BY: WC FIELD CHECK: N
DATE REVISED: 1993/12/22 REVISED BY: GSB FIELD CHECK: N

MINFILE NUMBER: **104A 167**

NATIONAL MINERAL INVENTORY:

NAME(S): **NELSON 2 SOUTH**, NELSON 2, NELSON, NEL 1-4

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 02 37 N
LONGITUDE: 129 31 08 W
ELEVATION: 1211 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Sampled quartz vein hosted in fault (Sample 39921, Assessment Report 21813).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6211055
EASTING: 467675

COMMODITIES: Gold, Silver, Lead, Copper

MINERALS

SIGNIFICANT: Galena, Chalcopyrite
ASSOCIATED: Quartz, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Jurassic-Cretaceous	Bowser Lake	Unnamed/Unknown Formation	

LITHOLOGY: Chloritic Andesite
Tuff
Flow
Mudstone
Siltstone
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1991

COMMODITY	GRADE	
Silver	278.2000	Grams per tonne
Gold	4.5000	Grams per tonne
Lead	1.9500	Per cent

COMMENTS: Across 15 centimetres of the quartz vein hosted in the fault.
REFERENCE: Assessment Report 21813.

CAPSULE GEOLOGY

The Nelson 2 South showing is located about 1 kilometre to the south of the Nelson 2 showing (104A 151), south of the toe of the Nelson glacier and 31 kilometres east-northeast of Stewart. The Nelson property also includes the Nelson 3 showing (104A 152).

The area may have been explored in the late 1970s for porphyry-type mineralization but there are no records available. In 1986(?), Noranda Exploration Company Ltd. acquired the Nel 1-4 claims over the area and carried out prospecting and silt sampling. The work failed to encounter any significant mineralization with the exception of an anomalous gold value in a silt sample from the north side of the Nelson Glacier. In 1988, Bond Gold Canada Inc. staked the Nelson 1-3 claims over the area and performed reconnaissance geological mapping and sampling the following year. In 1991, Noranda conducted general prospecting on the Nelson property.

The area is underlain by Hazelton Group rocks of the Upper Triassic to Lower Jurassic Unuk River Formation. The rocks comprise andesitic tuffs and flows intercalated with mudstones, siltstones and conglomerates (Assessment Report 19424). These lie close to the

CAPSULE GEOLOGY

contact with Bowser Lake Group sediments to the east.
The showing is a north-south trending quartz vein hosted in a 1.5-metre wide fault zone near the southeast corner of the claim. The vein contained up to 3 per cent coarse-grained galena with trace amounts of chalcopyrite. The vein is hosted in sheared chloritic andesite.
A sample across 15 centimetres assayed 4.5 grams per tonne gold, 278.2 grams per tonne silver and 1.95 per cent lead (Sample 39921, Assessment Report 21813).

BIBLIOGRAPHY

EMPR BULL 63
EMPR ASS RPT 16126, *19424, 20200, *21813
EMPR MAP 8
GSC MAP 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED: 1993/03/03 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: 1993/03/24 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 168**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD VALLEY 6**, GOLD VALLEY 6-7, GOLD SPOT, LEHTO

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 01 13 N
LONGITUDE: 129 44 15 W
ELEVATION: 1453 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of sampled shear zone on the Gold Valley 6 claim (Sample #45703B, Assessment Report 21966).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6208582
EASTING: 454028

COMMODITIES: Gold, Silver, Lead, Copper, Zinc

MINERALS

SIGNIFICANT: Galena, Sphalerite, Chalcopyrite, Pyrite
ASSOCIATED: Quartz, Carbonate, Barite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Shear
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au; J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY:
Siltstone
Argillite
Wacke
Talc Schist
Andesite
Andesitic Pyroclastic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1991

COMMODITY	GRADE	
Silver	28.2000	Grams per tonne
Gold	1.4800	Grams per tonne
Copper	0.0500	Per cent
Lead	0.1300	Per cent
Zinc	0.0800	Per cent

COMMENTS: Sample 45703B from a seam of pyrite.
REFERENCE: Assessment Report 21966.

CAPSULE GEOLOGY

The Gold Valley 6 showing is located about 17 kilometres northeast of Stewart.

There is no record of previous work on this property. Bond Gold prospected the property and discovered this showing in 1991.

The area is underlain by volcanic and sedimentary rocks of the Upper Triassic to Lower Jurassic Hazelton Group. The rocks comprise andesitic pyroclastics, siltstone, argillite and wacke.

A mineralized shear zone, subvertical and trending northwest, occurs on the Gold Valley 6 and 7 claims. The shear zone is hosted in a sequence of siltstone, argillites and wackes which are partly altered to talc schist. Galena, sphalerite, chalcopyrite and pyrite occur in a gangue of quartz, carbonate and barite. The shear zone is associated with abundant subhorizontal extensional quartz-sulphide veinlets.

Eight samples were taken from this zone, one sample (45703B) from a seam of pyrite assayed 1.48 grams per tonne gold, 28.2 grams per tonne silver, 0.05 per cent copper, 0.13 per cent lead and 0.08

CAPSULE GEOLOGY

per cent zinc (Assessment Report 21966). Samples from the quartz veins assayed higher in base metals.

BIBLIOGRAPHY

EMPR ASS RPT 20200, *21966
EMPR BULL 63
EMPR MAP 8
GSC MEM 32; 175
GSC MAP 28A; 216A; 217A; 307A; 315A; 9-1957; 1418A
GSC OF 2582

DATE CODED:	1993/03/04	CODED BY:	DEJ	FIELD CHECK:	N
DATE REVISED:	1993/03/04	REVISED BY:	DEJ	FIELD CHECK:	N

MINFILE NUMBER: **104A 169**

NATIONAL MINERAL INVENTORY:

NAME(S): **VON 2 SOUTH**, VON 2, BARITE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 07 51 N
LONGITUDE: 129 41 13 W
ELEVATION: 1514 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Veins located at the southeast corner of the Von 2 claim (Assessment Report 20784).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6220854
EASTING: 457302

COMMODITIES: Lead

MINERALS
SIGNIFICANT: Pyrite Galena
ASSOCIATED: Quartz Carbonate
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: 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
Lower Jurassic	Hazelton	Betty Creek	
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Siltstone
Volcanic Sandstone
Andesite
Greywacke
Tuff
Flow
Chert
Carbonate
Rhyodacite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Von 2 South showing is located on the Von 2 claim, at the end of Cullen Creek, a tributary of the Bear River, about 50 kilometres northeast of Stewart.

The area has seen some exploration activity, primarily associated with the Crown-granted claims. There are no records of this work but there is evidence of prospecting and trenching. The work was most likely done in the 1970s and 1980s. The Barite and Von claims were acquired by Teuton Resources in 1989. In 1990, Teuton Resources conducted stream sediment sampling, geological mapping, rock geochemical sampling and prospecting on the claims. In 1991, Teuton conducted geochemical (soil and silt) and rock sampling. The showing was not included in this work.

The area is underlain by Hazelton Group rocks. The northwest trending contact between the Betty Creek Formation and the underlying Unuk River Formation, is near the showing. The Betty Creek Formation comprises bedded purple to green volcanic sandstone and siltstone with sporadic intercalated andesitic volcanic flows, chert and minor carbonate lenses. Unuk River Formation rocks comprise green-grey argillaceous siltstones and lithic greywackes intercalated with coarsely layered volcanic sandstone and tuff. This sequence also includes pyritic, propylitized and deformed amygdaloidal andesitic flows and lenses irregularly intercalated with the siltstones. Thin lenticular rhyodacite flows interfinger with the more thinly bedded siltstone sequence near the contact.

A north trending fracture zone has developed oblique to the Cullen Creek fault/shear zone in the northwest corner of the Von 2 claim (104A 170). The Cullen Creek valley is the main shear zone in

CAPSULE GEOLOGY

the area.
Grab samples were taken in 1990 from this area (Samples GW-R-1 to 6, Assessment Report 20784). These samples were taken from 1) a quartz lens, hosted in siltstone in a shear, mineralized with pyrite and minor malachite, and 2) a quartz carbonate vein, 0.5 to 1.2 metres wide, with pyrite and galena blebs throughout. No assay results are available.

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR MAP 8
EMPR ASS RPT *20784, 22033
GSC MAP 307A; 315A; 9-1957; 1418
GSC OF 2582

DATE CODED: 1993/03/25 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: 1993/03/25 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 170**

NATIONAL MINERAL INVENTORY:

NAME(S): **VON 2 NORTH**, VON 2, BH 3, BH 4, BARITE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 08 14 N
LONGITUDE: 129 41 52 W
ELEVATION: 1360 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized zone located at the northwest corner of the Von 2 claim (Assessment Report 20784).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6221571
EASTING: 456636

COMMODITIES: Silver, Gold, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Pyrite, Galena, Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epithermal, Hydrothermal, Epigenetic
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn, I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Dacite Tuff
Andesite
Andesite Tuff
Andesitic Breccia
Tuff
Volcanic Sediment/Sedimentary
Chert
Limestone
Rhyodacite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1990

COMMODITY	GRADE	
Silver	415.0000	Grams per tonne
Gold	4.1400	Grams per tonne
Lead	16.2400	Per cent

COMMENTS: A 1.5 metre chip sample (GW-R-18) from a quartz-pyrite vein up to 30 centimetres wide containing disseminated to massive galena.
REFERENCE: Assessment Report 20784.

CAPSULE GEOLOGY

The Von 2 North showing is located at the northwest corner of the Von 2 claim, near the end of Cullen Creek, a tributary of the Bear River, about 50 kilometres northeast of Stewart. The Von 2 South showing (104A 169) occurs to the southeast.

The area has seen some exploration activity, primarily associated with the Crown-granted claims. There are no records of this work but there is evidence of prospecting and trenching. The work was most likely done in the 1970s and 1980s. The Barite and Von claims were acquired by Teuton Resources in 1989. In 1990, Teuton Resources conducted stream sediment sampling, geological mapping, rock geochemical sampling and prospecting on the claims. In 1991, Teuton conducted geochemical (soil and silt) and rock sampling. The

CAPSULE GEOLOGY

showing (comprising the BH 3 and BH 4 showings) was sampled at this time.

The area is underlain by Hazelton Group rocks. These comprise andesitic tuffs and breccias of the Upper Triassic to Lower Jurassic Unuk River Formation and volcanic sediments and tuffs with minor chert and limestone of the Lower Jurassic Betty Creek Formation. At the mouth of Cullen Creek is a small monzonite stock probably related to the Tertiary Bitter Creek dike swarm.

The property is underlain predominantly by volcanic (probably andesitic) tuffs, breccias and conglomerates. The northwest trending contact between the Betty Creek Formation and the underlying Unuk River Formation, is near the showing. Thin lenticular rhyodacite flows interfinger with the more thinly bedded siltstone sequence near the contact. A north trending fracture zone has developed oblique to the Cullen Creek fault/shear zone in the northwest corner of the Von 2 claim. The zone is silicified and contains veins and semi-massive galena, chalcopyrite and pyrite. The fractures appear to be semi-continuous.

This area represents one of the more intensely mineralized areas on the Barite property. Numerous pyrite and pyrite-bearing quartz veins are present. The veins average 20 to 30 centimetres in width and continue for at least 50 metres. The veins generally trend north-south and dip vertically. The veins occur at a frequency of at least 1 every 10 metres, over an area of 500 by 500 metres. One sample (BR473) assayed 77.5 grams per tonne silver and 10.89 per cent iron (Assessment Report 22033). Fifteen samples from this area assayed more than 10 grams per tonne silver and 2 samples had greater that 0.1 per cent arsenic. One massive pyrite vein, about 5 metres wide, strikes 155 degrees, dips vertically and can be traced for at least 75 metres to the south.

In 1990, samples were taken from a massive sulphide zone in sheared and silicified dacite tuff containing semi-massive pyrite, chalcopyrite and galena. A 3-metre chip sample from this zone assayed 0.300 gram per tonne gold, 30 grams per tonne silver, 0.23 per cent lead and 1 per cent zinc (Sample GW-R-17, Assessment Report 20784). Another chip sample from a narrow quartz vein assayed 4.14 grams per tonne gold, 415 grams per tonne silver and 16.24 per cent zinc (Sample GW-R-18, Assessment Report 20784).

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR MAP 8
EMPR ASS RPT *20784, *22033
GSC MAP 307A; 315A; 9-1957; 1418
GSC OF 2582

DATE CODED: 1993/03/25 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: 1993/03/25 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 171**

NATIONAL MINERAL INVENTORY:

NAME(S): **BH 1**, BARITE 2, BARITE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 08 02 N
LONGITUDE: 129 43 45 W
ELEVATION: 1211 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing BH1, located on the north-central Barite 2 claim (Assessment Report 22033).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6221221
EASTING: 454681

COMMODITIES: Silver, Zinc, Lead

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

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Mafic Volcanic Breccia
Andesite
Andesitic Tuff
Andesitic Breccia
Volcanic Sediment/Sedimentary
Tuff
Chert
Limestone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1991
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	171.0000	Grams per tonne
Lead	2.4000	Per cent
Zinc	4.6000	Per cent

COMMENTS: Sample (BR-461) from a 10 to 20-centimetre wide vein in a shear zone.
REFERENCE: Assessment Report 22033.

CAPSULE GEOLOGY

The BH 1 showing is located on the north-central Barite 2 claim, just west of Cullen Creek, a tributary of the Bear River, about 50 kilometres northeast of Stewart.

The area has seen some exploration activity, primarily associated with the Crown-granted claims. There are no records of this work but there is evidence of prospecting and trenching. The work was most likely done in the 1970s and 1980s. The Barite and Von claims were acquired by Teuton Resources in 1989. In 1990, Teuton Resources conducted stream sediment sampling, geological mapping, rock geochemical sampling and prospecting on the claims. In 1991, Teuton conducted geochemical (soil and silt) and rock sampling. The showing was sampled at this time.

The area is underlain by Hazelton Group rocks. These comprise andesitic tuffs and breccias of the Upper Triassic to Lower Jurassic Unuk River Formation and tuffs with minor chert and limestone of the Lower Jurassic Betty Creek Formation. At the mouth of Cullen Creek is a small monzonite stock probably related to the Tertiary Bitter Creek dike swarm.

CAPSULE GEOLOGY

The property is underlain predominantly by volcanic (probably andesitic) tuffs, breccias and conglomerates. The Cullen Creek fault/shear zone trends northeast along the valley and is the main structure in the area.

Small massive galena veins and several pyrite-bearing quartz veins, containing minor amounts of sphalerite, occur in the area. One sample (BR-459A), from a 3-centimetre wide vein, assayed 1760 grams per tonne silver and 65.6 per cent lead (Assessment Report 22033).

A 10 to 20-centimetre wide vein occurs in a shear which is traceable for 50 metres. The shear zone consists of brecciated rock fragments, with 5 per cent sphalerite and 5 per cent pyrite, and is hosted in a mafic volcanic breccia. The sulphides are generally concentrated along the fracture surfaces. A sample (BR-461) from the vein assayed 4.6 per cent zinc, 2.4 per cent lead and 171 grams per tonne silver (Assessment Report 22033).

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR MAP 8
EMPR ASS RPT 20784, *22033
GSC MAP 307A; 315A; 9-1957; 1418
GSC OF 2582

DATE CODED: 1993/03/25 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: 1993/03/25 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 172**

NATIONAL MINERAL INVENTORY:

NAME(S): **BS 2**, BARITE 2, BARITE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 08 04 N
LONGITUDE: 129 44 34 W
ELEVATION: 1468 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing BS 2, located at the northwestern corner of the Barite 2 claim (Assessment Report 22033).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6221292
EASTING: 453836

COMMODITIES: Silver, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Galena, Sphalerite, Chalcopyrite, Pyrite
ASSOCIATED: Quartz, Barite
ALTERATION: Silica, Malachite, Clay
ALTERATION TYPE: Silicific'n, Oxidation, Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Mafic Volcanic
Andesite
Andesitic Tuff
Andesitic Breccia
Volcanic Sediment/Sedimentary
Tuff
Chert
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1991

COMMODITY	GRADE	
Silver	47.3000	Grams per tonne
Copper	0.2172	Per cent
Lead	0.5130	Per cent
Zinc	0.4181	Per cent

COMMENTS: Sample (SR-32) from a quartz vein containing minor chalcopyrite, galena and malachite in a clay envelope.
REFERENCE: Assessment Report 22033.

CAPSULE GEOLOGY

The BS 2 showing is located in the northwestern corner of the Barite 2 claim, near Cullen Creek, a tributary of the Bear River, about 50 kilometres northeast of Stewart.

The area has seen some exploration activity, primarily associated with the Crown-granted claims. There are no records of this work but there is evidence of prospecting and trenching. The work was most likely done in the 1970s and 1980s. The Barite and Von claims were acquired by Teuton Resources in 1989. In 1990, Teuton Resources conducted stream sediment sampling, geological mapping, rock geochemical sampling and prospecting on the claims. In 1991, Teuton conducted geochemical (soil and silt) and rock sampling. The showing was sampled at this time.

The area is underlain by Hazelton Group rocks. These comprise andesitic tuffs and breccias of the Upper Triassic to Lower Jurassic

CAPSULE GEOLOGY

Unuk River Formation and volcanic sediments and tuffs with minor chert and limestone of the Lower Jurassic Betty Creek Formation. At the mouth of Cullen Creek is a small monzonite stock probably related to the Tertiary Bitter Creek dike swarm.

The property is underlain predominantly by volcanic (probably andesitic) tuffs, breccias and conglomerates. The northeast Cullen Creek fault/shear zone is the main structure in the area.

A series of silicified outcrops containing minor amounts of galena, sphalerite and chalcopyrite occur in the area. Trace amounts of disseminated galena, sphalerite and chalcopyrite occur along some of the fracture surfaces. The volcanics hosting this mineralization are heavily silicified and quite rusty. Sampling in 1991 covered a 100 by 100 metre area.

A grab sample was taken from a quartz vein, striking 165 degrees and dipping 7 degrees west, containing minor chalcopyrite, galena and malachite in a clay altered envelope. The sample (SR-32) assayed 47.3 grams per tonne silver, 0.2172 per cent copper, 0.5130 per cent lead and 0.4181 per cent zinc (Assessment Report 22033).

Another grab sample came from a discontinuous fracture, striking 140 degrees, in mafic volcanics is filled with quartz, barite and less than 1 per cent pyrite and galena. The sample (SR-34) assayed 18.2 grams per tonne silver, 0.1282 per cent copper and 1.52 per cent lead (Assessment Report 22033).

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR MAP 8
EMPR ASS RPT 20784, *22033
GSC MAP 307A; 315A; 9-1957; 1418
GSC OF 2582

DATE CODED: 1993/03/25 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: 1993/03/25 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 173**

NATIONAL MINERAL INVENTORY:

NAME(S): **MG 1**, BARITE 4, BARITE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 08 26 N
LONGITUDE: 129 46 34 W
ELEVATION: 1453 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing MG 1, located on the west-central part of the Barite 4 claim (Assessment Report 22033).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6221994
EASTING: 451772

COMMODITIES: Silver, Lead, Zinc

MINERALS
SIGNIFICANT: Pyrite, Galena
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Breccia
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 125 x 1 Metres
STRIKE/DIP: 276/60S
TREND/PLUNGE:
COMMENTS: Quartz breccia shear zone.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Mafic Tuff
Andesite
Andesitic Tuff
Andesitic Breccia
Volcanic Sediment/Sedimentary
Tuff
Chert
Limestone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1991
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	80.4000	Grams per tonne
Lead	2.0000	Per cent
Zinc	0.1230	Per cent

COMMENTS: Sample (MR-249) from a quartz shear, 2 metres wide, containing pyrite, galena and malachite.
REFERENCE: Assessment Report 22033.

CAPSULE GEOLOGY

The MG 1 showing is located at the southwestern corner of the Barite 4 claim, west of Cullen Creek, a tributary of the Bear River, about 50 kilometres northeast of Stewart.

The area has seen some exploration activity, primarily associated with the Crown-granted claims. There are no records of this work but there is evidence of prospecting and trenching. The work was most likely done in the 1970s and 1980s. The Barite and Von claims were acquired by Teuton Resources in 1989. In 1990, Teuton Resources conducted stream sediment sampling, geological mapping, rock geochemical sampling and prospecting on the claims. In 1991, Teuton conducted geochemical (soil and silt) and rock sampling. The showing was sampled at this time.

The area is underlain by Hazelton Group rocks. These comprise

CAPSULE GEOLOGY

andesitic tuffs and breccias of the Upper Triassic to Lower Jurassic Unuk River Formation and volcanic sediments and tuffs with minor chert and limestone of the Lower Jurassic Betty Creek Formation. At the mouth of Cullen Creek is a small monzonite stock probably related to the Tertiary Bitter Creek dike swarm.

The property is underlain predominantly by volcanic (probably andesitic) tuffs, breccias and conglomerates. The northeast trending Cullen Creek fault/shear zone is the main structure in the area.

A quartz breccia shear zone, up to 3 metres wide and averaging 1 metre in width, has been traced for at least 125 metres. The zone, striking 276 degrees and dipping 60 degrees south, is hosted in mafic tuff. Pyrite, galena and malachite are present in varying amounts and some of the quartz is vuggy.

A random grab sample of a quartz shear, 2 metres wide, contained 20 per cent quartz and pyrite, 15 per cent malachite and 20 per cent galena. This sample assayed 80.4 grams per tonne silver, 2 per cent lead and 0.123 per cent zinc (Sample MR-249, Assessment Report 22033). Samples were taken along the 125 metres strike with assays up to 186 grams per tonne silver (Sample MR-251, Assessment Report 22033). The arsenic content was up to 0.2050 per cent.

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR MAP 8
EMPR ASS RPT 20784, *22033
GSC MAP 307A; 315A; 9-1957; 1418
GSC OF 2582

DATE CODED: 1993/03/25 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: 1993/03/25 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 174**

NATIONAL MINERAL INVENTORY:

NAME(S): **MG 2**, BARITE 4, BARITE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 08 28 N
LONGITUDE: 129 45 27 W
ELEVATION: 1506 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing MG 2, located on the east-central portion of the Barite 4 claim (Assessment Report 22033).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6222043
EASTING: 452929

COMMODITIES: Silver Lead Zinc

MINERALS

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

DEPOSIT

CHARACTER: 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
Triassic-Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Mafic Tuff
Andesite
Andesitic Tuff
Andesitic Breccia
Volcanic Sediment/Sedimentary
Tuff
Chert
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1991

COMMODITY	GRADE	
Silver	200.4000	Grams per tonne
Lead	36.7000	Per cent
Zinc	0.3683	Per cent

COMMENTS: Sample across 2-metre wide face (MR-224) of a 2 centimetre wide vein containing 90 to 100 per cent galena.
REFERENCE: Assessment Report 22033.

CAPSULE GEOLOGY

The MG 2 showing is located on the east-central portion of the Barite 4 claim, near Cullen Creek, a tributary of the Bear River, about 50 kilometres northeast of Stewart.

The area has seen some exploration activity, primarily associated with the Crown-granted claims. There are no records of this work but there is evidence of prospecting and trenching. The work was most likely done in the 1970s and 1980s. The Barite and Von claims were acquired by Teuton Resources in 1989. In 1990, Teuton Resources conducted stream sediment sampling, geological mapping, rock geochemical sampling and prospecting on the claims. In 1991, Teuton conducted geochemical (soil and silt) and rock sampling. The showing was sampled at this time.

The area is underlain by Hazelton Group rocks. These comprise andesitic tuffs and breccias of the Upper Triassic to Lower Jurassic Unuk River Formation and volcanic sediments and tuffs with minor chert and limestone of the Lower Jurassic Betty Creek Formation. At the mouth of Cullen Creek is a small monzonite stock probably related

CAPSULE GEOLOGY

to the Tertiary Bitter Creek dike swarm.

The property is underlain predominantly by volcanic (probably andesitic) tuffs, breccias and conglomerates. The northeast trending Cullen Creek fault/shear zone is the main structure in the area.

A series of irregular galena veins, up to 2 centimetres wide, generally strike between 070 and 050 degrees, dipping 39 to 64 degrees south. The veins have been traced along strike for at least 100 metres. The veins, hosted in mafic tuff, also contain quartz and calcite.

A chip sample (MR-224) across a 2 metre wide face of a 2 centimetre wide vein assayed 36.7 per cent lead, 200.4 grams per tonne silver and 0.3683 per cent zinc (Assessment Report 22033). The sample contained quartz and 90 to 100 per cent galena.

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR MAP 8
EMPR ASS RPT 20784, *22033
GSC MAP 307A; 315A; 9-1957; 1418
GSC OF 2582

DATE CODED: 1993/03/25 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: 1993/03/25 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104A 175**

NATIONAL MINERAL INVENTORY:

NAME(S): **MG 3**, BARITE 1, BARITE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104A04E
BC MAP:
LATITUDE: 56 08 22 N
LONGITUDE: 129 43 19 W
ELEVATION: 1287 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing MG 3, located on the east-central portion of the Barite 1 claim (Assessment Report 22033).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6221834
EASTING: 455137

COMMODITIES: Copper Silver Zinc Lead

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

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 80 Metres STRIKE/DIP: 134/90 TREND/PLUNGE:
COMMENTS: Vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Volcanic
Andesite
Andesitic Tuff
Andesitic Breccia
Volcanic Sediment/Sedimentary
Tuff
Chert
Limestone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	144.8000	Grams per tonne
Copper	3.0800	Per cent
Lead	3.0800	Per cent
Zinc	9.2800	Per cent

COMMENTS: Sample (MR270-D) from the quartz vein containing 10 per cent pyrite, 50 per cent sphalerite and 20 per cent chalcopyrite.
REFERENCE: Assessment Report 22033.

CAPSULE GEOLOGY

The MG 3 showing is located on the east-central portion of the Barite 1 claim, near Cullen Creek, a tributary of the Bear River, about 50 kilometres northeast of Stewart.

The area has seen some exploration activity, primarily associated with the Crown-granted claims. There are no records of this work but there is evidence of prospecting and trenching. The work was most likely done in the 1970s and 1980s. The Barite and Von claims were acquired by Teuton Resources in 1989. In 1990, Teuton Resources conducted stream sediment sampling, geological mapping, rock geochemical sampling and prospecting on the claims. In 1991, Teuton conducted geochemical (soil and silt) and rock sampling. The showing was sampled at this time.

The area is underlain by Hazelton Group rocks. These comprise andesitic tuffs and breccias of the Upper Triassic to Lower Jurassic

CAPSULE GEOLOGY

Unuk River Formation and volcanic sediments and tuffs with minor chert and limestone of the Lower Jurassic Betty Creek Formation. At the mouth of Cullen Creek is a small monzonite stock probably related to the Tertiary Bitter Creek dike swarm.

The property is underlain predominantly by volcanic (probably andesitic) tuffs, breccias and conglomerates. The northeast trending Cullen Creek fault/shear zone is the main structure in the area.

A quartz vein, containing sphalerite, chalcopyrite, pyrite and galena, is up to 20 centimetres wide and can be traced for over 80 metres. The vein strikes 134 degrees and dips vertically.

Chip samples (MR-270A, B, C, D and E) assayed 2.72 to 5.84 per cent copper, 119.3 to 255 grams per tonne silver, 0.41 to 15.92 per cent zinc and 0.32 to 3.32 per cent lead (Assessment Report 22033). One sample (MR-270D), containing 20 per cent chalcopyrite, 10 per cent pyrite and 50 per cent sphalerite, assayed 144.8 grams per tonne silver, 3.08 per cent copper, 9.28 per cent zinc and 3.08 per cent lead (Assessment Report 22033).

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR MAP 8
EMPR ASS RPT 20784, *22033
GSC MAP 307A; 315A; 9-1957; 1418
GSC OF 2582

DATE CODED: 1993/03/25 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: 1993/03/25 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 001**

NATIONAL MINERAL INVENTORY: 104B12 Cu1

NAME(S): **JOHNSON**, JOHNSON RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B12E
BC MAP:
LATITUDE: 56 44 10 N
LONGITUDE: 131 35 06 W
ELEVATION: 122 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Located on the north side of the Iskut River, 4.8 kilometres east of the Johnson River mouth.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6290995
EASTING: 341878

COMMODITIES: Silver, Lead, Copper, Zinc

MINERALS
SIGNIFICANT: Tetrahedrite, Galena, Chalcopyrite, Sphalerite
ASSOCIATED: Quartz, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
STRIKE/DIP: 220/60W
TREND/PLUNGE:

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Pennsylvan.-Permian	Stuhini	Undefined Formation	Stikine Assemblage

LITHOLOGY: Andesitic Tuff
Clastic Sediment/Sedimentary
Greenstone

HOSTROCK COMMENTS: Unnamed Upper Triassic undifferentiated volcanics and sediments overlie Permian-Carboniferous volcanics and sediments.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist
COMMENTS: Located near Coast Crystalline-Intermontane boundary.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1948
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	370.9000	Grams per tonne
Copper	3.4300	Per cent
Lead	5.0400	Per cent
Zinc	1.4700	Per cent

REFERENCE: Geological Survey of Canada, Memoir 246, page 78.

CAPSULE GEOLOGY

Along the Iskut River and to the south, are Permian to Carboniferous greenstone to clastic sedimentary rocks of the Paleozoic Stikine Assemblage. These rocks are regionally metamorphosed to greenschist facies nearing the Coast Plutonic contact. Unconformably overlying these rocks are undifferentiated Upper Triassic andesitic volcanic to clastic sedimentary rocks that may be correlative with upper members of the Stuhini Group.

The Johnson River showing is a well defined fracture vein zone, approximately 0.3 metre wide, varying locally in width up to 3.0 metres. The fracture vein system strikes 220 degrees dipping 60 degrees northwest, and consists predominantly of quartz, with lesser galena, chalcopyrite, tetrahedrite, sphalerite and pyrite. A representative sample of the better part of the main vein assayed trace gold, 370.9 grams per tonne silver, 3.43 per cent copper, 5.04 per cent lead and 1.47 per cent zinc (Geological Survey of Canada, Memoir 246, page 78).

BIBLIOGRAPHY

GSC MEM *246, p. 77-78
GSC MAP 9-1957; 311A; 1418A
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut,
Dec. 1988, (Showing No. B8)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1989/01/10 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 002**

NATIONAL MINERAL INVENTORY:

NAME(S): **TERMINUS**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 06 13 N
LONGITUDE: 130 01 19 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit in centre of Lot 3221.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6218082
EASTING: 436435

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite Sphalerite
ASSOCIATED: Quartz Calcite
ALTERATION: Sericite Silica
ALTERATION TYPE: Sericitic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210 +24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Tuff
Sediment/Sedimentary

HOSTROCK COMMENTS: Isotopic Age reference: Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1971
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	99.4300	Grams per tonne
Gold	1.4000	Grams per tonne
Lead	6.9500	Per cent
Zinc	0.7000	Per cent

COMMENTS: Fifteen centimetre sample.
REFERENCE: Assessment Report 3013.

CAPSULE GEOLOGY

The area is underlain by the Hazelton Group which is a north-west trending belt of folded volcanic rocks which contains a thick sedimentary sequence infolded along a synclinal axis. This group is bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin.

The host rocks are the Lower Jurassic Unuk River Formation of the Hazelton Group. The Terminus showing is underlain by andesitic tuff which is characterized by sericitization and partly by silicification. The mineralized zones occur in quartz and quartz-calcite veins that outcrop 200 metres west of Silver Creek (Harris). A short adit about 12 metres long cut several quartz veins that are mineralized with massive galena and minor chalcopyrite and sphalerite. A 15 centimetre chip sample cut across a vein near the portal of the adit assayed 6.95 per cent lead, 0.70 per cent zinc, 99.43 grams per tonne silver, and 1.4 grams per tonne gold (Assessment Report 3013).

BIBLIOGRAPHY

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EMPR AR 1911-73; 1916-522
EMPR ASS RPT 912, 2320, *3013, 8202
EMPR EXPL 1980-461
EMPR PF (Wikstrom, C.C., (1969): Letter)
GCNL #238, 1977
GSC MEM 132
GSC MAP 9-1957; 307A; 1418A; 1829
GSC P 89-1E, pp. 145-154
EMPR FIELDWORK 1980, pp. 201-209; 1982, pp. 182-195; 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217,218; 1986, pp. 81-92, *93-102
Galley, A. (1981): *Volcanic Stratigraphy and Gold-Silver Occurrences on the Big Missouri Claim Group, Stewart, British Columbia, M.Sc. Thesis, University of Western Ontario
Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)
CIM SPEC. Vol. 37, pp. 202-215

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/09/23 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 003**

NATIONAL MINERAL INVENTORY: 104B15 Fe1

NAME(S): **DON**, DON 12, DON 40

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 54 53 N
LONGITUDE: 130 49 18 W
ELEVATION: 600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located in the vicinity of the headwaters of Forrest Kerr Creek, location is the intersection of the Don 12 and Don 40 groups (Assessment Report 443).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6309371
EASTING: 389092

COMMODITIES: Copper, Silver, Gold

MINERALS
SIGNIFICANT: Tetrahedrite, Chalcopyrite, Pyrite
ASSOCIATED: Pyrite
ALTERATION TYPE: Skarn, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Skarn, Igneous-contact
TYPE: K01 Cu skarn

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Unnamed/Unknown Informal
Permian			Stikine Assemblage

LITHOLOGY: Skarn
Feldspar Porphyry Diorite
Limestone
Volcanic Rock
Sediment/Sedimentary Rock

HOSTROCK COMMENTS: Permian or older(?) volcanic and sedimentary sequence of the Paleozoic Stikine Assemblage intruded by Jurassic(?) feldspar porphyry diorite.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP: Syn-mineralization
GRADE:

CAPSULE GEOLOGY

The Don occurrence is located within a Permian or older(?) sequence of volcanic and sedimentary rocks which are part of the Paleozoic Stikine Assemblage. This sequence has reportedly been intruded by a Jurassic(?) feldspar porphyry diorite intrusion and mineralization occurs along a contact with limestone. Disseminated pyrite, tetrahedrite, and chalcopyrite occurs in skarned rocks. No assays are available.

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DATE CODED: 1985/07/24
DATE REVISED: 1989/01/09
CODED BY: GSB
REVISED BY: LLD
FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104B 004** NATIONAL MINERAL INVENTORY: 104B11 Cu1

NAME(S): **SNIP (T-WEST)**, BRONSON, BONANZA (REG), JOHNNY MOUNTAIN, EL ORAM (L.2862), SILVER KING (L.2863), GOLDEN PHEASANT (L.2864), ISKUT (L.2866), SILVER DOLLAR (L.2867), MARGUERITE (L.2868), BLUE GROUSE (L.2869), COPPER QUEEN (L.2870), BRONSON CREEK (BONANZA)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 39 02 N
LONGITUDE: 131 03 37 W
ELEVATION: 910 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Bonanza zone, which includes Crown Grant lots 2862 to 2870 inclusive, located south and parallel to Bronson Creek on the north slopes of Johnny Mountain (part of Reg property, refer to Stonehouse, 104B 107).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6280386
EASTING: 373683

COMMODITIES: Silver, Zinc, Lead, Gold, Copper

MINERALS

SIGNIFICANT: Pyrite, Pyrrhotite, Chalcopyrite, Sphalerite, Galena, Tetrahedrite
ALTERATION: Sericite, Calcite, Pyrite, Quartz
ALTERATION TYPE: Sericitic, Carbonate, Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound, Massive, Disseminated, Podiform
CLASSIFICATION: Mesothermal, Replacement, Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins, G07 Subaqueous hot spring Ag-Au
DIMENSION:
STRIKE/DIP: /45W
TREND/PLUNGE: 110/
COMMENTS: Three parallel mineralized shear zones.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Volcaniclastic
Sediment/Sedimentary Rock
Volcanic Rock

HOSTROCK COMMENTS: Upper Triassic to Lower Jurassic stratified sedimentary/volcanic sequence.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: BONANZA SILVER REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	698.7300	Grams per tonne
Gold	0.2400	Grams per tonne
Lead	24.8000	Per cent
Zinc	23.7000	Per cent

COMMENTS: Sample location 10 from Map area B1 of the Bonanza Silver zone.
REFERENCE: Skyline Explorations Ltd., Reg Project, 1984 Promotional Brochure.

ORE ZONE: BONANZA REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	98.7300	Grams per tonne
Copper	14.1000	Per cent

COMMENTS: Silver quantity is 13900.5 grams per tonne.
REFERENCE: GSC Memoir 246.

CAPSULE GEOLOGY

The Bonanza zone covers the ten crown-granted mineral claims that parallel Bronson Creek just north of the Stonehouse Gold deposit (104B 107). The showings within this zone are comprised of stratabound pyrite, pyrrhotite, chalcopyrite, sphalerite, galena, plus tetrahedrite replacement mineralization which shows evidence of sulphide remobilization into secondary fractures and kink folds. Host rocks consist mainly of an Upper Triassic to Lower Jurassic sedimentary/volcanic sequence which has been correlated with the Hazelton Group, Unuk River Formation. Some of these stratified rocks may be correlated with upper members of the Stuhini Gorup. The stratified Jurassic-Triassic rocks are intruded by intermediate to felsic stocks and plutons of Jurassic and younger age that are related to the Coast Plutonic Complex.

Near the showings, shears cut sharply across the folded sedimentary sequence at about 110 degrees and dip about 45 degrees to the west. Alteration includes sericitization, carbonatization, silicification and pyritization which together have produced a bleached envelope in the otherwise dark sediments. Between 1914 and 1917, about one tonne of ore was shipped from the showings which produced about 2.0 grams per tonne gold, 1515.4 grams per tonne silver and 12.45 per cent copper (Minister of Mines, Annual Report 1917, page 74). Traces of argentite were reported to occur with the sulphides (Minister of Mines, Annual Report 1919, page 83).

Grab samples taken from these showings in 1984 to 1986 have assayed as high as 14.1 per cent copper, 13903 grams per tonne silver and 98.7 grams per tonne gold. The overall results from trenching indicate a large tonnage that would grade about 0.7 per cent copper, 0.6 per cent lead, 3.5 per cent zinc, 127.0 grams per tonne silver and about 1.9 grams per tonne gold (Grove, 1987). The showings are extremely high in silver relative to base metal concentrations and host exceedingly rich, discontinuous ore pockets.

Work along Bronson Creek suggests that the Bonanza zone sulphide mineralization is confined strong, through going shears cutting sharply across the folded sedimentary rocks. Three parallel shears have been investigated and found to trend uniformly at about 110 degrees, dipping 45 degrees west. Each of these shears is marked by sericite, calcite, quartz and sulphide alteration and replacement (Grove, 1987).

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Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/20 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 005**

NATIONAL MINERAL INVENTORY: 104B11 Pb1

NAME(S): **CRAIG RIVER**, ROB, ROB 1,
DUNDEE, STANLEY 4

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E 104B11W
BC MAP:
LATITUDE: 56 36 39 N
LONGITUDE: 131 10 19 W
ELEVATION: 600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located south of the Iskut River on the northwest side of the Craig River, near the junction of Jekill River. The claims straddle the north and west flanks of Seraphim Mountain, showing located in the southeast corner of the Rob 1 claim.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6276177
EASTING: 366697

COMMODITIES: Lead, Copper, Wollastonite

MINERALS

SIGNIFICANT: Galena, Chalcopyrite, Wollastonite
COMMENTS: Coarsely crystalline galena, chalcopyrite and wollastonite were reported by Kerr (1929).
ASSOCIATED: Quartz
ALTERATION: Wollastonite, Limonite, Chlorite, Silica
ALTERATION TYPE: Skarn, Oxidation, Chloritic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Igneous-contact, Skarn, Industrial Min.
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary			Coast Plutonic Complex
Pennsylvan.-Permian			Stikine Assemblage

LITHOLOGY: Granodiorite
Skarn
Limestone
Meta Sediment/Sedimentary
Andesite Flow
Tuff

HOSTROCK COMMENTS: Permian limestone and older metavolcanics and sediments are intruded by granodiorite of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Syn-mineralization
GRADE: Hornfels
COMMENTS: Located at boundary of Coast Crystalline and Intermontane belts.

CAPSULE GEOLOGY

The area is located within Paleozoic Stikine Assemblage rocks with complicated structures that are bounded on the west by the intrusive margin of the Coast Plutonic Complex.

The oldest sequence comprises Permian to Lower Triassic limestones, siltstones, shales and conglomerates that overlie metamorphosed sedimentary and volcanic rocks.

The property is underlain predominantly by granodiorite which is in contact mainly with mafic volcanic flows. Minor limestone occurs in the extreme southeast part of the property near the junction of the Craig and Jekill Rivers.

The granodiorite is equigranular, medium-grained and is relatively unaltered except for local concentrations of chlorite and occasional areas containing iron-rich quartz veins.

The volcanics consist mainly of andesite flows with minor interbedded mafic tuffs. These are often highly oxidized with abundant limonite staining.

The carbonates consist of limestone and argillaceous limestone which interfinger with the volcanics in the southeast corner of the property. Kerr (1929) describes a mineral locality in the extreme southeast part of the property which consists of coarsely crystalline galena and chalcopyrite within the limestone. The limestone is in

CAPSULE GEOLOGY

contact with the granodiorite intrusive and is altered into mainly wollastonite and silica.

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/09/23 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 006**
NATIONAL MINERAL INVENTORY: 104B10 Ni1

NAME(S): **E & L**, NICKEL MOUNTAIN, SNIPPAKER CREEK

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B10E
BC MAP:
LATITUDE: 56 34 40 N
LONGITUDE: 130 41 42 W
ELEVATION: 1829 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the north side of the head of Snippaker Creek about 13 kilometres south of the Iskut River and 5 kilometres east of Snippaker Creek airstrip. (Property just north of the Cone Glacier.)

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6271673
EASTING: 395875

COMMODITIES: Nickel, Copper, Platinum, Silver, Titanium, Gold

MINERALS

SIGNIFICANT: Pentlandite, Chalcopyrite, Bornite, Ilmenite, Pyrrhotite, Magnetite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Epidote, Carbonate, Chlorite
ALTERATION TYPE: Epidote, Carbonate, Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Pipe, Massive, Disseminated
CLASSIFICATION: Magmatic, Igneous-contact, Industrial Min.
TYPE: M02 Tholeiitic intrusion-hosted Ni-Cu
COMMENTS: Mineralization may have a pipe-like form.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Salmon River	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Coarse Grained Gabbro
Olivine Gabbro
Diabase
Volcanic Breccia
Altered Argillite
Shaly Argillite

HOSTROCK COMMENTS: Lower Jurassic coarse-grained gabbro intrudes Salmon River Formation (see Fieldwork 1989, pages 337-341).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Contact
RELATIONSHIP: Syn-mineralization
GRADE:

INVENTORY

ORE ZONE: E & L
REPORT ON: Y

CATEGORY: Combined
YEAR: 1968
QUANTITY: 2927485 Tonnes

COMMODITY	GRADE	
Copper	0.6200	Per cent
Nickel	0.8000	Per cent

COMMENTS: Total for geologically indicated ore (indicated and inferred ore).
REFERENCE: Property File - Sharp, W.M., (1968): Letter to Nickel Mountain Mines.

ORE ZONE: E & L
REPORT ON: N

CATEGORY: Inferred
YEAR: 1968
QUANTITY: 1193855 Tonnes

COMMODITY	GRADE	
Copper	0.6200	Per cent
Nickel	0.8000	Per cent

COMMENTS: Inferred ore within the Northwest and Southeast zones.
REFERENCE: Property File - Sharp, W.M., (1968): Letter to Nickel Mountain Mines.

INVENTORY

ORE ZONE: E & L REPORT ON: N

CATEGORY: Indicated YEAR: 1968
QUANTITY: 1733630 Tonnes

COMMODITY	GRADE	
Copper	0.6200	Per cent
Nickel	0.8000	Per cent

COMMENTS: Indicated ore to a depth of 213 metres.
REFERENCE: Property File - Sharp, W.M., (1968): Letter to Nickel Mountain Mines.

CAPSULE GEOLOGY

The E & L deposit, the second largest nickel resource in British Columbia, is located on Nickel Mountain in the Iskut River district north of Stewart. The deposit consists of pyrrhotite, pentlandite and chalcopyrite hosted in an olivine gabbro stock that intrudes Lower Jurassic sediments and volcanics. Exploration has identified 2.9 million tonnes grading 0.80 per cent nickel and 0.62 per cent copper with anomalous values in gold, silver and platinum group elements (Quartermain, R.A., 1987; Sharp, W.M., 1968). Fieldwork by the Geological Survey Branch was completed in 1988 and 1989 as part of an ongoing regional mapping project in the Iskut-Sulphurets area. Nickel Mountain is located in the headwaters of Snippaker Creek, 27 kilometres east-southeast of the Bronson Creek airstrip and 300 kilometres northwest of Smithers.

The Nickel Mountain stock crops out at 1850 metres elevation along the crest of a steep ridge sloping south toward Snippaker Creek and continues northward as a series of razorback ridges around glaciers and snowfields. Regionally, strata trend northeast with gentle to moderate northwest dips. The Nickel Mountain gabbro intrudes a thick sedimentary and volcanic sequence of the Lower Jurassic Hazelton Group. A large monzodiorite pluton intrudes the volcano-sedimentary package 3 kilometres northwest of the deposit. Regional deformation postdates the pluton. Late post-deformation mafic dykes crosscut all rocks in the area.

Sedimentary strata hosting the mineralized gabbro stock are black laminated shales of the Lower to Middle Jurassic Salmon River Formation. The basal calcareous grit and fossiliferous limestone member of the Salmon River formation type section has not been identified in the Nickel Mountain area. A thick sequence of felsic to intermediate volcanics and thin interbedded sediments underlies the Salmon River Formation. The package consists primarily of dacitic ash tuffs and lapilli tuffs, commonly plagioclase porphyritic. Thin sedimentary units are distributed randomly throughout the volcanics. This volcanic sequence can be correlated with the Lower Jurassic Betty Creek Formation (Hancock, 1990).

The Nickel Mountain gabbro is a unique lithology in the Stewart-Iskut district. The gabbro intrusions consist of four small plugs less than 100 metres wide at surface, one large stock approximately 800 metres across and a dyke swarm approximately 250 metres wide, all occurring along a 3 kilometre northeast trend. The large stock and dyke swarm may be connected as they are separated by a large ice-filled cirque. The stratigraphic and structural evidence suggests the intrusion of the gabbro postdates the Lower to Middle Jurassic sediments and predates the mid-Cretaceous deformation. This brackets the age of intrusion at 185 to 110 Ma.

A large pluton of porphyritic quartz-monzodiorite, the Jurassic Lehto porphyry, truncates sedimentary strata of the Salmon River Formation north and northwest of Nickel Mountain. The rock is typically medium to coarse grained with white plagioclase, pink potassium feldspar, grey quartz, black hornblende and lesser biotite. Medium-grained diorite dykes crosscut all other units in the area and are most probably Tertiary in age. They are typically rusty weathering, dark grey diorites, 1 to 10 metres wide.

Regional deformation has been dated at approximately 110 Ma in the Stewart area (Alldrick, D.J. et al, 1987). At Nickel Mountain there is a general northeast-southwest shortening. Sediments have taken up most of the stress in open, cylindrical folds. Stereonet plots indicate one phase of folding with a fold axis of 15/305 and an axial plane of 126/80SW. Weak penetrative axial planar cleavage is present in the fine grained sediments. Volcanic units are block faulted with individual blocks generally undeformed. Interbedded sediments show small scale folding. Tertiary northwest-southeast extension controlled intrusion of the diorite dykes.

Nickel and copper sulphide mineralization occurs exclusively within the central gabbro body. At surface there are three major mineralized zones. The Northwest and Southeast zones are the most significant; both are roughly triangular with dimensions of 60 x 45 x 45 metres. The East zone is considerably smaller and less

CAPSULE GEOLOGY

continuously mineralized than the other two. Surface and underground drilling indicate an irregular pipe-like form, possibly interconnected to the three zones at depth (Jeffery, W.G., 1966). Structural data collected by Sumitomo Metal Mining Corporation indicate a steep southwest plunge to the mineralized pipes (Hirata, Y., 1972). Vertical extent of the mineralization has been proved to a depth of 210 metres and the zones remain open laterally and to depth.

Mineralization is localized along the margins of the intrusion as irregular pipelike zones of veins, disseminations and massive lenses. The mineral textures and spatial relationship of the sulphides to the gabbro indicate that the mineralization is magmatic. Pyrrhotite, pentlandite and chalcopyrite are the dominant sulphides with minor amounts of pyrite, magnetite and "siegenite". Nickel occurs predominantly in pentlandite, but it is also present in a secondary nickel sulphide with a composition between siegenite (Co,Ni)3S4, and violarite (Ni,Fe)3S4. Chalcopyrite shows minor supergene alteration where covellite locally forms rims around the chalcopyrite and occasionally completely replaces it. Trace amounts of cobalt, noted in assay results, probably occurs in both the pentlandite, replacing iron, and the siegenite (Cabri, L.J., 1966). Gabbro within and around mineralized zones shows extensive alteration; olivine grains are partially or totally altered to serpentine, most plagioclase is altered and abundant chlorite, amphibole, biotite, carbonate, epidote and prehnite occur throughout the matrix (Hirata, Y., 1972).

Alteration of the host sediments is limited to an aureole less than 20 metres wide, of intense bleaching to a light green colour and partial loss of textures. Previous mapping identified these thermally altered sediments as either chert, siliceous tuffs or metadiorite.

Nickel Mountain was initially prospected in 1958 by Ed and Lela Freeze for the BIK syndicate (Silver Standard Mines Limited, Kerr-Addison Gold Mines Limited and McIntyre Porcupine Mines Limited). The E & L claims were staked at that time and geological mapping, geochemical sampling, hand trenching and packsack drilling were carried out. Sumitomo Metal Mining Corporation optioned the E & L claims in 1970 and began an aggressive underground exploration program. A 450-metre adit was collared 390 metres below the surface showings and driven towards the mineralized zone (Hirata, Y., 1972). Nine underground diamond-drill holes tested the downward extent of mineralization. Subsequent activity on the property has been minor. In 1986 and 1987 ground magnetometer and airborne magnetic/VLF electromagnetic surveys were conducted by Western Geophysical Aero Data Ltd. to outline mineralization beneath the cirque to the northeast. In 1986 selected grab samples were analyzed for platinum group elements.

Work on the E & L claims has identified three zones of nickel-copper mineralization exposed at surface and three additional zones underground. Published reserves are presented in the following table:

Indicated and Inferred Reserves

Category	Tonnes (000's)	Ni %	Cu %	Au g/t	Ag g/t
Trench and Drill Indicated	1734	0.80	0.62	0.34	6.8
Inferred	1194	0.80	0.62	0.34	6.8

(Exploration Summary, 1976; Quartermain, R.A., 1987; Sharp, W.M., 1968).

Platinum group element values ranging from less than 50 to 400 ppb platinum and from less than 5 to 415 ppb palladium were obtained from grab samples collected in trenches by Consolidated Silver Standard Mines Limited in 1986 (Quartermain, R.A., 1987) and Ministry geologists in 1988.

The Nickel Mountain area is the site of the second largest nickel deposit in British Columbia. The host rock gabbro and its related nickel-copper deposit were emplaced mid-Jurassic to mid-Cretaceous time and are therefore unrelated to the main Lower Jurassic and mid-Tertiary plutonic suites of the region. This suggests that the extensive Jurassic Bowser basin stratigraphy to the east is prospective terrain for similar deposits.

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N MINER Dec.4, 1969
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B31)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1990/02/12 REVISED BY: KDH FIELD CHECK: Y

MINFILE NUMBER: **104B 007** NATIONAL MINERAL INVENTORY:

NAME(S): **COPPER KING**, LEHTO, PARADIGM

STATUS: Showing MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B10E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 36 32 N NORTHING: 6274946
LONGITUDE: 130 33 54 W EASTING: 403939
ELEVATION: 670 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located along Harrymel Creek, just below the junction of the Copper King and Melville Glaciers.

COMMODITIES: Copper Iron Gold

MINERALS
SIGNIFICANT: Chalcopyrite Pyrrhotite Pyrite
COMMENTS: Gold is reported to be associated with copper-iron mineralization.
ASSOCIATED: Quartz
ALTERATION: Pyrite
ALTERATION TYPE: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Massive
CLASSIFICATION: Replacement Epigenetic Hydrothermal Industrial Min.
TYPE: G04 Besshi massive sulphide Cu-Zn I02 Intrusion-related Au pyrrhotite veins
DIMENSION: STRIKE/DIP: /70W TREND/PLUNGE: 360/
COMMENTS: Mineralization occurs in north trending fault which dips 60 to 85 degrees west.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Flow Breccia
Felsite
Andesitic Flow
Andesite
Siltstone
Argillite
Limestone
Cataclasite
Biotite Chlorite Epidote Schist

HOSTROCK COMMENTS: Jurassic-Triassic South Unuk cataclasite zone (Bulletin 63, Figure 13).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE:

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	17.0000	Grams per tonne

COMMENTS: Gold up to 17 grams per tonne has been reported.
REFERENCE: Vancouver Stockwatch, Jan. 17, 1989.

CAPSULE GEOLOGY

The Copper King occurrence is underlain by the Lower Jurassic (Hazelton Group Unuk River Formation) to the east and the Upper Triassic Stuhini Group to the west.

The contact between the Triassic and Lower Jurassic rocks is marked by an extensive north-northwest trending cataclasite zone, known as the South Unuk Zone, which contains biotite-chlorite-epidote schist (Bulletin 63, Figure 13).

The main showing occurs north of a prominent east-west gorge and

CAPSULE GEOLOGY

west of Harrymel Creek. A north trending fault zone which dips 60 to 85 degrees west is the host for the mineralization. To the west of the fault zone laminated flow breccias and felsite flows occur. Limestone, argillite, and siltstone are underlain by laminated felsite and andesitic flows grading into massive andesitic flows and breccias. The showing generally comprises small replacement bodies of massive fine-grained pyrrhotite and chalcopyrite which occur along the western edge of the fault zone and in felsite lenses which are 3 to 9 metres long and 0.3 metres wide. In addition, small stringers of pyrite on the eastern side of the fault zone also contain pyrrhotite and chalcopyrite.

At some locations, up to 17 grams per tonne gold is reported to accompany the copper-iron sulphide mineralization (Vancouver Stockwatch Jan. 17, 1989).

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/14 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 008** NATIONAL MINERAL INVENTORY: 104B9 Au1

NAME(S): **ESKAY CREEK**, MACKAY, ESKAY,
EMMA, KAY, TOK,
SIB, UNUK, VERNA D.,
21 (A,B,C), NEX, HANGINGWALL,
HW, 109, PUMPHOUSE

STATUS: Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B09W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 39 14 N NORTHING: 6279772
LONGITUDE: 130 25 44 W EASTING: 412397
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: 21 zone, approximately 84 kilometres north-northwest of Stewart and 4 kilometres east of Tom Mackay Lake on the Prout Plateau between the Unuk and Iskut rivers.

COMMODITIES: Gold Silver Zinc Copper Lead

MINERALS

SIGNIFICANT: Sphalerite Tetrahedrite Boulangerite Bournonite Galena
Pyrite Stibnite Realgar Orpiment Electrum
Gold Silver Chalcopyrite Aktashite Wurtzite
Arsenopyrite
ALTERATION: Chlorite Muscovite Silica Quartz Calcite
Dolomite Pyrobitumen Barite
COMMENTS: Also gypsum and potassium feldspar.
ALTERATION TYPE: Chloritic Sericitic Silicific'n Carbonate
MINERALIZATION AGE: Lower Jurassic
ISOTOPIC AGE: DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Stratabound Massive Disseminated Stockwork
CLASSIFICATION: Volcanogenic Hydrothermal Epithermal
TYPE: G07 Subaqueous hot spring Ag-Au G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
SHAPE: Tabular
MODIFIER: Faulted Sheared
DIMENSION: 1400 x 250 x 5 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: 21 zone; 5 to 45 metres thick. Age date of mineralization from Exploration in British Columbia 1989.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Salmon River	
Lower Jurassic	Hazelton	Mount Dilworth	

LITHOLOGY: Carbonaceous Mudstone
Rhyolite Mudstone Breccia
Rhyolite Breccia
Andesite Flow
Rhyolite
Andesite
Tuffaceous Mudstone
Pillow Basalt

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Lower greenschist facies.

INVENTORY

ORE ZONE: ESKAY CREEK REPORT ON: Y

CATEGORY: Combined YEAR: 2000
QUANTITY: 1467000 Tonnes

COMMODITY	GRADE	
Silver	2025.9500	Grams per tonne
Gold	44.8600	Grams per tonne

COMMENTS: Proven and probable reserves as of December 31, 2000.
REFERENCE: Homestake Mining Company Annual Report 2000.

CAPSULE GEOLOGY

The Eskay Creek deposits lie in the centre of the Iskut-Sulphurets gold camp in the Unuk River valley. Bedrock in the Unuk map area consists of a thick (more than 5000 metres) succession of Upper Triassic to Middle Jurassic volcano-sedimentary arc-complex lithologies (Stuhini and Hazelton groups) underlain by Permian and older arc and shelf sequences (Stikine Assemblage) and overlain by Middle and Upper Jurassic marine-basin sediments (Bowser Lake Group). Rocks have been folded, faulted and weakly metamorphosed, mainly during Cretaceous time. Dioritic to granitic rocks that crop out east and west of the Prout Plateau represent at least four intrusive episodes spanning Triassic to Tertiary time. Remnants of Pleistocene to Recent basaltic eruptions are preserved locally (Exploration in British Columbia 1989).

The Eskay Creek deposits area is underlain by a northwest-facing sequence of interbedded volcaniclastic rocks, flows and sediments of the Lower-Middle Jurassic Hazelton Group. Strata strike north-northeasterly and dip moderately to the northwest. The presence of fossils, pillow lavas and hyaloclastites suggests that many of the rocks were deposited in a subaqueous environment.

An 1100-metre section straddling Eskay Creek is divided into 6 lithostratigraphic sequences, from oldest to youngest: (1) lower volcano-sedimentary unit: inferred basement to the footwall dacite unit including the oldest rocks on the property; (2) footwall dacite unit: dacite lapilli, crystal and lithic tuffs interbedded with black mudstone and waterlain tuff (includes the "datum dacite" member; (3) rhyolite unit: rhyolite breccia and tuff; minor mudstone; (4) contact unit: basal rhyolite-mudstone breccia ("transition zone") grading upwards into carbonaceous mudstone; (5) hanging. wall andesite unit: pillowed andesite flows and breccias with thin carbonaceous mudstone interbeds; and (6) upper sedimentary unit: thin-bedded siltstone and fine sandstone with minor arenite-conglomerate beds.

The lower volcano-sedimentary unit is of unknown thickness and consists of mixed andesitic to dacitic volcaniclastic rocks and immature fine to medium grained sedimentary rocks. This unit is correlated with the Lower Jurassic Betty Creek Formation (Hazelton Group).

The footwall dacite unit comprises in excess of 100 metres of drab grey to white dacite tuff, tuffaceous wacke and mudstone. Dacitic volcanics are predominantly tuff and ash-flow tuff, with lesser volumes of lithic tuff and breccia. An important marker, the datum dacite member, comprises pink to green, fine grained, feldspar phyric tuff and lapilli breccia; it occurs near the top of the unit. The footwall dacite unit was assigned to the Lower Jurassic Mount Dilworth Formation (Hazelton Group) but recent interpretations suggest that it is a member of the Lower Jurassic Betty Creek Formation (Hazelton Group).

The rhyolite unit ranges from 30 to 110 metres thick and consists of grey to white aphyric breccia, tuff breccia, lapilli tuff, tuff and subordinate massive rhyolite. Thin intercalations of mudstone and waterlain tuff occur locally and provide markers. This unit is correlated with the Lower Jurassic Mount Dilworth Formation (Hazelton Group).

The contact unit consists of an areally restricted basal member of rhyolite-mudstone breccia (the "transition zone") that grades into a widespread upper member of carbonaceous mudstone. The entire contact unit ranges from less than 1 to more than 60 metres thick. The upper member is carbonaceous, pyritic and locally tuffaceous, laminated black mudstone. The contact unit can be correlated with the unnamed lower member of the Lower-Middle Jurassic Salmon River Formation (Hazelton Group). It is the host to most of the mineralization in the 21 zone (21A and 21B deposits) (Exploration in British Columbia 1989).

The hangingwall andesite unit is a flow and sill complex in excess of 150 metres thick. It consists of rusty brown weathering, light grey to dark green pillow breccias with subordinate massive flows, dikes or sills, and hyaloclastite horizons. Thin mudstone units occur as interflow sediments.

The upper sedimentary unit consists of a thick sequence of thin-bedded (turbiditic) siltstone, shale and fine sandstone. It includes strata of the lithologically similar Salmon River Formation (Hazelton Group) and Middle-Upper Jurassic Ashman Formation (Bowser Lake Group). The Salmon River Formation sediments are distinguished by the presence of volcanic material.

The major structure on the property is interpreted to be an asymmetric anticline which plunges gently to the northeast. The anticline is broken by a series of high-angle faults. Major faults strike north-northeast; minor ones north-northwest. Several northerly to northeasterly trending lineaments also traverse the property.

CAPSULE GEOLOGY

Many zones of mineralization have been recognized at Eskay Creek. These include the 5, 6, 10, 22, 23, 28 and Porphyry zones; Mackay and Emma adit areas; and the #1 to #5 bluffs. The 21 zone has undergone extensive exploration and underground development and represents a major portion of reserves at Eskay Creek. Two new zones, NEX and Hangingwall, were discovered in 1995.

The bulk of mineralization in the 21 zone occurs as a stratabound sheet within carbonaceous mudstones of the contact unit and underlying rhyolite breccia, beneath mostly barren andesite flows. In the north, sulphide layers also occur in the hangingwall andesite unit. As traced by diamond drilling the entire zone extends 1400 metres along strike, 250 metres downdip and is from 5 to 45 metres thick. It is open to the northeast and downdip.

Mineralization displays both lateral and vertical zoning. Antimony, arsenic and mercury-rich mineral assemblages in the south change to zinc, lead and copper-rich assemblages in the north. Vertical zoning is expressed as a systematic increase in gold, silver and base metal content up-section.

Based on mineral associations and continuity of grade, the 21 zone has been divided into two deposits: the 21A (formerly called the South zone) and the 21B (which includes the former Central and North zones, now linked by drilling). The deposits are separated by 140 metres of weak mineralization. Two new mineral zones, the 21C and Pumphouse, have recently been discovered. The 21C is centred about 450 metres due north of the 21A deposit. It is a discrete mineral zone 100 metres downdip from the 21B deposit and subparallel to it. The Pumphouse zone is located immediately northeast of Pumphouse Lake, east of the southern end of the 21B deposit.

Drilling in the 21A deposit area has outlined a mineralized zone approximately 280 metres long and up to 100 metres wide. Thickness is variable, averaging about 10 metres. The deposit is contained within the contact unit and underlying rhyolite unit. The deposit can be subdivided into an upper, stratabound zone of disseminated to near-massive stibnite and realgar within the contact unit, and a lower, stockwork zone of disseminated sphalerite, tetrahedrite and pyrite within the rhyolite unit. High-grade (> 15 grams per tonne) gold and silver mineralization occurs in variably sheared, carbonaceous mudstone and mudstone-rhyolite breccia. A diverse suite of metallic minerals has been identified.

Zones of nearly massive stibnite, realgar and orpiment pass along strike and downdip into disseminated domains where sulphides occur in veinlets, as feathery masses, or as heavy impregnations along shears or in the mudstone matrix. The breccia matrix is variably pyritic. Both breccia matrix and clasts contain needles of stibnite and arsenopyrite. Gold occurs as native gold, amalgam and possibly in mercurian wurtzite. Silver occurs as native silver, amalgam, tetrahedrite and unnamed silver-lead-arsenic-sulphur minerals.

Mineralization is associated with areas of intense alteration. Both members of the contact unit are overprinted with varying amounts of magnesian chlorite, muscovite, chalcedonic silica, calcite and dolomite; pyrobitumen is ubiquitous.

Disseminated to microfracture-filling mineralization in the rhyolite unit is characterized by low to moderate tenor gold (1-15 grams per tonne) and locally high silver, associated with base metal sulphides and minor to trace antimony, arsenic and mercury minerals. Tetrahedrite, pyrite, sphalerite and galena predominate, with minor aktashite and chalcopyrite. Realgar and orpiment are rare to nonexistent. Carbon and graphite are absent.

Beneath stratabound mineralization of the contact unit, the rhyolite unit is highly fractured and intensely altered. Fracturing, alteration intensity and metal tenor appear to increase toward the upper contact. Within 3 to 4 metres of the upper contact, rhyolite-hosted mineralization is characterized either by massive chlorite-gypsum-barite rock or by quartz-muscovite-sulphide breccia. Mineralization in the footwall dacite unit commonly occurs in the datum dacite member. It consists of semimassive to disseminated, crystalline pyrite, sphalerite, tetrahedrite, galena and chalcopyrite.

The 21B deposit is approximately 900 metres long, from 60 to 200 metres wide and locally in excess of 40 metres thick. It is displaced on the east by the northeast trending Pumphouse Creek fault and related north trending splays. The deposit is open to the northeast along strike, to the immediate east on fault-offset segments, and is partially open to the west at depth. It displays varied styles of mineralization and alteration.

The southernmost 600 metres of the 21B deposit (the former Central zone) is characterized by stratabound and stratiform high-grade gold and silver-bearing base metal sulphide layers.

CAPSULE GEOLOGY

Banded sulphide mineralization occurs in carbonaceous and tuffaceous mudstones of the contact unit. Sulphides form disseminated, semimassive and massive laminae and bands, up to 12 metres thick, that appear to parallel bedding in the mudstones. In approximate order of abundance sulphide minerals include amber sphalerite, tetrahedrite, boulangerite and bournonite with minor pyrite and galena. Gold and silver occur as 5 to 80-micron grains of electrum within fractured sphalerite, commonly in contact with galena. Realgar and stibnite are absent. Gangue minerals include magnesian chlorite, muscovite and quartz with lesser amounts of dolomite and calcite.

Peripheral to and beneath banded sulphide mineralization are areas of microfracture veinlets and disseminations of tetrahedrite, pyrite and minor boulangerite. Gangue minerals include magnesian chlorite, muscovite, potassium feldspar and calcite. Footwall, rhyolite-hosted stockwork mineralization is volumetrically insignificant in comparison with either the 21A deposit or the northern 21B deposit.

In contrast, the northern 300 metres of the 21B deposit (the former North zone) exhibits considerable geological and structural complexity. Although hostrock stratigraphy is similar to that found to the south, mineralization occurs at several different stratigraphic levels. Gold, silver and base metal-rich lenses occur in hangingwall unit interflow mudstones as well as in the contact unit mudstone and underlying rhyolite unit breccias. Very high grade mineralization occurs deeper in the rhyolite unit in association with crosscutting zones of fracture-related alteration. The mineralized zone is thick and cut by zones of strong shearing.

Hangingwall mineralization is hosted by two mudstone beds near the base of the hangingwall andesite unit and is associated with pervasive chlorite alteration and locally heavy barite. Near-massive dark sphalerite, galena and tetrahedrite with lesser amounts of pyrite and chalcopyrite occur as two partially stacked lenses.

Mineralization in the contact unit is dominantly comprised of sphalerite, tetrahedrite and possibly boulangerite with varying amounts of galena and chalcopyrite. Alteration minerals are again chlorite, muscovite, quartz and calcite. Mineralized textures vary from crudely banded massive sulphides to thick and thin sulphide bands intercalated with mudstone.

Crosscutting mineralization in the contact and rhyolite units occurs as siliceous (quartz-healed) and carbonate-rich breccias with anastomosing, crustiform veinlets and disseminations of coarse-grained iron-rich sphalerite, fine-grained pyrite, with minor galena, chalcopyrite and tetrahedrite group minerals. Gold occurs as spectacular films, wires or blebs associated with fractured sphalerite.

Lead isotope analyses of galena samples collected from Eskay Creek veins and massive sulphide lenses coincide with early Jurassic lead ratios from the Kitsault, Stewart, Sulphurets and Iskut mining camps. Isotopic data are taken to indicate a widespread, early Jurassic mineralizing event. The Eskay Creek deposits are also products of this event (Exploration in British Columbia 1989).

The 21 zone mineralization is unusual. There is a close spatial, and apparently temporal relationship between what conventional models describe as low-temperature epithermal and volcanogenic massive sulphide deposit types. Epithermal mineralization, characterized by gold, silver, arsenic, antimony and mercury mineral suites, forms massive and stratabound lodes as well as more usual crosscutting veins and disseminations. Massive sulphide mineralization show typical "syngenetic" ore textures but atypical mineralogy and precious metal enrichment.

In 1995 and 1996, drilling and underground exploration on the 21B zone have outlined proven and probable reserves of 1,090,000 tonnes grading 65.14 grams per tonne gold, 2949.0 grams per tonne silver, 5.6 per cent zinc and 0.77 per cent copper (Information Circular 1996-1, page 5). During 1994 the access road to the mine area was completed and construction of minesite facilities was completed by fall. The first shipment of ore started January 1995, two years after application to the provincial government for a Mine Development Certificate. The direct shipping ore was crushed and blended at the mine and then moved by rail from Kitwanga to Noranda's Horne smelter in Quebec, and by sea from Stewart to Dowa Mining's smelter in Japan. At a daily mining rate of 245 tonnes, annual production is estimated at 6220 kilograms of gold and 283,000 kilograms of silver, together with copper and zinc. The operating cost is forecast to be US$187 per ounce gold equivalent. Eskay Creek will become the fourth largest silver producer in the world. Zinc will be recovered using the solvent extraction - electrowinning method (Information Circular 1995-1, pages 9-10).

CAPSULE GEOLOGY

Late in 1995, the NEX zone was calculated to contain 205,911 tonnes grading 30.1 grams per tonne gold and 1926.5 grams per tonne silver (T. Schroeter, personal communication, 1996).

Production at Eskay Creek Mine:

Year	Tonnes Mined	Ag (grams)	Au (grams)	Pb (kg)	Zn (kg)
1998	147,350	364,638,530	8,774,000		
1997	110,161	368,498,000	7,591,065		
1996	102,395	369,263,056	6,793,111		
1995	100,243	327,754,000	6,418,078		
1979	9	25,490	1,263	412	1,008
1971	2	7,435	9	29	43
TOTAL	460,160	1,430,186,511	29,577,526	441	1,051

In 1996, reserves were 1.08 million tonnes at 65.5 grams per tonne gold, 2930 grams per tonne silver, 0.77 per cent copper and 5.6 per cent zinc (Exploration in BC 1996, page B5).

As of January 1, 1997, proven and probable reserves at Eskay Creek were estimated at 1,267,340 tonnes grading 59.38 grams per tonne gold and 2718.86 grams per tonne silver. Geological resources at January 1, 1997 were 252,200 tonnes grading 18.55 grams per tonne gold and 1083.43 grams per tonne silver (George Cross News Letter No. 25 (February 5), 1997).

As of January 1, 1998, proven and probable reserves were 1,356,240 tonnes grading 58.05 grams per tonne gold and 2684.57 grams per tonne silver. Geological resources (mineralized material) were 336,565 tonnes grading 20.13 grams per tonne gold and 411.43 grams per tonne silver (Prime Resources Group Inc., Press Release, January 22, 1998).

The Eskay Creek property has a long history of intermittent exploration since its discovery and staking in 1932 by T.S. Mackay. Early work identified more than 30 distinct mineralized zones in upper Coulter and Eskay creeks along a line of gossanous bluffs that extends more than 7 kilometres. Earliest exploration focused on the southern part of this area where the Mackay adit was driven for 110 metres. The Mackay adit lies 9 kilometres southwest of the 21 zone. In the northern part, underground development at the Emma adit totalled 180 metres of drifting and crosscuts. The Emma adit lies 3 kilometres southwest of the 21 zone. Surface work included several thousand metres of diamond drilling, numerous trenches, pits and opencuts. In 1971, a 1.5-tonne sample of high-grade ore was extracted from trenches on the 22 zone, which lies 2 kilometres southwest of the 21 zone. In 1979, these trenches were mined to produce 8.75 tonnes of hand-cobbed ore (Exploration in British Columbia 1989). In 1996, surface and underground exploration diamond drilling totalled 36,576 metres.

Eskay Creek is 100 per cent owned and operated by Homestake Canada Inc. following an amalgamation between Homestake and Prime Resources Group Inc.

Reserves on January 1, 1999 were 1,355,965 tonnes grading 57.7 grams per tonne gold and 2492.57 grams per tonne silver. Additional mineralized material were 453,600 tonnes grading 15.36 grams per tonne gold and 401.14 grams per tonne silver (Exploration in BC 1998, page 23 and www.homestake.com).

Drill targets in 1998 included 21C, a rod-shaped pyritic zone within footwall rhyolite. It reaches the surface at the original 21 zone trenches excavated in the 1930s (near the 21A deposit) and plunges gently northward for 900 metres, passing below and 200 metres downdip of the 21B deposit to its truncation by the Argillite Creek fault. Based on 1998 drilling the 21C zone is estimated to contain 303,000 tonnes of milling ore at a grade of 16.4 grams per tonne gold and 72 grams per tonne silver, with very low levels of deleterious elements (Exploration in BC 1998, page 23).

Barrick Gold Corporation acquired 100 per cent interest in the mine through the December 2001 merger with Homestake.

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DATE REVISED: 1997/05/02 REVISED BY: GO FIELD CHECK: Y

MINFILE NUMBER: **104B 009**

NATIONAL MINERAL INVENTORY:

NAME(S): **HAR**, JIM, MAX,
ILIAD 3

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 26 42 N
LONGITUDE: 130 33 05 W
ELEVATION: 500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized skarn zone on Newmont Map (Property File), located on the south side of the Unuk River opposite the junction of Harrymel Creek and the Unuk River.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6256688
EASTING: 404363

COMMODITIES: Copper Iron

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite Specularite
ASSOCIATED: Carbonate
ALTERATION: Epidote Garnet Magnetite Malachite Carbonate
COMMENTS: Iron-carbonate.
ALTERATION TYPE: Skarn Oxidation Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Igneous-contact Skarn Industrial Min.
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic			Unnamed/Unknown Informal

LITHOLOGY: Magnetite Epidote Garnet Skarn
Andesitic Schist
Garnet Schist
Carbonatized Diorite
Quartz Diorite
Diorite
Limestone
Biotite Schist
Argillite

HOSTROCK COMMENTS: Triassic or younger quartz diorite intruded Stuhini Group rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Contact
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

A Triassic or younger granodiorite to quartz diorite stock intrudes the Upper Triassic Stuhini Group volcaniclastics and sediments. Skarn-type mineralization including magnetite, chalcopyrite, specularite and pyrite is localized within Triassic interbedded limestones near the contact with the quartz diorite.

In the eastern part of the Har claims, sericite, chlorite and biotite schists are interbedded with limestones and minor black argillite. To the west, hornblende diorite and quartz diorite intrude these sediments. In 1960, a rusty zone within sheared diorite on the south side of the Unuk River was mapped. The diorite was described as being heavily carbonitized with iron-bearing carbonate and hosting disseminated specularite with up to 10 per cent pyrite. In other places, the massive diorites are carbonized and host sporadic malachite staining.

Opposite the mouth of Harrymel Creek, a small north-northwest trending fault cuts the diorite. A magnetite-epidote-garnet skarn has developed along this fault within altered andesitic schists and garnet-bearing schists. The skarn hosts abundant disseminated magnetite, specularite with pyrite and chalcopyrite (Newmont Map, Property File).

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Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B47)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
EMPR BULL *63
EMPR PF (*Geology Map-1:31250 Scale-Newmont Exploration of Canada, 1960's)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/27 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 010**

NATIONAL MINERAL INVENTORY:

NAME(S): **BENCH**, COREY, FOX, OX, FOX - 14, FOX - 16

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 29 27 N
LONGITUDE: 130 29 02 W
ELEVATION: 350 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6261697
EASTING: 408633

COMMENTS: Located east of the mouth of Sulphurets Creek. The claims lie on both the north and south sides of the creek with mineral showings on the Fox 14 and Fox 16 claims (Assessment Report 347). Magnetite-jasper showing is located on the Newmont Map (Property File). See Corey (104B 385) and Cumberland (104B 011).

COMMODITIES: Silver, Zinc, Lead, Copper, Antimony, Magnetite, Iron, Gold

MINERALS

SIGNIFICANT: Magnetite, Pyrite, Sphalerite, Galena, Arsenopyrite, Tetrahedrite
ASSOCIATED: Jasper
ALTERATION: Silica, Carbonate
ALTERATION TYPE: Silicific'n, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Industrial Min.
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn; G01 Algoma-type iron-formation; K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic	Hazelton	Salmon River	

LITHOLOGY: Rhyolite, Breccia, Mudstone, Andesite, Lithic Tuff, Crystal Tuff, Argillite, Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE:

CAPSULE GEOLOGY

The area near the junction of Sulphurets Creek and the Unuk River is underlain by a series of north to northwest trending Hazelton Group rocks which are part of the Lower Jurassic Unuk River Formation. Locally, they consist of red, green and purple volcanic breccia, conglomerate, sandstone and argillaceous siltstone with intercalated crystal and lithic tuff.

The east side of the property is underlain by andesitic pillow lava and volcanic flows. The west part of the property is underlain by altered volcanics comprised mainly of crystal and lithic tuffs with associated argillite and minor conglomerate. Magnetite mineralization occurs within the altered andesites on the Fox 14 and 16 claims.

The mineralization consists of disseminated magnetite with minor associated pyrite and jasper. Alteration consists of silicification and minor carbonitization which reportedly may be associated with the magnetite (Assessment Report 347).

The Bench Zone, discovered in 1993, is bounded on the west by the Unuk River, south by Sulphurets Creek, north by a series of small lakes and in the east by a steep hillside. Exploration work included soil geochemical sampling, VLF-EM and magnetometer surveys, geological mapping and hand trenching. In 1996, the area was mapped

CAPSULE GEOLOGY

at a scale of 1:2000 scale and the favorable stratigraphy was tested with seven drill holes.

The Bench Zone is underlain by Salmon River Formation units, preserved in a moderately north plunging syncline. Units include a central core of flow-banded aphyric rhyolite, overlain by a polymictic breccia and mudstone unit, pillowed basalt and mudstone. Footwall to the rhyolite is a thin mudstone unit and massive basalt. The rhyolite has been dated at approximately 172 million years by the MDRU.

In the Bench zone, the rhyolite unit is weakly mineralized with fracture-controlled pyrite, sphalerite and arsenopyrite, usually associated with zones of siliceous alteration and chlorite. The breccia unit locally contains fragments and clasts, up to 2.0 centimeters, of massive pyrite, light-coloured sphalerite, and galena. These same minerals are also disseminated in the breccia matrix. The mudstone unit contains bedding-parallel wispy laminae of pyrite and arsenopyrite, with rare sphalerite and galena. Chip and grab samples revealed assays up to 63.6 grams per tonne silver, 0.8 per cent zinc and 1.0 per cent lead; copper and antimony values exist. No mineralization was intersected in the drill holes.

The Bench zone notes are from the Kenrich Mining Corporation web site (WWW http://www.kenrichmining.com), June 1998. Prime Resources Group acquired the property in 1997.

See also Corey (104B 385) and Cumberland (104B 011).

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EMPR AR 1961-116
EMPR ASS RPT *347, 16318
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EMPR PF (Geology Map-1:31,250 Scale-Newmont Exploration of Canada, 1960's; Kenrich Mining Corporation Website (May 1998, Nov. 1999): Corporate Profile, Bench Zone, 7 p.)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
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Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of North-western British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988 1988, Showing No. B54)
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B54)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/06/02 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 011**

NATIONAL MINERAL INVENTORY: 104B8 Ag1

NAME(S): **CUMBERLAND (L.265)**, DALY, UNUK RIVER BARITE, COREY, SILVER PINE (L.266), MIDDLESEX (L.267), ZIPHIS (L.268), OUGMA (L.269), PRU, LOWER CUMBERLAND

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 29 19 N
LONGITUDE: 130 29 00 W
ELEVATION: 400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Property includes Crown Grant Lots 265 to 269. Located on the north-west flank of Mount Madge, about 1.3 kilometres east of the confluence of the Unuk River and Sulphurets Creek. Mineral location from Lot 265 is the approximate location of the adit entrance to the underground workings (Assessment Report 16318). See Corey (104B 385).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6261449
EASTING: 408662

COMMODITIES: Gold, Silver, Zinc, Copper, Lead, Barite

MINERALS

SIGNIFICANT: Chalcopyrite, Sphalerite, Galena, Tetrahedrite, Ruby Silver, Pyrargyrite, Pyrite, Pyrrhotite, Barite, Arsenopyrite
COMMENTS: Stibnite and some argentite (pyrargyrite?) were reported in 1935.
ASSOCIATED: Quartz, Calcite, Barite
COMMENTS: Mineralization occurs in quartz-calcite-barite gangue.
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia, Disseminated, Massive
CLASSIFICATION: Epigenetic, Hydrothermal, Industrial Min.
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn, I02 Intrusion-related Au pyrrhotite veins
DIMENSION: Metres
STRIKE/DIP: 145/85E
TREND/PLUNGE:
COMMENTS: Mineralized zone in Cumberland adit strikes 140 to 150 degrees and dips 85 degrees northeast.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic	Hazelton	Salmon River	

LITHOLOGY: Pillow Basalt, Rhyolite Breccia, Andesitic Breccia, Andesite, Rhyolite, Tuff, Tuffaceous Mudstone, Argillite, Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1935
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	82.2800	Grams per tonne
Gold	8.9000	Grams per tonne
Copper	0.3000	Per cent
Lead	3.0000	Per cent
Zinc	10.0000	Per cent

COMMENTS: Grab sample taken from a 14 tonne dump of mineralized rock from quartz replacement zone.
REFERENCE: Minister of Mines, Annual Report 1935, page B12.

INVENTORY

ORE ZONE: ADIT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	169.3700	Grams per tonne
Gold	4.3200	Grams per tonne

COMMENTS: Sample EK-1; massive sphalerite, pyrite, chalcopyrite and trace galena from Cumberland adit.
REFERENCE: Assessment Report 16318.

CAPSULE GEOLOGY

The area near the junction of Sulphurets Creek and the Unuk River is underlain by a series of north to northwest trending Hazelton Group intermediate (dacite/andesite) composition volcanic flows, pyroclastics and pillow lavas of the Lower Jurassic Unuk River Formation. Locally, they consist of red, green and purple volcanic breccia, conglomerate, sandstone, argillaceous siltstone with intercalated crystal and lithic tuffs. The stratigraphic and structural relationships are not well defined but the regional strike is to the northeast with an east dip.

Locally, andesite, tuff-volcanic breccia, argillite and conglomerate are the most common rock types. The eastern part of the claim is underlain by pillowed andesite, dark grey to green in color, and forms a massive cliff 30 to 40 metres in height. The tuff is grey to green in color with poorly sorted angular fragments with some flow banding. The volcanic breccia is similar to the tuff with larger unsorted angular fragments. Sediments in contact with the volcanics include a dark green-grey, massive chert and argillic conglomerate, which is characterized by a sandy matrix with rounded cobbles to boulders.

Minor mineralization consisting of disseminated pyrite is ubiquitous throughout the volcanics and argillite. Two mineral deposits were reported to have been developed by constructing two short adits close to the contact between the sediments and volcanics in 1935.

At an elevation of about 370 metres, a sheared and brecciated zone in the volcanics, striking northwest and dipping steeply northeast, contains small, irregular lenses and stringers of quartz, barite and calcite. In an adit driven along the north side of a dyke that cuts the shear zone, is a vein of quartz, calcite and barite which hosts pyrite, galena, sphalerite, tetrahedrite, stibnite and some argentite. In 1935, a grab sample taken from an old dump of these workings assayed 0.69 grams per tonne gold, 3586.2 grams per tonne silver, 0.5 per cent copper, 8.0 per cent lead and 4.0 per cent zinc. A reported 18 tonnes of similar material was mined but never located (Minister of Mines, Annual Report 1935, page B12).

To the northeast of this adit, at an elevation of about 412 metres, is a quartz replacement zone that is reported to consist of veinlets and lenses of quartz with stringers and blebs of chalcopyrite, pyrrhotite, pyrite, sphalerite and galena. The zone strikes about 345 degrees and dips 70 degrees east. Apparently 14 tonnes of this material was mined and left at the portal to the adit. In 1935, a representative sample from this dump assayed 8.9 grams per tonne gold, 82.28 grams per tonne silver, 0.3 per cent copper, 3.0 per cent lead and 10.0 per cent zinc (Minister of Mines, Annual Report 1935, page B12).

In 1987, a 0.5 to 0.75 metre zone was mapped at the Cumberland adit entrance. The host rock in the vicinity of the showing consists of highly fractured andesite with thin quartz-pyrite fracture fillings. Other sulphides include chalcopyrite, sphalerite and traces of galena. The heavily mineralized zone strikes between 140 to 150 degrees and dips 85 degrees northeast. A grab sample from this massive sulphide zone assayed 4.32 grams per tonne gold and 169.37 grams per tonne silver (Assessment Report 16318).

A 5-centimetre chip sample taken along Silver Creek (from Ougma, Lot 269) assayed 3502.2 grams per tonne silver (Assessment Report 16318). The sample was from a silicified carbonate rich shear zone which was reported to host possible ruby silver (pyrargyrite).

The following notes are from the Kenrich Mining Corporation web site (WWW http://www.kenrichmining.com), June 1998.

The Cumberland showing (104B 011) is located on the south bank of Sulphurets Creek, 1500 metres upstream from the confluence with the Unuk River. It is also immediately south of the Bench zone (104B 010). Two adits were excavated on the Cumberland during the 1890's and a very small shipment of hand-sorted ore was reported. The prospect appears to have volcanogenic massive sulphide attributes,

CAPSULE GEOLOGY

and has been frequently examined and partially explored by diamond drilling (Catear and Bighorn, 1988, six holes) and geological mapping and geophysics (Placer Dome, 1991). During the 1993 field program, a limited amount of time was spent re-examining the Placer Dome geological map. As well, several contour soil geochemical lines were completed up hill, south of the showing area. In 1995, preliminary mapping around the showing recognized Salmon River stratigraphy. In 1996, the property was mapped in detail with the discovery of bedded barite mineralization. The showings were trenched and drilled. Drilling demonstrated that these showings are not structurally controlled but are probably stratiform in nature. Two holes were drilled under the main Cumberland Showing demonstrating that the mineralization is continuous and is not cut off by faulting.

Mineralization at the Cumberland occurs in mafic volcanic units, possibly pillow basalt and breccia and thin mudstone horizons. Mineralization is composed of lenses 0.5 to 3.0 metres wide of massive sphalerite, barite, galena and pyrite. Sampling of this material has returned assay values as high as 9.4 grams per tonne gold, 93 grams per tonne silver, 0.45 per cent copper, 2.70 per cent lead and 9.80 per cent zinc. The zone of mineralization is highly sheared and disrupted and both the mineralization and host rocks have a pronounced mylonitic fabric and a steep plunge. A re-examination of rocks mapped by Placer as conglomerate and mudstone revealed rhyolite breccia and tuffaceous mudstone. The rhyolite is aphyric, cream to white coloured, with flow-banded to massive fragments in a dark gray, siliceous matrix. These rhyolite units possibly lie in the structural footwall of the Cumberland showing. Prospecting and soil geochemical traverses 1000 metres south of the showing (at 800 metres elevation) identified two possible extensions of the rhyolite horizons. In 1997, three outcrops of massive barite mineralization containing galena, sphalerite and associated silver mineralization were discovered and sampled returning assays up to 12,171 grams per tonne silver in grab samples and 4046 grams per tonne silver in a one-metre channel sample.

Prime Resources Group and Kenrich continue to work the property in 1998.

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EMPR OF 1989-10; 1999-2; 1999-14
EMPR PF (Mandy, J.T., (1930): Sketch map of Unuk River, (Map 1930), (1934): Unuk River and Adjacent Area (Map 1934), (1935): Re-connaissance of the Unuk River Area (Map 1935); Geology Map-1:31,250 Scale-Newmont Exploration of Canada, 1960's; Kenrich Mining Corporation Website (May 1998, Nov. 1999): Corporate Profile, Cumberland Showing, 6 p.)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
GSC SUM RPT 1905, p. 51
GCNL #86(May 5), 1998; #139(July 21), #153(Aug.11), #160(Aug.20), #190(Oct.2), 1998
N MINER July 7, 1997; Oct.12, 1998
PR REL Kenrich Mining Corporation, July 17, Aug. 18, 1998
V STOCKWATCH *Apr.13,Jul.14, 1987
W MINER Oct. 1964, p. 36
WWW http://www.kenrichmining.com
Anderson, R.G, (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of North-western British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B53)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/06/02 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 012**

NATIONAL MINERAL INVENTORY:

NAME(S): **MCQUILLAN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 24 01 N
LONGITUDE: 130 31 30 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showings on Newmont Map (Property File); located on the east side of McQuillan Ridge, west of Gracey Creek.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6251674
EASTING: 405879

COMMODITIES: Copper Iron

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite Malachite Magnetite
ASSOCIATED: Jasper
ALTERATION: Kaolin Chlorite Epidote
ALTERATION TYPE: Chloritic Epidote
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Igneous-contact Industrial Min.
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) L04 Porphyry Cu ± Mo ± Au
G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic			Unnamed/Unknown Informal

LITHOLOGY: Andesite Porphyry
Epidote Chlorite Schist
Diorite
Tuff
Diorite Dike

HOSTROCK COMMENTS: Jurassic-Triassic South Unuk cataclastic zone (Bulletin 63, Figure 13).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

Sediments and volcanics of the Upper Triassic Stuhini Group are overlain by sediments of the Lower Jurassic Hazelton Group, Unuk River Formation. To the southeast, on McQuillan Ridge, Upper Triassic rocks include predominant mafic flows and volcaniclastics with minor, intercalated Monotis or Halobia bearing shale. Locally, the Stuhini Group rocks consist of green volcanic conglomerates and sandstones with intercalated lenticular andesite flows, thinly banded calcareous siltstones and volcanic sandstones, and minor crystal and lithic tuffs. These epiclastics unconformably overlie amphibolite gneiss and mylonite. Brecciation along this contact is related to a probable low-angle thrust fault. The contact between the Triassic and Lower Jurassic rocks is marked by an extensive north-northwest trending cataclasite zone, known as the South Unuk Zone, which contains biotite chlorite epidote schist (Bulletin 63, figure 13). The Stuhini Group rocks, which are intruded by diorite and quartz diorite of probable Upper Triassic age, are locally metamorphosed along the contacts.

In an area east of McQuillan Ridge, occurrences of chalcopyrite, malachite, pyrite, jasper, magnetite and kaolin occur within andesite porphyry, tuff and diorite dyke. (Newmont map). The rocks are locally epidotized and chloritized.

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EMPR PF (*Geology-1:31250 Scale-Newmont Exploration of Canada Ltd., 1960's)

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EMPR OF 1989-10
GSC P 89-1E, pp. 145-154
Gunning, M.H. (1986): Late Triassic to Middle Jurassic (Norian to Oxfordian) volcanic and sedimentary stratigraphy and structure in the southeastern part of the Iskut map sheet, northcentral British Columbia; unpublished B.Sc. thesis, University of British Columbia
EMPR AR 1935-Map (after p.B8)

DATE CODED: 1988/06/10 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1989/01/16 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 013**

NATIONAL MINERAL INVENTORY: 104B7 Fe1

NAME(S): **MAX**, GRANDUC IRON, MAXWELL SMART

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 25 56 N
LONGITUDE: 130 33 54 W
ELEVATION: 610 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Trenches on geology map (Assessment Report 6690); located on the north side of Cebuck Creek, south of the Unuk River.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6255285
EASTING: 403491

COMMODITIES: Iron, Copper, Magnetite

MINERALS

SIGNIFICANT: Magnetite, Chalcopyrite, Pyrite, Pyrrhotite, Molybdenite
COMMENTS: Minor molybdenite is found within nearby gossanous diorite.
ASSOCIATED: Carbonate, Molybdenite
ALTERATION: Epidote, Garnet, Diopside, Actinolite, Magnetite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive, Disseminated
CLASSIFICATION: Igneous-contact, Skarn, Industrial Min.
TYPE: K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic			Unnamed/Unknown Informal

LITHOLOGY: Magnetite Skarn
Actinolite Diopside Garnet Skarn
Epidote Garnet Skarn
Limestone
Graphitic Limestone
Argillaceous Limestone
Sandstone
Argillite
Quartz Diorite
Diorite

HOSTROCK COMMENTS: Triassic or younger quartz diorite intrudes Stuhini Group rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Contact
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: MAX
REPORT ON: Y

CATEGORY: Indicated
YEAR: 1962
QUANTITY: 11176550 Tonnes

COMMODITY	GRADE	
Iron	45.0000	Per cent

COMMENTS: Indicated reserve of medium-grade magnetite reported in Granduc Mines Limited, Annual Report, 1962. Sample type is drill core.
REFERENCE: Energy, Mines and Resources CORPFILE - Granduc Mines Ltd., 1962.

CAPSULE GEOLOGY

A Triassic or younger diorite to quartz diorite stock intrudes the Upper Triassic Stuhini Group volcaniclastics and sediments. Skarn-type mineralization including magnetite, chalcopyrite, pyrrhotite and pyrite is localized within folded lenticular Triassic limestone near the margin of an irregular quartz diorite stock.

The Stuhini Group sedimentary rocks consist of limestone, sandstone and argillite. The limestone near the magnetite skarn zones is grey to black in colour, elsewhere, it is bluish grey, white to ivory. The composition varies from pure to graphitic and argillaceous limestone. West of Cebuck Creek, the limestone is

CAPSULE GEOLOGY

tightly folded and is more than 30 metres thick in contrast to magnetite-rich areas where it ranges from 3 to 15 metres in thickness. The sandstone is fine to medium-grained, grey to brown in colour and massive. The fine-grained black sediments classed as argillite range from soft mudstone to chert.

Alteration consists of recrystallization and chloritization (regional metamorphism). Contact metamorphism is represented by the development of actinolite-diopside-epidote-garnet skarn. The skarn and magnetite mineralization are closely related.

The Max deposit consists of massive magnetite mineralization and associated chalcopyrite, pyrrhotite and pyrite. The zone occurs at the contact between the diorite and sedimentary sequence with almost all of the chalcopyrite and magnetite occurring within the sedimentary sequence. Typical skarn-type metamorphism is evident within the sediments and diorite immediately below the magnetite zone.

In 1962, a 22.7-tonne bulk sample was taken for metallurgical test work. Drilling between 1960 and 1962 indicated a body of medium-grade magnetite estimated to contain 11,176,550 tonnes averaging 45 per cent iron (Energy, Mines and Resources CORPFILE - Granduc Mines Limited, Annual Report, 1962).

Immediately east of the Max deposit, medium-grained diorite is in fault contact with the sedimentary rocks. Minor disseminated chalcopyrite occurs within the diorite. Also, a gossanous zone within the dioritic intrusive is mineralized with chalcopyrite and molybdenite (Property File - Newmont Map, 1960's).

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EMPR GEM 1969-54,372; 1970-65
EMPR EXPL 1975-E180; 1977-65
EMPR ASS RPT 346, 1835, 2479, 5496, 6690, 16858
EMPR PF (*Geology Map, Newmont Exploration of Canada, 1960's; North Max Drill Log, Granduc Mines Ltd., 1961)
EMPR FIELDWORK 1988, pp. 241-250; 1990, pp. 131-137, 245-253
EMPR OF 1989-10
EMPR BULL 63
GSC P 89-1E, pp. 145-154; 90-1E, pp. 131-139
GSC MAP 9-1957; 1418A
EMR MP CORPFILE (Granduc Mines Limited)
GCNL #128, 1988
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B46)
Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/24 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 014**
NATIONAL MINERAL INVENTORY: 104B8 Au3

NAME(S): **DOC**, GRACEY , GRACY , HALPORT, GLOBE, GOLD

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 20 18 N
LONGITUDE: 130 27 10 W
ELEVATION: 1250 Metres
LOCATION ACCURACY: Within 500M
MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6244684
EASTING: 410190
COMMENTS: Main vein structure located from Assessment Report 15615. The Doc occurrence is apparently the same occurrence as the Gracey; the Gracey being the name of the claims owned by Halport Mines. The vein systems of Halport-Gracey and Doc have the same names (Minister of Mines Annual Reports 1948, page A66; 1949, page A73; 1953, page A82).

COMMODITIES: Gold Silver Copper Lead Zinc

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

DEPOSIT
CHARACTER: Vein Shear
CLASSIFICATION: Mesothermal Epigenetic
TYPE: I01 Au-quartz veins I02 Intrusion-related Au pyrrhotite veins
DIMENSION: 270 x 2 Metres
STRIKE/DIP: 110/90N
TREND/PLUNGE:
COMMENTS: Main vein structure (Q17/Q22); steep dips.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Andesitic Tuff
Siltstone
Wacke
Marble
Diorite
Monzonitic Diorite

HOSTROCK COMMENTS: The Upper Triassic host rocks are likely to be assigned to the Stuhini Group. Diorite intrusions cut host rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: TOTAL
REPORT ON: Y

CATEGORY: Combined
YEAR: 1988
QUANTITY: 426337 Tonnes

COMMODITY	GRADE	
Silver	44.9000	Grams per tonne
Gold	9.2000	Grams per tonne

COMMENTS: Proven/probable/possible reserves in Q17 and six other veins.
REFERENCE: Northern Miner - November 7, 1988.

CAPSULE GEOLOGY

The Doc occurrence is located over 2 kilometres west of the South Unuk River, opposite the mouth of Divelbliss Creek. It is hosted by folded and metamorphosed andesitic tuffs with interbedded siltstone, wacke and marble that have been intruded by irregular dioritic dykes or sills and small monzodiorite plugs (Fieldwork 1988). The strata were originally assigned to the Lower-Middle Jurassic Unuk River Formation (Hazelton Group) but recent fossil dating has resulted in the rocks being assigned a Late Triassic age (possibly Stuhini Group). The plutonic rocks have not been dated but are likely of Jurassic or Triassic age (Personal Communication, J.M. Britton, 1989).

Several mineralized veins, composed of milky white quartz, occur

CAPSULE GEOLOGY

in a shear zone that cuts the rocks. These veins contain from 5 to 10 per cent sulphides with associated precious metals. Three different types of mineralization occur:

1) quartz veining with specularite and gold
2) quartz veining with galena, pyrite and gold
3) quartz veining with chalcopyrite and pyrite containing no precious metals.

The main vein structure (Q17/Q22) is about 2 metres wide and has been traced for a distance of 270 metres. The vein strikes at about 110 degrees and has a vertical to steep north dip. The entire length of the vein carries specularite and galena with associated gold values. Sampling in 1985 revealed that 170 metres of vein structure averaged 15.43 grams per tonne gold and 59.66 grams per tonne silver across an average width of 2.3 metres (Assessment Report 15615).

The veins are different from any others seen in the Sulphurets or Unuk map areas. They have very restricted wallrock alteration aureoles, no apparent zoning, and appear to be limited to a few large fluid pathways. In this they display characteristics of mesothermal veins. Structural control of the vein sets has not been determined but may be due to fractures related to folds in the host rocks (Fieldwork 1988).

Combined (proven, probable, possible) reserves in Q17 and six other veins are 426,337 tonnes grading 44.9 grams per tonne silver and 9.2 grams per tonne gold (Northern Miner - November 7, 1988).

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EMPR BULL 63
EMPR EXPL 1980-464
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
EMPR GEM 1974-333; 1975-181
EMPR MAP 65 (1989)
EMPR OF 1988-4; 1989-10; 1992-1
EMPR PF (Mandy, J.T.: Sketch Map of Unuk River (1930), Reconnaissance of the Unuk River (Map, 1935), Unuk River and Adjacent Area (Map, 1934); Geol. Map - 1:34,250 Scale - Newmont Exploration of Canada Ltd., 1960's; Anderson, R.G.: A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map Area (104B), Abstract from Smithers Exploration Group - G.A.C. Cordilleran Section - Workshop, Oct. 16-19, 1988)
EMR MIN BULL MR 223 B.C. 323
EMR MP CORPFILE (Halport Mines Limited; Leitch Gold Mines Ltd.: Annual Reports for 1947, 1948, 1949; New Minex Resources Ltd.)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
GCNL #45,#80, 1975; #3, 1976; #30, 1984; #121, #169, 1985; #41,#60, #93,#94,#158,#182,#201,#219, 1986; #67,#93,#100,#144,#171,#183, #189,#206,#219,#243, 1987; #70,#86,#134,#196,#239, 1988; #153(Aug.10),#236(Dec.8), 1989
N MINER Oct.13, 1986; Mar.14,*Nov.7, 1988
NW PROSP May/Jun., 1986
PERS COMM Britton, J.M.
V Stockwatch Jun.24,Aug.26,Sept.3,Oct.2,28,Nov.17,Dec.17, 1987
WWW http://www.infomine.com/
Equity Preservation Corp. (Stewart-Sulphurets-Iskut Compilation, Dec. 1988, Showing No. B67)
Placer Dome File
Seraphim, R.H., (1948): *A Gold-Specularite Deposit, Unuk River, British Columbia, M.Sc. Thesis, University of British Columbia
EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1989/01/05 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 015**

NATIONAL MINERAL INVENTORY: 104B8 Au3

NAME(S): **GLOBE**, DOC

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 19 47 N
LONGITUDE: 130 25 19 W
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6243686
EASTING: 412076

COMMENTS: Globe crown grants located from Energy, Mines, and Resources 1:50,000 scale topographic map 104B/8. Approximate centre. The Doc (104B 014) occurrence is apparently the same occurrence as the Gracey. The Gracey being the name of the claims owned by Halport Mines. The vein system of Halport and Doc have the same names (Annual Report 1948-A66, 1949-A73, 1953-A82). Assessment Report 5239 (History section) states that the Gracey claims were those of Halport Mines.
The Gold claims can be seen adjacent (to the west of) the old Doc claims (2 post); Assessment Report 5512 shows old claim map. The Globe is related mineralogically to the Out prospect, but is located over 1 kilometre to the southeast on the well documented Crown grants. The Florence (104B 019) appears to be unrelated to the above and may have been covered by the Kay claims.
The Globe crown grants were optioned in 1986 by Magna Ventures Limited and explored as part of the Doc group.

COMMODITIES: Gold, Silver, Lead

MINERALS
SIGNIFICANT: Galena, Pyrite, Specularite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Mesothermal, Epigenetic, Hydrothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Andesite Tuff
Siltstone
Wacke
Marble

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	64.9700	Grams per tonne
Gold	8.6100	Grams per tonne

COMMENTS: From a 6 metre trench sample.
REFERENCE: Vancouver Stockwatch, December 17, 1987.

CAPSULE GEOLOGY

A group of Crown Grants (Lot 259 to Lot 264) called Globe covers a mineral occurrence that is located on the west side of the South Unuk River about 3 kilometres south of Divelbliss Creek. These crown grants were optioned in 1986 by Magna Ventures Limited and explored as part of the Doc group (104B 014).

The occurrence is underlain by folded and metamorphosed andesitic tuffs with interbedded siltstone, wacke and marble (Fieldwork 1988). The strata were originally assigned to the Lower Jurassic Unuk River Formation, Hazelton Group but recent fossil dating has resulted in the assignment of a Late Triassic age. These Upper Triassic Strata

CAPSULE GEOLOGY

may be correlative to the Stuhini Group (Personal Communication, J.M. Britton, Jan. 1989).

Quartz veins with galena, pyrite, specularite and associated gold are reported to occur in this area. On the nearby "Doc" prospect quartz veins occur in a shear zone that cuts the strata. The veins have very restricted wallrock alteration aureoles, no apparent zoning, and appear to be limited to a few large fluid pathways, characteristics in common with mesothermal veins (Fieldwork, 1988).

The main vein, called the "Globe" vein, varies from 1 to 16 metres in width. One 6 metre trench sample contained a high value of 8.61 grams per tonne gold and 64.97 (Vancouver Stockwatch, December 17, 1987).

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EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
EMPR OF 1988-4; 1989-10
EMPR ASS RPT 5239, 5512, *8925, 15615
EMPR AR 1901-994; *1919-60; *1935-B10; 1948-A66; 1949-A73; 1953-A82
EMPR GEM 1974-333; 1975-181
EMPR EXPL 1980-464
GCNL #45,#80, 1975; #3, 1976; #30, 1984; #121,#169, 1985; #41,#60, #93,#94,#158,#182,*#201,#219, 1986; *#67,#93,#100,#144,*#171,#183, *#189,#206,*#243, 1987; #70,#86,#134,#196,#239, 1988
N MINER Oct.13, 1986; Mar.14,Nov.7, 1988
V Stockwatch Jun.24,Aug.26,Sept.3,Oct.2,28,Nov.17,*Dec.17, 1987
EMR MP CORPFILE (Halport Mines Limited; Leitch Gold Mines Ltd.: Annual Reports for 1947-1949; New Minex Resources Ltd.)
EMPR PF (Mandy, J.T.: Sketch Map of Unuk River, (1930), Unuk River and Adjacent Area (Map 1934), Reconnaissance of the Unuk River (Map, 1935); Geol. Map- 1:31,250 Scale - Newmont Exploration of Canada Ltd., 1960's; Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map Area (104B), abstract from Smithers Exploration Group - G.A.C. Cordilleran Section Workshop Oct 16-19, 1988)
Seraphim, R.H., (1948): *A Gold-Specularite Deposit, Unuk River British Columbia, M.Sc. Thesis, University of British Columbia
PERS COMM Britton, J.M., (1988)
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. (Stewart-Sulphurets-Iskut Compilation, Dec. 1988, Showing No. B69)
Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1989/01/05 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 016**

NATIONAL MINERAL INVENTORY: 104B8 Cu4

NAME(S): **GRACE**, SIGRUN, NORTH

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 15 48 N
LONGITUDE: 130 20 31 W
ELEVATION: 1675 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Coordinates are approximate centre of North claim group. Identified from Assessment Report 484.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6236198
EASTING: 416879

COMMODITIES: Copper Iron

MINERALS
SIGNIFICANT: Chalcopyrite Magnetite Pyrite
ALTERATION: Carbonate
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Podiform Massive Disseminated
CLASSIFICATION: Epigenetic Hydrothermal Industrial Min.
TYPE: G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Chlorite Schist
Biotite Schist
Phyllonite
Andesite
Cataclasite
Diorite
Syenite
Hornblende Diorite

HOSTROCK COMMENTS: These unnamed metasediments may be correlative to the Lower Jurassic Unuk River Formation of the Hazelton Group.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist
COMMENTS: Schists represent shear zones with mylonite and cataclasite lenses.

CAPSULE GEOLOGY

The North group of claims are located east of the headwaters of the South Unuk River on the western flank of Mount Pearson.

The area is underlain by Jurassic age folded metavolcanic and metasedimentary rock that may be correlative to the Lower Jurassic Unuk River Formation, Hazelton Group. The predominant rock types are metasediments consisting of quartz-biotite and quartz-biotite-chlorite phyllonites and schists with minor interbedded limestone and graphitic schists. The original rocks are considered to be greywacke, marl and sandstone. The metamorphic rocks have been intruded by small sub-cordant bodies of diorite, leuco-diorite and/or syenite and hornblende diorite. A north trending stock of Jurassic and younger diorite, several kilometres in length, occurs adjacent to the west of this area and a smaller syenitic stock exists to the immediate east.

Volcanic rocks of the Unuk River Formation are exposed east and west of the area of interest. These consist of pillowed andesitic rock to the west and andesite to the west. These grade into green-stone, schists and phyllonite. Grove (Bulletin 63) has also mapped a small area of Middle Jurassic Salmon River Formation rock (Hazelton Group) overlying the metamorphics. He has also defined a northwest trending cataclasite zone, developed within Lower Jurassic rock, occurring along the path of the South Unuk River. The occurrence is hosted within this zone or occurs just east of it.

The major structural features are two major subparallel north trending steeply dipping faults. One, the "Granduc fault", cuts diagonally across the claim group. The second major fault lies about 1.5 kilometres east of the "Granduc fault". Cross fracturing and

CAPSULE GEOLOGY

shearing is a prominent feature in the block bounded by these faults. Mineralization is related to these structures.

Mineralization consists of widely seperated lenses of magnetite and/or chalcopyrite that occurs in the cross fractures and shears. The largest lens measures 30 by 0.8 metres.

Locally irregular and widely spaced carbonatized zones in the chlorite and biotite schist contain disseminated chalcopyrite and magnetite. These are small, widely seperated, and show no continuity.

Abundant finely disseminated pyrite with sporadic specks of chalcopyrite occurs in schist or phyllonite along the Granduc fault zone (Assessment Report 484).

Chalcopyrite mineralization is reported to occur in volcanics and syenite at several localities east of the occurrence area (National Mineral Inventory #104B8 Cu4).

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EMPR PF (Geology Map-1:31250 Scale-Newmont Exploration of Canada Ltd., 1960's)
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EMPR OF 1988-4; 1989-10
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. (Stewart-Sulphurets-Iskut Compilation, Dec. 1988, Showing No. B75)
GSC MAP 9-1957; 1418A
EMR MP CORPFILE (Tuksi Mining and Development Co. Ltd.; Jodee Exploration Ltd.)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/05/16 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 017**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD RUN**, BOULDER CREEK, GEKING CREEK, GENKING CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 20 40 N
LONGITUDE: 130 38 46 W
ELEVATION: 610 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Occurs on Boulder Creek which is also known as Geking or Genking Creek; on the east side of the Unuk River.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6245633
EASTING: 398256

COMMODITIES: Gold, Lead, Zinc

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

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic, Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Granite, Quartz Diorite, Granodiorite

HOSTROCK COMMENTS: The Cenozoic Coast Intrusives include stocks ranging from Triassic to Eocene in age.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks
Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist, Hornfels

CAPSULE GEOLOGY

The Cenozoic Coast Plutonic Complex, comprised of quartz diorite, granite and granodiorite, intrudes Upper Triassic Stuhini Group sediments exposed on the east side of the Unuk River. The sediments are hornfelsed near the contact and host abundant disseminated pyrite.

The Gold Run showing, occurs along Boulder Creek (also called Geking or Genking), within granitic rocks of the Coast Plutonic Complex. The showing consists of a narrow gold-bearing quartz vein mineralized with pyrite, galena and sphalerite (Minister of Mines Annual Report 1935, p. B10).

BIBLIOGRAPHY

EMPR BULL 63
GSC MAP 9-1957; 1418A; 7780G
EMPR AR 1906-73; 1911-66,67; 1929-111,113; 1934-B33; 1935-B10
GSC SUM RPT 1905-52
EMPR PF (Mandy, J.T., (1935), Map-Reconnaissance of Unuk River Area; Geology Map-1:31250 Scale-Newmont Exploration of Canada, (1960's).
EMPF OF 1989-10
EMPR FIELDWORK 1988, pp. 241-250
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B43)

DATE CODED: 1985/07/24
DATE REVISED: 1988/06/29

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104B 018**

NATIONAL MINERAL INVENTORY: 104B8 Au5

NAME(S): **UNUK JUMBO**, NI 1-2

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 24 48 N
LONGITUDE: 130 29 17 W
ELEVATION: 600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Massive pyrrhotite (Newmont Map); west of South Unuk River.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6253077
EASTING: 408190

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Pyrrhotite
COMMENTS: Unspecified copper mineralization is present.
ALTERATION: Chlorite
ALTERATION TYPE: Chloritic Epidote
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Massive Podiform Disseminated
CLASSIFICATION: Epigenetic
TYPE: G04 Besshi massive sulphide Cu-Zn
DIMENSION: 0003 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: 3.7 metre wide vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Lower Jurassic	Hazelton	Unuk River	
Triassic			Unnamed/Unknown Informal

LITHOLOGY: Andesite Porphyry
Biotite Chlorite Epidote Schist
Gneiss
Cataclasite
Mylonite
Conglomerate
Siltstone
Quartz Diorite

HOSTROCK COMMENTS: Jurassic-Triassic South Unuk cataclastic zone (Bulletin 63, Figure 13). Upper Triassic strata probably correlative with Stuhini Group.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1960
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Copper	0.3500	Per cent

COMMENTS: 3.7 metre wide sample.
REFERENCE: Property File (Newmont Map).

CAPSULE GEOLOGY

Sediments and volcanics of the Upper Triassic Stuhini Group are overlain by sediments of the Lower Jurassic Unuk River Formation, Hazelton Group. The Stuhini Group rocks are green volcanic conglomerates and sandstones with intercalated lenticular andesite flows, thinly banded calcareous siltstones and volcanic sandstones, and minor crystal and lithic tuffs. These epiclastics unconformably overlie amphibolite gneiss and mylonite. Brecciation along this contact is related to a probable low-angle thrust fault. The contact between the Triassic and Lower Jurassic rocks is marked by an extensive north-northwest trending cataclasite zone, known as the South Unuk Zone, which contains biotite-chlorite-epidote schist (Bulletin 63, figure 13). The Stuhini Group rocks, which are intruded by

CAPSULE GEOLOGY

diorite and quartz diorite of probable Upper Triassic age, are locally metamorphosed along the contacts.

A north-northeast, 3.7 metre wide zone of massive pyrrhotite, with 0.35 per cent copper, occurs within andesite porphyry (Newmont map). The andesites lie within a contact metamorphic zone which contains chloritic schists. Local areas of sheared volcanics with pyrrhotite occur to the southwest of this massive zone. Apparently, a rusty gossanous zone contains gold and barium values (Equity Preservation Corp. 1988).

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EMPR BULL 63
EMPR OF 1988-4; 1989-10
EMPR AR 1934-B33; *1935-B10
GSC MAP 9-1957; 1418A
EMPR FIELDWORK 1988, pp. 241-250
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B50)

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1988/06/09	REVISED BY:	LLD	FIELD CHECK:	N

MINFILE NUMBER: **104B 019**

NATIONAL MINERAL INVENTORY: 104B8 Au4

NAME(S): **FLORENCE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 18 59 N
LONGITUDE: 130 24 30 W
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 1.6 kilometres to the south of the Globe crown grants which are themselves located 1.6 kilometres south of Divelbliss Creek on the west side of the South Unuk River.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6242185
EASTING: 412888

COMMODITIES: Lead, Copper, Gold

MINERALS
SIGNIFICANT: Pyrite, Galena, Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: M01 Flood Basalt-Associated Ni-Cu

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Tertiary	Stuhini	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Volcanic
Quartz Feldspar Porphyry
Diabase
Diorite
Cataclasite

HOSTROCK COMMENTS: Unnamed Tertiary (?) quartz feldspar porphyry and diorite intrudes Stuhini (?) Group rock.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This occurrence is located about 3 kilometres south of Divelbliss Creek on the west side of the South Unuk River. The area is underlain primarily by Upper Triassic volcanics which are probably correlative with the Stuhini Group. Dykes and small stocks of quartz feldspar porphyry, diabase, diorite of Tertiary age (?) are reported in the area. A northwest trending cataclasite zone is developed in the Lower Jurassic rocks along the trace of the South Unuk River.

A wide quartz vein carrying pyrite, chalcopyrite and galena occurs in unspecified country rock. High gold values were reported (Minister of Mines, Annual Report 1935, p. B11).

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Equity Preservation Corp. (Stewart-Sulphurets-Iskut Compilation, Dec. 1988, Showing No. B70)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/24 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 020**

NATIONAL MINERAL INVENTORY: 104B8,9 Au6

NAME(S): **SULPHURETS CREEK**

STATUS: Past Producer — Open Pit
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 29 46 N
LONGITUDE: 130 20 11 W
ELEVATION: 533 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Placer located along Sulphurets Creek upstream and downstream from its confluence with Ted Morris Creek.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6262098
EASTING: 417726

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Gold
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Quaternary			Unnamed/Unknown Informal

LITHOLOGY: Gravel

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Sulphurets Creek, and its tributaries, drains an area underlain by Lower Jurassic Unuk River Formation rock, Hazelton Group. Gold colours, flakes and nuggets have been found in the gravels and alluvium along the lower reaches of the creek from near Ted Morris Creek downstream to the confluence with the Unuk River. Placer gold production from 1936 to 1940 was reported at 809 grams (Bulletin 28). A Sauerman dragline with a 1/4 yard bucket was utilized in the sluicing of about 274 metres of gravel near the mouth of Mitchell Creek. Gold recovery was not reported (Geology, Exploration and Mining, 1974-361).

Coarse boulders and swift waters along the remote location and long winters have restricted work on this placer occurrence.

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GSC P 89-1E, pp. 145-154
Placer Dome File

DATE CODED: 1985/07/24 — CODED BY: GSB — FIELD CHECK: N
DATE REVISED: 1988/09/22 — REVISED BY: GJP — FIELD CHECK: N

MINFILE NUMBER: **104B 021** NATIONAL MINERAL INVENTORY: 104B1 Cu1

NAME(S): **GRANDUC**, LEDUC, VAUGHN K., EDNA MAY

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 12 40 N NORTHING: 6230390
LONGITUDE: 130 20 42 W EASTING: 416576
ELEVATION: 975 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The mine is on the east side and near the head of Leduc Glacier on Lots 6566 and 6567.

COMMODITIES: Copper Silver Gold Lead Zinc
Cobalt

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Pyrrhotite Magnetite Sphalerite
Galena Arsenopyrite Bornite Cobaltite
ASSOCIATED: Quartz Calcite Magnetite Apatite
ALTERATION: Epidote Calcite Tourmaline Sericite Graphite
ALTERATION TYPE: Epidote Carbonate Sericitic
MINERALIZATION AGE: Triassic
ISOTOPIC AGE: DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Massive Stratiform Vein
CLASSIFICATION: Volcanogenic Syngenetic
TYPE: G04 Besshi massive sulphide Cu-Zn
SHAPE: Tabular
MODIFIER: Folded Sheared
DIMENSION: 1200 x 760 x 240 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Granduc deposit comprising several orebodies.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210 +/- 24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

Tertiary Hyder Pluton

LITHOLOGY: Quartz Biotite Schist
Quartz Sericite Schist
Quartzite
Meta Chert
Biotite Epidote Actinolite Schist
Andesitic Tuff
Argillite
Siltstone
Iron Formation
Limestone

HOSTROCK COMMENTS: Age date from Paper 1988-4; Alldrick et.al. 1990.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: GRANDUC REPORT ON: Y

CATEGORY: Indicated YEAR: 1969
QUANTITY: 39316435 Tonnes

COMMODITY	GRADE	
Copper	1.7300	Per cent

COMMENTS: Ore reserves before production began in 1971. The reserve does not take into account the total production to 1984 of 15.2 mt of ore.
REFERENCE: Granduc Mines Ltd. Annual Report 1969.

INVENTORY

QUANTITY: 9890000 Tonnes

COMMODITY	GRADE	
Copper	1.7900	Per cent

COMMENTS: 1986 - Minor gold and silver.
REFERENCE: Open File 1992-1.

CAPSULE GEOLOGY

The Granduc mine is located on the east side and near the head of Leduc Glacier on Lots 6566 and 6567. The original showings were discovered in 1931. E. Kvale and T. McQuillan staked the deposit in 1946. Exploration and development began in 1953 by Newmont Mining and Granby Consolidated Mining, Smelting and Power Co. Production began in 1971 and continued until 1978 when low metal prices forced the mine to shut down. The mine was brought back into production in 1980 and continued until 1984.

The Granduc ore deposit comprises a series of concordant massive sulphide lenses, localized within a complex sequence of volcanic-sedimentary rocks that have been deformed by cataclasis. The deposit lies 6 kilometres east of granodiorites of the Tertiary Coast Plutonic Complex. All rocks are cut by Tertiary-Jurassic quartz diorite plutons and dykes.

The volcanics east of the Granduc orebodies are pillow lavas intercalated with graphitic siltstones, thin bedded lithic and crystal tuffs and volcanic sandstones. This sequence is overlain by the ore zone, graphitic siltstones, silty argillites, thin bedded lenticular gypsum-bearing limestones and quartz pebble and quartz cobble conglomerate lenses. These rocks underwent several periods of later deformation, intrusion, alteration, faulting and erosion, culminating in Tertiary time with Hyder plutonism. The ore deposit lies along part of the deformed, overturned west limb of a north trending anticlinal fold. The less deformed rocks to the east of the ore deposit include a complex volcanic-sedimentary sequence, which is considered to be part of the Lower-Middle Jurassic Hazelton Group (Unuk River Formation).

Recrystallization of the rocks in the ore horizon has converted the fine-grained laminated rocks to compositionally banded, brown to pale grey quartz-rich biotite and sericite schists, quartzites and metacherts. Feldspathic and andesitic tuffs are converted to massive, or banded biotite, and biotite-epidote-actinolite schists. Massive rocks are more common in the lower half of the ore horizon. The upper part of the orebody occurs in the finely laminated quartz-rich brown biotite schists which are derived from silty argillites.

Several steep north trending faults cut the orebodies. The Western and Granduc graphitic fault zones are west of the ore zone. Several of the orebodies have been offset by apparent right-hand strike-slip movement.

The several ore zones, which make up the Granduc deposit, comprise pancake-like, overlapping, and commonly merging lenses, which extends vertically for 760 metres, laterally for 1200 metres and over a 120 to 240 metre lenticular width. The orebodies, designated as A to F, consist mainly of pyrite, chalcopyrite, pyrrhotite, magnetite, sphalerite, galena, arsenopyrite, bornite and cobaltite. Gangue includes blocks of brecciated country rock, quartz as lenses, stringers and blebs, recrystallized coarse-grained calcite as lenses and stringers, and apatite. Minor alteration minerals consist of calc-silicate lenses and tourmaline.

Individual ore zones, which are up to a few tens of metres thick and extend laterally up to hundreds of metres, consist of massive lenses, irregular streaks and blebs, and veinlets of sulphide. Repeated deformation of the massive sulphide lenses resulted in an irregular and feathery nature to the orebodies, which have been called stringer lodes. The magnetite-apatite-calcite assemblage occurs as thinly banded layers intercalated with calc-silicate, limestone bands up to 6 metres thick, graphitic quartzofeldspathic beds and the massive sulphide lenses.

The Granduc massive sulphide deposits are currently thought to be a banded iron formation (sulphide facies).

Total production from 1971 to 1978 and from 1981 to 1984 included mining of 15.2 million tonnes of ore.

Ore reserves before production began in 1971 were 39,316,435 tonnes grading 1.73 per cent copper (Granduc Mines Ltd. Annual Report 1969). Inventory in 1986 was reported as 9.89 million tonnes grading 1.79 per cent copper with minor gold and silver (Open File 1992-1).

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Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/07/25 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 022** NATIONAL MINERAL INVENTORY: 104B8 Ba1

NAME(S): **WINDY POINT (SULPHURETS)**, DISCOVERY (SULPHURETS), LUCK, BRUCEJACK PENINSULA, RED RIVER, SULPHURETS

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 28 09 N
LONGITUDE: 130 11 00 W
ELEVATION: 1378 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the Brucejack Peninsula on the west shores of Brucejack Lake at the headwaters of Sulphurets Creek; showing located as No. 26 on Open File Map 1988-4.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6258926
EASTING: 427097

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Argentite, Electrum, Pyrite, Tennantite, Tetrahedrite, Sphalerite, Galena
ASSOCIATED: Quartz, Barite, Arsenopyrite
ALTERATION: Sericite, Silica
ALTERATION TYPE: Silicific'n, Sericitic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein, Stockwork, Disseminated
CLASSIFICATION: Epithermal, Hydrothermal, Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Undefined Formation	

LITHOLOGY: Arkose, Arenite, Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE:

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1994
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	167.2000	Grams per tonne
Gold	2.1000	Grams per tonne

COMMENTS: Across 0.55 metre.
REFERENCE: Assessment Report 24610, page 19.

CAPSULE GEOLOGY

The area around Brucejack Lake, near the headwaters of Sulphurets Creek, is underlain by Upper Triassic-Middle Jurassic Hazelton Group rocks comprised mainly of crystal and lithic tuffs, minor chert, greywacke and limestone.

The Brucejack Peninsula can be divided into three areas by faults. The northern and central area are elongate fault blocks which trend about 120 degrees. A silicified zone in arkose occurs between and parallel to faults which are at 45 degrees to the Brucejack fault. The northern area has an intensely silicified zone with low gold and silver values along its axis, near the northeast shore of the peninsula. The central area consists of arkose with only minor quartz veining. The southern area, or Discovery zone, consists of arkose, arenite and tuffs with ubiquitous silicification, sericitization and veining.

An intensely shattered quartz vein striking 050 degrees and dipping 75 degrees north was located in 1980. This vein is impregnated with argentite and electrum. A sample taken over 1.0 metre assayed 1028.6 grams per tonne gold and 22,765 grams per tonne

CAPSULE GEOLOGY

silver. In 1982, a silicified mass adjacent to the discovery site was trenched. Values were low, except for a 3.0 metre section from Trench 2, which assayed 8.57 grams per tonne gold and 814.27 grams per tonne silver (Bridge and Melnyk, 1982). The Discovery vein is located about 10 metres south of a barite vein. This barite occurrence is thought to be the Luck occurrence which was located in 1935. A sample of this quartz-barite vein, taken from Trench 6 which is located about 45 metres northwest of Trench 2, assayed 4.11 grams per tonne gold and 238.28 grams per tonne silver over 2.0 metres. Another 1.5 metre sample taken from Trench 1 assayed 3.42 grams per tonne gold and 87.43 grams per tonne silver (Bridge and Melnyk, 1982).

The Windy Point zone was discovered in 1993. The zone consists of a quartz vein/stockwork structure up to 9.5 metres wide and 250 metres long. It trends northwest, dips vertically, and appears to merge with the Trachsel zone (104B 386) at its northwest end. Mineralization consists of disseminated and fracture fill pyrite with minor amounts of arsenopyrite, tennantite, tetrahedrite, sphalerite and galena. Significant trench results were 2.1 grams per tonne gold and 167.2 grams per tonne silver across 0.55 metre (Assessment Report 24610, page 19).

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1996/07/16 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104B 023**

NATIONAL MINERAL INVENTORY: 104B10 Zn2

NAME(S): **SHAN (JOSH)**, SHAN 1-6, SNIP, SNIP 5-6, JOSH, MAY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 39 10 N
LONGITUDE: 130 50 01 W
ELEVATION: 1050 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the east side of Snippaker Creek about 4.0 kilometres south of the Iskut River; location from Trench 1 (Assessment Report 11306).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6280239
EASTING: 387584

COMMODITIES: Zinc, Copper, Silver, Lead, Magnetite

MINERALS

SIGNIFICANT: Sphalerite, Chalcopyrite, Pyrite, Magnetite, Galena, Tetrahedrite
COMMENTS: Rare galena and tetrahedrite in skarn zone.
ASSOCIATED: Quartz
ALTERATION: Actinolite, Epidote, Garnet
ALTERATION TYPE: Skarn, Propylitic, Silicific'n, Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive, Disseminated
CLASSIFICATION: Igneous-contact, Skarn, Industrial Min.
TYPE: K02 Pb-Zn skarn
DIMENSION: 0610 x 0152 Metres
STRIKE/DIP:
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic			Coast Plutonic Complex
Paleozoic			Stikine Assemblage

LITHOLOGY: Actinolite Epidote Skarn
Actinolite Epidote Garnet Skarn
Limestone
Calcareous Volcanic
Andesitic Breccia
Syeno Diorite
Syeno Diorite Porphyry
Granodiorite
Gabbroic Dike

HOSTROCK COMMENTS: Mesozoic and older volcanics and volcaniclastics with Permian (?) limestones are intruded by satellitic bodies of syenodiorite.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
Plutonic Rocks RELATIONSHIP: Syn-mineralization
GRADE: Hornfels, Greenschist

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel
YEAR: 1983

COMMODITY	GRADE	
Silver	22.9700	Grams per tonne
Copper	0.0300	Per cent
Lead	0.0100	Per cent
Zinc	24.8000	Per cent

COMMENTS: A 0.9 metre sample from Trench 2.
REFERENCE: Assessment Report 11306.

CAPSULE GEOLOGY

The area lies on the east flank of the Coast Plutonic Complex, which consists of quartz monzonite stocks with satellitic bodies of syenite and diorite. The area is underlain by Mesozoic and older rocks consisting of shales, limestones and acid to intermediate volcanics and volcaniclastics which have been intruded by elements

CAPSULE GEOLOGY

of the Coast Intrusions.

Locally, the claims are underlain by a succession of limestone, volcanics and related sediments of probable Paleozoic and Mesozoic age which have undergone numerous periods of deformation and intrusion.

The oldest rocks appear to belong to a thick sequence of andesitic volcanic breccia which also contains minor tuff and argillite beds. A thick unit of light grey, banded, fossiliferous (crinoidal) limestone, of possible Permian age, is intercalated with the andesitic breccias.

These units are intruded by elements of the Coast Intrusions in the forms of a syenodiorite porphyry and later granodiorite. The syenodiorite is characterized by 1.0 to 1.5 centimetre hornblende phenocrysts. The main body strikes northeast across the property and locally, occurs both as sills and dykes within the layered rocks.

The granodiorite occurs as near vertical dykes within the syeno-diorite porphyry. It is characterized by a fine-grained matrix with 1 to 3 millimetre biotite grains.

The youngest rocks appear to be narrow, fine-grained gabbro dykes which also strike northeast across the property.

Rock alteration consists of propylitization, silicification, serpentinization and contact metasomatism. The contact metasomatism has resulted in the formation of actinolite-epidote skarns within the limestone and calcareous volcanics in close proximity to the syeno-diorite porphyry. Serpentinization is minor and is observed on faults which crosscut the limestone and may be related to the late gabbroic intrusions. Zones of silicification are observed within the finer grained volcanics and appear to be related to the intensity of late stage quartz veining. Propylitic alteration is widespread and is characterized by quartz veining with epidote and the alteration of mafic minerals to epidote and chlorite in all rocks.

Mineral occurrences on the property can be classified into three categories, namely skarns, weak quartz stockworks and late quartz veins (refer to Josh, 104B 290 and Josh 3, 104B 291). Mineralization related to skarns is best developed with the limestone and calcareous volcanic units along the northern margin of the syeno- diorite porphyry. Zinc and copper mineralization occurs over a strike length of 610 metres and a width of about 152 metres. In 1983, old trenches were resampled.

Trench 1 hosted massive pyrite, chalcopyrite and magnetite mineralization in a strong actinolite-epidote skarn within calcareous volcanics. The exposed, massive lens averaged 7.0 metres in length and 0.8 metres in width. In 1983, a 0.7 metre sample of this mineralization from Trench 1 assayed 4.19 per cent copper, 0.01 per cent lead, 0.12 per cent zinc, 30.5 grams per tonne silver and 0.1 grams per tonne gold (Assessment Report 11306).

Trenches 2 and 3 hosted irregular, discontinuous lenses of light brown, crystalline sphalerite with actinolite-epidote-garnet skarn. The maximum thickness averaged about 1.0 metre. Minor chalcopyrite and magnetite occur with the sphalerite. In 1983, a 0.9 metre sample from Trench 2 assayed 24.8 per cent zinc, 0.03 per cent copper, 0.01 per cent galena, 22.97 grams per tonne silver and trace gold (Assessment Report 11306).

A well weathered actinolite-epidote-garnet skarn exposed in Trench 4 is characterized by 0.3 metre pods of massive chalcopyrite associated with magnetite and vuggy crystalline quartz.

The mineralized skarns can be found in most exposures of the Permian (?) limestone and calcareous volcanics which have been intruded by the syenodiorite. Massive sphalerite, chalcopyrite and magnetite mineralization is found and is characterized by low silver values with traces of lead and gold. Rare galena and tetrahedrite were reported in actinolite-magnetite-garnet skarn zones.

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PR REL The Vancouver Sun (Delaware Resources Corp., Dec. 4, 1987)
V STOCKWATCH Jul.17,27,Aug.5,7,31,Oct.1,23,Nov.16,23,Dec.7, 1987
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B21)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/23 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 024**

NATIONAL MINERAL INVENTORY: 104B15 Fe1

NAME(S): **MAG**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 57 05 N
LONGITUDE: 130 46 33 W
ELEVATION: 670 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Fourteen claims located in the upper Forrest Creek area, exact location unknown.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6313378
EASTING: 391988

COMMODITIES: Iron, Copper, Magnetite

MINERALS
SIGNIFICANT: Magnetite, Chalcopyrite, Pyrite
ALTERATION: Magnetite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Massive, Disseminated
CLASSIFICATION: Skarn, Igneous-contact, Industrial Min.
TYPE: K01 Cu skarn, K03 Fe skarn

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Unnamed/Unknown Informal
Permian			Stikine Assemblage

LITHOLOGY: Skarn
Limestone
Diorite

HOSTROCK COMMENTS: Permian sedimentary sequence of the Paleozoic Stikine Assemblage intruded by Jurassic(?) diorite.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP: Syn-mineralization
GRADE:

CAPSULE GEOLOGY

The Mag occurrence is situated in a sedimentary sequence of probable Permian age within the Paleozoic Stikine Assemblage, which has been intruded by a Jurassic(?) diorite plug. Skarn mineralization occurs along a limestone-diorite contact and consists of massive magnetite with minor pyrite and traces of chalcopyrite. No assays are available.

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EMPR OF 1989-2
GSC MAP 9-1957; 311A; 7780G; 1418A
GSC MEM 246
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988

DATE CODED: 1985/07/24
CODED BY: GSB
FIELD CHECK: N
DATE REVISED: 1988/05/03
REVISED BY: LLD
FIELD CHECK: N

MINFILE NUMBER: **104B 025**

NATIONAL MINERAL INVENTORY: 104B11 Sb1

NAME(S): **JON**, MAC

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11W
BC MAP:
LATITUDE: 56 37 59 N
LONGITUDE: 131 24 07 W
ELEVATION: 1280 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Group of 12 claims located at the head of the east fork of the Inhini River.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6279120
EASTING: 352671

COMMODITIES: Silver, Copper, Antimony

MINERALS
SIGNIFICANT: Tetrahedrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Pennsylvan.-Permian			Stikine Assemblage

LITHOLOGY: Limestone
Meta Volcanic
Meta Sediment/Sedimentary

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks RELATIONSHIP:
METAMORPHIC TYPE: Regional
GRADE:

CAPSULE GEOLOGY

The Jon occurrence consists of 12 claims which were located at the head of the east fork of the Inhini River. The area is underlain by metamorphosed Pennsylvanian to Permian volcanics and sediments. On the property, a quartz vein ranging from 1.2 to 2.4 metres in width was reported to be erratically mineralized with tetrahedrite. The vein occurs along the contact of folded volcanics and limestone. Also, sparse tetrahedrite was found within reticulated quartz stringers in a sheared zone within the limestone footwall.

The National Mineral Inventory for the Jon (104B 011 SB1) indicates antimony and copper mineralization occurs also.

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GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B10)
EMPR AR *1963-9,10
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/03 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 026**

NATIONAL MINERAL INVENTORY: 104B11 Cu2

NAME(S): **IN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11W
BC MAP:
LATITUDE: 56 35 00 N
LONGITUDE: 131 29 00 W
ELEVATION: 1070 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Four claims located on the upper Inhini River.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6273766
EASTING: 347480

COMMODITIES: Copper Lead Zinc

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

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

HOST ROCK
DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic			Stikine Assemblage

LITHOLOGY: Meta Sediment/Sedimentary
Meta Volcanic
Phyllite
Quartzite
Greywacke
Limestone

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
TERRANE: Stikine Plutonic Rocks
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The property consists of four recorded claims on the upper Inhini River. The area is underlain by metamorphosed Paleozoic sediments and volcanics. Locally, the rocks are comprised of phyllites, quartzites, highly sheared greywacke, metavolcanics and minor Permian limestone. Mineralization occurs within narrow quartz veins in altered host rocks. Mineralization within the quartz veins consists of minor galena, sphalerite and chalcopyrite.

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GSC MEM 246

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/03 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 027**

NATIONAL MINERAL INVENTORY: 104B15 Cu1

NAME(S): **KEN**, DIRK, GLACIER,
ROPE, WARRIOR, GAB,
CREVASSE, CONSOLIDATED SEA GOLD

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 52 31 N
LONGITUDE: 130 56 17 W
ELEVATION: 1375 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Claim is located west of the headwaters of Forrest Kerr Creek on the divide between the headwaters of Forrest Kerr Creek and the southward flowing tributaries of the Iskut River (Assessment Report 4150).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6305176
EASTING: 381883

COMMODITIES: Gold Copper

MINERALS
SIGNIFICANT: Magnetite Chalcopyrite
ASSOCIATED: Barite
ALTERATION: Garnet Epidote
ALTERATION TYPE: Skarn Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn
TYPE: K04 Au skarn K01 Cu skarn

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mississippian			Stikine Assemblage

LITHOLOGY: Garnet Epidote Skarn
Skarn
Limestone
Sandstone
Andesite
Andesite Agglomerate

HOSTROCK COMMENTS: Mississippian volcanics and sediments are currently correlated with the Paleozoic Stikine Assemblage (GSC Paper 89-1E).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist Hornfels

INVENTORY

ORE ZONE: SKARN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	9.6000	Grams per tonne

COMMENTS: Trench sample taken over 1.5 metres in mineralized skarn zone.
REFERENCE: George Cross Newsletter, #180, 1988.

CAPSULE GEOLOGY

The area of the Ken showing is underlain by andesite, andesite agglomerate, limestone and sandstone of probable Mississippian age, currently correlated with the Paleozoic Stikine Assemblage.

Mineralization on the property is associated with skarn development within the sequence of sediments. The mineral assemblage consists of massive to disseminated magnetite, barite, pyrite and chalcopyrite with associated gold values.

The Ken showing, located near the western boundary of the Gab 10 claim, consists of massive skarn assemblage mineralization comprising magnetite and chalcopyrite with gold values. This massive, epidote garnet skarn is exposed in McLymont Glacier and the mineralized outcrop extends for about 100 metres to the south.

Drilling in 1972 within the Ken showing returned a 15.2 metre

CAPSULE GEOLOGY

intersection which assayed 1.5 per cent copper. Another 1.5 metre intersection assayed 7.5 grams per tonne gold (Assessment Report 17120). Trenching in 1988 on the Ken showing produced a chip sample that averaged 9.6 grams per tonne gold over 1.5 metres (George Cross Newsletter, #180, 1988).

Prospecting in 1988 identified skarn mineralization that covers an area of about 610 by 305 metres and includes the Ken and Glacier showings. The skarn mineralization is open in both directions along strike. Two grab samples taken about 46 metres southwest of the trench sample indicated above, assayed 33.7 and 6.1 grams per tonne gold, respectively (George Cross Newsletter, #180, 1988).

The Glacier zone and the Rope showing, two similar mineralized zones to the Ken showing, are located approximately 427 metres and 198 metres to the southeast, respectively. Selected grab samples from the Rope showing assayed 3.8 and 34.39 grams per tonne gold. Selected grab samples from the Glacier zone, located on the western portion of the Gab claims, assayed 24.0 and 22.0 grams per tonne gold (Vancouver Stockwatch, December 15, 1988, page 12).

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EMPR GEM 1972-519
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NW PROSPECTOR Aug./Sept., 1988, p.19
EMPR PF (Todoruk, S.L., Ikona, C.K., (1987): Summary Report on the Gab 9 claim in Statement of Material Facts #67/88 for Jazzman Resources Inc., Aug. 9, 1988)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/20 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 028**

NATIONAL MINERAL INVENTORY: 104B10 Cu3

NAME(S): **LAKE ZONE**, GOSSAN 22, KIM, GOSSAN 5, LAKE RIDGE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 33 27 N
LONGITUDE: 130 51 24 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Lake Zone located south of Crater Lake (Assessment Report 16892); part of Kim (104B 117).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6269674
EASTING: 385884

COMMODITIES: Copper, Lead, Zinc, Gold, Silver

MINERALS

SIGNIFICANT: Chalcopyrite, Sphalerite, Galena, Pyrite
ASSOCIATED: Quartz, Malachite
ALTERATION: Chlorite, Epidote, Calcite, Pyrite, Diopside, Malachite
ALTERATION TYPE: Propylitic, Oxidation, Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound, Disseminated, Vein
CLASSIFICATION: Skarn, Igneous-contact, Epigenetic, Hydrothermal
TYPE: K02 Pb-Zn skarn; I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Cretaceous-Tertiary			Coast Plutonic Complex

LITHOLOGY: Skarn
Chlorite Diopside Epidote Skarn
Pyroclastic
Tuffaceous Siltstone
Lapilli Tuff
Shale
Granodiorite
Orthoclase Porphyry

HOSTROCK COMMENTS: Triassic and younger plutonics intrude Juro-Triassic volcanics and sediments which may be correlative with Hazelton or Stuhini Groups.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks; Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SHEAR
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1986
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	2.8000	Grams per tonne
Gold	0.4800	Grams per tonne

COMMENTS: Samples of chalcopyrite-pyrite mineralization within a shear zone in granodiorite.
REFERENCE: Assessment Report 15238.

CAPSULE GEOLOGY

The area is underlain by an undivided assemblage of stratified rocks comprised of fragmental volcanics interlayered with sequences of argillite, banded siltstone, greywacke, conglomerate and minor impure limestones. Most of these rocks are believed to be correlative with the Lower Jurassic Hazelton Group (Unuk River Formation), but some of the lowermost members may correlate with the Upper Triassic Stuhini Group rocks.

The stratified rocks are intruded by sub-volcanic intrusives and

CAPSULE GEOLOGY

plutonic rocks related to the Coast Plutonic Complex that range from Upper Mesozoic to Cenozoic in age. These stocks and dykes include granodiorite, quartz monzonite, syenite and feldspar porphyry, as well as Tertiary dykes and plugs of basalt and diorite.

Propylitic alteration, consisting of chlorite, epidote, calcite and pyrite, is extensively developed within the Lake Ridge area. The most prominant propylitic alteration in Lake Ridge is in or near "orthoclase porphyry" bodies, in which 30 to 45 per cent of the orthoclase phenocrysts have been replaced by epidote and the groundmass contains traces of epidote, chlorite and calcite. The orthoclase porphyry is predominantly a porphyritic hypabyssal intrusive rock which varies in composition from granodiorite or quartz monzonite to syenite.

The porphyry intrudes an interbedded sequence of northeast dipping sedimentary and pyroclastic rocks. The sedimentary rocks are characterized by thinly laminated (1 millimetre to 2 centimetres) pyritic siltstones and shales with wider bands of greywacke. These are overlain by tuffs and lapilli tuffs of intermediate to mafic composition.

Varying degrees of sulphide-bearing skarn alteration is developed within the volcaniclastics and tuffaceous siltstones with the areas adjacent to the intrusives. Skarn alteration is best developed in the upper part of the volcaniclastic sequence and is comprised of massive, medium-grained chlorite, plus or minus diopside, with lesser amounts of quartz and epidote.

Mineralization consists of randomly oriented and discontinuous quartz-sulphide veins and veinlets ranging up to 0.5 centimetres in width. Sulphide mineralization consists of variable amounts of disseminated sphalerite, galena, chalcopyrite with associated malachite and coarse aggregates of pyrite.

In 1986, a sample from a rusty altered shear zone along the west side of the granodiorite intrusive assayed 0.48 grams per tonne gold and 2.8 grams per tonne silver (Assessment Report 15238). In 1987, a sample taken from a 30 centimetre wide pyrite-quartz vein within a sheared zone in the granodiorite assayed 0.265 grams per tonne gold and 0.1 grams per tonne silver (Assessment Report 16892).

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EMPR ASS RPT 3981, 5752, *11332(part 1), *15238, *16892
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
GCNL #132, 1984
V STOCKWATCH Aug.26, 1988, p. 19
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Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
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DATE CODED: 1988/06/22 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/10/22 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 029**

NATIONAL MINERAL INVENTORY:

NAME(S): **SOUTH LEDUC**, BLUE - BELLE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01W
BC MAP:
LATITUDE: 56 12 01 N
LONGITUDE: 130 20 58 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Gossan and malachite outcrop on Belle 3 claim (Assessment Report 89).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6229190
EASTING: 416277

COMMODITIES: Copper Lead Zinc

MINERALS
SIGNIFICANT: Chalcopyrite Galena Pyrite Sphalerite Pyrrhotite
ASSOCIATED: Quartz
ALTERATION: Limonite Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Syngenetic
TYPE: G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Tertiary			Unnamed/Unknown Informal

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Biotite Chlorite Schist
Volcanic Breccia
Limestone
Argillite
Siltstone
Quartzite
Gossan

HOSTROCK COMMENTS: Isotopic age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

The South Leduc occurrence lies 1.2 kilometres south of the Granduc ore deposit (104B 021) and the South Leduc Glacier. The occurrence is located at the south end at the east boundary of the 120 metre wide, north-trending South Unuk cataclastite zone (Lower Jurassic). The occurrence is hosted by banded biotite and/or chlorite schist, volcanic breccia, limestone, argillite, siltstone and quartzite of the Lower Jurassic Unuk River Formation (Hazelton Group). The volcanics and sediments strike north and dip steeply west. All rocks are cut by Tertiary quartz diorite plutons and dykes.

Mineralization, consisting of chalcopyrite, sphalerite, pyrrhotite, coarse-grained galena, pyrite, malachite, quartz and limonite is characterized by a large gossan zone.

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Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut,
(Showing No. B77)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/07/25 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 030** NATIONAL MINERAL INVENTORY: 104B1 Ag2

NAME(S): **OUTLAND SILVER BAR**, ELDORADO, SILVER BAR

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 09 04 N NORTHING: 6223430
LONGITUDE: 130 05 13 W EASTING: 432476
ELEVATION: 884 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Gossan zone, (figure 35, Bulletin 58), located west of Salmon Glacier, north of Mount Bayard. Johnnies vein lies 500 metres to the west-southwest.

COMMODITIES: Silver Lead Zinc Gold Copper
Tungsten

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Tetrahedrite Pyrrhotite
Chalcopyrite Arsenopyrite Argentite
COMMENTS: Unidentified tungsten mineral present.
ASSOCIATED: Quartz
ALTERATION: Silica Pyrite
ALTERATION TYPE: Silicific'n Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Hydrothermal Epigenetic Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn
SHAPE: Tabular
MODIFIER: Folded Sheared
DIMENSION: 0030 x 0001 Metres STRIKE/DIP: 315/70E TREND/PLUNGE:
COMMENTS: Johnnies vein.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Quartzitic/Quartzose Siltstone
Greywacke
Siliceous Argillite
Andesitic Tuff
Pyrite Siltstone
Mudstone
Porphyritic Hornblende Diorite Dike
Quartz Diorite Dike
Andesite Dike
Gossan

HOSTROCK COMMENTS: Isotopic age reference is Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	166.0000	Grams per tonne
Gold	1.4000	Grams per tonne
Copper	2.1700	Per cent
Lead	2.2800	Per cent

COMMENTS: Two metre sample.
REFERENCE: Assessment Report 8909.

CAPSULE GEOLOGY

The Outland Silver Bar occurrence lies on the west side of the Salmon Glacier, north of Mount Bayard. Host rocks are banded, dark, quartzitic siltstones and greywackes, which are bounded by andesitic tuffs of the Lower Jurassic Unuk River Formation (Hazelton Group). The area lies within the northwest extremity of the Eocene Portland Canal dyke swarm, which consists of diorite to granodiorite dykes. Hornblende granodiorite of the Texas Creek Batholith lies to the west and south.

The sedimentary rocks are marked by breccia and narrow mylonite zones and by complex, small scale, isoclinal folding. Quartz veins and mineralization cut altered porphyritic hornblende diorite and quartz diorite dykes and are subsequently cut by dark green andesitic dykes.

Several mineralized quartz veins and gossans occur on the property. The main vein or "Johnnies" vein, which trends north-northeast, dips 70 degrees east, and has been explored by two adits. The vein has a width of 1.3 metres, a mineralized length of 30 metres and occurs in brecciated altered siltstones. It has been cut by small dioritic dykes. Other smaller veins are found in the older dykes but generally show little extension into the siltstones. The veins consist of quartz with scattered galena, sphalerite, tetra-hedrite and pyrite with minor chalcopyrite. These veins trend north to northeast and dip east. A 2.0 metre channel sample from the Johnnies vein assayed 166 grams per tonne silver, 1.4 grams per tonne gold, 2.17 per cent copper, and 2.28 per cent lead (Assessment Report 8909).

About 100 metres to the southeast, an east-northeast trending vein cuts silicified argillite. It is less than 50 centimetres wide and a 0.3 metre sample of vein material assayed 936 grams per tonne silver, 1.4 grams per tonne gold, 0.53 per cent copper, 7.02 per cent lead, and 7.68 per cent zinc (Assessment Report 375).

Lenses of sulphide mineralization, that have been referred to as being replacement-type, occur in pyrite-rich siltstones and mudstones, 500 metres east-northeast of Johnnies vein. These mineralized zones, which trend east-northeast and dip steeply north, contain pyrite, pyrrhotite, arsenopyrite, and scattered chalcopyrite, galena, tetrahedrite, argentite, sphalerite and an unidentified tungsten mineral. A 10 metre sample from and adit assayed 95.3 grams per tonne silver, 0.3 grams per tonne gold, 0.23 per cent lead, and 0.19 per cent zinc (Assessment Report 8909). Twenty-nine samples were assayed for tungsten oxide (WO_3) and they contained between 0.01 to 0.06 per cent tungsten oxide (Assessment Report 8909).

From 1926 to 1929, 4 tonnes of ore produced 3328 grams of silver, 13 kilograms of copper, and 507 kilograms of lead.

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GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/20 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 031**

NATIONAL MINERAL INVENTORY: 104B1 Zn1

NAME(S): **INDIAN**, NEW INDIAN MINES, PORTLAND, BOUNDARY , PAYROLL

STATUS: Past Producer Underground
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 04 35 N
LONGITUDE: 130 02 01 W
ELEVATION: 685 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the Portland No.1 and 2 crown grants, five kilometres north of the Silbak Premier mine (104B 054).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6215063
EASTING: 435664

COMMODITIES: Silver, Gold, Zinc, Lead, Copper

MINERALS

SIGNIFICANT: Pyrite, Sphalerite, Galena, Chalcopyrite, Tetrahedrite
ASSOCIATED: Quartz, Calcite
ALTERATION: Sericite, Silica, Chlorite, Pyrite, Covellite
ALTERATION TYPE: Sericitic, Silicific'n, Propylitic, Potassic, Carbonate, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork, Breccia
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation
SHAPE: Irregular
MODIFIER: Folded, Faulted
DIMENSION: 0366 x 0122 x 0004 Metres
STRIKE/DIP: /90
TREND/PLUNGE: 155/
COMMENTS: Vein pinches and swells from 0.61 to 7.62 metres. Lenses are vertical and trend 155 degrees north.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Argillite
Siltstone
Granitic Intrusive

HOSTROCK COMMENTS: Date quoted for Texas Creek intrusives is for the Premier porphyry dyke (Fieldwork, 1985). Unuk River Formation date from Brown, 1987).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: HANGINGWALL VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1962
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	191.9700	Grams per tonne
Gold	30.1700	Grams per tonne
Copper	0.2800	Per cent
Lead	4.6200	Per cent
Zinc	13.5700	Per cent

COMMENTS: Across 30 centimetres.
REFERENCE: White, R.V. 1962.

ORE ZONE: INDIAN VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	57.9000	Grams per tonne
Gold	2.1400	Grams per tonne

COMMENTS: 8.95 metre intersection in DDH I-11
REFERENCE: Assessment Report 13073.

CAPSULE GEOLOGY

The Indian Mine is located on the Portland No. 1 and 2 Crown Grants, five kilometres north of the Silbak Premier Mine, 27 kilometers north of Stewart, B.C.. Exploration on the property started in 1910 and sporadic minor production began in 1925 and continued until 1953. Esso Resources Canada Ltd. has recently investigated the area.

The property is located in the Intermontane Belt bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, in the volcanic arc assemblage of the Stikinia Terrane.

The deposit is hosted by Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanic rocks. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillites and siltstones infolded along a synclinal axis. This sequence is intruded by the Lower Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and granitic Eocene Hyder intrusions. In the mine area remnants of country rock include breccia, tuffs and siltstone.

Mineralization was emplaced in the north trending Indian Fault system intermittently along strike (Indian Vein). The fault system contains pyritic, sericitic, quartz-calcite infilled fault breccia and gouge in an en echelon arrangement. The Indian Fault system generally dips steeply to the east striking 170 degrees and is believed to extend to the Payroll No. 4 (104B 050) Crown Grant, 450 metres north of the mine. Fracturing is abundant in the mine section and four distinct sets have been recognized, most of which are unmineralized. Economic mineralization appears to have been localized to areas where east dipping faults change direction and split into divergent branches, terminating where west dipping faults cut east dipping faults. The fault pattern differs between the mine levels. The level No. 2 faulting is mainly steeply west dipping.

Production from the mine was largely confined to the Indian vein (No. 1 level) which pinches and swells from 0.61 to 7.62 metres along a known strike length of 366 metres and a vertical range of at least 122 metres.

The "Hangingwall" vein exposed on the No. 2 level assayed 30.17 grams per tonne gold, 191.97 grams per tonne silver, 0.28 per cent copper, 4.62 per cent lead and 13.57 per cent zinc across 30 centimetres (White, 1962).

The deposit consists of several lenticular, irregular fissure-type, sulphide bearing quartz veins which grade into irregular stockworks. Mineralization occurs in milky quartz and carbonate veins as open space fillings with coarse galena, sphalerite, trace tetrahedrite, chalcopyrite, covellite and pyrite. Silica, pyritic, carbonate, sericitic and potassic alteration is visible in the mine area. Host rocks are most intensely silicified near mineralization. Wallrocks include silicified porphyry and chloritic breccia.

Vertical zoning has been recognized from petrographic analysis. The abundance of sphalerite (and the iron content) increases, while chalcopyrite and galena abundance decreases, with depth. Generally, ore values decrease towards lower levels.

The Indian vein contains variable gold and silver values over narrow vein widths with low continuity. Mineralization in the mine area is considered to be late stage infilling of fault breccia in young fault zones with coarse comb textures common. These mineral-

CAPSULE GEOLOGY

ized fault zones have narrow zones of sericitic alteration. There has been no early stage precious metal rich chalcedonic quartz stockworks similar to the Big Missouri deposit discovered on the property. The Indian mineralization is considered to be distinct and considerably later than the Big Missouri and Silbak Premier mineralization.

A diamond drillhole in 1984 intersected 8.95 metres of the vein and this interval assayed 57.9 grams per tonne silver and 2.14 grams per tonne gold (Assessment Report 13073). In 1936 a chip sample over 7.6 metres assayed 205.6 grams per tonne silver, 4.8 grams per tonne gold, 10.6 per cent zinc, 5.5 per cent lead and 0.2 per cent copper (Annual Report, 1936).

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N MINER Nov.4, 1985
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Equity Preservation Corp. (Stewart-Sulphurets-Iskut Compilation, Showing No. B108, Dec., 1988)
GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/20 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 032**

NATIONAL MINERAL INVENTORY:

NAME(S): **NEE**, NEE 1-4

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 32 39 N
LONGITUDE: 130 51 38 W
ELEVATION: 1375 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located south of the confluence of Snippaker Creek and the Iskut River, approximately 95 kilometres northwest of Stewart.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6268196
EASTING: 385605

COMMODITIES: Gold, Silver, Lead, Zinc

MINERALS

SIGNIFICANT: Arsenopyrite, Galena, Sphalerite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Pyrite, Epidote, Chlorite, Clay, Carbonate, Limonite, Sericite
ALTERATION TYPE: Sericitic, Propylitic, Argillic, Carbonate, Oxidation, Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Massive, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Igneous-contact, Skarn
TYPE: I01 Au-quartz veins, K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Limestone, Argillite, Calcareous Argillite, Siltstone, Skarn, Volcanic Flow, Tuff, Agglomerate, Orthoclase Porphyry, Felsic Dike

HOSTROCK COMMENTS: Undivided Jurassic-Triassic sediments and volcanics are intruded by a felsic intrusive unit and associated felsic dykes.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks RELATIONSHIP: Syn-mineralization, Post-mineralization
METAMORPHIC TYPE: Contact, Regional
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1983
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	143.6500	Grams per tonne
Gold	27.3250	Grams per tonne
Lead	2.4000	Per cent
Zinc	0.2700	Per cent

COMMENTS: Nee arsenopyrite, sample R-3034.
REFERENCE: Assessment Report 11332, part 1.

CAPSULE GEOLOGY

Undivided flows and volcaniclastics of the Jurassic to Triassic Hazelton Group (Unuk River Formation) or Stuhini Group, are comprised of basaltic to andesitic flows, agglomerates, breccias and tuffs. A Jurassic to Triassic sedimentary unit is comprised predominantly of limestone, calcareous argillite and siltstones which are occasionally interbedded with light brown calcarenites and marly shales. The lime-

CAPSULE GEOLOGY

stone is schistose and hosts abundant quartz and calcite veins.

The volcanics and sediments are intruded by a felsic intrusive comprised of orthoclase porphyry and rhyolite. The rocks are strongly sheared and altered with extensive limonitic staining. These rocks are thought to be related to an altered stock of similar composition which is exposed north of the claims.

Felsic dykes traverse the property and appear to dip at shallow angles to the west and may be up to 12 metres in width. They are associated with narrow chill zones.

Propylitic alteration is extensive and is evidenced by abundant chlorite and epidote in both the volcanic and sedimentary rocks. A zone of carbonate alteration is developed along a northeast-southwest trend and may be related to a fault structure. The intrusive rocks have been sericitized and bleached. Argillic alteration has developed along a major fault in these rocks. Hornfels is developed at and near the intrusive contacts.

Disseminated pyrite is ubiquitous throughout the property with an increase of pyrite content in the intrusive rocks. Coarse-grained, brassy pyrite is present in the hornfelsic zones.

Several quartz veins are present on the property with two intermittantly mineralized quartz veins exposed on the northeast portion of the property. These parallel veins average 1.0 metre in width and dip at moderate angles. They contain narrow sections of massive arsenopyrite which may occur along either the hangingwall or footwall of the veins. The wallrocks, which consist of skarned limestone and argillite, host disseminated pyrite with minor sphalerite and galena for up to 1.0 metres from the contacts.

Small (10 to 25 centimetres) arsenopyrite-galena-quartz veins occurring within silicified rocks on the Nee claims were examined in 1983. A sample from the Nee arsenopyrite vein was reported to assay 27.325 grams per tonne gold, 143.65 grams per tonne silver, 2.4 per cent lead and 0.27 per cent zinc (Assessment Report 11332, part 1).

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DATE CODED: 1988/06/16 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 033** NATIONAL MINERAL INVENTORY: 104B8 Au1

NAME(S): **EAST GOLD**, PIONEER

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B08E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 16 54 N NORTHING: 6237941
LONGITUDE: 130 04 02 W EASTING: 433926
ELEVATION: 735 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Portal located at the 735 metre elevation. Location 5 kilometres south of the toe of Frank Mackie Glacier about 200 metres west of the Bowser River (Annual Report 1946, page 69).

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS
SIGNIFICANT: Sphalerite Galena Electrum Pyrargyrite Silver Arsenopyrite Tetrahedrite Chalcopyrite Pyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Sericite Silica Carbonate Pyrite
ALTERATION TYPE: Sericitic Silicific'n Carbonate Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stockwork Massive Disseminated
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	
Lower Jurassic	Undefined Group	Unuk River	

LITHOLOGY: Fine Grained Siltstone
Greywacke
Argillite
Tuffaceous Rock

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: SHEAR REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1946
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	5.1400	Grams per tonne

COMMENTS: From a 1.82 metre chip sample.
REFERENCE: Annual Report 1946, page A68.

CAPSULE GEOLOGY

The East Gold epithermal deposit is located 5 kilometres south of Frank Mackie Glacier just west of the Bowser River. Limited mining and underground exploration was conducted on the property from 1931 to 1965 producing a small tonnage of high grade gold-silver ore. From 1939 to 1945, inclusive, fourteen shipments of sorted ore were made with a total weight of 14.74 tonnes. This contained approximately 20,092 grams of gold and 44,291 grams of silver (Annual Report 1946, page A72). From 1949 to 1954 inclusive, 29 tonnes were mined and contained a total of 29,828 grams of gold, 90,105 grams of silver, 2,067 kilograms of lead, 558 kilograms of zinc, and 30 kilograms of copper. In 1965, 2 tonnes were mined producing 1,866 grams of gold, 8,522 grams of silver, 278 kilograms of lead, and 471 kilograms of zinc.

The region is underlain by a north-northwest trending belt of folded volcanic rock which contains a thick sedimentary sequence infolded along a synclinal axis. This belt has been correlated with the Lower Jurassic Unuk River Formation, Hazelton Group, with the deposit occurring within the Upper Siltstone Member. This belt is cut by Mesozoic and Tertiary intrusions. A northern extension of the Early

CAPSULE GEOLOGY

Jurassic Summit Lake Stock occurs within 600 metres to the southwest of the occurrence (Fieldwork 1983; Open File 1987-22).

The deposit is apparently located within an isolated fault block that has been affected as a whole by hydrothermal alteration. The rocks are mainly comprised of highly fractured and sheared fine-grained siltstone with minor clastic horizons. Greywacke, argillite and tuffaceous sediments also occur. The major structure in the mine area is a tightly folded anticline made up of minor folds and locally contorted beds. It has a north-northwest trend and plunges to the south. A pervasive sericite, quartz, carbonate, pyrite alteration has overprinted the strata producing a reddish hue to area outcrops.

Three types of mineralization occur at the East Gold deposit:

1) A high-grade vein zone varying from 3 to 60 centimetres in width is bounded on the hangingwall side by a fault with average strike of 165 degrees and dip of 68 degrees west. The vein is knife edge thick on surface and can be traced for 53 metres. Underground it extends from the foot of a raise 12 metres northward where it appears to merge into a diffuse shear zone. The zone is sheared and silicified and contains stringers of quartz and calcite, much pyrite and discontinuous lenses, from 1 to 2.5 centimetres wide, of dark brown sphalerite and some galena. Minor amounts of pyrargyrite (ruby silver), electrum, arsenopyrite, tetrahedrite, chalcopyrite, and native silver also occurs, with electrum forming rich pockets locally. A 30 centimetre sample across the zone taken within the drift assayed 24.00 grams per tonne silver and a trace of gold. A 6.5 centimetre sample including a 4 centimetre stringer of sphalerite and galena assayed 476.58 grams per tonne silver and 2.06 grams per tonne gold. The entire production of the mine up to 1945 has come from this one vein zone. It is not clear whether post 1945 production also came from this source (Annual Report 1946).

2) Several strong and persistent shears cut the sediments, striking from 110 to 125 degrees and dipping from 70 to 85 degrees south-west. The rocks along the shear are silicified and carbonatized in bands ranging up to 30 centimetres in width, with the bands closely spaced over a width 0.6 to 4.6 metres. This zone is thought to extend for about 450 metres. Mineralization occurs in the altered sediments and in stringers and bands of quartz. Mineralization is similar to that of the high-grade vein zone but much less abundant with gold and silver values also being lower. Typical assays are 25.71 grams per tonne silver and a trace of gold over 1.82 metres and 5.14 grams per tonne gold and 3.43 grams per tonne silver over 1.82 metres (Fawley, A.P., 1946).

3) A stockwork of quartz veins occurs in highly fractured sediments about 300 metres southeast of the raise, approximately on strike with the high-grade vein. One vein is 30 centimetres wide and contains chalcopyrite, sphalerite, galena and small amounts of tetrahedrite, arsenopyrite and malachite. Metallic minerals form 5 per cent of the vein.

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MINFILE NUMBER: **104B 034** NATIONAL MINERAL INVENTORY: 104B1 Au10

NAME(S): **SCOTTIE GOLD**, SALMON GOLD, MORRIS SUMMIT, ROYAL SCOT

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 13 11 N NORTHING: 6231074
LONGITUDE: 130 05 43 W EASTING: 432080
ELEVATION: 1073 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Portal, near the northwestern tip of Summit Lake, south of Berendon Glacier (Bulletin 58).

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS
SIGNIFICANT: Pyrite Pyrrhotite Sphalerite Chalcopyrite Galena Arsenopyrite Gold Tetrahedrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Silica Calcite Chlorite Hematite
ALTERATION TYPE: Silicific'n Carbonate Chloritic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Shear
CLASSIFICATION: Epigenetic Mesothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Faulted Other
DIMENSION: 400 x 300 x 250 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Mineralized area; individual veins average 2 metres in width, strike west and dip steeply north.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE: 210 +/- 24-14 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Lower Jurassic			Summit Lake Stock

LITHOLOGY: Andesitic Breccia
Andesitic Tuff
Tuff
Lamprophyre Dike
Porphyry Dike
Dioritic Dike

HOSTROCK COMMENTS: Isotopic age date from Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SCOTTIE GOLD REPORT ON: Y

CATEGORY: Measured YEAR: 1990
QUANTITY: 28992 Tonnes

COMMODITY	GRADE	
Gold	18.5100	Grams per tonne

COMMENTS: Underground mineable reserves.
REFERENCE: D. Alldrick, personal communication, 1992.

CAPSULE GEOLOGY

The Scottie Gold mine is situated near the northwestern tip of Summit Lake, south of the Berendon Glacier. The property was staked in 1930 and extensive diamond drilling and limited underground development was carried out subsequently until 1949. Production began in 1981 and continued until 1984.

The Scottie Gold deposit is hosted by steeply east dipping volcaniclastic rocks of the Lower-Middle Jurassic Unuk River

CAPSULE GEOLOGY

Formation of the Hazelton Group. These consist of green andesitic breccia and conglomerate with thin intercalated volcanic sandstones and tuffaceous bands. The strata are cut by mineralized veins, faults and lamprophyre, microdiorite and porphyry dykes. Several alteration assemblages are developed in the area.

The Early Jurassic Summit Lake stock, which comprises hornblende quartz monzonite and/or hornblende granodiorite, lies to the northwest. The intrusives are locally sheared and chloritized, in particular, where it is transected by the Morris Summit fault. A wide but variable aureole around the intrusive is present with the inner envelope being a pervasively silicified contact zone with fine disseminated pyrrhotite grading outwards to altered volcanic breccias.

Structurally, the property is dominated by a set of north striking faults, the most dominant of which is the west dipping Morris Summit fault. East of the Morris Summit fault zone the area is dominated by north striking faults and to the west, by east striking faults and lineations. The eastern area is cut by a suite of north striking microdiorite dykes. The mineralized veins are components of secondary shears of the Morris Summit fault.

Alteration to the north of the property is characterized by the development of fine-grained pyrrhotite or pyrite in the volcanic host. To the south, the alteration zone has a gradational contact with less altered Hazelton rocks. Overprinting of the regional assemblage by the Summit Lake stock occurs. To the west of the Morris Summit fault, the Hazelton Group is metamorphosed to greenschist facies and locally altered to a grey to green fine-grained quartz-chlorite-pyrrhotite-pyrite assemblage.

The Scottie deposit consists of several mineralized quartz-carbonate veins, each forming an en echelon or ladder vein pattern across a 120 metre width and up to a 300 metre depth. The veins, which are up to 7 metres wide and average 2 metres wide, show variable sulphide content and occur north of Main Creek. Referred to as No. 1, 2 and 3 veins, the steep, north dipping mineralized veins strike west and converge with the northwest striking Main zone. Elsewhere in the area, (south of Main Creek) the veins are erratic in strike length and width. The overall mineralized area measures about 400 by 250 by 300 metres.

The veins contain lenses of massive sulphide, consisting largely of pyrrhotite and pyrite, with lesser sphalerite, chalcopyrite, galena, arsenopyrite, tetrahedrite and gold. The veins occur along near vertical fracture systems and are bordered by siliceous replacement zones with poorly defined walls.

About 250 metres north of the Main zone is a 15-metre wide quartz vein. The vein, which strikes 160 degrees and dips 60 degrees west, contains a 5-centimetre wide stringer of massive galena, and minor pyrite and tetrahedrite.

Underground mineable reserves at Scottie Gold are 28,992 tonnes grading 18.51 grams per tonne gold (D. Alldrick, personal communication, 1992).

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N MINER Apr.12,19,May 3,Oct.18, 1979; Jan.17,May 22,Dec.25, 1980; Mar.5,19,Jul.9,Aug.13,Oct.1, 1981; Mar.4,11,Jun.10,Jul.8,Nov.4, 1982; Feb.24,Jun.9,Jul.7,Aug.25,Sept.1, 1983; Feb.2,Sept.13, Nov.29, 1984; Jan.24, 1985
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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/07/27 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 035** NATIONAL MINERAL INVENTORY: 104B1 Ag10

NAME(S): **TROY**

STATUS: Showing MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 10 51 N NORTHING: 6226699
LONGITUDE: 130 02 46 W EASTING: 435063
ELEVATION: 1073 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of several veins, southeast of Daisy Lake (south end of Summit Lake). See Shannon, 1925.

COMMODITIES: Silver, Lead, Zinc, Copper, Gold, Tungsten

MINERALS

SIGNIFICANT: Galena, Sphalerite, Tetrahedrite, Chalcopyrite, Freibergite, Argentite, Silver, Pyrargyrite, Scheelite
COMMENTS: Scheelite probably present as evidenced by assay.
ASSOCIATED: Quartz, Pyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I12 W veins
DIMENSION: 1200 x 0900 Metres STRIKE/DIP: 160/60E TREND/PLUNGE:
COMMENTS: Area containing several quartz veins and alteration zones. Dip of veins varies from 45 to 80 degrees east. Veins average 10 metres in width over 700 metres length.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesite, Argillite, Siltstone, Volcanic, Lamprophyre Dike, Microdiorite

HOSTROCK COMMENTS: Isotopic age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: VEINS REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1937
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	13.0000	Grams per tonne
Gold	0.7000	Grams per tonne
Tungsten	3.0000	Per cent

COMMENTS: Sample over 15.0 centimetres.
REFERENCE: Property File: Geology Map 1937.

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1924
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	1220.0000	Grams per tonne
Lead	43.5000	Per cent

COMMENTS: 76 centimetre sample.
REFERENCE: Minister of Mines Annual Report 1924, page 74.

CAPSULE GEOLOGY

The Troy occurrence lies along a north-northwest trending contact between sediments and volcanics and epiclastics, all of the Jurassic Hazelton Group. The rocks to the east consist of argillite and interbedded siltstone, sandstone and conglomerate of the Middle Jurassic Salmon River Formation. These are underlain, from east to west, by tuffs of the Mount Dilworth Formation, epiclastics of the Betty Creek Formation, and andesite and andesite tuff of the Unuk River Formation, all Lower Jurassic in age. The rocks are cut by Tertiary lamprophyre and microdiorite dykes.

Several quartz veins and altered zones occur over a 1200 by 900 metre area. A set of veins, striking 160 degrees and dipping 45 to 80 degrees northeast, occur along the argillite-andesite contact and within the argillite. Mineralization in the veins, which average about 10 metres wide and about 700 metres long, consists of galena, sphalerite, tetrahedrite, chalcopyrite and minor freibergite, argentite, native silver and pyrargyrite (ruby silver). A 76 centimetre sample of one of the veins assayed 1220 grams per tonne silver and 43.5 per cent lead (Annual Report 1924).

Within the volcanics are silicified and pyritized zones containing disseminated pyrite and erratic occurrences of galena and sphalerite. Scheelite may occur within quartz veins in the andesites, as a 15 centimetre sample assayed 3.0 per cent tungsten, with 13 grams per tonne silver and 0.7 grams per tonne gold (Property File Map, 1937).

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/07 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 036**
NATIONAL MINERAL INVENTORY: 104B1 Ag4

NAME(S): **ST. EUGENE**, WOLF

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 11 05 N
LONGITUDE: 130 06 03 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location from description (Minister of Mines Annual Report 1927) and St. Eugene claim, Fig. 15C (Bulletin 58).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6227184
EASTING: 431673

COMMODITIES: Silver, Lead, Zinc, Copper

MINERALS
SIGNIFICANT: Galena, Sphalerite, Tetrahedrite, Pyrite, Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Parallel quartz veins strike northeast and dip steeply east, and average 0.3 metre in width.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Greenstone
Argillite

HOSTROCK COMMENTS: Isotopic age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1927
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	384.0000	Grams per tonne
Lead	18.0000	Per cent
Zinc	8.0000	Per cent

COMMENTS: 60 centimetre sample; trace gold.
REFERENCE: Minister of Mines Annual Report 1927, page 105.

CAPSULE GEOLOGY

The area is underlain by the Hazelton Group which is a northwest trending belt of folded volcanic rocks which contains a thick sedimentary sequence infolded along a synclinal axis. This group is bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin.

The host rocks are the Lower Jurassic Unuk River Formation of the Hazelton Group. The host rock is primarily greenstone with minor amounts of argillite. Four parallel quartz veins strike north-northeast and dip steeply east. Three of these veins are grouped within 16 metres and cross from a siliceous host, through a narrow band of argillite, and then into the greenstones. The fourth vein lies 50 metres to the east. The veins widen up to 1.6 metres but are generally less than 0.3 metres wide. The largest is 18 metres in length. Mineralization consists of galena, tetrahedrite, pyrite, sphalerite, and chalcopyrite. In 1927, a 60 centimetre sample of one

CAPSULE GEOLOGY

of the veins assayed 384 grams per tonne silver, 18 per cent lead, 8 per cent zinc, and trace gold (Minister of Mines Annual Report 1927, pages 104,105).

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/27 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 037**

NATIONAL MINERAL INVENTORY: 104B1 Ag5

NAME(S): **HOLLYWOOD**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 10 05 N
LONGITUDE: 130 09 01 W
ELEVATION: 1380 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: 1.5 metre long trench on Lot 4489 (Assessment Report 11987).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6225380
EASTING: 428573

COMMODITIES: Lead Copper Silver

MINERALS
SIGNIFICANT: Galena Pyrite Malachite
COMMENTS: Silver mineralization reported in early reports.
ASSOCIATED: Quartz Pyrite Calcite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE: 210+24-14 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			

LITHOLOGY: Black Argillite
Andesitic Pyroclastic
Coarse Grained Hornblende Granodiorite Dike
Dike

HOSTROCK COMMENTS: Texas Creek plutonic suite age date is for "Premier" porphyry dyke (Fieldwork, 1985). Unuk River Formation age date from Brown, D., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by the Hazelton Group, which is a north-west trending belt of folded volcanic rocks, which contains a thick sedimentary sequence infolded along a synclinal axis. This group is bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin.

The host rocks are the Unuk River Formation in contact with the Lower Jurassic Texas Creek Batholith. The Texas Creek Batholith is a coarse-grained hornblende granodiorite with porphyrytic phases and offshoot dykes. To the immediate north is an east-west trending sedimentary and volcanic package consisting of black argillites and andesitic pyroclastics. The volcanics and argillites have been intruded by the Early Jurassic Texas Creek Plutonic Suite and Tertiary dykes.

It has been reported (Minister of Mines Annual Report, 1923) that 66 metres of tunnel was driven in 1923 and that high silver values were found on the surface at the contact with the argillite and intrusive rock. However, neither the adit or significant silver mineralization could be found by subsequent investigations. Only a small pit was located on the hillside containing minor pyrite, galena and malachite associated with quartz pods and veins.

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Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B91)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/27 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 038**

NATIONAL MINERAL INVENTORY: 104B1 Ag9

NAME(S): **FORTY NINE**, YELLOWSTONE, 49

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 08 58 N
LONGITUDE: 130 02 19 W
ELEVATION: 1287 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit location.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6223198
EASTING: 435476

COMMODITIES: Silver, Lead, Zinc, Copper, Gold

MINERALS

SIGNIFICANT: Pyrite, Galena, Sphalerite, Tetrahedrite, Chalcopyrite, Pyrargyrite, Argentite, Silver, Polybasite
ASSOCIATED: Quartz, Pyrite
ALTERATION: Silica, Sericite, Pyrite
ALTERATION TYPE: Silicific'n, Sericitic, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive, Breccia, Stratiform, Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: J01 Polymetallic manto Ag-Pb-Zn; I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Faulted, Fractured
DIMENSION: 1000 x 0003 Metres
STRIKE/DIP: 070/60S
TREND/PLUNGE:
COMMENTS: Dimension of chert horizon which strikes northwest and dips 50 to 80 degrees south. Attitude of vein explored underground.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
	ISOTOPIC AGE: 210+24-14 Ma		
	DATING METHOD: Uranium/Lead		
	MATERIAL DATED: Zircon		
Tertiary			Portland Canal Dykes

LITHOLOGY: Andesite Tuff, Andesite Breccia, Andesite Lapilli Tuff, Chert, Siltstone, Argillite, Conglomerate, Dioritic Dike

HOSTROCK COMMENTS: Isotopic age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1935
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	651.0000	Grams per tonne
Gold	5.5000	Grams per tonne

COMMENTS: 2.4 metre sample.
REFERENCE: Geological Survey of Canada, Memoir 175.

CAPSULE GEOLOGY

The Forty Nine occurrence lies east of the Salmon River Glacier, on the west slope of Mount Dilworth. Host rocks consist of volcanic breccia and andesite tuff, with interbedded siltstone, argillite and conglomerate of the Lower Jurassic Unuk River Formation (Hazelton Group). The area lies within the Portland Canal dyke swarm, which consists generally of granodiorite/quartz diorite dykes, cutting the

CAPSULE GEOLOGY

volcaniclastics and mineralized veins.

Mineralization consists of semi-massive to massive lenses of pyrite, sphalerite, galena, chalcopyrite, pyrargyrite, tetrahedrite and native silver within schistose chert and breccia, with sericite-quartz rich andesite fragments. The stratiform chert horizon, up to 3 metres thick, strikes northwest for 1000 metres and dips 50 to 80 degrees southwest. It lies within andesite tuff breccia and andesite lapilli tuff. Northeast trending faults displace the chert-sulphide bed. Fracture controlled, quartz-sericite-pyrite rich zones, which contain pyrite-sphalerite-galena veins up to several centimetres thick, extend up to 200 metres into the hangingwall, above the chert horizon.

A vein, which strikes 070 degrees and dips 60 degrees southeast, has been explored by limited underground work. It is mineralized with lenticular masses and streaks of fine-grained galena, sphalerite, with minor tetrahedrite, pyrargyrite, argentite, native silver, and rare polybasite. A 2.4 metre sample assayed 651 grams per tonne silver and 5.5 grams per tonne gold (Geological Survey of Canada Memoir 175).

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GSC MAP 9-1957; 307A; 315A; 1418A
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Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B95)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/05 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 039**
NATIONAL MINERAL INVENTORY: 104B1 Ag9

NAME(S): **YELLOWSTONE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 09 13 N
LONGITUDE: 130 02 49 W
ELEVATION: 1176 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location #23, Map 1987-22.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6223670
EASTING: 434965

COMMODITIES: Silver, Lead, Gold

MINERALS
SIGNIFICANT: Galena, Pyrite, Pyrargyrite
ASSOCIATED: Quartz
ALTERATION: Sericite, Carbonate, Pyrite
ALTERATION TYPE: Sericitic, Carbonate, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins; I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 0006 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: 6.0 metre wide vein dips steeply and trends northeast.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Tertiary			Portland Canal Dykes

LITHOLOGY: Volcanic Breccia
Andesitic Tuff
Siltstone
Argillite
Conglomerate
Dioritic Dike
Gossan

HOSTROCK COMMENTS: Isotopic age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1923
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	13.9000	Grams per tonne

REFERENCE: Minister of Mines, Annual Report 1923.

CAPSULE GEOLOGY

The Yellowstone occurrence lies east of the Salmon River Glacier, on the west slope of Mount Dilworth. Host rocks consist of volcanic breccia and andesite tuff, with interbedded siltstone, argillite and conglomerate of the Lower Jurassic Unuk River Formation (Hazelton Group). The area lies within the Portland Canal dyke swarm, which consists generally of granodiorite/quartz diorite dykes, cutting the volcaniclastics and mineralized veins.

An adit exposed a 6 metre wide quartz vein, mineralized with galena, pyrite and minor pyrargyrite. The vein, which dips steeply and trends east-northeast, is likely a continuation of the Forty Nine occurrence (104B 038). A sample across the vein assayed 13.9 grams per tonne gold (Minister of Mines Annual Report, 1923). This occurrence is situated within an alteration zone characterized by seri-

CAPSULE GEOLOGY

cite, carbonate, and gossanous pyrite.

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/05 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 040**
NATIONAL MINERAL INVENTORY: 104B1 Au5

NAME(S): **SILVER BASIN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 06 58 N
LONGITUDE: 130 02 30 W
ELEVATION: 610 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Symbol #47, Open File 1987-22. West and downhill from Granduc Mine road. This showing is probably 800 metres north of this location in one of two creeks that parallel Hercules creek (D. Alldrick).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6219491
EASTING: 435230

COMMODITIES: Silver, Lead, Zinc, Gold

MINERALS
SIGNIFICANT: Pyrite, Galena, Sphalerite
ASSOCIATED: Quartz, Calcite, Pyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY:
Argillite
Siltstone
Andesite
Andesitic Lapilli Brecciated Tuff
Andesite Flow
Cherty Tuff
Dacitic Porphyry Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1929
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	102.9000	Grams per tonne
Lead	7.8000	Per cent
Zinc	4.6000	Per cent

COMMENTS: Over 1.1 metres, trace gold.
REFERENCE: Annual Report 1929.

CAPSULE GEOLOGY

The Silver Basin occurrence is located west and downhill from the Granduc Mine road in the north wall of a small canyon that drains to the southwest onto the Salmon Glacier, approximately one kilometre west-northwest of the Big Missouri deposit. This showing is probably located in one of the two creeks that parallel Hercules Creek 800 metres north of stated location (Personal Communication D. Alldrick Jan. 1989).

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the volcanic arc assemblage of the Stikinia Terrane.

Mineralization is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis.

CAPSULE GEOLOGY

The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes.

The Silver Basin showing is hosted in argillites of the Upper siltstone member of the Unuk River Formation. Mineralization occurs in shattered argillites as stringers of quartz, calcite, galena, sphalerite and some pyrite.

A chip sample over 1.1 metres assayed trace gold, 102.84 grams per tonne silver, 7.8 per cent lead and 4.6 per cent zinc (Annual Report 1929).

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CIM Spec. Vol. 37, pp. 202-215

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/09/26 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 041**
NATIONAL MINERAL INVENTORY: 104B1 Ag6

NAME(S): **LION**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 08 19 N
LONGITUDE: 130 01 11 W
ELEVATION: 1308 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6221975
EASTING: 436631

COMMODITIES: Silver, Zinc, Lead, Copper

MINERALS
SIGNIFICANT: Sphalerite, Galena, Chalcopyrite, Pyrite, Polybasite, Silver
COMMENTS: Exact mineralogy is uncertain.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded, Sheared
DIMENSION: 0006 Metres
STRIKE/DIP: 340/
TREND/PLUNGE:
COMMENTS: Mineralized zone maximum length 6.6 metres.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Salmon River	
Lower Jurassic	Hazelton	Mount Dilworth	
Tertiary			Portland Canal Dykes

LITHOLOGY: Quartz Porphyry Dike
Felsic Tuff
Argillaceous Siltstone
Black Grit

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by dark grey to black grits and ash-rich argillaceous siltstones of the Salmon River Formation, which are underlain by a felsic tuff sequence of the Mount Dilworth Formation, both of the Lower Jurassic Hazelton Group.

The Lion occurrence lies on the southwest flank of the Dilworth Syncline. The Eocene Portland Canal dyke swarm trends perpendicular to the volcanic-sedimentary sequence.

A 340 degree striking mineralized zone cuts one of these dykes, which consist largely of quartz porphyry. The mineralization does not extend into the surrounding argillites on either side of the dyke which limits the length of the vein to about 6.6 metres. Probable mineralogy is sphalerite, galena, chalcopyrite, pyrite, polybasite and native silver. There are no known assays from this occurrence.

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GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/22 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 042** NATIONAL MINERAL INVENTORY: 104B1 Ag6

NAME(S): **SILVER HILL**, SILVER CREST

STATUS: Past Producer Open Pit MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 08 03 N NORTHING: 6221469
LONGITUDE: 130 00 27 W EASTING: 437384
ELEVATION: 1177 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Symbol #30, Open File 1987-22. Located on west side of Harris Creek.

COMMODITIES: Silver Zinc Lead Copper Gold

MINERALS
SIGNIFICANT: Sphalerite Galena Chalcopyrite Pyrite Silver
Polybasite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Salmon River	
Lower Jurassic	Hazelton	Mount Dilworth	
Tertiary			Portland Canal Dykes

LITHOLOGY: Felsic Quartz Porphyritic Dike
Argillite
Black Grit
Argillaceous Siltstone
Felsic Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by dark grey to black grits and ash-rich argillaceous siltstones of the Salmon River Formation, which are underlain by a felsic tuff sequence of the Mount Dilworth Formation, both of the Lower Jurassic Hazelton Group.

The Silver Hill occurrence lies west of the fold axis of the Dilworth Syncline. The Eocene Portland Canal dyke swarm trends perpendicular to the volcanic-sedimentary sequence. Most of the mineralization occurs within these dykes, which consist largely of quartz porphyry. Mineralization occurs as small discontinuous stringers or in small quartz stringers. These mineralized veins, which are up to one metre wide, contain sphalerite, galena, chalcopyrite, pyrite, polybasite and native silver.

A sample across an 8.2 metre section of mineralization assayed 343 grams per tonne silver, including a 61 centimetre section of 38 grams per tonne gold and 3051 grams per tonne silver (Annual Report 1920).

Thirty-six tonnes of ore from surface cuts, shipped in 1925, assayed 8434 grams per tonne silver (Annual Report 1925). One tonne of this ore produced 9668.6 grams of silver and 41.7 kilograms of lead (Bulletin 58).

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CIM Spec. Vol. 37, pp. 202-215
GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/17 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 043** NATIONAL MINERAL INVENTORY: 104B1 Ag7

NAME(S): **SILVER TIP**, SILVER LEAF, MAY P.J., BLIND

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 07 37 N NORTHING: 6220668
LONGITUDE: 130 00 35 W EASTING: 437234
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Gold Lead Silver Zinc Copper

MINERALS

SIGNIFICANT: Freibergite Pyrite Galena Chalcopyrite Sphalerite Tetrahedrite Pyrargyrite Argentite Silver
ASSOCIATED: Quartz Calcite Graphite
ALTERATION: Graphite Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 0041 x 0001 Metres STRIKE/DIP: 120/35S TREND/PLUNGE:
COMMENTS: May P.J. vein mineralized over 41 metres, is up to 0.6 metres wide and strikes 120 degrees and dips 35 degrees southwest.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Mount Dilworth	
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

Tertiary — Portland Canal Dykes

LITHOLOGY: Felsic Tuff
Carbonaceous Lithic Lapilli Tuff
Argillaceous Siltstone
Breccia
Andesitic Tuff
Dioritic Dike

HOSTROCK COMMENTS: Isotopic age reference: Brown, D.A., 1987

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: MAY P.J. REPORT ON: Y

CATEGORY: Indicated YEAR: 1957
QUANTITY: 11295 Tonnes

COMMODITY	GRADE	
Silver	148.1000	Grams per tonne
Gold	0.7700	Grams per tonne
Lead	1.9000	Per cent
Zinc	1.8000	Per cent

COMMENTS: East and west shoots combined, assuming 61 metre downdip length and 0.9 metre width.
REFERENCE: Property File - Plumb, 1957.

INVENTORY

ORE ZONE: EAST SHOOT (MAY P.J.) REPORT ON: Y

CATEGORY: Indicated YEAR: 1957
QUANTITY: 816 Tonnes

COMMODITY	GRADE	
Silver	970.3000	Grams per tonne
Gold	4.8000	Grams per tonne
Lead	4.2000	Per cent
Zinc	6.2000	Per cent

COMMENTS: Based on dimensions of 23 by 12 by 1 metres.
REFERENCE: Property File - Plumb, 1957.

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1957
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	255.8000	Grams per tonne
Gold	1.3700	Grams per tonne
Lead	0.3000	Per cent
Zinc	0.2000	Per cent

COMMENTS: Average of thirteen samples across width of 0.8 metre.
REFERENCE: Property File - Plumb, 1957.

CAPSULE GEOLOGY

The Silver Tip property is underlain by a north-northwest trending belt of volcanic and sedimentary rocks of the Lower Jurassic Hazelton Group. The sequence is folded into a syncline whose axial surface trace strikes north-northwest along the west side of Long Lake. The folded sequence is cut by the east-southeast trending Portland Canal dyke swarm of Eocene Age. North trending faults appear to post date the dykes.

The oldest rocks in the claim area are andesitic tuffs with intercalated argillaceous epiclastics of the Unuk River Formation. Overlying this unit on the east side of Silver Creek is a felsic tuff sequence of the Mount Dilworth Formation dominated by a thick unit of carbonaceous crystal and lithic lapilli tuff with local argillaceous siltstone lenses. This unit is the dominant host rock for mineralization. This is overlain disconformably by dark grey to black grits and ash-rich argillaceous siltstones of the Salmon River Formation.

The Portland Canal dyke swarm trends perpendicular to the volcanic-sedimentary sequence. There are three dyke lithologies. The oldest are biotite or biotite-hornblende granodiorites, which may be up to 60 metres in width. These are crosscut by aphanitic microdiorite dykes which in turn are cut by thin lamprophyre dykes. Aplitic lenses also occur, often associated with quartz veins in mineralized zones.

The main area of mineralization, east of Silver Creek and south of Porphyry Creek, consists of two veins, the May P.J. and Blind veins which have been explored by two adits and two drifts.

The May P.J. vein is continuously exposed underground for about 98 metres, of which 41 metres is mineralized. The eastern underground exposure consists of barren vein-breccia. The vein is lenticular with quartz, calcite, and sulphides cementing black tuff fragments in vein-breccias. Widths vary up to about 0.6 metres with irregular streaks of sulphides up to 0.3 metres across. Mineralization consist of pyrite, galena, chalcopyrite, sphalerite, tetrahedrite, freibergite, pyrargyrite, argentite and native silver. The mineralized zone strikes 120 degrees and dips 35 degrees southwest.

On the surface, the May P.J. vein is represented by the East and West shoots. Based on a continuous 61 metre down dip length and 0.9 metre width, indicated reserves were calculated by Plumb (1957). The West Shoot totals 7485 tonnes grading 34.3 grams per tonne silver, 1.2 per cent lead and 1.5 per cent zinc, base on an average of 11 channel samples. The East Shoot totals 3810 tonnes grading 371.7 grams per tonne silver, 1.7 grams per tonne gold, 3.2 per cent lead and 2.5 per cent zinc. (Plumb, 1957). The combined reserves would be 11295 tonnes grading 148.1 grams per tonne silver, 0.77 grams per tonne gold, 1.9 per cent lead and 1.8 per cent zinc. Assuming the East Shoot to be a high-grade lens measuring 23 by 12 by 1 metres, it would contain 816 tonnes grading 4.8 grams per tonne gold, 970.3 grams per tonne silver, 4.2 per cent lead and 6.2 per cent zinc (Plumb, 1957).

The Blind Vein is south of the May P.J. Vein and strikes west and dips 40 degrees south in the black tuff unit. The vein is

CAPSULE GEOLOGY

faulted along the hangingwall and footwall. Lenticular zones, up to 1.8 metres wide, contain black tuff fragments, fault gouge, quartz, aplitic lenses, graphite, and sulphides. The vein-breccia is exposed for 35 metres underground, of which 30.5 metres is mineralized. Thirteen channel samples across an average width of 0.8 metres averaged 255.8 grams per tonne silver, 0.3 per cent lead, 0.2 per cent zinc, and 1.37 grams per tonne gold (Plumb, 1957).

Several other veins occur on the property. From 1949 to 1951, 22.9 tonnes of ore were shipped, yielding 308.6 grams of gold, 57908.6 grams of silver, 3240 kilograms of lead and 4390 kilograms of zinc (Annual Reports 1950, 1951). A total of 732 metres of underground work and 183 metres of surface diamond has been completed to date.

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Equity Preservation Corp. (Stewart-Sulphurets-Iskut Compilation, Dec. 1988, Showing No. B100)
EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/20 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 044**
NATIONAL MINERAL INVENTORY: 104B1 Au6

NAME(S): **UNITY**, GOOD HOPE, UNICORN, RIDGE ZONE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 07 11 N
LONGITUDE: 130 01 09 W
ELEVATION: 1036 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Unity zone from Cochrane, 1974. Located west side of Good Hope Crown Grant (L4538), west of Union Creek.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6219872
EASTING: 436635

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS
SIGNIFICANT: Pyrite, Arsenopyrite, Sphalerite, Galena, Chalcopyrite, Gold
ASSOCIATED: Quartz, Calcite
ALTERATION: Sericite, Silica, Pyrite, Chlorite, Carbonate, Epidote
ALTERATION TYPE: Sericitic, Silicific'n, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 0500 x 0095 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Mineralized alteration zone trends northwest, traced for 500 metres and varies from 70 to 120 metres in width.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Lapilli Tuff
Andesite Agglomerate
Cherty Tuff
Lamprophyre Dike

HOSTROCK COMMENTS: Isotopic age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1974
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	0.7000	Grams per tonne
Gold	3.7700	Grams per tonne

COMMENTS: 1.5 metre sample.
REFERENCE: Property File: Report by D.R. Cochrane, 1974.

CAPSULE GEOLOGY

The Unity occurrence, which is located 700 metres north-northeast of the Big Missouri deposit, lies within south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff, with interbedded cherty tuff of the Lower Jurassic Unuk River Formation. (See Big Missouri - 104B 046 for enhanced geology).

The occurrence, which lies immediately west of the north trending Union Creek Fault, is located within an alteration zone characterized by sericite, chlorite, quartz, calcite, epidote and

CAPSULE GEOLOGY

pyrite. The altered zone trends north-northwest for about 500 metres and varies from 70 to 120 metres wide. Mineralization consists of disseminated pyrite, arsenopyrite, sphalerite, galena, chalcopyrite and fine native gold. A sample of the zone assayed 6.2 grams per tonne gold, 137 grams per tonne silver, 1.0 per cent lead, and 4.0 per cent zinc (Minister of Mines Annual Report 1933). A 1.5 metre chip sample assayed 3.77 grams per tonne gold and 0.7 grams per tonne silver (Cochrane, D.A., 1974).

The altered zone is cut by east-striking south-dipping and northwest-striking west-dipping mineralized quartz-calcite veins. Southeast-striking lamprophyre dykes cut some of the veins. See the A Vein - 104B 145.

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CIM SPEC. Vol. 37, pp. 202-215
GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/16 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 045** NATIONAL MINERAL INVENTORY: 104B1 Ag8

NAME(S): **DAGO HILL**, MINERAL HILL, BIG MISSOURI, E PLURIBUS (L. 3213)

STATUS: Past Producer Open Pit Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 06 42 N NORTHING: 6218971
LONGITUDE: 130 00 48 W EASTING: 436984
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of Mann Tunnel on E. Pluribus Crown Grant (Lot 3213), west of Tunnel Lake and east of Silver Creek (Figure 25, Bulletin 58).
Open Pit production commenced August, 1988.

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Sphalerite Galena Chalcopyrite Argentite Tetrahedrite Pyrargyrite Electrum Acanthite Silver Freibergite
ASSOCIATED: Quartz Siderite
ALTERATION: Silica Sericite Pyrite Carbonate Pyrobitumen
ALTERATION TYPE: Sericitic Silicific'n Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Stratabound Podiform
CLASSIFICATION: Hydrothermal Epigenetic Exhalative Syngenetic
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn G07 Subaqueous hot spring Ag-Au
I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded Faulted

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Cherty Tuff
Andesitic Lapilli Tuff
Plagioclase Amphibole Andesite Agglomerate

HOSTROCK COMMENTS: Isotopic Age reference: Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: DAGO REPORT ON: Y

CATEGORY: Inferred YEAR: 1991
QUANTITY: 150000 Tonnes

COMMODITY	GRADE	
Silver	10.0000	Grams per tonne
Gold	1.2000	Grams per tonne

COMMENTS: Geological reserves.
REFERENCE: D. Alldrick, PhD Thesis, UBC, 1991.

CAPSULE GEOLOGY

The Dago Zone, which is located 800 metres east of the Big Missouri deposit, lies within south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff, with interbedded cherty tuff of the Lower Jurassic Unuk River Formation. (See Big Missouri - 104B 046 for enhanced geology). The mineralized zone is on the northwest limb of a shallow amplitude, anticlinal structure. The fold axis trends northeast, plunges 15 to 22 degrees southwest and has a 20 to 30 degree dipping northwest limb. The rocks are cut by north-northwest and northeast trending, steeply dipping faults. Open pit production commenced at Dago Hill in late August, 1988.

CAPSULE GEOLOGY

The Dago Zone occurs within the Lower Horizon which consists of green plagioclase-amphibole andesite agglomerate and lapilli tuff with lesser bleached andesite and cherty tuff. Three one to 5 metre thick carbonaceous cherty tuff beds, called D, E, and F, are separated by 6 to 8 metres of altered andesite, commonly with quartz-sulphide stringers. The andesite is pervasively sericitized and weakly to intensely silicified (bleached). Pyrite is commonly pseudomorphic after amphibole. Quartz, carbonate and carbonaceous veining are common.

Mineralization, consisting of pyrite, sphalerite, galena, chalcopyrite, argentite, tetrahedrite, and pyrargyrite, occurs as disseminations, lenses, pods, and stringers within the cherty tuffs and footwall and hangingwall andesite tuffs. Gold occurs as discrete grains of electrum along fractures and grain boundaries of sulphides and in the quartz-carbonate-sericite matrix. Relatively coarse-grained electrum occurs in pyrite and sphalerite. Silver minerals, consisting of acanthite, native silver and freibergite, occur as complex intergrowths with galena, siderite and chalcopyrite along narrow fractures, as rims on galena and chalcopyrite or as interstitial fillings in the gangue minerals.

Production through 1988-1989 was 384,000 tonnes of ore grading 1.2 grams per tonne gold and 10.0 grams per tonne silver. In 1991, geological reserves were 150,000 tonnes grading 1.2 grams per tonne gold and 10.0 grams per tonne silver (D. Alldrick, PhD Thesis, UBC, 1991).

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EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/18 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 046** NATIONAL MINERAL INVENTORY: 104B1 Au2

NAME(S): **BIG MISSOURI**, BIG MISSOURI MINE, PROVINCE (L.3208)

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 06 52 N NORTHING: 6219291
LONGITUDE: 130 01 32 W EASTING: 436229
ELEVATION: 875 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Stoped area, 200 metres below surface.

COMMODITIES: Gold Silver Zinc Lead Copper

MINERALS

SIGNIFICANT: Pyrite Sphalerite Galena Chalcopyrite Polybasite Pyrargyrite Electrum Silver Gold Freibergite
ASSOCIATED: Quartz Calcite Pyrobitumen Tetrahedrite Acanthite Argentite
ALTERATION: Chlorite Silica Sericite Carbonate
ALTERATION TYPE: Sericitic Chloritic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Stratabound Massive
CLASSIFICATION: Hydrothermal Epigenetic Exhalative Syngenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
G07 Subaqueous hot spring Ag-Au
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 150 x 75 x 20 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: A zone trends northwest.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210 +/- 24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

Lower Jurassic — Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2.0 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Cherty Tuff
Andesite Lapilli Tuff
Andesite Agglomerate
Granodiorite
Lamprophyre Dike

HOSTROCK COMMENTS: Isotopic age dates from Brown, D.A., 1987 and Fieldwork 1985.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: BIG MISSOURI REPORT ON: Y

CATEGORY: Measured YEAR: 1988
QUANTITY: 1685200 Tonnes

COMMODITY	GRADE	
Silver	22.9800	Grams per tonne
Gold	3.1200	Grams per tonne

COMMENTS: Combined reserves for the S-1, Dago Hill, Province, Martha Ellen, Northstar and Creek deposits (104B 084,045,147,092,146,086).
REFERENCE: George Cross News Letter No.102, 1988.

CAPSULE GEOLOGY

The Big Missouri deposit lies within the Stewart Complex, a belt of deformed volcanic, sedimentary and metamorphic rocks belonging to the Lower-Middle Jurassic Hazelton Group. The complex is situated between the Coast Crystalline Belt to the west and the Bowser Basin

CAPSULE GEOLOGY

to the east. The Hazelton rocks are intruded by granodiorite of the Early Jurassic Texas Creek Plutonic Suite and are cut by andesite, granitic and lamprophyre dykes of Tertiary age. The Portland Canal dyke swarm occurs to the north.

The host rocks consist of south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff with interbedded cherty tuff of the Unuk River Formation (Hazelton Group). The rocks are weakly schistose and have undergone several periods of faulting. To the east, the andesites are overlain by sediments, tuffs and siltstones of the Betty Creek, Mount Dilworth and Salmon River formations respectively, all of the Hazelton Group.

Three mineralized horizons, consisting of several cherty tuff bands with disseminated sulphides to semi-massive sulphide lenses, occur within the andesites. The cherty tuff horizons are silica-rich beds containing sericitized and silicified (bleached) andesite fragments, occasional rounded chert fragments, variable amounts of carbonaceous material, carbonate and sulphide minerals. North striking vertical faults locally juxtapose the mineralized cherty tuff with the bleached andesite horizons. The Lower Horizon contains the Dago Hill zone (104B 045), the Middle Horizon contains the S-1 (104B 084) and Big Missouri zones, and the Upper Horizon contains the Province East (104B 147) and Province West (104B 136) zones.

Stratabound semi-massive to massive lenses, pods and stringer zones of pyrite, sphalerite, galena and chalcopyrite with gold and silver occur within and at the contact of thin cherty tuff beds. The massive sulphides are well laminated in beds up to 0.3 metres thick, generally at the base of the cherty horizon. Electrum, acanthite, native silver, native gold, tetrahedrite, argentite, polybasite, pyrargyrite and freibergite occur as small grains on grain boundaries and fractures in the sulphides and within quartz gangue.

The footwall andesites are silicified and contain abundant sericite, chlorite, carbonate minerals and fine disseminated pyrite. Andesites overlying the cherty tuff beds are more intensely sericitized and silicified. The Middle Horizon contains abundant calcite and iron carbonate.

In addition to the stratabound mineralization, numerous late quartz-carbonate-chlorite veins containing coarse-grained pyrite, sphalerite and galena crosscut the altered andesites and cherty tuffs.

The mineralized, stratabound cherty tuff and the silica and sericite altered andesite are interpreted to have formed on or near the seafloor, as the result of submarine exhalative activity. The quartz-carbonate-sulphide breccia and stringer zones were either remobilized from the cherty tuff beds into the overlying andesite or precipitated from ongoing exhalative activity (Canadian Institute of Mining and Metallurgy Special Volume 37).

The Big Missouri deposit was mined from 1927 to 1942 mainly from the A zone. This zone consists of an area measuring about 20 by 75 by 150 metres, along a north-northwest trend.

Measured geological combined reserves for the S-1 (104B 084), Dago Hill (104B 045), Province (104B 147), Martha Ellen (104B 092), Northstar (104B 146) and Creek (104B 086) deposits are 1,685,200 tonnes grading 3.12 grams per tonne gold and 22.98 grams per tonne silver, at a waste-to-ore strip ratio of 3.7:1 (George Cross News Letter No.102, 1988).

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EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/17 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 047**
NATIONAL MINERAL INVENTORY: 104B1 Ag1

NAME(S): **MUNRO**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 07 13 N
LONGITUDE: 130 04 26 W
ELEVATION: 1036 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized vein, figure 3, Assessment Report 8540. Located on Big Chief No. 3 Crown Grant (Lot 5415), west of Salmon Glacier and east of Mount Bayard.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6219986
EASTING: 433234

COMMODITIES: Silver, Lead, Zinc, Copper, Gold

MINERALS
SIGNIFICANT: Galena, Tetrahedrite, Sphalerite, Chalcopyrite, Pyrite
ASSOCIATED: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 0130 x 0001 Metres
STRIKE/DIP: 140/
TREND/PLUNGE:
COMMENTS: Quartz vein between 7 and 70 centimetres wide and dips northeast.

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE: 210+24-14 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Tertiary			Hyder Pluton

LITHOLOGY: Siliceous Argillite
Tuffaceous Argillite
Siltstone
Biotite Hornblende Granodiorite
Hornfels
Calc-silicate

HOSTROCK COMMENTS: Isotopic age reference: Brown, D.A., 1987

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP:
GRADE: Amphibolite, Greenschist

CAPSULE GEOLOGY

The Munro occurrence is hosted by siliceous and tuffaceous argillites with intercalated siltstone of the Lower Jurassic Unuk River Formation of the Hazelton Group. This sedimentary unit forms a roof pendant in medium-grained biotite-hornblende granodiorite of the Eocene Boundary Stock of the Hyder Pluton. Metamorphic grade is upper greenschist with local amphibolite facies. Occasionally, hornfelsic and calc-silicate rocks are formed.

A quartz vein, striking 140 degrees and dipping northeast, occurs within the sediments. The vein is about 130 metres long and between 7 and 70 centimetres wide. Mineralization consists of galena, sphalerite, tetrahedrite and minor pyrite in pods and irregular stringers.

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/17 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 048**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAST CHANCE**, BARTHOLF

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 05 17 N
LONGITUDE: 130 04 13 W
ELEVATION: 436 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located from description in USGS Bulletin 807.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6216396
EASTING: 433402

COMMODITIES: Copper, Lead, Zinc, Barite

MINERALS

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

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic, Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Regular
DIMENSION: 0015 Metres
STRIKE/DIP: 135/35S
TREND/PLUNGE:
COMMENTS: Vein is between 0.2 and 0.5 metres wide and is traceable for about 15.2 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic			Texas Creek Plutonic Suite

LITHOLOGY: Coarse Grained Hornblende Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by the Hazelton Group which is a northwest trending belt of folded volcanic rocks which contains a thick sedimentary sequence infolded along a synclinal axis. This group is bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin.

The host rock is the Lower Jurassic Texas Creek Batholith which is a coarse-grained hornblende granodiorite. The occurrence consists of a small quartz vein which is between 0.2 and 0.5 metres wide. The vein strikes southeast and dips 35 degrees to the southwest and is traceable for about 15.2 metres. The vein consists of quartz, fragments of wallrock and is sporadically mineralized with chalcopyrite, galena, sphalerite, pyrite and barite.

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DATE CODED: 1985/07/24
DATE REVISED: 1988/07/11
CODED BY: GSB
REVISED BY: LDJ
FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104B 049**

NATIONAL MINERAL INVENTORY: 104B1 Zn1

NAME(S): **BOUNDARY (L.2314)**, INDIAN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 05 05 N
LONGITUDE: 130 02 21 W
ELEVATION: 655 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: On Boundary #1 Crown Grant (Lot 2314) on Myrtle Creek.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6215996
EASTING: 435333

COMMODITIES: Gold, Silver, Zinc, Lead, Copper

MINERALS

SIGNIFICANT: Sphalerite, Galena, Chalcopyrite, Bornite, Pyrite
ASSOCIATED: Quartz, Calcite
ALTERATION: Silica, Sericite, Chlorite, Limonite, Pyrite
ALTERATION TYPE: Silicific'n, Sericitic, Propylitic, Oxidation, Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia, Discordant, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded, Sheared
DIMENSION: 0190 x 0007 Metres
STRIKE/DIP: 170/90
TREND/PLUNGE:
COMMENTS: Near vertical northwest striking silicified shear zone with mineralization in en echelon fractures.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Andesitic Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Argillite
Siltstone
Granitic Intrusive

HOSTROCK COMMENTS: Date quoted for Texas Creek intrusives is for the "Premier" porphyry dyke (Fieldwork, 1985). Unuk River Fm. age date from Brown, D.A.,1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1936
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	103.0000	Grams per tonne
Gold	1.7000	Grams per tonne
Copper	1.0000	Per cent
Lead	3.0000	Per cent
Zinc	7.5000	Per cent

COMMENTS: From Cut #2 over 3.0 metres.
REFERENCE: Minister of Mines Annual Report 1936, pages 13,14.

CAPSULE GEOLOGY

The Boundary showing is located on the Boundary Crown Grant (Lot 2314), on Myrtle Creek, northwest of the Indian Mine (104B 031) and south of the Big Missouri deposit (104B 046), 25.0 kilometres north of Stewart, British Columbia. Initial exploration on the property started in 1911. The Boundary crown grants were amalgamated with the Indian and Payroll groups in 1957 to New Indian Mines Ltd.. Esso Resources Canada Ltd. has recently investigated the area. For a more extensive geological description and bibliography refer to the Indian Mine.

The property is located in the Intermontane Belt, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, in the volcanic arc assemblage of the Stikinia Terrane.

The deposit is hosted by Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanic rocks. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillites and siltstones infolded along a synclinal axis. This sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and granitic Eocene Hyder intrusions.

Mineralization was emplaced in en echelon fracture sets in a silicified shear zone (Indian fault system). This vertical zone, up to 7.0 metres wide striking 170 degrees, can be traced for 190 metres and has been exposed in four open cuts and an adit. These mineralized zones have narrow bands of sericitic alteration.

The showing consists of veinlets, streaks and blebs of disseminated fine-grained pyrite, chalcopyrite, bornite, sphalerite and galena.

Mineralization in this area is considered to be late stage infilling of fault breccia in young fault zones with coarse comb textures common. No early stage precious metal rich chalcedonic quartz stockworks, similar to the Big Missouri deposit, have been noted on the property. Mineralization in this area is considered to be distinct and considerably later than the Big Missouri and Silbak Premier mineralization.

A sample taken over 3 metres from cut #2 in 1936 assayed 1.7 grams per tonne gold, 103 grams per tonne silver, 1 per cent copper, 3 per cent lead and 7.5 per cent zinc (Minister of Mines Annual Report 1936, pages 13,14).

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Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B104)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/11/30 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 050**

NATIONAL MINERAL INVENTORY: 104B1 Zn1

NAME(S): **PAYROLL (L.5525)**, INDIAN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 05 02 N
LONGITUDE: 130 02 16 W
ELEVATION: 689 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Diamond-drill holes on Payroll Zone (Minister of Mines Annual Report 1963, pages 10,11).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6215902
EASTING: 435418

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Pyrite, Galena, Sphalerite, Chalcopyrite, Arsenopyrite, Tetrahedrite
ASSOCIATED: Quartz, Calcite, K-Feldspar
ALTERATION: Sericite, Chlorite, Pyrite, Epidote
ALTERATION TYPE: Sericitic, Propylitic, Carbonate, Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia, Massive, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic, Porphyry
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded, Faulted
DIMENSION: 0240 x 0004 x 0001 Metres
STRIKE/DIP: 170/
TREND/PLUNGE:
COMMENTS: Payroll Zone mineralization occurs intermittently along a strike length of 240 metres, emplaced in Indian fault zone which dips steeply east and strikes 170 degrees.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210 +/- 24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

Lower Jurassic — Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Lapilli Tuff
Andesite Breccia
Porphyry Dike
Argillite
Siltstone
Andesite Pyroclastic

HOSTROCK COMMENTS: Date quoted for the Texas Creek intrusives is for the Premier porphyry dyke(Fieldwork, 1985). Unuk River Fm. age date from Brown, D.A., 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1962

COMMODITY	GRADE	
Silver	2569.2900	Grams per tonne
Gold	13.7100	Grams per tonne
Copper	1.7000	Per cent
Lead	4.8000	Per cent
Zinc	16.1200	Per cent

COMMENTS: Sample of mineralized rock from dump.
REFERENCE: White, W.H., 1962.

CAPSULE GEOLOGY

The Payroll zone, located on the Payroll claims, is approximately 600 metres north of the Indian mine which is 24 kilometers north of Stewart, British Columbia. For a more extensive capsule geology and bibliography refer to the Indian Mine (104B 031).

The property is located in the Intermontane Belt bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, in the volcanic arc assemblage of the Stikinia Terrane.

The showing is hosted by Lower Jurassic Hazelton Group, Unuk River Formation metavolcanic rocks. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillites and siltstones infolded along a synclinal axis. This sequence is intruded by the Early Jurassic Texas Creek plutonic suite of porphyry dykes.

Mineralization was emplaced in the north trending Indian fault system intermittently along a strike length of 240 metres (Indian Vein). The fault system contains pyritic, sericitic, and quartz-calcite infilled fault breccia and gouge in an en echelon arrangement. The Indian fault system dips steeply to the east, striking 170 degrees.

The mineralization on the Payroll claim is probably a richer, north extension of mineralization at the Indian Mine (104B 031).

Mineralization consists of pods of heavily disseminated to massive sphalerite and galena with minor chalcopyrite, tetrahedrite and arsenopyrite. The mineralization is essentially identical to the Indian Mine mineralization except for the abundance of chalcopyrite and the small amounts of tetrahedrite. The host rock has undergone propylitic, carbonate and potassium feldspar alteration.

It has been reported that the Indian vein contains variable gold and silver values with grades less than 8 grams per tonne gold over narrow vein widths with low continuity. There have been no economic quartz stockworks similar to the Big Missouri deposit (104B 046) discovered on the property and mineralization is considered to be late stage versus the more economic early stage mineralization exhibited in deposits nearby, such as the Silbak Premier (104B 054) and the Big Missouri.

In 1961 a grab sample of mineralized rock from the dump material of an old open cut assayed 13.71 grams per tonne gold, 2569.29 grams per tonne silver, 1.70 per cent copper, 4.80 per cent lead, 16.12 per cent zinc (White, W.H., 1962).

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EMPR EXPL 1983-515,516; 1985-C379
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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/11/30 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 051**
NATIONAL MINERAL INVENTORY: 104B1,104A4, Pb1

NAME(S): **COBALT**, BUSH COBALT MINES, HOVELAND, EXCHANGE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 04 01 N
LONGITUDE: 130 01 13 W
ELEVATION: 503 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Symbol 78; Minister of Mines Open File 1987-22.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6214000
EASTING: 436479

COMMODITIES: Gold Silver Lead Zinc

MINERALS
SIGNIFICANT: Sphalerite Galena Pyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Folded Sheared
DIMENSION: 0009 x 0001 Metres
STRIKE/DIP: 157/85S
TREND/PLUNGE:
COMMENTS: Attitude of vein, 5.0 to 23.0 centimetres wide.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Andesitic Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Granitic Intrusive
Argillite
Siltstone

HOSTROCK COMMENTS: Date quoted for Texas Creek intrusives is for the Premier porphyry dyke(Fieldwork, 1985). Unuk River Fm. age date from Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1936

COMMODITY	GRADE	
Silver	274.2000	Grams per tonne
Gold	12.3000	Grams per tonne
Lead	5.5000	Per cent
Zinc	1.3000	Per cent

COMMENTS: Sample from vein mineralization.
REFERENCE: Minister of Mines Annual Report 1936, page B10.

CAPSULE GEOLOGY

The Cobalt showing is located on Cobalt Creek, 1.5 kilometres

CAPSULE GEOLOGY

north of the Silbak Premier Mine (104B 054), 24 kilometres north of Stewart, British Columbia.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and the Eocene granitic Hyder intrusives.

Mineralization on the property consists of two types. A quartz vein, 5.0 to 23.0 centimetres wide, has been traced for 9.0 metres northward. The vein strikes 157 degrees and dips 85 degrees southwest and hosts pyrite, sphalerite and galena. A grab sample across this vein in 1936 assayed 12.3 grams per tonne gold, 274.2 grams per tonne silver, 5.5 per cent lead and 1.3 per cent zinc (Minister of Mines Annual Report 1936). At a lower elevation (495 metres) mineralization in a 67 centimetre wide silicified shear zone consists of irregular patches and blebs of pyrite, sphalerite and galena. A grab sample across this zone assayed 3.42 grams per tonne gold, 54.8 grams per tonne silver, 0.4 per cent lead and 0.8 per cent zinc (Minister of Mines Annual Report 1936).

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EMPR BULL 58, p. 135; 63
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EMR MP CORPFILE (Chief Metals Co.; Extenuate Gold Mines Ltd.; Bush Consolidated Gold Mines Inc.; Bush Cobalt Mines Ltd.)
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GSC MAP 315A
Brown, D.A., (1987): Geologic Setting of the Volcanic hosted Premier Silbak Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File 104B 054)
GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 052** NATIONAL MINERAL INVENTORY: 104B1 Au3

NAME(S): **VANCOUVER**, PREMIER EXTENSION, WOODBINE

STATUS: Prospect MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 03 52 N NORTHING: 6213733
LONGITUDE: 130 01 58 W EASTING: 435696
ELEVATION: 370 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: See also Minster of Mines, Open File 1987-22 (#81). Located on Vancouver #3 Crown Grant (L.4125) near the Granduc Road (Assessment Report 7522).

COMMODITIES: Gold Silver Lead Zinc

MINERALS
SIGNIFICANT: Galena Sphalerite Pyrite
ASSOCIATED: Quartz
ALTERATION: Silica Pyrite
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Breccia Vein Stockwork Disseminated
CLASSIFICATION: Hydrothermal Porphyry Epigenetic Epithermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Folded Faulted
DIMENSION: 0003 Metres STRIKE/DIP: 172/30W TREND/PLUNGE:
COMMENTS: Silicified zone exposed by adit, 2.7 metres wide.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Andesitic Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Granitic Intrusive
Volcaniclastic

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

INVENTORY
ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	191.2800	Grams per tonne
Gold	4.3500	Grams per tonne

COMMENTS: DDH 87-287 over 0.5 metres.
REFERENCE: Assessment Report 17151.

INVENTORY

ORE ZONE: ADIT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1936
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	20.5700	Grams per tonne
Gold	2.0570	Grams per tonne
Zinc	0.4000	Per cent

COMMENTS: Assay across 2.74 metres of the best mineralization.
REFERENCE: Minister of Mines Annual Report 1936, page B12.

CAPSULE GEOLOGY

The Vancouver showing is located on the Vancouver No.3 Crown Grant (L.4125) by the Granduc Road, north of the Woodbine workings (104B 090) and 24 kilometres north of Stewart, British Columbia. The majority of the work on the property was carried out in 1929 during the search for the extension to the Silbak Premier "West" or "Northwest" mineralized zone. For a more extensive geological description and bibliography refer to the Silbak Premier Mine (104B 054).

The showing is located in the Intermontane Belt, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, in the volcanic arc assemblage of the Stikinia Terrane.

Mineralization is hosted in Late Triassic to Early Jurassic Hazelton Group, Unuk River Formation. The Hazelton Group is a northwest trending belt of folded metavolcanic rocks containing a thick sequence of argillites and siltstones infolded along a synclinal axis.

The showing is hosted in the Unuk River Formation andesite flows, breccia and lapilli tuff. This sequence is intruded by the Early Jurassic Texas Creek plutonic suite porphyry dykes and is unconformably overlain by volcaniclastic and epiclastic rocks. This package is intruded by extensive Eocene Hyder granitic dykes and they, along with several faults, have "chopped up" the area.

Silicified potassium feldspar porphyry dykes strike north across the property. Mineralization is contained partially in the dykes and partially in the andesite tuff commonly as grey siliceous breccia or sometimes in quartz stringers up to 6 centimetres wide. Silicification is most intense in mineralized zones. The host rocks are sheared and fractured to some extent and contain minor disseminated pyrite.

Mineralization on the property consists of blebs and disseminations of pyrite and rare small blebs and stringers of galena and sphalerite.

An adit driven on a porphyry dyke exposed a 2.7 metre wide silicifed zone mineralized with pyrite, sphalerite and galena. The zone strikes 172 degrees and dips 30 degrees west. A 2.74 chip sample across the best mineralization in this zone was 2.057 grams per tonne gold, 20.57 grams per tonne silver and 0.4 per cent zinc (Minister of Mines Annual Report 1936, page B12).

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EMPR EXPL 1979-278; 1980-459; 1983-518
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GCNL #140, 1980
N MINER Jan.15,1981
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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 053** NATIONAL MINERAL INVENTORY: 104B1 Au1

NAME(S): **NORTHERN LIGHTS**, PREMIER BORDER

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 03 30 N NORTHING: 6213033
LONGITUDE: 130 00 42 W EASTING: 437001
ELEVATION: 600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of workings, Figure 41, Bulletin 58. Located on the Oakville No. 2 Fraction (Lot 4022) and the Northern Light No. 1 crown grants, south of Cooper Creek and north of the Silbak Premier (104B 054).

COMMODITIES: Gold, Silver, Zinc, Lead, Copper, Cadmium

MINERALS

SIGNIFICANT: Silver, Electrum, Tetrahedrite, Sphalerite, Galena, Chalcopyrite, Pyrrhotite, Pyrite, Arsenopyrite
ASSOCIATED: Quartz, Calcite
ALTERATION: Silica, Sericite, Calcite, Chlorite, Pyrite, Carbonate
ALTERATION TYPE: Silicific'n, Sericitic, Propylitic, Potassic, Chloritic, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork, Breccia, Discordant
CLASSIFICATION: Hydrothermal, Porphyry, Epigenetic, Epithermal
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation; I05 Polymetallic veins Ag-Pb-Zn±Au; I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Folded, Faulted
DIMENSION: STRIKE/DIP: /60N TREND/PLUNGE: 050/
COMMENTS: Dip of Main zone flattens to 30 degrees with depth. Trend of ore shoots.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		

LITHOLOGY: Andesitic Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Andesitic Dacitic Volcaniclastic
Argillite
Siltstone
Dacite Flow

HOSTROCK COMMENTS: Date quoted for Texas Creek intrusives for Premier porphyry dyke. (Fieldwork, 1985). Unuk River Formation age date from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: NORTHERN LIGHTS REPORT ON: Y

CATEGORY: Inferred YEAR: 1986
QUANTITY: 347381 Tonnes

COMMODITY	GRADE	
Silver	39.4200	Grams per tonne
Gold	4.0400	Grams per tonne
Lead	1.5000	Per cent
Zinc	4.9300	Per cent

REFERENCE: George Cross Newsletter No.18, 1986.

CAPSULE GEOLOGY

The Northern Lights orebody is part of the Silbak Premier Mine located 22 km north of Stewart, B.C.. The orebody is approximately 350 metres northwest of the main Premier orebody and lies at a deeper level. Mineralization on the Northern Light claims was discovered in 1927 and the orebody was brought into production in 1935. For an expanded capsule geology and bibliography refer to the Silbak Premier Mine (104B 054).

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the volcanic arc assemblage of the Stikinia Terrane.

The deposit is hosted by Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanic rocks. The Hazelton Group is a northwest trending belt of folded andesitic to dacitic metavolcanic rocks containing a thick sequence of argillites and siltstones infolded along a synclinal axis.

The ore is hosted by massive andesite, andesite breccia and lapilli tuff which are intruded by Early Jurassic Texas Creek plutonic suite dacitic porphyry dykes. The andesite, at least 750 metres thick, is unconformably overlain by volcaniclastic and epiclastic rocks. Potassium feldspar porphyry (historically known as the "Premier Porphyry") is spatially associated with the ore and this relationship is thought to indicate a Lower Jurassic mineralization age.

The Northern Lights orebody is situated in the hangingwall of the steeply northwest-dipping "Main" or "Northeast" zone. The dip of this zone varies from 60 degrees at surface to 30 degrees by the lowermost workings. The deposit is similar to the main Premier deposit as it also exhibits two distinct zone orientations. In the main orebody most production came from an area within about 500 metres of the intersection of these two zones. These trends are believed to represent structural controls to mineralization and emplacement of dacite porphyry intrusions. The ore is predominantly discordant but locally concordant with the moderately northwest-dipping andesite flows, breccias and dacite flows.

Hydrothermal alteration zones related to the mineralizing system are represented by a proximal silicification/quartz stockwork and potassium feldspar and/or sericite facies potassic alteration. Peripheral to mineralization is a propylitic alteration assemblage of carbonate, chlorite and pyrite. The variable intensity and type of alteration is partially controlled by fracture intensity and host lithology, and presumably, elevation in the hydrothermal system. The most characteristic feature of the andesite package is the pervasive carbonate, chlorite, and clay alteration around the deposit.

There are at least four styles of mineralization with textures ranging from stockwork and siliceous breccia to locally layered and massive sulphide-rich mineralization. Due to vertical mineral zonation, the Northern Lights orebody is more base metal rich with lower silver values than the Main deposit. Sulphide content varies, generally less than 5 per cent but can be as high as 75 per cent. Such ore diversity is an indication of the complex and episodic nature to ore deposition.

The base metal rich mineral assemblage consists of pyrite, sphalerite, galena, tetrahedrite, chalcopyrite, arsenopyrite, pyrrhotite, electrum, and native silver. Gangue minerals are quartz, potassium feldspar, chlorite, carbonate and others.

A hybrid ore genesis model combining epigenetic vein and porphyry copper characteristics compare well with the features observed.

Inferred ore reserves for the Northern Lights orebody in 1986 were 347,381 tonnes grading 4.04 grams per tonne gold and 39.42 grams per tonne silver, 1.5 per cent lead and 4.93 per cent zinc (George Cross Newsletter No. 18, Jan 27, 1986).

Production data is included in the Silbak Premier Mine production figures (104B 054).

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N MINER Jul.10, 1980; Mar.9, 1987
EMPR GEM 1969-56; 1971-33
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Placer Dome File
EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/10 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 054** NATIONAL MINERAL INVENTORY: 104B1 Au1

NAME(S): **PREMIER**, SILBAK PREMIER, PREMIER GOLD,
SILBAK PREMIER MINE, SALMON-BEAR RIVER MINING, SALMON GOLD

STATUS: Past Producer Open Pit Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 03 06 N NORTHING: 6212294
LONGITUDE: 130 00 51 W EASTING: 436834
ELEVATION: 0610 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of ore zones projected to surface, 22 kilometres north of Stewart (Brown, 1987).

COMMODITIES: Gold Silver Lead Zinc Copper
Cadmium

MINERALS
SIGNIFICANT: Gold Silver Pyrargyrite Polybasite Electrum
Galena Sphalerite Tetrahedrite Chalcopyrite Argentite
ASSOCIATED: Quartz Calcite Pyrrhotite Arsenopyrite Pyrite
Barite
ALTERATION: Silica Sericite Pyrite Calcite Chlorite
ALTERATION TYPE: Silicific'n Sericitic Propylitic Potassic Carbonate
Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stockwork Breccia Layered
CLASSIFICATION: Epithermal Hydrothermal Porphyry Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation I05 Polymetallic veins Ag-Pb-Zn±Au
I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Folded Faulted
DIMENSION: 1800 x 500 x 10 Metres STRIKE/DIP: TREND/PLUNGE: /62W
COMMENTS: West and Main zones; dip flattens with depth (60 to 30 degrees). Plunge is for ore shoots.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210 Ma +/- 24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 Ma +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Andesitic Dacitic Volcaniclastic
Flow
Dacitic Hornblende Plagioclase Porphyry
Argillite
Siltstone

HOSTROCK COMMENTS: Age date for the Texas Creek Plutonic Suite is from a Premier porphyry dyke (Fieldwork 1985); Unuk River Formation age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Located on western edge of Intermontane Belt.

INVENTORY

ORE ZONE: PREMIER REPORT ON: Y

CATEGORY: Combined YEAR: 1997
QUANTITY: 350140 Tonnes

COMMODITY	GRADE	
Silver	37.7000	Grams per tonne
Gold	7.1900	Grams per tonne
Zinc	1.6000	Per cent

COMMENTS: Proven and probable reserves diluted reserves; gold is cut and silver is uncut.
REFERENCE: George Cross News Letter No.26 (February 6), 1997.

ORE ZONE: PREMIER REPORT ON: Y

CATEGORY: Possible YEAR: 1997
QUANTITY: 111573 Tonnes

COMMODITY	GRADE	
Silver	27.4200	Grams per tonne
Gold	8.5700	Grams per tonne

COMMENTS: Undiluted reserves; gold is cut and silver is uncut.
REFERENCE: George Cross News Letter No.26 (February 6), 1997.

CAPSULE GEOLOGY

The Silbak Premier mine is located 22 kilometres north of Stewart covering an area of 5.3 square kilometres. Mineralization was initially discovered as a gossan zone in 1910 and production began about 1918 and continued with a few interruptions until 1968. Currently (1988), Westmin Resources Ltd., Pioneer Metals Corp. and Canacord Resources Inc. are constructing a 2000 tonne per day mill to extract the low grade, bulk tonnage ore, from an open pit in the "glory hole" area. Production is expected to begin in 1989.

The mine is located in the Intermontane Belt bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, in the volcanic arc assemblage of the Stikinia Terrane. The Premier deposit is hosted by Lower-Middle Jurassic andesitic to dacitic volcanic rocks, correlated with the Hazelton Group, Unuk River Formation. The Hazelton Group is a northwest trending belt of folded andesitic to dacitic metavolcanic rocks containing a thick sequence of argillites and siltstones infolded along a synclinal axis.

The orebody is hosted in aphanitic andesite, monolithic andesite breccia and lapilli tuff of the Unuk River Formation. The andesite, at least 750 metres thick, is intruded by Early Jurassic Texas Creek Plutonic Suite dacitic porphyry dykes and is unconformably overlain by volcaniclastic and epiclastic rocks. The mixed green and maroon heterolithic volcaniclastic rocks form the bulk of the Bear River ridge directly east of Silbak Premier.

There are three varieties of porphyritic dacite: 1) potassium feldspar porphyry, 2) hornblende-plagioclase porphyry and 3) maroon porphyry. They are hypabyssal members of the Texas Creek Plutonic Suite. These porphyries are characteristically blocky weathered and less foliated than the andesite or tuff.

The potassium feldspar porphyry, historically known as the "Premier Porphyry", is spatially associated with the ore. This association is believed to indicate a Lower Jurassic mineralization age.

Hornblende-plagioclase porphyry is texturally similar to potassium feldspar porphyry but contains few or no quartz or potassium feldspar phenocrysts.

Maroon porphyry, distinct with a maroon to purple groundmass, is higher structurally and all known mineralization lies stratigraphically and structurally below it.

The dominant structures at Silbak are pencil lineations, extensional white barren quartz veins and joints. Bedding attitudes are limited, an overall moderate northwest dipping section has been established based on drill results and sparse, controversial surface data. A pervasive northwest dipping phyllitic chlorite-sericite foliation is best developed in andesites. The ore is predominantly discordant but locally concordant with the moderately northwest dipping andesite flows, breccias and dacite flows. Narrow zones (less than 2 metres wide) of easterly striking, steeply dipping planar fabrics are exposed locally. Heterolithic epiclasts in a few outcrops are elongated and are colinear with the pencil lineations.

Hydrothermal alteration zones related to the mineralizing system are represented by a proximal silicification/quartz stockwork and potassium feldspar and/or sericite facies potassic alteration. Peripheral to mineralization is a propylitic alteration assemblage of carbonate, chlorite and pyrite. The variable intensity and type of alteration is partially controlled by fracture intensity and host lithology, and presumably, elevation in the hydrothermal system. The

CAPSULE GEOLOGY

green weathering andesites are propylitically altered with ubiquitous disseminated pyrite, chlorite and sericite. The least altered samples contain small (less than 1 millimetre long) plagioclase and hornblende phenocrysts in an aphanitic groundmass. Rare amygdules are evident in drill core (P. Wodjak, personal communication, 1986). The most characteristic feature of the andesite package is the pervasive carbonate, chlorite and clay alteration around the deposit.

Mineralization occurs along two trends: 1) a steeply northwest dipping, Northeast or Main zone, (60 degrees near surface flattens to 30 degrees by the 6-level) and 2) a steep to vertical Northwest or West zone. These two zones have a combined en echelon strike of 1800 metres, a downdip extent of at least 500 metres and a width of about 10 metres. Most production came from an area within 500 metres of the intersection of these two zones. These trends are believed to represent structural controls to mineralization and emplacement of dacite porphyry intrusions. Similar showings occur in southeastern Alaska but no definite relationship has been established.

There are at least four styles of mineralization with textures ranging from stockwork and siliceous breccia to locally layered and massive sulphide-rich mineralization. Sulphide content varies, generally less than 5 per cent but can be as high as 75 per cent. Although it has not been extensively studied, there is evidence for mineral zonation. The gold content varies laterally and the silver content decreases vertically. Such ore diversity is an indication of the complex and episodic nature to ore deposition.

Ore minerals include pyrite, sphalerite, galena with minor tetrahedrite, chalcopyrite, arsenopyrite and local pyrrhotite. Bonanza ore contains native gold, electrum, pyrargyrite, polybasite, argentite and native silver. Gangue minerals are quartz, potassium feldspar, chlorite, carbonates and others.

A hybrid ore genesis model combining epigenetic vein and porphyry copper characteristics compare well with the features observed.

Production data includes ore from B.C. Silver (104B 155), Sebakwe (104B 153), Northern Lights (104B 053) and Pictou (104B 156).

In 1994, mining was from two main areas, the Northern Light and the Glory Hole zones; proven and probable reserves as of January 1, 1994 were estimated by the company at 151,200 tonnes grading 7.54 grams per tonne gold and 55.2 grams per tonne silver (Information Circular 1995-1, page 7).

Westmin Resources began operations at the Premier gold mine in late May 1989. Production was 550 tonnes per day in 1995, two-thirds from Glory Hole fill recovered via a decline from 515 bench in the open pit, and one-third from pillars and ore on 4-level (Information Circular 1996-1, page 7).

Westmin completed 6900 metres of drilling in 84 holes resulting in proven and probable reserves of 261,000 tonnes grading 7.9 grams per tonne gold and 35.3 grams per tonne silver; and possible reserves of 151,000 tonnes grading 8.6 grams per tonne gold and 30.9 grams per tonne silver (T. Schroeter, personal communication, 1996).

Production at the Westmin Resources Limited Premier gold mine during 1995 totalled 580 kilograms of gold and 6235 kilograms of silver from 179,500 tonnes of ore milled at a daily throughput of 490 tonnes. Reserves estimated by the company at January 1, 1996 were 260,000 tonnes grading 4.65 grams per tonne gold and 68.0 grams per tonne silver (Information Circular 1997-1, page 9). During 1996 millfeed came from the Glory Hole and other underground areas. Underground mining was suspended on April 12, 1996 due to poor grades in the developed zones and dwindling reserves. A compilation in early 1996 by the company identified a possible underground resource of approximately 1 million tonnes grading 7.9 grams per tonne gold. Metallurgical testing examined the feasibility of producing a zinc concentrate. Westmin also conducted an aggressive, two-phase exploration surface and underground diamond drilling program, estimated to total approximately 12,800 metres, testing for mineralization between the No. 4 and No. 6 levels of the mine and also for deeper mineralization in the Martha Ellen (104B 092) zone on the Big Missouri deposit to the north.

As of January 1, 1997 diluted proven/probable reserves were 350,140 tonnes grading 7.19 grams per tonne gold (cut), 37.7 grams per tonne silver (uncut) and 1.6 per cent zinc. Possible diluted reserves were 111,573 tonnes grading 8.57 grams per tonne gold (cut) and 27.42 grams per tonne silver (uncut) (George Cross News Letter No.26 (February 6), 1997).

After considering offers from Treminco, BYG, Canarc and Hunter Dickenson, Westmin placed the mine on a long term care and maintenance program on April 12, 1996, due primarily to the depressed gold price (T. Schroeter, personal communication, 1997).

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1997/05/02 REVISED BY: LDJ FIELD CHECK: Y

MINFILE NUMBER: **104B 055**

NATIONAL MINERAL INVENTORY: 104B1 Ag3

NAME(S): **INTERNATIONAL**, BOUNDARY , GRUB

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 02 07 N
LONGITUDE: 130 01 21 W
ELEVATION: 610 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit located northeast side of Cabin Creek on Grub Crown Grant, Lot 3924 (Assessment Report 9724 and Geological Survey of Canada Map 1829).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6210477
EASTING: 436288

COMMODITIES: Silver Lead

MINERALS
SIGNIFICANT: Argentite Galena Pyrite
COMMENTS: Stringers of pyrite and galena.
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stockwork Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Folded Sheared
DIMENSION: 0003 Metres STRIKE/DIP: 020/63W TREND/PLUNGE:
COMMENTS: Attitude of silicified zone, 2.4 to 3.0 metres wide.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE: 210+24-14 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2.0 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Eocene			Hyder Pluton

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Granitic Intrusive

HOSTROCK COMMENTS: Date quoted for Texas Creek intrusives for "Premier" porphyry dyke (Fieldwork, 1985). Unuk River Formation age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP:
COMMENTS: Located at western margin of Intermontane Belt.

PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

The International adit is located on the northeast side of Cabin Creek, east of the Canada-Alaska boundary on the Grub Crown Grant (Lot 3924). The 28.0 metre adit was driven in 1919, but failed to intersect predicted mineralization 46.0 metres below surface.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis.

CAPSULE GEOLOGY

The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and the Eocene granitic Hyder intrusives.

Mineralization near the adit occurs along the contact between a feldspar porphyry dyke and tuff within a silicified zone. This zone is between 2.4 and 3.0 metres wide, striking 20 degrees northeast with a dip of 63 degrees west. Mineralization consists of stringers of pyrite and galena, and argentite. Within the zone small veins of pure quartz, with different orientations, are reported to carry the highest values. The mineralogy of the vein is reported to be similar to the "Bush" vein (104A 094) which assayed 519 grams per tonne silver in the 1930's.

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 056**

NATIONAL MINERAL INVENTORY: 104B1 Au9

NAME(S): **HIGH ORE GOLD**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 01 11 N
LONGITUDE: 130 00 34 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: South adit location (Assessment Report 7630).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6208734
EASTING: 437076

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite
COMMENTS: Gold and silver minerals not identified.
ASSOCIATED: Quartz Calcite
ALTERATION: Silica Sericite Carbonate Chlorite Pyrite
ALTERATION TYPE: Silicific'n Sericitic Carbonate Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation
SHAPE: Irregular
MODIFIER: Folded Faulted

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE: 210+24-14 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2.0 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Eocene			Hyder Pluton

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Granitic Intrusive
Lamprophyre Dike

HOSTROCK COMMENTS: Date quoted for Texas Creek intrusives for "Premier" porphyry dyke (Fieldwork, 1985). Unuk River Formation age date from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1983
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	22.6000	Grams per tonne
Gold	0.3100	Grams per tonne

COMMENTS: Sample 7230 across 2.0 metres.
REFERENCE: Assessment Report 12236

CAPSULE GEOLOGY

The High Ore showing is located at the head of Boundary Creek, 3.5 kilometres south of the Silbak Premier Mine (104B 054) and north of Stewart, British Columbia. Minor work (open cuts) was carried

CAPSULE GEOLOGY

out on the property in 1928 and trenching and a geochemical survey were conducted in 1979 and 1983.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The mineralization is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes, Eocene granitic Hyder intrusives and lamprophyre dykes.

The High Ore showing consists of an extensive zone of pyritized, silicified and sericitized metavolcanics, locally intruded by porphyry dykes. These highly altered rocks contain between 5 and 20 per cent disseminated pyrite. Trenching and sampling returned values from 0.03 to 0.31 grams per tonne gold and from 1.4 to 22.6 grams per tonne silver (Assessment Report 12236). The mineralization was exposed as massive sulphides and breccia with associated quartz and calcite stringers and veinlets.

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GSC MAP 9-1957; 307A; 315A; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 057** NATIONAL MINERAL INVENTORY:

NAME(S): **CANTU**

STATUS: Showing MINING DIVISION: Alaska, USA
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 04 36 N NORTHING: 6215123
LONGITUDE: 130 03 53 W EASTING: 433729
ELEVATION: 365 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located within the United States, southeast side of Cantu Mountain (USGS Bulletin 807).

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS
SIGNIFICANT: Galena Sphalerite Tetrahedrite Pyrite Chalcopyrite
ASSOCIATED: Quartz Barite Calcite
ALTERATION: Sericite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 0006 x 0001 Metres STRIKE/DIP: 040/40E TREND/PLUNGE:
COMMENTS: Vein varies in width from 10 to 76 centimetres, striking 30 to 50 degrees and dipping 40 degrees east.

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	
Lower Jurassic			Texas Creek Plutonic Suite

ISOTOPIC AGE: 194.8 +/- 2 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Coarse Grained Hornblende Granodiorite
Quartz Porphyry

HOSTROCK COMMENTS: Age date from Fieldwork, 1985.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1929
SAMPLE TYPE: Bulk Sample

COMMODITY	GRADE	
Silver	1065.0000	Grams per tonne
Gold	6.0000	Grams per tonne
Lead	44.1000	Per cent
Zinc	12.2000	Per cent

COMMENTS: Quantity is 11 tonnes.
REFERENCE: USGS Bulletin 807, page 92.

CAPSULE GEOLOGY

The area is underlain by the Hazelton Group which is a northwest trending belt of folded volcanic rocks which contains a thick sedimentary sequence infolded along a synclinal axis. This group is bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin.

The host rock is the Early Jurassic Texas Creek Batholith which is a coarse-grained hornblende granodiorite. The plutonics are cut by quartz porphyry which are locally sericitized. The rocks are cut by quartz veins and stringers, mineralized with galena, sphalerite, tetrahedrite, and minor pyrite and chalcopyrite. Gangue minerals are quartz, barite and minor calcite. The main vein, which strikes and dips 30 to 50 degrees east, varies in width from 10 to 76 centimetres

CAPSULE GEOLOGY

for a strike length of 6 metres. Assays on about 11 tonnes of sorted ore from the vein returned 6 grams per tonne gold, 1065 grams per tonne silver, 44.1 per cent lead and 12.2 per cent zinc (United States Geological Survey, Bulletin 807).

A probable extension to the vein occurs 100 metres to the south-southwest, where it is up to 1 metre thick. A 5.9 tonne sample of sorted ore assayed 10.3 grams per tonne gold, 473 grams per tonne silver, 37.2 per cent lead and 5.6 per cent zinc (United States Geological Survey, Bulletin 807).

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GSC MAP 1418A
EMPR REGIONAL PF (Mineral Terranes of Alaska, University of Alaska, 1982 Plate F)
GSC P 89-1E, pp. 145-154
CJES VOL 10, part 1, 1973, pp. 408-420

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/28 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 058**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD CLIFF PREMIER**

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 03 02 N
LONGITUDE: 130 02 44 W
ELEVATION: 150 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location straddles east and west side of the Salmon River in the United States (United States Geological Survey Bulletin 807).

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6212199
EASTING: 434877

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Tetrahedrite, Galena, Sphalerite, Chalcopyrite, Pyrrhotite, Pyrite
ASSOCIATED: Quartz, Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins; I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded, Sheared
COMMENTS: Mineralized band in sheared tuff is 76 centimetres wide.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Andesite Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Dacitic K-Feldspar Porphyry Dike
Granitic Intrusive
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Formation age date from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
COMMENTS: Located at western margin of Intermontane Belt.

PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: EAST
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
YEAR: 1929

COMMODITY	GRADE	
Silver	137.1200	Grams per tonne
Gold	34.2800	Grams per tonne

COMMENTS: From 76.0 centimetre mineralized band.
REFERENCE: United States Geological Survey Bulletin 807.

CAPSULE GEOLOGY

The Gold Cliff Premier showing occurs on the east and west side of the Salmon River above the Cascade Creek junction in southeastern

CAPSULE GEOLOGY

Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

On the east side of the river a 6.1 metre open cut on a 61 centimetre shear zone in tuff has exposed a pyritized band with associated quartz and calcite. This 76.0 centimetre wide band is reported to assay 34.28 grams per tonne gold and 102.84 to 137.12 grams per tonne silver (United States Geological Survey Bulletin 807).

At 245 metres altitude, on the west side of the river, mineralization occurs as a narrow stringer of galena and a 2.0 centimetre wide stringer of sphalerite, chalcopyrite, tetrahedrite and pyrrhotite.

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EMPR BULL 58; 63
GSC MEM 175
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Sutherland-Brown, A., (1951): Cordilleran Structure in Canada and Alaska)
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Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)
CJES VOL 10, Part 1, 1973, pp. 408-420
GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 059**

NATIONAL MINERAL INVENTORY:

NAME(S): **BORDER**

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 02 42 N
LONGITUDE: 130 02 14 W
ELEVATION: 200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adjacent to the International Boundary on the Salmon River Road in the United States, mineralized zone (USGS Bulletin 807) and drilled area (Minister of Mines Annual Report 1927).

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6211573
EASTING: 435387

COMMODITIES: Lead, Zinc, Copper

MINERALS
SIGNIFICANT: Galena, Sphalerite, Pyrite, Chalcopyrite
ASSOCIATED: Quartz, Calcite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Disseminated, Stockwork
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded, Sheared

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Dacitic K-Feldspar Porphyry Dike
Andesitic Lapilli Tuff
Andesite Flow
Andesitic Breccia
Argillite
Siltstone
Granitic Intrusive
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

CAPSULE GEOLOGY

The Border showing is located adjacent to the International Boundary on the Salmon River road in southeastern Alaska, United States.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

A 21.0 metre adit has been driven between two porphyry dykes in a

CAPSULE GEOLOGY

mineralized fissure zone. Mineralization consists of galena, sphalerite, pyrite and a little chalcopyrite with associated calcite in shoots up to 15.0 centimetres wide. Sulphides occur in scattered veinlets and narrow stringers of quartz in a wide zone of gash veinlets.

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CJES Vol. 10, Part 1, 1973, pp. 408-420
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Premier Mine, Northwestern British Columbia, M.Sc. Thesis,
University of British Columbia (in Property File: 104B 054)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 060** NATIONAL MINERAL INVENTORY:

NAME(S): **VIRGINIA**

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 02 23 N
LONGITUDE: 130 02 38 W
ELEVATION: 183 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit located near junction of Salmon River and Boundary Creek in the United States (United States Geological Survey Bulletin 807).

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6210992
EASTING: 434963

COMMODITIES: Gold Lead Zinc Copper

MINERALS
SIGNIFICANT: Tetrahedrite Galena Sphalerite Pyrrhotite Pyrite Chalcopyrite
ASSOCIATED: Quartz Calcite Epidote Garnet
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated Discordant
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I02 Intrusion-related Au pyrrhotite veins
SHAPE: Tabular
MODIFIER: Folded Sheared
DIMENSION: STRIKE/DIP: 130/ TREND/PLUNGE:
COMMENTS: Mineralized shoot dips south.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Dacitic K-Feldspar Porphyry Dike
Andesitic Lapilli Tuff
Andesite Flow
Andesitic Breccia
Argillite
Siltstone
Granitic Intrusive
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Formation age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1929
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	154.3000	Grams per tonne

COMMENTS: Selected sample, maximum value.
REFERENCE: United States Geological Survey Bulletin 807, page 88.

CAPSULE GEOLOGY

The Virginia showing is located near the junction of the Salmon River and Boundary Creek on the banks of Cascade Creek in southeastern Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

An adit has been driven in intensely altered porphyry and a drift exposed a mineralized shoot in a 61.0 centimetre wide shear zone. The shoot strikes 130 degrees, dips southward and consists of almost solid sulphide in quartz gangue. These sulphides are pyrrhotite, sphalerite pyrite and a little galena and tetrahedrite. Mineralized bands are also exposed in the roof of the drift and quartz veins and calcite veinlets are common. Near the portal of the adit a lamprophyre dyke was intersected. Values as high as 154.30 grams per tonne gold are reported from selected samples of ore (United States Geological Survey Bulletin 807). Another adit, 46.0 metres upstream, exposed sparse similiar mineralization with the addition of minor chalco-pyrite and a notable quantity of epidote in bands and veins. Mineralization on the property occurs in veins, stringers, threads, blebs, and as fracture fillings and disseminated in host rocks.

Contact metamorphism has produced epidote and rare garnet near several dykes on the property.

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EMPR AR 1923-A87
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GSC P 89-1E, pp. 145-154
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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 061** NATIONAL MINERAL INVENTORY:

NAME(S): **DALY - ALASKA (LOWER)**, NEW ALASKA, ELEVENMILE

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 01 54 N
LONGITUDE: 130 02 39 W
ELEVATION: 183 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Vein located near junction of Salmon River and Daly Creek in the United States (United States Geological Survey Bulletin 807).

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6210096
EASTING: 434932

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Freibergite, Galena, Sphalerite, Chalcopyrite, Tetrahedrite, Pyrrhotite, Pyrite, Arsenopyrite
ASSOCIATED: Quartz, Calcite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded
DIMENSION: 0001 Metres STRIKE/DIP: 100/60S TREND/PLUNGE:
COMMENTS: Vein is 0.9 metre wide.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Andesitic Lapilli Tuff
Andesite Flow
Andesitic Breccia
Argillite
Siltstone
Dacitic K-Feldspar Porphyry Dike
Granitic Intrusive
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1929
SAMPLE TYPE: Grab

COMMODITY	GRADE
Silver	1371.2000 Grams per tonne

COMMENTS: Assay from vein 1028.4 to 1371.2 grams per tonne silver.
REFERENCE: United States Geological Survey Bulletin 807.

CAPSULE GEOLOGY

The Daly-Alaska (Lower) workings are located near the junction of Salmon River and Daly Creek in southeastern Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

Two open cuts expose a mineralized vein in silicified country rock. The vein is 0.9 metre wide, strikes 100 degrees and dips 60 degrees south. Mineralization consists of stringers of fine granular galena, pyrrhotite, sphalerite, chalcopyrite, pyrite and arsenopyrite with some mineralized calcite and quartz veinlets. The sulphides comprise 20 per cent of the vein. The vein is reported to assay 1028.4 to 1371.2 grams per tonne silver (United States Geological Survey Bulletin 807).

An open cut on the same zone, 3.0 metres above, consists of pyrite with local sphalerite stringers that reportedly assay high in gold.

Above the Elevenmile camp similar mineralization occurs in altered metavolcanics. The mineralization consists of pyrrhotite, sphalerite, pyrite, galena, tetrahedrite (some as freibergite) and chalcopyrite. A fault cut in a tunnel reportedly had a small amount of associated silver. Selected samples are reported to contain as much as 17,140 grams per tonne silver (United States Geological Survey Bulletin 807).

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GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 062**

NATIONAL MINERAL INVENTORY:

NAME(S): **STONER-CLEGG-O'ROURKE**, LIBERTY

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 01 56 N
LONGITUDE: 130 02 02 W
ELEVATION: 411 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit located between Boundary and Daly Creeks in the United States (United States Geological Survey Bulletin 807).

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6210148
EASTING: 435574

COMMODITIES: Zinc Lead Copper

MINERALS
SIGNIFICANT: Sphalerite Pyrite Galena Pyrrhotite Chalcopyrite Tetrahedrite
COMMENTS: Possibly silver present.
ASSOCIATED: Calcite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded Faulted

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Andesite Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Dacitic K-Feldspar Porphyry Dike
Granitic Intrusive
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
COMMENTS: Located at western margin of Intermontane Belt.

PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

The Stoner-Clegg-O'Rourke adit is located on the Liberty claim between Boundary and Daly Creeks in southeastern Alaska, United States.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

CAPSULE GEOLOGY

A tunnel 23.0 metres long has been driven in metavolcanics. Mineralization in dump material consists of calcite veinlets containing sphalerite, pyrite and galena and minor amounts of pyrrhotite, chalcopyrite and tetrahedrite. Mineralization at other localities in the area has been exposed by open cuts. This mineralization, contained in bands hosted by metavolcanics, consists of disseminated pyrite and pyrrhotite and seams of calcite, sphalerite, pyrite and galena.

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GSC MEM 175
EMPR FIELDWORK 1983, pp. 149-165; 1984, pp. 316-342; 1985, pp. 217-219
EMPR REGIONAL PF (Mineral Terranes of Alaska, 1982 Plate F;
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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 063**

NATIONAL MINERAL INVENTORY:

NAME(S): **DALY - ALASKA (UPPER)**, NEW ALASKA, ELEVENMILE

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 01 44 N
LONGITUDE: 130 02 16 W
ELEVATION: 440 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Upper adit located north of Daly Creek in the United States (United States Geological Survey Bulletin 807).

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6209781
EASTING: 435326

COMMODITIES: Lead Zinc Copper

MINERALS
SIGNIFICANT: Galena Sphalerite Tetrahedrite Chalcopyrite Pyrite Arsenopyrite Pyrrhotite
ASSOCIATED: Quartz Calcite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded
DIMENSION: 0011 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Zone mineralized over 11.3 metres.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Andesitic Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Dacitic K-Feldspar Porphyry Dike
Granitic Intrusive
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP:
COMMENTS: Located at western margin of Intermontane Belt.

PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

The Daly-Alaska (Upper) workings are located north of Daly Creek in southeastern Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of

CAPSULE GEOLOGY

dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

The workings consist of 2 adits and an open cut. The open cut exposes a highly silicified porphyry dyke mineralized with stringers and disseminations of pyrite, minor sphalerite and a few gash veins of quartz or calcite. At 15.0 metres below this open cut a 4.6 metre drift appears to be driven on a shoot of pyrite, sphalerite, galena, tetrahedrite, chalcopyrite, pyrrhotite and arsenopyrite. Another adit 18.3 metres below this one contains bands and patches of sphalerite, galena and pyrite in altered metavolcanics well mineralized over 11.3 metres.

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 064**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALASKA - PREMIER**, TAU 104, LOWER TAU, ALASKA, READY MONEY

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 01 36 N
LONGITUDE: 130 02 29 W
ELEVATION: 427 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit located south of Daly Creek in the U.S.A. (USGS BULL 807).

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6209537
EASTING: 435097

COMMODITIES: Gold, Silver, Zinc, Lead, Copper, Tungsten

MINERALS

SIGNIFICANT: Gold, Tetrahedrite, Galena, Sphalerite, Pyrrhotite, Chalcopyrite, Scheelite, Pyrite
COMMENTS: Scheelite occurs as rare grains in south workings.
ASSOCIATED: Quartz, Carbonate
ALTERATION: Silica, Sericite, Chlorite
ALTERATION TYPE: Silicific'n, Sericitic, Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded, Fractured
DIMENSION:
STRIKE/DIP: 120/50E
TREND/PLUNGE:
COMMENTS: Attitude of dyke containing quartz veinlets which are up to 5 centimetres wide.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE: 210+24-14 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Eocene			Hyder Pluton

LITHOLOGY: Dacitic K-Feldspar Porphyry Dike
Andesite Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Granitic Intrusive
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for Premier porphyry dyke in Silbak Premier area (Fieldwork 1985). Unuk River Fm. age date from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
COMMENTS: Located at western margin of the Intermontane Belt.

PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: DUMP REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1979
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	459.0000	Grams per tonne
Lead	14.0000	Per cent

COMMENTS: 14 percent value is for lead and zinc combined.
REFERENCE: Houston Oil and Minerals Corp. 1979.

ORE ZONE: PIT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1929
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	1199.8000	Grams per tonne

COMMENTS: Selected Specimen.
REFERENCE: USGS Bulletin 807.

CAPSULE GEOLOGY

The Alaska-Premier workings are located south of Daly creek, 13 kilometres north of Hyder, Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the volcanic arc assemblage of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows, and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic intrusives and lamprophyre dykes.

An adit driven on a 12.2 metre thick porphyry dyke exposed quartz veinlets, up to 5 centimetres wide, mineralized with pyrite, sphalerite, galena, pyrrhotite and considerable gold. The dyke strikes 120 degrees and dips 50 degrees east.

Above the tunnel on the old Ready Money claim, a pit exposes a rich pocket of mineralization. The host rock is fractured and silicified and contains quartz veins mineralized with blebs of pyrite, sphalerite, galena, pyrrhotite and chalcopyrite. Selected specimens are reported to have contained up to 1199.8 grams per tonne gold (USGS Bulletin 807).

Similar mineralization, with the addition of tetrahedrite, is exposed in a shear zone at 370 metres elevation.

Surface mineralization consists of pockets or lenses of semi-massive pyrite and arsenopyrite, fine grained pyrrhotite, sphalerite, and galena with chalcopyrite rimming the other sulphides. Quartz-carbonate veining and chlorite alteration is associated with mineralization.

The best assay obtained from exploration in 1979 was from a grab sample of the lower adit muckpile. This sample assayed 459 grams per tonne silver and 14 per cent lead and zinc (Houston Oil and Minerals Corp., 1979).

Scheelite occurs as rare grains in the veins on the property.

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Sutherland-Brown, A., (1951) Cordilleran Structure in Canada and Alaska)
EMPR PF (*Report and Map by Kretschmar, D. (1979) Houston Oil and Minerals Corp.)
CIMM SPEC VOL #8 pp.149-170, pp.215-229
EMPR AR 1923-A87
GSC P 89-1E, pp. 145-154
CJES VOL 10, Part 1, 1973, pp. 408-420
Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 065** NATIONAL MINERAL INVENTORY:

NAME(S): **HOBO**

STATUS: Showing MINING DIVISION: Alaska, USA
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 01 14 N NORTHING: 6208860
LONGITUDE: 130 02 41 W EASTING: 434879
ELEVATION: 732 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Vein located east of Salmon River in the United States (United States Geological Survey Bulletin 807).

COMMODITIES: Zinc Gold Silver Lead Copper

MINERALS
SIGNIFICANT: Sphalerite Galena Chalcopyrite Pyrite Pyrrhotite Arsenopyrite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn
SHAPE: Tabular
MODIFIER: Folded Sheared
DIMENSION: 0002 Metres STRIKE/DIP: 270/ TREND/PLUNGE:
COMMENTS: Veins strike approximately east-west. Mineralized zone approximately 1.52 metres wide.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Andesitic Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Dacitic K-Feldspar Porphyry Dike
Granitic Intrusive
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

INVENTORY
ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1929
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Gold	308.5200	Grams per tonne

COMMENTS: Some samples reportedly assayed this high.
REFERENCE: United States Geological Survey Bulletin 807.

CAPSULE GEOLOGY

The Hobo showing is located east of the Salmon River in south-

CAPSULE GEOLOGY

eastern Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

On the Hobo property three open cuts have exposed mineralized veins or vein-like replacement deposits. These veins strike almost east-west.

At 732 metres elevation, a 3.0 metre open cut exposes 1.5 metres of mineralization consisting of pyrite veins and disseminations, quartz lenses and stringers of solid sulphide (mainly sphalerite), fracture filling sphalerite and a vein of solid pyrrhotite 5.0 centimetres thick with minor chalcopyrite. Other sulphides present are galena and arsenopyrite. Quartz and calcite are the main gangue minerals.

The gold content is extremely variable and low in pyritic and pyrrhotitic ore. Silver content is generally low. Some samples are reported to carry 308 grams of gold per tonne (United States Geological Survey Bulletin 807).

A pyritic quartz vein occurs on the Red Rose claim (location undetermined).

A stockwork zone 61.0 centimetres wide occurs in a fissure zone in metavolcanic rock south of the claim at 884 metres elevation. The zone strikes 155 degrees and dips 60 degrees south. Mineralization consists of 5.0 centimetres of quartz heavily mineralized with pyrite, galena and sphalerite.

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Sutherland-Brown, A., (1951): Cordilleran Structure in Canada and Alaska)
CIM Spec. Vol. 8, pp. 149-170,215-229
Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)
CJES VOL 10, Part 1, 1973, pp. 408-420
GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 066**

NATIONAL MINERAL INVENTORY:

NAME(S): **PORTLAND**, USA

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 01 19 N
LONGITUDE: 130 03 13 W
ELEVATION: 533 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit located east of Salmon River in the United States (United States Geological Survey Bulletin 807).

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6209023
EASTING: 434327

COMMODITIES: Lead Zinc Copper

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

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Folded
DIMENSION: 0452 x 0001 Metres STRIKE/DIP: 120/52S TREND/PLUNGE:
COMMENTS: Vein traced for 452 metres is 61.0 centimetres wide, strikes 120 degrees and dips 52 degrees south.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Argillite
Andesite Lapilli Tuff
Andesite Flow
Andesite Breccia
Siltstone
Dacitic K-Feldspar Porphyry Dike
Granitic Intrusive
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

CAPSULE GEOLOGY

The Portland showing is located east of the Salmon River in southeastern Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

CAPSULE GEOLOGY

A 61.0 centimetre quartz vein has been exposed in a 4.6 metre adit driven in argillite. The vein strikes 120 degrees, dips 52 degrees south and has been traced for approximately 452 metres by pits and surface exposures. Mineralization consists of sparse disseminated pyrite, galena and blebs of sphalerite and minor chalcopyrite. The argillite contains other quartz veins and stringers.

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EMPR BULL 58; 63
GSC MEM 175
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Sutherland-Brown, A., (1951): Cordilleran Structure in Canada and Alaska)
CIM Spec. Vol. 8, pp. 149-170,215-229
CJES VOL 10, Part 1, 1973, pp. 408-420
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Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1988/12/28	REVISED BY:	DEJ	FIELD CHECK:	N

MINFILE NUMBER: **104B 067**

NATIONAL MINERAL INVENTORY:

NAME(S): **CRIPPLE CREEK**

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 01 25 N
LONGITUDE: 130 04 08 W
ELEVATION: 122 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit located in the United States (United States Geological Survey Bulletin 807).

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6209223
EASTING: 433378

COMMODITIES: Lead Zinc Copper

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

DEPOSIT
CHARACTER: Vein Disseminated Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded Sheared
DIMENSION: 0001 Metres STRIKE/DIP: 107/ TREND/PLUNGE:
COMMENTS: Quartz vein above adit 30 to 60 centimetres wide, strikes 107 degrees and dips steeply north.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Granodiorite
Andesitic Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Granitic Intrusive
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP:
COMMENTS: Located at western margin of Intermontane Belt.

PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

The Cripple Creek property is located on the east side of the Salmon river road below the Salmon River bridge at Tenmile in south-eastern Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek granodiorite, Eocene granitic Hyder intrusives and lamprophyre dykes.

There are several showings on the property. Beside the road, a

CAPSULE GEOLOGY

14.0 metre adit has been driven along a vein consisting of a sheeted zone 3.0 to 4.6 metres wide with quartz stringers and a vein up to 1.0 metre wide in the footwall. One quartz stringer is mineralized with galena, sphalerite and minor pyrite and locally tetrahedrite. Quartz, 2.5 metres thick on the south side of the portal, is locally mineralized with sparse pockets of galena. The country rock is sheared Texas Creek granodiorite containing disseminated pyrite. At 4.6 metres above the adit a 30 to 60 centimetre wide quartz vein and stringers are exposed for 20 metres. The quartz vein strikes 107 degrees and dips steeply north. One stringer, 5.0 centimetres wide, is heavily mineralized with galena, pyrite and sparse chalcopyrite.

Uphill from the adit (53 metres) an open cut also exposes a quartz vein.

There are two other mineralized showings consisting of stringers and stockwork veins containing disseminated galena, sphalerite and pyrite.

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Sutherland-Brown, A., (1951): Cordilleran Structure in Canada and Alaska)
CIM Spec. Vol. 8, pp. 149-170,215-229
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GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 068** NATIONAL MINERAL INVENTORY:

NAME(S): **BUTTE**, HYDER BUTTE, BRIGADIER

STATUS: Showing MINING DIVISION: Alaska, USA
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 01 01 N NORTHING: 6208479
LONGITUDE: 130 04 01 W EASTING: 433488
ELEVATION: 274 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Lower adit on vein located southeast of the Salmon River road in the Unites States (Plate 13 in United States Geological Survey Bulletin 1024-F).

COMMODITIES: Gold Silver Lead Tungsten

MINERALS
SIGNIFICANT: Galena Scheelite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Folded
DIMENSION: 0122 x 0001 Metres STRIKE/DIP: 148/65E TREND/PLUNGE:
COMMENTS: Vein exposed in shaft.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Andesitic Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Dacitic K-Feldspar Porphyry Dike
Granitic Intrusive
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for the "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1929
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Silver	706.1700	Grams per tonne
Gold	20.5700	Grams per tonne
Lead	14.1000	Per cent

REFERENCE: United States Geological Survey Bulletin 807.

CAPSULE GEOLOGY

The Butte property is located southeast of the Salmon River road

CAPSULE GEOLOGY

5.6 kilometres west of the International Boundary in southeastern Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

There are several occurences on this property. One, at 107 metres elevation, occurs in a 7.6 metre shaft sunk on a quartz vein that is up to 1.0 metre wide. The vein strikes 148 degrees, dips 65 degrees east and has been traced southeast for 122 metres. Pyrite and galena occur as shoots in the quartz. One assay contained 14.1 per cent lead, 20.57 grams per tonne gold and 706.17 grams per tonne silver (United States Geological Survey Bulletin 807). Another assay was considerably lower.

Two adits were sunk on a quartz vein about 1.0 kilometre southwest of the shaft. This vein has been traced for about 600 metres. The vein trends southeast and is reported to contain rare grains of scheelite with variable quantities of unspecified sulphides (United States Geological Survey Bulletin 1024-F).

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Sutherland-Brown, A., (1951): Cordilleran Structure in Canada and Alaska)
CIM Spec. Vol. 8, pp. 149-170,215-229
CJES VOL 10, Part 1, 1973, pp. 408-420
Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)
GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 069**

NATIONAL MINERAL INVENTORY:

NAME(S): **CREST**, BLUEBIRD

STATUS: Prospect
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 01 01 N
LONGITUDE: 130 03 44 W
ELEVATION: 468 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Discovery vein, page 82 (United States Geological Survey Bulletin 807). See also location of Bluebird vein (400 metres to the east-southeast) on Plate 13 (United States Geological Survey Bulletin 1024-F). Located within the United States, east of Salmon River.

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6208474
EASTING: 433782

COMMODITIES: Gold, Lead, Copper, Tungsten, Molybdenum

MINERALS

SIGNIFICANT: Galena, Pyrite, Chalcopyrite, Gold, Scheelite, Molybdenite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Folded
DIMENSION: 0107 Metres
STRIKE/DIP: 130/65E
TREND/PLUNGE:
COMMENTS: Discovery vein dips 55 to 70 degrees east.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Granodiorite
Andesitic Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Granitic Intrusive
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

INVENTORY

ORE ZONE: DISCOVERY VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1929
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Gold	19.9000	Grams per tonne

COMMENTS: Assays range from 11.6 to 19.9 grams.
REFERENCE: United States Geological Survey Bulletin 807.

INVENTORY

ORE ZONE: BLUEBIRD VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1929
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Tungsten	0.5000	Per cent

COMMENTS: Three hand samples estimated value. Commodity is tungsten oxide (Wo3).
REFERENCE: United States Geological Survey Bulletin 1024-F.

CAPSULE GEOLOGY

The Crest property is located east of the Salmon River in south-eastern Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek granodiorite, Eocene granitic Hyder intrusives and lamprophyre dykes.

The Discovery vein has been traced for 107 metres, strikes 130 degrees, dips 55 to 70 degrees east and is narrow but continuous. The vein, locally only stringers, occurs in a fissure zone developed in Texas Creek granodiorite that is mineralized with disseminated pyrite and fracture coating galena. The zone is 61.0 centimetres wide with exposures indicating an average width of 23.0 centimetres. Mineralization consists of local shoots heavily mineralized with galena, pyrite and a little chalcopyrite. Free gold is reported from an open cut where the vein consists of small stringers. The mineralized shoots run from 11.6 to 19.9 grams per tonne gold ($7.00 to $12.00 per tonne; United States Geological Survey Bulletin 807).

The Bluebird vein is 400 metres to the east-southeast of the Discovery vein at 678 metres elevation. The vein, which is also hosted in Texas Creek granodiorite, is exposed for 61.0 centimetres and is 10.0 centimetres wide. Mineralization consists of sparsely disseminated pyrite, chalcopyrite, galena, scheelite and molybdenum along the vein walls. Three hand specimens were estimated to contain 0.5 per cent tungsten oxide (Wo3) - (United States Geological Survey Bulletin 1024-F).

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CIM Spec. Vol. 8, pp. 149-170,215-229
CJES VOL 10, Part 1, 1973, pp. 408-420
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GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 070**

NATIONAL MINERAL INVENTORY:

NAME(S): **HYDER SKOOKUM**

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 00 44 N
LONGITUDE: 130 02 11 W
ELEVATION: 975 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located between Skookum and Fish Creeks in the United States (United States Geological Survey Bulletin 807).

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6207924
EASTING: 435384

COMMODITIES: Copper Iron

MINERALS
SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite Arsenopyrite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Breccia Disseminated
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Folded Sheared
DIMENSION: 0001 Metres STRIKE/DIP: 130/60S TREND/PLUNGE:
COMMENTS: Vein in open cut 76.0 centimetres wide.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Andesitic Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Granitic Intrusive
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Formation age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

CAPSULE GEOLOGY

The Hyder Skookum showing is located between Skookum and Fish Creeks in southeastern Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending, steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

Two parallel quartz veins strike northwest and dip steeply south.

CAPSULE GEOLOGY

Fragments of the country rock, forming a breccia with the veins, carries disseminated pyrite. The southern vein is hosted partly in a Texas Creek porphyry dyke and partly in metavolcanics, while the northern vein is wholly contained in metavolcanics. These veins are up to 2.13 metres wide and contain minor calcite.

An open cut exposed a vein mineralized with disseminated sulphides, solid masses and veinlets in the metavolcanic country rock. The vein is 76 centimetres wide, strikes 130 degrees and dips 60 degrees south. Mineralization consists mainly of pyrrhotite with a little associated chalcopyrite and arsenopyrite.

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CJES VOL 10, Part 1, 1973, pp. 408-420
GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 071**

NATIONAL MINERAL INVENTORY:

NAME(S): **TITAN**, UPPER CHUM

STATUS: Developed Prospect
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 00 40 N
LONGITUDE: 130 01 25 W
ELEVATION: 1020 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit location from description and location map (USGS Bulletin 807). Located within the United States, west slope of Mt. Welker, east of Fish Creek.

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6207789
EASTING: 436179

COMMODITIES: Gold, Silver, Zinc, Lead, Copper

MINERALS

SIGNIFICANT: Sphalerite, Galena, Pyrite, Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Sericite, Silica
ALTERATION TYPE: Sericitic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded, Sheared
DIMENSION: 0230 x 0084 Metres
STRIKE/DIP: 125/45S
TREND/PLUNGE:
COMMENTS: Vein strikes 120 to 130 degrees and dips 45 degrees south.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2.0 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Dacitic K-Feldspar Porphyry Dike
Andesite Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for "Premier" Porphyry dyke in Silbak Mine area (Fieldwork, 1985). Unuk River Formation age date is from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane belt.

CAPSULE GEOLOGY

The Titan workings are located on the "Upper Chum" claims, previously the Titan claims on the west slope of Mt. Welker, east of Fish Creek in southeastern Alaska. The claims were staked in 1917 and were being worked in 1925. Exxon Minerals explored the property in 1983.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

Mineralization is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick se-

CAPSULE GEOLOGY

quence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

Open cuts expose a quartz vein in a northwest trending sheared and altered porphyry dyke. The dyke has been sericitized and silicified. The vein strikes 120 to 130 degrees, dips 45 degrees south and has been traced intermittently in outcrop for 230 metres with a vertical extent of 84 metres. At the southeast end of the open cut, 55 metres above this vein, a band of porphyry up to 1.5 metres wide contains pyrite and quartz stringers. These stringers, up to 10 centimetres wide, contain disseminated sphalerite, galena, pyrite and chalcopyrite. Sphalerite is the most abundant with total sulphide content up to 25 per cent.

Hand picked samples from mineralized surface exposures are reported to contain high gold and silver values, while underground assays were low. The showings in the Titan adit were resampled in 1983 by Exxon Minerals (results unavailable). A possible extension of the vein occurs 600 metres east of the camp at 1220 metres elevation with minor similar mineralization.

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1985, pp. 217-219
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EMPR AR 1923-A87
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GSC P 89-1E, pp. 145-154
CJES VOL 10, Part 1, 1973, pp. 408-420

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 072**

NATIONAL MINERAL INVENTORY:

NAME(S): **UNUK RIVER (AP)**, BRUCE GLACIER

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 36 14 N
LONGITUDE: 130 21 43 W
ELEVATION: 1435 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: AP zone, immediately adjacent to the east side of Bruce Glacier and 4.5 kilometres east of Unuk River, 65 kilometres north of Stewart (Assessment Report 20993).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6274124
EASTING: 416391

COMMODITIES: Gold, Silver, Zinc, Lead, Copper

MINERALS

SIGNIFICANT: Galena, Sphalerite, Pyrite, Arsenopyrite, Chalcopyrite
ALTERATION: Silica, Carbonate
ALTERATION TYPE: Silicific'n, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated, Shear
CLASSIFICATION: Epigenetic, Hydrothermal
DIMENSION: 300 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: AP zone

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	
Lower Jurassic	Hazelton	Mount Dilworth	

LITHOLOGY: Welded Tuff
Tuffaceous Mudstone
Argillaceous Sediment/Sedimentary
Felsic Volcanic
Intermediate Volcanic
Diabase Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	20.7000	Grams per tonne
Gold	1.2500	Grams per tonne
Copper	0.0350	Per cent
Lead	0.9000	Per cent
Zinc	1.0870	Per cent

COMMENTS: Sample across a true width of 1.36 metres.
REFERENCE: Assessment Report 20993.

CAPSULE GEOLOGY

The Unuk River area is underlain by a thick Upper Triassic-Middle Jurassic volcano-sedimentary succession which is overlain by marine basin sediments of Middle to Upper Jurassic age. The sedimentary and volcanic rocks have been cut by a variety of plutons representing at least four intrusive episodes spanning late Triassic to Tertiary time. Major structural features apparent in the area are north trending folds and a major normal fault known as the Harrymel Creek fault. A number of lesser normal faults which repeat stratigraphy are recognized at the toe of Bruce Glacier. Metamorphism in the area has been determined to be lower greenschist facies.

The Unuk River (AP) occurrence area is underlain by a package of Lower Jurassic Betty Creek Formation (Hazelton Group) intermediate

CAPSULE GEOLOGY

and felsic volcanic rocks and related sedimentary rocks, and possibly felsic volcanic rocks and sedimentary rocks of the Lower Jurassic Mount Dilworth Formation (Hazelton Group). The AP zone is a moderately strong, continuous crosscutting zone of brecciation, silicification, carbonatization and related galena-sphalerite-pyrite-arsenopyrite-(chalcopyrite) mineralization. It is hosted by welded tuffs, tuffaceous mudstones and argillaceous sediments within felsic volcanic rocks of the Betty Creek and possibly Mount Dilworth formations. A multitude of crosscutting, anastomosing diabase dykes occur throughout the zone. The zone extends over 300 metres along strike and may join with other mineralized structures in the area (see Unuk (Zone 1), 104B 083 and Unuk (Zone 2), 104B 344).

A drill core intersection across a true width of 1.36 metres assayed 1.25 grams per tonne gold, 20.7 grams per tonne silver, 0.035 per cent copper, 1.087 per cent zinc and 0.9 per cent lead (Assessment Report 20993).

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EMPR BULL 63
GSC MAP 9-1957; 1418A
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/06/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1991/12/04 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104B 073** NATIONAL MINERAL INVENTORY:

NAME(S): **RIVERSIDE**, LINDEBORG, 7 MILE, ICKIS, RIVERVIEW, CROSS

STATUS: Past Producer Underground MINING DIVISION: Alaska, USA
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 00 13 N NORTHING: 6206999
LONGITUDE: 130 04 17 W EASTING: 433188
ELEVATION: 162 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Upper Level Adit (United States Geological Bulletin 1024-F); Located within the United States, east of the Salmon River.

COMMODITIES: Silver Lead Gold Copper Tungsten Zinc

MINERALS
SIGNIFICANT: Pyrite Galena Pyrrhotite Scheelite Chalcopyrite Sphalerite Tetrahedrite Arsenopyrite Gold
ASSOCIATED: Quartz Calcite Ankerite Epidote Barite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated Massive
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I12 W veins
SHAPE: Irregular
MODIFIER: Sheared
DIMENSION: 0600 x 0200 x 0003 Metres STRIKE/DIP: 120/80 TREND/PLUNGE:
COMMENTS: Lindeborg Vein is discontinuous within the 600 by 200 metre shear zone. Tertiary age of mineralization is reported in EMPR Paper, 1988-4.

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

Lower Jurassic — Texas Creek Plutonic Suite
ISOTOPIC AGE: 206.5 +/- 6 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Hornblende

LITHOLOGY: Coarse Grained Hornblende Granodiorite
Mylonite
Porphyry
Lamprophyre

HOSTROCK COMMENTS: Isotopic Age reference: Fieldwork, 1985 and Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: UNDERGROUND WORKINGS REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1956
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	89.0000	Grams per tonne
Gold	1.3700	Grams per tonne
Copper	0.2100	Per cent
Lead	1.1500	Per cent
Tungsten	0.0100	Per cent

COMMENTS: One metre channel sample.
REFERENCE: United States Geological Survey Bulletin 1024-F, Plate 17.

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1929
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	925.6000	Grams per tonne

REFERENCE: USGS Bulletin 807-81.

CAPSULE GEOLOGY

Volcanics and sediments of the Lower Jurassic Hazelton Group are intruded by the Early Jurassic Texas Creek Plutonic Suite consisting of coarse-grained granodiorite. These are cut by north trending granodiorite porphyry dykes, which are related to the Hyder quartz monzonite, lamprophyre dykes, and a mylonite zone known as the Lindeborg Shear Zone. The zone, which strikes 135 to 145 degrees and dips steeply northward, has a 600 metre length, 200 metre vertical depth and 25 metre width.

The Lindeborg Shear Zone contains the Lindeborg Vein, consisting of quartz veins and stringers, mineralized with pyrite and galena and lesser pyrrhotite, scheelite, chalcopyrite, sphalerite, tetrahedrite, arsenopyrite and native gold. Gangue minerals include quartz, epidote, calcite, ankerite and barite. The vein trends 120 degrees, dips 60-80 degrees northeast, varies from 1 to 3 metres in width and is discontinuously developed along the length of the shear zone. A one metre channel sample from the underground workings assayed 89 grams per tonne silver, 1.15 per cent lead, 1.37 grams per tonne gold, 0.21 per cent copper and 0.01 per cent tungsten oxide (United States Geological Survey Bulletin 1024-F, Plate 17).

The Riverside Mine also contains two mineralized quartz veins, known as the Ickis (Riverview) and Cross veins, within the granodiorite. The Ickis Vein strikes northwest, dips steeply to the northeast, is 80 metres long and is up to 1.4 metres wide. It lies 120 metres southwest of and is parallel to the Lindeborg Vein. The Cross Vein, which is between the Lindeborg and Ickis veins, strikes north, is 230 metres long and varies from 0.2 to 1.4 metres wide. Mineralization in both veins is similar to the Lindeborg Vein.

From 1925 to 1950, total production, mainly from the Lindeborg vein, was 84,086 grams of gold, 2,976,342 grams of silver, 34,338 kilograms of copper, 1,024,320 kilograms of lead, 31,752 kilograms of tungsten and 8120 kilograms of zinc. This came from 26,434 tonnes of milled ore. (United States Geological Survey Bulletin 1024-F, page 129).

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EMPR P 1988-4 (in press)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/07/04 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 074**
NATIONAL MINERAL INVENTORY: 104B1 Au11

NAME(S): **SCOTTIE NORTH**, SCOTTIE, SCOTTY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 13 54 N
LONGITUDE: 130 04 43 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Main area of massive sulphide bodies, figure 38, Bulletin 58. Located north end of Summit Lake.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6232387
EASTING: 433134

COMMODITIES: Gold, Silver, Copper, Zinc, Lead

MINERALS
SIGNIFICANT: Pyrrhotite, Pyrite, Arsenopyrite, Chalcopyrite, Sphalerite, Galena
ALTERATION: Silica, Chlorite, Carbonate
ALTERATION TYPE: Silicific'n, Chloritic, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Massive, Podiform
CLASSIFICATION: Replacement, Hydrothermal, Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation; I05 Polymetallic veins Ag-Pb-Zn±Au
J04 Sulphide manto Au
SHAPE: Irregular
MODIFIER: Sheared
DIMENSION: 0150 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Sulphide bodies scattered over a 150 metre north-trending area.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Breccia
Andesitic Tuff
Tuff

HOSTROCK COMMENTS: Isotopic Age reference: Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1946
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	58.3000	Grams per tonne
Gold	51.0000	Grams per tonne

COMMENTS: 11.3 metre channel sample.
REFERENCE: Minister of Mines Annual Report, 1946.

CAPSULE GEOLOGY

The Scottie North occurrence lies 1.5 kilometres northeast of the Scottie Gold deposit (104B 034). It is hosted by volcaniclastic rocks of the Lower Jurassic Unuk River Formation of the Hazelton Group. These rocks consist of green andesitic breccia and conglomerate, with thin intercalated volcanic sandstones and tuffaceous bands. The Lower Jurassic Summit Lake Stock, comprised of hornblende quartz monzonite and/or hornblende granodiorite, lies to the west.

Alteration in the area is characterized by the development of fine-grained pyrrhotite or pyrite in the volcanic host and local development of silicification, chloritization and carbonate alteration.

The mineral occurrences consist of very irregular siliceous

CAPSULE GEOLOGY

replacement bodies containing discontinuous veinlets and large masses of sulphides. The mineralization appears unrelated to any definite structural feature but there are several unmineralized, northwest and west trending shear zones with branching structures into which some of the mineralized zones tend to merge and die out.

The sulphide mineralization is characterized by abundant fine-grained pyrrhotite with smaller amounts of pyrite, arsenopyrite and chalcopyrite, with minor sphalerite and galena. The gold content is erratic and is apparently not proportional to the total sulphides.

The massive sulphide bodies are scattered over a 150 metre, north-trending area. Channel sampling of a lens within the northerly occurrences, gave values of 51 grams per tonne gold and 58.3 grams per tonne silver over 11.3 metres. A 7.3 metre channel sample, 100 metres to the south, assayed 40.8 grams per tonne gold and 106.3 grams per tonne silver. (Annual Report 1946).

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GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/07/28 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 075**
NATIONAL MINERAL INVENTORY: 104B1 Ag11

NAME(S): **RAINBOW**, TIDE, CASSIAR RAINBOW

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 12 49 N
LONGITUDE: 130 03 58 W
ELEVATION: 1105 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized shears, figure 28, Bulletin 58.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6230366
EASTING: 433878

COMMODITIES: Silver, Gold, Copper, Zinc, Lead

MINERALS

SIGNIFICANT: Sphalerite, Galena, Pyrrhotite, Chalcopyrite, Arsenopyrite, Pyrite
ASSOCIATED: Quartz, Carbonate
ALTERATION: Silica, Pyrite
ALTERATION TYPE: Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins; I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Sheared
DIMENSION: 0186 x 0050 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Maximum dimension of east-trending, north-dipping mineralized shear zones.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Volcanic Breccia, Andesite Tuff, Siltstone, Argillite

HOSTROCK COMMENTS: Isotopic Age reference: Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: TUNNEL
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
YEAR: 1983

COMMODITY	GRADE	
Gold	5.6000	Grams per tonne

COMMENTS: Over 2.7 metres.
REFERENCE: Assessment Report 12117.

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
YEAR: 1947

COMMODITY	GRADE	
Silver	72.0000	Grams per tonne
Gold	1.7000	Grams per tonne

COMMENTS: Sample #813 over 46 centimetres.
REFERENCE: Minister of Mines Annual Report, 1947.

CAPSULE GEOLOGY

The Rainbow occurrence lies east of Summit Lake, on the Trojan Horse Ridge. Underlying rocks consist of volcanic breccia and

CAPSULE GEOLOGY

andesite tuff, overlain by siltstone and argillite, of the Lower Jurassic Unuk River Formation (Hazelton Group). To the south of the Trojan Horse Ridge is an irregularly shaped body of andesite porphyry. The Lower Jurassic Summit Lake Stock, comprised of hornblende quartz monzonite and/or hornblende granodiorite, lies northwest of Summit Lake.

Mineralized east-trending, north dipping shear zones cut the volcanic breccia. The zones, which are up to 50 metres wide and 186 metres long, are mineralized with sphalerite, galena, pyrrhotite, chalcopyrite and arsenopyrite in zones usually less than 1.6 metres wide. Pyritization, silicification and quartz-carbonate stringers are common.

A 46 centimetre sample (#813) taken from a vein assayed 1.7 grams per tonne gold and 72 grams per tonne silver (Annual Report 1947). A mineralized zone was sampled within the Trojan Horse tunnel (675 metres from the south portal). This sample, located 300 metres west of the main Rainbow shear zone, assayed 5.6 grams per tonne gold over 2.7 metres (Assessment Report 12117).

Stringers and disseminations of pyrite and pyrrhotite occur along the contact between the volcanic breccia and the argillites, east of the ridge.

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GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/02 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 076**

NATIONAL MINERAL INVENTORY: 104B11 Ag1

NAME(S): **RAY**, RAY NO. 1, RAY 4,
HEMLO-WEST 16, ISKUT SILVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 42 11 N
LONGITUDE: 131 08 22 W
ELEVATION: 152 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6286377
EASTING: 369012

COMMENTS: Ray No. 1 showing located on Ray 4 claim (Assessment Report 3374, Figure 2) on the north side of the Iskut River, currently located on Hemlo-West 16 claim (Assessment Report 11320, Figure 4).

COMMODITIES: Gold, Silver, Lead, Zinc, Copper, Arsenic

MINERALS

SIGNIFICANT: Sphalerite, Galena, Chalcopyrite, Pyrite, Bornite
ASSOCIATED: Quartz, Carbonate, Dolomite
ALTERATION: Sericite, Chlorite, Epidote, Pyrite, Garnet, Biotite
COMMENTS: Iron and manganese oxides occur in fault gouge.
ALTERATION TYPE: Sericitic, Chloritic, Epidote, Pyrite, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated, Massive
CLASSIFICATION: Hydrothermal, Epigenetic, Industrial Min.
TYPE: I02 Intrusion-related Au pyrrhotite veins
I05 Polymetallic veins Ag-Pb-Zn±Au
G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Pyrite Biotite Quartz Schist
Sericite Schist
Argillaceous Siltstone
Limestone
Chert
Mafic Volcanic Tuff
Volcanic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1966

COMMODITY	GRADE	
Silver	6.9000	Grams per tonne
Gold	0.6900	Grams per tonne
Lead	0.0400	Per cent
Zinc	5.6000	Per cent

REFERENCE: Annual Report 1966, pages 34-37.

INVENTORY

ORE ZONE: TRENCH REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	200.0000	Grams per tonne
Arsenic	0.9500	Per cent
Gold	3.0500	Grams per tonne
Copper	0.3300	Per cent
Lead	0.3300	Per cent
Zinc	0.9800	Per cent

COMMENTS: Sample 16410, pyrite-sphalerite mineralization in sericite schist.
REFERENCE: Dandy, L.: Report on Iskut River property, Jan. 1988.

CAPSULE GEOLOGY

Regional mapping indicates the area is underlain by Mesozoic and older sediments and volcanics which have been intruded by granitic rocks of the Coast Plutonic Complex.

The oldest rocks consist of a thick sequence of weakly metamorphosed siltstones and argillites which are considered to be pre-Triassic in age. Overlying this sequence are black shales, siltstones, greywacke and conglomerates. Corals from limestone beds within these rocks have been dated as Upper Triassic and are thought to be correlative with the Stuhini Group. This sedimentary sequence is overlain by a chaotic mixture of Lower Jurassic to Triassic volcanics of the Hazelton Group (Unuk River Formation). They consist of an andesitic to rhyolitic mixture of pyroclastics and flows.

Intruding the Mesozoic rocks are Jurassic to Cretaceous plutonic rocks which range in composition from syenite to diorite. Contact metamorphism consists of large zones of hydrothermal alteration with the formation of some migmatites and cataclasites.

On the property the Upper Triassic sedimentary rocks are dominated by black to grey, foliated and well-bedded argillaceous siltstone. The siltstone grades into well-indurated, poorly foliated and well-bedded chert and some limestone. The volcanics consist mainly of mafic flows which include feldspar porphyry volcanic flows.

Sericite schist occurs in the eastern portion of the Hemlo West 16 claim. Metamorphosed sediments in this area, which consist of siltstone, sandstone and shale, are believed to be Lower Triassic in age. It is pale green in color, well-foliated, variably siliceous and hosts variable amounts of disseminated, veined and laminated pyrite. Structural relationships suggest that this rock unit is unconformable, however, some coarsely crystalline limestone with faults along both contacts, occurs within the schist.

Chloritization and some epidotization of the volcanics and sediments appears to be related to regional metamorphism. Pervasive sericitization which characterizes the schist is possibly related to the mineralization which accompanies the sericite schist. Outcrops of quartz sandstone adjacent to the sericite schist contain minor amounts of sericite suggesting that the sericitization is gradational between the two.

Widespread disseminated and veined pyrite is abundant on the Hemlo West 16 claim. Accompanying the pyrite are local concentrations of chalcopyrite and galena. This mineralization appears to be associated with the sericite schist, and in some cases the pyrite occurs as laminations parallel to the foliation. Also on the Hemlo West 16 claim veined pyrite mineralization appears to be confined to the chert in quartz-carbonate-dolomite gangue.

The Ray No. 1 showing occurs within a steep-sided gully within quartz-sericite schist with some garnet and chlorite. A fault, striking northwest and dipping 55 degrees southwest, between coarsely crystalline limestone and schist is mineralized with sphalerite and galena. In 1966, a 0.34 metre sample taken across sulphide mineralization with iron and manganese oxide stained fault rock and clay gouge assayed 1.37 grams per tonne gold, 44.57 grams per tonne silver, 0.14 per cent lead and 2.0 per cent zinc (Minister of Mines, Annual Report, 1966, page 35).

A pod of massive sphalerite, chalcopyrite, galena, pyrite and quartz is reported to occur along a foliation plane within the sericite schist. In 1966, a chip sample across 0.7 metres assayed 18.17 grams per tonne gold, 1769.0 grams per tonne silver, 2.68 per cent lead, 9.3 per cent zinc and 8.92 per cent copper (Minister of Mines, Annual Report, 1966, page 35).

In 1987, a rock sample taken from Trench A (Ray No. 1 showing), which hosts secondary mineralization consisting of pyrite and sphalerite with intensely weathered biotite, assayed 3.05 grams per tonne gold, greater than 200.0 grams per tonne silver, 0.95 per cent arsenic, 0.33 per cent copper, 0.33 per cent lead and 0.98 per cent

CAPSULE GEOLOGY

zinc. Mineralization within Trench B consists of a 3 to 30 centimetre wide chalcopyrite-bornite vein with associated parallel pyrite veins. A sample from the chalcopyrite-bornite vein assayed 3.05 grams per tonne gold, 92.6 grams per tonne silver, 0.95 per cent lead with greater than 1.0 per cent copper and zinc (Dandy, 1988).

Regarding the re-opening and re-sampling of these trenches, the best result comes from Trench No. 1B, which returned values of 8.32 per cent copper, 3.90 per cent lead, 12.02 per cent zinc, 884.895 grams per tonne silver and 32.639 grams per tonne gold over 0.5 metres (Assessment Report 17122).

Earlier reports suggest the mineralization is the result of fault controlled, epithermal processes, however, it is now thought the genesis may be associated with some form of volcanogenic massive sulphide deposit.

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EMPR GEM 1971-37
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Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/11/17 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 077**

NATIONAL MINERAL INVENTORY: 104B11 Cu1

NAME(S): **BRONSON SLOPE**, RED BLUFF (L.2857), REG,
RED BIRD (L.2859), JOHNNY MOUNTAIN, HOMESTAKE (L.2858),
MERMAID (L.2860), CAP, BRON,
ISKUT, COPPER QUEEN, HIGHWALL SLOPE,
HIGH

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 39 59 N
LONGITUDE: 131 05 40 W
ELEVATION: 0400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Crown Grant Lots 2857 to 2860 inclusive, located along the south shores of Bronson Creek, about 2 kilometres south of the Iskut River. Location is center of Red Bluff claim.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6282211
EASTING: 371642

COMMODITIES: Gold, Silver, Copper, Molybdenum, Magnetite

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Molybdenite, Magnetite
ALTERATION TYPE: Pyrite, Chloritic, Oxidation, Silicific'n, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated, Vein
CLASSIFICATION: Porphyry, Hydrothermal, Igneous-contact, Mesothermal
TYPE: L04 Porphyry Cu ± Mo ± Au; H04 Epithermal Au-Ag-Cu: high sulphidation
DIMENSION: 500 x 100 Metres
STRIKE/DIP:
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Unknown			Coast Plutonic Complex

LITHOLOGY: Porphyry Intrusive
Feldspar Porphyry
Pyrite Porphyry Intrusive
Hornfels
Quartz Monzonite
Gossan
Quartz Vein
Volcaniclastic
Schist
Chlorite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: BRONSON SLOPE
REPORT ON: Y

CATEGORY: Indicated
YEAR: 1998
QUANTITY: 79000000 Tonnes

COMMODITY	GRADE	
Silver	2.7000	Grams per tonne
Gold	0.4800	Grams per tonne
Copper	0.1700	Per cent
Molybdenum	0.0060	Per cent

COMMENTS: International Skyline Gold Corporation estimates this resource based on a pre-feasibility study.
REFERENCE: Information Circular 1999-1, page 8.

CAPSULE GEOLOGY

The Red Bluff group was originally staked in 1911 to cover an immense red bluff which comprises about 245 metres of cliff exposure along the south side of Bronson Creek. Between 1916 and 1920, two adits were driven, as well as several open cuts, which exposed good prospects in gold and copper. In 1919, a vein was reported along

CAPSULE GEOLOGY

this side-hill and assayed values of copper, silver and gold across about 9 metres (Minister of Mines, Annual Report, 1919, page 84).

These five Crown-granted claims are underlain by an Upper Triassic to Lower Jurassic sedimentary/volcanic sequence which has been correlated with the Hazelton Group (Unuk River Formation) but may correlate with upper members of the Stuhini Group. The stratified Jurassic-Triassic rocks are intruded by intermediate to felsic stocks and plutons of Jurassic and younger age that are related to the Coast Plutonic Complex.

The mineralization occurs within an altered porphyry intrusion with a volcaniclastic sequence which is pyritized and bleached by carbonatization and silicification (refer to Stonehouse - 104B 107 and Snip 104B 250). These schists are chloritized and are extremely oxidized.

There are several gold showings located on both the Red Bluff and Red Bird Crown Grants. Included on these claims is a copper-gold porphyritic intrusion located only a few hundred metres northeast of the Snip Twin zone (104B 250). Several showings grade between 3.43 to 30.86 grams per tonne gold. A fault zone cutting the porphyry with a 200 metre strike length hosts values from 3.43 to 8.57 grams per tonne gold across 0.3 to 0.8 metres with this zone. A 5 metre section of poorly exposed pyritic intrusion carries 8.57 to 20.57 grams per tonne gold across a 1.0 metre exposure at an elevation of 513 metres. At 290 metres elevation, a gossanous vein within mineralized porphry grades 27.43 grams per tonne gold across 0.3 metres exposed thickness and 3 metres of exposed strike length (Skyline Explorations Ltd., Press Release, June 15, 1988).

Drilling in 1988, within the northern corner of the Red Bird Crown Grant (Lot 2859) returned good values of gold. A 15 metre intersection in drill hole RB 8 assayed 64.0 grams per tonne gold. Another 0.9 metre intersection from drill hole RB 8 assayed 8.26 grams per tonne gold (Skyline Explorations Ltd., Press Release, August 4, 1988).

In late 1993, International Skyline Gold Corporation calculated a mineral inventory of 100 million tonnes grading 0.65 gram per tonne gold, 0.14 per cent copper, 3.4 grams per tonne silver and 0.01 per cent molybdenum. A drill-indicated probable and possible mineral resource of 20 million tonnes grading 0.25 per cent copper, 0.71 gram per tonne gold and 2.65 grams per tonne silver is contained within the larger resource (Information Circular 1994-19, page 21).

In August 1995, the company estimated a drill indicated and inferred inventory of 90 million tonnes grading 0.16 per cent copper, 0.75 gram per tonne gold and 4.17 grams per tonne silver, plus the potential for recovery of molybdenum and iron from magnetite. A higher grade potential open pit starter resource of 17 million tonnes grading 0.23 per cent copper, 0.72 gram per tonne gold and 3.10 grams per tonne silver is indicated within this inventory.

In 1995, with Explore B.C. Program support, International Skyline Gold Corporation carried out a 7 hole diamond drilling program totalling 2428.6 metres. This program and a review of all previous work allowed the company to refine its resource estimation to an inferred resource of 90 million tonnes grading 0.749 gram per tonne gold, 0.159 per cent copper, 4.17 grams per tonne silver and 0.005 per cent molybdenum. The project was advanced to the mine development stage and an Approval Certificate Application made as the first step in the Environmental Assessment Review (Explore B.C. Program 95/96 - M67).

International Skyline increased its resource tonnage in 1996 as a result of a further 2000 metres of diamond drilling. The company estimates a total resource of 97,920,000 tonnes grading 0.2 per cent copper, 0.576 gram per tonne gold and 2.65 grams per tonne silver (Information Circular 1997-1, page 18). The company has begun a series of studies leading to a feasibility stage, based on a 12,000 tonne per day milling operation.

Based on 14,800 metres of drilling in 77 holes, International Skyline Gold Corporation estimates a resource of 76,000,000 tonnes grading 0.162 per cent copper, 0.44 gram per tonne gold, 2.747 grams per tonne silver and 0.007 per cent molybdenum for the Bronson Slope deposit. The company plans mining in three stages over 14 years, beginning with a low strip ratio, high-grade starter pit with an estimated reserve of 22 million tonnes grading 0.207 per cent copper, 0.504 grams per tonne gold, 2.953 grams per tonne silver and 0.005 per cent molybdenum. The mill is planned to produce a gold and silver-rich copper concentrate and a separate molybdenum concentrate. The plant is also designed to recover a high-quality magnetite concentrate. Metallurigical testing has indicated good recoveries for copper, gold and silver, tests have also demonstrated that molybdenum and magnetite are recoverable. During 1997 the company continued with the preparation of a feasibility study and its

CAPSULE GEOLOGY

environmental assessment project report. The project, as currently proposed, is a 15,000-tonne-per-day milling operation; capital costs were estimated at $150 million (Information Circular 1998-1, page 19).

Drilling in the high wall area, south of the deposit, intersected a zone of disseminated pyrite in hornfels that averages 0.58 gram per tonne gold across 70 metres (Exploration in BC 1997, page 15).

In December 1998, International Skyline Gold and Homestake Canada agreed to explore and possibly mine a portion of Skyline's claims neighbouring the Snip gold mine (104B 250). Skyline conducted underground drilling (1495 metres, 17 holes) and drifting (197.7 metres) on to its High 1, 2 and 3 claim group from the nearby Snip mine workings. Homestake will perform the mining and drilling that will be funded and directed by Skyline. Net operating profit from ore mined from Skyline's ground will be shared, 55 per cent Skyline and 45 per cent Homestake.

The High claims target area is interpreted to represent the strike extension of the Snip deposit on to Skyline's Bronson Slope property.

Exploration will focus on intersecting a previous drill intercept, which cut 15.77 grams gold per tonne across a 2-metre interval. The mineralization is adjacent to a quartz-calcite-sulphide stringer zone containing 4.9 grams gold across 1.6 metres. The intercept occurred 195 metres from the eastern end of the Snip mine and 75 metres inside the Skyline claim boundary.

About 400 metres up-dip of this target area, Skyline has traced a near-surface structure of disseminated and stockwork gold mineralization known as the Highwall zone. The zone can be followed along strike for about 800 metres on Skyline's property. The zone likely represents the easterly continuation of the deeper, high-grade structure being mined at the Snip deposit.

Based on a pre-feasibility study, International Skyline identified a resource of 79 million tonnes, grading 0.17 per cent copper, 0.006 per cent molybdenum, 0.48 grams per tonne gold and 2.70 grams per tonne silver (Information Circular 1999-1, page 8).

Royal Gold Inc. financed exploration on the property in 1999. Assays from the exploration drilling did not warrant further work by International Skyline Gold.

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GSC MEM 246
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N MINER July 4, 1988; May 4, Dec.21, 1998; Feb.15, June 28, 1999
PR REL Skyline Explorations Ltd., *Jun.15,*Aug.4, 1988
WWW http://www.eao.gov.bc.ca./PROJECT/projectlist.htm; http://www.infomine.com/
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Placer Dome File
EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/04/01 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 078**

NATIONAL MINERAL INVENTORY: 104B9 Cu3

NAME(S): **TREATY GOSSAN**, TREATY, TREATY CREEK, AW, RIDGE VEINS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 35 18 N
LONGITUDE: 130 08 27 W
ELEVATION: 1432 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the western margin of Treaty Gossan itself located south-east of Treaty Glacier (Assessment Report 16841).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6272145
EASTING: 429935

COMMODITIES: Gold, Silver, Sulphur

MINERALS

SIGNIFICANT: Pyrite, Sulphur, Alunite, Orpiment
ASSOCIATED: Quartz
ALTERATION: Pyrite, Quartz, Sericite, Limonite
ALTERATION TYPE: Pyrite, Sericitic, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epithermal, Hydrothermal, Epigenetic, Industrial Min.
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Siliceous Sinter
Andesite Tuff
Dacitic Tuff
Andesite
Dacite
Tuffaceous Breccia
Lapilli Tuff
Volcanic Flow
Schist

HOSTROCK COMMENTS: Rocks in the Treaty Gossan may be intensely altered and schistose.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: TRENCHES
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
YEAR: 1995

COMMODITY	GRADE	
Silver	1168.9000	Grams per tonne
Gold	3.7000	Grams per tonne

COMMENTS: Best trench results from the AW zone.
REFERENCE: Explore B.C. Program 95/96 - G167.

CAPSULE GEOLOGY

The Treaty Gossan occurrence is located near the western margin of a large gossanous area that occurs adjacent to the southeast of Treaty Glacier. The area is underlain by massive green and grey andesitic to dacitic tuff, lapilli tuff, tuff breccia and minor flows, of the Lower Jurassic Betty Creek Formation, Hazelton Group (Open File, 1988-4).

The gossan is a product of fault and fracture-controlled hydrothermal activity that has affected a larger area. Pyrite-quartz and sericite alteration minerals predominate and the rocks are locally foliated to schistose in texture. The presence of native sulphur and alunite indicated that this is an area of acid-sulphate alteration characteristic of high levels of epithermal systems (Fieldwork 1987).

A chip sample taken every 0.3 metres along a 4 metre length of massive coarse-grained pyrite vein contained 4.32 grams per tonne

CAPSULE GEOLOGY

gold and 60.4 grams per tonne silver. The vein contains 10 to 15 per cent quartz, is 8 to 10 centimetres wide, trends 170 degrees and dips vertically (Assessment Report 16841). The host rocks are excessively leached and limonitic. A sample taken of silicious sinter in 1987 by D.J. Alldrick assayed 3.84 grams per tonne gold and 0.54 grams per tonne mercury (Personal Communication: D.J. Alldrick).

In 1995, with Explore B.C. Program support, Teuton Resources Corporation completed 77 metres of trenches and collected and assayed 96 rock samples from the AW and Ridge Veins zones. Best trench results from the AW zone were 3.7 grams per tonne gold, 1168.9 grams per tonne silver and 2.9 per cent lead across 2.7 metres; best values from the Ridge Veins zone were 136.7 grams per tonne silver and 2.22 per cent lead across 1.5 metres (Explore B.C. Program 95/96 - G167).

Tenton and Global Explorations Ltd. drilled 8 holes on the property in 1997.

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DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1996/11/26	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104B 079**

NATIONAL MINERAL INVENTORY:

NAME(S): **MT. DUNN**, VV, PN,
ERIC, KING 1-4, KING CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 28 02 N
LONGITUDE: 130 38 14 W
ELEVATION: 1250 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on a north trending saddle on the north-east spur of Mt. Dunn, midway between the east flowing King and Fewright Creeks about 4.0 kilometres west of the Unuk River.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6259284
EASTING: 399131

COMMODITIES: Copper, Gold, Silver, Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite, Molybdenite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Sericite, Chlorite, Epidote, Calcite, Pyrite, Kaolin, Malachite, Azurite
COMMENTS: Saussuritized feldspars.
ALTERATION TYPE: Propylitic, Sericitic, Oxidation, Argillic, Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Cenozoic			Unnamed/Unknown Informal

LITHOLOGY: Monzonite
Hornblende Monzonite
Lithic Tuff
Crystal Tuff
Breccia
Andesitic Flow
Argillite
Siltstone

HOSTROCK COMMENTS: Eocene or older monzonite stock intrudes the Jurassic Hazelton Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks
Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1976
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	2.0500	Grams per tonne
Gold	0.8200	Grams per tonne
Copper	0.3400	Per cent
Molybdenum	0.0030	Per cent

COMMENTS: Chip sample across 3.4 metres of copper mineralization is seri-citized monzonite.
REFERENCE: Assessment Report 6234, page 19.

CAPSULE GEOLOGY

The Mt. Dunn property is underlain by a sequence of andesitic to rhyolitic volcanics of the Jurassic Hazelton Group that are intruded by a monzonite stock. The volcanic rocks vary in composition from Hazelton Group lithic and crystal lithic tuffs to Lower Jurassic Hazelton Group breccias and andesitic flows of the Unuk River Form-ation. The southeast part of the property is underlain by Upper

CAPSULE GEOLOGY

Triassic Stuhini Group sediments comprised mainly of interbedded argillites, siltstones and carbonates that have been faulted to their present position. Regional metamorphism is of lower greenschist facies with significant epidotization in the andesites, agglomerates and flow breccias west of the intrusive.

The intrusive is comprised of a light green-grey fine to medium-grained monzonite and is described as a "high level", vertically tabular monzonite body that has apparently been block faulted up into volcanic sequence. It varies from 150 to 350 metres in width and appears to be continuous in a north-south direction for about 6 kilometres.

Sericite is the primary alteration mineral with propylitic assemblages of chlorite and calcite ubiquitous throughout the intrusive. Based on the degree of alteration, the intrusive has been subdivided as follows: hornblende monzonite, sericitized monzonite and felsitized monzonite. The hornblende monzonite is characterized by the presence of chloritized hornblende, lightly sericitized and suassuritized feldspars with minor calcite, pyrite, scattered chalcopyrite and malachite staining.

The sericitized monzonite is highly altered with abundant sericite and carbonate, plus/minus pyrite. This phase of the intrusive is highly fractured and hosts a mineralized quartz stockwork. Copper mineralization is present within the quartz veins and within the host rock at a ratio of pyrite to chalcopyrite of less than 2 to 1.

The altered intrusive is rusty weathered on surface and is frequently soft and crumbly due to extensive leaching. The phyllic alteration assemblage consists of sericite, pyrite, probable kaolin and remnant malachite. The felsitized intrusive, while being widespread, is particularly striking in a rusty band about 30 metres wide along the western side of the intrusive.

Copper mineralization in the form of chalcopyrite, malachite and azurite is widespread. Chalcopyrite is found most concentrated in and associated with quartz stockworks within the sericitized monzonite. In 1976, a 3.4 metre chip sample from this zone assayed 0.34 per cent copper, 0.0003 per cent molybdenum, 0.82 grams per tonne gold, and 2.05 grams per tonne silver. Two other chip samples, one 8.2 metres and the other 10.6 metres in length assayed 0.25 per cent copper, 0.55 grams per tonne gold, 0.34 grams per tonne silver and 0.87 per cent copper, 1.85 grams per tonne gold, 2.05 grams per tonne silver respectively (Assessment Report 6234).

Significant molybdenum mineralization was encountered in only one location. In 1976, a grab sample assayed 1.07 per cent copper and 0.19 per cent molybdenum.

Significant sphalerite was found in one locality within the contact zone of the monzonite intrusion. Refer to Eric 2 (104B 152).

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Chevron File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/27 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 080**

NATIONAL MINERAL INVENTORY:

NAME(S): **HARRYMEL CREEK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10E
BC MAP:
LATITUDE: 56 32 43 N
LONGITUDE: 130 34 02 W
ELEVATION: 480 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing on Newmont Map (Property File); located on the west side of Harrymel Creek, about 8.5 kilometres south of Melville Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6267870
EASTING: 403641

COMMODITIES: Copper

MINERALS

SIGNIFICANT:	Chalcopyrite	Pyrrhotite	Pyrite	
ASSOCIATED:	Quartz	Epidote		
ALTERATION:	Epidote	Carbonate	Chlorite	
ALTERATION TYPE:	Silicific'n	Epidote	Carbonate	Chloritic
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER: Stratiform Disseminated
CLASSIFICATION: Epigenetic
TYPE: G04 Besshi massive sulphide Cu-Zn J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Quartz Epidote Schist
Biotite Chlorite Epidote Schist
Cataclasite
Greywacke
Siliceous Siltstone
Carbonatized Siltstone
Greenstone
Graphitic Schist

HOSTROCK COMMENTS: Jurassic-Triassic South Unuk cataclasite zone (Bulletin 63, Fig. 13).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Syn-mineralization
Post-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

Lower Jurassic Hazelton Group volcanics and sediments of the Unuk River Formation, located on the east side of Harrymel Creek, are in fault contact with the Upper Triassic Stuhini Group sediments to the west. The contact between the Triassic and Lower Jurassic rocks is marked by an extensive north-northwest trending cataclasite zone, known as the South Unuk Zone, which contains biotite-chlorite-epidote schist (Bulletin 63, Figure 13).

Mineralization occurs within schist in this cataclasite zone near a north trending fault which dips 60 to 85 degrees west. The occurrence consists of a well mineralized zone within quartz-epidote schist which hosts abundant pyrite, chalcopyrite and some pyrrhotite.

West of the showing, the Stuhini Group rocks consist of epidotized and sheared greywacke with silicified epidotized and carbonate altered argillite. East of the north trending fault, the Unuk River Formation rocks consist mainly of graphitic schists and silicified greenstones.

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 081**

NATIONAL MINERAL INVENTORY:

NAME(S): **UNUK (ZONE 4)**, TAG

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 32 42 N
LONGITUDE: 130 19 56 W
ELEVATION: 855 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: On east side of McTagg Creek approximately 2.5 to 3.0 kilometres upstream from confluence with Mitchell Creek (Property File; Geology Map, Newmont Exploration of Canada).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6267534
EASTING: 418088

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Malachite Pyrite
ASSOCIATED: Jasper Quartz
ALTERATION: Sericite Quartz Malachite
ALTERATION TYPE: Sericitic Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: G04 Besshi massive sulphide Cu-Zn
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Argillaceous Phyllite
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

Host rocks of the Tag showing are weakly metamorphosed sedimentary sequences assigned an Upper Triassic age based on recent fossil evidence (Gunning, M.H., 1986). These rocks are now believed to be correlative with the Stuhini Group (Personal Communication, D.J. Alldrick, Jan. 1989).

Two small showings in McTagg Creek valley were originally recorded by Newmont Exploration Ltd. One consists of copper staining (malachite?) associated with quartz-sericitic and siliceous alteration, including jasper and pyrite, of argillaceous phyllite. The other consists of pyritiferous quartz stringers along fractures in similar rock (Newmont Map).

Later work by True North Minerals outlined a north trending alteration zone (Zone 4), within argillitic rock, composed of up to 30 per cent sulphides, mainly pyrite. The altered argillites are cut by quartz veins. Chalcopyrite was reported at one location. The highest assay came from a rusty quartz vein hosting fine-grained pyrite and contained 0.071 grams per tonne gold and 8.4 grams per tonne silver across a width of 10 centimetres. An average value of 14 samples taken is 0.017 grams per tonne gold and 2.1 grams per tonne silver (Assessment Report 17087).

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/13 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 082**

NATIONAL MINERAL INVENTORY: 104B8 Au2

NAME(S): **PORTLAND**, HAIDA

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 17 43 N
LONGITUDE: 130 06 08 W
ELEVATION: 944 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located north and adjacent the toe of Thomas Glacier between Frank Mackie and Berendon Glaciers (Open File, 1987-22; Assessment Report 9391).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6239490
EASTING: 431783

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS
SIGNIFICANT: Electrum Arsenopyrite Pyrite Sphalerite Galena Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Massive Disseminated
CLASSIFICATION: Igneous-contact Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Black Argillite
Greywacke
Feldspar Porphyry

HOSTROCK COMMENTS: Mineralization is found in contact zone of feldspar porphyry dyke and sediments.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: OPENCUT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1946
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	20.5700	Grams per tonne
Gold	4.1100	Grams per tonne

COMMENTS: Channel sample taken across a 1 metre zone.
REFERENCE: Minister of Mines Annual Report, 1946, page 73.

CAPSULE GEOLOGY

The Portland (Haida) prospect is located north and adjacent to the toe of Thomas Glacier. The area is underlain by Lower Jurassic Unuk River Formation rock of the Hazelton Group, consisting of a series of sediments in contact with a feldspar porphyry dyke. The sedimentary rocks have a strike of 135 degrees and a dip of 65 degrees to the northeast. They are composed of argillites and greywackes varying from thin intercallations to thick individual sequences. The argillites are mainly black and contain pyrite in fine grains. The feldspar porphyry dyke is approximately 30 metres wide and varies from a coarsely porphyritic phase to a grey-green fine-grained andesitic phase.

The sediment-dyke contact has an approximate strike of 110 degrees and a dip of 75 degrees southwest. The sedimentary sequence is silicified and locally shattered and crushed along a 70 metre width adjacent to the contact. The showings appear to be a series of parallel closely spaced quartz lenses, lying en echelon within a fairly wide zone, and carrying inclusions of country rock. Min-

CAPSULE GEOLOGY

eralization occurs within quartz veins and in silicified sediments and dyke material. Pyrite and arsenopyrite are the predominant sulphides and occur massively and in sparse disseminations. Sphalerite and galena occur locally in small amounts and chalcopyrite may also be present. Gold values are highest with pyrite and arsenopyrite and tests indicate gold and silver occur at least partially as electrum (F.J. Hemsworth, 1953).

The main adit of this prospect was driven in 1940 for 49.4 metres at 100 degrees following a poorly defined shear zone, irregularily silicified and sparsely mineralized, with a dip of about 85 degrees south. The adit was started on a well mineralized 36 centimetre wide quartz vein which pinched out 10.7 metres from the portal. A 90 centimetre sample from here assayed 1.37 grams per tonne gold.

The lowest showing is in a 3 metre long adit drive on a 1.5 metre wide zone of silicified argillite and quartz vein that strikes 110 degrees and dips 83 degrees northeast. The vein zone pinches to about 15 centimetres and continues into the feldspar porphyry dyke which occurs near the adit. Shearing is pronounced on both walls. Numerous streaks and irregular masses of pyrite, arsenopyrite, sphalerite and galena are reported.

Several open cuts also investigate mineralized zones. A sample across a 1 metre wide zone of quartz and silicified rock containing abundant pyrite and arsenopyrite with minor amounts of sphalerite, galena and chalcopyrite assayed 4.11 grams per tonne gold and 20.57 grams per tonne silver. Another channel sample, 0.66 metres wide, taken acaross a 0.6 metre wide zone that contains silicified rock, quartz stringers and fine-grained pyrite and arsenopyrite in veinlets and disseminations, assayed 33.60 grams per tonne gold and 24.00 grams per tonne silver (Minister of Mines, Annual Report 1946).

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EMPR OF *1987-22; 1988-4
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EMPR ASS RPT *8768, *9391, 15975
EMPR BULL 63
GSC MEM 175
GSC MAP 9-1957; 307A; 315A; 1418A
CANMET IR 1227 (Flotation and Cyanidation Tests on a Pyritic Gold Ore from the Tide Lake Gold Group)
EMPR EXPL 1980-466
EMPR PF (*Langille, E.G.: Report on the Portland Group, 1939; *Hemsworth, F.J.: Report on the Tide Lake Portland Mine, 1953; Claim Map, Geology, Veins and Workings, Assay Plan)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/11 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 083**

NATIONAL MINERAL INVENTORY:

NAME(S): **UNUK (ZONE 1)**, JACK GLACIER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 36 55 N
LONGITUDE: 130 20 40 W
ELEVATION: 1068 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location is for the galena and magnetite occurrence located by Newmont Exploration (Newmont Geology Map).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6275370
EASTING: 417490

COMMODITIES: Gold Silver Zinc Copper

MINERALS
SIGNIFICANT: Pyrite Galena Chalcopyrite
ASSOCIATED: Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I01 Au-quartz veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Dacite
Rhyolite
Siltstone
Greywacke
Sandstone
Volcanic Breccia
Conglomerate
Tuff
Limestone
Chert

HOSTROCK COMMENTS: Mineralization occurs near geologic contact of the Betty Creek and Salmon River Formations.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: FLOAT REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	31.5000	Grams per tonne

COMMENTS: From float containing stringers of pyrite and carbonate.
REFERENCE: Assessment Report 15961.

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	3.1600	Grams per tonne

COMMENTS: Silver values range up to 74.1 grams per tonne.
REFERENCE: Assessment Report 17087.

CAPSULE GEOLOGY

Mineralization occurs near the geologic contact of the Lower Jurassic Betty Creek Formation and the Middle Jurassic Salmon River Formation, both of the Hazelton Group. Salmon River Formation rocks consist primarily of siltstone, greywacke, sandstone, some calcarenite, argillite, conglomerate and minor limestone. Betty Creek Formation rocks may be comprised of volcanic breccia, conglomerate,

CAPSULE GEOLOGY

sandstone, siltstone, tuffs and minor chert and limestone (Grove, Bulletin 63).

Galena and magnetite are reported to occur in outcrop, west of the toe of Jack Glacier, just south of the headwaters of Storie Creek (Newmont Exploration Geology Map). Several hundred metres north of this showing at the tip of the glacier's toe pieces of float containing abundant stringers of pyrite and carbonate were collected. This float assayed 31.5 grams per tonne silver, 0.0157 per cent arsenic, 0.0116 per cent lead and 0.0061 per cent zinc (Assessment Report 15961).

Another area of east trending mineralization occurs about 700 metres to the southwest. Several samples of volcanic rock were taken with one sample identified as dacite and another as rhyolite. These rocks are reported to contain up to 60 per cent sulphides with pyrite being the main sulphide along with lesser chalcopyrite and galena. One sample contained 3.16 grams per tonne gold. Values of silver range from 0.2 to 74.1 grams per tonne (Assessment Report 17087).

Several of the samples collected were float. The company doing the exploration failed to indicate the location of samples containing high gold and silver or if the samples were collected from outcrop or float.

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EMPR BULL 63
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/14 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 084**

NATIONAL MINERAL INVENTORY: 104B1 Au2

NAME(S): **S-1**, UNION, S1,
BIG MISSOURI

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 06 58 N
LONGITUDE: 130 01 12 W
ELEVATION: 975 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Symbol 48, Minister of Mines Open File, 1987-22. Located on Union Fraction (Lot 3215), west of Union Creek.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6219471
EASTING: 436577

COMMODITIES: Gold, Silver, Zinc, Lead, Copper

MINERALS

SIGNIFICANT: Pyrite, Sphalerite, Galena, Chalcopyrite, Electrum
ALTERATION: Sericite, Silica, Carbonate
ALTERATION TYPE: Sericitic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia, Stratabound, Disseminated
CLASSIFICATION: Syngenetic, Epigenetic, Hydrothermal, Exhalative
TYPE: G07 Subaqueous hot spring Ag-Au
I02 Intrusion-related Au pyrrhotite veins
G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
DIMENSION: 0002 Metres
STRIKE/DIP: 135/25W
TREND/PLUNGE:
COMMENTS: Mineralized cherty tuff beds are 1 to 2 metres thick.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Cherty Tuff
Andesitic Breccia
Plagioclase Amphibole Porphyritic Andesite

HOSTROCK COMMENTS: Isotopic Age reference: Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: S1
REPORT ON: Y

CATEGORY: Inferred
YEAR: 1991
QUANTITY: 800000 Tonnes

COMMODITY	GRADE	
Silver	10.0000	Grams per tonne
Gold	2.2000	Grams per tonne

COMMENTS: Geological reserves.
REFERENCE: D. Alldrick, PhD Thesis, UBC, 1991.

CAPSULE GEOLOGY

The S1 Zone, which is located 400 metres northeast of the Big Missouri deposit, lies within south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff, with interbedded cherty tuff of the Lower Jurassic Unuk River Formation. (See Big Missouri - 104B 046 for enhanced geology).

The S1 Zone lies immediately west of the north trending Union Creek Fault and occurs within the Middle Horizon, which is the same horizon containing the Big Missouri deposit. Three distinct southwest dipping cherty tuff beds, approximately 20 metres apart, comprise the Middle Horizon. These are separated by plagioclase-amphibole porphyritic andesite units, which show weak sericite and silica alteration.

The cherty tuff beds are generally 1 to 2 metres thick and contain carbonate, andesite fragments, laminated and/or mineralized chert fragments and sulphide mineralization. A well developed

CAPSULE GEOLOGY

footwall breccia grades upward into each cherty tuff bed and downward into a stringer zone.

The andesite sequence, which encloses the cherty tuff and breccia strikes southeast and dips 20 to 30 degrees southwest. This sequence is likely gently warped around a northeast trending axis. Several steep dipping, north-northwest and northeast trending faults juxtapose the strata.

Mineralization, consisting of pyrite, sphalerite, galena, and chalcopyrite, occurs as disseminations, lenses, pods, and stringers within the cherty tuff, footwall breccia, and footwall and hangingwall stringer zones. Weakly laminated, semi-massive to massive sulphide occurs locally at the base of the cherty tuff beds. The lower cherty tuff-footwall breccia zone has the greatest sulphide content.

Gold and silver occur only as electrum which is strongly associated with sphalerite. Electrum also occurs within galena and along sulphide grain boundaries. All of the sulphides are closely associated, and commonly intergrown in polycrystalline aggregates along veinlets.

Production from the S-1 zone in 1990 totalled 304,000 tonnes of ore grading 2.4 grams per tonne gold and 10.0 grams per tonne silver. Geological (inferred) reserves in 1991 were 800,000 tonnes grading 2.2 grams per tonne gold and 10.0 grams per tonne silver (D. Alldrick, PhD Thesis, UBC, 1991).

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GSC MEM 132; 175
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EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/17 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 085**

NATIONAL MINERAL INVENTORY:

NAME(S): **BARB LAKE**, SULPHURETTES

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10E
BC MAP:
LATITUDE: 56 35 36 N
LONGITUDE: 130 31 58 W
ELEVATION: 1060 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located just east of the south end of Barb Lake, about 2.0 kilometres directly south of Tom Mackay Lake, between Coulter and Harrymel Creeks.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6273170
EASTING: 405878

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Pyrrhotite Chalcopyrite Pyrite
ALTERATION: Pyrite Silica
ALTERATION TYPE: Pyrite Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Magmatic Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Hornblende Diorite
Greywacke
Andesite
Siliceous Andesite

HOSTROCK COMMENTS: Lower Jurassic or younger hornblende diorite intrudes the Unuk River Formation rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact Regional
RELATIONSHIP: Syn-mineralization Post-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

Lower Jurassic Hazelton Group rocks of the Unuk River Formation are intruded by a Lower Jurassic or younger hornblende diorite intrusion along the east shores of Barb Lake. Disseminated pyrite, pyrrhotite and chalcopyrite occur within the hornblende diorite near the contact with gritty greywacke of the Unuk River Formation. Just south-southeast of this showing silicified and pyritized andesite of the Unuk River Formation hosts abundant disseminated pyrite. This area is characterized by oxidized and silicified rocks which were initially prospected by the Sulphurettes Prospecting Syndicate in 1934.

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85 pages.

DATE CODED: 1988/06/15 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 086**
NATIONAL MINERAL INVENTORY: 104B1 Au2

NAME(S): **CREEK**, LAURA (L. 3214), BIG MISSOURI

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 06 57 N
LONGITUDE: 130 00 54 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of Creek zone from figure 25, Bulletin 58. Located on the east bank of Harris Creek about 50 metres upstream from its junction with Union and Silver Creeks.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6219436
EASTING: 436887

COMMODITIES: Silver, Gold, Copper, Lead, Zinc

MINERALS
SIGNIFICANT: Pyrite, Sphalerite, Galena, Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Sericite, Silica, Carbonite, Pyrite
ALTERATION TYPE: Sericitic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Stratabound, Disseminated
CLASSIFICATION: Hydrothermal, Exhalative, Epigenetic, Syngenetic
TYPE: G07 Subaqueous hot spring Ag-Au
I02 Intrusion-related Au pyrrhotite veins
G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 0035 x 0025 x 0002 Metres
STRIKE/DIP: 180/35W
TREND/PLUNGE:
COMMENTS: Mineralized cherty tuff horizon.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Cherty Tuff
Andesitic Tuff
Dioritic Dike

HOSTROCK COMMENTS: Isotopic Age reference: Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: CREEK
REPORT ON: Y

CATEGORY: Measured
YEAR: 1988
QUANTITY: 7500 Tonnes

COMMODITY	GRADE	
Silver	116.2300	Grams per tonne
Gold	2.4000	Grams per tonne

COMMENTS: Mineable reserves at a waste-to-ore ratio of 2.0:1.
REFERENCE: George Cross News Letter No.102, 1988.

CAPSULE GEOLOGY

The Creek Zone, which is located east of the Big Missouri deposit, lies within south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff, with interbedded cherty tuff of the Lower Jurassic Unuk River Formation. (See Big Missouri - 104B 046 for enhanced geology). The occurrence lies west of the north trending Union Creek Fault. Dioritic dykes less than 1 metre wide and striking 120 to 140 degrees cut the rocks.

A mineralized cherty tuff horizon occurs within bleached andesite layers of the Lower Horizon. A 35 metre long segment of the horizon, which strikes north and dips 30 to 40 degrees west, is exposed on the east bank of Harris Creek. Fifty metres east, this

CAPSULE GEOLOGY

horizon was intercepted at a lower level by diamond drilling, indicating downdropping by faulting.

The cherty tuff, which is about 25 metres wide and 1 to 2 metres thick, is white to grey quartz with blue-grey chert fragments, carbon and disseminated pyrite, sphalerite, and galena with gold and silver values. Along the base of the chert bed are lenses of banded semi-massive to massive pyrite, sphalerite, galena, and chalcopyrite. The hangingwall, quartz-sericite rich andesite tuffs contain disseminated pyrite, pyrite veinlets, and carbonaceous veinlets. Veins of chalco-pyrite up to 1 metre long and numerous contorted quartz stringers cut the chert bed and hangingwall rocks.

Several samples taken from the zone gave average assays of 54.2 grams per tonne silver, 0.84 per cent copper, 3.04 per cent lead, and 4.3 per cent zinc (Assessment Report 3013). Mineable reserves, with an average waste to ore ratio of 2.0 to 1, are 7500 tonnes grading 2.40 grams per tonne gold and 116.23 grams per tonne silver (George Cross Newsletter No.102, 1988).

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GSC MEM 132; 175, pp. 154,155
GSC MAP 9-1957; 1829; 307A; 1418A
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EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/22 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 087**

NATIONAL MINERAL INVENTORY: 104B8 Cu3

NAME(S): **UP**, BLISS 3

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 18 03 N
LONGITUDE: 130 21 22 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located east of the South Unuk River and immediately north of Sawyer Glacier (Assessment Report 3344).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6240389
EASTING: 416083

COMMODITIES: Copper, Gold, Lead

MINERALS

SIGNIFICANT: Chalcopyrite, Galena, Pyrite
ASSOCIATED: Calcite, Quartz
ALTERATION: Calcite, Sericite, Limonite, Malachite, Silica, Pyrite
ALTERATION TYPE: Carbonate, Sericitic, Oxidation, Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated, Vein
CLASSIFICATION: Porphyry, Hydrothermal, Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au
DIMENSION: 0060 x 0040 Metres
STRIKE/DIP:
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic-Cretaceous			Unnamed/Unknown Informal

LITHOLOGY: Dacite, Syenite, Dacitic Tuff

HOSTROCK COMMENTS: The plutonic rock is of Jurassic and younger age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1971
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	0.6860	Grams per tonne
Copper	0.8700	Per cent

COMMENTS: From a 3 metre chip sample.
REFERENCE: Assessment Report 3344.

CAPSULE GEOLOGY

The area is underlain by volcanic rock of the Lower Jurassic Unuk River Formation (Hazelton Group). Mineralization is hosted by massive silicified dacite which grades into an orthoclase porphyry (syenite) of Lower Jurassic and younger age. The mineralized zone is visible as a limonite stained band trending southwest for a length of 140 metres and a width of 75 metres.

The rocks in this zone are extensively fractured, pyritized and silicified. Alteration consists mainly of calcite and sericite. Calcite and quartz are found in fractures. Mineralization consists mainly of pyrite occurring as disseminations and occassionally as massive 2 to 4 centimetre seams along fractures. Chalcopyrite occurs finely disseminated and along fractures in the silicified dacite host. Malachite occurs sparsely and minor galena is associated with calcite in thin stringers that fill fractures.

The content of pyrite and chalcopyrite decreases markedly as the rock grades south into brecciated orthoclase porphyry.

Chip sampling revealed a mineralized area of about 60 by 40 metres, which averaged 0.35 per cent copper and 0.343 grams per tonne

CAPSULE GEOLOGY

gold. One chip sample contained a high of 0.87 per cent copper and 0.686 grams per tonne gold over 3 metres (Assessment Report 3344).

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GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
Chevron File

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1988/06/20	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104B 088**

NATIONAL MINERAL INVENTORY: 104B11 Ag1

NAME(S): **RAY NO. 2**, HEMLO-WEST 16, ISKUT SILVER, TOTEM CREEK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 42 33 N
LONGITUDE: 131 08 45 W
ELEVATION: 145 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Ray No. 2 showing located north of Ray No. 1 (104B 076) on Hemlo-West 16 claim (Assessment Report 11320, Figure 7); on the north side of the Iskut River.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6287069
EASTING: 368642

COMMODITIES: Zinc, Copper, Lead, Silver, Gold, Cadmium

MINERALS
SIGNIFICANT: Sphalerite, Pyrite, Chalcopyrite, Galena
ASSOCIATED: Quartz
ALTERATION: Sericite, Chlorite, Epidote
ALTERATION TYPE: Chloritic, Epidote, Sericitic, Pyrite, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Breccia, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn, I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
STRIKE/DIP: 135/43S
TREND/PLUNGE:
COMMENTS: Quartz-sphalerite vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Sericite Schist
Quartz Biotite Schist
Argillaceous Siltstone
Chert
Siliceous Tuff
Limestone
Mafic Volcanic Tuff
Volcanic Breccia
Volcanic Flow
Diorite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1966
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	6.8600	Grams per tonne
Gold	0.6900	Grams per tonne
Cadmium	0.0300	Per cent
Lead	0.0400	Per cent
Zinc	5.6000	Per cent

COMMENTS: 1.04 metre wide chip sample taken across a sphalerite-quartz vein.
REFERENCE: Minister of Mines Annual Report, 1966, page 37.

CAPSULE GEOLOGY

Regional mapping indicates the area is underlain by Mesozoic and older sediments and volcanics which have been intruded by granitic rocks of the Coast Plutonic Complex.

The oldest rocks consist of a thick sequence of weakly metamorphosed siltstones and argillites which are considered to be pre-Triassic in age. Overlying this sequence are black shales, silt-

CAPSULE GEOLOGY

stones, greywacke and conglomerates which may be correlative with the Stuhini Group. Corals from limestone beds within these rocks have been dated as Upper Triassic. This sedimentary sequence is overlain by a chaotic mixture of Lower Jurassic to Triassic volcanics of the Hazelton Group, Unuk River Formation. They consist of an andesitic to rhyolitic mixture of pyroclastics and flows.

Intruding the Mesozoic rocks are Jurassic to Cretaceous plutonic rocks which range in composition from syenite to diorite. Contact metamorphism consists of large zones of hydrothermal alteration with the formation of some migmatites and cataclasites.

On the property the Upper Triassic sedimentary rocks are dominated by black to grey, foliated and well-bedded argillaceous siltstone. The siltstone grades into well-indurated, poorly foliated and well-bedded chert and some limestone. The volcanics consist mainly of mafic flows which include feldspar porphyry volcanic flows.

Sericite schist occurs in the eastern portion of the Hemlo West 16 claim. Metamorphosed sediments in this area, which consist of siltstone, sandstone and shale, are believed to be Lower Triassic in age. It is pale green in color, well-foliated, variably siliceous and hosts variable amounts of disseminated, veined and laminated pyrite. Structural relationships suggest that this rock unit is unconformable, however, some coarsely crystalline limestone with faults along both contacts, occurs within the schist.

Chloritization and some epidotization of the volcanics and sediments appears to be related to regional metamorphism. Pervasive sericitization which characterizes the schist is possibly related to the mineralization which accompanies the sericite schist. Outcrops of quartz sandstone adjacent to the sericite schist contain minor amounts of sericite suggesting that the sericitization is gradational between the two.

Widespread disseminated and veined pyrite is abundant. Accompanying the pyrite are local concentrations of chalcopyrite and galena. This mineralization appears to be associated with the sericite schist, and in some cases the pyrite occurs as laminations parallel to the foliation. Also on the Hemlo West 16 claim veined pyrite mineralization appears to be confined to the chert (silicified tuff?).

Other modes of mineralization on the property include a vein of sphalerite and quartz which was called the Ray No. 2 showing. This sphalerite-quartz vein, where exposed, averages 30 centimetres in thickness and contains an average sphalerite content of 30 to 80 per cent. Internally, the vein is banded and brecciated, and strikes 135 degrees dipping 43 degrees southwest. This orientation is similar to the bedding which averages 137 degrees and dips 18 degrees southwest. In 1966, a 1.04 metre wide chip sample taken across the vein assayed 0.69 grams per tonne gold, 6.86 grams per tonne gold, 0.04 per cent lead, 5.6 per cent zinc and 0.03 per cent cadmium (Minister of Mines Annual Report, 1966, page 37).

In Devil's Club Gulch, located about 240 metres south of the No. 2 showing, a small cut revealed thin stringers of sphalerite and the foliation of an open fold in quartz-biotite schist that plunges 30 degrees west.

In 1987, values up to 0.95 grams per tonne gold were reported from an area containing a pyrite-rich, silicified tuff (?). In addition, a mineralized zone occurs north of a stock where mapping indicated strong quartz-pyrite veining within or proximal to a small diorite dyke or sill (Assessment Report 17122).

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GCNL Jun.17, 1983; Jan.6, 1984; #218, 1988
N MINER Oct.3, 1988
PR REL (Delaware Resources Corp., Aug.6, 1987; American Ore Ltd. Nov 10,1988)

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Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B13)
Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/18 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 089**

NATIONAL MINERAL INVENTORY: 104B11 Ag1

NAME(S): **ISKUT 1**, JOANN, MERIDOR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 42 51 N
LONGITUDE: 131 06 12 W
ELEVATION: 480 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Rock sample located on the north side of the Iskut River (report by Dandy in Statement of Material Facts, Meridor Resources, May 19, 1988, Figure 3).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6287545
EASTING: 371260

COMMODITIES: Gold, Silver, Copper, Lead, Zinc, Molybdenum

MINERALS

SIGNIFICANT: Galena, Sphalerite, Chalcopyrite, Molybdenite, Pyrite, Bornite, Pyrrhotite
COMMENTS: Traces of bornite and pyrrhotite were reported.
ASSOCIATED: Quartz
ALTERATION: Pyrite, Malachite, Azurite, Magnetite, Chlorite, Garnet, Biotite
ALTERATION TYPE: Pyrite, Oxidation, Chloritic, Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Porphyry, Igneous-contact
TYPE: L04 Porphyry Cu ± Mo ± Au
G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
I05 Polymetallic veins Ag-Pb-Zn±Au
J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Jurassic-Cretaceous			Coast Plutonic Complex
Permian			Stikine Assemblage

LITHOLOGY: Pyrite Argillite
Pyrite Chert
Limy Argillite
Magnetite Skarn
Syenite Porphyry
Diorite

HOSTROCK COMMENTS: Syenite porphyry is thought to be Jurassic to Cretaceous in age and related to the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
Plutonic Rocks RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	36.6000	Grams per tonne
Gold	8.4000	Grams per tonne
Copper	0.8400	Per cent
Lead	0.0900	Per cent
Zinc	0.2680	Per cent

COMMENTS: Sample 40352 consists of pyrite and chalcopyrite in a vein structure.
REFERENCE: Property File: Dandy, L., (1988).

CAPSULE GEOLOGY

Correlations and ages of formations are under investigation and subject to refinements. The oldest non-metamorphic formations are Permian limestones, overlain by a thick sequence of Permian or Triassic volcanics with intercalated sediments. These are overlain

CAPSULE GEOLOGY

by Triassic clastics and limestone.

The property lies within intensely gullied terrane. The oldest rocks exposed consist of Late Paleozoic to Permian greenstone, limestone, shale and clastic sediments. These are overlain by Upper Triassic to Lower Jurassic andesitic volcanics and sedimentary rocks. These are intruded by Jurassic and Cretaceous diorite and hornblende diorite. Recent basalt and ash is found in the northern part of the property.

Localized showings on the property are within a package of Permian (?) or older silty or limy argillites with chlorite, biotite and minor garnet. These sedimentary rocks are intruded by a syenite porphyry on the southeast part of the claims. Several northeast trending right lateral faults occur, as well as cross faults. Bedded rocks strike about 270 degrees with dips over 45 degrees to the southwest. An occurrence of magnetite skarn with minor chalcopyrite is reported to occur along a 045 degree trending fault that apparently follows the contact of the syenite porphyry.

Mineralization on the property shows a broad zoning pattern across the length and breadth of the property. A 457 metre wide porphyry copper and molybdenum core area is surrounded by a broad pyrite halo containing gold and copper values. To the north and northwest, the disseminated pyrite mineralization abruptly changes to mineralized shear zones carrying quartz and sulphide veins.

In 1987, a sample of pyritic argillite with malachite and azurite staining assayed 0.56 grams per tonne gold, 5.0 grams per tonne silver and 0.09 per cent copper. Another sample of pyrite and chalcopyrite from a vein structure assayed 8.4 grams per tonne gold, 36.6 grams per tonne silver, 0.84 per cent copper, 0.09 per cent lead and 0.268 per cent zinc (Dandy, L., 1988).

Drilling in 1988 has intersected abundant disseminated pyrite (up to 10 per cent) and disseminated and stringer veins of chalcopyrite (up to 0.5 per cent). Trace amounts of pyrrhotite, sphalerite, molybdenite, galena and bornite were reported. Four holes intersected massive pyrite and chalcopyrite (Northern Miner, July 26, 1988).

The company reports that assays from the first 18 holes all carry gold values. Drill hole MRO 88-17 averaged 0.82 grams per tonne gold over its entire 89 metre length. Drill hole MRO 88-11 hosts copper and molybdenum concentrations and averaged 0.15 per cent copper, 0.025 per cent molybdenum and 0.48 grams per tonne gold over 123 metres length (Supplement to the Northern Miner, October 03, 1988). Approximately ten zones of gold mineralization have been intersected in seven of the first twenty five holes (Equity Preservation Corp. 1988).

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GSC MAP 9-1957; 311A; 1418A
GSC MEM 246, p. 82
N MINER *Jun.13, 1988 (*Supplement to the Northern Miner, Oct.3, 1988)
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GCNL #92,#132,#143,#160,#197,#201,#218, 1988
Prime Capital Corporation-Iskut River Gold Camp Poster, July 1988
Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/17 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 090**
NATIONAL MINERAL INVENTORY: 104B1 Au4

NAME(S): **WOODBINE**, KITCHENER, VANCOUVER

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 03 30 N
LONGITUDE: 130 02 01 W
ELEVATION: 305 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Portal location Figure 54, Energy, Mines and Petroleum Bulletin 58 on Northern Lights #5 (Lot 4051) on the west side of Cascade River.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6213054
EASTING: 435634

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Galena, Sphalerite, Chalcopyrite, Pyrite, Tetrahedrite, Covellite, Gold
ASSOCIATED: Quartz, Pyrite, Calcite
ALTERATION: Silica, Sericite, Pyrite, Limonite, Chlorite
ALTERATION TYPE: Silicific'n, Sericitic, Propylitic, Oxidation, Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork, Breccia, Discordant
CLASSIFICATION: Hydrothermal, Porphyry, Epigenetic, Epithermal
TYPE: I02 Intrusion-related Au pyrrhotite veins; G07 Subaqueous hot spring Ag-Au
SHAPE: Irregular
MODIFIER: Folded, Faulted
DIMENSION: 0274 x 0122 Metres
STRIKE/DIP: 135/55W
TREND/PLUNGE:
COMMENTS: Attitude of northwest striking quartz veins. Silicified zones or veins are up to 274 metres long and 122 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE: 210+24-14 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Eocene			Hyder Pluton

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Andesitic Dacitic Volcaniclastic
Granitic Intrusive
Argillite
Siltstone
Dacite Flow

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. date from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: NO. 1 VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1927

COMMODITY	GRADE	
Silver	171.0000	Grams per tonne
Gold	0.7000	Grams per tonne
Zinc	5.0000	Per cent

COMMENTS: Trace lead.
REFERENCE: Minister of Mines Annual Report, 1927.

CAPSULE GEOLOGY

The Woodbine workings are located approximately 500 metres northwest of the Silbak Premier Mine on the west side of Cascade Creek 22 kilometres north of Stewart, British Columbia. The area was investigated as early as 1919 in the search for an extension to the Silbak Premier "West" or "Northwest" zone. The only documented evidence of production was a 4.5 tonne high grade shipment in 1929. The underground workings consist of two adits over a length of 914 metres. For a more extensive regional geological description and bibliography refer to the Silbak Premier Mine (104B 054).

The mine is located in the Intermontane Belt, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, in the volcanic arc assemblage of the Stikinia Terrane.

The mineralization is hosted in the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation. The Hazelton Group is a northwest trending belt of folded metavolcanic rocks containing a thick sequence of argillites and siltstones infolded along a synclinal axis.

The ore body is hosted in andesite flows, breccia and lapilli tuff of the Unuk River Formation. The andesite, at least 750 metres thick, is intruded by Early Jurassic Texas Creek plutonic suite dacitic porphyry dykes and is unconformably overlain by volcaniclastic and epiclastic rocks. This package is intruded by extensive Eocene Hyder granitic dykes and they along with several faults have "chopped up" the area.

Potassium feldspar porphyry, historically known as the "Premier Porphyry", is spatially associated with mineralization. The ore is predominantly discordant but locally concordant with the moderately northwest-dipping andesite flows, breccias and dacite flows.

Hydrothermal alteration zones related to the mineralizing system in the area are represented by a proximal silicification/quartz stockwork and potassium feldspar and/or sericite facies potassic alteration. Peripheral to mineralization is a propylitic alteration assemblage of carbonate, chlorite and pyrite.

Mineralization occurs in three silicified zones or veins with widths varying between 6.1 and 122 metres, the lower adit exposes a silicified zone 274 metres long by 122 metres wide in altered porphyry and breccia crosscut by granitic dykes. Hand picked samples from this zone are reported to contain high values in gold.

The principal showing on the property, the No. 1 vein, is possibly the westerly continuation of the steep to vertical "Northwest" or "West" zone. Due to the presence of major north-south faults this is difficult to determine. The No. 1 vein strikes northeast and dips steeply northwest.

Mineralization is of two types in the Woodbine area; occasional banded sulphides and commonly brecciated quartz-pyrite-sericite-limonite altered porphyry containing fragments supported in a siliceous sulphide rich matrix.

Ore minerals include pyrite, sphalerite, galena, minor chalcopyrite, tetrahedrite, covellite and native gold in irregular quartz stringers. Gangue minerals are quartz, potassium feldspar, chlorite, carbonate and others.

There is some debate as to whether the mineralization seen at the Woodbine workings is similar to the late stage mineralization at the Indian mine or the more economic early stage mineralization of the Silbak Premier Mine.

A chip sample from the No. 1 vein in 1927 assayed 0.7 grams per tonne gold, 171 grams per tonne silver, 5 per cent zinc and a trace of lead (Minister of Mines Annual Report, 1927).

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/10 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 091**

NATIONAL MINERAL INVENTORY: 104B13 Cu1

NAME(S): **MUD GLACIER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B13W
BC MAP:
LATITUDE: 56 58 23 N
LONGITUDE: 131 49 37 W
ELEVATION: 150 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Located just southeast of the foot of Mud Glacier.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6317942
EASTING: 328173

COMMODITIES: Copper Molybdenum

MINERALS
SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Quartz Pyrite Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary			Coast Plutonic Complex

LITHOLOGY: Intrusive Rock

HOSTROCK COMMENTS: Coast Plutonic Complex.

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Mud Glacier showing, occurs within the Coast Plutonic Complex. Large masses of quartz and pyrite, smaller fragments of chalcopyrite, pyrite, pyrrhotite and some molybdenite have been noted within float trains from Mud Glacier.

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/14 REVISED BY: JNR FIELD CHECK: N

MINFILE NUMBER: **104B 092**
NATIONAL MINERAL INVENTORY: 104B1 Au7

NAME(S): **MARTHA ELLEN**, HERCULES, BIG MISSOURI

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 07 55 N
LONGITUDE: 130 02 08 W
ELEVATION: 1160 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: A 500 metre long zone located on Martha Ellen (L. 1521) and Glacier (L. 1522) Crown Grants, southwest slope of Mount Dilworth.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6221248
EASTING: 435636

COMMODITIES: Gold, Silver, Lead, Copper, Zinc

MINERALS
SIGNIFICANT: Pyrite, Galena, Chalcopyrite, Sphalerite
ASSOCIATED: Quartz
ALTERATION: Silica, Sericite, Pyrite
ALTERATION TYPE: Silicific'n, Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Stratabound, Disseminated, Massive
CLASSIFICATION: Hydrothermal, Exhalative, Epigenetic, Syngenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins; G07 Subaqueous hot spring Ag-Au
SHAPE: Irregular
MODIFIER: Sheared
DIMENSION: 0600 x 0007 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Three sulphide horizons have been traced for 600 metres in a 7 metre wide cherty tuff along a north-northwest striking shear zone.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Tertiary			Portland Canal Dykes

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Cherty Tuff
Andesitic Tuff
Dioritic Dike

HOSTROCK COMMENTS: Isotopic Age reference: Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: MARTHA ELLEN
REPORT ON: Y

CATEGORY: Inferred
YEAR: 1991
QUANTITY: 1576449 Tonnes

COMMODITY	GRADE	
Gold	2.2600	Grams per tonne
Silver	27.4300	Grams per tonne

COMMENTS: Geological reserves.
REFERENCE: D. Alldrick, PhD Thesis, UBC, 1991.

ORE ZONE: MARTHA ELLEN
REPORT ON: Y

CATEGORY: Measured
YEAR: 1988
QUANTITY: 647900 Tonnes

COMMODITY	GRADE	
Gold	2.7800	Grams per tonne
Silver	23.0500	Grams per tonne

COMMENTS: Mineable reserves with an average waste-to-ore ratio of 3.99:1.
REFERENCE: George Cross News Letter No.102, 1988.

CAPSULE GEOLOGY

The Martha Ellen deposit, which is located 2 kilometres north-

CAPSULE GEOLOGY

northwest of the Big Missouri deposit, lies within south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff, with interbedded cherty tuff of the Lower Jurassic Unuk River Formation. (See Big Missouri - 104B 046 for enhanced geology). The area lies within the Portland Canal dyke swarm, which consists generally of granodiorite/quartz diorite dykes, cutting the volcaniclastics and mineralized veins. Three sulphide horizons occur within the andesitic rocks.

The Martha Ellen, Martha Ellen-North, and Martha Ellen-Glacier zones, which occur within the Middle Horizon, have been traced over 600 metres along a north-northwest striking shear zone. Mineralization consists of semi-massive to massive lenses and quartz veins with pyrite, galena, sphalerite and chalcopyrite. Pyritized and silicified zones contain disseminated galena and chalcopyrite. The stratabound cherty tuff horizon is up to 7 metres thick.

A drill hole (82-51) intersected 5.86 grams per tonne gold, 73.0 grams per tonne silver, 1.35 per cent lead, 4.35 per cent zinc and 0.32 per cent copper over 14.6 metres (see National Mineral Inventory Card 104B/1 AU 7). Mineable reserves, with an average waste to ore ratio of 3.99 to 1, are 647,900 tonnes grading 2.78 grams per tonne gold and 23.05 grams per tonne silver (George Cross Newsletter #102, 1988).

In 1987, geological (inferred) reserves were 1,576,449 tonnes grading 2.26 grams per tonne gold and 27.43 grams per tonne silver (D. Alldrick, PhD Thesis, UBC, 1991). Mineable reserves with an average waste-to-ore ratio of 3.99:1 are 647,900 tonnes grading 2.78 grams per tonne gold and 23.05 grams per tonne silver (George Cross News Letter No.102, 1988).

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V STOCKWATCH Oct.19, 1987
W MINER May, 1983
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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/22 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 093**

NATIONAL MINERAL INVENTORY: 104B1 Pb2

NAME(S): **MONTANA**, MONTANA FR.

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 07 58 N
LONGITUDE: 130 01 48 W
ELEVATION: 1237 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Symbol #32, Minister of Mines, Open File 1987-22.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6221335
EASTING: 435983

COMMODITIES: Gold Silver Lead Zinc

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

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 0003 Metres STRIKE/DIP: 070/ TREND/PLUNGE:
COMMENTS: Three quartz veins are 1 to 4.9 metres wide.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
	ISOTOPIC AGE: 210+24-14 Ma		
	DATING METHOD: Uranium/Lead		
	MATERIAL DATED: Zircon		
Tertiary			Portland Canal Dykes

LITHOLOGY: Quartz Porphyry Dike
Andesitic Tuff

HOSTROCK COMMENTS: Isotopic Age reference: Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The host rocks are andesitic tuffs with intercalated argillaceous epiclastics of the Lower Jurassic Unuk River Formation of the Hazelton Group. These are cut by the Eocene Portland Canal dykes consisting mainly of quartz porphyry.

Three quartz veins, striking 070 degrees, are one to 4.9 metres wide and are mineralized with pyrite, galena, and sphalerite which are reported to carry values in gold and silver. The mineralization is reported to occur in the quartz porphyry.

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GSC P 89-1E, pp. 145-154
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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/20 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 094**

NATIONAL MINERAL INVENTORY: 104B1 Pb3

NAME(S): **MINERAL BASIN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 04 25 N
LONGITUDE: 130 01 40 W
ELEVATION: 430 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the Mineral Basin Fraction (Lot 4062). West of Cascade Creek.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6214749
EASTING: 436023

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Galena, Sphalerite, Chalcopyrite, Pyrite
ASSOCIATED: Quartz, Carbonate
ALTERATION: Silica, Carbonate
ALTERATION TYPE: Silicific'n, Oxidation, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic, Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn
I05 Polymetallic veins Ag-Pb-Zn±Au
G07 Subaqueous hot spring Ag-Au
SHAPE: Irregular
MODIFIER: Folded, Sheared
DIMENSION: 0061 Metres
STRIKE/DIP: 135/60W
TREND/PLUNGE:
COMMENTS: Shear zones strike northwest and dip 60 degrees southwest, traced for 61 metres.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE: 210+24-14 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2.0 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Eocene			Hyder Pluton

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Granitic Intrusive

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. dage from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1934
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Silver	576.0000	Grams per tonne
Gold	10.3000	Grams per tonne
Lead	16.0000	Per cent
Zinc	6.0000	Per cent

COMMENTS: Trace copper.
REFERENCE: Minister of Mines Annual Report, 1934.

CAPSULE GEOLOGY

The Mineral Basin occurrence is located west of Cascade Creek, 25 kilometres north of Stewart, British Columbia. These crown granted claims were worked in 1934 by open cuts and an adit was driven.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

Mineralization occurs in two parallel shear zones 27 metres apart. On the property the zones strike northwest, dip 60 degrees southwest and are cut by porphyry dykes. They have been traced for 61 metres.

An open cut in the east shear zone exposes a silicified, carbonatized and oxidized replacement zone 1 metre wide, mineralized with galena, sphalerite, pyrite and chalcopyrite. A sample across this zone taken in 1934 assayed 10.3 grams per tonne gold, 576.0 grams per tonne silver, 16 per cent lead, 6 per cent zinc and a trace of copper (Minister of Mines Annual Report, 1934).

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 095**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER COIN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 05 09 N
LONGITUDE: 130 01 42 W
ELEVATION: 870 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Symbol #71, Energy, Mines and Petroleum Open File 1987-22. Located on Pay Roll No. 3 (Lot 5524) Crown Grant and Silver Coin Fraction (Lot 2840), south of Noname Lake.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6216109
EASTING: 436009

COMMODITIES: Silver, Zinc, Lead, Copper

MINERALS
SIGNIFICANT: Sphalerite, Galena, Chalcopyrite, Pyrite
ASSOCIATED: Quartz, Calcite
ALTERATION: Silica, Sericite, Chlorite, Pyrite
ALTERATION TYPE: Silicific'n, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Stockwork, Breccia, Discordant
CLASSIFICATION: Hydrothermal, Porphyry, Epigenetic, Epithermal
TYPE: I02 Intrusion-related Au pyrrhotite veins; G07 Subaqueous hot spring Ag-Au
I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded, Faulted
DIMENSION: 0305 x 0005 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Main silicified zone is 3.0 to 7.0 metres wide over a strike length of 305 metres.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE: 210+24-14 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Argillite
Siltstone

HOSTROCK COMMENTS: Texas Creek date is for the "Premier" porphyry in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Silver coin showing is located 400 metres south of Noname Lake approximately 1 kilometre north of the Indian Mine and 25 kilometres north of Stewart, British Columbia.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the volcanic arc assemblage of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanic rocks. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillites and siltstones infolded along a synclinal axis. This sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes.

The showing is exposed on the crest of the Big Missouri ridge as

CAPSULE GEOLOGY

a well defined siliceous zone in bleached, silicified and foliated tuffs. The main silicified zone, 3 to 7 metres wide, consists of quartz stockworks, veins and stringers. Quartz lenses connected by veins and stringers to the main zone in en echelon arrangement, extend the width of the zone. This north striking zone can be traced along strike for 150 metres, both to the north and south where it disperses as a series of quartz veins, stringers, and/or offset lenses.

Sparsely mineralized quartz containing sphalerite, galena, chalcopyrite and pyrite is exposed in outcrop. The host rock has undergone propylitization.

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/20 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 096**

NATIONAL MINERAL INVENTORY: 104B7 Cu3

NAME(S): **UNUK RIVER**, UNUK RIVER (9 MILE)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 26 08 N
LONGITUDE: 130 35 28 W
ELEVATION: 185 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Showing on Newmont Map (Property File), located along the Unuk River about 15.5 kilometres north of the International Boundary, opposite the mouth of Fewright Creek.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6255693
EASTING: 401890

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Magnetite
ALTERATION: Silica Magnetite Epidote
ALTERATION TYPE: Skarn Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Porphyry Igneous-contact Skarn
TYPE: K01 Cu skarn

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic			Unnamed/Unknown Informal

LITHOLOGY: Siliceous Diorite
Diorite
Greenstone
Magnetite Skarn
Silica Andesite Porphyry

HOSTROCK COMMENTS: Upper Triassic and younger silicified diorite intrudes Upper Triassic Stuhini Group sediments.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact Regional
RELATIONSHIP: Syn-mineralization Post-mineralization
GRADE: Greenschist
COMMENTS: The metamorphic relationship classification is unclear.

CAPSULE GEOLOGY

Triassic and younger diorite intrudes the Upper Triassic Stuhini Group sediments. The intrusive is comprised mainly of silicified diorite and is in contact with greenstones which host abundant magnetite and epidote. Along this contact the Stuhini sediments are altered to magnetite skarns and the intrusive is described as sericitized andesite porphyry.

In 1929, two claims were located along the east side of the Unuk River across from the mouth of Fewright Creek (Glacier Creek). The claims were located to cover a showing with a high percentage of copper.

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EMPR FIELDWORK 1988, pp. 241-250
EMPR BULL *63
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EMPR AR *1929-112; *1935-Map(after p. B8)
EMPR PF (Geology Map - 1:31250 Scale-Newmont Exploration of Canada, 1960's)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/23 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 097**

NATIONAL MINERAL INVENTORY: 104B7 Cu2

NAME(S): **FEWRIGHT**, UNUK RIVER (6 MILE) , ACHILLES

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 24 50 N
LONGITUDE: 130 39 45 W
ELEVATION: 190 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Showing on Newmont Map (Property File), located along the west shores of the Unuk River, south of Fewright Creek and about 10 kilometres north of the International Boundary.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6253386
EASTING: 397430

COMMODITIES: Copper Silver Gold Lead

MINERALS
SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Tuff
Volcaniclastic
Sandstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The area is underlain by altered Lower Jurassic Hazelton Group rocks of the Unuk River Formation comprised mainly of crystal and lithic tuffs, sandstone and conglomerate. These volcaniclastics and sediments are comprised of biotite-rich beds, and in places have been altered to hornblende or amphibolite-rich cataclasite. To the west, the Hazelton Group rocks are intruded by Lower Tertiary quartz diorite.

In 1911 and again in 1929, it was reported that seven claims were located along the Unuk River about 10 kilometres north of the International Boundary to cover a 30 metre wide mineralized ledge which ran the entire length of seven claims (estimated at about 300 metres). Some tunnel work was done on the claims and the mineralized zone was reported to carry values of silver, copper, gold and lead.

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EMPR BULL *63
EMPR PF (*Geology Map - 1:31250 Scale-Newmont Exploration of Canada, 1960's)
GSC P 89-1E, pp. 145-154
EMPR OF 1989-10
EMPR FIELDWORK 1988, pp. 241-250
Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing B40)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/23 REVISED BY: LLC FIELD CHECK: N

MINFILE NUMBER: **104B 098**

NATIONAL MINERAL INVENTORY: 104B7 Au1

NAME(S): **CANYON CREEK**, BLACK BEAR, DAILY BOY, ELLISON CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 23 45 N
LONGITUDE: 130 41 47 W
ELEVATION: 300 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Showings are located along Canyon (Ellison) Creek, an east flowing tributary to the Unuk River, about 6.5 kilometres east of the International Boundary.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6251427
EASTING: 395290

COMMODITIES: Gold, Lead, Zinc

MINERALS

SIGNIFICANT: Galena, Sphalerite, Pyrrhotite, Pyrite
COMMENTS: Auriferous pyrite and pyrrhotite.
ASSOCIATED: Quartz, Pyrite
ALTERATION: Limonite
COMMENTS: Weathering consists of a deep brown crust of ferrugenous oxide.
ALTERATION TYPE: Oxidation, Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Cenozoic			Coast Plutonic Complex

LITHOLOGY: Hornfels, Slate, Argillite, Quartzite, Quartz Diorite, Diorite Porphyry Dike, Lamprophyre Dike

HOSTROCK COMMENTS: Showings lie within hornfelsed contact between Coast Plutonic quartz diorite and Hazelton Group sediments.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
Plutonic Rocks RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist, Hornfels

CAPSULE GEOLOGY

In the vicinity of Canyon (Ellison) Creek, the Black Bear and Daily Boy showings occur within the hornfelsed contact between the Cenozoic Coast Plutonic, quartz diorite intrusive and Lower Jurassic Hazelton Group rocks of the Unuk River Formation.

The Black Bear showing consists of a 60 centimetre wide quartz vein, located along the selvage of a diorite-porphyry dyke, that contains auriferous pyrite and pyrrhotite.

The Daily Boy showing is located within a gulch adjacent to Canyon Creek, and consists of several mineralized veins within silicified and hornfelsed sediments. The altered slates, argillites and quartzites of the Unuk River Formation are characterized by high concentrations of disseminated pyrite and on weathering they are covered by a deep brown crust of ferruginous oxide (limonite). The sediments are crosscut by a complex of lamprophyric dykes of variable width. The mineralized quartz veins within the gulch host pyrite, pyrrhotite with minor sphalerite and galena.

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GSC SUM RPT 1905, p. 52
GSC P 89-1E, pp. 145-154
EMPR PF (Geology Map - 1:31250 Scale-Newmont Exploration of Canada, 1960's)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/29 REVISED BY: LLC FIELD CHECK: N

MINFILE NUMBER: **104B 099**

NATIONAL MINERAL INVENTORY: 104B8 Cu2

NAME(S): **KERR D**, D, KERR COPPER

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 28 17 N
LONGITUDE: 130 16 28 W
ELEVATION: 1415 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located from Open File 1988-4. Occurrence is situated about 1.5 kilometres south of the toe of Sulphurets Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6259274
EASTING: 421488

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
COMMENTS: Geochemically anomalous in copper and molybdenite.
ASSOCIATED: Quartz
ALTERATION: Quartz Chlorite Sericite Pyrite Carbonate
ALTERATION TYPE: Sericitic Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Sericite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: D

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1986

COMMODITY	GRADE	
Gold	0.8500	Grams per tonne

COMMENTS: Unknown sample length.
REFERENCE: Assessment Report 15493.

CAPSULE GEOLOGY

The Sulphurets map area lies along the western margin of the Intermontane Tectonic Belt and lies within Stikinia Terrane. The area is underlain by Lower Jurassic Unuk River Formation, Hazelton Group, volcanic and sedimentary rocks that have been folded, faulted and weakly metamorphosed, mainly during Cretaceous time. Strata are cut by at least three intrusive episodes.

The Kerr Copper mineral occurrence is reported to lie entirely within a "tectonic shear zone". This zone contains all the significant gold anomalies. The zone covers an elongate northern trending area, 800 to 900 metres wide and two kilometres long. The zone is flanked by comparatively unaltered or weakly altered, fine-grained, brownish green clastic sediments and submarine volcanics on the east, and by a thick unit of basaltic andesite on the west. The tectonic zone is typically composed of moderately to strongly altered and sheared rocks interpreted to be of volcanic, subvolcanic, or plutonic origin. Most of the altered zone can be described as a sericite schist, however andesitic tuffs and flows, feldspar porphyry dykes and possibly flows can be recognized in less altered zones. A later formed "swarm" of fine-grained weakly altered andesite dykes cut across the schistosity. Both the altered zone and dykes have been cut by faults. Minor sections of silty shale and siltstone occur on the western and eastern margin of the altered zone.

Rock types within the D zone are likely andesitic tuffs altered

CAPSULE GEOLOGY

to sericite schist. Within the sheared zones quartz and/or pyrite veins occur and strike in a west to northwest direction. One 4 metre wide pyrite vein occurs in one such shear zone.

The D zone is located within the same fault-bounded block as the A zone (104B 194). The West Fault marks the western boundary, the A zone Fault marks the eastern boundary.

The D zone is one of the soil geochemical anomalies outlined in September 1985. Results of more detailed follow-up work in 1986 were not encouraging. Most rock chip samples contained between 0.1 and 0.5 grams per tonne gold with only one greater than 0.5 grams per tonne gold (0.85 grams per tonne) (Assessment Report 15493). Some trenching has been completed on nearby mineralized outcrops. No work was carried out here in 1987 or 1988.

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N MINER Nov.9,Dec.14, 1987; Sept.19,Oct.3,10,Nov.28, 1988
GCNL #70,#194, 1985; #232, 1986; #142,#144,#165,#173,#177,#182,#202, #204, 1987; #75,#155,#156,#163,#167,#191, 1988
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EMR MP CORPFILE (Western Canadian Mining Corporation)
EMPR INF CIRC 1986-1, pp. 14,18; 1988-1, p. 12 (BC Mineral Exploration Review 1985 and 1987)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/09/01 REVISED BY: DJA FIELD CHECK: N

MINFILE NUMBER: **104B 100**

NATIONAL MINERAL INVENTORY:

NAME(S): **TR**, SERICITE SCHIST

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 35 05 N
LONGITUDE: 130 10 56 W
ELEVATION: 1645 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 200 metres west and uphill from the Konkin Skarn occurrence (104B 171), itself located near the western edge of Treaty Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6271786
EASTING: 427387

COMMODITIES: Gold

MINERALS

SIGNIFICANT:	Pyrite				
ALTERATION:	Limonite	Sericite	Silica	Pyrite	
ALTERATION TYPE:	Oxidation	Sericitic	Silicific'n	Pyrite	
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: G07 Subaqueous hot spring Ag-Au I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Sericite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	23.7000	Grams per tonne

COMMENTS: From a 2 metre sample.
REFERENCE: Assessment Report 16839.

CAPSULE GEOLOGY

The TR (Sericite Schist) occurrence is located near the western margin of Treaty Glacier and occurs in rock of the Lower Jurassic Unuk River Formation, Hazelton Group. Rocks in the area include weak to moderately altered crystal-lithic andesite tuffs, intensely altered crystal-lithic andesite tuffs (sericite schist), dolomite, limestone, quartzite, pillow lavas, red, purple, green, volcanic breccias, porphyritic flows and minor chert. The strata are intruded by a Jurassic diorite stock.

The north-south trending "Sericite Schist" zone is part of a large area of alteration extending over 900 metres with a minimum width of 150 metres. Alteration includes sericite, quartz and pyrite.

A limonitic, silicified, leached andesitic tuff showing weak sericite schist alteration contained 23.7 grams per tonne gold and 5.38 grams per tonne silver over 2 metres (Assessment Report 16839).

See also Konkin Skarn (104B 171).

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DATE CODED: 1988/11/21 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1989/02/13 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 101**

NATIONAL MINERAL INVENTORY: 104B8 Cu1

NAME(S): **KERR 15 EAST**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 26 29 N
LONGITUDE: 130 14 19 W
ELEVATION: 1737 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Copper mineralization occurs between Sulphurets Glacier East and and Sulphurets Glacier West (Minister of Mines Annual Report 1968, Figure 8).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6255895
EASTING: 423636

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Sediment/Sedimentary Rock
Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Unspecified copper mineralization occurs on Sulphurets Mountain between Sulphurets East and Sulphurets West Glaciers (Minister of Mines Annual Report 1968, p. 45, Figure 8). The area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. In this area these rocks consist of mixed sedimentary rocks with tuffaceous interbeds (Open File 1988-4). No further details of showing are available.

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/09/13 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 102**

NATIONAL MINERAL INVENTORY: 104B7 Cu1

NAME(S): **BOULDER**, BOULDER CREEK, GEKING CREEK, GENKING CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 19 34 N
LONGITUDE: 130 42 42 W
ELEVATION: 180 Metres
LOCATION ACCURACY: Within 1 KM

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6243692
EASTING: 394154

COMMENTS: Prior to 1906, a group of 6 claims was located on the east side of the Unuk River about 0.8 kilometres north of the International Boundary.

COMMODITIES: Copper, Gold, Silver, Lead

MINERALS

SIGNIFICANT: Pyrite
COMMENTS: Exact mineralogy not specified.
ALTERATION TYPE: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Igneous-contact
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Cenozoic			Coast Plutonic Complex

LITHOLOGY: Hornfels
Slate
Argillite
Quartzite
Limestone
Quartz Diorite
Dike

HOSTROCK COMMENTS: Showing lies within the hornfelsed contact between intrusive quartz diorite and Stuhini Group sediments.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks; Syn-mineralization, Post-mineralization
GRADE: Greenschist, Hornfels

CAPSULE GEOLOGY

The Boulder showing occurs within the hornfelsed contact between the Cenozoic Coast Plutonic quartz diorite intrusive and the Upper Triassic Stuhini Group sediments.

In 1911, a large body of low grade ore, containing copper, gold, silver and lead mineralization, was reported to occur about 8 kilometres north of the Alaska-British Columbia border on the east side of the Unuk River. Host rocks consist of Upper Triassic (?) hornfelsed sediments comprised of altered slates, argillites, quartzites with minor limestone and breccia. The sediments are crosscut by several intrusive dykes of variable widths. Abundant disseminated pyrite occurs throughout the sediments.

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/29 REVISED BY: LLC FIELD CHECK: N

MINFILE NUMBER: **104B 103**

NATIONAL MINERAL INVENTORY: 104B9 Cu2

NAME(S): **MITCHELL**, SULPHURETS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09W 104B09E
BC MAP:
LATITUDE: 56 31 52 N
LONGITUDE: 130 15 01 W
ELEVATION: 1006 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located north and adjacent of Mitchell Glacier, about 1 kilometre from the glacier's toe (Open File 1988-4).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6265893
EASTING: 423098

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated Vein
CLASSIFICATION: Porphyry Epigenetic Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Alkali Feldspar Granite
Intermediate Pyroclastic
Mafic Pyroclastic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1980

COMMODITY	GRADE	
Copper	0.1820	Per cent

COMMENTS: A 94 metre composite chip sample.
REFERENCE: Bridge et al, (1981): Unpublished Report-Esso Minerals Canada Ltd.

CAPSULE GEOLOGY

The Mitchell Zone is located north and adjacent to Mitchell Glacier, about 1 kilometre northeast of the glaciers toe. The area is underlain by intermediate to mafic pyroclastics and flows with minor sediments. A stock of Jurassic alkali-feldspar granite intrudes the country rock (Open File 1988-4).

Disseminated chalcopyrite is reported to occur in fresh intrusive rock in association with intense quartz veining. A 94.5 metre composite chip sample contained 0.182 per cent copper, 0.14 grams per tonne gold and 5.94 grams per tonne silver (Bridge et al, 1981).

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DATE CODED: 1985/07/24	CODED BY: GSB	FIELD CHECK: N
DATE REVISED: 1988/09/08	REVISED BY: GJP	FIELD CHECK: N

MINFILE NUMBER: **104B 104**
NATIONAL MINERAL INVENTORY: 104B9 Mo1

NAME(S): **DAWSON (SULPHURETS)**, MOLY, SULPHURETS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 31 30 N
LONGITUDE: 130 14 17 W
ELEVATION: 1036 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Situated south of, adjacent to, Mitchell Glacier about 1.5 kilometres east of the toe (Assessment Report 8420).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6265200
EASTING: 423837

COMMODITIES: Molybdenum, Gold, Copper

MINERALS
SIGNIFICANT: Molybdenite, Chalcopyrite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Sericite, Silica, Pyrite, Chlorite, K-Feldspar, Malachite
ALTERATION TYPE: Sericitic, Silicific'n, Pyrite, Chloritic, Potassic, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Disseminated, Concordant
CLASSIFICATION: Hydrothermal, Epigenetic, Porphyry
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Quartz Sericite Schist
Volcanic
Granite

HOSTROCK COMMENTS: Mineralization is reported to occur in granitic rock as well as altered volcanics.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Mineralization due to shearing and intrusive alteration.

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1980
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Molybdenum	0.0370	Per cent

COMMENTS: From a 3 metre drill section.
REFERENCE: Assessment Report 8420.

CAPSULE GEOLOGY

The Dawson/Moly zone is underlain by interbedded volcanics and lesser sedimentary rock of the Lower Jurassic Unuk River Formation, Hazelton Group. A stock of Jurassic monzonite to quartz monzonite intrudes the country rock within 0.5 kilometres to the southwest of the prospect.

Pervasive silica-pyrite-sericite-chlorite-feldspar alteration has obliterated primary texture and structures. Extensive shearing and faulting and related alteration has resulted in discrete foliation. Altered rocks within the zone are now essentially quartz-sericitic-schists. The rocks typically contain between 3 to 5 per cent pyrite and as much as 10 per cent locally.

Light grey quartz veins containing up to 5 per cent pyrite, generally intrude parallel to subparallel foliation and are less than 1.5 centimetres thick. Molybdenite mineralization occurs primarily within very thin quartz stringers, associated with the grey quartz veins, and as localized less significant remobilized fractions along

CAPSULE GEOLOGY

shear planes. Finely disseminated molybdenite is also common within highly silicified granitic rocks. Minor chalcopyrite with malachite occurs locally within volcanic rocks.

Two holes were drilled in 1980 by Esso Minerals Canada Ltd., with overall results considered negative. Diamond-drill hole 13 contained a 3 metre section of 0.037 per cent molybdenite and diamond-drill hole 9 contained 3 metres of 0.92 grams per tonne gold. Most assays were significantly less. Silver is also anomalous (Assessment Report 8420).

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EMPR AR 1935-B7-B12; 1961-9; 1962-8; 1964-19; 1967-31; 1968-45
EMPR GEM 1972-515; 1974-334
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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/12 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 105** NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDWEDGE**, GOLD WEDGE, CATEAR, GOLDEN ROCKET, GOLDRIDGE, DISCOVERY

STATUS: Developed Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B08E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 29 04 N NORTHING: 6260649
LONGITUDE: 130 12 16 W EASTING: 425826
ELEVATION: 1550 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Three veins, about 1.75 kilometres northwest of Brucejack Lake (Open File 1988-4).

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS
SIGNIFICANT: Pyrite Electrum Tetrahedrite Arsenopyrite Sphalerite Galena Pyrargyrite
ASSOCIATED: Pyrite Barite
ALTERATION: Sericite Fuchsite
COMMENTS: Very rare fuchsite.
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stockwork Shear
CLASSIFICATION: Epithermal Mesothermal Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation G07 Subaqueous hot spring Ag-Au
I02 Intrusion-related Au pyrrhotite veins
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 170 x 54 x 4 Metres STRIKE/DIP: 035/83 TREND/PLUNGE:
COMMENTS: Golden Rocket vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Andesite Tuff
Andesite Lapilli Tuff
Syeno Diorite

HOSTROCK COMMENTS: Mesothermal-epithermal vein system associated with syenodiorite intrusion.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: GOLDEN ROCKET REPORT ON: Y

CATEGORY: Indicated YEAR: 1988
QUANTITY: 289500 Tonnes

COMMODITY	GRADE	
Silver	38.3000	Grams per tonne
Gold	27.4000	Grams per tonne

REFERENCE: Assessment Report 18679, page 8.

ORE ZONE: DISCOVERY REPORT ON: Y

CATEGORY: Indicated YEAR: 1988
QUANTITY: 34451 Tonnes

COMMODITY	GRADE	
Gold	21.5000	Grams per tonne
Silver	37.0000	Grams per tonne

REFERENCE: Assessment Report 18679, page 8.

CAPSULE GEOLOGY

The initial discovery of gossan, sulphides and visible gold on the Discovery Vein is credited to E. Ostensoe and E. Kruchkowski in

CAPSULE GEOLOGY

1978. The veins are located on a rolling plateau at 1550 metres elevation, just to the northwest of a tiny lake. The Goldwedge deposit consists of 3 veins, the Golden Rocket (current producer), Discovery and Goldridge.

The deposit is hosted in massive, green chloritic andesite tuffs and lapilli tuffs of the Lower-Middle Jurassic Unuk River Formation, Hazelton Group. The deposit consists of a quartz vein and veinlet stockwork cutting strongly chloritized to strongly sericitized and weakly silicified massive tuffs. The sericitic alteration includes significant amounts (up to 5 per cent) of euhedral, fine-grained pyrite and the rock is pale grey (bleached) and has a schistose foliation (but is not a true "sericite schist"). The wallrock can locally host massive, fine-grained pyritic seams and veinlets up to 2 centimetres wide. Minor amounts of disseminated euhedral arsenopyrite have been noted within the altered rocks and one large bleb of fuchsite has been noted in the underground works.

The gold occurs as abundant grains, blebs and seams of visible gold in quartz veins and in fault gouge where minor faults cut the ore zone. Gold most often occurs as spongy, arborescent masses but fine crystalline forms have also been noted. Gold values are also associated with pyrite from quartz veins, from pyrite veins and from disseminated pyrite in the sericite-altered wallrock. The general control on the vein stockwork is thought to be a paleofault or shear zone that is all but obscured by the pervasive hydrothermal alteration that accompanied ore deposition. The quartz stockwork also hosts electrum, tetrahedrite, arsenopyrite, sphalerite, galena and pyrargyrite.

Mineralogy and alteration patterns suggest a mesothermal to epithermal vein type deposit associated with Jurassic syenodiorite intrusions.

Indicated reserves of the Golden Rocket zone are 289,500 tonnes grading 38.3 grams per tonne silver and 27.4 grams per tonne gold; indicated reserves of the Discovery zone are 34,451 tonnes grading 37.0 grams per tonne silver and 21.5 grams per tonne gold (Assessment Report 18679, page 8).

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GSC P 89-1E, pp. 145-154
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EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 1988/08/14

CODED BY: GSB
REVISED BY: DJA

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **104B 106**

NATIONAL MINERAL INVENTORY: 104B14 Cu1

NAME(S): **TWIN GLACIER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B14E
BC MAP:
LATITUDE: 56 45 57 N
LONGITUDE: 131 12 09 W
ELEVATION: 335 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Toe area of the Twin Glacier. Mineralized float.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6293485
EASTING: 365377

COMMODITIES: Copper Lead

MINERALS
SIGNIFICANT: Chalcopyrite Galena Pyrite
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Gossan
Rock

HOSTROCK COMMENTS: Upper Triassic undifferentiated andesitic volcanic and clastic sedimentary rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Float within the Twin Glacier moraine shows considerable chalcopyrite, galena and pyrite. Similar float, most likely from a different source, was observed several miles to the southwest. At the same locality, veins up to 30 centimetres wide have been reported completely oxidized to gossan material.

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GSC MEM 246, p. 78
GSC MAP 9-1957; 311A; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/18 REVISED BY: JNR FIELD CHECK: N

MINFILE NUMBER: **104B 107** NATIONAL MINERAL INVENTORY: 104B11 Cu3

NAME(S): **JOHNNY MOUNTAIN**, JOHNNY MOUNTAIN MINE, REG, STONEHOUSE, PICK AXE, DISCOVERY, 16, ZEPHRIN, CLOUTIER, GOLDRUSH, GROOVE RIDGE

STATUS: Past Producer Underground MINING DIVISION: Liard
REGIONS: British Columbia
NTS MAP: 104B11E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 37 25 N NORTHING: 6277401
LONGITUDE: 131 04 03 W EASTING: 373149
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Stonehouse Gold zone in the centre of the main deposit.

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Gold, Electrum, Chalcopyrite, Galena, Sphalerite, Molybdenite, Bornite, Covellite, Tetrahedrite, Enargite, Magnetite, Marcasite, Stephanite, Pyrargyrite
ASSOCIATED: Arsenopyrite, Pyrite, Hematite, Ilmenite, K-Feldspar, Orthoclase, Quartz
ALTERATION: Silica, Carbonate, K-Feldspar
ALTERATION TYPE: Potassic, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork
CLASSIFICATION: Mesothermal, Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins; G07 Subaqueous hot spring Ag-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Volcaniclastic, Phyllonite, Syenite, Syeno Diorite, Feldspar Porphyry, K-Feldspar Syeno Diorite, Volcanic, Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact Regional RELATIONSHIP: GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: TOTAL REPORT ON: Y

CATEGORY: Probable YEAR: 1994
QUANTITY: 24000 Tonnes

COMMODITY	GRADE	
Silver	22.0000	Grams per tonne
Gold	11.3000	Grams per tonne
Copper	0.2300	Per cent

COMMENTS: Estimated reserves.
REFERENCE: Information Circular 1994-19, page 8.

CAPSULE GEOLOGY

Regional studies indicate that the shaly units forming Snippaker Mountain are fossiliferous and appear to represent variably deformed thick slabs of pre-Permian strata trending along the Iskut River and dipping to the north. It is thought that these pre-Permian rocks unconformably overlie correlatives of the Lower-Middle Jurassic Betty Creek and Unuk River formations (Hazelton Group). Some of these Triassic rocks may be, in part, correlative with the upper members of

CAPSULE GEOLOGY

the Stuhini Group.

The unconformable nature of the pre-Permian/Jurassic overlap is exposed on both sides of Snippaker Ridge and north of Snippaker Peak. The area is extensively cut by regional thrust faults and more regional northeast and northwest striking normal block faults. The east-west trending Iskut River Valley may form part of a large thrust fault that has pushed strata up and over to the south (Grove, 1987).

The stratified Jurassic-Triassic rocks are intruded by intermediate to felsic stocks and plutons of Jurassic and younger age that are related to the Tertiary-Jurassic Coast Plutonic Complex.

Mineralization at Johnny Mountain is confined to part of a sequence comprising mostly deformed volcanic/volcaniclastic rocks of probable Lower Jurassic-Upper Triassic age, that are intruded by syenite porphyry. The host rocks trend about east and dip steeply north forming a sequence at least 1.0 kilometre thick.

Massive, syenitic feldspar porphyry units lie between the sedimentary units and are marked by close-spaced fracturing with fine-grained pyrite outlining the fracture pattern. Widths of up to 137 metres were measured for several of these syenitic units which strike 100 degrees and dip 55 degrees north and are thought to be sills due to a persistent autometamorphic texture. Veining is pronounced within these units especially near the upper contacts with the sediments and volcaniclastics.

The potassium feldspar porphyry comprises phenocrysts in a fine-grained matrix with biotite, sericite, quartz and some calcite. Fine pyrite is ubiquitous with concentrations along hairline fractures.

In the main zone sequence, the resistant potassium feldspar porphyry members are sandwiched between less resistant medium to dark green sericite and biotite phyllonites. The bulk of these fragmental rocks are polymictic and grain sizes range from sand size to angular boulder sizes.

The deposit includes a number of subparallel sulphide-potassium feldspar-quartz vein and stockwork systems. The deposit extends for 1525 metres on surface and has been drilled to 215 metres depth. Development has concentrated on the 16 and Discovery vein systems which strike northeast with steep north dips. The deposit has been developed on the 1125 and 1075 levels and a decline is being driven to reach deeper vein systems.

The gold-silver-copper-bearing sulphides are comprised mainly of pyrite and chalcopyrite with some sphalerite, galena and minor pyrrhotite. Gangue minerals are potassium feldspar (orthoclase) and quartz. Metallic minerals identified from the high grade Discovery drill core include rare arsenopyrite, bornite, chalcopyrite, covellite, electrum, enargite, galena, native gold, hematite, ilmenite, magnetite, marcasite, molybdenite, pyrargyrite, pyrite, pyrrhotite, sphalerite, stephanite and tetrahedrite. Together, the sulphides form about 80 percent of the vein with the gangue potassium feldspar and quartz forming stringers within the sulphide and along both the hanging wall and footwall. Native gold occurs as irregular veinlets within these stringers and occasionally in pyrite.

The mineralogy of the 16 sulphide vein is similar to the Discovery vein, except that sulphides, particularly chalcopyrite, are less abundant, and sphalerite and galena are more abundant. The 16 vein lies in the footwall of the Discovery vein and in the hanging wall of the Pick Axe mineralization, and like the former lies along fractures cutting the country rocks which are marked by potassium feldspar flooding and general pyritization. The Gold Rush vein system consists of coarse pyrite, quartz and potassium feldspar with abundant free gold, scattered galena, tetrahedrite and minor sulphosalts. The newly discovered Zephrin zone consists of feldspathic and siliceous alteration in a brecciated zone containing 10 to 15 per cent sulphides and carrying high gold values. The Cloutier vein (current name - Discovery vein) comprises a zone of quartz veins with abundant pyrite and chalcopyrite. In 1986, a 2.6-metre wide sample averaged 5.18 grams per tonne gold, 29.3 grams per tonne silver and 3.23 per cent copper (Exploration Review 1986, Information Circular 1987-1, page 36).

In summary, the host rock at the Johnny Mountain mine is part of a potassium feldspathized syenite-syenodiorite stock of probable Lower Jurassic age that has intruded a thick Upper Triassic intercalated felsic volcanic/volcaniclastic sequence. The Triassic strata are overlain by a younger, gently dipping volcanic-sedimentary sequence. The veins and sulphide stockworks are found entirely within fracture systems cutting altered and deformed syenite and sedimentary rock pendants. High-grade gold mineralization appears to be concentrated along phyllonite/massive syenite contacts.

As of January 1989 reserves at the mine are:

CAPSULE GEOLOGY

	Tonnes	Grams per tonne gold
Proven (broken ore)	50,792	22.62
Proven (in ground)	44,443	31.88
Probable	78,002	23.65
Possible	448,965	17.14
Total	622,202	19.54

(Property File - Globe and Mail, January 26, 1989)

The Johnny Mountain mine was engaged in pre-production from January through to November of 1988. The mill began operation in August and commercial production was achieved on November 1, 1988. The mine closed in mid-August of 1990 and milling operations ceased in early September. High operating costs and low gold prices were significant factors in the closure.

Interest has been reactivated at the Stonehouse deposit, where there are 16 gold-bearing veins with drill indicated reserves of 59,868 tonnes grading 20.5 grams per tonne gold (George Cross News Letter No. 95 (May 18), 1993).

Reserves estimated by the company as of January 1, 1994 were 24,00 tonnes grading 11.3 grams per tonne gold, 22 grams per tonne silver and 0.23 per cent copper (Information Circular 1994-19, page 8).

In 1995, with Explore B.C. Program support, International Skyline Gold Corp. carried out a limited program of trenching and sampling. Results were disappointing; no assays equal or greater than 1 gram per tonne gold were obtained (Explore B.C. Program 95/96 - A66).

Skyline Gold Corp. and R&R Enterprises plan to recover gold from the tailings during 2003.

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MIN REV Sept./Oct., 1988, pp. 38-43
N MINER Jan.7, Sept.30, 1982; Apr.14, Aug.4, Nov.3,7,17, 1986; Jan.26, Feb.16, May 4,11, Jun.8, Aug.10, 1987; Jan.11, Mar., May 16, Jul.4, Aug.8, *Dec.19, 1988; Feb.20, Mar.6, Apr.10, June 12, Aug.21, Oct.9, 1989; Apr.30, June 18, July 9,16, 1990
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NW PROSP Nov./Dec., 1982; Aug./Sept.,Oct./Nov.,Dec./Jan., 1988; Jan./Feb., March/April, Sept./Oct., Nov./Dec., 1989
PR REL Skyline Explorations Ltd.: Nov.9, 1982; Oct.25, 1984; Jan.11,Oct.24,25,28 1985; Jun.,Jul.7,25,Aug.15,20,Sept.4,17, Oct.28,Nov.10,25,Dec.8,Development-Reg Property, 1986; Apr.15,

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1996/11/04 REVISED BY: VAP FIELD CHECK: N

MINFILE NUMBER: **104B 108**

NATIONAL MINERAL INVENTORY: 104B12 Cu2

NAME(S): **WHIPPLE MTN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B12E
BC MAP:
LATITUDE: 56 36 57 N
LONGITUDE: 131 34 47 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Located on Whipple Mountain, just north of the international border.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6277600
EASTING: 341697

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Tetrahedrite Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Pennsylvan.-Permian			Stikine Assemblage

LITHOLOGY: Andesitic Volcanic
Clastic Sediment/Sedimentary
Schist
Gneiss

HOSTROCK COMMENTS: Upper Triassic volcanic and sedimentary rocks overlie Permian to Carboniferous schists and gneisses.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Near boundary of Coast Crystalline-Intermontane belts.

CAPSULE GEOLOGY

Whipple Mountain consists mainly of Permian to Carboniferous schists and gneisses, which are overlain by Upper Triassic undifferentiated andesitic volcanic and clastic sedimentary rocks. Mineralization is restricted to veins of tetrahedrite (host rock unknown), and others of quartz and chalcopyrite.

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GSC MAP 9-1957; 311A; 1418A
GSC MEM 246, p. 78
GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/14 REVISED BY: JNR FIELD CHECK: N

MINFILE NUMBER: **104B 109**

NATIONAL MINERAL INVENTORY: 104B12 Fe1

NAME(S): **ELBOW MOUNTAIN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B12W
BC MAP:
LATITUDE: 56 42 00 N
LONGITUDE: 131 50 01 W
ELEVATION: 1036 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Located on the eastern flanks of Elbow Mountain, near the international border.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6287579
EASTING: 326509

COMMODITIES: Magnetite Wollastonite

MINERALS
SIGNIFICANT: Magnetite Wollastonite
ALTERATION: Wollastonite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Igneous-contact Skarn Industrial Min.
TYPE: K03 Fe skarn

HOST ROCK
DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary			Coast Plutonic Complex
Pennsylvan.-Permian			Stikine Assemblage

LITHOLOGY: Hornblendite
Skarn
Meta Sediment/Sedimentary
Meta Volcanic
Quartz Diorite

HOSTROCK COMMENTS: Permian to Carboniferous schists and gneisses are intruded by Cretaceous to Tertiary quartz diorite.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Regional
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist
COMMENTS: Located at boundary of Coast Crystalline-Intermontane Belts.

CAPSULE GEOLOGY

On Elbow Mountain at the contact between Cretaceous to Tertiary quartz diorite intrusives and Permian to Carboniferous schists and gneisses, there is considerable magnetite noted within hornblendite. Wollastonite has been reported, particularly along carbonate-rich beds near the contact.

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GSC MEM 246, p. 78
GSC MAP 9-1957; 311A; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/14 REVISED BY: JNR FIELD CHECK: N

MINFILE NUMBER: **104B 110**

NATIONAL MINERAL INVENTORY: 104B13 Asb1

NAME(S): **EAGLE CRAG**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B13E
BC MAP:
LATITUDE: 56 54 23 N
LONGITUDE: 131 41 31 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Located on the southern flanks of Eagle Crag.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6310193
EASTING: 336084

COMMODITIES: Asbestos

MINERALS
SIGNIFICANT: Asbestos Arsenopyrite Pyrite
ASSOCIATED: Amphibole
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Igneous-contact Industrial Min.
TYPE: M06 Ultramafic-hosted asbestos

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary			Coast Plutonic Complex
Pennsylvan.-Permian			Stikine Assemblage

LITHOLOGY: Meta Rock
Meta Volcanic

HOSTROCK COMMENTS: Contact between Coast Plutonic Complex and Permian to Carboniferous metamorphics.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Near boundary of Coast Crystalline-Intermontane belts.

CAPSULE GEOLOGY

Near the contact of the Permian to Carboniferous metamorphics and the Coast Plutonic Complex, just south of Eagle Crag, is an occurrence of amphibole asbestos. Also noted, along the hornblende granodiorite contact, on the ridge south of Eagle Crag, are heavy impregnations of pyrite and arsenopyrite (Geological Survey of Canada, Memoir 246, page 78).

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GSC MAP 9-1957; 311A; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/18 REVISED BY: JNR FIELD CHECK: N

MINFILE NUMBER: **104B 111**

NATIONAL MINERAL INVENTORY: 104B10 Cu1

NAME(S): **PINS**, PINS WEST, GOSSAN 25, RW

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 31 10 N
LONGITUDE: 130 48 57 W
ELEVATION: 1520 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located between two icefields along a fairly flat topped ridge west of Snippaker Creek.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6265372
EASTING: 388281

COMMODITIES: Zinc, Lead, Copper, Silver, Gold

MINERALS

SIGNIFICANT: Chalcopyrite, Sphalerite, Galena
ASSOCIATED: Quartz, Chlorite
ALTERATION: Malachite, Limonite, Sericite, Clay, Chlorite, Epidote, Pyrite, Silica
ALTERATION TYPE: Propylitic, Argillic, Oxidation, Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
I02 Intrusion-related Au pyrrhotite veins
G04 Besshi massive sulphide Cu-Zn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite, Andesitic Tuff, Siltstone, Gossan, Tuffaceous Siltstone, Rhyolite, Argillite

HOSTROCK COMMENTS: Undivided Jurassic-Triassic volcanic and sedimentary rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: PINS
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1987

COMMODITY	GRADE	
Silver	5.0000	Grams per tonne
Gold	0.0500	Grams per tonne
Copper	0.0140	Per cent
Lead	0.0390	Per cent
Zinc	0.0670	Per cent

COMMENTS: Grab sample taken from Pins Zone.
REFERENCE: Assessment Report 16892.

INVENTORY

ORE ZONE: PINS WEST REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	8.4000	Grams per tonne
Gold	0.0800	Grams per tonne
Lead	1.9500	Per cent
Zinc	2.5500	Per cent

COMMENTS: Sample #R-3083 from Pins West.
REFERENCE: Assessment Report 11332, part 1.

CAPSULE GEOLOGY

The area is underlain by an undivided Jurassic to Triassic Hazelton Group (Unuk River Formation) or Stuhini Group volcanic and sedimentary sequence comprised mainly of andesite, rhyolite or latite, tuff and argillites. General chlorite-epidote-pyrite alteration with resultant bleaching and the development of secondary clays, masks original textures and makes field identification of these rock units difficult. All rock units are crosscut by diorite porphyry and andesite porphyry dykes.

Hydrothermal alteration is characteristic of each rock unit with abundant secondary chlorite, epidote, silica, pyrite, carbonate and base metal sulphides. Where carbonate alteration is more intense, similarily pyritization is more intense except in areas of diorite porphyry where epidote is rare but chlorite and sericite are abundant.

Chalcopyrite, malachite and limonite occur as fine disseminations or as coarser blebs and veinlets in andesite altered to clay, sericite and chlorite. Quartz veins and veinlets are abundant containing chlorite and pyrite with some hosting chalcopyrite, galena and sphalerite. In 1984, prospecting showed two east-west striking gossans hosting lead and zinc bearing quartz veins in siltstone and volcanic rocks. Selected grab samples from these veins assayed 1 to 2 per cent lead, 2 to 3 per cent zinc, 5 to 100 grams per tonne silver and less than 0.1 grams per tonne gold (Assessment Report 14972).

In 1987, the mineralization on the Gossan 25 claim was described as consisting of small (5 to 10 metres squared) pods of 0.1 to 1 per cent pyrite with lesser amounts of sphalerite, minor galena and chalcopyrite. The pyrite occurs as fine-grained disseminations, while the sphalerite and galena occur as coarse-grained, 1 to 2 millimetre aggregates.

Two samples taken from the Pins West Zone in 1983 assayed 0.08 grams per tonne gold, 8.4 grams per tonne silver, 1.95 per cent lead, 2.55 per cent zinc and 0.07 grams per tonne gold, 5.5 grams per tonne silver, 1.76 per cent lead, 2.46 per cent zinc, respectively (Assessment Report 11332, part 1).

In 1987, a grab sample, taken from the Pins zone, consisting of silicified and chloritized tuffaceous siltstone with pyrite, sphalerite and chalcopyrite assayed 0.05 grams per tonne gold, 5.0 grams per tonne silver, 0.0672 per cent zinc, 0.0387 per cent lead, 0.0142 per cent copper. Another sample taken from Pins Ridge which consisted of chlorite, epidote, silica, clay altered andesite tuff with disseminated and coarse aggregates of chalcopyrite and pyrite assayed 0.03 grams per tonne gold, 1.4 grams per tonne silver, 0.051 per cent copper (Assessment Report 16892).

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EMR MP CORPFILE (Silver Standard Mines Ltd.; Cobre Exploration Ltd.)
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Division, Northwestern British Columbia for Western Canadian Mining Corporation, November 1987)
Chevron File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/16 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 112**
NATIONAL MINERAL INVENTORY: 104B1 Au8

NAME(S): **GLACIER**, SALMON

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 04 42 N
LONGITUDE: 130 02 54 W
ELEVATION: 412 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Original vein is probably exposed down creek; below cabin shown at north end of Indian Lake in Assessment Report 7639, Lot 1850.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6215293
EASTING: 434751

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS
SIGNIFICANT: Chalcopyrite, Sphalerite, Galena, Tetrahedrite
ASSOCIATED: Pyrite, Quartz, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Discordant
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 0001 Metres
STRIKE/DIP: 100/45S
TREND/PLUNGE:
COMMENTS: Vein is 1 to 1.5 metres wide.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Andesitic Tuff
Argillite
Siltstone

HOSTROCK COMMENTS: Isotopic age reference: Brown, D.A., 1987 and Fieldwork, 1985.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1929
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	9.6000	Grams per tonne
Silver	929.8300	Grams per tonne
Copper	1.3000	Per cent
Lead	0.4000	Per cent
Zinc	0.4000	Per cent

COMMENTS: Sample across a quartz vein from a 30-centimetre chip.
REFERENCE: EMPR PF Starr, C.C. (1929): Brief Report on the Glacier Group.

CAPSULE GEOLOGY

The region is underlain by andesitic tuffs and related sediments of the Unuk River Formation of the Hazelton Group. These strata are intruded by the early Jurassic Texas Creek Batholith on the west, and the property is crosscut by Eocene age "Hyder dykes".

On the property fragmental andesitic volcanic rocks and deformed siltstones are intruded by the Texas Creek pluton and the Tertiary dykes. The showing consists of several parallel, moderate to flat-

CAPSULE GEOLOGY

dipping (45 degrees south) quartz-carbonate-sulphide veins and veinlets containing chalcopyrite, sphalerite, galena and tetrahedrite. The veins strike 100 degrees and are hosted in tuffs and siltstone east of, and stratigraphically above, the contact with the Texas Creek pluton. A 30-centimetre sample across a quartz vein yielded 9.6 grams per tonne gold, 929.83 grams per tonne silver, 1.3 per cent copper, 0.4 per cent lead and 0.4 per cent zinc (Starr, 1929 Property File).

Recent exploration efforts (1979) did not relocate the original 1 to 1.5 metre wide vein, but their traverses did not investigate the slope area or gully directly below the cabin at the north end of Indian Lake. This was the approximate area of the original veins described in Minister of Mines Annual Report 1925, page A101.

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1999/10/04 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 113** NATIONAL MINERAL INVENTORY:

NAME(S): **INEL**, DISCOVERY, MAIN SULPHIDE,
BIG CREEK, TWIN CREEK, INEL NORTH,
INEL SOUTH, CENTRE, AK,
DISCOVERY NORTH, DISCOVERY SOUTH

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 36 36 N
LONGITUDE: 130 57 08 W
ELEVATION: 1675 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Intersection of Inel (Main Sulphide) and Discovery zones, approximately 25 kilometres east of the Alaska-British Columbia border and about 10 kilometres south of the Iskut River (Assessment Report 11312).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6275679
EASTING: 380178

COMMODITIES: Gold, Silver, Zinc, Copper, Lead

MINERALS

SIGNIFICANT: Pyrite, Galena, Sphalerite, Chalcopyrite, Gold
ASSOCIATED: Quartz, K-Feldspar, Arsenopyrite
ALTERATION: Silica, Pyrite, Carbonate, Chlorite, Biotite, Hematite, Epidote
ALTERATION TYPE: Pyrite, Silicific'n, Potassic, Carbonate, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound, Massive, Breccia, Vein
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins; G04 Besshi massive sulphide Cu-Zn
DIMENSION: 240 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: AK zone.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Fine Grained Clastic Sediment/Sedimentary
Olivine Basalt Flow
Brecciated Dike
Intrusive Breccia
Rhyolite Flow
Andesitic Volcaniclastic
Alaskite
Quartz Feldspar Porphyry
Argillite

HOSTROCK COMMENTS: Alaskite pluton intrudes Lower Jurassic Hazelton Group rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: DISCOVERY REPORT ON: Y

CATEGORY: Indicated YEAR: 1991
QUANTITY: 317485 Tonnes

COMMODITY	GRADE	
Silver	13.3000	Grams per tonne
Copper	0.1000	Per cent
Lead	0.1000	Per cent
Zinc	2.6000	Per cent
Gold	3.4000	Grams per tonne

COMMENTS: Underground diamond drilling has defined preliminary reserves for lens No. 1.
REFERENCE: Assessment Report 22026, page 14.

CAPSULE GEOLOGY

The oldest rocks consist of Permian limestones and Pennsylvanian

CAPSULE GEOLOGY

to Permian carbonaceous strata that are highly contorted and deformed. Unconformably overlying this strata is an Upper Triassic(?) shale unit and a volcanic-sedimentary sequence correlated to the Lower-Middle Jurassic Hazelton Group, Unuk River Formation. Some of the Upper Triassic stratified sequence may be correlative with upper members of the Stuhini Group. The upper contact of the Unuk River Formation is an angular unconformity. The Unuk River Formation is overlain by the Lower Jurassic Betty Creek Formation (Hazelton Group) which is characterized by planar bedded, bright red and green volcaniclastics, breccias, chert and carbonate lenses.

The bulk of the country rock underlying the Inel property includes a layered Unuk River Formation sequence comprising basalt-rhyolitic breccias, flows and clastic sediments, andesitic volcaniclastics, conglomerates, minor limestones with intercalated basalt flows and breccias. North of the property this Lower Jurassic sequence includes a thick south dipping fossil-rich limestone dated as Toarcian, or Late Lower Jurassic and is equivalent to the Upper Member of the Unuk River Formation (Grove, 1973, 1987).

South of Snippaker Peak the Lower Jurassic sequence is unconformably overlain by gently dipping Betty Creek Formation equivalents. The rocks include volcanic sandstone, volcanic breccia and andesitic basaltic flows.

The Lower Jurassic rocks are cut by a long, narrow, high angle alaskite (quartz-feldspar porphyry) pluton which extends from the south boundary of the Inel claims, north across Snippaker Ridge, just south of Snippaker Peak. At the south, the contacts are marked by wide granitized margins with zinc-silver mineralization on the west, and oxidized copper-molybdenum on the east. In the Main Sulphide zone area the east contact is marked by a swarm of narrow dykes. The dykes and mineralized country rocks have been faulted, deformed and cut by wide pyrite-quartz-feldspar injection breccia dykes. Together with the mineralized country rocks and quartz-sulphide veins these pyritic injection breccias form the broad Main Sulphide zone.

There is a broad, alteration zoning related to the overall sulphide mineralization and the intrusive activity on the Inel property. Intense pyritization, silicification and feldspathization affects the area of the main showings and extends about 500 by 1200 metres when the Discovery zone is included. Mineralized zones surrounding the main showings are outlined in part by a pyritic halo dominated by carbonate veining and alteration and by the presence of barite veins. The halo is described as 2 kilometres wide and extends easterly about 2.5 kilometres. This halo is surrounded by low temperature minerals like bright green chlorite and gypsum.

Drilling within the Main Sulphide and Discovery zones indicate extensive alteration within the sediments comprised of pervasive potassium feldspar, quartz and carbonate stockwork veining and secondary biotite. Extensive induration, bleaching and mottling of the host rocks as well as scattered epidote and hematite alteration occur within the Discovery zone.

Within the Main Sulphide zone, extensive pyritization is cut by two major sets of dykes, high grade sulphide veins and by discrete gold-bearing pyritic lenses. The sulphide lenses or dyke-like shoots consist of coarse south dipping injection breccia dykes comprised of about 60 per cent broken pyrite, with quartz and fragmental potassium feldspar gangue. Drilling within the Main Sulphide zone shows continuity within the copper-silver-gold-bearing mineralization in the altered sediments. The mineralization occurs as east-west trending sheets dipping moderately to steeply south. In 1984, DDH-4 returned an overall grade over 3.7 metres of 7.2 grams per tonne gold, 317.14 grams per tonne silver, 0.38 per cent copper, 0.06 per cent lead and 0.29 per cent zinc (Grove, 1987).

The Discovery zone hosts significant gold, silver, zinc, copper and lead mineralization over narrow widths exceeding 230 metres in length. The zone consists of at least five east dipping complex sulphide zones within a 110-metre thick sequence of thin-bedded sedimentary and volcanic rocks. The pyrite-chalcopyrite-sphalerite-galena mineralization parallels bedding and occurs as parallel bands or as vein-like, possibly remobilized, sulphide mineralization. In 1984, a sample from D-1 taken over 4.9 metres assayed 4.1 grams per tonne gold, 3.2 grams per tonne silver and 6.8 per cent zinc (Grove, 1987).

The Main Sulphide zone, which is at least 300 metres wide, comprises a sequence which forms the extension of the Discovery zone but has been cut by thick dyke-like injection sulphide-potassium feldspar breccias which now form about 50 per cent of the zone. Like the Discovery zone, the original sequence in the Main Sulphide zone comprised intercalated fine-grained clastic sediments and thin olivine basalt flows. In the Discovery zone the gold-bearing, zinc-rich mineralization (native gold occurs in fractures within the

CAPSULE GEOLOGY

sphalerite) is found along and near the basalt/sediment contacts and within the sediments. The Main Sulphide zone mineralization includes stratabound sulphides, remobilized vein sulphides and disseminated gold in the massive injection breccia dykes.

Underground drifting and diamond drilling have been carried out on the Inel Main zone. In 1988, drill hole U88-3, within the centre section, returned a grade of 26.37 grams per tonne gold over 4.05 metres (George Cross News Letter, No.185, September 26, 1988). Surface diamond drilling, 300 metres in elevation above the portal, returned 3.77 grams per tonne gold over 0.85 metre and 7.0 grams per tonne gold over 1.5 metres from Hole 88-1 and 5.4 grams per tonne gold over 1.4 metres from Hole 88-2 (Inel Resources Ltd., Press Release, August 5, 1988).

The underground exploration adit within the North, Centre and South workings have crosscut nine distinct quartz-sulphide gold veins. Of these, one vein returned 50.06 grams per tonne gold across 0.7 metres and other returned 8.9 grams per tonne gold over 2.3 metres (Inel Resources Ltd., Press Release, September 23, 1988).

In 1988, the AK zone was discovered and has been drilled from surface in 1989. The zone is 600 metres north of the Discovery zone and 400 metres north-northwest of the Inel Ridge zone (104B 258). In 1990, 367 metres of underground drifting were completed preparatory to an underground drilling program. The AK zone contains an intrusive breccia dyke that is accompanied by and contains clasts of a megacrystic syenite dyke. Mineralization consists of gold in association with pyrite, sphalerite, galena, chalcopyrite and arsenopyrite and is hosted by a syenitic intrusive breccia. The mineralized intrusive breccia was traced over a strike length of 240 metres; a drill intersection of 9.2 metres grades 18.1 grams per tonne gold (Assessment Report 21157). The highest gold values seem to be concentrated along one horizon at about the 1690 metre level. This zone may extend or repeat into other areas of known mineralization, in particular, the Inel Ridge zone to the southeast and the Discovery South zone to the south.

The assemblage into which the syenite/breccia intruded is comprised from oldest to youngest of: rhyolite flows and volcaniclastic rocks; argillites and coarser sediments; interbedded basaltic sediments and flows that grade upward into massive flows. All of these rocks are assigned to the Lower Jurassic Unuk River Formation and along the height of land on the property are unconformably overlain by volcaniclastic rocks of the Lower Jurassic Betty Creek Formation, both of the Hazelton Group. The intrusive breccia is most strongly developed and best mineralized within the argillites, which circumstance is attributed to the extensive jointing of these rocks relative to the enclosing rhyolites and basalts. A flat fault offsets the intrusive breccia at about the 1675 metre level, with the footwall having moved about 50 metres to the south. This fault and other fracture zones possibly associated with it contain base metals, principally zinc, in notably greater concentrations than does the intrusive breccia; these zones do not, however, contain significant gold values.

Underground diamond drilling has defined preliminary reserves for lens No.1. In the Discovery zone is 317,485 tonnes grading 0.1 per cent copper, 0.1 per cent lead, 2.6 per cent zinc, 3.4 grams per tonne gold and 13.3 grams per tonne silver. (Assessment Report 22026, page 14).

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GSC MEM 246
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N MINER Jul.17, 1989; Nov.12, 1990
NAGMIN Jul.6, 1984
NW PROSP Nov./Dec. 1989

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/01/13 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104B 114**

NATIONAL MINERAL INVENTORY: 104B15 Cu1

NAME(S): **DIRK**, KEN, CHANDI, W.D., DIRK 1-324, AU 1-2, BIZ, NEZ

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B14E 104B15W
BC MAP:
LATITUDE: 56 49 19 N
LONGITUDE: 131 01 41 W
ELEVATION: 1829 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Also see Ken (104B 027). Dirk Group located within an area locally known as the Forrest Kerr Icefield, about 20 kilometres north of the Iskut River (Assessment Report 4150).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6299400
EASTING: 376223

COMMODITIES: Gold Silver Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite Bornite Chalcocite
ASSOCIATED: Magnetite Hematite
ALTERATION: Garnet
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Podiform Disseminated
CLASSIFICATION: Skarn Igneous-contact
TYPE: K01 Cu skarn K04 Au skarn

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Permian			Stikine Assemblage

LITHOLOGY: Skarn
Syenite Porphyry Dike
Feldspar Porphyry Dike
Limestone
Chert
Argillite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist Hornfels

CAPSULE GEOLOGY

The Dirk occurrence is situated in Upper Permian metamorphic, sedimentary, and volcanic rocks. Paleozoic rocks are overlain by Upper Triassic sedimentary rocks. A series of syenite porphyry dykes or feldspar porphyry dykes, generally less than 9.1 metres wide, intrude bedded rocks consisting of argillite-chert-limestone and localizes mineralization. The dykes are "rhomb porphyries" with coarse-grained k-feldspar phenocrysts and occasional small grains of garnet in the matrix. Mineralization is a typical skarn association of bornite, chalcocite, chalcopyrite, magnetite, hematite, and pyrite with a calc-silicate assemblage near, but not necessarily in, limestones intruded by syenite porphyries. Mineralization is erratic and forms pods and lenses, some of which have high copper content and carry appreciable gold and silver.

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/12 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 115**

NATIONAL MINERAL INVENTORY: 104B10 Cu1

NAME(S): **PINS EAST**, PINS, PINS RIDGE, GOSSAN 2

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 31 54 N
LONGITUDE: 130 47 25 W
ELEVATION: 1270 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6266690
EASTING: 389889

COMMENTS: The claims straddle a flat-topped ridge which lies between two forks of Snippaker Creek, about 3 kilometres west of Julian Lake and about 18 kilometres south of the Iskut River.

COMMODITIES: Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Chalcopyrite, Galena, Sphalerite, Pyrite, Magnetite
ASSOCIATED: Quartz, Chlorite
ALTERATION: Limonite, Sericite, Chlorite, Epidote, Pyrite
ALTERATION TYPE: Sericitic, Propylitic, Oxidation, Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Porphyry, Igneous-contact
TYPE: L04 Porphyry Cu ± Mo ± Au; I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Lower Jurassic	Hazelton	Unuk River	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Andesitic Tuff
Chlorite Sericite Andesite
Rhyolite
Latite
Diorite Porphyry
Andesite Porphyry

HOSTROCK COMMENTS: Diorite-porphyry and andesite-porphyry intrudes an undivided Jurassic-Triassic volcanic and sedimentary sequence.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Pre-mineralization, Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1973
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Copper	0.0024	Per cent
Lead	0.0030	Per cent
Zinc	0.0140	Per cent

COMMENTS: Chip sample from Line 42+50E-4+50S.
REFERENCE: Assessment Report 4748.

CAPSULE GEOLOGY

The Pins showing is located within an undivided Jurassic-Triassic volcanic and sedimentary sequence which may, in part, be correlative with the Hazelton Group (Unuk River Formation) or Stuhini Group rocks. The volcanic units consist of rhyolite-latites, andesites and an intensely altered rock hosting abundant chlorite, epidote and pyrite. Argillites and andesitic tuffs were also mapped. The rhyolite occurs as flows and sills, is strongly fractured and hosts abundant pyrite, both disseminated and in veinlets accompanied by sericite. Limonite staining is common and masks the rock fabric.

CAPSULE GEOLOGY

The volcanic and sedimentary sequence are intruded by Upper Mesozoic to Cenozoic intrusives of the Coast Plutonic Complex. The intrusive units consist of diorite porphyry, orthoclase porphyry and an andesitic porphyry.

Copper mineralization, consisting of fine-disseminated specks and coarser blebs or veinlets of chalcopyrite with pyrite and limonite, occurs within a chlorite-sericite altered andesite. The adjacent rock type is andesitic tuff which is also strongly altered by chlorite and pyrite. Quartz veins contain mainly chlorite and pyrite with minor amounts of chalcopyrite, galena and sphalerite. Minor specks of galena and sphalerite were found disseminated within the altered andesite and tuff.

Silicification is more intense in the eastern part of the Pins grid, and the altered andesite hosts abundant quartz veins and veinlets.

In 1973, several rock samples were collected from quartz veining in the eastern part of the property. One chip sample assayed 0.0135 per cent zinc, 0.003 per cent lead and 0.0024 per cent copper.

In 1983, a float sample taken from the North Pins Glacier float train assayed 0.96 grams per tonne gold, 565.7 grams per tonne silver, 1.92 per cent lead, 5.87 per cent zinc and 0.058 per cent copper (Assessment Report 11332, part 1).

The Pins Central zone hosts quartz-pyrite-chalcopyrite veins and disseminations which are associated with patchy local silicification and propylitic alteration, and may contain traces of magnetite. They appear to be small, fracture controlled mineralized zones associated with contacts of small intrusives.

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Chevron File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/16 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 116**

NATIONAL MINERAL INVENTORY: 104B10 Cu2

NAME(S): **TAMI (BLUE RIBBON)**, SNIP 2, BLUE RIBBON, SERICITE RIDGE, SERICITE EAST, BETTY 157-264

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 35 04 N
LONGITUDE: 130 52 54 W
ELEVATION: 1530 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Blue Ribbon zone located in the central part of Sericite Ridge on the Snip 2 claim, west of Snippaker Creek.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6272714
EASTING: 384430

COMMODITIES: Gold, Silver, Copper, Lead, Barite

MINERALS

SIGNIFICANT: Chalcopyrite, Bornite, Chalcocite, Covellite, Pyrite, Galena, Magnetite, Barite
ASSOCIATED: Quartz, Barite, Magnetite, Gypsum, Fluorite, Carbonate
ALTERATION: Chlorite, Epidote, Sericite, Limonite, Hematite, Jarosite, Kaolin, Talc
COMMENTS: Limonite and jarosite form thick coatings on fracture surfaces.
ALTERATION TYPE: Propylitic, Sericitic, Pyrite, Argillic, Oxidation, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork, Disseminated
CLASSIFICATION: Porphyry, Igneous-contact, Industrial Min.
TYPE: D03 Volcanic redbed Cu; I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Mesozoic			Coast Plutonic Complex

LITHOLOGY: Sericite Volcanic
Gossan
Hornfels
Quartz Magnetite Pyrite Vein
Andesitic Tuff
Siltstone
Greywacke
Quartz Monzonite
Porphyritic Diorite

HOSTROCK COMMENTS: Undivided Jurassic-Triassic volcanic and sedimentary sequence is intruded by Triassic or younger quartz monzonite.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks; Pre-mineralization, Syn-mineralization, Post-mineralization
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1983

COMMODITY	GRADE	
Silver	4.8000	Grams per tonne
Gold	3.0900	Grams per tonne

COMMENTS: 10 metre chip sample taken in 1983 from the Blue Ribbon zone.
REFERENCE: George Cross Newsletter, No. 132, July 10, 1984.

CAPSULE GEOLOGY

The area is underlain by Triassic and younger dioritic rocks of the Coast Plutonic Complex and related later dykes of felsite, granodiorite, orthoclase porphyry and basalt. These intrude an undivided

CAPSULE GEOLOGY

Triassic to Jurassic assemblage of Stuhini Group or Hazelton Group (Unuk River Formation) andesitic tuffs, greywackes and siltstones that are pervasively sericite and pyrite altered. Sericitic shear zones cut all rock units except the basalt dykes and show prominant east and northeast trends.

Sericite Ridge is characterized by a large, bright red colored gossan and iron-oxide cemented soil or ferricrete. The tuffaceous volcanics host minor porphyritic phases and have been altered by the porphyritic diorite intrusive and associated tan-colored felsite dykes. In detail, the volcanics range from fine-grained crystall tuff with finely disseminated magnetite to lapilli tuffs and volcanic breccias. The greywackes and siltstones are pervasively altered, greenish, fine-grained rocks with relict traces of bedding.

The volcanics show weak to moderate propylitic alteration which consists of patchy epidotization and extensive chloritization. Chlorite alteration is less common in the intrusive rocks but epidote alteration appears to be more widespread and homogeneous. More intensely altered rocks have been completely altered to an assemblage of quartz-sericite-pyrite-kaolin and locally, minor talc. Some of this intense sericite alteration is related to zones of intense shearing or hornfelsing.

Quartz, quartz-magnetite and quartz-carbonate veins are widespread. Oxidation is extensive in areas of heavy pyritization and gossanous hematite staining is well developed. Limonite and jarosite are the main oxide minerals and form thick coatings on most fracture surfaces. Mineralization occurs in quartz veining within areas of intense sericite alteration and within quartz-pyrite-chlorite filled fractures. Hematite, pyrite, chalcopyrite and magnetite occur within the quartz veins.

Copper mineralization occurs within a light green highly sericitized volcanic. A mineralized zone, 0.6 by 1.8 metres, hosts chalcopyrite, bornite, chalcocite, covellite and pyrite. Patchy zones of malachite staining with minor chalcopyrite occur throughout the altered rock.

A barite vein outcrops in the northeastern part of the property. The vein is 0.3 metres wide and is exposed over 9 metres striking 007 degrees and dipping 56 degrees southeast. The vein carries localized patches of galena with minor epidote and hematite. Also, on the northeast side of the property, is widespread quartz veining, composed of an epidote-rich mass of quartz veins up to 5 metres in width and hosting abundant magnetite. Disseminated magnetite is also common near the intrusive margins. Veins of gypsum-calcite-fluorite, plus widespread sericite-pyrite alteration and traces of copper mineralization, suggest a porphyry-type system.

In 1983, prospecting outlines a 1000 by 200 metre geochemical anomoly called the Blue Ribbon zone. This anomalous area, which occurs in the central portion of the Snip-2 claim, within the largest alteration zone on Sericite Ridge, corresponds to the 0.6 by 1.8 metre copper mineralized zone. Eight grab samples from this pod of massive chalcopyrite, bornite, covellite, chalcocite and pyrite ranged between 6.8 to 10.29 grams per tonne gold. In 1983, a 10 metre chip sample from the Blue Ribbon zone assayed 3.09 grams per tonne gold, and 4.8 grams per tonne silver (George Cross Newsletter, No. 132, July 10, 1984).

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/20 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 117**

NATIONAL MINERAL INVENTORY: 104B10 Cu3

NAME(S): **KIM (SNOW)**, GOSSAN 7, PELICAN, PONCHO, LAKE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 33 53 N
LONGITUDE: 130 49 57 W
ELEVATION: 1525 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Snow Zone located north-northeast of Crater Lake (Assessment Report 5142), on the west side of Snippaker Creek.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6270438
EASTING: 387391

COMMODITIES: Silver, Copper, Gold, Lead, Zinc, Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite, Galena, Sphalerite, Pyrite, Malachite
COMMENTS: Molybdenum values are associated with pyrite-chalcopyrite quartz veins.
ASSOCIATED: Quartz, Barite
ALTERATION: Silica, Malachite, Azurite, Chlorite, Epidote, Carbonate, Clay, Limonite
COMMENTS: Extensive iron-staining with clay, sericite, and minor epidote. Also includes sericite as alteration mineral.
ALTERATION TYPE: Silicific'n, Propylitic, Oxidation, Epidote, Argillic, Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Porphyry, Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Cretaceous-Tertiary			Coast Plutonic Complex

LITHOLOGY: Andesitic Tuff, Chlorite Lapilli Tuff, Andesite, Andesitic Volcanic, Granodiorite, Granitic Porphyry, Diorite

HOSTROCK COMMENTS: Triassic and younger plutonics intrude Juro-Triassic volcanics and sediments which correlate with the Hazelton or Stuhini Groups.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	1.6000	Grams per tonne
Gold	0.0310	Grams per tonne
Copper	0.0103	Per cent
Lead	0.0129	Per cent
Zinc	0.2090	Per cent

COMMENTS: Grab sample of chloritized lapilli tuff with 5 per cent pyrite and sphalerite.
REFERENCE: Assessment Report 16892.

INVENTORY

ORE ZONE: SNOW REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1974
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	82.9700	Grams per tonne
Copper	7.0700	Per cent
Molybdenum	0.0030	Per cent
Lead	0.0100	Per cent

COMMENTS: Chip sample M-C from granite porphyry hosting chalcopyrite and malachite (Mo reported as MoS2 per cent).
REFERENCE: Assessment Report 5142.

CAPSULE GEOLOGY

The area is underlain by an undivided assemblage of stratified rocks comprised of fragmental volcanics interlayered with sequences of argillite, banded siltstone, greywacke, conglomerate and minor impure limestones. Most of these rocks are believed to be correlative with the Lower Jurassic Hazelton Group (Unuk River Formation), but some of the lowermost members may correlate with the Upper Triassic Stuhini Group rocks.

The stratified rocks are intruded by sub-volcanic intrusives and plutonic rocks of the Coast Plutonic Complex, which range from Upper Mesozoic to Cenozoic in age. These stocks and dykes include granodiorite, quartz monzonite, syenite and feldspar porphyry, as well as Tertiary dykes and plugs of basalt and diorite.

Sulphide mineralization occurs throughout the claim area. The most significant mineralization occurs in the northeastern part of the property within what is known as the Snow zone.

The Snow zone consists of quartz-pyrite-chalcopyrite veins and disseminations which are associated with patchy local silicification and propylitic alteration (chlorite, carbonate, epidote). The pyrite, chalcopyrite and associated malachite occur within tuffs, andesitic volcanics and granodioritic intrusives. Patchy showings of chalcopyrite, azurite and malachite are associated with quartz veining and fracture fillings in altered tuff and andesite. Numerous chalcopyrite-galena and sphalerite-bearing quartz veins, as well as galena and barite veins are also found in the northeastern part of the Snow zone. They appear to be small fracture controlled mineralized zones associated with contacts of small intrusives.

Sampling in 1973 within the Snow zone showed values up to 2.7 grams per tonne gold and 32.4 grams per tonne silver (Assessment Report 6030). In 1974, sampling of copper mineralization within the Snow zone returned values of copper, silver, lead and molybdenite. Chip sample M-C, taken from granite porphyry hosting chalcopyrite and malachite assayed 7.07 per cent copper, 0.003 per cent molybdenite, 0.01 per cent lead, trace gold and 82.97 grams per tonne silver. Another sample from altered, fine-grained tuff hosting chalcopyrite, malachite and azurite assayed 0.54 per cent copper, 0.003 per cent molybdenite, 0.02 per cent lead, trace gold and 6.17 grams per tonne silver (Assessment Report 5142).

The central portion of the Gossan 7 claim is underlain by medium to coarse-grained granodiorite and diorite intrusives, which are decomposed with clay, sericite and minor epidote alteration. A broad northwest trending shear zone crosscuts the intrusive and displays a rusty alteration zone and hosts up to 5 per cent pyrite. Minor malachite with traces of chalcopyrite occurs near the eastern edge of the altered shear zone. The western slope contains iron staining with malachite and azurite. In 1986, samples from the rusty, altered shear zone within the granodiorite assayed 0.44 grams per tonne gold, 8.1 grams per tonne silver and 0.48 grams per tonne gold, 2.8 grams per tonne silver, respectively (Assessment Report 15238).

In 1987, a grab sample taken from chloritized lapilli tuff in the Snow zone with 5 per cent pyrite and sphalerite assayed 0.031 grams per tonne gold, 1.6 grams per tonne silver, 0.2088 per cent zinc, 0.0129 per cent lead, and 0.0103 per cent copper. Another grab sample from a 3 by 4 metre pyrite-rich pod in chlorite-epidote altered andesite tuff within the Snow zone assayed 0.008 grams per tonne gold, 1.5 grams per tonne silver, 0.0188 per cent zinc, 0.0038 per cent lead, and 0.0619 per cent copper (Assessment Report 16892).

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GCNL #132, 1984
Chevron File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/20 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 118**

NATIONAL MINERAL INVENTORY:

NAME(S): **RED RIVER**, SULPHURETS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 28 41 N
LONGITUDE: 130 12 18 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Identified from Assessment Report 6255 and Open File 1988-4. Located 1.25 kilometres northeast of Brucejack Lake.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6259939
EASTING: 425779

COMMODITIES: Lead Zinc

MINERALS
SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Sandstone
Wacke
Shale
Hornfels
Lapilli Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The area is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks consist of sandstone, wackes and shale overlain by lapilli-tuff of andesitic composition. The Brucejack fault and associated splay faults cut the country rock in a north-south to northwest direction. North of Brucejack Lake the fault system is bounded on the east by rocks of the Lower Jurassic Betty Creek Formation, Hazelton Group. A variety of Jurassic hornblende syenites and alkali feldspar syenites occur in the area.

Several lead-zinc showings were mapped on the Red River claims by Granduc Mines in 1976 (Assessment Report 6255). (These showings have all been further examined and/or grouped with the Goldwedge (104B 105) and Brucejack Flat (104B 295) occurrences.) Minor amounts of sphalerite and galena are reported to occur in sheared and hornfelsed arenaceous rock (Exploration in B.C., 1976).

The Red River showing occurs about 1.25 kilometres to the northwest of Brucejack Lake (0.75 kilometres south of the Goldwedge occurrence) (Open File 1988-4).

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University of Idaho

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/09/02 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 119**

NATIONAL MINERAL INVENTORY:

NAME(S): **HARRYMEL CREEK SOUTH**, GINNY 1, BETTY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10E
BC MAP:
LATITUDE: 56 31 39 N
LONGITUDE: 130 34 00 W
ELEVATION: 520 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing on Newmont (Property File), located on the west side of Harrymel Creek along a tributary creek, about 2.0 kilometres west of Charlotte Lake.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6265891
EASTING: 403630

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Galena Sphalerite Pyrite
COMMENTS: Silver sulphides have been reported.
ASSOCIATED: Epidote
ALTERATION: Epidote
ALTERATION TYPE: Epidote Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Epigenetic
TYPE: J01 Polymetallic manto Ag-Pb-Zn G04 Besshi massive sulphide Cu-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Gossan
Epidote Schist
Biotite Chlorite Epidote Schist
Greywacke
Siliceous Schist
Limestone
Cataclasite
Greenstone
Graphitic Schist

HOSTROCK COMMENTS: Jurassic-Triassic South Unuk cataclasite zone (Bulletin 63, Figure 13).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Syn-mineralization Post-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

Lower Jurassic Hazelton Group volcanics and sediments of the Unuk Formation, located on the east side of Harrymel Creek are in fault contact with the Upper Triassic Stuhini Group sediments to the west. The contact between the Triassic and Lower Jurassic rocks is marked by an extensive north-northwest trending cataclasite zone, known as the South Unuk Zone, which contains biotite-chlorite-epidote schist (Bulletin 63, Figure 13).

Mineralization occurs within schists in this cataclasite zone along the west side of Harrymel Creek, near a north trending fault. Pyrrhotite and chalcopyrite occur within a gossanous zone in epidotized greywacke and epidote bands within the schist. To the west of this showing epidotized limestone and silicified schists are in contact with sheared and epidotized greywacke and argillite which are part of the Stuhini Group sediments.

On the east side of the fault and cataclasite zone, the Hazelton Group, Unuk Formation rocks consist of graphitic schists, greenstone, andesite and felsite.

Recent work, along a shear zone separating Upper Triassic volcanics from argillaceous and graphitic sediments, indicates that the mineralization occurring within this zone consists of pyrite, galena, sphalerite, chalcopyrite and locally, silver sulphides. The

CAPSULE GEOLOGY

silver minerals are localized in silicified areas in the footwall of the shear and samples have assayed in excess of 13,000 grams per tonne silver (Equity Preservation Corp., 1988).

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1989/01/12 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 120**

NATIONAL MINERAL INVENTORY:

NAME(S): **ICEFIELD**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 37 03 N
LONGITUDE: 130 10 54 W
ELEVATION: 1860 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located from Open File 1988-4. Identified from Newmont Exploration Ltd. Geology Map.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6275434
EASTING: 427483

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Malachite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Volcanic Breccia
Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Malachite stains are reported near the northern edge of an ice-field. The area is underlain by volcanic breccia, and tuffs of the Lower Jurassic Betty Creek Formation of the Hazelton Group (Property File (Geology Map-1:31250 Scale-Newmont Exploration of Canada Ltd., 1960's)).

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/06/16 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 121**

NATIONAL MINERAL INVENTORY:

NAME(S): **GREAT GLACIER**, GLACIER MOUNTAIN, CRAIG RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B13W
BC MAP:
LATITUDE: 56 47 42 N
LONGITUDE: 131 51 03 W
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Refer to Capsule Geology.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6298192
EASTING: 325896

COMMODITIES: Kyanite, Sillimanite, Garnet

MINERALS
SIGNIFICANT: Kyanite, Sillimanite, Garnet
ASSOCIATED: Hornblende, Quartz, Feldspar, Actinolite, Tourmaline, Apatite, Andalusite, Graphite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Hydrothermal, Igneous-contact, Industrial Min.
TYPE: P02 Kyanite-sillimanite schists

HOST ROCK
DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary			Coast Plutonic Complex
Paleozoic			Stikine Assemblage

LITHOLOGY: Schist
Gneiss
Mica Schist
Intrusive Rock

HOSTROCK COMMENTS: Permian to Carboniferous highly crystalline schists and gneisses.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP:
GRADE: Hornfels, Granulite

COMMENTS: Located near contact between Coast Crystalline-Intermontane belts.

CAPSULE GEOLOGY

The Great Glacier occurrence is an area which extends from the International Boundary, south of the Great Glacier and southeast to the valley of Craig River. The area has been described (in Geologic Survey of Canada Memoir 246, page 23) as crystalline schists and gneisses. The less altered schists include biotite, sericite, chlorite, and hornblende which exhibit a well developed cleavage. The more crystalline schists in the occurrence area are dominantly mica schists, with large crystals of hornblende, brown garnet, sillimanite or staurolite. Other minerals, other than the typical mica, quartz, and feldspar, include kyanite, ottrelite, actinolite, tourmaline, apatite, andalusite, and minor graphite.

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GSC MAP 9-1957; 311A; 1418A
GSC MEM *246, p. 23
EMPR OF 1988-26
GSC P 89-1E, pp. 145-154

DATE CODED: 1985/07/24
DATE REVISED: 1988/10/18
CODED BY: GSB
REVISED BY: JNR
FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104B 122**

NATIONAL MINERAL INVENTORY:

NAME(S): **KIT**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01W
BC MAP:
LATITUDE: 56 13 42 N
LONGITUDE: 130 22 11 W
ELEVATION: 884 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Northwest of Granduc Mine. Magnetic anomaly associated with pods of magnetite (Assessment Report 7544).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6232337
EASTING: 415081

COMMODITIES: Iron

MINERALS
SIGNIFICANT: Magnetite
ASSOCIATED: Actinolite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Podiform Disseminated Massive
CLASSIFICATION: Syngenetic Industrial Min.
TYPE: K03 Fe skarn

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Tertiary			Unnamed/Unknown Informal

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Actinolite Andesite
Quartz Diorite Dike

HOSTROCK COMMENTS: Isotopic Age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Post-mineralization
GRADE: Amphibolite

CAPSULE GEOLOGY

The Kit occurrence lies 2.5 kilometres northwest of the Granduc ore deposit (104B 021), on the east side of the North Leduc Glacier. The occurrence, which is located within the 120 metre wide, north-trending South Unuk cataclasite zone (Lower Jurassic), lies within metavolcanics of the Lower Jurassic Unuk River Formation (Hazelton Group). All rocks are cut by Tertiary quartz diorite plutons and dykes.

Mineralization, consisting of disseminated and massive podiform magnetite, occurs within metamorphosed actinolitic dark green andesite. A ground magnetometer survey outlines a strong north-trending, 700 metre long magnetic anomaly over the occurrence.

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EMPR ASS RPT *7544
EMPR BULL 63
EMPR MAP 1956 (Map of the Granduc Area)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)

DATE CODED: 1988/07/15
DATE REVISED: / /
CODED BY: LDJ
REVISED BY:
FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **104B 123**

NATIONAL MINERAL INVENTORY:

NAME(S): **ZIPPA**, ZIP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11W
BC MAP:
LATITUDE: 56 39 12 N
LONGITUDE: 131 18 36 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Nepheline syenite intrusion forms the peak of Zippa Mountain. See also Iskut Wollastonite (104B 384).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6281183
EASTING: 358385

COMMODITIES: Nepheline Syenite, Feldspar, Titanium

MINERALS
SIGNIFICANT: Nepheline, K-Feldspar, Magnetite, Titanite
ASSOCIATED: Garnet, Biotite, Orthoclase, Albite, Titanite, Sphene
ALTERATION: Garnet
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Magmatic, Industrial Min.
TYPE: R13 Nepheline syenite
DIMENSION: 4800 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Intrusion is about 4.8 kilometres long.

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Nepheline Syenite
Orthoclase Porphyry
Syenite
Carbonate

HOSTROCK COMMENTS: Zippa Mountain pluton.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The peak of Zippa Mountain is comprised of a nepheline syenite intrusion (Zippa Mountain pluton of Triassic age) that is nearly 4.8 kilometres long. It is composed of dark grey feldspar phenocrysts in a matrix of white mica with altered orthoclase, minor alibte, titanite, biotite and a yellowish brown garnet.

In some places the porphyritic texture is not pronounced and the rock is nearly equigranular and somewhat gneissic. A thin section of this material showed 70 per cent orthoclase with some microperthite, 10 per cent nephelite (nepheline) and considerable amounts of biotite, brown garnet and magnetite (Geological Survey of Canada Memoir 246, page 51).

This porphyry intrudes Permian and older volcanics and sediments. Near the contact, the porphyry appears dark green and is very difficult to distinguish from the altered country rock. A thin section of one of the contact phases showed it to be comprised mainly of green augite with 10 to 20 per cent interstitial orthoclase and some colorless garnet. Another sample consisted of augite crystals up to 2.5 centimetres in length, about 10 per cent titanite (sphene) and a matrix of 20 to 50 per cent orthoclase (Geological Survey of Canada Memoir 246, page 51).

In 1987, samples from the nepheline syenite were described as consisting of 95 per cent potassium feldspar, which were tabular crystals averaging about 10 millimetres in length, and about 5 per cent augite. Another sample of the intrusive hosted prismatic to acicular nepheline with no visible sulphides (Assessment Report 16954).

See Iskut Wollastonite (104B 384) for a description of associated carbonates with wollastonite deposits.

BIBLIOGRAPHY

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EMPR OF 1987-17, p. 93; 1991-10
GSC MAP 9-1957; 311A; 1418A
GSC MEM *246, p. 51
GSC P 89-1E, pp. 145-154
GCNL #29 (Feb.11), #55 (Mar.19), 1998
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/03 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 124**

NATIONAL MINERAL INVENTORY:

NAME(S): **4-J GOLD**, JOHN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 17 55 N
LONGITUDE: 130 07 15 W
ELEVATION: 1550 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 2.5 kilometres south of Frank Mackie Glacier. Identified from Assessment Report 12387.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6239879
EASTING: 430638

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Tetrahedrite Pyrite
ALTERATION: Sericite Pyrite Carbonate Quartz Limonite
ALTERATION TYPE: Sericitic Pyrite Carbonate Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

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

LITHOLOGY: Sericite Schist
Black Argillite
Volcaniclastic
Chlorite Feldspar Porphyry
Feldspar Porphyry Dike
Andesitic Tuff

HOSTROCK COMMENTS: Feldspar porphyry intrusion of unknown age intrude sediments and volcanics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
GRADE:
COMMENTS: Country rock is altered to sericite schist.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1980
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	39.5000	Grams per tonne
Gold	7.3000	Grams per tonne

REFERENCE: Assessment Report 12387.

CAPSULE GEOLOGY

The area is underlain by rocks of the Middle Jurassic Salmon River Formation, Hazelton Group. The occurrence area is comprised of black argillite, conglomerate, greywacke, andesitic tuffs, and volcaniclastics. Bedding attitudes generally vary from north to northeast with steep to moderate western dips. The sediments and volcanics are intruded by two distinct phases of intrusive rocks. The older intrusive, a chloritic feldspar porphyry occurs as plugs and sills, and is generally in contact with the volcanic rocks. The younger intrusives, light green, 1 to 3 metre wide fine-grained hornblende-feldspar porphyry dykes, cut all the other rock types and exhibit a consistent northwest trend.

A zone of alteration from 10 to 50 metres in width extends hundreds of metres intermittently in a north-south direction. The zone consists of volcaniclastics and feldspar porphyry hydrothermally altered to carbonate-quartz-sericite-pyrite-limonite. This type of hydrothermal action is represented in the argillites as abundant hair-

CAPSULE GEOLOGY

line limonite-quartz-carbonate veins.
Two samples of sericite schist were taken in a zone of sericite-pyrite alteration: a tetrahedrite rich sample contained 7.30 grams per tonne gold and 39.5 grams per tonne silver; a pyrite rich sample contained 2.20 grams per tonne gold and 25.5 grams per tonne silver (Assessment Report 12387).

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EMPR ASS RPT *12387, *14386
EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102; 1987, pp. 199-209
EMPR OF 1987-22; 1988-4
EMPR BULL 63
EMPR EXPL 1983-520; 1986-C438
EMPR PF (*Prospectus - Wedgewood Resources Ltd., 1988)
GSC MAP 9-1957; 1418A
GCNL #36, 1985
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. (Stewart-Sulphurets-Iskut Compilation, Dec. 1988, Showing No. B78)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/08/15 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 125**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHRIS**, ANNE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W 104B07E
BC MAP:
LATITUDE: 56 26 45 N
LONGITUDE: 130 29 57 W
ELEVATION: 457 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6256709
EASTING: 407584

COMMODITIES: Iron, Copper, Silver, Gold, Magnetite

MINERALS

SIGNIFICANT: Magnetite, Pyrrhotite, Chalcopyrite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Silica, Chlorite, Garnet, Diopside, Magnetite
ALTERATION TYPE: Chloritic, Silicific'n, Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive, Stratiform, Disseminated
CLASSIFICATION: Skarn, Replacement, Industrial Min.
TYPE: K01 Cu skarn; K03 Fe skarn; K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Upper Triassic			Unnamed/Unknown Informal

LITHOLOGY: Limestone
Diorite Dike
Andesite Tuff
Siltstone
Feldspar Porphyry
Sandstone

HOSTROCK COMMENTS: Upper Triassic and younger dykes are related to skarn mineralization.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Chris occurrence is situated within rock of the Upper Triassic Stuhini Group. Lower Jurassic Unuk River Formation rock (Hazelton Group) lies to the immediate east of this occurrence. The Triassic rocks have a uniform north to northwest trend with dips varying from east to west, indicating some degree of folding. The most abundant rock types on the property include fine to medium-grained chloritic andesitic tuff, tuffaceous siltstone, and minor massive greenstone. The tuff is usually thin-bedded to laminated, and has a weak to locally strong foliation usually parallel to bedding. A recrystallized limestone occurs interbedded with the tuff and appears laminated as a result of shearing. Feldspathic sandstone occurs interbedded with the tuffaceous units and feldspar porphyry also occurs as a conformable sill or flow. Minor diorite dykes and offshoots from the Triassic and younger "Max" diorite body cut the property rocks. The "Max" diorite occurs over 2 kilometres to the west and is associated with the Max (104B 013) iron deposit.

Mineralization consists of massive magnetite and pyrrhotite, with chalcopyrite occurring in one to three limestone horizons. Magnetite occurs as layers in relatively pure limestone, whereas the sulphides occur in thin beds of green chloritic limestone that have almost completely been replaced. Chalcopyrite occurs as streaks and disseminations in massive magnetite and pyrrhotite, and locally in commonly siliceous tuff units that underlie massive sulphide layers.

All rock units have been moderately chloritized. Only minor development of skarn silicates occurred, with garnet and diopside occurring erratically as scattered grains and masses in the magnetite or sulphide rich limestone host. Locally, fine-grained silica occurs in tuff. Quartz veins and quartz cemented breccia are common in some fault zones.

CAPSULE GEOLOGY

A 1988 rock sample (character unknown) assayed 249 grams per tonne silver. Other rock samples contained as much as 0.37 grams per tonne gold. Stream samples up to 10 grams per tonne gold were also obtained (Personal Communication, Terry Heinrich).

BIBLIOGRAPHY

GSC P 89-1E, pp. 145-154
EMPR OF 1989-10
EMPR FIELDWORK 1988, pp. 241-250
Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing Nos. B49,B64)
EMPR BULL 63
EMPR ASS RPT *9723
EMPR EXPL 1981-101
EMPR PF (Geology Map-1:31250 Scale-Newmont Exploration of Canada Ltd., 1960's)
GSC MAP 9-1957; 1418A; 7780G
PERS COMM (Terry Heinrich, Owner)

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1989/01/23	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104B 126**

NATIONAL MINERAL INVENTORY:

NAME(S): **MCLYMONT**, CAMP, WARRIOR, CENTRAL GRID, MCLYMONT 1, DIRK, GULF, MCLYMONT CREEK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 48 59 N
LONGITUDE: 130 54 37 W
ELEVATION: 666 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located north of the Iskut River, east of McLymont Creek. Location of trenching and diamond drilling on the Camp zone, McLymont 1 claim from Assessment Report 16932.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6298575
EASTING: 383392

COMMODITIES: Gold, Silver, Copper

MINERALS

SIGNIFICANT: Pyrite, Gold, Chalcopyrite, Sphalerite, Galena, Arsenopyrite
ASSOCIATED: Quartz, Ankerite, Barite
ALTERATION: Carbonate
ALTERATION TYPE: Silicific'n, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Porphyry, Hydrothermal, Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins; L04 Porphyry Cu ± Mo ± Au
I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Regular
MODIFIER: Other
COMMENTS: Mineralied quartz-pyrite veins trend northwest between 120 to 140 degrees. Modifier is lenticular.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Unnamed/Unknown Informal
Paleozoic			Stikine Assemblage

LITHOLOGY: Granite, Quartz Syenite, Quartz Porphyry

HOSTROCK COMMENTS: Quartz-rich granite intrusion is of Jurassic(?) age and may be related to syenitic plutons (Grove, 1987).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine
METAMORPHIC TYPE: Contact, Regional
METAMORPHIC RELATIONSHIP:
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	9.5800	Grams per tonne
Gold	18.1000	Grams per tonne

COMMENTS: 7.1 metre sample from DDH 87-10, interval 58.4 to 65.5 metres.
REFERENCE: Assessment Report 16932.

CAPSULE GEOLOGY

The Camp Zone of the McLymont Creek property (McLymont 3 claim) i underlain by Mississippian and Permian sediments and volcanics of the Stikine Assemblage. The Mississippian package structurally overlies Permian stratigraphy, separated by a northeast trending steeply dipping reverse or thrust fault. The Mississippian is a thin bedded clastic marine succession comprising coarse crinoidal limestone, siltstone, sandstone, turbidites, lesser chert, and polymictic conglomerate. Permian(?) stratigraphy consists of hornblende-plagio-

CAPSULE GEOLOGY

clase porphyritic maroon andesite breccia flows, maroon lahar, lapilli tuff, and associated volcanic sediments. A Jurassic quartz rich granite pluton intrudes the stratified rocks and occurs as dykes along pervasive northeast trending faults.

In the central part of the property are numerous quartz-pyrite veins in the quartz-rich granite. The walls of the veins are enriched by k-feldspar. These auriferous quartz-pyrite veins are cut by a series of en echelon ankerite vein swarms that are generally oriented northwest and northeast. They are essentially ubiquitous throughout the northern parts of the claim group and are considered as late replacement veins formed along fractures in both the country rock and intrusive granite. Selected pyrite samples from several of these veins have returned good values in gold. In 1982, a sample taken from an ankerite-barite vein in the main grid area which contained pyrite and traces of chalcopyrite with arsenopyrite assayed 0.2 grams per tonne gold (Assessment Report 10418).

The quartz-pyrite-chalcopyrite veins in granite have been localized along 120 to 140 degree trending fractures in dominantly quartz-rich intrusive rock. These veins are concentrated near the centre of the claims, in the Camp zone, and are lenticular sub-parallel swarms which are traceable over lengths of up to 500 metres. Mineralization in these veins comprises mainly quartz, pyrite, some chalcopyrite, minor sphalerite, galena and scattered free gold. Native gold occurs in drill core from veins located mainly on the the McLymont 1 claim.

The geological setting appears to be porphyry-related and the mineralization appears to be young with pyrite, chalcopyrite and free gold superimposed on earlier sphalerite-galena mineralization.

In 1987, six 1.0 metre samples from Trench 1 averaged 3.5 grams per tonne gold. Another six 1.0 metre samples from Trench 2 averaged 2.4 grams per tonne gold (Assessment Report 16932). A 7.1 metre sample from drill hole 87-10 assayed 18.1 grams per tonne gold (Gulf International Minerals Ltd., McLymont Project, 1988 Information Circular).

In 1982, several grab samples taken from quartz-pyrite-chalcopyrite pods in veins and shear zones within the main grid area gave good values in gold, silver and copper. One sample assayed 17.04 grams per tonne gold, 116.23 grams per tonne silver with 0.34 per cent copper and another assayed 12.45 grams per tonne gold, 23.0 grams per tonne silver and 0.79 per cent copper (Assessment Report 10418).

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EMPR OF 1989-2
EMPR PF (Yeager, D.A. and Ikona, C.K. (1987): *Geological Report on the McLymont Claim Group, Feb. 1987 in Statement of Material Facts #70/87 for Gulf International Minerals Ltd., May 14, 1987; (1988): *Gulf International Minerals, McLymont Project, 1988 Information Circular; Gulf International Minerals Ltd. Progress Report #4, 1987)
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GCNL #110,#217, 1986; #110,#217, 1987; #45,#107,#151,#159,#181,#137, #138, 1988
NW PROSPECTOR Aug/Sept 1988 p.19
PR REL Gulf International Minerals Ltd., Nov.6, 1986; Jun.8,Jul.16, Sept.15,Oct.28, 1987; Aug.4,*Sept.19,Oct.4,5, 1988
V STOCKWATCH Jun.9,Oct.28,Dec.4, 1987
WWW http://www.infomine.com/
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Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B5)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/12/05 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 127**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOODOO DISCOVERY**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B14W
BC MAP:
LATITUDE: 56 49 05 N
LONGITUDE: 131 19 36 W
ELEVATION: 1225 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located immediately to the north of Hoodoo Mountain, north of the Iskut River.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6299547
EASTING: 357987

COMMODITIES: Silver

MINERALS

SIGNIFICANT: Pyrite Argentite Pyrargyrite Cinnabar Bornite
ALTERATION: Silica Sericite Carbonate
ALTERATION TYPE: Sericitic Silicific'n Carbonate Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au H02 Hot spring Hg

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Felsic Pyroclastic

HOSTROCK COMMENTS: Felsic pyroclastics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks
METAMORPHIC TYPE: Contact Regional RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Near contact between Coast Crystalline-Intermontane belts.

INVENTORY

ORE ZONE: VEINS
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1984
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	43.2000	Grams per tonne

COMMENTS: Fractured filled argentiferous veins.
REFERENCE: Assessment Report 12614.

CAPSULE GEOLOGY

The Hoodoo occurrence is underlain by a sequence of mafic to felsic volcanics, primarily pyroclastic in character. The volcanic rocks have been subsequently intruded by a gabbroic body. Late intrusive mafic dykes related to recent volcanism in the area have intruded all rock types.

The volcanics trend approximately west-northwest, dipping from 70 degrees north to near vertical. The mafic to intermediate volcanics are generally dark grey to black and consist of a series of tuffs and lapilli tuffs with minor agglomeratic horizons. The felsic volcanics are typically pyroclastic in nature, made up predominantly of tuffs, lapilli tuffs and agglomerates. Also recognized are two unique sub-units of finely laminated cherty tuffs and heterolithic tuffs.

The Discovery zone occurs within a silicified felsic volcanic package. Within the Discovery zone, silver values have been reported along a gossanous zone with a known strike length of 150 metres. Argentiferous veins are present as closely spaced extension joint fillings. A 7.4 metre sample in one trench returned 43.2 grams per tonne silver (Assessment Report 12614). Mineralization within pyritized quartz-carbonate alteration zones include argentite, pyrargyrite, cinnabar and bornite (Equity Preservation Corp. 1988).

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GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B6)
V STOCKWATCH Nov.16, 1988, p. 12

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/10/18 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 128**

NATIONAL MINERAL INVENTORY:

NAME(S): **4-J**, JOHN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 18 34 N
LONGITUDE: 130 07 31 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Occurs about 1 kilometre south of Frank Mackie Glacier (Assessment Report 14386).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6241090
EASTING: 430382

COMMODITIES: Zinc, Lead, Silver, Gold, Copper, Antimony

MINERALS

SIGNIFICANT: Sphalerite, Galena, Antimony, Bournonite, Pyrite, Arsenopyrite
ASSOCIATED: Quartz
ALTERATION: Sericite, Silica, Carbonate, Limonite, Pyrite
ALTERATION TYPE: Silicific'n, Sericitic, Carbonate, Oxidation, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform, Massive, Vein, Disseminated
CLASSIFICATION: Exhalative, Syngenetic, Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
J01 Polymetallic manto Ag-Pb-Zn
G04 Besshi massive sulphide Cu-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

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

LITHOLOGY: Black Argillite
Volcaniclastic
Andesitic Tuff
Chlorite Feldspar Porphyry
Feldspar Porphyry Dike

HOSTROCK COMMENTS: Feldspar porphryry intrusions occur as plugs, sills and dykes (age unknown).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	194.7400	Grams per tonne
Gold	1.3000	Grams per tonne
Lead	21.4000	Per cent
Zinc	30.2000	Per cent

COMMENTS: From a 0.28 metre wide sample.
REFERENCE: Property File (Prospectus-Wedgewood Resources Ltd.).

CAPSULE GEOLOGY

The area is underlain by rock of the Middle Jurassic Salmon River Formation, Hazelton Group. The occurrence area is comprised of black argillite, conglomerate, greywacke, andesitic tuffs, and volcaniclastics. Bedding attitudes generally vary from north to northeast with steep to moderate western dips. The sediments and volcanics are intruded by two distinct phases of intrusive rocks. The intrusive, a chloritic feldspar porphyry occurs as plugs and sills, and is generally in contact with the volcanic rocks. The younger intrusives, light green, 1 to 3 metre wide fine-grained hornblende-feldspar porphyry dykes, cut all the other rock types and exhibit a very consistent northwest trend.

CAPSULE GEOLOGY

A zone of alteration from 10 to 50 metres in width extends hundreds of metres intermittently in a north-south direction. The zone consists of volcaniclastics and feldspar porphyry hydrothermally altered to carbonate-quartz-sericite-pyrite-limonite. This type of hydrothermal action is represented in the argillites as abundant hair-line limonite-quartz-carbonate veins.

Mineralization occurs locally within the alteration zone and consists of:

1) Narrow 1 to 10 centimetre wide quartz veins with minor amounts of sphalerite, galena, and bournonite.
2) Narrow 10 to 50 centimetre wide veins and shears of pyrite plus or minus arsenopyrite plus or minus sphalerite.
3) Disseminated pyrite in felsic tuffs and argillite.
4) Black argillite hosting stratiform mineralization in the form of very fine-grained laminar wisps of sphalerite and galena. Antimony minerals such as bournonite are present with galena.

In addition several types of mineralized float occur:

5) Vuggy quartz veins boulders with abundant galena and bournonite or bournonite and sphalerite.
6) Altered argillite cobbles with
   a) sphalerite, bournonite, and antimony,
   b) banded sphalerite and galena,
   c) native antimony.
7) Massive sphalerite-pyrite cobbles.

Stratiform mineralization (type 4) was discovered when a wallrock sample of apparently barren, black argillite assayed 21.4 per cent lead, 30.2 per cent zinc, 194.74 grams per tonne silver, and 1.30 grams per tonne gold over a sample width of 0.28 metres (Prospectus - Wedgewood Resources Ltd.)

Mineralized types 1, 2, and 3 do not contain appreciable amounts of precious and/or base metals. One sample of Type 3 contained a high of 1.6 grams per tonne gold. A sample of Type 1 material contained 0.86 per cent zinc, 0.37 per cent lead, 0.19 per cent arsenic, 0.18 per cent antimony, 6.8 grams per tonne silver and 0.44 grams per tonne gold. Samples of Type 5 (float) contained high silver and gold with one sample containing 1217 grams per tonne silver, 2.12 grams per tonne gold, 48.2 per cent lead, 0.02 per cent zinc, 0.04 per cent arsenic and 3.54 per cent antimony (Assessment Report 14386).

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EMPR EXPL 1983-520; 1986-C438
EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102; 1987, pp. 199-209
EMPR OF 1987-22; 1988-4; 1999-2; 1999-14
EMPR PF (*Prospectus - Wedgewood Resources Ltd., 1988)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
GCNL #36, 1985
WWW http://www.infomine.com/
Equity Preservation Corp. (Stewart-Sulphurets-Iskut Compilation, Dec. 1988, Showing No. B78)

DATE CODED: 1985/08/30 CODED BY: AFW FIELD CHECK: N
DATE REVISED: 1988/08/12 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 129** NATIONAL MINERAL INVENTORY:

NAME(S): **TIDE**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 16 07 N
LONGITUDE: 130 04 27 W
ELEVATION: 850 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located within 1 kilometre east of the Bowser River and about 2 kilometres north of Berendon Glacier (Assessment Reports 11528,13072).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6236495
EASTING: 433473

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS
SIGNIFICANT: Chalcopyrite Galena Sphalerite Pyrite Pyrrhotite
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stockwork Massive Disseminated
CLASSIFICATION: Hydrothermal Epigenetic Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210 +24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Summit Lake Stock
ISOTOPIC AGE:	192 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		

LITHOLOGY: Dacitic Tuff
Andesitic Tuff
Hornblende Granodiorite
Flow Breccia
Lamprophyre Dike

HOSTROCK COMMENTS: Mineralization occurs in volcanics and granodiorite. Age date from Fieldwork 1985, page 218.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	28.1100	Grams per tonne
Gold	19.5500	Grams per tonne

REFERENCE: Assessment Report 13072.

CAPSULE GEOLOGY

The area is composed of ash tuffs with lesser dust and lapilli tuffs and interbedded augite porphyry of the Lower Jurassic Unuk River Formation, Hazelton Group. A north trending extension of Lower Jurassic Summit Lake Stock hornblende granodiorite intrudes the volcanics. This intrusive lobe is from 300 to 500 metres wide, and seperates andesitic volcanics to the west from dacitic volcanics to the east (Open File 1987-22).

Mineralization occurs in the granodiorite and adjacent volcanics for over a 1 kilometre length. Narrow east trending shears, averaging 30 centimetres, cut both granodiorite and volcanics, and are mineralized with quartz, carbonate and/or sulphides including galena, sphalerite and chalcopyrite. A selected sample of sheared granodiorite containing these sulphides, located near the northern limit of mineralization, assayed 19.55 grams per tonne gold and 28.11 grams per

CAPSULE GEOLOGY

tonne silver. Stringers of galena up to 5 centimetres wide, striking at 20 degrees, occur in the volcanics just south of the intrusion. An unmineralized quartz stockwork cuts the volcanics in this area also. A 3 centimetre wide vein of galena and sphalerite was located in the volcanics at the eastern contact of the intrusion near the southern limit of mineralization. A sample contained 170 grams per tonne gold and 1462 grams per tonne silver (Assessment Report 13072).

One diamond drill hole was drilled in 1986 targetting the quartz stockwork. The hole cut mainly flow breccia containing fragments of andesitic and black tuff. Lamprophyre dykes were also encountered. The breccia is sparsely mineralized with pyrite, pyrrhotite, chalcopyrite and minor sphalerite. No significant assays were obtained (Assessment Report 15626).

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EMPR ASS RPT 8656, 9687, 11528, *13072, *15410, *15626, 17894, 20771
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EMPR EXPL 1980-465; 1981-90; 1983-521; 1984-385; 1986-375
EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102
EMPR OF 1987-22
GSC MAP 9-1957; 307A; 315A; 1418A
GSC MEM 175
GSC P 89-1E, pp. 145-154
GCNL #179, 1982; #70,#122, 1984
N MINER Mar.4, 1982; Apr.12, 1984
WWW http://www.infomine.com/
Equity Preservation Corp. (Stewart-Sulphurets-Iskut Compilation, Dec. 1988, Showing No. B82)

DATE CODED: 1985/08/29 CODED BY: AFW FIELD CHECK: N
DATE REVISED: 1987/07/25 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 130**

NATIONAL MINERAL INVENTORY:

NAME(S): **HEATHER VEIN**, HOODOO WEST 2

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B14W
BC MAP:
LATITUDE: 56 47 09 N
LONGITUDE: 131 23 07 W
ELEVATION: 990 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the western side of Hoodoo Glacier between Hoodoo Mountain and Surprise Mountain, to the southeast. Heather vein location (Assessment Report 12220).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6296084
EASTING: 354285

COMMODITIES: Silver, Gold, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Galena, Sphalerite, Tetrahedrite, Arsenopyrite, Chalcopyrite, Pyrite
ASSOCIATED: Carbonate, Quartz
ALTERATION: Silica, Carbonate, Pyrite
ALTERATION TYPE: Silicific'n, Carbonate, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary			Coast Plutonic Complex
Permian-Triassic			Stikine Assemblage

LITHOLOGY: Quartz Monzonite
Pyroclastic
Hornfels
Volcanic

HOSTROCK COMMENTS: Fractured and hornfelsed volcanics and volcaniclastics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist, Hornfels
COMMENTS: Near boundary between Coast Crystalline-Intermontane belts.

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1983
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	1698.0000	Grams per tonne
Gold	12.7500	Grams per tonne

COMMENTS: Sample from quartz-carbonate vein.
REFERENCE: Assessment Report 12220.

CAPSULE GEOLOGY

The Hoodoo West occurrence is situated in an area where numerous small plutons are separated by Paleozoic to Mesozoic stratified rocks. The property is underlain by both intrusive and stratified rocks, with areas to the south and west becoming dominantly intrusive, while stratified rocks continue to the northeast. Locally, three groups of bedded rocks have been recognized, all of which have been cut by intrusives. The oldest rocks consist of schistose basaltic to rhyolite pyroclastics, sediments, and limestones. The second unit is made up predominantly of thinly-bedded cherts with minor siltstone. Quartz-pyrite fracture fillings do occur within this unit. The third unit consists of well-bedded coarse to fine volcaniclastics, sediments, and possibly minor flows. Intrusives noted include quartz monzonite, biotite granodiorite, hornblendite, fine-grained feldspar porphyry diorite, and a quartz-eye felsite.

CAPSULE GEOLOGY

Mineralization occurs within quartz-carbonate veins. These veins consist mainly of fault and fracture infillings and host disseminated galena, sphalerite, tetrahedrite, and arsenopyrite. Silver assays average about 6.9 grams per tonne and can range up to 1698 grams per tonne. Gold assays range up to a maximum of 12.75 grams per tonne. (Assessment Report 12220)

Contact mineralization occurs as small areas of hornfelsing and pyritization within the volcanic rocks peripheral to the intrusives. These zones vary from 1 to 100 metres across and trend northwest. Pyritiferous samples from the contact zone range from 3.0 to 100.0 grams per tonne silver (Assessment Report 12220).

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GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B7)
V STOCKWATCH Nov.16, 1988, p. 12
EMPR ASS RPT *12220
EMPR EXPL 1983-529
GSC MEM 246
GSC MAP 9-1957; 311A; 1418A

DATE CODED: 1985/10/09 CODED BY: AFW FIELD CHECK: N
DATE REVISED: 1988/10/18 REVISED BY: JNR FIELD CHECK: N

MINFILE NUMBER: **104B 131**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRONSON EAST**, HEMLO WEST 5-6, GOSSAN 14-15, BRONSON CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 37 33 N
LONGITUDE: 130 58 15 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Hemlo West No.'s 5 and 6 claims are located south of the Iskut River between Bronson Glacier tongue and Snippaker Creek, location from Assessment Report 11307, Figure 5.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6277474
EASTING: 379087

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

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

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
G04 Besshi massive sulphide Cu-Zn
I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Tuffaceous Siltstone
Argillite
Tuff
Pyroclastic
Shale
Greywacke
Granodiorite
Hornblende Diorite

HOSTROCK COMMENTS: Stratified rocks may be correlative with the Hazelton Group or, in part, with the upper members of the Stuhini Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks, Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1983
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	61.3600	Grams per tonne
Gold	7.4000	Grams per tonne
Copper	0.2700	Per cent
Lead	3.3800	Per cent
Zinc	1.3300	Per cent

COMMENTS: Grab sample from mineralized metasediments.
REFERENCE: Assessment Report 11307.

CAPSULE GEOLOGY

The area is underlain by an undivided group of sedimentary and volcanic rocks of Upper Triassic to Jurassic age, which are intruded by Mesozoic marginal phases of the Coast Plutonic Complex.

The stratified rocks are comprised of submarine to sub-aerial fragmental volcanic rocks that are interlayered with a sequence of argillite, banded siltstone, greywacke, conglomerate and minor lime-stone. Most of these rocks are thought to be correlated to the Lower

CAPSULE GEOLOGY

Jurassic Hazelton Group, Unuk River Formation, however, some may be related to the upper members of the Upper Triassic Stuhini Group.

Structurally, the rocks have a general northwest trend and have been regionally metamorphosed to the greenschist facies. The rocks are strongly deformed and are cut by numerous north to northeast trending faults and fractures.

The property is underlain by an interbedded sequence of southwest dipping sedimentary and pyroclastic rocks. The sedimentary rocks are characterized by thinly laminated grey to brown siltstones, shales and 1 to 3 metre wide beds of greywacke. Higher in the succession, the sequence is characterized by tuffs and lapilli tuffs of intermediate to mafic composition. Numerous granodiorite and lesser hornblende and aplite dyke-like apophyses of the Coast Plutonic Complex intrude both the siltstone and pyroclastic units. Alteration within the volcano-sedimentary sequence consists of local silicification and biotization adjacent to the intrusives as well as quartz and quartz-calcite veining, which are concordant to bedding, also related to the intrusives.

Mineralization in the Bronson East area consists of randomly oriented, discontinuous 0.1 to 1.0 metre wide veins and veinlets of quartz, pyrite, sphalerite, galena and chalcopyrite that infill fractures in tuffaceous siltstones and argillites. At the Bronson East showing, a 1 metre wide, northwest trending, massive sulphide vein exposed in a creek bed assayed 6.9 grams per tonne gold, 29.1 grams per tonne silver, 21.50 per cent zinc and 0.38 per cent copper (Assessment Report 16891).

Cathedral Gold Corp., Imperial Metals Inc. and Ecstall Mining Corporation hold interest in the property.

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EMPR PF (Graf, C.W., (1982): Report on Claims in Snippaker Creek area of British Columbia for Active Mineral Explorations Ltd., December 1982; Peterson, D.B., (1987): Report on Gossan Gold Project, Liard Mining Division, Northwestern British Columbia, for Western Canadian Mining Corporation, November 1987; Ecstall Mining Corporation Website (Nov. 1999): Bronson Creek Area, 2 p.)
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
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GCNL Dec.29, 1986
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WWW http://www.ecstall.com
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988

DATE CODED: 1987/05/05 CODED BY: AFW FIELD CHECK: N
DATE REVISED: 1988/10/30 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 132**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEND**, CAMP, SUMMIT

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 14 44 N
LONGITUDE: 130 04 07 W
ELEVATION: 792 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Discovered by prospecting along roadcuts in spring of 1983. Located from Map 1-20, Assessment Report 13593. Lies near Granduc Mill Site, 3 kilometres northeast of Scottie Gold deposit (104B 034).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6233923
EASTING: 433778

COMMODITIES: Gold, Silver, Copper, Iron, Lead, Zinc

MINERALS

SIGNIFICANT: Pyrrhotite, Pyrite, Chalcopyrite, Arsenopyrite, Galena, Sphalerite
ASSOCIATED: Quartz, Calcite
ALTERATION: Chlorite, Calcite, Silica, Epidote, Sericite
ALTERATION TYPE: Propylitic, Potassic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia
CLASSIFICATION: Epigenetic, Hydrothermal, Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Faulted, Sheared
DIMENSION: 0060 x 0001 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Vein averages 1.5 metres in width over 60.0 metres length.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Lapilli Tuff, Argillite, Siltstone, Lamprophyre Dike, Dioritic Dike, Granodiorite

HOSTROCK COMMENTS: Isotopic Age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP:
GRADE: Hornfels, Greenschist

INVENTORY

ORE ZONE: BEND
REPORT ON: Y

CATEGORY: Inferred
YEAR: 1984
QUANTITY: 9900 Tonnes

COMMODITY	GRADE	
Silver	51.4000	Grams per tonne
Gold	61.8100	Grams per tonne

COMMENTS: Drill inferred in situ tonnage of a vein segment assuming a 15 metre distance of influence for drill results.
REFERENCE: Assessment Report 13593.

CAPSULE GEOLOGY

The Bend occurrence lies near the Granduc mill site, 3 kilometres northeast of the Scottie Gold deposit (104B034). It is hosted by andesite lapilli tuff of the Lower Jurassic Unuk River Formation (Hazelton Group). These are overlain by epiclastic sediments, mostly siltstone and lesser argillite and andesite crystal

CAPSULE GEOLOGY

tuff. The Lower Jurassic Summit Lake Stock, comprised of hornblende quartz monzonite and/or hornblende granodiorite, intrudes the rocks to the west. All rocks are cut by lamprophyre and microdiorite dykes.

The strata strike north-northwest and dip from vertical to 50 degrees east and 70 degrees west. Northeast trending faults, one the mineralized Bend fault, have an average strike of 060 degrees and dip 70 degrees north. Propylitic alteration is widespread in the volcanics and sediments and K-feldspar alteration occurs locally in the granodiorite and andesite.

The Bend vein is a semi-massive sulphide vein, occupying part of the Bend fault. Mineralization consists of pyrrhotite and pyrite with minor chalcopyrite and arsenopyrite, and traces of sphalerite and galena. Gangue minerals include black chlorite, calcite, silica and epidote.

The vein, which is exposed in a trench by the roadside, 100 metres east of the granodiorite contact, measures 60 metres long and averages 1.5 metres wide. Late stage faulting has brecciated the footwall of the vein and minor related shears have cut the vein into steep west-plunging segments. Propylitic alteration of the andesite lapilli tuff in the hanging wall of the vein is moderate to intense over an average width of 30 metres.

The western end of the Bend vein contains 16.0 metres strike length of 22.69 grams per tonne gold and 67.52 grams per tonne silver over an average 2.0 metre true width. A diamond-drill hole (SJV-7) below the segment intersected 70.65 grams per tonne gold and 47.8 grams per tonne silver over a true width of 4.17 metres. The uncut, drill inferred, in-situ tonnage of a vein segment is 9900 tonnes of 61.81 grams per tonne gold and 51.4 grams per tonne silver, assuming a 15 metre distance of influence for drill results. (Assessment Report 13593).

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EMPR ASS RPT *13593
EMPR OF 1987-22
GSC MAP 9-1957; 1418A
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GSC P 89-1E, pp. 145-154
Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B85)

DATE CODED: 1985/05/09 CODED BY: DJA FIELD CHECK: Y
DATE REVISED: 1988/07/29 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 133** NATIONAL MINERAL INVENTORY:

NAME(S): **BLUEBERRY**, SUMMIT

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 14 13 N
LONGITUDE: 130 04 29 W
ELEVATION: 870 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Discovered in 1983. Location of vein from Map 1-1, Assessment Report 13593. Lies south of the Granduc Mine site, 2.5 kilometres northeast of the Scottie Gold deposit (104B 034).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6232971
EASTING: 433384

COMMODITIES: Gold Silver Copper

MINERALS
SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Chlorite Sericite Pyrite
ALTERATION TYPE: Propylitic Potassic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Sheared
DIMENSION: 0070 x 0001 Metres STRIKE/DIP: 023/52W TREND/PLUNGE:
COMMENTS: Dimension and attitude of Blueberry Vein.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Lapilli Tuff
Siltstone
Argillite
Lamprophyre Dike
Dioritic Dike
Granodiorite

HOSTROCK COMMENTS: Isotopic Age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	21.8300	Grams per tonne
Gold	26.5600	Grams per tonne

COMMENTS: 1.59 metre intersection.
REFERENCE: Assessment Report 13593.

CAPSULE GEOLOGY

The Blueberry occurrence lies south of the Granduc mine site, 2.5 kilometres northeast of the Scottie Gold deposit (104B 034). It is hosted by andesite lapilli tuff of the Lower Jurassic Unuk River Formation, Hazelton Group. These are overlain by epiclastic sediments, mostly siltstone and lesser argillite and andesite crystal tuff. The Lower Jurassic Summit Lake Stock, comprised of hornblende quartz monzonite and/or hornblende granodiorite, intrudes the rocks to the west. All rocks are cut by lamprophyre and microdiorite dykes.

CAPSULE GEOLOGY

The strata strike north-northwest and dip from vertical to 50 degrees east and 70 degrees west. Propylitic alteration is widespread in the volcanics and sediments and K-feldspar alteration occurs locally in the granodiorite and andesite.

The Bluberry vein is a 0.2 to 2.0 metre wide, 70 metre long massive sulphide vein, emplaced in a minor shear. The vein strikes 023 degrees and dips 52 degrees northwest. Mineralization consists of pyrrhotite-pyrite and minor chalcopyrite, with black chlorite gangue.

A diamond-drill hole (SJV-11) intersected 1.59 metres of 26.56 grams per tonne gold and 21.83 grams per tonne silver (Assessment Report 13593).

Several small pyrrhotite-pyrite-chlorite north-trending quartz veins occur along the Granduc road for a distance of 500 metres, west of the Blueberry vein.

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EMPR OF 1987-22
GSC MAP 9-1957; 1418A
Today's Market Line Feb. 27, 1984
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Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B85)

DATE CODED: 1985/05/10 CODED BY: DJA FIELD CHECK: Y
DATE REVISED: 1988/07/29 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 134**

NATIONAL MINERAL INVENTORY:

NAME(S): **DC**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 20 42 N
LONGITUDE: 130 20 24 W
ELEVATION: 1340 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located near headwaters of Divelbliss Creek. Identified from Newmont Exploration Ltd., Geology Map.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6245284
EASTING: 417176

COMMODITIES: Lead

MINERALS
SIGNIFICANT: Galena
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Volcanic Breccia
Conglomerate
Sandstone
Siltstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Galena is reported to occur near the headwaters of Divelbliss Creek (Newmont Map). The area is underlain by Lower Jurassic Unuk River Formation rock of the Hazelton Group. The formation is composed primarily of thick-bedded epiclastic volcanic rocks and lithic tuffs with closely associated pillow lavas, carbonate lenses and thick-bedded siltstones.

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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/06/20
DATE REVISED: / /

CODED BY: GJP
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **104B 135**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAKE RIDGE WEST**, GOSSAN 5

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 33 02 N
LONGITUDE: 130 53 20 W
ELEVATION: 1830 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located south of the confluence of Snippaker Creek and the Iskut River, Figure 2, Assessment Report 11332, Part 1.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6268955
EASTING: 383883

COMMODITIES: Silver, Lead, Zinc, Gold, Copper

MINERALS

SIGNIFICANT: Arsenopyrite, Galena, Sphalerite, Chalcopyrite, Pyrite
ASSOCIATED: Quartz, Scorodite
ALTERATION: Epidote, Chlorite, Calcite, Pyrite, Silica
ALTERATION TYPE: Propylitic, Silicific'n, Epidote, Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic, Hydrothermal, Igneous-contact
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Andesite, Breccia, Volcanic Flow, Argillite, Siltstone, Orthoclase Porphyry

HOSTROCK COMMENTS: Orthoclase porphyry intrudes an undivided sequence of Triassic to Jurassic volcanics and sediments.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks, Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1983

COMMODITY	GRADE	
Silver	62.4000	Grams per tonne
Gold	0.2800	Grams per tonne
Copper	0.0068	Per cent
Lead	1.0200	Per cent
Zinc	1.4600	Per cent

COMMENTS: Sample R-4708 from arsenopyrite quartz vein.
REFERENCE: Assessment Report 11332.

CAPSULE GEOLOGY

Jurassic to Triassic Stuhini Group or Hazelton Group (Unuk River Formation) volcanic flows, tuffs, andesite, breccia and sediments consisting of calcareous argillites and siltstones are intruded by a Mesozoic orthoclase porphyry stock related to the Coast Plutonic Complex. The orthoclase porphry is described as predominantly a porphyritic hypabyssal intrusive rock ranging in composition from granodiorite or quartz monzonite to syenite. Where unaltered, the rock is dark green with orthoclase phenocrysts in a matrix of finely divided chlorite, plagioclase, orthoclase and sericite.

Chlorite is very common as both a diagenetic and a metamorphic

CAPSULE GEOLOGY

mineral in the volcanics, epiclastic sediments and marginal to fracture zones within the intrusive.

Propylitic alteration consisting of chlorite, epidote, calcite and pyrite is extensively developed. The prominent propylitic alteration in the Lake Ridge area is in or near the orthoclase porphyry, in which 30 to 45 per cent of the orthoclase phenocrysts have been replaced by epidote and the groundmass contains epidote, chlorite and calcite. Much of the volcanic rock contains epidote, but this is considered to be a metamorphic product.

Silicification, in the form of penetrative quartz veining and pervasive silica flooding is well developed in the Lake Ridge West area and on the Nee claims (104B 032).

The Lake Ridge West occurrence consists of narrow arsenopyrite-galena-quartz veins in silicified shears which show a northeast trend. These small arsenopyrite-galena quartz veins range from 10 to 25 centimetres in width and may contain sphalerite, pyrite or chalcopyrite. The veins weather a distinctive green color due to the presence of scorodite (FeAsO4). The arsenopyrite rich veins contain between 8.57 to 27.45 grams per tonne gold and 143.65 grams per tonne silver (Assessment Report 16892).

In 1983, a sample taken from an arsenopyrite-quartz vein on the Lake Ridge West showing assayed 0.28 grams per tonne gold, 62.4 grams per tonne silver, 1.02 per cent lead, 1.46 per cent zinc, 0.0068 per cent copper (Assessment Report 11332, part 1).

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DATE CODED: 1988/06/20 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/10/20 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 136**
NATIONAL MINERAL INVENTORY: 104B1 Au2

NAME(S): **PROVINCE WEST**, BIG MISSOURI

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 06 47 N
LONGITUDE: 130 01 38 W
ELEVATION: 1036 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Symbol #52, Minister of Mines Open File, 1987-22.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6219138
EASTING: 436123

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS
SIGNIFICANT: Pyrite, Sphalerite, Galena, Chalcopyrite
ASSOCIATED: Quartz, Carbonate
ALTERATION: Sericite, Silica, Chlorite
ALTERATION TYPE: Sericitic, Silicific'n, Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Podiform, Stratabound, Disseminated
CLASSIFICATION: Hydrothermal, Exhalative, Epigenetic, Syngenetic
TYPE: G07 Subaqueous hot spring Ag-Au
I02 Intrusion-related Au pyrrhotite veins
G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Cherty Tuff
Lapilli Tuff
Andesite
Andesite Agglomerate

HOSTROCK COMMENTS: Isotopic Age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Province West zone lies 200 metres above the underground workings of the old Big Missouri Mine and occurs within the Upper Horizon which consists of several cherty tuff layers with disseminated sulphides to semi-massive sulphide lenses. The zone lies within south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff, with interbedded cherty tuff of the Lower Jurassic Unuk River Formation. (See Big Missouri - 104B 046 for enhanced geology).

The Province West zone lies 200 metres west of and is much smaller than the Province East zone (see 104B 147). It consists of beds of mixed cherty tuff and sericitized andesite. Pyrite, sphalerite, galena, and minor chalcopyrite occur as patches, thin lenses, and disseminated grains within the bleached andesite-chert tuff zone.

The Province West zone likely contains reserve grades similar to the Province East zone, however the tonnage potential is quite small.

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DATE CODED: 1988/01/04 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/08/18 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 137**

NATIONAL MINERAL INVENTORY:

NAME(S): **MITRE**, HAPPY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 17 35 N
LONGITUDE: 130 03 22 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: An adit driven on a quartz vein, that contains galena, near the northwest corner of the Happy claims (Assessment Report 12967). The Happy claims were located along the east bank of the Bowser River. Open File Map 1987-22 shows location of Mitre showing.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6239198
EASTING: 434633

COMMODITIES: Lead

MINERALS
SIGNIFICANT: Galena
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Hazelton	Unuk River	

LITHOLOGY: Carbonaceous Argillite
Siltstone
Sandstone
Conglomerate

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This occurrence is located adjacent to the east bank of the Bowser River approximately 2 kilometres north of the Tide Lake Flats Airstrip (Open File 1987-22).

The region consists of a north-northwest trending belt of folded volcanic rock which contains a thick sedimentary sequence infolded along a synclinal axis. This belt is part of the Lower Jurassic Unuk River Formation, Hazelton Group. The deposit occurs within the Upper Siltstone Member.

The property is underlain by carbonaceous thin-bedded argillite, siltstone, and sandstone with local basal conglomerate. A massive quartz vein, 1.2 metres wide, is exposed on a west facing cliff. Granduc Mine geologists have reported that the vein dips vertically and strikes east. The vein was trenched at the top of the cliff and a 10 metre adit was driven in from the base of the cliff. The total strike length of the vein is 200 metres and it is reported to host minor coarse-grained, disseminated galena. No assay results are available.

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EMPR EXPL 1984-385
EMPR BULL 63
GSC MAP 9-1957; 307A; 315A; 1418A
GSC MEM 175
GSC P 89-1E, pp. 145-154
PERS COMM *D.J. Alldrick

DATE CODED: 1985/03/14 CODED BY: DJA FIELD CHECK: N
DATE REVISED: 1988/08/09 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 138**

NATIONAL MINERAL INVENTORY:

NAME(S): **KHYBER PASS**, GOSSAN, GOSSAN 11, A, B, C

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 35 32 N
LONGITUDE: 130 57 37 W
ELEVATION: 1740 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Zone "A" location from Assessment Report 14055, located south of the Iskut River, between Bronson Glacier and Snippaker Creek on the Gossan 11 claim.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6273715
EASTING: 379627

COMMODITIES: Gold, Silver, Copper, Zinc, Lead, Molybdenum

MINERALS

SIGNIFICANT: Pyrite, Sphalerite, Chalcopyrite, Galena, Molybdenite, Arsenopyrite, Hydrozincite
ASSOCIATED: Quartz, Calcite
ALTERATION: Chlorite, Silica, Carbonate, Biotite, Hydrozincite
ALTERATION TYPE: Silicific'n, Chloritic, Carbonate, Biotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated, Stratabound
CLASSIFICATION: Epigenetic, Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
G04 Besshi massive sulphide Cu-Zn
G07 Subaqueous hot spring Ag-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Andesitic Pyroclastic, Volcaniclastic, Tuff, Banded Siltstone, Sediment/Sedimentary, Quartz Feldspar Porphyry

HOSTROCK COMMENTS: Stratified rock may be correlated with the Hazelton Group or, in part, with the upper members of the Stuhini Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks, Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: KYBER PASS
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
YEAR: 1987

COMMODITY	GRADE	
Silver	85.7100	Grams per tonne
Gold	5.8300	Grams per tonne
Copper	0.7100	Per cent
Zinc	1.4200	Per cent

COMMENTS: 1.0 metre intersection from drill hole 87-4.
REFERENCE: Petersen, 1987.

CAPSULE GEOLOGY

The area is underlain by stratified rocks comprised of submarine to sub-aerial fragmental volcanic rocks that are interlayered with sequences of argillite, banded siltstone, greywacke, conglomerate and minor limestone. These rocks are thought to be correlative with the Lower Jurassic Hazelton Group, Unuk River Formation, or in part, with the upper members of the Upper Triassic Stuhini Group.

CAPSULE GEOLOGY

These stratified rocks have been intruded by sub-volcanic and plutonic rocks that range from the Upper Mesozoic to Cenozoic times and are part of the Coast Plutonic Complex. The sequence is regionally metamorphosed to greenschist facies with the intrusion of a diverse suite of intrusive rocks. The altered intermediate to felsic pyroclastics and tuffaceous sedimentary rocks host widespread sulphide mineralization with pyrite and lead-zinc-copper sulphide veins and disseminations with some containing anomalous gold and silver values.

The Kyber Pass zone on the Gossan 11 claim originally consisted of a northeast trending talus geochemical anomaly which was about 600 metres long and 150 metres wide. In 1985, rock chip sampling and trenching over this zone defined three main zones, the "A" zone, which comprises a copper-gold zone, the "B" zone which comprises an arsenic-rich zone, and the "C" zone which hosts high zinc and silver values. Drill hole 85-3, within zone "A", returned significant gold, silver and copper values over its 78 metre length. One sample over 5.2 metres assayed 5.8 grams per tonne gold, 91.2 grams per tonne silver and 0.9 per cent copper. Another sample from this drill hole, over 5.6 metres, assayed 4.11 grams per tonne gold, 222.1 grams per tonne silver and 1.74 per cent copper, respectively (Assessment Report 14055).

The stratified bedrock in the property has been divided into three; the lower banded siltstones and tuffs, middle andesitic pyroclastics, and an upper sedimentary sequence. Considerable alteration is apparent with pervasive secondary biotite and a large zone of intense pyrite-sericite alteration superimposed on the banded siltstones and tuffaceous rocks. The sericite-pyrite zone terminates abruptly against the overlying andesitic volcanics.

South of the Kyber Pass zone, in an area of considerable silicification and quartz veining, which appears to be related to a k-feldspar, quartz-rich porphyry intrusive, chlorite, epidote and carbonate alteration is widespread (refer to Pyramid Saddle, 104B 323 and Pyramid Hill, 104B 207).

Sphalerite occurs as disseminations in some of the andesitic volcaniclastics where it is associated with chlorite-carbonate alteration. Diamond drilling in 1987 in the Kyber Pass zone has intersected sections of massive pyrite with lesser quartz, chalcopyrite, sphalerite and sparce galena, calcite and chlorite. Minor amounts of molybdenite, arsenopyrite and hydrozincite have also been reported. The mineralization occurs within the volcaniclastics and the underlying altered sediments. Assay results from the drill core have been reported as 4.1 to 148.4 grams per tonne silver and between 4.1 to 7.9 grams per tonne gold. Copper assays range from 0.05 to 1.61 per cent zinc values range from 0.21 to 1.42 per cent (Petersen, 1987).

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EMPR EXPL 1983-525-526; 1986-C442-C443
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Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
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Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B30)

DATE CODED: 1986/02/18 CODED BY: DJA FIELD CHECK: N
DATE REVISED: 1988/10/31 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 139**

NATIONAL MINERAL INVENTORY:

NAME(S): **HICKS**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 12 59 N
LONGITUDE: 130 07 55 W
ELEVATION: 1585 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Symbol #13, Open File 1987-22.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6230740
EASTING: 429800

COMMODITIES: Gold Silver Zinc Lead

MINERALS
SIGNIFICANT: Sphalerite Galena Pyrite Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal Epithermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION:
STRIKE/DIP: 100/90
TREND/PLUNGE:
COMMENTS: Showing is a series of narrow massive sulphide veins.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesite Ash Tuff
Andesitic Lapilli Tuff
Andesite Breccia
Tuff
Granodiorite

HOSTROCK COMMENTS: Isotopic Age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Hicks occurrence lies 2 kilometres west of the Scottie Gold deposit (104B 034). It is hosted by volcaniclastic rocks of the middle member of the Lower Jurassic Unuk River Formation of the Hazelton Group. These rocks consist of green andesitic breccia and conglomerate, with thin intercalated volcanic sandstones and tuffaceous bands. The Lower Jurassic Summit Lake Stock, comprised of hornblende quartz monzonite and/or hornblende granodiorite, lies to the north.

A series of sub-parallel narrow veins cut massive andesitic ash tuffs and lapilli tuffs. The veins are vertical, strike 100 degrees, range up to a maximum of 8 centimetres thick, and are composed of massive chocolate-brown coarse-grained sphalerite, with minor associated galena, pyrite, and pyrrhotite. Abundant float boulders of massive pyrrhotite are scattered around in the outcrop area, which is adjacent to a rapidly retreating thin ice-sheet.

No assay results are known.

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EMPR MAP 1956 (Map of the Granduc Area)
EMPR OF 1987-22
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis,

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University of British Columbia (in Property File: 104B 054)

DATE CODED: 1988/07/29 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/07/29 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 140**

NATIONAL MINERAL INVENTORY: 104B1 Ag10

NAME(S): **DAISY**, HI HO SILVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 11 35 N
LONGITUDE: 130 03 27 W
ELEVATION: 880 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Vein location, Assessment Report 12808.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6228070
EASTING: 434377

COMMODITIES: Silver Lead Gold Copper

MINERALS

SIGNIFICANT: Galena Tetrahedrite
COMMENTS: Disseminated.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Folded Fractured

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Salmon River	

LITHOLOGY: Black Argillite
Siltstone
Diabase Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: MAIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1984
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	848.0000	Grams per tonne
Gold	0.2000	Grams per tonne

COMMENTS: One sample only showed any good values, undetermined size of sample.
REFERENCE: Assessment Report 12808.

CAPSULE GEOLOGY

A diabase dyke cuts argillite/siltstones of the Lower Jurassic Salmon River Formation (Hazelton Group). Quartz veins carrying minor disseminated galena and tetrahedrite have precipitated out in the folded and fractured argillites adjacent to the dyke. There are at least three small quartz veins. All show limited strike length, limited tonnage potential, and trace to minor disseminated galena.

One sample only showed any good values, a grab sample of undetermined size assayed 848.0 grams per tonne silver and 0.2 grams per tonne gold.

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EMPR AR 1925-A106
EMPR BULL 58; 63
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut,

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Dec. 1988, (Showing No. B88)

DATE CODED: 1988/05/30 CODED BY: DJA FIELD CHECK: N
DATE REVISED: 1988/08/07 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 141**

NATIONAL MINERAL INVENTORY:

NAME(S): **DAN**, DAN FR. (L.5091), SILVER COIN GROUP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 05 52 N
LONGITUDE: 130 02 17 W
ELEVATION: 913 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the Dan Fraction Crown Grant (Lot 5091) near the northend of the property (Groves, 1981).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6217448
EASTING: 435424

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

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

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded Sheared
DIMENSION: 0036 x 0002 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Quartz vein is 2.1 metres wide believed to persist for 33.5 to 39.5 metres.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210 +24 -14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		

LITHOLOGY: Andesitic Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Andesitic Flow
Andesitic Breccia
Argillite
Siltstone

HOSTROCK COMMENTS: Texas Ck. date is for "Premier" porphyry in Silbak Premier area(Field-work,1985). Unuk River Fm. age date from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Located near western margin of Intermontane Belt.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1930
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	342.8000	Grams per tonne
Gold	12.0000	Grams per tonne

COMMENTS: Across 1.8 metres.
REFERENCE: Groves, 1981.

CAPSULE GEOLOGY

The Dan showing is located on the north end of the Dan Fraction Crown Grant (Lot 5091) south of the Big Missouri deposit (104B 046). The property was explored in 1967 by Granduc Mines

CAPSULE GEOLOGY

Ltd.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline complex and on the east by the Bowser Basin, is part of the volcanic arc assemblage of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes.

The workings on this property consist of several small pits and trenches and a short adit. The 2.1 metre wide mineralized quartz vein is exposed in the main trench hosted in silicified and pyritized andesitic volcanics. A north striking steeply east dipping shear zone occurs to the east and to the west there are several moderately west dipping faults. The vein appears to have been emplaced in a cross fracture in a mineralized zone similiar to the geological setting of the Silbak Premier deposit (104B 054).

The mineralization consists of pyrite, streaks of mixed galena and sphalerite and minor chalcopyrite with quartz and carbonate gangue. The vein is crosscut by narrow quartz veinlets.

It is believed that the vein persists for 33.5 to 39.5 metres from the main trench into a network of quartz stringers mineralized with minor sulphides.

A sample across 1.8 metres from a open cut (location uncertain) assayed 12 grams per tonne gold and 342.8 grams per tonne silver (Groves, 1981).

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EMPR ASS RPT 448
Brown, D.A., (1987) Geological setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (copy in Property File 104B 054)
EMPR PF (*Grove, E.W. (1981) Geological Report on the Silver Coin Claim group, Salmon River District, Northwestern British Columbia)

DATE CODED: 1989/01/24 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: 1989/01/24 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 142**

NATIONAL MINERAL INVENTORY: 104B1 Ag9

NAME(S): **OXEDENTAL**, OCCIDENTAL, OXIDENTAL, OCCEDENTAL, FORTY NINE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 08 44 N
LONGITUDE: 130 02 25 W
ELEVATION: 1210 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of occurrence from Figure 19, Galley (1981).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6222767
EASTING: 435366

COMMODITIES: Silver, Copper, Zinc, Lead, Antimony

MINERALS

SIGNIFICANT: Silver, Pyrite, Chalcopyrite, Sphalerite, Galena, Polybasite, Argentite, Pyrargyrite
ASSOCIATED: Quartz, Calcite, Pyrobitumen
ALTERATION: Pyrite, Sericite
ALTERATION TYPE: Sericitic, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: G04 Besshi massive sulphide Cu-Zn; I05 Polymetallic veins Ag-Pb-Zn±Au; I02 Intrusion-related Au pyrrhotite veins
DIMENSION: 0030 x 0001 Metres
STRIKE/DIP: 110/55S
TREND/PLUNGE:
COMMENTS: Vein or limestone-chert layer is 1.0 metre thick and has been drifted along for 30.0 metres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Tertiary			Portland Canal Dykes

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Tuff, Volcanic Breccia, Siltstone, Argillite, Conglomerate, Granodiorite Dike

HOSTROCK COMMENTS: Isotopic Age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Oxedental occurrence lies east of Salmon River Glacier, on the west slope of Mount Dilworth. Host rocks consist of volcanic breccia and andesite tuff, with interbedded siltstone, argillite and conglomerate of the Lower Jurassic Unuk River Formation, Hazelton Group. The area lies within the Portland Canal dyke swarm, which consists generally of granodiorite/quartz diorite dykes, cutting the volcaniclastics and mineralized veins.

The mineralization occurs in calcite-quartz-sericite-pyrite rich andesite tuffs. Quartz-pyrite, quartz chlorite, and pyrite-carbonaceous veining is extensive. The Oxedental occurrence is a 1.0 metre thick chert-limestone layer or vein which strikes 110 degrees and dips 55 degrees southwest. A drift follows this layer for 30 metres. The layer contains semi-massive to disseminated pyrite, chalcopyrite, sphalerite, galena, polybasite, argentite, pyrargyrite, and native silver. To the south are quartz-pyrite-carbon rich rocks containing bands of pyrite-sphalerite-galena up to 20 centimetres thick.

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Galley, A. (1981): *Volcanic Stratigraphy and Gold-Silver Occurrences on the Big Missouri Claim Group, Stewart, British Columbia, M.Sc. Thesis, University of Western Ontario
CIM SPEC Vol. 37, pp. 202-215
EMPR ASS RPT 2320
GSC P 89-1E, pp. 145-154
Dykes et al: GAC Field Trip "C" Guidebook, Oct.19-21, 1988 (in Property File 104B 046)

DATE CODED: 1987/12/18 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/08/05 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 143**

NATIONAL MINERAL INVENTORY:

NAME(S): **WOLFGANG**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 05 21 N
LONGITUDE: 130 02 10 W
ELEVATION: 843 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the Wolfgang Fr. (L.5526) Crown Grant near center, 1.4 kilometres north of the Indian Mine (104B 031)(Assessment Report 9629).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6216487
EASTING: 435530

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Pyrite
ALTERATION: Carbonate Sericite Chlorite
ALTERATION TYPE: Carbonate Sericitic Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I02 Intrusion-related Au pyrrhotite veins
SHAPE: Tabular
MODIFIER: Folded

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		

LITHOLOGY: Andesite Lapilli Tuff
Dacitic Porphyry Dike
Andesite Flow
Andesite Breccia
Argillite
Siltstone

HOSTROCK COMMENTS: Texas Creek age date from Fieldwork, 1985. Unuk River Formation age date from Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Located at the western margin of the Intermontane Belt.

INVENTORY

ORE ZONE: OUTCROP REPORT ON: N

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

COMMODITY	GRADE	
Silver	7.2000	Grams per tonne
Gold	1.2300	Grams per tonne

COMMENTS: Sample from outcrop, trace values for copper, lead and zinc.
REFERENCE: Assessment Report 9629.

CAPSULE GEOLOGY

The Wolfgang showing is located near the center of the Wolfgang Fraction (L.5526) Crown Grant, 1.4 kilometres north of the Indian Mine (104B 031).

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the volcanic arc assemblage of the Stikinia Terrane.

CAPSULE GEOLOGY

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by Early Jurassic Texas Creek dacitic porphyry dykes.

Exposed in outcrop on the property, andesitic tuffs host sparsely mineralized veins. The tuff is calcareous, chloritized, sericitized and contains minor disseminated pyrite.

A sample from the outcrop assayed 1.23 grams per tonne gold, 7.20 grams per tonne silver and trace amounts of copper, lead and zinc (Assessment Report 9629).

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GSC MEM 175
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Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)

DATE CODED: 1989/01/05 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 144**

NATIONAL MINERAL INVENTORY:

NAME(S): **RAMBLER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 07 19 N
LONGITUDE: 130 01 35 W
ELEVATION: 1112 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Symbol #38, Open File 1987-22.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6220126
EASTING: 436189

COMMODITIES: Lead

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

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Tuff

HOSTROCK COMMENTS: Isotopic age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Rambler occurrence is underlain by andesitic tuff of the Lower Jurassic Unuk River Formation of the Hazelton Group. A quartz vein containing pyrite and minor galena occurs in brecciated tuff.

BIBLIOGRAPHY

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EMPR BULL 58, p. 126; 63
GSC MEM 132; 175, p. 154
EMPR ASS RPT 2320
GSC MAP 9-1957; 1829; 307A; 1418A
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Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)

DATE CODED: 1988/09/30
DATE REVISED: / /
CODED BY: LDJ
REVISED BY:
FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **104B 145**
NATIONAL MINERAL INVENTORY: 104B1 Au6

NAME(S): **A VEIN**, GOOD HOPE, UNICORN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 07 14 N
LONGITUDE: 130 01 05 W
ELEVATION: 1042 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: A Vein location, figure 3, Cochrane, 1974. Located on Good Hope Crown Grant (L. 4538), east of Union Creek.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6219964
EASTING: 436705

COMMODITIES: Gold, Silver, Lead, Zinc

MINERALS
SIGNIFICANT: Pyrite, Sphalerite, Galena, Gold
ASSOCIATED: Quartz
ALTERATION: Sericite, Silica, Pyrite, Carbonate
ALTERATION TYPE: Sericitic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au; I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Sheared
DIMENSION:
STRIKE/DIP: 090/60S
TREND/PLUNGE:

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Lapilli Tuff
Andesite Agglomerate
Cherty Tuff
Lamprophyre Dike

HOSTROCK COMMENTS: Isotopic Age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1974

COMMODITY	GRADE	
Silver	463.0000	Grams per tonne
Gold	4.8000	Grams per tonne

COMMENTS: Composite grab sample along vein.
REFERENCE: Cochrane, 1974.

CAPSULE GEOLOGY

The A Vein, which is located 800 metres north-northeast of the Big Missouri deposit, lies within south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff, with interbedded cherty tuff of the Lower Jurassic Unuk River Formation. (See Big Missouri - 104B 046 for enhanced geology).

The A Vein, which strikes east and dips 60 degrees south, occurs in a 12.2 to 15.2 metre wide shear zone which cross-cuts a north-trending altered zone (see Unity - 104B 044). The occurrence lies immediately west of the north trending Union Creek Fault. The vein is cut by southeast-striking lamprophyre dykes.

Mineralization is erratic and consists of disseminated pyrite, sphalerite, and galena, with reports of visible gold in quartz. A composite grab sample along the vein assayed 4.8 grams per tonne gold

CAPSULE GEOLOGY

and 463 grams per tonne silver (Cochrane, 1974).

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EMPR GEM 1974-331
EMPR EXPL 1975-179,180; 1978-257; 1979-280
EMPR BULL 58, p. 126; 63
EMPR ASS RPT 912, 2320, 5757, 6080, 8788
GSC MEM 132; 175, p. 170
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GSC MAP 9-1957; 1829; 307A; 1418A
EMPR PF (*RPT by D.R. Cochrane (1974): Unicorn Project)
EMPR FIELDWORK 1980, pp. 201-209; 1982, pp. 182-195; 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217,218; 1986, pp. 81-102
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EMR MP CORPFILE (Tournigan Mining Explorations Ltd.)
CIM SPEC. Vol. 37, pp. 202-215
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Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)

DATE CODED: 1987/12/15 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/08/16 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 146** NATIONAL MINERAL INVENTORY: 104B1 Au2

NAME(S): **NORTHSTAR - LINDEBORG**, BUENA VISTA (L.3207)

STATUS: Developed Prospect MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 07 05 N NORTHING: 6219691
LONGITUDE: 130 01 26 W EASTING: 436338
ELEVATION: 1099 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of Lindeborg tunnel, Figure 25, Bulletin 58. Located on Buena Vista Crown Grant (Lot 3207) - (see Big Missouri, 104B 046).

COMMODITIES: Silver Gold Lead Zinc Copper

MINERALS
SIGNIFICANT: Pyrite Sphalerite Galena Chalcopyrite
ALTERATION: Sericite Pyrite Carbonate
ALTERATION TYPE: Sericitic Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stratabound
CLASSIFICATION: Epigenetic Hydrothermal Epithermal
TYPE: G07 Subaqueous hot spring Ag-Au G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Cherty Tuff
Andesitic Lapilli Tuff
Andesite Agglomerate

HOSTROCK COMMENTS: Mineralization is hosted by the upper member of the Unuk River Formation. Isotopic age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: NORTHSTAR REPORT ON: Y

CATEGORY: Measured YEAR: 1988
QUANTITY: 47100 Tonnes

COMMODITY	GRADE	
Silver	20.5700	Grams per tonne
Gold	4.2800	Grams per tonne

COMMENTS: Mineable reserves at a waste-to-ore ratio of 1.59:1.
REFERENCE: George Cross News Letter No.102, 1988.

CAPSULE GEOLOGY

The Northstar-Lindeborg zone, which is located 550 metres north of the Big Missouri deposit, lies within south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff, with interbedded cherty tuff of the Lower Jurassic Unuk River Formation. (See Big Missouri - 104B 046 for enhanced geology).

A north-trending, moderately west-dipping mineralized zone occurs in the Upper Horizon. The horizon consists of beds of mixed cherty tuff and intense sericite-pyrite-carbonate altered andesite. Pyrite, sphalerite, galena, and minor chalcopyrite occur as patches, thin lenses, and disseminated grains within the bleached andesite-chert tuff zone. The zone is cut by quartz and quartz-carbonate veins.

A hole drilled in 1979 intersected 16.5 grams per tonne gold, 68.6 grams per tonne silver, 3.44 per cent lead, and 4.3 per cent zinc over 0.5 metres (Assessment Report 7800). The Northstar zone contains mineable reserves, with an average waste to ore ratio of

CAPSULE GEOLOGY

1.59 to 1, of 47100 tonnes grading 4.28 grams per tonne gold and 20.57 grams per tonne silver (George Cross News Letter No.102, 1988).

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EMPR OF 1998-10

DATE CODED: 1988/06/01 CODED BY: DJA FIELD CHECK: N
DATE REVISED: 1988/08/22 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 147** NATIONAL MINERAL INVENTORY: 104B1 Au2

NAME(S): **PROVINCE**, PROVINCE EAST, BIG MISSOURI

STATUS: Developed Prospect MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 06 47 N NORTHING: 6219135
LONGITUDE: 130 01 26 W EASTING: 436330
ELEVATION: 1060 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Symbol #53, Minister of Mines Open File, 1987-22.

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Sphalerite Galena Chalcopyrite Electrum Silver Argentite Freibergite
ASSOCIATED: Quartz Carbonate
ALTERATION: Silica Sericite Carbonate Chlorite
ALTERATION TYPE: Silicific'n Sericitic Carbonate Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Massive Disseminated
CLASSIFICATION: Hydrothermal Exhalative Epigenetic Syngenetic
TYPE: G07 Subaqueous hot spring Ag-Au G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 0400 x 0200 x 0030 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Province East zone dips shallowly to moderately southwest.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Cherty Tuff
Andesite Lapilli Tuff
Andesite Agglomerate

HOSTROCK COMMENTS: Isotopic age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: PROVINCE REPORT ON: Y

CATEGORY: Inferred YEAR: 1991
QUANTITY: 100000 Tonnes

COMMODITY	GRADE	
Silver	20.0000	Grams per tonne
Gold	1.5000	Grams per tonne

COMMENTS: Geological reserves.
REFERENCE: D. Alldrick, PhD Thesis, UBC, 1991.

CAPSULE GEOLOGY

The Province East zone lies 200 metres above the underground workings of the old Big Missouri Mine and occurs within the Upper Horizon which consists of several cherty tuff layers with disseminated sulphides to semi-massive sulphide lenses. The zone lies within south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff, with interbedded cherty tuff of the Lower Jurassic Unuk River Formation. (See Big Missouri - 104B 046 for enhanced geology).

The Province zone consists of beds, up to 7 metres thick, of mixed cherty tuff and intensely sericitized andesite. The cherty tuff contains intensely sericitized and silicified andesite fragments, recrystallized chert, and sulphide minerals. From the sharp footwall

CAPSULE GEOLOGY

contact, the amount of altered andesite decreases and the amount of recrystallized cherty material increases toward an almost pure siliceous top.

The footwall consists of green feldspar-amphibole-porphyritic andesite lapilli tuff. Quartz, quartz-carbonate, and carbonate veins are moderately well developed and chlorite is well developed in the footwall. Andesite in the hangingwall is intensely sericitized and silicified (bleached).

The mineralized horizon dips shallowly to moderately southwest, and has been cut by several steeply dipping north tending faults and moderately dipping northeast trending faults.

Pyrite, sphalerite, galena, and minor chalcopyrite occur as patches, thin lenses, and disseminated grains within the bleached andesite-chert tuff zone. In the footwall, gold and silver values associated with base metals are confined to narrow (generally less than 20 centimetres thick) quartz veins. A lateral zonation is evident as gold decreases, while silver and base metal content of the horizon increase from east to west across the zone. Gold is present as discrete grains of electrum along sulphide grain boundaries, and as variable sized grains within the gangue. Silver minerals, which include native silver, argentite, and rare freibergite, are intergrown with galena and/or chalcopyrite.

The Province East zone measures about 400 by 200 by 30 metres. Production in 1990 amounted to 33,300 tonnes of ore grading 2.46 grams per tonne gold and 21.88 grams per tonne silver. In 1991, geological (inferred) reserves were 100,000 tonnes grading 1.5 grams per tonne gold and 20.0 grams per tonne silver (D. Alldrick, PhD Thesis, UBC, 1991).

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W MINER May, 1983
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EMPR OF 1998-10

DATE CODED: 1988/03/03 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/08/22 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 148**
NATIONAL MINERAL INVENTORY: 104B1 Au2

NAME(S): **CALCITE CUTS**, E. PLURIBUS (L.3213)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 06 42 N
LONGITUDE: 130 01 06 W
ELEVATION: 884 Metres
LOCATION ACCURACY: Within 500M
MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6218975
EASTING: 436673
COMMENTS: On a ridge west of Silver Creek east of the old Big Missouri mill site and south of the junction of Union and Silver Creeks (Open File 1987-22, Occurrence 54). Located on E. Pluribus (Lot 3213) crown grant (Figure 25, Energy, Mines and Petroleum Resources Bulletin 58).

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS
SIGNIFICANT: Pyrite, Galena, Sphalerite, Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Sericite, Silica, Carbonate, Pyrite
ALTERATION TYPE: Sericitic, Silicific'n, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Stratabound, Disseminated
CLASSIFICATION: Hydrothermal, Exhalative, Epigenetic, Syngenetic
TYPE: G07 Subaqueous hot spring Ag-Au
G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
I02 Intrusion-related Au pyrrhotite veins
DIMENSION: 0110 x 0004 Metres
STRIKE/DIP: 360/30W
TREND/PLUNGE:
COMMENTS: Cherty tuff horizon.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Chert
Limestone
Andesitic Lapilli Tuff
Andesite Agglomerate

HOSTROCK COMMENTS: Isotopic age from Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Calcite Cuts occurrence, which is located 500 metres east of the Big Missouri deposit, lies within south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff, with interbedded cherty tuff of the Lower Jurassic Unuk River Formation. (See Big Missouri - 104B 046 for enhanced geology). The occurrence lies immediately west of the north trending Union Creek Fault.

The Calcite Cuts occurrence lies within the Lower Horizon which consists of green plagioclase-amphibole andesite agglomerate and lapilli tuff with lesser bleached andesite and cherty tuff. The cherty tuff horizon strikes north for 110 metres, dips 20 to 40 degrees west, and either plunges gently to the north or is offset by cross-cutting faults. It widens from 1 to 4 metres from south to north. The chert layer contains abundant fragments of altered andesite. Alteration minerals within the footwall and hangingwall andesites include sericite, quartz, carbonate, and pyrite.

Mineralization, consisting of pyrite, sphalerite, galena, and chalcopyrite, occurs as disseminations, lenses, pods, and stringers within the cherty tuffs and footwall and hangingwall andesite tuffs.

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DATE CODED: 1987/12/17 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/08/22 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 149**

NATIONAL MINERAL INVENTORY: 104B1 Au2

NAME(S): **GOLDEN CROWN**, BIG MISSOURI

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 06 32 N
LONGITUDE: 130 01 14 W
ELEVATION: 991 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized zone west of Groundhog Tunnel, Figure 25, Bulletin 58. Located on the Golden Crown Crown Grant (Lot 3210), west of Silver Creek and Hog Lake.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6218668
EASTING: 436531

COMMODITIES: Copper, Lead, Zinc

MINERALS
SIGNIFICANT: Pyrite, Chalcopyrite, Galena, Sphalerite
ASSOCIATED: Quartz
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: G07 Subaqueous hot spring Ag-Au; G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Lapilli Tuff
Cherty Tuff

HOSTROCK COMMENTS: Isotopic age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Golden Crown occurrence, which is located 700 metres south-southeast of the Big Missouri deposit, lies within south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff, with interbedded cherty tuff of the Lower Jurassic Unuk River Formation. (See Big Missouri - 104B 046 for enhanced geology).

The mineralization, which consists of pyrite, chalcopyrite, galena, and sphalerite, occurs in andesitic tuff and intercalated hematitic sediment lenses. Two adits explored a mineralized zone up to 3 metres wide, associated with cherty tuff.

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DATE CODED: 1987/12/23 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/08/20 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 150** NATIONAL MINERAL INVENTORY: 104B1 Au2,12

NAME(S): **SILVER BUTTE**, SB, BIG MISSOURI (L.3217), WINER, KANSAS

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 06 11 N NORTHING: 6218028
LONGITUDE: 130 01 51 W EASTING: 435882
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of drilled zone, on the Big Missouri (Lot 3217), Winer (Lot 3212) and Kansas (Lot 3218) Crown Grants, south of the Big Missouri mine (104B 046) (Property File - Tenajon Silver Corp. company map). The mineralized zone is about 100 metres below surface and outcrops in cliffs on the Big Missouri claim.

COMMODITIES: Gold Silver Zinc Lead Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite Sphalerite Galena
ASSOCIATED: Quartz Carbonate
ALTERATION: K-Feldspar Quartz Sericite Silica Chlorite
ALTERATION TYPE: Potassic Sericitic Silicific'n Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stockwork
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au H05 Epithermal Au-Ag: low sulphidation
G07 Subaqueous hot spring Ag-Au I02 Intrusion-related Au pyrrhotite veins
SHAPE: Bladed
MODIFIER: Faulted
DIMENSION: Metres STRIKE/DIP: 350/ TREND/PLUNGE:
COMMENTS: Facecut zone.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Undefined Formation	

ISOTOPIC AGE: 210 +/- 24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesite
Andesitic Tuff
Welded Ash Tuff
Lapilli Tuff
Flow Breccia
Argillite
Porphyritic Granodiorite

HOSTROCK COMMENTS: Isotopic age date from Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: WEST KANSAS REPORT ON: Y

CATEGORY: Measured YEAR: 1994
QUANTITY: 1774000 Tonnes

COMMODITY	GRADE	
Gold	2.2000	Grams per tonne

COMMENTS: In situ undiluted geological reserves for the Kansas/West Kansas zone over 295 metres of strike length. A higher grade portion is 879,100 tonnes grading 2.86 grams per tonne gold.
REFERENCE: T. Schroeter, personal communication, 1995.

CAPSULE GEOLOGY

The Silver Butte property is located within the Stewart mining camp between the gold-silver mines, Silbak Premier (104B 054) to the south and Big Missouri (104B 046) slightly to the north. The

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property lies within the Stewart complex located in the Intermontane tectonic belt, on the western edge of the Stikinia terrane adjacent to the Coast Plutonic Complex. The region contains rocks ranging in age from late Paleozoic to Quaternary. Permian carbonates and Triassic volcanics form the basal units and are overlain by volcanics and sedimentary rocks of the Lower-Middle Jurassic Hazelton Group. Bowser Lake Group sediments of late Jurassic age overlie the Hazelton Group. Late Triassic to early Jurassic intrusive activity was followed by moderate deformation and regional metamorphism in the Cretaceous. Stocks and dykes intruded the region in the early to middle Eocene (Exploration in British Columbia 1988). Three main rock types are exposed at the Silver Butte occurrence: argillites and andesites of the Hazelton Group and granodiorite of the Jurassic Texas Creek Plutonic Suite. The argillite is carbonaceous and thinly bedded with occasional intercalations of black chert and grey lapilli tuff. These black argillites are thought to be east dipping and may be complexly deformed. The andesites lying above the argillites are the principal unit encountered in drifting. They may be the extrusive equivalent of the Premier porphyry dykes (Exploration in British Columbia 1988). Typically the rock is a pale to dark green andesitic tuff. It varies locally from a fine to medium-grained tuff to a welded ashfall tuff, to a lapilli-stone tuff, to a flow breccia. It is often bleached pale green along fault structures. Both a fine-grained and medium-grained massive andesite were identified with the contact between them often mineralized and silicified. The third rock unit is a porphyritic granodiorite, the Premier porphyry phase of the Texas Creek Plutonic Suite, which contains megacrysts of orthoclase, plagioclase and hornblende within a coarse-grained groundmass. This unit intrudes the other units on the north and to the east of the Anomaly Creek fault. The andesite and porphyritic granodiorite are associated with a subaerial volcanic centre of early Jurassic age centred in the Big Missouri-Premier area. Rocks in the southeastern part of the property are folded about a north to northwest trending axis and are affected by major post-mineral faulting. The Anomaly Creek and North Gully faults are subparallel and arcuate northwest to south trending structures. Faults divide the property into three west dipping (45-60 degrees) segments. Right-lateral oblique slip along the faults does not appear to have significantly offset mineralization except on the Anomaly Creek fault. This local structure is a reflection of a larger regional right-lateral strike-slip shear regime. Five mineralized zones have been identified on the property: Facecut, 35, West Kansas, Kansas and Anomaly. There are two styles of mineralization identified: high-sulphide, base metal-rich gold mineralization in the Facecut and 35 zones; and low-sulphide gold-rich mineralization in the Kansas zone. These are consistent with the two main vein types at Silbak Premier (104B 054). The Silver Butte mineralization is commonly spatially related to the contact between a fine-grained and a coarser grained andesite but locally is clearly discordant and occurs both above and below the contact. The surface alteration at Silver Butte is characterized by inner areas of quartz-sericite or pervasive silicification surrounded by chloritic alteration. At depth, pervasive potassium feldspar alteration is associated with the quartz-carbonate stockwork ore zones. Sulphide mineralization occurs in the Facecut zone in a quartz-carbonate stockwork associated with the contact between fine and coarser grained andesites. The zone geometry is irregular with predominantly subvertical to steep easterly dips. Sulphides comprise 25 per cent or more of the zone and consist of pyrite, chalcopyrite, sphalerite and galena. Mineralized widths of 2 metres and greater are known to extend eastward, downdip, 100 metres to the 750-metre level, where the zone is offset by the Anomaly Creek fault. The zone trends 350 degrees, exhibits sporadic grades to the north and may merge with the 35 zone to the south. Pervasive potassium feldspar alteration is associated with the quartz-carbonate stockwork and envelopes the lenses of massive sulphide mineralization. The mineralization and associated alteration are hosted by the andesitic tuffs which commonly contain less than 2 per cent finely disseminated pyrite. The host rocks, alteration and mineralization in the 35 zone are similar to the Facecut zone and may well be an extension of it. Widths of mineralization are between 2 and 12 metres; known strike length is about 50 metres, trending approximately 350 degrees, with an 80 degree easterly dip. At depth, the 35 zone is offset an unknown distance by the Anomaly Creek fault; it is open to the south. The Facecut and 35 zones have been explored by surface drilling and underground development.

Proven and probable geological reserves in the 35 zone (cut and diluted grades) are 95,998 tonnes grading 65.81 grams per tonne silver, 9.9 grams per tonne gold, 0.32 per cent copper, 0.67 per cent

CAPSULE GEOLOGY

lead and 3.85 per cent zinc (George Cross News Letter No.47, 1991). Reserves calculated for a 50 metre strike length explored by sub-drifting and diamond drillling in the West Kansas zone are 312,700 tonnes grading 3.07 grams per tonne gold (George Cross News Letter No. 97 (May 20), 1994.

Diamond drilling has defined the Kansas zone which is located approximately 150 metres south of the Facecut and 35 zones. It is 200 metres long with widths varying between 1.5 and 13.25 metres. The zone has a 30 degree east dip and a known downdip extension of 100 metres. Minor sphalerite and galena, less than 1 per cent total sulphides, occur in quartz-carbonate veinlets and breccia carrying gold and silver. The fine-grained andesite host exhibits intense silicification and potassium feldspar alteration.

Diamond drilling west of the Gully fault has also outlined the West Kansas zone. The zone is 170 metres long and strikes north with a 60 degree west dip. Drill holes intersected discrete veins with quartz, carbonate, sphalerite and galena; visible native gold is also evident. The andesitic hostrock exhibits weak chloritic alteration.

The Anomaly zone is located to the east of the Anomaly Creek fault. Diamond drilling intersected mineralization in a zone 70 metres long, with a steep easterly dip. Quartz, carbonate and sulphides occur in a distinctly veined zone over a 2-metre true thickness.

A total of 6880 tonnes of ore was mined from development headings at Silver Butte and trucked and processed at the Premier mill outside the town of Stewart. Total gold production from this run was reported to be 69,417 grams of gold (Northern Miner - August 12, 1991). During the period between early May 1991 and early November 1991, 102,502 tonnes of ore were shipped to Westmin's carbon-in-leach mill to produce 929,022 grams of gold and 2,799,064 grams of silver. Production has ceased at the mine with a small amount of reclamation remaining to be done (Northern Miner - January 6, 1992).

In 1993, a total of 283 metres of drifting and raising were completed to test about 50 metres of strike of the Kansas/West Kansas zone. The underground development was driven primarily to provide access for diamond drilling. An aggregate 2647 dry tonnes of this material was milled in two batches through the Westmin Premier mill. A total of 7961 grams of gold were recovered from the test milling (George Cross News Letter No.5 (January 10), 1994).

In 1994, 168 metres of sub-drifting and 3507 metres of underground drilling in 62 holes was completed on the Kansas/West Kansas zone. A total of 1481 tonnes of development material from the sub-drifting was processed through the Premier mill. The in situ undiluted geological reserves for the Kansas/West Kansas zone over 295 metres of strike length are estimated at 1,774,000 tonnes grading 2.2 grams per tonne gold. The higher grade portion is 879,100 tonnes grading 2.86 grams per tonne gold (T. Schroeter, personal communication, 1995).

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IPDM Dec., 1985
N MINER Nov.4, 1982; Sept.8, 1983; Jun.21, 1984; Sept.23, 1985; Aug.1,27, Sept.19, Oct.3,17, Nov.14, 1988; Mar.6, June 12, Aug.28, Oct.30, Nov.6, 1989; June 18, Jul.30, Oct.22, 1990; Feb.25, Mar. 11, Apr.15, June 3, July 15,29, Aug.12, Oct.7, 1991; Jan.6, 1992
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DATE CODED: 1988/01/04 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1991/11/13 REVISED BY: GO FIELD CHECK: Y

MINFILE NUMBER: **104B 151**
NATIONAL MINERAL INVENTORY: 104B1 Au2

NAME(S): **DAY**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 06 48 N
LONGITUDE: 130 01 52 W
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Symbol #51, Open File 1987-22.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6219172
EASTING: 435881

COMMODITIES: Gold Silver Zinc Lead

MINERALS
SIGNIFICANT: Pyrite Sphalerite Galena
ALTERATION: Sericite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesite Agglomerate
Cherty Tuff
Andesite Lapilli Tuff
Argillite

HOSTROCK COMMENTS: Isotopic age reference: Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Day occurrence, which is located 400 metres west of the Big Missouri deposit, lies within south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff, with interbedded cherty tuff and argillite of the Lower Jurassic Unuk River Formation. (See Big Missouri - 104B 046 for enhanced geology).

The sulphide mineralization likely consists of pyrite, sphalerite and galena within sericitized andesite and argillite. In 1934, an adit was driven from this area to access the Province zone of the Big Missouri deposit.

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DATE CODED: 1988/09/26 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/09/26 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 152**

NATIONAL MINERAL INVENTORY:

NAME(S): **ERIC 2**, MT. DUNN, KING CREEK, VV

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 28 34 N
LONGITUDE: 130 38 36 W
ELEVATION: 1210 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6260282
EASTING: 398778

COMMENTS: Located south of King Creek on the northern slopes of Mt. Dunn, about 4.0 kilometres west of the Unuk River; part of the Mt. Dunn property, VV claims (104B 079); showing found on line 72N at 5W (Assessment Report 6234).

COMMODITIES: Zinc

MINERALS

SIGNIFICANT: Sphalerite
ASSOCIATED: Quartz Calcite Siderite
ALTERATION: Epidote Chlorite Carbonate
ALTERATION TYPE: Propylitic Epidote Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au J01 Polymetallic manto Ag-Pb-Zn
DIMENSION: 0061 x 0030 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Cenozoic			Unnamed/Unknown Informal

LITHOLOGY: Pyroclastic Breccia
Flow Breccia
Andesitic Flow
Tuff
Monzonite
Hornblende Diorite Dike

HOSTROCK COMMENTS: Eocene or older monzonite stock intrudes the Jurassic Hazelton Group rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Contact
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1976
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Zinc	0.1000	Per cent

COMMENTS: Overall grade is less than 0.1 per cent zinc over an area 61 by 30 metres.
REFERENCE: Assessment Report 6234, page 20.

CAPSULE GEOLOGY

Jurassic Hazelton Group volcanics are intruded by an Eocene or older monzonite stock that varies from 150 to 350 metres in width and appears to be continuous in a north-south direction for about 6 kilometres. The volcanic rocks vary in composition from lithic and crystal lithic tuffs to Lower Jurassic Hazelton Group breccias and andesitic flows of the Unuk River Formation. Regional metamorphism is of lower greenschist facies with significant epidotization in the andesites, agglomerates and flow breccias west of the intrusive.

The intrusive is comprised of a light green, fine to medium-grained monzonite that hosts widespread copper mineralization in the form of chalcopyrite, malachite and auzurite. Refer to the Mt. Dunn

CAPSULE GEOLOGY

property (VV (Mt. Dunn) 104K 079).

Significant sphalerite was found peripheral to the monzonite porphyry within altered pyroclastic breccia north of the VV (Mt. Dunn). Mineralization consisted of dark brown, iron-rich sphalerite within well crystallized quartz and quartz-calcite veinlets cutting pyroclastic breccia. The sphalerite-bearing veinlets range up to a few centimetres in width over an area of about 61 by 30 metres. In 1976, the overall grade was reported as less than 0.1 per cent zinc (Assessment Report 6234, page 20). Honey brown siderite is frequently associated with the zinc mineralization.

The showing lies northwest of the intrusive within intermediate volcanics that shows advanced degrees of propylitization culminating into advanced epidotization and chloritization in scattered locations. The propylitization is thought to be a representative of both regional, greenschist facies metamorphism and local hydrothermal alteration.

The sphalerite mineralization is located within a north trending fault gully close to a cross-cutting hornblende diorite dyke. The mineralization is underlain by a thin barren-carbonate horizon which probably provided a favourable chemical environment. The sphalerite is present only in quartz, plus or minus, calcite veinlets.

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EMPR PF (Graf, C.: Report on Claims in the Snippaker Creek Area of British Columbia for Active Mineral Explorations, December 1982, page 53-54, Figure 3; Geology Map-1:31250 Scale-Newmont Exploration of Canada, 1960's)
Chevron File

DATE CODED: 1988/07/05 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 153** NATIONAL MINERAL INVENTORY: 104B1 Au1

NAME(S): **SEBAKWE**, LESLEY , SILBAK PREMIER, BUSH MINES, LESLEY FLATS

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 03 43 N NORTHING: 6213430
LONGITUDE: 130 00 20 W EASTING: 437387
ELEVATION: 610 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Sebakwe shaft from Figure 41, Energy, Mines and Petroleum Resources Bulletin 58. Located on the Lesley 6 Crown Grant (Lot 3847) north-northeast of B.C. Silver (104B 155) south of Lesley Creek.

COMMODITIES: Gold Silver Zinc Lead Copper

MINERALS

SIGNIFICANT: Tetrahedrite Pyrargyrite Argentite Electrum Sphalerite Galena Polybasite Chalcopyrite Gold Arsenopyrite
ASSOCIATED: Quartz Calcite Barite Adularia Pyrrhotite Pyrite
ALTERATION: Silica Sericite Calcite Chlorite Pyrite
ALTERATION TYPE: Silicific'n Sericitic Propylitic Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Breccia Discordant
CLASSIFICATION: Hydrothermal Porphyry Epigenetic Epithermal
TYPE: I02 Intrusion-related Au pyrrhotite veins G07 Subaqueous hot spring Ag-Au
SHAPE: Irregular
MODIFIER: Folded Faulted
DIMENSION: 0076 x 0005 Metres STRIKE/DIP: 135/45W TREND/PLUNGE:
COMMENTS: Dimension of initial discovery, dipping 45 degrees west, strikes northeast.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2.0 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Andesitic Dacitic Volcaniclastic
Argillite
Siltstone
Dacitic Flow

HOSTROCK COMMENTS: Date quoted for Texas Creek intrusives is for Premier porphyry (Fieldwork, 1985). Unuk River Fm. age date from Brown, D.A., 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The Sebakwe orebody, part of the Silbak Premier mine (104B 054), is located 250 metres north and slightly east of the B.C. Silver orebodies (104B 155) 22 kilometres north of the community of Stewart. Mineralization was first discovered as silver-bearing stringers in tuffs and the orebody was intersected 300 metres along a tunnel driven from the east fork of Cooper Creek in 1926. The property along with the B.C. Silver Mines holdings and the Premier mine was amalgamated into British Silbak Premier in 1935. For a more extensive capsule geology and bibliography refer to the Silbak Premier mine (104B 054).

CAPSULE GEOLOGY

Located in the Intermontane Belt, the area, bounded on the west by the Coast Belt and on the east by the Bowser Basin, is underlain by the volcanic arc assemblage of the Stikine Terrane.

The deposit is hosted in Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation. The Hazelton Group is a northwest-trending belt of folded metavolcanic rocks containing a thick sequence of argillites and siltstones infolded along a synclinal axis. The Sebakwe deposit is a blind orebody capped by barren maroon tuffs.

The ore is hosted by massive andesite, andesite breccia and lapilli tuff intruded by Early Jurassic Texas Creek plutonic suite dacitic porphyry dike. The andesite, at least 750 metres thick, is unconformably overlain by volcaniclastic and epiclastic rocks. Potassium feldspar porphyry (historically known as the "Premier Porphyry") is spatially associated with the ore, this relationship is thought to indicate a Lower Jurassic mineralization age.

The Sebakwe deposit is considered to be the northerly continuation of the steeply northwest dipping, "Main" or "Northeast" zone of the main Premier and B.C. Silver deposits. This trend is believed to represent structural control on the mineralization and emplacement of dacite porphyry intrusions. The ore is predominantly discordant but locally concordant with the moderately northwest dipping andesite flows, breccias and dacite flows. The initial discovery was 76.2 metres long, 4.6 metres wide, striking northeast, plunging steeply southwest and dipping 45 degrees northwest.

There are at least four styles of mineralization with textures ranging from stockwork and siliceous breccia to locally layered and massive sulphide-rich mineralization.

Hydrothermal alteration zones related to the mineralizing system are represented by a proximal silicification/quartz stockwork and potassium feldspar and/or sericite facies potassic alteration. Peripheral to mineralization is a propylitic alteration assemblage of carbonate, chlorite and pyrite. The variable intensity and type of alteration is partially controlled by fracture intensity and host lithology, and presumably, elevation in the hydrothermal system.

Ore minerals include pyrite, sphalerite, galena, with minor tetrahedrite, chalcopyrite, arsenopyrite and local pyrrhotite. Bonanza ore contains native gold, electrum, pyrargyrite, polybasite, argentite and native silver. Gangue minerals are quartz, potassium feldspar, chlorite, carbonate and others. Sulphide content varies, generally less than 5 per cent but can be as high as 75 per cent.

The diversity of the ore is an indication of the complex and episodic nature of ore deposition. A hybrid ore genesis model combining epigenetic vein and porphyry copper characteristics compare well with the features observed.

Post-1935 production data is included in the production figures for the Silbak Premier mine (104B 054).

Diamond drilling in 1994 was performed in an area located north of Lesley Creek (Cooper Creek on some maps), west of the Long Lake-Fish Creek fault, east of Cascade Creek and bounded to the north by a dike or stock of "Premier Porphyry" along the Big Missouri road north of the switchbacks. Geologically, two main features were discovered which were previously unknown. The first was the discovery of arsenopyrite-rich veins with or without sphalerite, galena and chalcopyrite that contain occasional grains of visible gold. Silver to gold ratios are from 3:1 to 1:3. Veins of this mineralogy are at best rare in the Stewart camp. Lead isotopic analyses of galena from one of these veins from drillhole P94CH725 suggests the mineralization is Tertiary, not Jurassic in age (Assessment Report 24622). The second feature is that the favourable stratigraphy undergoes a marked change in the area of P94CH725 but does continue to the north of the interpreted sub-basin boundary. The most significant intersection from the drilling is 6.3 metres of 4.05 grams per tonne gold in drillhole 94-725 (Assessment Report 24622).

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1925-A98; 1926-A98; 1927-C98; 1928-112; 1929-C106; 1930-A111;
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342; 1985, pp. 217-219; 1986, pp.81-102; 1987, pp. 211-216,349-
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see 104B 054)

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*Brown, D.A. (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)

DATE CODED: 1988/02/15 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1996/09/18 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 154**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOPE-POWER**, GRANDUC ROAD

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 03 28 N
LONGITUDE: 130 01 35 W
ELEVATION: 305 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: A small high grade lens, in Hope Zone, located along the Granduc Road, at Milepost 16.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6212985
EASTING: 436083

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Galena, Sphalerite, Chalcopyrite, Pyrite
ASSOCIATED: Pyrite, Quartz, Calcite
ALTERATION: Chlorite, Sericite, Silica, Limonite, Carbonate
ALTERATION TYPE: Propylitic, Silicific'n, Oxidation, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Layered, Massive
CLASSIFICATION: Hydrothermal, Epigenetic, Porphyry
TYPE: G07 Subaqueous hot spring Ag-Au; G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Folded, Faulted
DIMENSION: 0006 x 0006 x 0002 Metres
STRIKE/DIP: 100/80N
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
			Texas Creek Plutonic Suite

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

ISOTOPIC AGE: 194.8 +/- 2 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Andesitic Dacitic Volcaniclastic
Argillite
Siltstone

HOSTROCK COMMENTS: Date quoted for Texas Creek intrusives is for Premier porphyry dyke (Fieldwork 1985). Unuk River Fm. age date from Brown, D.A., 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel
YEAR: 1986

COMMODITY	GRADE	
Silver	93.9200	Grams per tonne
Gold	3.8700	Grams per tonne
Lead	0.7700	Per cent
Zinc	6.1100	Per cent

COMMENTS: 7.0 metre channel sample.
REFERENCE: Assessment Report 15762.

INVENTORY

ORE ZONE: POWER REPORT ON: Y

CATEGORY: Measured YEAR: 1988
QUANTITY: 100000 Tonnes

COMMODITY	GRADE	
Gold	4.1000	Grams per tonne

COMMENTS: Gold equivalent grade.
REFERENCE: George Cross Newsletter No.102 (May 27), 1988.

CAPSULE GEOLOGY

The Hope-Power zone showing is located on the north side of the "West" or "Northwest" zone of the main Silbak Premier deposit (104B 054), approximately 1 kilometre west of the Glory Hole area. The zone was first exposed during construction of the Granduc Mine road during 1965. The Power Zone is 200 metres northwest of the Hope Zone along the same trend. Their exact relationship remains to be established. For a more extensive bibliography and geological description refer to the Silbak Premier mine.

The area is underlain by the Upper Triassic to Lower Jurassic Hazelton Group, which is a northwest trending belt of folded andesitic to dacitic metavolcanic rocks containing a thick sequence of argillites and siltstones infolded along a synclinal axis. The area, part of the volcanic arc assemblage of the Stikinia Terrane, lies in the Intermontane Belt bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin.

The showing is hosted in the Lower Jurassic Unuk River Formation andesite flows, breccia, and lapilli tuff, intruded by Early Jurassic Texas Creek dacite porphyry dykes, capped by volcaniclastics. The most characteristic feature of the andesite package is the pervasive carbonate, chlorite and clay alteration around the Premier deposit.

Potassium feldspar porphyry (historically known as the "Premier" porphyry) is spatially associated with the mineralization; this relationship is thought to indicate a Lower Jurassic age of mineralization.

The showing consists of a siliceous zone and a near vertical layer of massive sulphides along the contact of a vertical northwest striking porphyry in andesite. The porphyry is 50 to 75 metres wide and extends east to the Glory Hole area. A zone of limonitic weathering, silicification and pyritization occurs along the contact. The showing is exposed in a high roadside cut. The south wall of the cut is fine grained, strongly chloritized andesitic tuff with medium grained disseminated pyrite and the north wall is Premier porphyry dacite dyke with disseminated pyrite.

Massive sulphide mineralization consists of pyrite, sphalerite, galena and chalcopyrite. This layer dips 80 degrees north and strikes 100 degrees.

A few short drill holes from above and below (underground) have failed to find extensions to this small high grade layer (6 x 6 x 2 metres). A channel sample taken over 7.0 metres assayed 3.87 grams per tonne gold, 93.92 grams per tonne silver, 0.77 per cent lead, 6.11 per cent zinc (Assessment Report 15762). The Power zone is reported to have 100,000 tonnes of measured geological ore grading 4.1 grams per tonne gold equivalent (George Cross Newsletter No.102, (May 27), 1988).

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FOR MORE EXTENSIVE BIBLIOGRAPHY ON SILBAK PREMIER MINE SEE 104B 054
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EMPR ASS RPT *15762
EMPR EXPL 1980-459
GSC MAP 9-1957; 1418A
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Brown, D.A., (1987): *Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)

DATE CODED: 1988/05/31 CODED BY: DJA FIELD CHECK: Y
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 155** NATIONAL MINERAL INVENTORY: 104B1 Au1

NAME(S): **B.C. SILVER**, SILBAK PREMIER, LAKE, O'LEARY

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 03 17 N NORTHING: 6212628
LONGITUDE: 130 00 27 W EASTING: 437254
ELEVATION: 670 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: B.C. Silver upper tunnel, Figure 40, Energy, Mines and Petroleum Resources Bulletin 58. Located on the Hooligan Crown Grant (Lot 4019), northeast of Silbak Premier Glory Hole (104B 054).

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS
SIGNIFICANT: Gold Silver Tetrahedrite Pyrargyrite Argentite Electrum Sphalerite Galena Chalcopyrite Polybasite
ASSOCIATED: Quartz Calcite Barite Pyrite Arsenopyrite Pyrrhotite
ALTERATION: Silica Sericite Chlorite Pyrite Calcite
ALTERATION TYPE: Silicific'n Sericitic Propylitic Potassic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stockwork Breccia Discordant
CLASSIFICATION: Hydrothermal Porphyry Epigenetic Epithermal
TYPE: G07 Subaqueous hot spring Ag-Au G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: Extension of "Main" zone which dips 60 to 30 degrees northwest.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2.0 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Andesitic Dacitic Volcaniclastic
Dacitic Flow
Argillite
Siltstone

HOSTROCK COMMENTS: Date quoted for Texas Creek intrusives is for the Premier prophyry (Fieldwork 1985). Unuk River Fm. age date from Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The B.C. Silver ore bodies of the British Silbak Premier Mine are located north of the main deposit (104B 054), 22 kilometers north of Stewart, B.C.. These ore bodies are the northeast extension of the "Northeast or Main" ore zone of the Premier deposit. The property was originally owned by B.C. Silver Mines Ltd. who intersected ore in 1922, about 475 metres east of the main deposit. In 1935 when the property was amalgamated along with the Sebakwe property into British Silbak Premier Mines Ltd., there was a total length of four miles of underground workings. For a more extensive capsule geology and bibliography refer to the Silbak Premier mine.

Located in the Intermontane Belt, the area, bounded on the west

CAPSULE GEOLOGY

by the Coast Crystalline complex and on the east by the Bowser Basin, is part of the volcanic arc assemblage of the Stikinia Terrane.

The deposit is hosted in Upper Triassic to Lower Jurassic andesitic to dacitic volcanic rocks, correlated with the Hazelton Group, Unuk River Formation. The Hazelton Group is a northwest trending belt of folded metavolcanic rocks containing a thick sequence of argillites and siltstones infolded along a synclinal axis.

The ore is hosted by andesite flows, breccia and lapilli tuff, intruded by the Early Jurassic Texas Creek plutonic suite dacitic porphyry dykes. Potassium feldspar porphyry (historically known as the "Premier Porphyry") is spatially associated with the ore; this relationship is thought to indicate a Lower Jurassic mineralization age.

The B.C. Silver ore bodies occur as the northeast extension of the steeply northwest-dipping, "Main" or "Northeast" zone. The mineralization in this zone dips at 60 degrees near surface and flattens to 30 degrees by the lowermost workings. This trend is believed to represent structural control on mineralization and emplacement of dacite porphyry intrusions. The ore is predominantly discordant but locally concordant with the moderately northwest-dipping andesite flows, breccias and dacite flows. The B.C. Silver orebodies appear to be offset in several planes with offsets up to 35 metres.

Hydrothermal alteration zones related to the mineralizing system are represented by a proximal silicification/quartz stockwork and potassium feldspar and/or sericite facies potassic alteration. Peripheral to mineralization is a propylitic alteration assemblage of carbonate, chlorite and pyrite. The variable intensity and type of alteration is partially controlled by fracture intensity and host lithology, and presumably, elevation in the hydrothermal system. The most characteristic feature of the andesite package is the pervasive carbonate, chlorite, and clay alteration around the deposit.

Ore minerals include pyrite, sphalerite, galena, with minor tetrahedrite, chalcopyrite, arsenopyrite and local pyrrhotite. Bonanza ore contains native gold, electrum, pyrargyrite, polybasite, argentite and native silver. Gangue minerals are quartz, potassium feldspar, chlorite, carbonates and others.

Sulphide content varies, generally less than 5 per cent but can be as high as 75 per cent. Textures range from stockwork and siliceous breccia to local layered to massive sulphide-rich mineralization. Such ore diversity is an indication of the complex and episodic nature to ore deposition. A hybrid ore genesis model combining epigenetic vein and porphyry copper characteristics compare well with the features observed.

By 1935 B.C. Silver Mines had shipped 920 tonnes of ore producing 68,560 grams of gold and 2,742,400 grams of silver (Geological Survey of Canada Memoir 175).

Post 1935 production is included with production figures for the Silbak Premier Mine (104B 054).

BIBLIOGRAPHY

FOR AN EXTENSIVE BIBLIOGRAPHY ON SILBAK PREMIER MINE SEE 104B 054
EMPR BULL 58, p. 153; 63
GSC MEM *175, pp. 152,153
EMPR EXPL 1980-459
EMPR AR 1919-N75; 1920-N66; 1922-N81,82; 1923-A81; 1924-B73; 1925-A107; 1926-A97,98; 1927-C98; 1928-C112; 1929-C106,107; 1930-A51, 54,A111,112; 1931-A46; 1936-B3
EMPR FIELDWORK 1982, pp. 183-195; 1983, pp. 149-164; 1984, pp. 316-342; 1985, pp. 217-219; 1986, pp. 81-102; 1987, pp. 211-216,349-352,489-493
GSC BULL 5, pp. 24,25
White, W.H., (1939): Geology and ore-deposition of Silbak Premier Mine Ltd., M.Sc. Thesis, University of British Columbia
GSC P 89-1E, pp. 145-154
Falconbridge File

DATE CODED: 1988/07/13 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 156** NATIONAL MINERAL INVENTORY: 104B1 Au1

NAME(S): **PICTOU**

STATUS: Past Producer Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 02 55 N NORTHING: 6211956
LONGITUDE: 130 01 02 W EASTING: 436639
ELEVATION: 541 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Pictou tunnel location from figure 40 EMPR BULL 58. Located on the Pictou crown grant (L.3596) between Wilson and Fletcher creeks.

COMMODITIES: Silver Gold Zinc Lead Copper

MINERALS
SIGNIFICANT: Galena Arsenopyrite Pyrite Sphalerite Argentite Chalcopyrite
COMMENTS: Pyrite is significant in abundance.
ASSOCIATED: Garnet Epidote Calcite Quartz Adularia
ALTERATION: Silica Sericite Chlorite Limonite Carbonate Pyrite
ALTERATION TYPE: Silicific'n Propylitic Oxidation Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stockwork Breccia Discordant
CLASSIFICATION: Hydrothermal Porphyry Epigenetic Epithermal
TYPE: G07 Subaqueous hot spring Ag-Au G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Folded Faulted
DIMENSION: 0006 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Pictou vein averages 6 metres in width.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Lower Jurassic			Texas Creek Plutonic Suite

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

ISOTOPIC AGE: 194.8 +/- 2.0 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Andesitic Dacitic Volcaniclastic
Dacitic Flow
Argillite
Siltstone

HOSTROCK COMMENTS: Date quoted for Texas Creek intrusives is for the Premier porphyry (Fieldwork 1985). Unuk River Fm. age date from Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	142.2620	Grams per tonne
Gold	3.7710	Grams per tonne
Copper	0.0800	Per cent
Lead	6.1000	Per cent
Zinc	12.1000	Per cent

COMMENTS: From trench above tunnel over 61.0 centimetres.
REFERENCE: Property File: R.W. Phendler, 1980.

ORE ZONE: PICTOU VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	173.1100	Grams per tonne
Gold	0.2700	Grams per tonne

COMMENTS: Over 5.7 metres.
REFERENCE: Assessment Report 15762, Fig.3.

CAPSULE GEOLOGY

The Pictou zone of the Silbak Premier mine is located between Fletcher and Wilson Creeks 22.0 kilometres north of Stewart, British Columbia. The zone is offset to the east, just south of the main deposit across an east-west fault. For a more extensive geological description and bibliography refer to the Silbak Premier Mine (104B 054).

The property is located in the Intermontane Belt, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, in the volcanic arc assemblage of the Stikinia Terrane.

The deposit is hosted by Upper Triassic to Lower Jurassic andesite flows, breccia and lapilli tuff, correlated with the Hazelton Group, Unuk River Formation. The Hazelton Group is a northwest trending belt of folded metavolcanic rocks containing a thick sequence of argillites and siltstones infolded along a synclinal axis.

The andesite, at least 750 metres thick, is intruded by Early Jurassic Texas Creek plutonic suite dacitic porphyry dykes and is unconformably overlain by volcaniclastic and epiclastic rocks. The potassium feldspar porphyry (historically known as "Premier Porphyry") is spatially associated with the ore; this relationship is thought to indicate a Lower Jurassic age for mineralization. The ore is predominantly discordant but locally concordant with the moderately northwest-dipping andesite flows, breccias and dacite flows.

Hydrothermal alteration zones related to the mineralizing system are represented by a proximal silicification/quartz stockwork and potassium feldspar and/or sericite facies potassic alteration. Peripheral to mineralization is a propylitic alteration assemblage of carbonate, chlorite and pyrite.

Mineralization is associated with the steeply northwest dipping, "Northeast" or "Main" zone where there are at least four styles of mineralization with textures ranging from stockwork and siliceous breccia to locally layered and massive sulphide-rich mineralization. Pictou mineralization consists of narrow discrete quartz veins rich in base metals. The Pictou vein averages 6 metres in width.

Ore minerals include pyrite, galena, sphalerite, argentite, chalcopyrite and arsenopyrite. Gangue minerals are quartz, potassium feldspar, chlorite, carbonate and others.

In 1980 a resampling program resulted in an assay of 3.771 grams per tonne gold, 142.262 grams per tonne silver, 0.08 per cent copper, 6.10 per cent lead and 12.10 per cent zinc from a trench above the Pictou tunnel (Phendler, R.W., 1980).

In 1986 a drill core sample of the Pictou vein over 5.7 metres assayed 0.27 grams per tonne gold and 173.11 grams per tonne silver (Assessment Report 15762, Fig. 3). Production from this zone is included with the Silbak Premier mine production figures.

BIBLIOGRAPHY

FOR AN EXTENSIVE BIBLIOGRAPHY ON SILBAK PREMIER MINE SEE 104B 054
EMPR PF (Phendler, R.W., (1980): Report on the Silbak Premier Gold-Silver Mine, Skeena Mining Division, British Columbia for British Silbak Premier Mines Ltd.; British Silbak Premier Mines Ltd. Annual Report 1980 in 104B 054)
EMPR BULL 58, p. 109
EMPR AR 1911-72,73; 1917-68; 1918-80,472; 1919-74
GSC MEM 32, pp. 66,67; 132, p. 51

BIBLIOGRAPHY

EMPR SUM RPT 1911, p. 54
EMPR EXPL 1980-459
EMPR ASS RPT *15762
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/13 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/12/14 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 157**

NATIONAL MINERAL INVENTORY:

NAME(S): **SOUTH PICTOU**, SP

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 02 43 N
LONGITUDE: 130 00 53 W
ELEVATION: 635 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of trenching, fig. 5 (Ass Rpt 15762) located on the Pictou crown grant (L.3596) between Fletcher and Logan creeks.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6211583
EASTING: 436789

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Galena, Sphalerite, Tetrahedrite, Pyrite
COMMENTS: Pyrite is significant in abundance
ASSOCIATED: Quartz, Calcite, Adularia, Pyrite
ALTERATION: Silica, Sericite, Chlorite, Limonite, Carbonate, Pyrite
ALTERATION TYPE: Silicific'n, Propylitic, Oxidation, Carbonate, Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork, Breccia, Discordant
CLASSIFICATION: Hydrothermal, Porphyry, Epigenetic, Epithermal
TYPE: G07 Subaqueous hot spring Ag-Au; G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn; I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Folded, Faulted

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Lower Jurassic			Texas Creek Plutonic Suite

Lower Jurassic
ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

Lower Jurassic
ISOTOPIC AGE: 194.8 +/- 2.0 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Andesitic Dacitic Volcaniclastic
Argillite
Siltstone

HOSTROCK COMMENTS: Date quoted for Texas Creek intrusives is for "Premier" porphyry dyke (Fieldwork 1985). Unuk River Fm. age date from Brown, D.A.,1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1986

COMMODITY	GRADE	
Silver	266.7000	Grams per tonne
Gold	2.5000	Grams per tonne

COMMENTS: Sample 16856
REFERENCE: Assessment Report 15762.

CAPSULE GEOLOGY

The South Pictou prospect is located south of the main Premier deposit, 22 kilometres north of Stewart, B. C. offset to the east across an east-west fault between Fletcher and Logan creeks. This

CAPSULE GEOLOGY

zone is possibly related to the Pictou vein (104B 156). For a more detailed geological description and bibliography refer to the Silbak Premier Mine (104B 054).

The property is located in the Intermontane Belt, bounded on the west by the Coast Crystalline complex and on the east by the Bowser Basin, in the volcanic arc assemblage of the Stikinia Terrane.

Mineralization is hosted by Upper Triassic to Lower Jurassic andesite flows, breccia and lapilli tuff, correlated with the Hazelton Group, Unuk River Formation. The Hazelton Group is a northwest trending belt of folded metavolcanic rocks containing a thick sequence of argillites and siltstones infolded along a synclinal axis.

The andesite, at least 750 metres thick, is intruded by Early Jurassic Texas Creek plutonic suite porphyries and is unconformably overlain by volcaniclastic and epiclastic rocks. The potassium feldspar porphyry (historically known as the "Premier Porphyry") is spatially associated with the mineralization; this relationship is thought to indicate a Lower Jurassic age for mineralization.

Mineralization in the area is predominantly discordant but locally concordant with the moderately northwest-dipping andesite flows, breccias and dacite flows.

The South Pictou mineralization is believed to be associated with the steeply northwest-dipping, "Northeast" or "Main" zone of the Silbak Premier Mine.

Mineralization in the area occurs as fine disseminations, narrow discontinuous veins and breccia infillings. Mineralization in the Pictou vein, slightly north of this showing, consists mainly of narrow discrete quartz veins rich in base metals. The Pictou vein averages 6.0 metres in width.

Ore minerals include pyrite, galena, sphalerite, and tetrahedrite. Gangue minerals are quartz, potassium feldspar, chlorite, carbonate and others.

Hydrothermal alteration zones related to the mineralizing system in the area are represented by a proximal silicification/quartz stockwork and potassium feldspar and/or sericite facies potassic alteration. Peripheral to mineralization is a propylitic alteration assemblage of carbonate, chlorite and pyrite.

A grab sample from trench #2 in 1986 assayed 2.5 grams per tonne gold and 266.7 grams per tonne silver (Assessment Report 15762).

BIBLIOGRAPHY

FOR AN EXTENSIVE BIBLIOGRAPHY ON SILBAK PREMIER MINE SEE 104B 054
EMPR ASS RPT *15762
GSC P 89-1E, pp. 145-154
EMPR EXPL 1980-459

DATE CODED: 1988/07/13 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/12/14 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 158**

NATIONAL MINERAL INVENTORY:

NAME(S): **SIMCOE**, SP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 02 34 N
LONGITUDE: 130 01 02 W
ELEVATION: 635 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing from Figure 3 (Assessment Report 15762) located on the Simcoe crown grant (Lot 4145) on Logan Creek.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6211307
EASTING: 436629

COMMODITIES: Silver, Gold, Zinc, Lead, Copper

MINERALS

SIGNIFICANT: Sphalerite, Galena, Tetrahedrite, Pyrite
COMMENTS: Pyrite is significant in abundance.
ASSOCIATED: Quartz, Calcite, Adularia
ALTERATION: Silica, Sericite, Chlorite, Carbonate, Pyrite
ALTERATION TYPE: Silicific'n, Sericitic, Propylitic, Carbonate, Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork, Breccia, Discordant
CLASSIFICATION: Hydrothermal, Porphyry, Epigenetic, Epithermal
TYPE: G07 Subaqueous hot spring Ag-Au
G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Folded, Faulted
COMMENTS: Stratigraphy dips 75 degrees east.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2.0 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Andesitic Dacitic Volcaniclastic
Dacitic Flow
Argillite
Siltstone
Granitic Intrusive

HOSTROCK COMMENTS: Date quoted for Texas Creek intrusives is for the Premier porphyry dyke (Fieldwork 1985). Unuk River Fm. age date from Brown, D.A., 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1986
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	152.8900	Grams per tonne
Gold	0.7200	Grams per tonne

COMMENTS: Samples 35539-35541 over 6 metres.
REFERENCE: Assessment Report 15762.

CAPSULE GEOLOGY

The Simcoe showing is located on the Simcoe crown grant (L.4145) on Logan Creek south of the Silbak Premier mine, 22 km north of Stewart, B.C.. For a more extensive bibliography and geological description refer to the Silbak Premier mine (104B 054).

The area is located in the Intermontane Belt, bounded on the west by the Coast Crystalline complex and on the east by the Bowser Basin, in the volcanic arc assemblage of the Stikinia Terrane.

The mineralization is hosted by Late Triassic to Early Jurassic Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending belt of folded dacite flows, andesite flows, breccias and lapilli tuffs containing a thick sequence of argillites and siltstones infolded along a synclinal axis. The andesite, at least 750 metres thick, is unconformably overlain by volcaniclastic and epiclastic rocks. This sequence is intruded by Early Jurassic Texas Creek dacitic porphyry dykes and granitic Eocene Hyder intrusives.

The potassium feldspar porphyry (historically known as the "Premier Porphyry") is spatially associated with mineralization; this relationship is believed to indicate a Lower Jurassic age for mineralization.

Simcoe mineralization occurs as fine disseminations, narrow discontinuous veins and breccia infillings. Ore minerals include pyrite, sphalerite, galena, and tetrahedrite. Gangue minerals are quartz, potassium feldspar, chlorite, carbonate and others.

Mineralization in this area is closely associated with alteration; the most intensely silicified and re-brecciated rocks generally host the most mineralization. Intense alteration usually occurs in areas of structural weakness near intrusions. Simcoe alteration is comparable to zones bordering or immediately on strike with the Glory Hole area of the Silbak Premier mine. The Simcoe showing is generally more calcareous and sericitic, less siliceous and somewhat less structurally deformed than the Glory Hole ore zones.

A channel sample taken over 6 metres in 1986 assayed 0.72 grams per tonne gold and 152.89 grams per ton silver (Assessment Report 15762).

BIBLIOGRAPHY

FOR AN EXTENSIVE BIBLIOGRAPHY ON SILBAK PREMIER MINE SEE 104B 054
EMPR ASS RPT *15762
EMPR EXPL 1980-459
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/13 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/12/14 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 159**

NATIONAL MINERAL INVENTORY:

NAME(S): **96 GROUP**

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 02 28 N
LONGITUDE: 130 04 10 W
ELEVATION: 150 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit location from USGS Bulletin 807. Location within the United States, east of Texas Creek, west side of Mineral Hill.

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6211171
EASTING: 433373

COMMODITIES: Lead Zinc Copper

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

DEPOSIT
CHARACTER: Vein Stockwork Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Folded Sheared
DIMENSION: 0061 x 0002 Metres STRIKE/DIP: 170/40E TREND/PLUNGE:
COMMENTS: Vein is 1.5 metres thick and has been traced for 61 metres.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2.0 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Granodiorite Dike
Andesite Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Granitic Intrusive
Lamprophyre Dike

HOSTROCK COMMENTS: Date quoted for Texas Creek is for the "Premier" porphyry dykes in Silbak Premier area (Fieldwork, 1985). Unuk River age: Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP:
COMMENTS: Located at western margin of Intermontane Belt.

PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

The showing on the Ninety-six group of claims is located on the west side of Mineral Hill, east of Texas Creek in southeastern Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek granodiorite, Eocene granitic Hyder intrusives and lamprophyre dykes.

A vein was intersected in a 19 metre adit in a Texas Creek granodiorite dyke. The vein occurs in a brecciated zone as mineralized stockwork stringers with no well-defined walls. The vein is 1.5

CAPSULE GEOLOGY

metres thick in outcrop above the adit. The vein strikes 170 degrees, dips 40 degrees east and has been traced on the surface for 61 metres. Mineralization consists of galena, sphalerite, tetrahedrite, chalcopyrite and pyrite with galena most abundant.

BIBLIOGRAPHY

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Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)
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DATE CODED: 1988/07/13 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 160**

NATIONAL MINERAL INVENTORY:

NAME(S): **STONER**, CHUM

STATUS: Prospect
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 02 02 N
LONGITUDE: 130 01 53 W
ELEVATION: 440 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Shaft located north of Boundary Creek in United States (USGS Bulletin 807 and Kretschmar, 1979).

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6210331
EASTING: 435732

COMMODITIES: Zinc, Lead, Gold, Silver, Copper

MINERALS

SIGNIFICANT: Sphalerite, Galena, Tetrahedrite, Pyrrhotite, Pyrite, Arsenopyrite, Chalcopyrite
ASSOCIATED: Calcite, Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia, Massive, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: G07 Subaqueous hot spring Ag-Au; G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Folded, Faulted
DIMENSION: 0002 Metres
STRIKE/DIP: 090/
TREND/PLUNGE:
COMMENTS: Shoot at shaft strikes approximately east, dips northward and is 2 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE: 210+24-14 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2.0 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Eocene			Hyder Pluton

LITHOLOGY: Andesite Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Dacitic K-Feldspar Porphyry Dike
Granitic Intrusive
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Date for Texas Creek is for the "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age from Brown, D.,1987

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1929
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Gold	13.2700	Grams per tonne

COMMENTS: Gold equivalent. Calculated from 6 to 8 dollars gold and silver per tonne, using $20.67 per ounce.
REFERENCE: United States Geological Survey, Bulletin 807.

CAPSULE GEOLOGY

The Stoner workings are located on the Chum claims north of Boundary Creek 13 kilometres north of Hyder, Alaska. Houston Oil and Minerals Corporation explored the property in 1979.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

Mineralization is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes, Eocene granitic Hyder intrusives and lamprophyre dykes.

The Stoner shaft was sunk in silicified andesite tuff on a 2 metre wide massive sulphide shoot. The shoot consists of quartz mineralized with coarse-grained pyrite and wispy bands of sphalerite and galena. The shoot strikes approximately east and dips northward.

Patchy and discontinuous mineralization is exposed in a series of trenches and adits over 76 metres. This mineralization occurs interstially in a siliceous tuff or volcanic breccia and consists of semi-massive pyrite, sphalerite, galena and arsenopyrite. Less commonly pyrite, euhedral arsenopyrite, pyrrhotite and chalcopyrite occur in a quartz matrix.

The 9 metre wide western open cut exposes a 5 centimetre thick shoot of pyrite, sphalerite and minor galena, tetrahedrite, pyrrhotite, and calcite gangue.

Other mineralized shoots in the area are reported to have yielded 9.95 to 13.27 grams per tonne gold equivalent (6 to 8 dollars gold and silver per tonne, USGS Bulletin 807).

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CIM SPEC. Vol. #8, pp. 149-170,215-229
GSC MAP 9-1957; 1418A
EMPR PF (Kretschmar, D., (1979): *Report and Map, Houston Oil and Minerals Corp.)
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GSC P 89-1E, pp. 145-154
Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)

DATE CODED: 1988/01/21 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 161**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOHNSTONE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 34 45 N
LONGITUDE: 130 11 40 W
ELEVATION: 1737 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located from Open File, 1988-4.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6271181
EASTING: 426625

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Arkosic Wacke
Greywacke
Conglomerate

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Chalcopyrite and pyrite are reported to occur in outcrop on the eastern edge of the Johnstone Icefield (Open File 1988-4).

The area is underlain by arkosic wacke, greywacke and conglomerate of the Lower Jurassic Unuk River Formation, Hazelton Group.

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EMPR OF *1988-4
EMPR BULL 63
GSC MAP 9-1957; 1418A
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EMPR ASS RPT 16839
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/06/16 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/06/16 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 162**

NATIONAL MINERAL INVENTORY:

NAME(S): **MONARCH**, NORTH STAR

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 00 19 N
LONGITUDE: 130 03 23 W
ELEVATION: 730 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on adit on plate 13 (USGS Bull. 1024-F). Located in the United States, between Salmon River and Skookum Creek.

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6207171
EASTING: 434126

COMMODITIES: Gold, Silver, Lead, Zinc, Copper, Tungsten, Barite

MINERALS
SIGNIFICANT: Galena, Pyrite, Tetrahedrite, Sphalerite, Chalcopyrite, Barite, Scheelite
ASSOCIATED: Pyrite, Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic, Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I12 W veins
DIMENSION:
STRIKE/DIP: 125/75E
TREND/PLUNGE:
COMMENTS: Vein averages 10.0 centimetres in thickness.

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic			Texas Creek Plutonic Suite

ISOTOPIC AGE: 206.5 +/- 6 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Hornblende

LITHOLOGY: Hornblende Granodiorite, Volcanic, Sediment/Sedimentary

HOSTROCK COMMENTS: Reference is Fieldwork 1985, page 217.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1929
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	9120.0000	Grams per tonne
Gold	46.4000	Grams per tonne

COMMENTS: Assay from a specimen of tetrahedrite.
REFERENCE: United States Geological Survey, Bulletin 807, page 75.

CAPSULE GEOLOGY

The area is underlain by the Hazelton Group, which is a northwest trending belt of folded volcanic rocks, which contains a thick sedimentary sequence infolded along a synclinal axis. This group is bounded on the west by the Coast Crystalline Complex, and on the east by the Bowser Basin.

The host rock is the Texas Creek Batholith of Early Jurassic Age. The mineralization occurs in a series of northwest striking quartz veins in a coarse-grained hornblende granodiorite. Mineralization consists of galena, pyrite, tetrahedrite, sphalerite, and chalcopyrite. Locally there is considerable barite, and minor amounts of scheelite. A specimen of tetrahedrite, which assayed at 9120.0 grams per tonne silver and 46.4 grams per tonne gold (USGS Bulletin 807, page 75), came from a vein which strikes 125 degrees and dips 75 degrees northeast. This vein, which averages 10 centimetres thick, is likely part of the Olympia Extension vein (104B 164), 600 metres

CAPSULE GEOLOGY

to the southeast.

BIBLIOGRAPHY

USGS BULL *807, pp. 74,75; 1024F, p. 139, plate 13
EMPR OF 1987-22; 1991-17
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EMPR FIELDWORK 1983, pp. 149-165; 1984, pp. 316-342; 1985, pp. 217-219
GSC MEM 175
GSC MAP 9-1957; 1418A
EMPR PF (Unpublished Company Maps, Pulsar Energy and Resources Inc.)
CJES Vol. 10, Part 1, 1973, pp. 408-420
GSC P 89-1E, pp. 145-154

DATE CODED:	1988/02/02	CODED BY:	GSA	FIELD CHECK:	N
DATE REVISED:	1988/06/09	REVISED BY:	LDJ	FIELD CHECK:	N

MINFILE NUMBER: **104B 163**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHASTA IRON**, SUMMIT, SHAFT CREEK COPPER

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 00 13 N
LONGITUDE: 130 02 33 W
ELEVATION: 868 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of shaft on plate 12 (United States Geological Survey, Bulletin 807). This occurrence lies in the United States, between Skookum and Fish Creeks.

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6206972
EASTING: 434989

COMMODITIES: Iron, Gold, Silver, Copper

MINERALS

SIGNIFICANT: Pyrrhotite, Chalcopyrite, Pyrite, Arsenopyrite
ASSOCIATED: Quartz, Calcite, Orthoclase
ALTERATION: Sericite, Chlorite, Pyrite, Silica
ALTERATION TYPE: Sericitic, Chloritic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive, Vein
CLASSIFICATION: Hydrothermal, Epigenetic, Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au; I02 Intrusion-related Au pyrrhotite veins
G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
SHAPE: Irregular
MODIFIER: Folded, Faulted
DIMENSION: 0004 x 0003 Metres
STRIKE/DIP:
TREND/PLUNGE: 070/
COMMENTS: Indistinct bedding. Masses of almost pure pyrrhotite, the largest measures 1.52 by 3.66 metres and is at least 3.0 metres deep.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE: 210+24-14 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2.0 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Eocene			Hyder Pluton

LITHOLOGY: Andesite Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Dacitic K-Feldspar Porphyry Dike
Granitic Intrusive
Dacitic Porphyry Sill
Lamprophyre Dike

HOSTROCK COMMENTS: Date for Texas Creek is for the "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. date from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1929
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Silver	137.1200	Grams per tonne
Gold	12.3400	Grams per tonne
Copper	2.0000	Per cent

COMMENTS: Assay from pyrrhotite-rich body.
REFERENCE: United States Geological Survey, Bulletin 807, page 71.

CAPSULE GEOLOGY

The Shasta Iron showing is located on the Summit claim between Skookum and Fish Creeks in southeastern Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

Mineralization is hosted in metavolcanics that have been silicified and sericitized. Petrography indicates that the original host may have been a quartz porphyry. Indistinct bedding trends 70 degrees northeast and is nearly vertical.

These altered metavolcanics contain calcite veins, quartz, chlorite, orthoclase and abundant sulphide mineralization, most notably large masses of almost pure pyrrhotite. The largest of these masses measures 1.52 by 3.66 metres with a vertical extent of at least 3 metres. Small amounts of chalcopyrite, arsenopyrite and pyrite are associated with these bodies.

The paragenetic sequence is thought to be pyrite, arsenopyrite, quartz, pyrrhotite and chalcopyrite with pyrrhotite and chalcopyrite occurring contemporaneously.

An assay of samples from this body was reported to contain 12.34 grams per tonne gold, 137.12 grams per tonne silver and 2 per cent copper (United States Geological Survey, Bulletin 807).

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Sutherland-Brown, A., (1951): Cordilleran Structure in Canada and Alaska)
CIM SPEC VOL #8, pp. 149-170, 215-229
CJES Vol. 10, Part 1, 1973, pp. 408-420
GSC P 89-1E, pp. 145-154
Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)

DATE CODED: 1988/07/13 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 164**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROANAN**, OLYMPIA EXTENSION, FISH CREEK (UPPER), LAST CHANCE

STATUS: Prospect
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 00 07 N
LONGITUDE: 130 02 59 W
ELEVATION: 853 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit located on the Olympia Extension claim near Skookum Creek in the United States (United States Geological Survey, 1024-F).

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6206793
EASTING: 434536

COMMODITIES: Gold, Silver, Lead, Zinc, Copper, Tungsten

MINERALS

SIGNIFICANT: Tetrahedrite, Galena, Sphalerite, Chalcopyrite, Pyrite, Scheelite
ASSOCIATED: Quartz, Ankerite, Barite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Layered
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I12 W veins
SHAPE: Tabular
MODIFIER: Folded, Faulted
DIMENSION: 0183 x 0076 x 0001 Metres
STRIKE/DIP: 140/45E
TREND/PLUNGE:
COMMENTS: Attitude of quartz vein traced for 183 metres, average 1 metre in width, 76 metres in depth.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE: 210+24-14 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2.0 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Eocene			Hyder Pluton

LITHOLOGY: Dacitic K-Feldspar Porphyry Dike
Andesite Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Dacitic Porphyry Sill
Granitic Intrusive

HOSTROCK COMMENTS: Texas Creek date is for "Premier" Porphyry dyke in Silbak Mine area (Fieldwork, 1985). Unuk River Formation age date from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1917
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Silver	349.7400	Grams per tonne
Gold	48.6800	Grams per tonne
Tungsten	0.0500	Per cent

COMMENTS: Commodity is tungsten oxide (Wo3). Across 1.83 metres of vein, scheelite in lower drift exposure over 15 metres.
REFERENCE: United States Geological Survey, Bulletin 807 and 1024-F.

CAPSULE GEOLOGY

The Roanan showing is believed to be located on the Last Chance claim, previously known as the Olympia Extension claim, near Skookum Creek, approximately 1250 metres east of the Salmon River in south-eastern Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder intrusives and lamprophyre dykes.

The mineralized quartz vein is hosted in a Texas Creek porphyry dyke near the Unuk River Formation contact. The vein strikes 140 degrees, dips 45 degrees east and has been traced along strike for 183 metres. The vein has an average width of 1 metre and a vertical dimension of 76 metres. The walls of the vein show slickensiding. A surface trench exposed the vein 1.22 to 1.83 metres wide, mineralized with stringers of solid sulphides. Mineralization consists of tetrahedrite, galena, sphalerite, chalcopyrite and pyrite with associated gold and silver values. Tetrahedrite occurs in solid stringers up to 5 centimetres wide while other sulphides are layered. Ankerite and barite are associated with vein mineralization (probably alteration products).

The vein has been exposed underground along strike in 2 drifts. The vein in the upper drift contains several small crystals of scheelite. In the lower drift, the vein averages 30 centimetres in width and contains sparsely distributed grains of scheelite over a length of 15 metres with an estimated grade of 0.05 per cent scheelite (United States Geological Survey, Bulletin 1024-F).

A sample across 1.83 metres in the surface exposure, taken in 1917, assayed 48.68 grams per tonne gold and 349.74 grams per tonne silver (United States Geological Survey, Bulletin 807).

The Roanan and Olympia extension veins may be two separate veins in the same structure. Vague locational evidence suggests that they are the same vein, and have been described as such here.

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EMPR BULL 58; 63
EMPR FIELDWORK 1983, pp. 149-165; 1984, pp. 316-342; 1985, pp. 217-219 EMPR OF 1987-22; 1991-17
EMPR REGIONAL PF (Mineral Terranes of Alaska, 1982 Plate F; Sutherland-Brown, A., (1951): Cordilleran Structure in Canada and Alaska)
GSC MAP 1418A
GSC MEM 175
GSC P 89-1E, pp. 145-154
CIM SPEC VOL #8, pp. 149-170, 215-229
CJES VOL 10, Part 1, 1973, pp. 408-420
USGS BULL 722; 800; *807-69-71; *1024F-138; 1425
Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)

DATE CODED: 1988/02/17 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 165**

NATIONAL MINERAL INVENTORY:

NAME(S): **PHIZ**, ROB 13, CREST, MAGENTA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 41 16 N
LONGITUDE: 131 11 17 W
ELEVATION: 150 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of Phiz Vein is in the north central part of the Rob 13 claim, located between the Craig and Iskut Rivers. Location from 1:25,000 claim map for Magenta Development Corp., submitted by Prime Explorations Ltd., January 19, 1989.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6284771
EASTING: 365982

COMMODITIES: Gold, Silver, Zinc, Lead, Copper

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

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary			Coast Plutonic Complex
Permian			Stikine Assemblage

LITHOLOGY: Quartz Vein
Volcanic Rock
Sediment/Sedimentary Rock
Volcaniclastic
Intrusive Rock

HOSTROCK COMMENTS: Permian and older Stikine Assemblage rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
Plutonic Rocks RELATIONSHIP:
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	44.6000	Grams per tonne
Gold	16.9000	Grams per tonne

COMMENTS: 7.0 metre channel sample taken across the Phiz Vein.
REFERENCE: Vancouver Stockwatch November 28, 1988, page 11.

CAPSULE GEOLOGY

The area between the Craig and Iskut Rivers is underlain by metamorphosed Paleozoic (Permian and older) rocks of the Stikine Assemblage. These rocks are unconformably overlain by stratified Triassic rocks. This area lies on the eastern margin of the Tertiary-Cretaceous Coast Plutonic Complex.

In 1988, the Phiz vein was located on the Rob 13 claim. Stripping and trenching exposed the vein over a 24.4 metre strike length and where exposed the vein averages about 3.0 metres in width. Surface channel samples assayed 49.7 grams per tonne gold and 135.8 grams per tonne silver over 3.2 metres, 88.0 grams per tonne gold and 87.1 grams per tonne silver across 2.98 metres, and 16.9 grams per tonne gold with 44.6 grams per tonne silver across 7.0 metres (George Cross Newsletter Nov. 18, 1988).

CAPSULE GEOLOGY

Thirteen holes have been drilled in the vicinity of the vein. Several quartz pebbles were found in the casing indicating that the vein could be very shallow in depth. Holes 7,9,10 and 11 encountered a broad silicified zone with disseminated galena, sphalerite and chalcopyrite mineralization. The zone appears to have a width of up to 12 metres. Drilling about 46 metres to the southeast of the vein intersected a mineralized quartz vein which hosts disseminated galena and pyrite.

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DATE CODED: 1989/01/19 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1989/01/24 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 166**

NATIONAL MINERAL INVENTORY:

NAME(S): **DELTA**, DELTA WEST (ZONE)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 22 04 N
LONGITUDE: 130 08 06 W
ELEVATION: 1340 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 5 kilometres north of Frank Mackie Glacier. Coordinates are for central area of mineralized zone (Assessment Report 14607).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6247592
EASTING: 429888

COMMODITIES: Silver, Gold, Zinc, Lead, Copper

MINERALS
SIGNIFICANT: Sphalerite, Galena
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au; J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	
Eocene			Unnamed/Unknown Informal

LITHOLOGY: Siltstone
Sandstone
Feldspar Porphyry

HOSTROCK COMMENTS: Feldspar porphyry intrusions occur near mineralized altered zone.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1985

COMMODITY	GRADE	
Silver	52.8000	Grams per tonne
Lead	0.1800	Per cent
Zinc	0.4800	Per cent

COMMENTS: From a 2.44 metre sample.
REFERENCE: Assessment Report 14607.

CAPSULE GEOLOGY

This occurrence is located immediately north of a small valley glacier itself located about 2.5 kilometres north of Frank Mackie Glacier. The area is underlain by rock of the Middle Jurassic Salmon River Formation Siltstone Sequence, Hazelton Group. The sediments have been folded into synclines and anticlines with north trending fold axes. Small Eocene feldspar porphyry intrusions occur near mineralized zone.

A mineralized altered zone was located on the eastern bank of the westernmost creek draining into the valley glacier. The zone, of undetermined width, trends for several hundred metres in a north-northwest direction parallelling the eastern wall of the creek. Alteration minerals were not reported.

Reported mineralization includes very minor galena and sphalerite. A 2.44 metre wide sample taken across the zone near the glacier contained 0.48 per cent zinc, 0.18 per cent lead, and 52.80 grams per tonne silver. Another sample from this zone taken about 600 metres to the north contained 0.62 per cent copper, 0.69 per cent lead, 0.76 per cent zinc, 1.23 grams per tonne gold, and 10.97 grams per tonne silver. The highest silver value obtained was 95.32 grams per tonne silver (Assessment Report 14607).

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EMPR ASS RPT 11716, *13403, *14607, 15645, 16911
EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102; 1987, pp. 199-209
EMPR OF 1987-22; 1988-4
EMPR BULL 63
EMPR EXPL 1983-520; 1984-386; 1986-C440; 1987-C372
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1986/08/19 CODED BY: AFW FIELD CHECK: N
DATE REVISED: 1988/12/16 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 167**

NATIONAL MINERAL INVENTORY:

NAME(S): **TENNYSON**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 15 49 N
LONGITUDE: 130 09 49 W
ELEVATION: 1460 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located north of and adjacent to Berendon Glacier (Assessment Report 15789).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6236028
EASTING: 427925

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Pyrite, Sphalerite, Galena, Electrum, Tetrahedrite, Chalcopyrite
ASSOCIATED: Quartz, Calcite, Dolomite, Chlorite, Magnetite
ALTERATION: Sericite, Pyrite, Chlorite, Clay, Silica, Carbonate, Epidote, Garnet
COMMENTS: Magnetite also present.
ALTERATION TYPE: Sericitic, Argillic, Propylitic, Carbonate, Silicific'n, Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stratabound, Massive, Breccia
CLASSIFICATION: Epithermal, Hydrothermal, Epigenetic, Skarn
TYPE: G07 Subaqueous hot spring Ag-Au, K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Carbonaceous Pelitic Tuff
Andesitic Tuff
Tuffaceous Breccia
Volcanic Conglomerate
Flow Breccia
Schist
Limestone
Siltstone
Sandstone
Cataclasite

HOSTROCK COMMENTS: Gold mineralization is spatially related to black carbonaceous pelitic horizons.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
YEAR: 1986

COMMODITY	GRADE	
Silver	284.2000	Grams per tonne
Gold	40.8000	Grams per tonne

COMMENTS: Assay over 2.14 metres (7.0 feet) from DDH 88-4.
REFERENCE: Assessment Report 15789.

CAPSULE GEOLOGY

A gossanous outcrop approximately 750 by 500 metres is bounded to the north, south, east and west by Berendon Glacier and associated icefield and to the east by a steeply dipping northwest trending fault.

The area is underlain by lapilli and ash tuffs, ash/crystal tuff breccias, volcanic conglomerate, flow breccia and lesser sediments of the Lower Jurassic Unuk River Formation, Hazelton Group. Highly foliated sections of tuff pass into silver coloured talcose-sericite schist. Cataclasite, quartz-sericite schist and quartz-feldspar-

CAPSULE GEOLOGY

sericite schist also occur, with the latter being a highly altered fine-grained andesitic volcanic.

Large scale folding and the development of 30 degree striking regional foliation and schistosity characterize the main deformation event. Joints and fractures are common in all volcanic/sedimentary sequences. Alteration assemblages include propylitic and quartz-carbonate-chlorite zones peripheral to a main zone of sericite-pyrite alteration which contain local areas of silicification and clay alteration.

The most prominent form of mineralization is the pervasive pyritization with pyrite concentrations averaging between 5 and 10 per cent and locally up to 20 per cent. Other types of mineralization include:

1) Foliation parallel, stratabound sulphide layers and/or distinct veins varying from several centimetres to 0.31 metres in width. These ubiquitous massive, banded sulphides consist mainly of pyrite with lesser sphalerite, tetrahedrite, galena, chalcopyrite and gold. Polished sections studies indicate that gold is present in the form of electrum inclusions in tetrahedrite.
2) Discordant veins of quartz, calcite, dolomite and chlorite contain, in order of abundance, pyrite, sphalerite, galena, chalcopyrite and gold.
3) Quartz-carbonate-chlorite stockwork bearing chalcopyrite but low gold and silver.
4) Garnet-epidote-magnetite skarn with development of base metal sulphides. No appreciable gold and silver occur.
5) Carbonate healed breccia zones plus or minus base metals but low

Results indicate that gold occurs mainly within the foliation parallel banded sulphide layer/vein zones of type 1. A 3.1 metre interval of this type was intersected in diamond-drill hole 86-1 and contained 2.84 grams per tonne gold. The gold mineralization is spatially related to black carbonaceous pelitic horizons. Black tuffs are also observed with gold mineralized sections of drill hole 86-4. A second type of gold mineralization was indicated from diamond-drill hole 86-4 where an argillic altered pyritized section, 2.14 metres in length, assayed 40.8 grams per tonne gold and 284.2 grams per tonne silver (Assessment Report 15789).

According to J.M. Logan, the author of the above Assessment Report, the alteration assemblages, peripheral base metal veins and associated precious metal values suggest a volcanic hosted epithermal precious metal deposit.

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EMPR ASS RPT 13403, *14642, *15789
EMPR BULL 63
EMPR OF 1987-22; 1988-4
EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102
GSC MAP 9-1957; 307A; 315A; 1418A
GSC MEM 175
EMPR EXPL 1984-386; 1986-437; 1987-C374
GCNL #30,#56,#60,#141,#181,Dec.10, 1986
N MINER Feb.24, 1986; Dec.16, 1985
GSC P 89-1E, pp. 145-154

DATE CODED: 1986/08/19 CODED BY: AFW FIELD CHECK: N
DATE REVISED: 1988/08/10 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 168**

NATIONAL MINERAL INVENTORY:

NAME(S): **GAMMA**, FAIRWEATHER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 20 52 N
LONGITUDE: 130 08 10 W
ELEVATION: 1350 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located between Canoe Glacier and Frank Mackie Glacier, approximately 42 kilometres north-northwest of Stewart.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6245367
EASTING: 429783

COMMODITIES: Silver, Gold, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Tetrahedrite, Sphalerite, Galena, Chalcopyrite, Pyrite
ASSOCIATED: Quartz, Calcite
ALTERATION: Malachite, Azurite
ALTERATION TYPE: Silicific'n, Carbonate, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: G07 Subaqueous hot spring Ag-Au; I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Breccia, Tuff, Conglomerate, Sandstone, Siltstone, Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE — REPORT ON: N

CATEGORY: Assay/analysis — YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	4.0400	Grams per tonne

COMMENTS: A weighted average over a 7.15 metre width.
REFERENCE: Assessment Report 17028.

ORE ZONE: SHEAR — REPORT ON: N

CATEGORY: Assay/analysis — YEAR: 1986
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	2000.0000	Grams per tonne

COMMENTS: Two metre sample from a tetrahedrite rich shear. Another sample contained 12,900 grams per tonne silver.
REFERENCE: Assessment Report 15644.

CAPSULE GEOLOGY

The claim is underlain by Lower Jurassic Hazelton Group rocks of the Unuk River Formation comprised of red, green, to maroon tuff, breccia with conglomerate, sandstone, and siltstone. These rocks are overlain by the Middle Jurassic Salmon River Formation comprised of siltstones, greywackes, and sandstone.

Locally the Unuk River rocks are described as andesitic tuffs with interbedded red weathering, black shales. These are intruded by a feldspar porphyry which is highly fragmented.

Mineralization consists of quartz-calcite veinlets hosting

CAPSULE GEOLOGY

galena, sphalerite, chalcopyrite, and pyrite with significant amounts of silver. Mineralization in a fault containing galena and sphalerite, as well as malachite, and azurite staining assayed 0.17 grams per tonne gold, and 60.5 grams per tonne silver. In 1986, a grab sample from a quartz vein hosting tetrahedrite, sphalerite, and galena assayed up to 12,900 grams per tonne silver and 1.99 grams per tonne gold. Also in 1986, a 2.0 metre trench channel sample from a tetrahedrite-rich shear contained over 2000 grams per tonne silver (Assessment Report 15644). A pyritized structure between 5 and 15 metres in width with a 125 metres strike length was sampled yielding a weighted average 0f 4.04 grams per tonne gold over a 7.15 metre width (Assessment Report 17028).

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EMPR PF (*Prospectus: Wedgewood Resources Ltd., 1988)
EMPR ASS RPT 13403, *15644, *17028
EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102; 1987, pp. 199-209
EMPR OF 1987-22; 1988-4
EMPR BULL 63
EMPR EXPL 1984-386; 1987-C374
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1987/09/02 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/08/15 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 169**

NATIONAL MINERAL INVENTORY:

NAME(S): **THETA**, ETA, I0TA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 20 14 N
LONGITUDE: 130 11 13 W
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Located on the southern flank of Ketchum Mountain with the Frank Mackie Glacier bounding the property to the south (Assessment Report 16156).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6244245
EASTING: 426621

COMMODITIES: Silver, Gold, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Galena, Sphalerite, Chalcopyrite, Pyrite
ASSOCIATED: Quartz, Calcite
ALTERATION: Malachite, Azurite
ALTERATION TYPE: Silicific'n, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: G07 Subaqueous hot spring Ag-Au
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Cretaceous-Tertiary			Coast Plutonic Complex

LITHOLOGY: Volcanic Breccia
Conglomerate
Siltstone
Tuff
Andesite
Granodiorite
Quartz Monzonite
Granite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
COMMENTS: Lies east of C.P.C. and within western boundary of Bowser Basin.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1986
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	1520.0000	Grams per tonne
Gold	0.8200	Grams per tonne
Copper	0.6400	Per cent
Lead	19.6000	Per cent
Zinc	7.7500	Per cent

COMMENTS: The sample width is reported to be 3 to 4 metres.
REFERENCE: Assessment Report 16156.

CAPSULE GEOLOGY

Rocks in the area belong to the Mesozoic Hazelton Group and have been folded on a regional northwest-southeast axis, cut by faults and selective tectonism, locally hydrothermalized and intruded by plugs of both Cenozoic and Mesozoic Age.

Locally, Lower Jurassic Hazelton Group volcanic and sedimentary rocks of the Unuk River Formation are unconformably overlain by the Middle Jurassic marine and non-marine volcanics and sediments of the Betty Creek Formation, the volcano-sedimentary Upper Jurassic Salmon River Formation, and the post-accretion fine clastic basinal Nass Formation.

The Unuk River Formation forms a north-northwest trending belt

CAPSULE GEOLOGY

and consists of red, green, and purple volcanic breccia, conglomerate, sandstone, siltstone, and minor tuff with limestone. Also included are pillow lavas and volcanic flows. These rocks are overlain by both the Betty Creek and Salmon River Formations, respectively.

The Betty Creek Formation consists of pillow lavas, breccias, and andesitic and basaltic flows. The overlying Salmon River Formation consists of banded siltstone, sandstone, calcarenite, limestone, volcanic sediments and flows.

Intrusives are dominated by granodiorite of the Coast Plutonic Complex to the west. Some of the small intrusive plugs on the claims range from quartz monzonite to granite. Small Tertiary feldspar porphyry dykes, sills, and small plugs intrude the rocks and host related quartz-sulphide and epithermal metalliferous deposits.

Two quartz veins sampled in the southeastern corner of the Theta claim host mineralization over widths from 0.3 to 0.6 metres. The lower quartz vein in altered andesites, hosts galena, sphalerite, chalcopyrite and pyrite. In 1986, four samples taken from the vein over 1 to 2 metres ranged between 0.2 to 0.38 grams per tonne gold, 13.4 to 441.8 grams per tonne silver, 0.12 to 7.42 per cent lead, 0.11 to 4.85 per cent zinc, and 0.01 to 2.14 per cent copper. To the north, another quartz vein hosts lensoidal mineralization. A 3 to 4 metre grab sample assayed 0.82 grams per tonne gold, 1520.0 grams per tonne silver, 19.6 per cent lead, 7.75 per cent zinc, and 0.64 per cent copper (Assessment Report 16156).

Mineralization also occurs in the northeast corner of the Eta claim, and consists of a brecciated quartz-calcite vein which marks a contact between fine-grained andesite tuff to the north and a pyritic agglomerate to the south. The vein hosts galena, sphalerite, chalcopyrite, pyrite, azurite, and malachite. Values obtained from a blasting and trenching program indicate a higher gold/silver ratio than other parts of the property. The average of nine trench samples contained 1.84 grams per tonne gold, 41.41 grams per tonne silver, 0.05 per cent lead, 0.27 per cent zinc, and 0.08 per cent copper (Assessment Report 16156).

BIBLIOGRAPHY

EMPR ASS RPT *16156
EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102; 1987, pp. 199-209
EMPR BULL 58; 63
EMPR OF 1987-22; 1988-4
EMPR EXPL 1987-C374
GSC MAP 9-1957; 1418
GSC P 89-1E, pp. 145-154

DATE CODED: 1987/10/26 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/08/12 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 170**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAMBDA**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 18 39 N
LONGITUDE: 130 09 51 W
ELEVATION: 1160 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Claims cover the western slopes of an unnamed mountain in the area south of the Frank Mackie Glacier and west of the Bowser River, (Assessment Report 16155).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6241284
EASTING: 427979

COMMODITIES: Silver, Gold, Zinc, Lead, Copper

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

DEPOSIT
CHARACTER: Vein, Massive, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: G07 Subaqueous hot spring Ag-Au; I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic Cretaceous-Tertiary	Hazelton	Unuk River	Coast Plutonic Complex

LITHOLOGY: Volcanic Breccia
Conglomerate
Siltstone
Tuff
Andesite
Granodiorite
Quartz Monzonite
Granite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Silver	1790.0000	Grams per tonne
Gold	1.9600	Grams per tonne
Copper	0.2600	Per cent
Lead	4.4500	Per cent
Zinc	2.4500	Per cent

REFERENCE: Assessment Report 16155.

CAPSULE GEOLOGY

Rocks in the area belong to the Mesozoic Hazelton Group and have been folded on a regional northwest-southeast axis, cut by faults and selective tectonism, locally hydrothermalized and intruded by plugs of both Cenozoic and Mesozoic Age.

Locally, Lower Jurassic Hazelton Group volcanic and sedimentary rocks of the Unuk River Formation are unconformably overlain by the Middle Jurassic marine and non-marine volcanics and sediments of the Betty Creek Formation, the volcano-sedimentary Upper Jurassic Salmon River Formation, and the post-accretion fine clastic basinal Nass Formation.

The Unuk River Formation forms a north-northwest trending belt and consists of red, green, and purple volcanic breccia, conglomerate, sandstone, siltstone, and minor tuff with limestone. Also included are pillow lavas and volcanic flows. These rocks are overlain by both the Betty Creek and Salmon River Formations, respective-

CAPSULE GEOLOGY

ly.

The Betty Creek Formation consists of pillow lavas, breccias, and andesitic and basaltic flows. The overlying Salmon River Formation consists of banded siltstone, sandstone, calcarenite, limestone, volcanic sediments and flows.

Intrusives are dominated by granodiorite of the Coast Plutonic Complex to the west. Some of the small intrusive plugs on the claims range from quartz monzonite to granite. Small Tertiary feldspar porphyry dykes, sills, and small plugs intrude the rocks and host related quartz-sulphide and epithermal metalliferous deposits.

Mineralization occurs in a quartz vein which cuts the Hazelton Group rocks. The vein strikes 015 degrees over a length of about 10 metres and hosts massive galena with sphalerite and pyrite. A sample assayed 1.96 grams per tonne gold, 1790.0 grams per tonne silver, 4.45 per cent lead, 2.45 per cent zinc, and 0.26 per cent copper. Another quartz vein hosting massive galena was sampled over 1.0 metre and assayed 0.58 grams per tonne gold, 1580.0 grams per tonne silver, 2.86 per cent lead, 0.93 per cent zinc, and 0.34 per cent copper (Assessment Report 16155).

A sample of massive sphalerite and galena is interbedded within a schist that strikes 040 degrees. A sample taken over a 1.0 metre area assayed 0.21 grams per tonne gold, 238.0 grams per tonne silver, 5.35 per cent lead, 22.5 per cent zinc, and 0.35 per cent copper

Samples taken from a gossanous area approximately 60 metres long and 1 to 3 metres wide, hosting disseminated pyrite throughout assayed 1.35 grams per tonne gold, 604.3 grams per tonne silver, 0.16 per cent lead, 0.22 per cent zinc, and 0.06 per cent copper (Assessment Report 16155).

BIBLIOGRAPHY

EMPR ASS RPT *16155
EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102; 1987, pp. 199-209
EMPR OF 1987-22; 1988-4
EMPR BULL 63
EMPR EXPL 1987-C373
GSC MAP 9-1957; 1418
GSC P 89-1E, pp. 145-154

DATE CODED: 1987/10/26 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/08/12 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 171**

NATIONAL MINERAL INVENTORY:

NAME(S): **KONKIN**, KONKIN GOLD, TR

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 35 00 N
LONGITUDE: 130 10 44 W
ELEVATION: 1525 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located along the western edge of Treaty Glacier about 6.5 kilometres southwest of the glacier's toe (Open File 1988-4).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6271628
EASTING: 427589

COMMODITIES: Gold, Copper, Zinc

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrite, Magnetite, Hematite, Sphalerite, Gold
ASSOCIATED: Quartz, Calcite
ALTERATION: Chlorite, Diopside, Garnet, Epidote, Malachite, Azurite, Limonite
ALTERATION TYPE: Silicific'n, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Dolomite
Lithic Crystal Andesite Tuff
Diorite
Limestone
Quartzite
Pillow Lava
Volcanic Breccia
Porphyritic Flow
Chert

HOSTROCK COMMENTS: Strata are intruded by a small Jurassic diorite stock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	4.8700	Grams per tonne

COMMENTS: Sample taken over a 12.5 metre width.
REFERENCE: Progress Report, Teuton Resources Corp., Oct.17, 1988.

CAPSULE GEOLOGY

The Konkin occurrence, located near the western margin of Treaty Glacier, occurs in the Lower Jurassic Unuk River Formation, Hazelton Group. Rocks in the area include weak to moderately altered crystal-lithic andesite tuffs, intensely altered crystal-lithic andesite tuffs (sericite schist), dolomite, limestone, quartzite, pillow lavas, red, purple, and green volcanic breccias, porphyritic flows and minor chert. The strata are intruded by a Jurassic diorite stock.

Two nearby parallel east-trending altered zones, from 12 to 20 metres in width, occur in a silicified dolomite/lithic-crystal tuff host. A potassium feldspar-altered intrusive is reported to cut the zones in several places. The zones, covered by overburden on the west, extend about 30 metres east where they are cut off by north-

CAPSULE GEOLOGY

striking faults.
The altered zones consist of magnetite-hematite-chalcopyrite-pyrite-quartz-calcite veinlets in chlorite-diopside-garnet bearing rocks. Coarse native gold occurs in vuggy oxidized quartz-calcite veins. Epidote, malachite, azurite, limonite and trace sphalerite are also reported.
A weighted average of two assays, of two trench samples that together traversed the full width of the northernmost altered zone, was 4.87 grams per tonne gold over 12.5 metres (Progress Report, Teuton Resources, October 17, 1988). A high-grade section within the zone contained 960 grams per tonne gold over 1.2 metres (Vancouver Stockwatch, September 21, 1987).

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EMPR BULL 63
EMPR FIELDWORK *1987, p. 207
EMPR ASS RPT *16839
EMPR PF (Britten, R.M. (1983): Regional Geological Assessment of the Stewart-Sulphurets Area, Geology and Alteration of the Sulphurets Prospect Area by Esso Minerals Canada Ltd. (unpublished); Geology Map-1:31250 Scale-Newmont Exploration of Canada Ltd., 1960's; Teuton Resources Corporation, News Releases, Sept.*10,*18,Oct.5,Nov.2, 1987; Feb.3,May6,Aug.5,Sept.14,*Oct.17, 1988)
GSC P 89-1E, pp. 145-154
GSC MAP 9-1957; 1418A
V STOCKWORK Sept.15,*21,Oct.7,Nov.4, 1987
GCNL #177,#192,#211, 1987; #151,#178, 1988

DATE CODED: 1988/04/25 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/11/21 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 172**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOAT TRAIL**, KONKIN NORTH, TR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 35 10 N
LONGITUDE: 130 10 38 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located near the western edge of Treaty Glacier, about 6 kilometres southwest of the glacier's toe (Open File 1988-4). Refer also to Konkin Skarn (104B 171).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6271935
EASTING: 427696

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT:	Gold	Pyrite	Chalcopyrite			
ASSOCIATED:	Calcite					
ALTERATION:	Limonite	Sericite	Silica	Pyrite	Jarosite	
ALTERATION TYPE:	Oxidation		Sericitic	Silicific'n		Pyrite
MINERALIZATION AGE:	Unknown					

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Dolomite
Sericite Schist
Andesitic Tuff
Quartzite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1987

COMMODITY	GRADE	
Gold	23.6900	Grams per tonne

COMMENTS: Sample taken over a 2 metre width.
REFERENCE: Teuton Resources, News Release, September 10, 1987.

CAPSULE GEOLOGY

The Goat Trail occurrence, located near the western margin of Treaty Glacier, occurs in rock of the Lower Jurassic Betty Creek Formation, Hazelton Group (Open File 1988-4). A geologic contact with Unuk River Formation rock occurs to the immediate south as does a small stock of Jurassic diorite.

The occurrence consists of a highly weathered gossan, 150 metres wide, lying along a contact between volcanic and sedimentary rock. The zone consists primarily of dolomite and minor quartzite/sandstone. Pyrite-sericite-quartz alteration is locally intense.

A sample of grey dolomite hosting up to 3 per cent disseminated blebs of chalcopyrite and up to 10 per cent calcite veinlets assayed 0.7 grams per tonne gold. Another sample of severely sheared and crushed jarositic and pyritic sericite schist assayed 2.0 grams per tonne gold and 8.1 grams per tonne silver (Assessment Report 16839). The centre of the zone was trenched in 1988 with samples containing 2.64 grams per tonne gold over 4.5 metres and 8.85 grams per tonne gold over 2.3 metres (News Release, Teuton Resources Corp., October 17, 1988).

Visible gold was reported to occur in a trench which explored a limonitic structure very similar to the Konkin Skarn occurrence (104B

CAPSULE GEOLOGY

171) (News Release, Teuton Resources Corp., August 5, 1988).

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GSC P 89-1E, pp. 145-154
GSC MAP 9-1957; 1418A

DATE CODED:	1988/04/25	CODED BY:	GSA	FIELD CHECK:	N
DATE REVISED:	1988/11/21	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104B 173**

NATIONAL MINERAL INVENTORY:

NAME(S): **IRON CAP GOLD (SULPHURETS)**, SULPHURETS

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 32 50 N
LONGITUDE: 130 13 32 W
ELEVATION: 1676 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 3.25 kilometres northeast of the toe of Mitchell Glacier (Open File 1988-4).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6267659
EASTING: 424651

COMMODITIES: Gold, Silver, Copper, Molybdenum, Zinc, Lead

MINERALS

SIGNIFICANT: Pyrite, Tetrahedrite, Molybdenite, Chalcopyrite, Sphalerite, Galena, Magnetite
ASSOCIATED: Quartz
ALTERATION: Silica, Sericite, Pyrite, Chlorite, Hematite
ALTERATION TYPE: Silicific'n, Sericitic, Pyrite, Chloritic, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork, Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: G07 Subaqueous hot spring Ag-Au; I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Volcanic
Volcaniclastic
Quartz Sericite Schist
Chlorite Schist
Hornblende Porphyry

HOSTROCK COMMENTS: Volcanic and volcaniclastic rocks are altered to schists. Stocks of Jurassic hornblende porphyry occur in region.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Volcanic rocks are altered to schists.

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1982
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	34.2800	Grams per tonne
Gold	3.4300	Grams per tonne

COMMENTS: A rough average of 19 samples across an average width of 5 metres.
REFERENCE: Bridge et al (1983): Unpublished Report-Esso Minerals Canada Ltd.

CAPSULE GEOLOGY

The Iron Cap Gold prospect is located above the north side of Mitchell Glacier just west of the northern extension of the north trending Brucejack fault system. Mineralization occurs in an altered sequence of volcanic, volcaniclastic and clastic sediments of the Lower Jurassic Unuk River Formation, Hazelton Group. Feldspar and hornblende porphyry intrusives of Jurassic age are reported in the area.

Alteration consists of pervasive silicification, pyritization and lesser sericitization and chloritization. The host rocks are commonly reported as quartz sericite schist or chlorite schist. The rocks typically contain from 3 to 5 per cent pyrite.

Three major parallel sets of quartz-pyrite veins and stockwork

CAPSULE GEOLOGY

occur over a total length of 700 metres and a vertical extent of 400 metres. These vein zones range in width from 0.5 to 6 metres.

The Iron Cap West vein is the westernmost of the veins. It is exposed for 300 metres horizontally along length and 140 metres vertically. The vein strikes from 10 to 25 degrees and dips vertically to steeply east. The lower half of the vein averages 5 metres in width; the upper half averages 3 metres. The vein is controlled by a prominent fault set; the south end terminates abruptly and the north end may splits into two or three veins and is offset by numerous cross-faults.

The veins consist of massive quartz and from 5 to 10 per cent pyrite. Minor amounts of tetrahedrite and trace amounts of molybdenite, chalcopyrite, sphalerite, galena, hematite and magnetite also occur. Assays of 19 samples across the vein indicate a rough average grade of 3.43 grams per tonne gold and 34.29 grams per tonne silver (Bridge et al, 1983).

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DATE CODED: 1988/03/27 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/09/21 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 174**

NATIONAL MINERAL INVENTORY:

NAME(S): **IRON CAP COPPER (SULPHURETS)**, SULPHURETS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 32 26 N
LONGITUDE: 130 13 59 W
ELEVATION: 1450 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Situated 2.5 kilometres northeast of Mitchell Glacier toe (Open File 1988-4).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6266925
EASTING: 424176

COMMODITIES: Copper, Molybdenum, Gold, Silver

MINERALS

SIGNIFICANT: Chalcopyrite, Molybdenite
COMMENTS: Disseminated copper mineralization reported is assumed to be chalcopyrite.
ALTERATION: Malachite, Pyrite, Sericite, Quartz
ALTERATION TYPE: Oxidation, Sericitic, Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry, Hydrothermal, Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Intermediate Pyroclastic
Intermediate Flow
Mafic Pyroclastic
Mafic Flow
Siltstone
Wacke
Alkali Feldspar Granite
Monzonite

HOSTROCK COMMENTS: Porphyry type mineralization is thought to be related to an intrusion at depth.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1980
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	9.6000	Grams per tonne
Gold	0.2400	Grams per tonne
Copper	0.2020	Per cent
Molybdenum	0.0190	Per cent

COMMENTS: Assay from a 296.36 metre section of drill core.
REFERENCE: Bridge et al, (1981): Esso Minerals Canada Ltd. (unpublished rpt.).

CAPSULE GEOLOGY

The Iron Cap occurrence is situated above the north side of Mitchell Glacier and west of Brucejack Fault. The area consists of a steep, strongly iron-stained slope surmounted by ice and permanent snow. The gossan covers over a 3 kilometre length of the mountain slope above the glacier. The area is underlain by intermediate to mafic pyroclastics and flows with minor interbeds of siltstone and wacke. These rocks are assigned to the Lower Jurassic Unuk River Formation, Hazelton Group. Stocks of Jurassic alkali-feldspar granite and monzonite intrude the country rock within 2 kilometres of the occurrence.

Extreme alteration within the gossan area consists of pyrite

CAPSULE GEOLOGY

quartz and sericite. Large areas of low-grade disseminated porphyry copper and copper-molybdenum-gold-silver mineralization have been outlined in the area. Heavy malachite staining is also reported. One drill hole intersected 296.36 metres containing 0.202 per cent copper, 0.019 per cent molybdenite, 0.24 grams per tonne gold, and 9.60 grams per tonne silver (Bridge et al, 1981).

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DATE CODED: 1988/06/16 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/06/16 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 175**

NATIONAL MINERAL INVENTORY:

NAME(S): **UNUK (ZONE 3)**, GINGRAS CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 31 07 N
LONGITUDE: 130 24 28 W
ELEVATION: 1150 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralization originally identified from Newmont Exploration of Canada Geology Map. Zone 3 from the Unuk claims (Assessment Report 17087).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6264690
EASTING: 413383

COMMODITIES: Asbestos Copper

MINERALS
SIGNIFICANT: Asbestos Magnetite
COMMENTS: Unspecified copper mineralization reported.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Industrial Min.
TYPE: M06 Ultramafic-hosted asbestos

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Volcanic Breccia
Conglomerate
Sandstone
Diorite

HOSTROCK COMMENTS: The specific host of mineralization was not reported.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The showings are located at the headwaters of Gingras Creek, a southeast flowing tributary of Sulphurets Creek.

The area is underlain by green, red and purple volcanic breccia, conglomerate, sandstone and siltstone of the Lower Jurassic Unuk River Formation (Hazelton Group). A large stock of Lower Jurassic and younger diorite has intruded the Hazelton Group rock and its eastern contact is found within a kilometre to the west of the occurrence (Grove, Bulletin 63).

Two showings of asbestos, one with magnetite and some copper mineralization, occur within a kilometre of each other (Property File: Geology Map-Newmont Expl. of Canada Ltd.). Showings of magnetite are reported west and northeast of these asbestos showing. The nature of how the mineralization occurs and the host rock in which it occurs was not reported.

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DATE CODED: 1988/06/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/06/15 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 176**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 31 37 N
LONGITUDE: 130 15 45 W
ELEVATION: 792 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Situated at the toe of Mitchell Glacier. Located from Open File 1988-4.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6265443
EASTING: 422338

COMMODITIES: Silver, Lead, Zinc, Molybdenum, Copper

MINERALS
SIGNIFICANT: Galena, Sphalerite, Molybdenite, Tetrahedrite
ASSOCIATED: Quartz
ALTERATION: Pyrite, Quartz, Sericite
ALTERATION TYPE: Pyrite, Silicific'n, Sericitic
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Intermediate Pyroclastic
Intermediate Flow
Mafic Pyroclastic
Mafic Flow
Monzonite

HOSTROCK COMMENTS: Mineralized volcanics occur immediately south of monzonitic intrusive.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Toe showing is located at the toe of Mitchell Glacier on the north side of Mitchell Creek. The area is underlain primarily by intermediate to mafic pyroclastics and flows of the Lower Jurassic Unuk River Formation, Hazelton Group. A stock of Jurassic monzonite to quartz monzonite intrudes immediately north of the toe. Rocks in the area have undergone pervasive pyrite-quartz-sericite alteration (Open File 1988-4).

The occurrence is reported to consist of quartz veins containing galena, sphalerite, molybdenite and tetrahedrite (Personal Communication, J.M. Britton). Massive chalcopyrite in veinlets was also observed just north of the toe (Bridge et al, 1981).

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GSC MAP 9-1957; 1418A

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DATE CODED: 1988/04/22 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/09/29 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 177**

NATIONAL MINERAL INVENTORY:

NAME(S): **KIRKHAM (SULPHURETS)**, SULPHURETS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 31 21 N
LONGITUDE: 130 14 49 W
ELEVATION: 1189 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Identified from Esso Minerals Canada Unpublished Report by Bridge et al, 1981. Located from Open File 1988-4.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6264931
EASTING: 423286

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite
ALTERATION: Sericite Silica Pyrite Chlorite K-Feldspar Malachite
ALTERATION TYPE: Sericitic Silicific'n Pyrite Chloritic Potassic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia
CLASSIFICATION: Hydrothermal Epigenetic Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

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

LITHOLOGY: Monzonite
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1980

COMMODITY	GRADE	
Copper	0.1590	Per cent

COMMENTS: Average value of a 110 metre sample collected along two parallel lines.
REFERENCE: Esso Minerals Canada (Unpublished Report): Bridge et al, 1981.

CAPSULE GEOLOGY

The Kirkham Zone occurs in a Jurassic monzonite to quartz monzonite stock with local granitic phases. This stock intruded into an area underlain by volcanics and sediments of the Unuk River Formation, Hazelton Group. Rocks of all type are intensely altered through the processes of potassic feldspathization, silicification, pyritization, sericitization and chloritization. Subsequently, primary textures, structure and original composition of the rocks have been masked.

Chalcopyrite and pyrite are reported to occur in an area of brecciated intrusive rock. Malachite staining is common and magnetite is locally abundant. A 110 metre sample collected along parallel sampling lines average 0.159 per cent copper, 0.15 grams per tonne gold and 4.55 grams per tonne silver (Bridge et al, 1981).

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DATE CODED: 1988/03/30 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/06/17 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 178**

NATIONAL MINERAL INVENTORY:

NAME(S): **QUARTZ STOCKWORK(SULPHURETS)**, SULPHURETS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 31 16 N
LONGITUDE: 130 13 18 W
ELEVATION: 1478 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located south of Mitchell Glacier (Open File 1988-4).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6264749
EASTING: 424838

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz
ALTERATION: Pyrite Sericite Silica
ALTERATION TYPE: Pyrite Sericitic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Concordant Vein
CLASSIFICATION: Hydrothermal Epigenetic Porphyry
TYPE: L05 Porphyry Mo (Low F- type)
COMMENTS: Veins occur in the plane of foliation of the rock.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Quartz Sericite Schist
Volcanic
Sediment/Sedimentary

HOSTROCK COMMENTS: Volcanics and sediments have undergone pervasive alteration to quartz-sericite schist.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Volcanics and sediments are altered to sericite schists.

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Molybdenum	0.0180	Per cent

COMMENTS: Commodity is MoS2. Report apparently indicates an average value.
REFERENCE: Esso Minerals Canada Ltd. (Unpublished Report): Bridge et al, 1981.

CAPSULE GEOLOGY

The Quartz Stockwork Zone is hosted in rock of the Lower Jurassic Unuk River Formation, Hazelton Group, located immediately west of the Brucejack Fault. The rocks consist of volcanic and sediments that have undergone pervasive pyritization, sericitization and silicification. Rocks within the zone are described as quartz sericite schists.

The schists are intensely quartz veined with most veins occurring in the plane of foliation of the rock. Molybdenite is exposed on a canyon wall along the east edge of the zone. Two holes just over 305 metres long, gave assays of 0.017 to 0.018 per cent molybdenum (Bridge et al, 1981).

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Simpson, T.M., (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho

DATE CODED:	1988/03/30	CODED BY:	GSA	FIELD CHECK:	N
DATE REVISED:	1988/09/26	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104B 179**

NATIONAL MINERAL INVENTORY:

NAME(S): **SULPHURETS (SNOWFIELD)**, SNOWFIELD

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 30 58 N
LONGITUDE: 130 13 21 W
ELEVATION: 1493 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 1.3 kilometres south of Mitchell Glacier (Open File 1988-4).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6264193
EASTING: 424777

COMMODITIES: Gold Molybdenum

MINERALS

SIGNIFICANT: Pyrite Molybdenite
ALTERATION: Sericite Chlorite Pyrite
ALTERATION TYPE: Sericitic Chloritic Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Breccia
CLASSIFICATION: Porphyry Hydrothermal Epigenetic
TYPE: L02 Porphyry-related Au G07 Subaqueous hot spring Ag-Au
DIMENSION: 330 x 250 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Area of mineralization.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	

LITHOLOGY: Mafic Volcanic Breccia
Mafic Tuff
Basaltic Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SNOWFIELD REPORT ON: Y

CATEGORY: Indicated YEAR: 1989
QUANTITY: 6984670 Tonnes

COMMODITY	GRADE	
Gold	2.5700	Grams per tonne

COMMENTS: Based on 5 drillholes and 24 trenches.
REFERENCE: George Cross News Letter August 24, 1989.

CAPSULE GEOLOGY

The Sulphurets (Snowfield) zone is located in Lower-Middle Jurassic Unuk River Formation (Hazelton Group) rocks, immediately west of the Brucejack fault. The rocks consist of mafic volcanic breccia, with up to 10 per cent disseminated pyrite, surrounded by mafic tuffs and gritty clastic sediments.

The rocks are medium to dark green resulting from varying degrees of chlorite and sericite alteration. A strong penetrative foliation with strikes of 091 and 060 degrees also obscures original texture and structure. Alteration, foliation and pyrite content within the auriferous zone are not notably different from that of the surrounding area. The zone is also void of quartz veins and silicification.

Significant gold mineralization occurs in the volcanic breccia over an area of about 330 by 250 metres. A central core measuring 240 by 120 metres contains more consistent gold grades. Molybdenite also occurs locally along foliations and shears.

One of 5 holes drilled in 1985 assayed 1.89 grams per tonne gold across 151 metres with the first 68 metres grading 2.47 grams per tonne gold (Northern Miner, September 23, 1985).

Reserves in Snowfield are 6,984,670 tonnes grading 2.57 grams per tonne gold based on 5 drillholes and 24 trenches (George Cross News Letter August 24, 1989).

CAPSULE GEOLOGY

The property is held by Newhawk Gold Mines Ltd. Newhawk merged with Silver Standard Resources Inc. in September 1999.

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EMPR FIELDWORK 1987, p. 199
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EMPR MAP 65 (1989)
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EMR MIN BULL MR 223 B.C. 322
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
GCNL #187,#194,#242, 1985
N MINER *Sept.23, Oct.14, Dec.16, 1985; *Jun.2, 1986; *Aug.8, 1988; Feb.15, 1993
WWW http://www.silver-standard.com; http://www.infomine.com/
Equity Preservation Corp. (Stewart-Sulphurets-Iskut Compilation, Dec. 1988, Showing No. B61)
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DATE CODED: 1988/03/31 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/09/26 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 180** NATIONAL MINERAL INVENTORY:

NAME(S): **MITCHELL-SULPHURETS RIDGE**, JOSEPHINE, SULPHURETS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 30 34 N
LONGITUDE: 130 12 48 W
ELEVATION: 1920 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: High grade quartz vein in midst of most strongly veined area, surrounded by a very intensive alteration envelope. Located from Open File 1988-4.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6263441
EASTING: 425328

COMMODITIES: Gold Silver Copper

MINERALS
SIGNIFICANT: Electrum Argentite Pyrargyrite Tetrahedrite Pyrite
COMMENTS: Pyrite is ubiquitous as disseminations; other minerals confined to small rare veins.
ASSOCIATED: Quartz Barite
COMMENTS: Quartz is much more common than barite.
ALTERATION: Sericite Chlorite Quartz Pyrite
ALTERATION TYPE: Sericitic Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Discordant Disseminated Stockwork
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: G07 Subaqueous hot spring Ag-Au I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Andesitic Breccia

HOSTROCK COMMENTS: Due to intense alteration host rock lithology is not easily discerned.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	276.0000	Grams per tonne

COMMENTS: Silver assay was 16,457 grams per tonne. Values range from 0.3 to 3 grams per tonne gold and 17 to 35 grams per tonne silver.
REFERENCE: Lomenda, M.G., (1983): Unpublished Rpt. by Esso Minerals Canada.

ORE ZONE: STOCKWORK REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	2880.3700	Grams per tonne
Gold	6.4800	Grams per tonne

COMMENTS: Sampled over 3 metres.
REFERENCE: Newhawk Gold Mines Ltd., News Release, Oct.6, 1988.

CAPSULE GEOLOGY

Barren and mineralized quartz and quartz-barite veins occur in an area of intense sericitic alteration extending approximately 3500 metres along an east-west trending ridge situated between Mitchell and Freegold Glaciers. Host rocks are difficult to recognize due to alteration but include andesitic pyroclastics and subordinate immature sedimentary rocks assigned to the Lower Unuk River Formation (Hettangian to Pliensbachan) of the Hazelton Group.

The main area of mineralization consists of narrow (1 centimetre

CAPSULE GEOLOGY

to 1.5 metres thick) discontinuous quartz veins and stringers that can be traced for 1 to 15 metres laterally. Mineralization in the veins consists of pyrite, minor argentite, pyrargarite and tetrahedrite with rare specks of electrum in one high grade vein (276 grams per tonne gold; 16457 grams per tonne silver). More typical assays range from 0.3 to 3.0 grams per tonne gold and 17.0 to 35.0 grams per tonne silver (Lomenda, 1983). Pyrite is widely disseminated in the altered host rocks and comprised up to 15 per cent of the rock.

The alteration and mineralization are typical of an epithermal system. On the south side of the Mitchell-Sulphurets ridge, the altered zone grades into fresher rocks approximately 250 metres below the ridge where the best mineralized veins have been located. The fresher rocks may represent the base of the epithermal alteration zone. Barite-bearing quartz veins are locally mineralized with silver; sphalerite and galena-bearing float has been reported near the western limit of the alteration zones.

The eastern end of Mitchell-Sulphurets Ridge was also examined and was named the Josephine zone. A quartz stockwork was sampled with resulting assays as high as 6.48 grams per tonne gold and 2880.37 grams per tonne silver over 3 metres (Newhawk Gold Mines Ltd., News Release, Oct.6, 1988).

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EMPR PF (*Lomenda, M.G., 1983: Geology, Alteration and Mineralization of the Mitchell-Sulphurets Ridge and Snowfields Gold Zone, Sulphurets Property, Northwestern B.C., Unpublished Report for Esso Minerals Canada Ltd., 15 pp.; *Newhawk Gold Mines Ltd., News Release, Oct.6, 1988)
N MINER Oct.17, 1988
GSC P 89-1E, pp. 145-154
Simpson, T.M., (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho

DATE CODED: 1988/06/13 CODED BY: JMB FIELD CHECK: N
DATE REVISED: 1988/09/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 181**

NATIONAL MINERAL INVENTORY: 104B8 Cu2

NAME(S): **KERR P**, PYRAMID

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 28 19 N
LONGITUDE: 130 16 18 W
ELEVATION: 1430 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: This prospect was field checked by D.J. Alldrick in the summer of 1988. Located west of Sulphurets Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6259333
EASTING: 421661

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT:	Chalcocite	Chalcopyrite	Pyrite	
ALTERATION:	Quartz	Sericite	Chlorite	Pyrite
ALTERATION TYPE:	Silicific'n	Chloritic	Sericitic	Pyrite
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER: Breccia
CLASSIFICATION: Porphyry Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Brecciated Siliceous Rock
Andesitic Tuff
Feldspar Porphyry
Sericite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Sulphurets-Mitchell Creek area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks include green to grey volcanic epiclastics and a sequence of dominantly fine-grained marine sediments. A third sequence of massive red and green volcanic sandstones and conglomerates form the highest peaks capping the stratigraphic sections.

The mineral occurrence is reported to lie entirely within a "tectonic shear zone". This zone contains all of the significant gold anomalies. The zone covers an elongated northern trending area, 800 to 900 metres wide and 2 kilometres long. The zone is flanked by comparitively unaltered or weakly altered, fine-grained, brownish green clastic sediments and submarine volcanic rocks on the east, and by a thick unit of basaltic andesite on the west. This tectonic zone is typically composed of moderately to strongly altered and sheared rocks, interpreted to be of volcanic, subvolcanic or plutonic origin. Most of the altered zone can be described as a sericite schist. However andesitic tuffs and flows, and feldspar porphyry dykes and possible flows, can be recognized in the less altered zone. A later formed "swarm" of fine-grained, weakly altered andesite dykes cuts across the schistosity. Both the altered zone and dykes have been cut by faults. Minor sections of silty shale and siltstone occur on the western and eastern margin of the altered zone.

The Pyramid zone outcrops as a prominent, gossanous knoll in the large cirque basin on the north side of the Kerr Ridge. It lies within the same fault-bounded block of ground as the B zone and is probably the northern continuation of the B zone. The western bounding fault is the Number 3 Fault, the eastern bounding fault is the B zone Fault.

Like the B zone, the Pyramid zone consists of massive, wholly silicified country rock that has been subsequently crushed to a crackle breccia texture. The hairline fractures of the crackle breccia are lined with fine black sooty chalcocite, with lesser chalcopyrite and pyrite. The alteration assemblage also includes chlorite, sericite and pyrite. The P zone was tested by trenching and

CAPSULE GEOLOGY

a single diamond-drill hole in 1988. No assay results are available.

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GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
N MINER Nov.9,Dec.14, 1987; Sept.19,Oct.3,10,Nov.28, 1988
GCNL #70,#194, 1985; #232, 1986; #142,#144,#165,#173,#177,#182,#202, #204, 1987; #75,#155,#156,#163,#167,#191, 1988
V STOCKWATCH Aug.27,Sept.8,11,23,27,Oct.21,23,26,Nov.16, 1987
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EMR MP CORPFILE (Western Canadian Mining Corporation)
EMPR INF CIRC 1986-1, pp. 14,18; 1988-1, p. 12 (BC Mineral Exploration Review 1985, 1987)

DATE CODED: 1989/01/12 CODED BY: DJA FIELD CHECK: Y
DATE REVISED: 1989/01/12 REVISED BY: DJA FIELD CHECK: N

MINFILE NUMBER: **104B 182**

NATIONAL MINERAL INVENTORY: 104B9 Cu1

NAME(S): **SULPHURETS GOLD**, BRECCIA, CANYON, MAIN COPPER, SULPHURETS, TEDRAY, BIG, TED, RAY, MITCH, RAN, SULPHSIDE, KERR-SULPHSIDE

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 30 16 N
LONGITUDE: 130 15 46 W
ELEVATION: 1372 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6262940
EASTING: 422275

COMMENTS: The Sulphurets Gold Zone forms a broad halo about the west, south and east side of the Main Copper Deposit. The Breccia and Canyon Zones are sub-zones of the Sulphuret Gold Zone (unpublished Esso Minerals Reports, located in Energy, Mines and Petroleum Resources Property File). The zone is over 1 kilometre in length and is located between Sulphurets and Mitchell Glaciers.

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Bornite
ASSOCIATED: Quartz
ALTERATION: Quartz Pyrite K-Feldspar Sericite Chlorite
ALTERATION TYPE: Silicific'n Potassic Sericitic Pyrite Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Porphyry Hydrothermal Epigenetic
TYPE: G07 Subaqueous hot spring Ag-Au I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Andesitic Breccia
Quartz Monzonite
Monzonite
Syenite
Granite

HOSTROCK COMMENTS: Monzonitic intrusions are associated with the deposit.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SULPHURETS GOLD REPORT ON: Y

CATEGORY: Combined YEAR: 2000
QUANTITY: 54800000 Tonnes

COMMODITY	GRADE	
Gold	1.0200	Grams per tonne

COMMENTS: The original date and source of this resource calculation was not reported. The calculation includes measured, indicated and inferred resources.
REFERENCE: Northern Miner, June 26, 2000.

CAPSULE GEOLOGY

The Sulphurets Gold Zone is located above the north side of Sulphurets Glacier. The zone occurs within massive andesite of the Lower Jurassic Unuk River Formation, Hazelton Group. It occurs below the Sulphurets fault and above a complex parallel fault set. Large bodies of Jurassic Monzonite to Quartz Monzonite occur to the north-west and southwest of the zone.

The Sulphurets Gold Zone is a northeast trending zone, over 1.5 kilometres in length, that forms a broad halo around the west, south,

CAPSULE GEOLOGY

and east sides of the Main Copper deposit; a zone discovered by Granduc Mines Limited in the early 1960s. The Main Copper deposit is described in Assessment Report 8420 as "an extensive area of quartz-albite-pyrite rock and moderately altered quartz-albite-pyrite-chalcopyrite rock. Both apparently hydrothermal alteration products of intermediate volcanics intruded by syenite and granite". Bornite is also reported to occur.

The eastern section of the Sulphurets Gold Zone was previously called the Breccia Zone. In this zone the best gold values were derived from andesitic breccias, having quartz-pyrite-K-feldspar and minor sericite-chlorite alteration. The greater the silicification the greater the gold content. The western extension of the Breccia Zone was called the Canyon Zone where gold occurs in andesite with quartz-pyrite-sericite alteration with the addition of quartz veins.

Sulphurets Gold Zone rock samples assayed as high as 5.28 grams per tonne gold (grab) and 2.95 and 3.33 grams per tonne gold over 3 metres (Northern Miner October 17, 1988). In the Main Copper Zone about 0.69 grams per tonne gold accompanies 0.55 per cent copper (Bridge et al, 1981). From 5 drill holes completed on the Breccia zone an ore reserve of 20,000,000 tonnes grading 1.71 grams per tonne gold was inferred (Property File - Esso Minerals Canada (Unpublished Report), Bridge and Melnyk, 1982).

In June of 2000, Seabridge Resources Inc. entered into an agreement with Placer Dome whereby Seabridge agreed to acquire Placer Dome's 100-per-cent interest in the Kerr-Sulphside project which includes Sulphurets Gold and the Kerr deposit (104B 191).

At Sulphurets, Placer Dome has estimated a total measured, indicated and inferred gold resource of 1.8 million ounces of gold contained in 54.8 million tonnes grading 1.02 grams of gold per tonne, at a 0.50 gram per tonne cut-off (Press Release, Seabridge Resources Inc, June 6, 2000; Northern Miner, June 26, 2000). Approximately 72 per cent of the total gold resource (1.3 million ounces) is within 50 metres of a drill intercept and has been classified by Placer Dome as drill-indicated. The Sulphurets gold zone is the collective name for at least four intrusive centered gold-rich zones spanning approximately three kilometres of strike length. The resource calculations made by Placer Dome were confined to 1,000 metres of the three-kilometre strike length.

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EMPR GEM 1970-65; 1971-36; 1972-515; 1974-334
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EMR MIN BULL MR 223 B.C. 322
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
GCNL #242, 1985; #194, 1988
N MINER Oct. 17, 1988; June 26, 2000; Sept.23, 2002
NW PROSP Dec. 87/Jan. 88; Oct./Nov. 1988 (Northern Highlights)
PR REL Seabridge Resources Inc., June 6, 2000; Noranda Inc., Sept.17, 2002
WWW http://www.infomine.com/
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University of Idaho

DATE CODED: 1988/04/07 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 2000/07/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 183**

NATIONAL MINERAL INVENTORY:

NAME(S): **WATERFALL**, BIG SHOWING, MITCHELL, TED, RAY, RAN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W 104B09W
BC MAP:
LATITUDE: 56 29 52 N
LONGITUDE: 130 17 03 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located just less than 1 kilometre north of the east end of Sulphurets Lake. Located from Open File 1988-4.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6262222
EASTING: 420944

COMMODITIES: Copper Molybdenum Silver

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Greywacke

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1980

COMMODITY	GRADE	
Silver	9.2600	Grams per tonne
Copper	0.7500	Per cent
Molybdenum	0.0450	Per cent

COMMENTS: From a 1.5 metre sample.
REFERENCE: Esso Resources Canada Ltd. (Unpublished Rpt. - Bridge et al, 1981).

CAPSULE GEOLOGY

The Waterfall showing occurs in andesitic tuff of the Lower Jurassic Unuk River Formation, Hazelton Group. The andesite is overlain by, and in fault contact with, greywacke. Stringers and disseminations of chalcopyrite and pyrite occur over an area of about 15 by 50 metres.

A 1.5 metre trench sample contained 0.75 per cent copper, 0.045 per cent molybdenite, 9.26 grams per tonne silver and 0.10 grams per tonne gold (Bridge et al, 1981).

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EMPR GEM 1972-515; 1974-334
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GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
Simpson, T.M., (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho

DATE CODED: 1988/04/06 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/10/01 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 184**

NATIONAL MINERAL INVENTORY:

NAME(S): **SULPHURETS LAKE (SULPHURETS)**, SULPHURETS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 29 28 N
LONGITUDE: 130 17 41 W
ELEVATION: 731 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 200 metres north of the west end of Sulphurets Lake. Located from Assessment Report 9568 and Open File 1988-4.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6261492
EASTING: 420281

COMMODITIES: Gold Silver Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite
ALTERATION: K-Feldspar
ALTERATION TYPE: Potassic Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: G07 Subaqueous hot spring Ag-Au

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Chert
Argillite
Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1981

COMMODITY	GRADE	
Gold	8.4000	Grams per tonne

COMMENTS: From a 6 metre drill section. Grab samples yield up to 134 grams per tonne gold and 838 grams per tonne silver.
REFERENCE: Bridge and Melnyk, 1982, Unpublished Report for Esso Minerals.

CAPSULE GEOLOGY

The Sulphurets Lake prospect occurs in an area underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. Mineralization occurs in large blocks of k-feldspar-pyrite altered chert. These blocks are surrounded by andesite and have a strike length of about 400 metres. The chert is overlain to the north by argillite which is separated from the chert by a low angle fault. The argillite is also mineralized locally.

Up to 10 per cent pyrite occurs within thin to medium bedded, highly fractured and sheared chert. Thin pyrite veins host chalcopyrite locally and contain as much as 134.57 grams per tonne gold and 838.29 grams per tonne silver. One chip sample contained 2.54 grams per tonne gold over 30.6 metres (Bridge et al, 1981). Two diamond-drill holes were completed in 1981 with the best assay being 8.40 grams per tonne gold from a 6.0 metre interval (Bridge and Melnyk W., 1982).

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Kirkham, R.V., (1963), M.Sc. Thesis, U.B.C.: The Geology and Mineral Deposit in the Vicinity of the Mitchell and Sulphurets Glaciers
GSC MAP 9-1957; 1418A
GCNL #194, 1988
N MINER Oct. 17, 1988
NW PROSP Oct./Nov. 1988 (Northern Highlights)
GSC P 89-1E, pp. 145-154
Simpson, T.M., (1983): *The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho

DATE CODED: 1988/04/07 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/09/20 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 185**

NATIONAL MINERAL INVENTORY: 104B8 Au7

NAME(S): **HANGING GLACIER (SULPHURETS)**, TEDRAY 12, SULPHURETS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 29 37 N
LONGITUDE: 130 13 24 W
ELEVATION: 1311 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 3 to 5 kilometres northwest of Brucejack Lake (Open File 1988-4). First noted in Assessment Report 836.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6261690
EASTING: 424681

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS
SIGNIFICANT: Electrum, Sphalerite, Galena, Tetrahedrite, Chalcopyrite, Pyrite
ASSOCIATED: Quartz, Carbonate, Barite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: G07 Subaqueous hot spring Ag-Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Siltstone
Arkosic Wacke
Greywacke
Conglomerate

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Hanging Glacier occurrence area is underlain by bedded siltstone (turbidite) and well sorted arkosic wacke, greywacke and conglomerate of the Lower Jurassic Unuk River Formation, Hazelton Group. Area rocks have undergone pyrite-quartz-sericite alteration (Open File 1988-4).

Minor quartz-calcite-barite veins occur within an area of about 61 by 122 metres. Electrum was found in association with barite at one location. Samples contained erratic gold and silver values (Bridge et al, 1981).

Also reported in the vicinity are quartz-carbonate stringers plus or minus sphalerite, tetrahedrite, galena, chalcopyrite, and pyrite (Personal Communication, J.M. Britton).

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EMPR PF (*Bridge, D.A., Ferguson, L.J., and Brown, M.G., 1981; 1980 Exploration Report on the Sulphurets Property for Esso Minerals Canada Ltd. (unpublished); Geology Map - 1:31,250 Scale - Newmont Exploration of Canada Ltd., 1960's)
EMPR OF 1988-4
EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209
EMPR ASS RPT 836
GSC MAP 9-1957; 1418
PERS COMM Britton, J.M.
GSC P 89-1E, pp. 145-154
Simpson, T.M., (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho

DATE CODED: 1988/04/07
DATE REVISED: 1988/09/15

CODED BY: GSA
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104B 186**

NATIONAL MINERAL INVENTORY:

NAME(S): **BORNITE**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 29 09 N
LONGITUDE: 130 16 38 W
ELEVATION: 850 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 500 metres southeast of Sulphurets Lake (Open File 1988-4).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6260885
EASTING: 421347

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Chalcopyrite Tetrahedrite Pyrrhotite Bornite Covellite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated Vein
CLASSIFICATION: Igneous-contact Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Andesite Tuff
Diorite
Monzonite

HOSTROCK COMMENTS: Copper mineralization occur in tuffs near contact with plutonic rock.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	2.7400	Grams per tonne
Copper	1.8600	Per cent

REFERENCE: Bridge et al, 1981: 1980 Expl. Rpt. by Esso Minerals (unpublished).

CAPSULE GEOLOGY

The Sulphurets-Mitchell Creek area is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks includes green to grey volcanic epiclastics, and a sequence of dominantly fine-grained marine sediments. A third sequence of massive red and green volcanic sandstone and conglomerates form the highest peaks capping the stratigraphic sections.

The Bornite zone is locallized at the contact between a southeast-trending Jurassic diorite or monzonite body that cuts the andesite tuff country rock. The stock hosts disseminated pyrrhotite and shows up as a pronounced magnetometer anomaly. Three trenched and two short diamond-drill holes have been completed on the prospect by late 1988.

Despite its name there is very little bornite in the zone; the mineralization is mainly chalcopyrite and tetrahedrite occurring as disseminations and in small veins within the andesite tuff. Bornite occurs as minor, but distinctive grains, and trace amounts of covellite have been reported. Assays from this showing range up to 1.86 per cent copper and 2.74 grams per tonne gold.

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GSC P 89-1E, pp. 145-154

GSC MAP 9-1957; 1418A

GCNL *#155, 1988

Simpson, T.M., (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho

DATE CODED:	1988/03/30	CODED BY:	GSA	FIELD CHECK:	N
DATE REVISED:	1988/09/01	REVISED BY:	DJA	FIELD CHECK:	N

MINFILE NUMBER: **104B 187** NATIONAL MINERAL INVENTORY:

NAME(S): **COOGAN'S BLUFF (SULPHURETS)**, KRUCHKOWSKI

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 28 30 N
LONGITUDE: 130 11 28 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 400 metres northwest of Brucejack Lake (Assessment Report 24610).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6259584
EASTING: 426629

COMMODITIES: Gold, Silver, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Pyrite, Tetrahedrite, Sphalerite, Galena
ASSOCIATED: Quartz, Carbonate, Barite, Arsenopyrite
ALTERATION: Sericite, Carbonate
ALTERATION TYPE: Sericitic, Carbonate
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stockwork, Vein
CLASSIFICATION: Epithermal, Epigenetic, Hydrothermal
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation
DIMENSION: 150 x 100 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Zone of discontinuous sheeted quartz veins.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Lapilli Tuff
Feldspar Hornblende Phyric Flow
Andesite

HOSTROCK COMMENTS: Host rocks are pervasively altered to sericite and quartz. Nearest fresh rocks (50 metres to south) are andesitic lapilli tuffs.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1994
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	70.2000	Grams per tonne
Gold	9.7000	Grams per tonne

COMMENTS: Across 0.9 metre.
REFERENCE: Assessment Report 24610, page 31.

CAPSULE GEOLOGY

The Coogan's Bluff zone appears to be the same as the original Kruchkowski showing which consisted of a stockwork of quartz veins up to 5 centimetres thick, exposed over an area of a few square metres, cutting sericite altered rocks. Veins carry thin seams of pyrite, tetrahedrite and arsenopyrite. Hostrock lithology has been obscured by intense alteration and shearing. Fifty metres to the south of the veins are foliated andesitic lapilli tuffs which are probably also the hostrock type. The showing has been trenched by Esso Minerals Ltd. (trench number T76 and T79) in 1980 or 1981 but no assay data has been reported. The Kruchkowski showing is located about 400 metres northwest of Brucejack Lake (Open File 1988-4). Small exploration pits and trenches were blasted and excavated by hand. The showing was visited by Ministry of Energy, Mines and Petroleum Resources Geological Survey Branch geologist J.M. Britton in 1987.

The showing occurs in volcanic and sedimentary rocks of the Upper Triassic-Middle Jurassic Hazelton Group assigned to the top of the Unuk River Formation of Hettangian to Pliensbachian age. These rocks have been variably folded, hydrothermally altered, sheared and

CAPSULE GEOLOGY

cut by minor faults.

Work in 1994 by Newhawk Gold Mines Ltd. outlined a 100 by 150 metre northwest trending zone of discontinuous sheeted quartz veins up to 50 metres long and 1 metre wide, lying along strike to the northwest, of the Shore zone (104B 189). The zone may represent the strike extension of the Shore zone.

Drillhole S94-451 was designed to intersect the Coogan's Bluff zone approximately 130 metres below surface. The hole intersected several zones of quartz +/- carbonate stockwork and numerous discrete, narrow quartz veins hosted within fine grained, massive feldspar-hornblende phyric andesite flows and andesitic lapilli tuff. Hostrocks are variably sericite +/- carbonate altered, but rarely silicified, and typically carry 5-6 per cent disseminated pyrite. Four main stockwork zones were intersected; at 52.2 to 54.5 metres, 63.0 to 65.5 metres, 108.0 to 113.9 metres, and 180.9 to 213.0 metres, which coincide with diffuse zones of stockwork mapped at surface. These intersections confirm a steep (65 to 80 degree) zone dip to the southwest. The zones contain 20 to 70 per cent massive white to pale grey quartz +/- carbonate +/- barite veins ranging in width from several millimetres to 80 centimetres, and carry trace to 2 per cent pyrite and rare tetrahedrite and sphalerite. The best mineralization consists of 2 per cent sphalerite, trace tetrahedrite and less than 1 per cent galena within a strong quartz stockwork at 32.2 to 32.9 metres, but gold assays from this section are only weakly anomalous.

Drilling indicates that the nature of the Coogan's Bluff zone does not change significantly with depth, but remains a series of subparallel stockwork zones to at least 200 metres below surface. Although one significant intersection (9.7 grams per tonne gold and 70.2 grams per tonne silver across 0.9 metre) was made in the main stockwork zone, the zone lacks potential to host significant volume of ore grade material (Assessment Report 24610).

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DATE CODED: 1987/09/09 CODED BY: JMB FIELD CHECK: Y
DATE REVISED: 1996/07/16 REVISED BY: GO FIELD CHECK: Y

MINFILE NUMBER: **104B 188**

NATIONAL MINERAL INVENTORY: 104B8 Cu2

NAME(S): **KERR C**, C

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 28 16 N
LONGITUDE: 130 15 50 W
ELEVATION: 1585 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: D.J. Alldrick of the Ministry of Energy, Mines and Petroleum Resources Geological Survey Branch, visited this property during the 1988 field season.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6259231
EASTING: 422138

COMMODITIES: Gold, Silver, Copper

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
ALTERATION: Sericite, Silica, Pyrite, Epidote, Chlorite
ALTERATION TYPE: Sericitic, Silicific'n, Pyrite, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: L02 Porphyry-related Au; L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Sericite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: C
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1986
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	7.2000	Grams per tonne
Gold	3.1900	Grams per tonne

COMMENTS: A weighted average over 18 metres (trench samples, C2).
REFERENCE: Assessment Report 16616.

CAPSULE GEOLOGY

The Sulphurets-Mitchell Creek area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. These include green to grey volcanic epiclastics, and a sequence of dominantly fine-grained marine sediments. A third sequence of massive red and green volcanic sandstones and conglomerates form the highest peaks capping the stratigraphic sections.

The mineral occurrence is reported to lie entirely within a "tectonic shear zone". This zone contains all of the significant gold anomalies. This zone covers an elongated northern trending area 800 to 900 metres wide and 2 kilometres long. The zone is flanked by comparatively unaltered or weakly altered, fine-grained, brownish green clastic sediments and submarine volcanic rocks on the east, and by a thick unit of basaltic andesite on the west. This tectonic zone is typically composed of moderately to strongly altered and sheared rocks interpreted to be of volcanic, subvolcanic or plutonic origin. Most of the altered zone can be described as a sericite schist, however, andesitic tuffs and flows, and feldspar porphyry dykes and possibly flows, can be recognized in the less altered zone. A later formed "swarm" of fine-grained, weakly altered andesite dykes cuts across the schistosity. Both the altered zone and dykes have been cut by faults. Minor sections of silty shale and siltstone occur on the

CAPSULE GEOLOGY

western and eastern margin of the altered zone.
The C zone occurs within a fault-bounded block of ground that also contains the L zone (Lake zone). Host rocks include andesitic tuffs altered to sericite schist. The mineralization is probably continuous between these two zones, but of sub-economic grade. The west bounding fault is the B zone Fault. The eastern bounding fault is the Camp Fault.
The C zone consists of pyrite mineralized quartz veins and silica-cemented breccias. Mineralization consists of gold, with sub-economic amounts of values copper and silver. A weighted average of 9 trench samples (Trench C2) resulted in 3.19 grams per tonne gold and 7.20 grams per tonne silver over an 18 metre length (Assessment Report 16616). Alteration in the C zone is predominantly sericite. Quartz, pyrite, epidote and chlorite alteration are also reported.

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EMPR EXPL 1983-522; 1984-386; 1985-A24,A52; 1986-C440; 1987-A15,C376
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
N MINER Nov.9,Dec.14, 1987; Sept.19,Oct.3,10,Nov.28, 1988
GCNL #70,#194, 1985; #232, 1986; #142,#144,#165,#173,#177,#182,#202, #204, 1987; #75,#155,#156,#163,#167,#191, 1988
V STOCKWATCH Aug.27,Sept.8,11,23,27,Oct.21,23,26,Nov.16, 1987
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EMR MP CORPFILE (Western Canadian Mining Corporation)
EMPR INF CIRC 1986-1, pp. 14,18; 1988-1, p. 12 (BC Mineral Exploration Review 1985, 1987)

DATE CODED: 1988/02/29 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/01/12 REVISED BY: DJA FIELD CHECK: Y

MINFILE NUMBER: **104B 189** NATIONAL MINERAL INVENTORY: 104B8 Au8

NAME(S): **SHORE (SULPHURETS)**, CAMINO REAL, NEAR SHORE ZONE, RED RIVER, PENINSULA

STATUS: Developed Prospect MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B08E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 28 16 N NORTHING: 6259143
LONGITUDE: 130 11 00 W EASTING: 427100
ELEVATION: 1387 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the northwestern shore of Brucejack Lake (Open File 1988-4).

COMMODITIES: Gold, Silver, Zinc, Copper, Lead

MINERALS

SIGNIFICANT: Electrum, Pyrite, Sphalerite, Tetrahedrite, Galena, Chalcopyrite, Acanthite, Pearceite, Proustite, Arsenopyrite
ASSOCIATED: Quartz, Carbonate, Calcite, Barite
ALTERATION: Sericite, Silica, K-Feldspar
ALTERATION TYPE: Sericitic, Silicific'n, Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork, Vein
CLASSIFICATION: Epithermal, Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation; G07 Subaqueous hot spring Ag-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	

LITHOLOGY: Trachyandesite
Andesitic Tuff
Tuff Breccia
Andesite
Arkose
Hornblende Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: TOTAL REPORT ON: Y

CATEGORY: Combined YEAR: 1994
QUANTITY: 83703 Tonnes

COMMODITY	GRADE	
Silver	158.7000	Grams per tonne
Gold	12.7000	Grams per tonne

COMMENTS: Exploration to date has outlined proven and probable reserves.
REFERENCE: Assessment Report 24610, page i.

CAPSULE GEOLOGY

The area is underlain by rocks of the Lower-Middle Jurassic Unuk River Formation, Hazelton Group. These rocks consist of sandstone, wackes and shale overlain by lapilli tuff of andesitic composition. The Brucejack fault and associated splay faults cut the country rock in a north to northwest direction. North of Brucejack Lake the fault system is bounded on the east by rocks of the Betty Creek Formation, Hazelton Group. A variety of Jurassic hornblende syenites and alkali feldspar syenites occur in the area.

The Shore (Sulphurets) zone is an epithermal-type quartz vein system occurring along the north shore of Brucejack Lake (onshore and offshore). Rocks associated with the zone include arkose, hornblende syenite, andesitic tuff and tuff breccia. Mineralization appears to occur within trachyandesite near a volcanic/sedimentary contact (as in the nearby West zone, 104B 193). The zone, characterized by intense quartz-carbonate-sericite-pyrite alteration, occurs along a fault zone that marks the axis of an anticlinal structure. The Shore zone is a 500 metre long, 50 metre wide zone of quartz stockwork and

CAPSULE GEOLOGY

stacked, subparallel quartz veins trending northwest and dipping steeply to the northeast. The veins dip underneath Brucejack Lake and remain open at depth in some areas.

The vein system varies from a quartz vein to a quartz stockwork, to a single 1 to 2 centimetre thick quartz-electrum vein. Pyrite, sphalerite, tetrahedrite, galena and chalcopyrite occur as traces or combined may form up to 20 per cent of the vein. Large masses of calcite occur as later fracture fillings. Pearceite, acanthite, proustite and barite are also reported.

Several discrete quartz vein and stockwork structures were mapped along strike (Camino Real zone) to the northwest of the Shore zone. The continuity of these structures indicates the Camino Real zone is really the northwest strike extension of the Shore zone. The new structures are hosted within an envelope of phyllic alteration that also encompasses the Shore and Camino Real zones. The structures are characterized by quartz +/- carbonate +/- barite veins and stockworks hosting podiform sulphide mineralization consisting of variable amounts of pyrite, tetrahedrite, sphalerite, galena and arsenopyrite. The veins form 'stacked', en echelon, sigmoidal lenses up to 100 metres in length and up to 1.5 metres wide, but are typically between 20 and 40 metres long. Hostrocks are sericite altered, but not strongly quartz or K-feldspar altered as at the Shore zone to the southeast. The structures seem to be feathering out to the northwest, and probably mark the northern limit of the Shore zone mineralizing event.

Exploration to date has outlined proven and probable reserves of 83,703 tonnes grading 12.7 grams per tonne gold and 158.7 grams per tonne silver at the Shore zone (Assessment Report 24610).

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N MINER Jul.4, Aug.8,23, Sept.9, Dec.16, 1985; Jun.2, Oct.13, Nov.24, 1986; Feb.9, 1987; Aug.1,8, 1988
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EMR MIN BULL MR 223 B.C. 322
EMPR OF 1998-10

DATE CODED: 1988/03/28 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1996/07/16 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104B 190**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOSSAN HILL (SULPHURETS)**, TOMMYKNOCKER, PM-1-6, MARIE GOLD, SILVER STREAK, RED RIVER, BRUCEJACK LAKE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 28 09 N
LONGITUDE: 130 11 34 W
ELEVATION: 1432 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 1 kilometre west of Brucejack Lake and 150 metres north of the West zone (104B 193) (Open File 1988-4).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6258936
EASTING: 426515

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Pyrite, Electrum, Sphalerite, Galena, Tetrahedrite, Polybasite
ASSOCIATED: Quartz
ALTERATION: Sericite, Silica
ALTERATION TYPE: Sericitic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork, Vein
CLASSIFICATION: Epithermal, Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation; G07 Subaqueous hot spring Ag-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Lapilli Tuff
Andesite
Altered Volcanic Rock

HOSTROCK COMMENTS: A variety of Jurassic syenites occur in the area.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The area is underlain by rocks of the Lower-Middle Jurassic Unuk River Formation, Hazelton Group. These rocks consist of sandstone, wackes and shale overlain by lapilli tuff of andesitic composition. The Brucejack fault and associated splay faults cut the country rock in a north to northwest direction. North of Brucejack Lake the fault system is bounded on the east by rocks of the Betty Creek Formation, Hazelton Group. A variety of Jurassic hornblende syenites and alkali feldspar syenites occur in the area.

The Gossan Hill (Sulphurets) zone consists of an epithermal-type quartz vein stockwork occurring within silicified and sericitized lapilli tuffs. The zone is 150 metres north of the West (Sulphurets) zone (104B 193). The Gossan Hill zone is an area of intense quartz-sericite-pyrite alteration hosting 11 zones of quartz veining and stockwork carrying erratic gold mineralization. The zones strike east, dip steeply to the north and are up to 245 metres long and 20 metres wide. These zones include the Marie Gold, PM-1 to PM-6, Tommyknocker and Silver Streak. Veins host pyrite, sphalerite, electrum and galena. Pyrite also occurs as fine disseminations and fracture fillings. One diamond-drill hole intersected a 1.2 metre section that assayed 374.75 grams per tonne gold and 408.00 grams per tonne silver (George Cross News Letter No.192, 1985).

The Marie Gold zone was mapped in detail in 1993. It is exposed for approximately 80 metres strike length and consists of a number of east trending, en echelon quartz vein lenses hosted within sericite-pyrite +/- quartz altered volcanic rocks. Mineralization within the quartz lenses consists of pyrite, tetrahedrite, polybasite, sphalerite, galena and rare electrum. Four grab samples collected from the zone yielded between 14.9 and 111.7 grams per tonne gold and 920 and 1693 grams per tonne silver (Assessment Report 24610).

CAPSULE GEOLOGY

Drilling beneath the Gossan Hill area failed to intersect material that would indicate the presence of a large, low grade gold deposit within the quartz-sericite-pyrite alteration zone. While drilling in this area did prove the PM structures are continuous to depths of up to 200 metres below surface, these structures showed no appreciable increase in precious metal content (Assessment Report

The Tommyknocker zone remains open along strike to the west and downdip and contains complicated vein geometry that will need to be examined in considerable detail before additional drilling or underground exploration can take place. Drill results (1994) indicate the zone decreases in width towards the west, and dips subvertically at depth. The zone is poorly constrained, typically consisting of a weak stockwork as opposed to a well defined vein.

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DATE CODED: 1988/04/18 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1996/07/16 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104B 191**

NATIONAL MINERAL INVENTORY: 104B8 Cu2

NAME(S): **KERR**, KERR B, KERR-SULPHIDE

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 28 03 N
LONGITUDE: 130 16 08 W
ELEVATION: 1675 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located immediately west of Sulphurets Glacier (Assessment Report 14614).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6258835
EASTING: 421823

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcocite Chalcopyrite Copper Pyrite
ALTERATION: Silica Sericite Chlorite Pyrite
ALTERATION TYPE: Silicific'n Sericitic Chloritic Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia
CLASSIFICATION: Porphyry Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	

LITHOLOGY: Brecciated Siliceous Rock
Andesitic Tuff
Feldspar Porphyry
Sericite Schist

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: MAIN

REPORT ON: Y

CATEGORY: Unclassified
YEAR: 1993
QUANTITY: 141000000 Tonnes

COMMODITY	GRADE	
Gold	0.3600	Grams per tonne
Copper	0.7500	Per cent

REFERENCE: Northern Miner, June 26, 2000.

CAPSULE GEOLOGY

The Sulphurets-Mitchell Creek area is underlain by rocks of the Lower-Middle Jurassic Unuk River Formation, Hazelton Group. These rocks include green to grey volcanic epiclastics and a sequence of dominantly fine-grained marine sediments. A third sequence of massive red and green volcanic sandstones and conglomerates form the highest peaks capping the stratigraphic sections.

The Kerr occurrence is reported to lie entirely within a "tectonic shear zone". The zone covers an elongated northern trending area, 800 to 900 metres wide and 2 kilometres long. The zone is flanked by comparatively unaltered or weakly altered, fine-grained, brownish green clastic sediments and submarine volcanic rocks on the east, and by a thick unit of basaltic andesite on the west. This tectonic zone is typically composed of moderately to strongly altered and sheared rocks, interpreted to be of volcanic, subvolcanic or plutonic origin. Most of the altered zone can be described as a sericite schist. However, andesitic tuffs and flows and feldspar porphyry dykes and possibly flows can be recognized in the less altered zone. A later formed "swarm" of fine-grained, weakly altered andesite dykes cuts across the schistosity. Both the altered zone and dykes have been cut by faults. Minor sections of silty shale and siltstone occur on the western and eastern margin of the altered zone.

The B zone consists of a fault-bounded, north trending block of

CAPSULE GEOLOGY

massive, wholly silicified country rock. This material has been subsequently crushed, producing a ubiquitous crackle-breccia on a centimetre scale. The hairline fractures of the crackle breccia are mainly lined with fine, black, sooty chalcocite; with lesser chalcopyrite, native copper and pyrite at the fracture junctions. The alteration assemblage includes chlorite, sericite and pyrite. Economically, the B zone is a copper deposit with recoverable gold and is thought to represent a hypogene porphyry copper-gold system in a subvolcanic environment. The best diamond drill intersection to mid-1988 was a 61.57-metre intersection grading 1.32 per cent copper and 0.58 grams per tonne gold (George Cross News Letter #191, 1988).

The west boundary of the B zone is marked by the Number 3 fault, the east boundary by the B zone fault. Dips on these faults vary from 50 to 75 degrees west. The north extension of the B zone is the P (Pyramid) zone (104B 181) roughly 1000 metres to the north. The B zone deposit is open to the south, to the north (toward the P zone), and to depth.

Unclassified reserves at Kerr are 135 million tonnes grading 0.34 gram per tonne gold and 0.76 per cent copper (Sharon Gardner (Placer Dome), personal communication, 1993).

Seabridge Resources Inc. announced in June 2000 that it has entered into a letter of intent whereby Seabridge agrees to acquire Placer Dome's 100 per cent interest in the Kerr-Sulphside project. Also see the Sulphurets Gold deposit (104B 182).

The Kerr deposit has been modelled by Placer Dome as a copper-gold porphyry system with total measured, indicated and inferred resources estimated at 140.8 million tonnes grading 0.75 per cent copper and 0.36 grams of gold (1.6 million ounces of gold) per tonne at a 0.40 per cent copper grade cut-off (Seabridge Resources Inc., Press Release, June 6, 2000; Northern Miner, June 26, 2000). Approximately 52 per cent of the total Kerr resource is within 50 metres of a drill intercept and has been classified by Placer Dome as drill-indicated.

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N MINER Nov.9, Dec.14, 1987; Sept.19, Oct.3,10, Nov.28, 1988; Apr.10, Jul.24, Aug.28, 1989; July 22, 1991; Jan.27, June 29, 1992; June 26, 2000; Dec.2, 2002
NW PROSP May/June 1989
PR REL Seabridge Resources Inc., June 6, 2000; Noranda Inc., Sept.17, 2002
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DATE CODED: 1988/02/29 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 2000/07/17 REVISED BY: GJP FIELD CHECK: Y

MINFILE NUMBER: **104B 192**

NATIONAL MINERAL INVENTORY: 104B8 Cu2

NAME(S): **KERR L**, L, LAKE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 28 03 N
LONGITUDE: 130 15 55 W
ELEVATION: 1615 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: D.J. Alldrick of the Geological Survey Branch (Energy, Mines and Petroleum Resources) visited this property during the 1988 field season.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6258831
EASTING: 422045

COMMODITIES: Gold, Silver, Copper

MINERALS

SIGNIFICANT: Pyrite, Gold, Electrum
ASSOCIATED: Quartz
ALTERATION: Quartz, Sericite, Carbonate
ALTERATION TYPE: Sericitic, Silicific'n, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation; G07 Subaqueous hot spring Ag-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Andesitic Flow
Sericite Schist
Andesitic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: L
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel
YEAR: 1987

CAPSULE GEOLOGY

The Sulphurets-Mitchell Creek area is underlain by rocks of the Lower Jurassic Hazelton Group. These rocks include green to grey volcanic epiclastics, and a sequence of dominantly fine-grained marine sediments. A third sequence of massive red and green volcanic sandstones and conglomerates form the highest peaks capping the stratigraphic sections.

The Kerr L mineral occurrence is reported to lie entirely within a "tectonic shear zone". This zone contains all of the significant gold anomalies. This zone covers an elongated northern trending area, 800 to 900 metres wide and 2 kilometres long. The zone is flanked by comparitively unaltered or weakly altered, fine-grained, brownish green clastic sediments and submarine volcanic rocks on the east, and by a thick unit of basaltic andesite on the west. This tectonic zone is typically composed of moderately to strongly altered and sheared rocks, interpreted to be of volcanic, subvolcanic or plutonic origin. Most of the altered zone can be described as a sericite schist, however, andesitic tuffs and flows, and feldspar porphyry dykes and possibly flows, can be recognized in the less altered zone. A later formed "swarm" of fine-grained, weakly altered andesite dykes cuts across the schistosity. Both the altered zone and dykes have been cut by faults. Minor sections of silty shale and siltstone occur on the western and eastern margin of the altered zone.

The L Zone lies within the same fault-bounded block as the C Zone (104B 188) and the two mineral zones may be connected by sub-economic mineralization and alteration. The west bounding fault is the B Zone

CAPSULE GEOLOGY

fault; the east bounding fault is the Camp Fault.

Gold mineralization in the Kerr L Zone occurs in quartz-cemented breccia in silicified ash tuff to cherty tuff. The gold probably occurs as free gold or electrum within quartz veins and silica cemented breccias. Alteration consists of pervasive silica, sericite and carbonate.

One trench sample (L1, 16860) assayed 29.0 grams per tonne gold, 17.9 grams per tonne silver and 0.03 per cent copper over 1.5 metres (Assessment Report 16616).

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DATE CODED: 1988/02/29 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1989/01/12 REVISED BY: DJA FIELD CHECK: Y

MINFILE NUMBER: **104B 193** NATIONAL MINERAL INVENTORY: 104B8 Au8

NAME(S): **SULPHURETS (BRUCESIDE)**, WEST (SULPHURETS), WEST BRUCEJACK, BRUCESIDE, RED RIVER, BRUCEJACK, R1-R8, ERASER, BIELECKI, MAGGIE

STATUS: Developed Prospect Underground MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B08E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 28 03 N NORTHING: 6258752
LONGITUDE: 130 11 38 W EASTING: 426443
ELEVATION: 1432 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 1.0 kilometre west of Brucejack Lake (Open File 1988-4).

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Electrum Pyrite Tetrahedrite Argentite Galena Sphalerite Chalcopyrite Pyrargyrite Gold Silver Cerargyrite Freibergite Stephanite Polybasite Acanthite
ASSOCIATED: Quartz
ALTERATION: Sericite Silica
ALTERATION TYPE: Sericitic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein Breccia
CLASSIFICATION: Epithermal Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation G07 Subaqueous hot spring Ag-Au
DIMENSION: 600 x 240 x 40 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Stockwork zone is open to the south.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Altered Tuff Breccia
Andesite
Hornblende Feldspar Porphyry Syenite

HOSTROCK COMMENTS: Mineralized tuff breccia occurs adjacent to a syenitic Jurassic intrusion.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

INVENTORY

ORE ZONE: WEST REPORT ON: Y

CATEGORY: Combined YEAR: 1994
QUANTITY: 749264 Tonnes

COMMODITY	GRADE	
Silver	647.8000	Grams per tonne
Gold	15.4000	Grams per tonne

COMMENTS: Proven and probable geological reserves. Five satellite zones hold an additional geological resource of approximately 181,500 tonnes grading 19.5 grams per tonne gold and 135.4 grams per tonne silver.
REFERENCE: Assessment Report 24610 and www.northair.com/newhawk, August, 1999.

CAPSULE GEOLOGY

The area is underlain by rocks of the Lower-Middle Jurassic Unuk River Formation, Hazelton Group. These rocks consist of sandstone, wackes and shale overlain by lapilli tuff of andesitic composition. The Brucejack fault and associated splay faults cut the country rock in a north to northwest direction. North of Brucejack Lake the fault system is bounded on the east by rocks of the Betty Creek Formation, Hazelton Group. A variety of Jurassic hornblende syenites and alkali feldspar syenites occur in the area.

The West (Sulphurets) zone is an epithermal-type quartz stockwork zone occurring within intensely altered tuff breccia

CAPSULE GEOLOGY

adjacent to a volcanic-sedimentary contact. The contact marks a northwest trending zone of pervasive sericite-silica alteration, about 100 metres wide, paralleling the contact with a hornblende-feldspar porphyry syenite intrusion which occurs immediately to the west.

The stockwork zone abuts the syenite on the northwest and has been traced for more than 600 metres to the southeast. The zone dips steeply northeast and strikes 138 degrees. It may be up to 40 metres thick and contain greater than 60 per cent vein material. The zone is defined to a depth of 240 metres and is open to the south.

The bulk of the reserves occur in oblique trending veins or tensional fractures that are infilled with quartz. These oblique veins cut the main north-south regional trend at approximately 035 degrees and typically have limited strike length. Dip and strike attitudes also change continually. The gold occurs mostly as electrum with pyrite, pyrargyrite, tetrahedrite, argentite, galena and sphalerite occurring as the main metallic minerals. Also reported are chalcopyrite, pyrargyrite, polybasite, native gold, native silver, cerargyrite, freibergite, stephanite and acanthite.

The West zone consists of at least 10 northwest trending, steep northeast dipping, subparallel quartz veins/vein breccias that include the R1 to R8, Eraser and Bielecki structures. The R6 vein is the dominant structure, with other R structures splaying off the northeast side of R6 at northwest to westerly trends. The R8 structure is the highest grade and most important of these splaying R structures. It trends east, dips 60 degrees to the north, and is not exposed at surface. Individual veins are up to 250 metres in strike length and up to 6 metres in width, and several of the vein systems remain open along strike and downdip.

Drilling (1994) of the western end of the R8 zone resulted in the discovery of a new zone, termed the Maggie zone, which is a quartz stockwork to breccia zone lying approximately subparallel to the R8 zone, 50 to 90 metres updip, and hosted within quartz-sericite-pyrite altered volcanics.

Exploration to date on the West zone has outlined proven and probable geological reserves of 749,264 tonnes grading 15.4 grams per tonne gold and 647.8 grams per tonne silver (Assessment Report 24610). Five satellite deposits hold an additional geological resource of approximately 181,500 tonnes grading 19.5 grams per tonne gold and 135 grams per tonne silver (Newhawk web site, July 1999).

Over 75,000 metres of diamond drilling with over 300 holes from surface and 422 holes from underground have been completed on the property. Underground workings total 5300 metres of decline plus level workings on four levels and numerous raises (Treminco Resources Ltd. News Release May 1997).

The property is comprised of 31 claims and is owned 60 per cent by Newhawk Gold Mines Ltd. (managed by the Northair Group) and 40 per cent by Black Hawk Mining Inc. (formerly Granduc Mining Corporation). Newhawk also maintains a 100 per cent interest in the adjacent Snowfield property (104B 179). In September 1999, Newhawk merged with Silver Standard Resources Inc.

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EMPR INF CIRC 1993-13; 1994-19, p. 13
EMPR OF 1988-4; 1992-1; 1994-1; 1998-10
EMPR MAP 65 (1989)
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EMR MIN BULL MR 223 B.C. 322

GSC MAP 9-1957; 1418A

GSC P 89-1E, pp. 145-154

CIM BULL Vol. 80, #904, Aug. 1987

CMJ Apr.1, 1986

GCNL #163,#280, 1980; #98,#166,#225, 1982; #240, 1983; #160,#163, #192,#242, 1985; Aug.15,Nov.13,#127,#157,#160,#174,#183,#218,#223, 1986; Nov.9,#24,#27,#35,#87,#108,#119,#165,#181,#194,#215,#231, 1987; #31,#134,#135,#136,#151,#194,#211,*#222, 1988; #6(Jan.10), #68(Apr.10),#115(June 15),#118(June 20),#144(Jul.27),#153(Aug.10), #157(Aug.16),#163(Aug.24),#167(Aug.30),#186(Sept.27),#211(Nov.2), #234(Dec.6),#245(Dec.21), 1989; #13(Jan.18),#30(Feb.12), #57(Mar.21),#134(Jul.12),#209(Oct.29), 1990; #63(Apr.2), 1991; #3(Jan.6), 1992; #93(May 14), 1997

IPDM Dec.5, 1985

N MINER Dec.29, 1983; Jul.4, Aug.8, Sept.9,23, Oct.14, Dec.16, 1985; Jun.2, Jul.14, Aug.25, Sept.8,22, Oct.13, Nov.24, Dec.4,30, 1986; Feb.9, Apr.1,20, Sept.14, Dec.1,14,30, 1987; May 2, Jun.6, *Aug.1, 8, Oct.17, Nov.7, 1988; Apr.17, Aug.7, Sept.11, Nov.20, 1989; Jan. 29, Feb.1,23, Nov.12, 1990; Apr.1, July 22, 1991; Feb.15, 1993; July 19, 1999; Dec.2, 2002

N MINER MAG *Jan., 1989

NW PROSP Oct./Nov., (Northern Highlights), Dec./Jan., 1988; Sept./Oct., Nov./Dec., 1989

PR REL Newhawk Gold Mines Ltd., July 7, 1999

V STOCKWATCH Jun.5,11,17, Aug.25,26, Sept.1,18,30, Oct.7,8, Nov.5,9,30, 1987; Feb.12, 1988

WWW http://www.silver-standard.com; http://www.bhkmining.com; http://www.infomine.com/

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DATE CODED: 1988/03/28 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1996/07/17 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 194**

NATIONAL MINERAL INVENTORY: 104B8 Cu2

NAME(S): **KERR A**, A

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 27 59 N
LONGITUDE: 130 16 29 W
ELEVATION: 1800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Visited by D.J. Alldrick of the Geological Survey Branch (Energy, Mines and Petroleum Resources).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6258718
EASTING: 421461

COMMODITIES: Gold, Silver, Copper

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite, Galena
ASSOCIATED: Quartz
ALTERATION: Quartz, Chlorite, Sericite, Pyrite, Carbonate, Clay, Malachite, Hematite
ALTERATION TYPE: Sericitic, Propylitic, Silicific'n, Carbonate, Pyrite, Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork, Breccia, Disseminated
CLASSIFICATION: Porphyry, Hydrothermal, Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation; G07 Subaqueous hot spring Ag-Au
DIMENSION: 0200 Metres
STRIKE/DIP:
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Andesitic Flow
Feldspar Porphyry Dike
Feldspar Porphyry Flow
Sericite Schist
Andesitic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: A
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
YEAR: 1987

COMMODITY	GRADE	
Silver	1303.2100	Grams per tonne
Gold	19.6500	Grams per tonne
Copper	4.8100	Per cent

COMMENTS: From a 2.0 metre drill interval.
REFERENCE: Assessment Report 16616.

CAPSULE GEOLOGY

The Sulphurets-Mitchell Creek area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks include green to grey volcanic epiclastics, and a sequence of dominantly fine-grained marine sediments. A third sequence of massive red and green volcanic sandstones and conglomerates forms the highest peaks capping the stratigraphic sections.

The Kerr A mineral occurrence is reported to lie entirely within a "tectonic shear zone". This zone contains all of the significant gold anomalies. This zone covers an elongated north trending area, 800 to 900 metres wide and 2 kilometres long. The zone is flanked by comparitively unaltered or weakly altered, fine-grained, brownish green clastic sediments and submarine volcanic rocks on the east, and by a thick unit of basaltic andesite on the west. This tectonic zone is typically composed of moderately to strongly altered and sheared rocks, interpreted to be of volcanic, subvolcanic or plutonic origin.

CAPSULE GEOLOGY

Most of the altered zone can be described as a sericite schist, however, andesitic tuffs and flows, feldspar porphyry dykes and possibly flows, can be recognized in the less altered zones. A later formed "swarm" of fine-grained, weakly altered andesite dykes cut across the schistosity. Both the altered zone and dykes have been cut by faults. Minor sections of silty shale and siltstone occur on the western and eastern margin of the altered zone.

Mineralization consists of quartz-sulphide veins, stockworks, and disseminated sulphides. Veining has accompanied the development of sericitization and silicification to the extent that disseminated and vein material are an integral part of the alteration assemblage. Veins range in width from a few millimetres to several centimetres. Pyrite is the most common sulphide and is ubiquitous within the shear zone. Chlorite and carbonate alteration are also observed. Chalcopyrite occurs with pyrite, in a few locations in small quartz-pyrite stockworks. Minor malachite is visible at the margins of some chalcopyrite bearing veins. Silicification is common where stockwork veining is intense and clay alteration also occurs adjacent to some large quartz-pyrite veins. Calcite occurs in minor amounts.

Sphalerite, galena, and hematite were reported in polished thin sections. Gold mineralization is primarily associated with quartz-pyrite veins, with residual gold in the strongly weathered and leached zones.

Diamond drilling on the A Zone has shown that the gold distribution is erratically high but discontinuous. The best drill hole intersection from 1987 assayed 19.65 grams per tonne gold, 1303.21 grams per tonne silver and 4.81 per cent copper over 2.0 metres (Assessment Report 16616). Trench samples taken in 1988 assayed 23.66 grams per tonne gold, 36.00 grams per tonne silver over 2.0 metres and 144 grams per tonne gold and 507 grams per tonne silver over 1 metre (Northern Miner, Sept.19, 1988).

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N MINER Nov.9,Dec.14, 1987; Sept.19,Oct.3,10,Nov.28, 1988
GCNL #70,#194, 1985; #232, 1986; #142,#144,#165,#173,#177,#182,#202, #204, 1987; #75,#155,#156,#163,#167,#191, 1988
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DATE CODED: 1988/02/26 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/01/10 REVISED BY: DJA FIELD CHECK: Y

MINFILE NUMBER: **104B 195**

NATIONAL MINERAL INVENTORY:

NAME(S): **367 (SULPHURETS)**, SULPHURETS, RED RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 27 57 N
LONGITUDE: 130 12 08 W
ELEVATION: 1463 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located from Open File 1988-4 and Assessment Report 6255. Situated 1 kilometre west-southwest of Brucejack Lake.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6258575
EASTING: 425927

COMMODITIES: Gold Silver Lead

MINERALS
SIGNIFICANT: Galena Arsenopyrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Sericite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stockwork Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation G07 Subaqueous hot spring Ag-Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite Breccia

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks consist of sandstone, wackes and shale overlain by lapilli-tuff of andesitic composition. The Brucejack fault and associated splay faults cut the country rock in a north-south to northwest direction. North of Brucejack Lake, the fault system is bounded on the east by rocks of the Lower Jurassic Betty Creek Formation, Hazelton Group. A variety of Jurassic hornblende syenites and alkali feldspar syenites occur in the area.

The 367 showing is a zone of tectonically brecciated andesite with a matrix of vuggy quartz, quartz veins and carbonate veins. It occurs in a cross fracture zone with 50 degree trend adjacent to the first north-south fault west of the Brucejack fault. The zone occurs mainly between north-south faults, crosscutting, but fading out across the fault. The breccia matrix and veins contain minor arsenopyrite and galena. The wallrock is slightly sericitized (Bridge, D. and Melnyk, W., 1982).

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DATE CODED: 1988/03/31 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/09/06 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 196** NATIONAL MINERAL INVENTORY:

NAME(S): **GALENA STOCKWORK (SULPHURETS)**, GALENA , STOCKWORK, SULPHURETS, RED RIVER

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 27 48 N
LONGITUDE: 130 11 18 W
ELEVATION: 1493 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Situated 500 metres southwest of Brucejack Lake. Located from Open File 1988-4.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6258282
EASTING: 426777

COMMODITIES: Gold, Silver, Zinc, Lead, Copper

MINERALS
SIGNIFICANT: Pyrite, Sphalerite, Galena, Tetrahedrite, Electrum, Chalcopyrite, Gold
ASSOCIATED: Quartz, Barite
ALTERATION: Sericite, Pyrite
ALTERATION TYPE: Sericitic, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stockwork, Vein
CLASSIFICATION: Epithermal, Hydrothermal, Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation; G07 Subaqueous hot spring Ag-Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Lapilli Tuff
Brecciated Andesitic Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: STOCKWORK REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1982
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	2.4000	Grams per tonne

COMMENTS: Average assay over 35 metres. Assays up to 740 grams per tonne gold and 1276 grams per tonne silver also reported.
REFERENCE: Bridge and Melnyk, (1983): Unpublished Rpt by Esso Minerals Ltd.

CAPSULE GEOLOGY

The area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks consist of sandstone, wackes and shale overlain by lapilli tuff of andesitic composition. The Brucejack fault and associated splay faults cut the country rock in a north-south to northwest direction. North of Brucejack Lake the fault system is bounded on the east by rock of the Lower Jurassic Betty Creek Formation, Hazelton Group. A variety of Jurassic hornblende syenites and alkali feldspar syenites occur in the area.

The Galena-Stockwork occurrence is a 220 metre long vein structure occurring within andesitic tuff breccia. It consists of a quartz and minor sulphide sheeted stockwork at its east end and a thick quartz vein at its west end. The eastern end, known as the Stockwork zone, is isolated from the western end, the Galena zone, by a till covered 100 metre gap (Bridge and Melnyk, 1983).

The Galena area is characterized by weak sericitic alteration. The thick quartz vein is mineralized mainly with fine disseminated pyrite, sphalerite, tetrahedrite and a trace of electrum. On the north side of the quartz vein, a halo of quartz, quartz-sulphide, and quartz veins with electrum has formed (Assessment Report 10698). Other reports also mention the occurrence of galena, chalcopyrite and native gold in quartz and barite veinlets (Fieldwork 1982).

CAPSULE GEOLOGY

The Stockwork area is characterized by a wide zone of moderately intense sericite-pyrite alteration. The quartz stockwork is mineralized with pyrite, galena and sphalerite (Fieldwork 1982).

Drilling in 1982 intersected a sheeted stockwork with an apparent true thickness of 35 metres with an average assay of 2.4 grams per tonne gold. Assays up to 724.0 grams per tonne gold over 0.7 metres occur but the consistency of mineralization is not sustained (Bridge and Melnyk, 1983). Grab samples contain up to 1276.0 grams per tonne silver (Fieldwork 1982).

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DATE CODED: 1988/03/24 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/09/06 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 197**

NATIONAL MINERAL INVENTORY:

NAME(S): **5.9 VEIN (SULPHURETS)**, SULPHURETS, RED RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 27 50 N
LONGITUDE: 130 11 07 W
ELEVATION: 1450 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 400 metres southwest of Brucejack Lake (Fieldwork 1982).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6258341
EASTING: 426967

COMMODITIES: Gold Silver Zinc Copper Lead

MINERALS

SIGNIFICANT: Pyrite Sphalerite Tetrahedrite Galena Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Sericite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation G07 Subaqueous hot spring Ag-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Brecciated Andesitic Tuff
Lapilli Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1982

COMMODITY	GRADE	
Gold	202.2900	Grams per tonne

COMMENTS: Silver assayed at 18617.0 grams per tonne.
REFERENCE: Esso Minerals Ltd., Unpublished Report by Bridge and Melnyk, 1983.

CAPSULE GEOLOGY

The area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks consist of sandstone, wackes and shale overlain by lapilli-tuff of andesitic composition. The Brucejack fault and associated splay faults cut the country rock in a north-south to northwest direction. North of Brucejack Lake, the fault system is bounded on the east by rock of the Lower Jurassic Betty Creek Formation, Hazelton Group. A variety of Jurassic hornblende syenites and alkali feldspar syenites occur in the area.

The 5.9 vein is part of a stockwork or sheeted vein zone occurring within weakly sericitic andesitic tuff-breccia. The 5.9 vein is between 20 to 100 centimetres thick and up to 40 metres in length. This vein assayed 185.14 grams per tonne gold and 18617.0 grams per tonne silver over 20 centimetres (Bridge, D., Melnyk, W., 1983). Other quartz veins in this area range in thickness from 0.5 to 2.0 centimetres and contain minor disseminated to semi-massive pyrite, sphalerite, tetrahedrite, galena and a trace of chalcopyrite.

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GCNL #135, 1988
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Simpson, T.M., (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho

DATE CODED: 1988/03/24 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/09/07 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 198**

NATIONAL MINERAL INVENTORY: 104B8 Cu2

NAME(S): **KERR F**, F

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 27 34 N
LONGITUDE: 130 16 21 W
ELEVATION: 1325 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located west of Sulphurets Glacier (Assessment Report 15463).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6257942
EASTING: 421584

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Sericite Silica Pyrite Carbonate
ALTERATION TYPE: Sericitic Silicific'n Pyrite Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation G07 Subaqueous hot spring Ag-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff
Sericite Schist
Intermediate Volcaniclastic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: F
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1985

COMMODITY	GRADE	
Gold	46.5000	Grams per tonne

COMMENTS: Sample KE 85-43117.
REFERENCE: Assessment Report 14614, page 11.

CAPSULE GEOLOGY

The Sulphurets-Mitchell Creek area is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. These include green to grey volcanic epiclastics, and a sequence of dominantly fine-grained marine sediments. A third sequence of massive red and green volcanic sandstones and conglomerates form the highest peaks capping the stratigraphic sections.

The Kerr F mineral occurrence is reported to lie entirely within a "tectonic shear zone". This zone contains all of the significant gold anomalies. This zone covers an elongated northern trending area, 800 to 900 metres wide and 2 kilometres long. The zone is flanked by comparitively unaltered or weakly altered, fine-grained, brownish green clastic sediments and submarine volcanic rocks on the east, and by a thick unit of basaltic andesite on the west. The tectonic zone is typically composed of moderately to strongly altered and sheared rocks, interpreted to be of volcanic, subvolcanic or plutonic origin. Most of the altered zone can be described as a sericite schist, however, andesitic tuffs and flows, and feldspar porphyry dykes, and possibly flows, can be recognized in the less altered zone. A later formed "swarm" of fine-grained, weakly altered andesite dykes cuts across the schistosity. Both the altered zone and dykes have been cut by faults. Minor sections of silty shale and siltstone occur on the western and eastern margin of the altered zone.

The F Zone mineralization is exposed on the south flank of the Kerr Ridge, just above the ice surface of the West Sulphurets Glacier.

CAPSULE GEOLOGY

Mineralization is reported to occur in quartz veins and is similar to the Kerr C occurrence (104B 188). The host rock is a sericite schist or an andesitic tuff. The alteration assemblage includes sericite, quartz, pyrite and carbonate. A sample taken from here in 1985 assayed 46.5 grams per tonne gold (Assessment Report 14614).

The F Zone was outlined as an area of anomalous gold values during the 1985 reconnaissance geochemical survey. Follow-up detailed soil geochemical survey and rock sampling work in 1986 showed that the gold values were high, but distribution was erratic and discontinuous. Given the steep terrane and access problems in this area, no additional work has been undertaken to date.

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N MINER Nov.9,Dec.14, 1987; Sept.19,Oct.3,10,Nov.28, 1988
GCNL #70,#194, 1985; #232, 1986; #142,#144,#165,#173,#177,#182,#202, #204, 1987; #75,#155,#156,#163,#167,#191, 1988
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EMPR INF CIRC 1986-1, pp. 14,18; 1988-1, p. 12 (BC Mineral Exploration Review 1985, 1987)

DATE CODED: 1988/02/29 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1989/01/12 REVISED BY: DJA FIELD CHECK: N

MINFILE NUMBER: **104B 199**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPINE (SULPHURETS)**, NORTH SPINE, SULPHURETS, RED RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 27 32 N
LONGITUDE: 130 11 35 W
ELEVATION: 1585 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 1.0 kilometre southwest of Brucejack Lake (Open File 1988-4).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6257793
EASTING: 426478

COMMODITIES: Silver, Gold, Copper

MINERALS

SIGNIFICANT:	Tetrahedrite		
ASSOCIATED:	Quartz		
ALTERATION:	Silica	Sericite	Pyrite
ALTERATION TYPE:	Silicific'n	Sericitic	Pyrite
MINERALIZATION AGE:	Unknown		

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation; G07 Subaqueous hot spring Ag-Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Arkose

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1982
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	292.4600	Grams per tonne
Gold	0.9600	Grams per tonne

COMMENTS: One metre sample from Esso Minerals trench; probably done in 1982.
REFERENCE: Newhawk Mines Ltd.- trench map (unpublished).

CAPSULE GEOLOGY

The area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks consist of sandstone, wackes and shale overlain by lapilli tuff of andesitic composition. The Brucejack fault and associated splay faults cut the country rock in a north-south to northwest direction. North of Brucejack Lake, the fault system is bounded on the east by rocks of the Lower Jurassic Betty Creek Formation, Hazelton Group. A variety of Jurassic hornblende syenites and alkali feldspar syenites occur in the area.

The Spine Zone consists of a few long quartz veins containing minor patches of tetrahedrite. These veins are hosted by arkose to lithic arkose. Weak pervasive quartz-sericite-pyrite alteration allows only minor lithic fragments and rare pebbly sections to be identified. A one metre trench sample contained 0.960 grams per tonne gold and 292.46 grams per tonne silver (Newhawk Mines Map).

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DATE CODED: 1988/03/02 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/09/07 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 200**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELECTRUM (SULPHURETS)**, SULPHURETS, RED RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 27 27 N
LONGITUDE: 130 11 23 W
ELEVATION: 1615 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 1.0 kilometre south of the west end of Brucejack Lake (Open File 1988-4).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6257634
EASTING: 426681

COMMODITIES: Gold, Silver, Copper, Zinc

MINERALS

SIGNIFICANT: Electrum, Pyrite, Tetrahedrite, Sphalerite, Argentite
ASSOCIATED: Quartz
ALTERATION: Silica, Sericite, Pyrite
ALTERATION TYPE: Silicific'n, Sericitic, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: L02 Porphyry-related Au
H04 Epithermal Au-Ag-Cu: high sulphidation
G07 Subaqueous hot spring Ag-Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Syeno Diorite

HOSTROCK COMMENTS: Mineralization is hosted by a Jurassic syenodiorite body emplaced within Hazelton Group volcanics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
YEAR: 1983

COMMODITY	GRADE	
Silver	47.3100	Grams per tonne
Gold	50.0900	Grams per tonne

COMMENTS: From a 0.5 metre drill intersection.
REFERENCE: Esso Minerals Ltd.-(unpublished report): Melnyk, 1983.

CAPSULE GEOLOGY

The area is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks consist of sandstone, wackes and shale overlain by lapilli tuff of andesitic composition. The Brucejack fault and associated splay faults cut the country rock in a north-south to northwest direction. North of Brucejack Lake, the fault system is bounded on the east by rocks of the Lower Jurassic Betty Creek Formation, Hazelton Group. A variety of Jurassic hornblende syenites and alkali feldspar syenites occur in the area.

The Electrum Zone consists of numerous subparallel quartz veins occurring in moderate to intense quartz-sericite-pyrite altered syenodiorite. These veins range from less than 1.0 centimetre up to 50 centimetres in width. Some of the thicker veins can be traced for 50 metres. The veins generally trend 330 degrees and dip steeply to the south. The intrusive consists of from 5 to 8 per cent coarse, subhedral, disseminated pyrite.

Surface exposures and diamond drill results indicate quartz veins are mineralized mainly with pyrite, tetrahedrite, sphalerite and argentite. Trenching exposed an electrum bearing quartz vein that pinches and swells over a 15 metre total length changing in character from a dry fracture to an electrum bearing ovoid pod of 10 centi-

CAPSULE GEOLOGY

metres.
Electrum was encountered in only one quartz vein during the 1983 drill program when an 18 centimetre vein was intersected at 30 metres. A 0.5 metre section containing this vein assayed 50.09 grams per tonne gold and 47.31 grams per tonne silver. Another quartz vein intersected at 79 metres contained 2.0 per cent tetrahedrite and sphalerite and assayed 6.62 grams per tonne gold and 24 grams per tonne silver over 0.65 metres (Property File: Melnyk, W., 1983).

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EMPR EXPL 1976-E181; 1977-E222; 1980-464; 1981-248; 1982-382; 1983-520; 1986-C441
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N MINER Dec.29, 1983
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DATE CODED: 1988/03/01 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/09/09 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 201**

NATIONAL MINERAL INVENTORY:

NAME(S): **TRIBE**, THAT, HAT

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 21 53 N
LONGITUDE: 130 15 46 W
ELEVATION: 1630 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of best assay in gossanous stockwork zone (Assessment Report 16479).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6247389
EASTING: 421989

COMMODITIES: Gold, Silver, Arsenic, Lead, Zinc

MINERALS

SIGNIFICANT: Pyrite, Pyrrhotite, Arsenopyrite, Galena, Sphalerite
COMMENTS: Occur as veins and disseminations in alteration zones.
ASSOCIATED: Quartz, Carbonate
ALTERATION: Sericite, Pyrite, Quartz
ALTERATION TYPE: Sericitic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Epithermal, Industrial Min.
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation, G07 Subaqueous hot spring Ag-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Andesitic Agglomerate
Andesitic Tuff
Chert
Syenite

HOSTROCK COMMENTS: Syenitic stocks (age unknown) intrude Hazelton Group rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	3.1000	Grams per tonne
Gold	12.5000	Grams per tonne

COMMENTS: From a 0.4 metre sample. Another sample assayed 47.7 grams per tonne silver across 1.2 metre.
REFERENCE: Assessment Report 16479.

CAPSULE GEOLOGY

The Tribe showing is underlain by volcanic and sedimentary rocks tentatively correlated with the Lower Jurassic Unuk River Formation of the Hazelton Group. Host rocks consist of cherts, andesite agglomerates and andesite tuffs intruded by small syenite stocks. In areas of strong sericitic alteration, are quartz and quartz-carbonate veins and stockworks that locally carry pyrite, pyrrhotite, arsenopyrite, sphalerite, and galena.

The best gold assays were from samples of a stockwork zone 13 by 30 metres across. The best vein assay from this zone was reported as 12.5 grams per tonne gold and 3.1 grams per tonne silver over 0.4 metres. Another sample from the same area contained 47.7 grams per tonne silver over 1.2 metres. A second vein 30 metres to the northeast was sampled (grab) and assayed 28.3 grams per tonne gold and 34.3 grams per tonne silver (Assessment Report 16479).

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EMPR BULL 63
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/06/16 CODED BY: JMB FIELD CHECK: N
DATE REVISED: 1988/08/14 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 202**

NATIONAL MINERAL INVENTORY:

NAME(S): **FELD**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 22 00 N
LONGITUDE: 130 09 19 W
ELEVATION: 1675 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of 1986 rock geochemistry sampling grid (Assessment Report 15668).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6247489
EASTING: 428633

COMMODITIES: Gold, Silver, Lead, Zinc

MINERALS
SIGNIFICANT: Pyrite
COMMENTS: No other minerals reported.
ALTERATION: Quartz, Pyrite, Carbonate, Sericite
ALTERATION TYPE: Sericitic, Carbonate, Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: G07 Subaqueous hot spring Ag-Au; I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Mount Dilworth	

LITHOLOGY: Felsic Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1986

COMMODITY	GRADE	
Silver	26.8000	Grams per tonne
Lead	1.1000	Per cent
Zinc	5.2000	Per cent

REFERENCE: Assessment Report 15668.

CAPSULE GEOLOGY

The occurrence is located within a 75 to 150 metre wide band of felsic pyroclastic rock of the Mount Dilworth Formation, Hazelton Group. This narrow band conformably overlies the Betty Creek Formation and may paraconformably underlie the Salmon River Formation; the former occurring east and the latter to the west of the mineralized band (Open File 1988-4; Fieldwork 1987).

Intense alteration (quartz-pyrite-carbonate-sericite) has obscured original lithologies, but they appear to be sheared tuffs. Work to date has included rock chip sampling of talus and hand-trenching over the area of most intense alteration. Two float boulders contained 3.5 to 7.0 grams per tonne gold. Best value from the talus sampling program was 5.2 per cent zinc, 1.1 per cent lead, and 26.8 grams per tonne silver (Assessment Report 16840).

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EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102; 1987, pp. 199-209
EMPR OF 1987-22; 1988-4
EMPR BULL 63
GSC MAP 9-1957; 1418A

BIBLIOGRAPHY

GSC P 89-1E, pp. 145-154

DATE CODED: 1985/02/26 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/08/17 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 203**

NATIONAL MINERAL INVENTORY:

NAME(S): **MONTGOMERY**, SULPHURETS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E 104B09W
BC MAP:
LATITUDE: 56 30 25 N
LONGITUDE: 130 14 12 W
ELEVATION: 1859 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Situated 1 kilometre northwest of Freegold Glacier. Located from Open File 1988-4.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6263189
EASTING: 423887

COMMODITIES: Copper Molybdenum

MINERALS
SIGNIFICANT: Pyrite Molybdenite Malachite
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Andesitic Tuff
Monzonitic Porphyry

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Montgomery showing occurs in rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. Mineralization consists of malachite, pyrite and molybdenite hosted by fine to medium-grained andesitic tuff. This andesitic tuff has been intruded by a barren monzonitic porphyry. A network of quartz veinlets within the andesitic tuff have been reported to occur adjacent to the mineralized area (Personal Communication, J.M. Britton).

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DATE CODED: 1988/04/21 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/09/29 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 204**

NATIONAL MINERAL INVENTORY:

NAME(S): **WARATAH 6**, BLUFF, SWAMP, NO. 7, HANDEL, TUNGCO, WARATAH

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 41 01 N
LONGITUDE: 130 59 01 W
ELEVATION: 240 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located south of the Iskut River on the northern slopes of Snippaker Mountain, on the north ridge of Bug Lake.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6283926
EASTING: 378489

COMMODITIES: Gold, Silver, Copper, Magnetite

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Magnetite, Arsenopyrite, Bornite, Chalcocite, Copper
COMMENTS: Minor bornite, chalcocite and native copper have been reported.
ASSOCIATED: Quartz
ALTERATION: Chlorite, Carbonate, Epidote
ALTERATION TYPE: Chloritic, Carbonate, Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic, Mesothermal, Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Volcaniclastic
Agglomerate
Andesitic Agglomerate

HOSTROCK COMMENTS: Upper Triassic (?) volcaniclastic is correlative with the upper members of the Stuhini Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks RELATIONSHIP:
METAMORPHIC TYPE: Regional
GRADE: Greenschist

INVENTORY

ORE ZONE: BLUFF VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	10.6000	Grams per tonne
Gold	8.7000	Grams per tonne

COMMENTS: The Bluff vein extends to 75 metres depth. Sample of drill intersection of 2.5 metres.
REFERENCE: Vancouver Stockwatch, April 14, 1988.

CAPSULE GEOLOGY

Paleozoic limestone with overlying metamorphosed sediments and volcanics are unconformably overlain by Mesozoic volcanic arc assemblages and sediments. Monotis fossils found within this assemblage on the north slope of Snippaker Peak give an age of Upper Triassic. The stratified rocks are correlated with upper members of the Stuhini Group.

The property is underlain mainly by a basic volcaniclastic unit believed to be of Upper Triassic age and to be correlative with the upper members of the Stuhini Group. Intrusive bodies include an orthoclase porphyry plug at the junction of Bronson Creek and the Iskut River and a large quartz monzonite to granodiorite intrusion along the east margin of the property.

The volcaniclastic is described as an andesitic agglomerate, comprised of volcanic fragments up to 2 centimetres in length and

CAPSULE GEOLOGY

subrounded to subangular feldspar porphyry clasts. The matrix of this porphyry consists of an aphanitic mass of andesitic to basaltic composition which exhibits pervasive chlorite alteration.

The agglomerate has undergone weak regional greenschist facies metamorphism and is altered by pervasive carbonate, chlorite and to a lesser extent, epidote. The agglomerate also hosts 1 to 3 per cent disseminated magnetite.

Mineral occurrences on the Waratah may be classified into three categories: copper-gold veins, gold-pyrite veins (refer to Golden Arrow 104B 296) and copper lead-zinc-silver-gold veins (refer to Gold Bug 104B 295).

The greatest number of mineral showings consist of copper-gold veins. Up to 18 different veins with gold values trending about 130 degrees occur on the Waratah 6 claim. These veins are associated with a major northeast trending fault, the Handel fault, which cuts through the Waratah 6 claim and trends southwest upslope to Johnny Mountain.

The best examples of the copper gold vein mineralization, are the Bluff, Swamp and No. 7 veins. The mineralization consists of pyrite, chalcopyrite, magnetite and arsenopyrite within quartz-chlorite veins. Minor bornite, chalcocite and native copper have been reported. Better gold grades occur with higher sulphide content within zones of chalcopyrite, magnetite and arsenopyrite. The gold is assumed to be contained within the sulphide lattice as no visible gold was reported. Vein widths vary from several centimetres to 1.65 metres in width and are controlled by north trending fracture planes.

A 0.5 metre chip sample taken from the main vein in trench 2, on the Bluff showing in 1987, consisting of a quartz vein with massive and banded pyrite, arsenopyrite and chalcopyrite on the footwall, assayed 37.7 grams per tonne gold, 26.06 grams per tonne silver, 0.23 per cent copper, 0.02 per cent lead and 0.01 per cent zinc (Assessment Report 16904).

A 0.75 metre sample from the Swamp vein, which consists of massive pyrite, magnetite and chalcopyrite, assayed 345.32 grams per tonne gold, 115.88 grams per tonne silver and 0.15 per cent copper. The No. 7 vein is comprised of massive lenses of pyrite, chalcopyrite and magnetite and a 1.0 metre sample taken from Trench 9 assayed 71.59 grams per tonne gold, 89.48 grams per tonne silver, 0.41 per cent copper, 0.06 per cent lead and 0.02 per cent zinc (Assessment Report 16904).

The 1988 drill program, which was designed to test the strike and depth extensions of the Bluff and No. 7 veins, has indicated the Bluff vein mineralization extends to a depth of 75 metres down-dip in Hole 27. A 2.5 metre mineralized intersection from this drill hole assayed 8.7 grams per tonne gold. The No. 7 vein was extended 120 metres along strike with intersections grading 5.93 grams per tonne gold across 3.0 metres (Northwest Prospector, June/July, 1988).

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Placer Dome File

DATE CODED: 1988/05/13 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/09/13 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 205**

NATIONAL MINERAL INVENTORY:

NAME(S): **HANDEL**, RAVEL, CHOPIN,
WINSLOW GOLD CORPORATION

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E 104B10W
BC MAP:
LATITUDE: 56 39 54 N
LONGITUDE: 131 00 43 W
ELEVATION: 1060 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Handel showing located on the north face of Snippaker Ridge, location from main showing in Assessment Reports 10364 and 11326.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6281905
EASTING: 376693

COMMODITIES: Silver, Zinc, Lead, Gold, Arsenic, Copper

MINERALS

SIGNIFICANT: Pyrite, Arsenopyrite, Sphalerite, Galena
ASSOCIATED: Quartz, Calcite
COMMENTS: Minor calcite.
ALTERATION: Limonite, Jarosite, Scorodite, Clay
COMMENTS: Possibly scorodite.
ALTERATION TYPE: Oxidation, Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Massive
CLASSIFICATION: Epigenetic, Hydrothermal, Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Triassic-Jurassic	Stuhini	Undefined Formation	

LITHOLOGY: Volcaniclastic
Andesitic Tuff
Argillite
Limestone
Greywacke

HOSTROCK COMMENTS: Stratified rocks are correlated with the Hazelton Group, however, some units may be correlative with upper members of the Stuhini Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1983

COMMODITY	GRADE	
Silver	89.0000	Grams per tonne
Arsenic	3.6000	Per cent
Gold	0.0100	Grams per tonne
Copper	0.0300	Per cent
Lead	2.1500	Per cent
Zinc	3.3500	Per cent

COMMENTS: 1.5 metre sample of massive arsenopyrite and sphalerite.
REFERENCE: Assessment Report 11326.

CAPSULE GEOLOGY

Permian to Upper Triassic basement shales and limestones are unconformably overlain by Jurassic Hazelton Group volcanics and sediments. The Bronson Creek-Iskut River area is generally underlain by the Lower Jurassic Unuk River Formation consisting of greywacke, argillite and volcaniclastics, which are unconformably (?) overlain by the Betty Creek Formation comprised of a complex of sandstones, siltstones, conglomerates, breccias, tuffs and porphyritic andesitic flows.

CAPSULE GEOLOGY

The central part of the property is underlain by a 600 to 800 metre thick volcaniclastic-andesitic tuff unit of the Unuk River Formation. To the west it is interbedded with black argillite that exhibits rusty weathering due to disseminated pyrite. This unit may, in part, be correlative with upper members of the Stuhini Group. A lesser member in this unit is a grey limestone up to 5 to 10 metres thick. East of the main Handel fault, within Snippaker Ridge saddle, the limestone hosts fossils that are reported to be of Upper Triassic to Lower Jurassic age.

Underlying the volcaniclastic-andesitic tuff unit along the western part of Snippaker Ridge is a fine to medium-grained greywacke that is at least 600 metres thick. Where it underlies the Bronson grid the greywacke carries 1 to 4 per cent pyrite mineralization disseminated and along fractures (refer to Bronson, 104B 300).

The Handel fault, which strikes 055 degrees and dips 055 degrees southeast, crosscuts the property. This is a regional fault and appears to extend 20 kilometres from the Iskut River, through Snippaker Ridge to Bronson Creek and continues west across Johnny Mountain to the Craig River. Along the north face of Snippaker Ridge, a series of splays, off the main Handel fault, strike an average 040 degrees. One of these splays hosts the Handel showing. Mineralization in the Handel showing may be controlled by a second east-west trending fault.

The Handel mineralized zone lies within the volcaniclastic-andesitic tuff unit with interbedding argillite. The mineralized zone exhibits hydrothermal alteration caused by meteoric waters passing through shear zones and fracture systems. Mineralization includes pyrite, arsenopyrite, sphalerite and galena and is most massive at the intersection of an east-west trending splay off the main Handel fault. Alteration products include limonite, jarosite, possibly scorodite and an abundance of clay. Gangue minerals include quartz with only minor calcite.

In 1983, a 1.5 metre sample of massive arsenopyrite and sphalerite from the Handel showing assayed 0.01 grams per tonne gold, 89.0 grams per tonne silver, 2.15 per cent lead, 3.35 per cent zinc, 0.03 per cent copper and 3.6 per cent arsenic. Another 3.0 metre sample of massive sphalerite and galena assayed 0.003 grams per tonne gold, 21.0 grams per tonne silver, 0.36 per cent lead, 1.5 per cent zinc, 0.02 per cent copper and 2.4 per cent arsenic (Assessment Report 11326).

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V STOCKWATCH Sept.2, 1987; *Aug.26, 1988
NW PROSPECTOR Aug./Sept.(p. 18), 1988
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DATE CODED: 1988/09/20 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1988/12/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 206**

NATIONAL MINERAL INVENTORY:

NAME(S): **WOLVERINE**, GOSSAN 17, GOSSAN 23, BRONSON CREEK (WOLVERINE)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E 104B10W
BC MAP:
LATITUDE: 56 37 30 N
LONGITUDE: 131 00 09 W
ELEVATION: 1125 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the west side of Bronson Creek, adjacent to the toe of Bronson Glacier, south of the Iskut River.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6277437
EASTING: 377141

COMMODITIES: Zinc, Lead, Silver, Copper, Gold

MINERALS

SIGNIFICANT: Sphalerite, Galena, Chalcopyrite, Pyrite
ASSOCIATED: Quartz, Calcite
ALTERATION: Silica, Biotite, Hematite
ALTERATION TYPE: Silicific'n, Biotite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Mesozoic			Coast Plutonic Complex

LITHOLOGY: Tuff, Pyroclastic, Siltstone, Shale, Greywacke, Granodiorite, Hornblende Diorite

HOSTROCK COMMENTS: Stratified rocks may be correlative with the Hazelton Group, or in part, with the Stuhini Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
Plutonic Rocks RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by an undivided group of sedimentary and volcanic rocks of Upper Triassic to Jurassic age, which are intruded by Mesozoic marginal phases of the Coast Plutonic Complex.

The stratified rocks are comprised of submarine to sub-aerial fragmental volcanic rocks that are interlayered with a sequence of argillite, banded siltstone, greywacke, conglomerate and minor limestone. Most of these rocks are thought to be correlative with the Lower Jurassic Hazelton Group, Unuk River Formation, however, some may be related to upper members of the Upper Triassic Stuhini Group.

Structurally, the rocks have a general northwest trend and have been regionally metamorphosed to the greenschist facies. The rocks are strongly deformed and are cut by numerous north to northeast trending faults and fractures.

The property is underlain by an interbedded sequence of southwest dipping sedimentary and pyroclastic rocks. The sedimentary rocks are characterized by thinly laminated grey to brown siltstones, shales and 1 to 3 metre wide beds of greywacke. Higher in the succession, the sequence is characterized by tuffs and lapilli tuffs of intermediate to mafic composition. Numerous granodiorite and lesser hornblende diorite and aplite dyke-like apophyses of the Coast Plutonic Complex intrude both the siltstone and pyroclastic units. Alteration within the volcano-sedimentary sequence consists of local silicification and

CAPSULE GEOLOGY

biotization adjacent to the intrusives as well as quartz and quartz-calcite veining, which are concordant to bedding, also related to the intrusives.

The Wolverine showing is comprised of 0.1 to 0.5 metre wide veins and veinlets with scattered pods of spalerite, galena and minor chalcopyrite. The sulphides occur as clusters and coarse aggregates in a gangue comprised of quartz and minor calcite. The mineralization infills northwest trending shears and fault zones that have been traced for up to 4 metres along strike before gradually pinching out. Closely spaced rock chip sampling revealed high concentrations of lead, zinc and silver with low grade values (peak value 0.495 grams per tonne gold) (Assessment Report 16891).

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V STOCKWATCH Aug.26, 1988 p.19

DATE CODED: 1988/05/11 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/10/30 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 207**

NATIONAL MINERAL INVENTORY:

NAME(S): **PYRAMID HILL**, GOSSAN 10-13

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 34 53 N
LONGITUDE: 130 56 28 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralized area located west of Pyramid Peak on the east flank of Pyramid Hill, location of magnetite showing from Assessment Report 16931, Figure 5.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6272476
EASTING: 380770

COMMODITIES: Copper, Zinc, Gold, Silver, Molybdenum, Magnetite

MINERALS

SIGNIFICANT: Magnetite, Chalcopyrite, Pyrite, Molybdenite, Malachite, Sphalerite
ASSOCIATED: Quartz
ALTERATION: Biotite, Chlorite, Diopside, Epidote, Garnet, Actinolite, Tremolite
ALTERATION TYPE: Skarn, Chloritic, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive, Stratabound, Stockwork, Disseminated
CLASSIFICATION: Replacement, Epigenetic, Skarn, Industrial Min.
TYPE: K02 Pb-Zn skarn; K01 Cu skarn; K03 Fe skarn; J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Magnetite Skarn
Chlorite Epidote Diopside Skarn
Hornfels Siltstone
Tuffaceous Siltstone
Volcaniclastic
Calcareous Siltstone
Tuff
Granodiorite

HOSTROCK COMMENTS: Bedded sedimentary sequence may be correlated with the Hazelton Group, or in part, with the Stuhini Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks, Syn-mineralization
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	2.9000	Grams per tonne
Gold	0.1720	Grams per tonne
Copper	0.1360	Per cent
Zinc	1.7490	Per cent

COMMENTS: 1.0 metre chip sample from massive magnetite exposure.
REFERENCE: Assessment Report 16931, Figure 5.

CAPSULE GEOLOGY

The area is underlain by an undivided assemblage of sedimentary and volcanic rocks ranging from Upper Triassic to Jurassic in age, which are intruded by Middle Mesozoic phases of the Coast Plutonic Complex.

CAPSULE GEOLOGY

The stratified rocks are composed of submarine to sub-aerial fragmental volcanic rocks that are interlayered with sequences of argillite, banded siltstone, greywacke, conglomerate and minor impure limestone which are thought to be correlative with the Lower Jurassic Hazelton, Unuk River Formation or the Upper Triassic Stuhini Group.

Structurally, the rock units have a general northwest trend and have undergone regional greenschist facies metamorphism. They are strongly deformed and are cut by numerous northeast trending faults and fractures.

Pyramid Hill is underlain mainly by a southwest dipping, 450 to 500 metre thick succession of sedimentary and volcaniclastic rocks. The sedimentary rocks are predominantly thin-bedded, locally calcareous, pale to dark grey siltstones grading upwards into tuffaceous siltstones. Higher in the succession, the sequence is characterized by massive tuffs and lapilli tuffs. Numerous granodiorite and orthoclase porphyry dyke-like apophyses of the Coast Plutonic Complex intrude both the siltstone and volcaniclastic units.

Varying degrees of sulphide-bearing skarn alteration is developed within the volcaniclastics and tuffaceous siltstones in areas adjacent to the intrusions. Skarn alteration is comprised of massive, medium-grained chlorite, plus or minus diopside, with lesser amounts of quartz and epidote, isolated clusters of coarse, brown garnet, scattered tremolite-actinolite and sulphides.

The basal siltstone unit is hornfelsed with secondary biotite, is siliceous and hosts pyrite-rich areas adjacent to the intrusives.

The skarn related mineralization at Pyramid Hill appears to be stratabound and has selectively followed a sequence of tuffs and lapilli tuffs within a bedded succession of siltstones and tuffaceous siltstones. A highly mineralized area occurs west of Pyramid Peak on the north side of a prominant saddle (refer to Pyramid Saddle 104B 323) and consists of stockwork veins, veinlets and disseminations of gold-bearing sulphides. On the east side of Pyramid Peak is a massive magnetite and minor chalcopyrite replacement zone in the vicinity of the skarn/siltstone contact. Apophyses of this magnetite body were traced for about 30 metres and continuous rock chip samples were collected at 1 metre intervals. In 1987, a 1 metre chip sample assayed 0.136 per cent copper, 1.75 per cent zinc, 2.9 grams per tonne silver and 0.17 grams per tonne gold. Another 1 metre chip sample assayed 0.028 per cent copper, 0.336 per cent zinc, 1.7 grams per tonne silver and 0.12 grams per tonne gold (Assessment Report 16931, figure 5).

Other mineralization, associated with the magnetite skarn zones, consists of disseminations amd stockwork veinlets which host some sphalerite, molybdenite, malachite and rare pyrrhotite in addition to the pyrite and chalcopyrite.

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DATE CODED: 1988/05/12 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/10/31 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 208**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN SPRAY**, SKY 5, SPRAY, HECTOR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 39 43 N
LONGITUDE: 130 54 57 W
ELEVATION: 1050 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located approximately 3.2 kilometres south of the Iskut River and 3.0 kilometres west of Snippaker Creek; location from Trench 87-3, main zone of Golden Spray vein (Assessment Report 16678, Figure 4).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6281397
EASTING: 382573

COMMODITIES: Gold, Silver, Lead, Zinc, Arsenic

MINERALS

SIGNIFICANT: Pyrite, Sphalerite, Magnetite, Galena
COMMENTS: Massive pyrite with minor galena, magnetite and sphalerite.
ASSOCIATED: Quartz
ALTERATION: Chlorite, Limonite
ALTERATION TYPE: Chloritic, Oxidation, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Massive
CLASSIFICATION: Epigenetic, Mesothermal, Industrial Min.
TYPE: I02 Intrusion-related Au pyrrhotite veins; J01 Polymetallic manto Ag-Pb-Zn
I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
STRIKE/DIP: 117/90
TREND/PLUNGE:
COMMENTS: Golden Spray vein strikes 117 degrees with a vertical dip.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Greywacke
Chlorite Greywacke
Siltstone
Andesitic Agglomerate

HOSTROCK COMMENTS: Stratified rocks are correlated with the Hazelton Group, however, some may, in part, be correlated with upper members of the Stuhini Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	81.0000	Grams per tonne
Arsenic	2.0500	Per cent
Gold	4.9400	Grams per tonne

COMMENTS: Trench 87-3, a 1.3 metre sample of massive pyrite with minor magnetite.
REFERENCE: Assessment Report 16678.

CAPSULE GEOLOGY

The oldest rocks in the area consist of Paleozoic crinoidal limestone overlying metamorphosed sedimentary and volcanic members. Unconformably overlying the Paleozoic limestone are Upper Triassic to Lower Jurassic Stuhini Group volcanics and sediments. Monotis fossils have been recognized on the north slope of Snippaker Peak giving an age of Upper Triassic. Some of the stratified rocks may, in part, be correlated with lower members of the Hazelton Group.

On the property, Stuhini Group rocks consist mainly of a basal sequence of greywacke with minor interbedded siltstone which is

CAPSULE GEOLOGY

overlain by andesite agglomerate. The greywacke-siltstone unit shows pervasive weak to moderate chlorite alteration, hosts minor disseminated pyrite and locally, is silicified and strongly fractured. The andesite agglomerate is comprised of 1 centimetre long phenocrysts of plagioclase and hornblende set in an andesitic matrix. Minor hornblende-porphyry dykes, which are strongly magnetic and host pyrite and calcite, were observed crosscutting the stratigraphy.

The most significant mineralization found on the property is confined to a prominent northwest-southeast lineament which is in excess of 1.0 kilometre long and is referred to as the Main Creek. Auriferous quartz veining exposed in trenches in the Golden Spray zone strike 300 metres along this structure. A second parallel lineament lies 200 metres to the north and both of these structures are intersected by a north-south lineament which cuts the north end of the Golden Spray zone.

In 1987, five trenches were excavated along a 300 metre strike length of the Golden Spray zone. Trenches 1 and 2 host parallel quartz veining with massive pyrite, separated by up to 1.0 metre of fractured, chloritic greywacke. The zone trends 102 degrees with a vertical dip. The limonitic quartz veining is also associated with minor magnetite and galena.

A sample from Trench 87-1 of semi-massive pyrite in limonitic quartz veining assayed 11.28 grams per tonne gold, 69.1 grams per tonne silver, 0.37 per cent arsenic, 0.036 per cent copper, 0.16 per cent lead, 0.068 per cent zinc (Assessment Report 16678).

Trench 87-3 exposes the best mineralized part of the Golden Spray zone, the Golden Spray vein. This vein hosts massive pyrite with lesser sphalerite and magnetite in quartz veining up to thicknesses of 1.4 metres over a strike length of 13 metres. The zone trends 117 degrees with a vertical dip. (In 1987, two chip samples of massive pyrite and minor magnetite assayed 4.94 grams per tonne gold, 81.0 grams per tonne silver, 2.05 per cent arsenic over 1.3 metres and 5.35 grams per tonne gold, trace silver, 2.28 per cent arsenic over 1.4 metres, respectively (Assessment Report 16678)).

A series of limonitic quartz-pyrite veins occur along the Main Creek and trend about 135 degrees dipping 75 degrees northeast. Auriferous quartz veins occur mainly on the east side of Main Creek.

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V STOCKWATCH Jul.25,Oct.23, 1987; Dec.4, 1987; Sept.1, 1988
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Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B19)

DATE CODED: 1988/09/13 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1988/12/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 209**

NATIONAL MINERAL INVENTORY:

NAME(S): **COLE**, BOOT, CONSOAT, KING CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E 104B10E
BC MAP:
LATITUDE: 56 29 52 N
LONGITUDE: 130 37 55 W
ELEVATION: 1070 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6262676
EASTING: 399537

COMMENTS: Located on the north side of King Creek which drains southeast for 6 kilometres, emptying into the Unuk River. Showing occurs near the headwaters of Gossan Creek (Assessment Report 11673, Fig. 2).

COMMODITIES: Copper, Silver, Gold

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Malachite, Chlorite
ALTERATION TYPE: Silicific'n, Oxidation, Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Volcanogenic, Epigenetic, Hydrothermal
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation; I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Cenozoic	Stuhini	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Gossan
Dacite
Andesite
Andesitic Tuff
Siliceous Chert
Felsic Intrusive
Quartz Monzonite

HOSTROCK COMMENTS: Eocene or older quartz monzonite and a Tertiary felsic unit intrude Stuhini Group rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
Plutonic Rocks RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1983

COMMODITY	GRADE	
Silver	44.5700	Grams per tonne
Gold	5.1400	Grams per tonne
Copper	0.0030	Per cent

COMMENTS: Grab sample from quartz-pyrite vein.
REFERENCE: Assessment Report 11673.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Stuhini Group rocks comprised of a series of northeast striking andesitic to rhyolitic flows and tuffs, chert and minor limestone. These rocks are intruded by an Eocene or older quartz monzonite stock, and locally, by a Tertiary felsic intrusive.

The area of the mineralization, which occurs near the headwaters of Gossan Creek, is underlain by dacite which is greenish grey in colour, displays fine to coarse grained equivalents and is pyritic with a marked gossanous appearance. Andesite occurs as minor inter-beds within the dacite west of Gossan Creek. It is commonly frac-

CAPSULE GEOLOGY

tured, slightly chloritic and hosts minor disseminated pyrite. Silicified andesitic tuff occurs immediately west of the headwaters of Gossan Creek and also displays a gossanous appearance.

The massive greenish-grey dacite to quartz monzonite varies from a fine-grained dacitic unit to a coarse-grained equivalent hosting feldspars up to 1 centimetre in size with disseminated pyrite. It is quite siliceous and is exposed for about 1100 metres down Gossan Creek. This felsic unit is thought to be intrusive but may represent a subvolcanic occurrence related to the finer grained dacite.

Mineralization includes pyrite and chalcopyrite in gossanous zones which can be attributed to the chemical weathering of pyrite. In the main gossan zone, near the headwaters of Gossan Creek, pyrite is present predominantly as disseminations and fracture fillings in the felsic intrusive and volcanic rocks. It is found, to a lesser extent, as scattered clusters or blebs. Quartz veinlets are also present and host minor disseminated pyrite.

At the south end of a small alpine lake that drains into Gossan Creek, is a rusty, malachite-stained, 5 centimetre wide fracture filled with massive pyrite. A number of other small pyrite filled fractures also occur within the dacitic rocks.

In 1981, an 18 metre chip sample taken from the main gossan zone assayed 0.069 per cent copper, 0.01 per cent zinc, 3.43 grams per tonne silver and 0.07 grams per tonne gold. Two other chip samples taken over 12 metres and 9 metres assayed 0.102 per cent copper, 3.77 grams per tonne silver, 0.103 grams per tonne gold and 0.104 per cent copper, 2.4 grams per tonne silver, 0.034 grams per tonne gold, respectively (Assessment Report 10474, page 8).

In 1983, a grab sample taken from a quartz-pyrite vein of variable width, ranging from 5 to 50 centimetres, assayed 5.14 grams per tonne gold, 44.57 grams per tonne silver, 0.003 per cent copper (Assessment Report 11673, page 13). It appears that gold values are associated with quartz-pyrite vein mineralization.

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EMPR EXPL 1976-E180-181; *1983-519
EMPR PF (Geology Map-1:31250 Scale-Newmont Exploration of Canada, 1960's)

DATE CODED: 1988/04/27 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/06/30 REVISED BY: LLC FIELD CHECK: N

MINFILE NUMBER: **104B 210**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOY 2**, JOY 1-2, BAX, BRENWEST

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 44 17 N
LONGITUDE: 130 57 49 W
ELEVATION: 1372 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Rock samples taken from Baseline on Grid in Joy-2 claim (Sorbara, J.P., (1988)).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6289949
EASTING: 379887

COMMODITIES: Gold, Silver, Copper

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Epidote, Clay, Sericite, Hematite, Specularite
ALTERATION TYPE: Silicific'n, Propylitic, Argillic, Oxidation, Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic, Hydrothermal, Igneous-contact
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Jurassic-Cretaceous			Coast Plutonic Complex
Paleozoic			Stikine Assemblage

LITHOLOGY: Andesite
Massive Intermediate Volcanic
Agglomerate
Volcanic Breccia
Granite
Granodiorite

HOSTROCK COMMENTS: Granitic stock intrudes massive intermediate volcanics. Paleozoic (?) limestone is unconformable with stratified volcanic & sediment. rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SHEAR
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	226.3000	Grams per tonne
Gold	190.0000	Grams per tonne
Copper	0.5700	Per cent

COMMENTS: Sample 87-BGR-011, from mineralized shear zone in altered andesite.
REFERENCE: Sorbora, J.P., (1988),

CAPSULE GEOLOGY

The oldest rocks in the area are complexly folded and metamorphosed schists and gneisses of probable mid-Paleozoic age. These are overlain by white to grey crystalline limestone which is thought to be part of a Late Paleozoic sedimentary sequence that includes minor greenstone.

These rocks are overlain by a Mesozoic volcanic and sedimentary sequence which is regarded as Upper Triassic due to the presence of Monotis fossils. These rocks are correlated with the Stuhini Group.

The dominant lithology on the property is an extensive unit of massive, intermediate volcanics which are characterized by the pres-

CAPSULE GEOLOGY

ence of rounded inclusions of plagioclase porphyry material. Propylitic alteration is pervasive and intense within this unit, with saussuritized plagioclase phenocrysts and massive epidote occurring as fracture infillings.

Distinctive volcaniclastic horizons are encountered in the andesites in the northeastern part of the Joy 2 claim. Agglomerates and volcanic breccias with clasts up to 10 centimetres in diameter occur here.

In the central part of the Joy 2 claim alteration includes extensive zones of clay alteration with zones of intense silicification. Hematization is commonly associated with the clay alteration zone, and specular hematite occurs occasionally in fractures.

The most significant intrusive body on the property consist of a stock of granitic to granodioritic composition which outcrops in the north central portion of the Joy 2 claim. Peripheral areas of the intrusion have undergone intense sericite and epidote alteration. Quartz-epidote veins are present near the contact with the surrounding volcanics. Part of the southern boundary of this intrusion appears to be in fault contact with the volcanics. The fault strikes about 075 degrees.

The most significant mineralization on the Joy 2 claim occurs in an intensely oxidized, pyrite and chalcopyrite-bearing shear zone within altered andesites. The showing is located in the north central part of the claim, and occurs in close proximity to a contact between the volcanics and a granitic stock. The shear zone is exposed over a strike length of about 20 metres and is mineralized over a width of 30 centimetres. A high grade sample taken from this showing in 1987, assayed 190.0 grams per tonne gold, 226.3 grams per tonne silver and 0.57 per cent copper (Assessment Report 16794). Other anomalous gold, silver and copper values are reported from samples taken from a smaller shear zone which converges with the main showing.

Sulphide-bearing shear zones, quartz veins and zones of intense clay alteration elsewhere on the Joy 2 claim also contain anomalous gold values.

Gold-bearing pyrite mineralization occurs near the convergence of two small shear zones on the Joy 1 claim (refer to 104B 329).

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V STOCKWATCH Nov.18,1988 p.3

DATE CODED: 1988/05/13 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/10/29 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 211**

NATIONAL MINERAL INVENTORY:

NAME(S): **CATSPAW**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 17 42 N
LONGITUDE: 130 05 33 W
ELEVATION: 820 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Silver-gold zone identified from Assessment Report 15975. Nearby copper mineralization identified from Assessment Report 8768. Located immediately southeast of the toe of a small glacier south of Frank Mackie Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6239449
EASTING: 432385

COMMODITIES: Silver Gold Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated Vein Massive
CLASSIFICATION: Igneous-contact Hydrothermal Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation I02 Intrusion-related Au pyrrhotite veins
L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Cenozoic			Unnamed/Unknown Informal

LITHOLOGY: Tuff
Argillite
Volcanic Breccia
Limestone
Feldspar Porphyry Dike

HOSTROCK COMMENTS: Specific host rock of gold and silver mineralization was not reported.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: GOSSAN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	123.7700	Grams per tonne

REFERENCE: Assessment Report 15975.

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	4.8000	Grams per tonne
Gold	1.0600	Grams per tonne

REFERENCE: Assessment Report 15975,

CAPSULE GEOLOGY

The occurrence is located near the toe of Thomas Glacier, a small glacier located between Frank Mackie and Berendon Glacier. The area is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. These consist of limestone, volcanic fragmentals and tuffs with minor argillites cut by later Cenozoic(?) feldspar porphyry dykes.

Limestone outcrops at lower elevations and consists of dark grey to black fine to medium-grained rock containing pyrite and hematite stains. The fragmentals were observed on the north slope

CAPSULE GEOLOGY

above the glacier and consist of angular fragments in a fine-grained green matrix. The tuffs with minor argillite are thin-bedded well laminated rocks varying from grey to black.

A large gossan, hosting gold and silver mineralization, occurs south and adjacent to the toe of the glacier. It was prospected and sampled in 1986. Two pyritic rock samples contain 1.06 and 1.13 grams per tonne gold with 4.80 and 2.40 grams per tonne silver, respectively. A third sample assayed 123.77 grams per tonne silver. The lithology underlying the gossan was not reported (Assessment Report 15975).

Several hundred metres to the northeast a feldspar porphyry dyke, with a northwest trend, intrudes limestone. Chalcopyrite occurs along the contact as disseminations and massive stringers up to several centimetres in width but commonly less than 1 metre in length. No samples were taken for analysis (Assessment Report 8768).

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GSC MAP 9-1957; 307A; 315A; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1987/11/30 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/08/12 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 212**

NATIONAL MINERAL INVENTORY:

NAME(S): **IDAHO (L.2836)**, SILVER COIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 05 47 N
LONGITUDE: 130 01 42 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located at south end of Idaho Crown Grant (Lot 2836), (Groves, E.W., 1981).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6217284
EASTING: 436026

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
ALTERATION: Silica Pyrite
ALTERATION TYPE: Silicific'n Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: G07 Subaqueous hot spring Ag-Au I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Folded Sheared
DIMENSION: 0009 x 0003 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Mineralized zone exposed for 3.3 metres estimated to be 7.6 to 10.6 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

Lower Jurassic — Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2.0 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Andesitic Flow
Andesitic Breccia
Argillite
Siltstone

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, D.A., 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Located near western margin of Intermontane Belt.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1930
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	17.1400	Grams per tonne

REFERENCE: Property File: Grove, E.W., 1981,

CAPSULE GEOLOGY

The Idaho showing is located at the south end of the Idaho Crown Grant (Lot 2836) south of the Big Missouri deposit (104B 046). In 1967 the property was explored by Granduc Mines Ltd.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin,

CAPSULE GEOLOGY

is part of the volcanic arc assemblage of the Stikinia Terrane.
Mineralization is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes.
Mineralization was broken into and exposed for about 3.3 metres and estimated to be from 7.6 to 10.6 metres wide. Country rock in the area have been silicified, pyritized and sheared. A sample of the mineralization assayed 17.14 grams per tonne gold (Grove, 1981).

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DATE CODED: 1989/01/23 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: 1989/01/23 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 213**

NATIONAL MINERAL INVENTORY: 104B1 Au6

NAME(S): **H**, GOOD HOPE, UNICORN,
I

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 07 11 N
LONGITUDE: 130 00 55 W
ELEVATION: 1036 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6219869
EASTING: 436876

COMMENTS: H Vein is approximately 300 metres southeast of A Vein (104B 145).
Located west of Harris Creek.

COMMODITIES: Silver, Gold, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Pyrite, Galena, Sphalerite, Tetrahedrite, Silver
ALTERATION: Sericite, Silica, Pyrite, Carbonate
ALTERATION TYPE: Sericitic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: G07 Subaqueous hot spring Ag-Au; I02 Intrusion-related Au pyrrhotite veins
DIMENSION: 0075 x 0001 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: H vein is between 0.15 to 1.0 metres thick and flat-lying.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Lapilli Tuff
Andesitic Agglomerate
Cherty Tuff

HOSTROCK COMMENTS: Isotopic Age from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1974

COMMODITY	GRADE	
Silver	2571.0000	Grams per tonne
Gold	6.2000	Grams per tonne

COMMENTS: Composite of 12 grab samples.
REFERENCE: Cochrane, 1974,

CAPSULE GEOLOGY

The H Vein, which is located 900 metres north-northeast of the Big Missouri deposit, lies within south-southeast striking, moderately dipping andesite, agglomerate and lapilli tuff, with interbedded cherty tuff of the Lower Jurassic Unuk River Formation. (See Big Missouri - 104B 046 for enhanced geology).

The H Vein, which trends north for 75 metres, is flat lying and between 0.15 to 1.0 metres thick. This quartz vein is well mineralized with pyrite, galena, sphalerite, tetrahedrite, and native silver. A composite sample of twelve grab samples assayed at 6.2 grams per tonne gold and 2571 grams per tonne silver (Cochrane, 1974).

The nearby I Vein, which strikes east and dips 45 degrees south, is 0.3 to 1.0 metre wide and is mineralized with pyrite, sphalerite, native silver and minor galena.

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GSC MEM 132; *175, p. 170
EMPR OF 1987-22
GSC MAP 1829; 307A; 9-1957; 1418A
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CIM Spec. Vol. 37, pp. 202-215
GSC P 89-1E, pp. 145-154

DATE CODED: 1987/12/15 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1988/08/16 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 214**

NATIONAL MINERAL INVENTORY:

NAME(S): **PELICAN**, GOSSAN 6, KIM, PONCHO, SERICITE RIDGE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 34 00 N
LONGITUDE: 130 51 26 W
ELEVATION: 1070 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Pelican zone located north of Crater Lake (Assessment Report 16892), part of the Kim (104B 117).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6270695
EASTING: 385877

COMMODITIES: Gold, Silver, Copper, Zinc, Lead

MINERALS

SIGNIFICANT: Sphalerite, Galena, Chalcopyrite, Magnetite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Pyrite, Sericite, Epidote, Chlorite, Diopside, Calcite, Malachite
ALTERATION TYPE: Pyrite, Sericitic, Skarn, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Porphyry, Igneous-contact
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Banded Siltstone
Skarn
Volcaniclastic
Volcanic
Tuff

HOSTROCK COMMENTS: Juro-Triassic volcanics and sediments may be correlative with the Hazelton or Stuhini Groups.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	9.2000	Grams per tonne
Gold	0.1520	Grams per tonne
Copper	0.2020	Per cent
Lead	0.0100	Per cent
Zinc	0.0230	Per cent

COMMENTS: Sample from quartz vein with pyrite in silicified and altered quartz diorite.
REFERENCE: Assessment Report 16892,

CAPSULE GEOLOGY

The area is underlain by an undivided assemblage of stratified rocks comprised of fragmental volcanics interlayered with sequences of argillite, banded siltstone, greywacke, conglomerate and minor impure limestones. Most of these rocks are believed to be correlative with the Lower Jurassic Hazelton Group (Unuk River Formation) but some of the lowermost members may correlate with the Upper Triassic Stuhini Group rocks.

The stratified rocks are intruded by sub-volcanic intrusives and plutonic rocks that range from Late Mesozoic to Cenozoic in age.

CAPSULE GEOLOGY

These stocks and dykes include granodiorite, quartz monzonite, syenite and feldspar porphyry, as well as Tertiary dykes and plugs of basalt and diorite.

The Pelican showing, located on the north flank of Lake Ridge, consists of magnetite-rich vein mineralization associated with precious metal anomalies. Magnetite veins with minor sphalerite are exposed in steep cliffs composed of rusty weathering, pyritic banded siltstone.

The banded siltstone overlies black argillite and is characterized by 1 to 3 centimetre thick beds which alternate light to dark and fine to coarser. A dark green volcanic succession overlies the siltstone. Sericitic alteration is intense within the siltstone unit, especially near the lower contact.

Other mineralization with the Pelican zone consists of randomly oriented and discontinuous quartz-sulphide veins and veinlets which range up to 0.5 centimetre in width. Sulphides include sphalerite, galena with minor chalcopyrite and associated malachite staining. The mineralization occurs at or near the contact between the banded siltstone and overlying altered and skarned volcaniclastics. Alteration mineralogy consists mainly of chlorite, calcite with lesser amounts of epidote, diopside, quartz and pyrite. Disseminated sulphides are also present within the altered rock.

In 1983, a selected sample from the Pelican zone assayed 2.4 grams per tonne gold, 39.5 grams per tonne silver, 0.0219 per cent lead, 0.121 per cent zinc, and 5.92 per cent copper. Other samples from small sulphide veins assayed 0.81 grams per tonne gold, 20.6 grams per tonne silver, 0.506 per cent lead, 3.41 per cent zinc, 0.152 per cent copper and 0.035 grams per tonne gold, 11.6 grams per tonne silver, 0.18 per cent lead, 5.13 per cent zinc, 0.0747 per cent copper, respectively (Assessment Report 11332, part 1).

In 1987, a continuous chip sample taken from chloritized, finely laminated siltstone with disseminated pyrite, chalcopyrite, malachite and sphalerite within the Pelican zone assayed 0.02 grams per tonne gold, 7.5 grams per tonne silver, 0.3665 per cent copper, 0.0034 per cent lead, and 0.0169 per cent zinc. Another sample containing 1 per cent sphalerite, pyrite and chalcopyrite assayed trace gold, 1.0 grams per tonne silver, 0.021 per cent copper, 0.0059 per cent lead, and 0.3147 per cent zinc. A grab sample from the Pelican zone consisting of silicified and strongly altered quartz diorite containing pyrite in veins up to 6 centimetres in width assayed 0.152 grams per tonne gold, 9.2 grams per tonne silver, 0.2019 per cent copper, 0.0104 per cent lead, and 0.0226 per cent zinc (Assessment Report 16892).

The sulphide mineralization is related to small intrusive bodies and is found mainly within skarned and altered sediments and volcaniclastics within the contact zones (refer to the Lake Zone 104B 028).

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GSC P 89-1E pp.145-154
EMPR GEM 1972-517; 1973-500; 1974-335
EMPR EXPL 1983-525; 1986-C442-C443
EMPR ASS RPT 3981, 5142, 5752, 6030, *11332(part 1), *15238, *16892, 16931
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
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EMPR PF (Graf, C.W., (1982): Report on Claims in Snippaker Creek area of British Columbia for Active Mineral Explorations Ltd., December 1982; Peterson, D.B., (1987): Report on Gossan Gold Project, Liard Mining Division, Northwestern British Columbia, for Western Canadian Mining Corporation, November 1987)
Chevron File

DATE CODED: 1988/06/22 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/10/22 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 215**

NATIONAL MINERAL INVENTORY:

NAME(S): **DIVEL**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 20 47 N
LONGITUDE: 130 22 26 W
ELEVATION: 850 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: South of Divelbliss Creek, just east of Cabin Glacier (Property File (Geol. Map - 1:31,250 scale - Newmont Explorations Ltd.).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6245480
EASTING: 415085

COMMODITIES: Lead Copper

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

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

HOST ROCK
DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Amphibolite
Andesitic Flow
Tuff
Sediment/Sedimentary

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
GRADE: Amphibolite
COMMENTS: Rocks are altered to amphibolite at one showing.

CAPSULE GEOLOGY

This occurrence is located south of Divelbliss Creek just west of the toe of Cabin Glacier. The area is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. These consist of andesitic flows, tuffs and associated sediments that have a north to northwest structural trend. A fault with similar trend occurs immediately east of the showings.

Alteration and deformation in the area are complex and are related to regional faulting and Jurassic and Tertiary plutonism. In addition, the degree of dynamic metamorphism increases toward the South Unuk River cataclasite zone (Grove, Bulletin 63).

Galena occurs with quartz in an unspecified host rock. Traces of chalcopyrite are reported to occur in outcrop a few hundred metres north and several hundred metres south. The latter occurring in amphibolite with up to 15 per cent pyrite.

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EMPR ASS RPT 17055, 17056
EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-254
EMPR OF 1988-4; 1989-10
EMPR PF (*Geology Map-1:31250 Scale-Newmont Exploration of Canada Ltd., 1960's)
GSC MAP 9-1957, 1418A
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B68)

DATE CODED: 1988/06/21 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/06/21 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 216**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLISS 1**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 19 58 N
LONGITUDE: 130 21 20 W
ELEVATION: 1676 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Identified from Newmont Exploration Ltd. geology map 1960's.
Located south of Divelbliss Creek, west of Cabin Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6243943
EASTING: 416188

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au G04 Besshi massive sulphide Cu-Zn
COMMENTS: Vein mineralization consists of chalcopyrite in fractures.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Andesitic Pillow Lava
Syenite

HOSTROCK COMMENTS: The plutonic rock is of Lower Jurassic and younger age.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This occurrence is located south of Divelbliss Creek just west of Cabin Glacier. The area is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. The formation is composed primarily of thick-bedded epiclastic volcanic rocks and lithic tuffs with closely associated pillow lavas, carbonate lenses and thin-bedded siltstones.

Alteration and deformation are complex and are related to regional folding and Jurassic and Tertiary plutonism. In addition, the degree of dynamic metamorphism increases toward the South Unuk River cataclasite zone (Grove, Bulletin 63).

A small gossan is reported to occur in andesitic pillow lavas. The rocks contain up to 25 per cent pyrite and 2 per cent copper. A syenite body of unreported size and dimension outcrops approximately 300 metres west of the gossan zone. Chalcopyrite occurs in fractures within this body (Newmont Map).

The syenite is likely related to the small syenite stock of Lower Jurassic and younger (?) age that occurs less than 3 kilometres to the south.

BIBLIOGRAPHY

EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
EMPR ASS RPT 17055, 17056
EMPR PF (*Geology Map-1:31250 Scale-Newmont Exploration of Canada Ltd., 1960's)
EMPR OF 1988-4; 1989-10
EMPR BULL 63
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/06/21
DATE REVISED: / /

CODED BY: GJP
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **104B 217**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLISS 4**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 19 23 N
LONGITUDE: 130 22 17 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Identified from Newmont Exploration Map 1960's.
Located south of Divelbliss Creek and east of South Unuk River.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6242880
EASTING: 415187

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Volcanic
Conglomerate
Lithic Tuff
Pillow Lava
Carbonate
Siltstone

HOSTROCK COMMENTS: Actual host rock was not reported.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This occurrence is located south of Divelbliss Creek and west of Cabin Glacier. The area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. The formation is composed primarily of thick-bedded epiclastic volcanic rocks and lithic tuffs with closely associated pillow lavas, carbonate lenses and thin-bedded siltstone.

Alteration and deformation are complex and are related to regional folding and Jurassic and Tertiary plutonism. In addition, the degree of dynamic metamorphism increases toward the South Unuk River cataclasite zone (Grove, Bulletin 63).

Chalcopyrite is reported to occur with quartz in an unspecified host rock (Newmont Map).

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EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
EMPR ASS RPT 17055, 17056
EMPR PF (*Geology Map-1:31250 Scale-Newmont Exploration of Canada Ltd., 1960's)
EMPR OF 1988-4; 1989-10
EMPR BULL 63
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/06/21 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 218**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAL**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 18 42 N
LONGITUDE: 130 20 37 W
ELEVATION: 1981 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Identified from Newmont Exploration Ltd. Geol. Map (Property File). Located northeast of Sawyer Glacier and southwest of Mount Frank Mackie.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6241579
EASTING: 416880

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Malachite Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Lithic Tuff
Andesitic Pillow Lava
Volcanic Conglomerate
Syenite
Carbonate
Siltstone

HOSTROCK COMMENTS: The plutonic rock is of Jurassic and younger age.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This occurrence is located about 1.8 kilometres northeast of Sawyer Glacier. The area is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. The formation is composed primarily of thick-bedded epiclastic volcanic rocks and lithic tuffs with closely associated pillow lavas, carbonate lenses and thin-bedded siltstone. A small stock of Lower Jurassic and younger(?) syenite intrudes the country rock within 300 metres to the west of the occurrence.

Alteration and deformation in the area are complex and are related to regional folding and Jurassic and Tertiary plutonism. In addition, the degree of dynamic metamorphism increases toward the South Unuk River cataclasite zone (Grove, Bulletin 63).

Malachite and pyrrhotite are reported to occur near the southern margin of an icefield. Another malachite showing occurs about 1 kilometre to the south (Newmont Map).

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EMPR PF (*Geology Map-1:31250 Scale-Newmont Explorations of Canada Ltd., 1960's)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/06/22
DATE REVISED: / /

CODED BY: GJP
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **104B 219**

NATIONAL MINERAL INVENTORY:

NAME(S): **JIM**, FLORY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 21 20 N
LONGITUDE: 130 39 47 W
ELEVATION: 1220 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: South end of altered zone (Assessment Report 2503).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6246895
EASTING: 397239

COMMODITIES: Copper Iron Magnetite Gold

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite Magnetite Pyrrhotite
COMMENTS: In 1911, gold values were reported for this area.
ALTERATION: Epidote Garnet Chlorite Saussurite
ALTERATION TYPE: Epidote
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Skarn Industrial Min.
TYPE: K04 Au skarn K01 Cu skarn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Jurassic	Stuhini	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Andesitic Tuff
Skarn
Limestone
Shale
Greenstone
Granodiorite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Syn-mineralization
GRADE: Amphibolite
COMMENTS: The relationship classification is unclear.

CAPSULE GEOLOGY

The Jim occurrence lies within 5 kilometres of the Coast Crystalline Complex and is underlain by the Upper Triassic Stuhini Group, intruded by Middle Jurassic and younger diorites and granodiorites.

Seven distinct rock types have been noted on the property and include greenstone within which the feldspars have been epidotized and saussuritized. Accessory minerals include magnetite, pyrrhotite and chlorite. Fine-grained andesitic tuff have had their minor structures obliterated by regional metamorphism. The limestone-shale sequence also contains greywackes with individual bands being less than 1 centimetre. Slickensides and small scale drag folds are abundant in this formation. The diorite, which may be a hypabyssal equivalent of the greenstone, are generally similar but coarser grained than the greenstone. An amphibolite unit has been mapped and is thought to be derived from the greenstone. A granodiorite dyke, about 30 metres wide, has been described as coarse-grained, light coloured holocrystalline rock with rounded basic zenoliths. Several porphyritic dykes, which exhibit a glassy black matrix and moderately coarse-grained phenocrysts of feldspar and quartz, have been observed in the occurrence area.

A zone of alteration, which tends to be sporadic, usually conforms to the dip and strike of enclosing beds but does exhibit minor independant fluctuations. The altered rock is reportedly a tuff and skarn alteration has been noted in some sedimentary units. The alteration consists mainly of epidotization with "associated skarn-type minerals, including garnet". Magnetite, pyrite and chalcopyrite occur within the altered zone. In 1911, gold values of about 64 grams per tonne gold were reported from this area.

BIBLIOGRAPHY

EMPR BULL 63
GSC MAP 1418A; 7780G; 9-1957
EMPR ASS RPT *2503, 16858
EMPR PF (Geol. Map, 1:31 250 scale, Newmont Exploration of Canada Ltd., 1960's)
EMPR AR 1911-66,67
EMPR GEM 1962-8; *1969-54
GSC P 89-1E pp.145-154
EMPR OF 1989-10
EMPR FIELDWORK 1988 pp.241-250
Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B44)

DATE CODED:	1988/06/24	CODED BY:	LDJ	FIELD CHECK:	N
DATE REVISED:	1988/10/20	REVISED BY:	LLD	FIELD CHECK:	N

MINFILE NUMBER: **104B 220**

NATIONAL MINERAL INVENTORY:

NAME(S): **MCQUILLAN RIDGE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 21 39 N
LONGITUDE: 130 35 41 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Disseminated pyrrhotite on Newmont Map (Property File). Located near the headwaters of Boulder Creek, also called Geking or Genking, on the south end of McQuillan Ridge.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6247382
EASTING: 401474

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Pyrrhotite Specularite
COMMENTS: Disseminated pyrrhotite with some copper showings.
ALTERATION: Limonite
COMMENTS: Heavy iron-staining.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Middle Jurassic			Unnamed/Unknown Informal
Cenozoic			Coast Plutonic Complex

LITHOLOGY: Diorite Dike
Biotite Schist
Chlorite Schist
Quartz Mica Schist
Amphibolite
Granodiorite

HOSTROCK COMMENTS: Middle Jurassic or younger diorite dykes crosscut the altered Stuhini Group rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact Regional
Plutonic Rocks RELATIONSHIP: Syn-mineralization Post-mineralization
GRADE: Greenschist Amphibolite

CAPSULE GEOLOGY

Altered, Upper Triassic Stuhini Group sediments and volcaniclastics are intruded by a granodiorite batholith which is part of the Cenozoic Coast Plutonic Complex. Locally, the Stuhini Group rocks are comprised mainly of biotite-rich schists, chlorite schists or amphibolite and quartz-mica schists.

Middle Jurassic or younger diorite dykes crosscut the altered Stuhini Group rocks and host disseminated pyrrhotite within the dykes and along the contact margins. The diorite is quite magnetitic and is associated with some copper mineralization. The schistose volcanics are heavily iron stained but show no traces of copper. Minor specular hematite is associated with the biotite schists.

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EMPR FIELDWORK 1988 pp.241-250
EMPR AR 1935-Map after p. 88
EMPR BULL *63
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
EMPR PF (*Geology Map - 1:31,250 : Newmont Exploration of Canada,

BIBLIOGRAPHY

1960's)

DATE CODED: 1988/06/27 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 221**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRACEY CREEK**, GRACEY 2

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 19 51 N
LONGITUDE: 130 31 20 W
ELEVATION: 670 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing on Newmont Map (Property File). Located on the east side of Gracey Creek.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6243942
EASTING: 405879

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Igneous-contact
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Tertiary			Hyder Pluton

LITHOLOGY: Biotite Schist
Mylonite
Amphibolite Gneiss
Quartz Diorite
Granodiorite

HOSTROCK COMMENTS: Triassic amphibolite gneiss.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact Regional
Plutonic Rocks RELATIONSHIP: Post-mineralization
GRADE: Greenschist Amphibolite

CAPSULE GEOLOGY

Sediments and volcanics of the Upper Triassic Stuhini Group are overlain by sediments of the Lower Jurassic Unuk River Formation. The Stuhini epiclastics unconformably overlie an amphibolite gneiss unit of Triassic age. Brecciation along this contact is related to a probable low-angle thrust fault. The Stuhini and gneissic rocks are intruded by granodiorite and quartz diorite of the Tertiary Hyder Pluton of the Coast Plutonic Complex.

East of Gracey Creek, near the contact with the pluton, biotite schists of the gneissic unit and mylonite contain pyritic stringers with chalcopyrite.

BIBLIOGRAPHY

GSC P 89-1E pp.145-154
EMPR OF 1989-10
EMPR FIELDWORK 1988, pp.241-250
EMPR AR 1935 (Geology Map, after pp.B8-B10)
EMPR BULL 63
EMPR PF (*Geology Map - 1:31,250 scale - Newmont Exploration of Canada Ltd., 1960's)
GSC MAP 9-1947; 1418A

DATE CODED: 1988/06/10 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/12/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 222**

NATIONAL MINERAL INVENTORY: 104B7 Fe1

NAME(S): **CEBUCK CREEK**, MAX, MAXWELL SMART

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 26 07 N
LONGITUDE: 130 34 36 W
ELEVATION: 305 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Trench location along Lot 68 South (Assessment Report 6690); along Cebuck Creek on the east side of the Unuk River; part of Max (104B 013).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6255641
EASTING: 402780

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
ALTERATION: Pyrite
COMMENTS: Pyritic sandstone.
ALTERATION TYPE: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact
TYPE: L02 Porphyry-related Au

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic			Unnamed/Unknown Informal

LITHOLOGY: Pyrite Sandstone
Greenstone
Volcanic Sandstone
Siltstone
Limestone
Quartz Diorite
Diorite

HOSTROCK COMMENTS: Triassic and younger diorite and quartz diorite intrudes Stuhini Group volcaniclastics and sediments.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1978
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	10.2900	Grams per tonne
Gold	1.3700	Grams per tonne

COMMENTS: Sample of pyritic rock from Trench at west end of Lot 68 South.
REFERENCE: Assessment Report 6690,

CAPSULE GEOLOGY

The area along Cebuck Creek is underlain by Upper Triassic Stuhini Group sediments comprised mainly of volcanic sandstone, siltstone and limestone. These are intruded by Triassic and younger quartz diorite and diorite intrusives.

In 1978 a small pit was excavated at the west end of Lot 68 South, close to the edge of Cebuck Creek (the property is part of the Max occurrence (104B 013)). The rock is comprised of a pyritized volcanic sandstone (altered to greenschist) which is heavily iron-stained and is located within the contact zone of a dioritic intrusive. The trench is 1.0 by 0.5 by 0.5 metres, and is located within altered and sheared sandstone riddled with quartz veins and veinlets. In 1978 a sample of this pyritized rock assayed: 1.37

CAPSULE GEOLOGY

grams per tonne gold and 10.29 grams per tonne silver (Assessment Report 6690).

BIBLIOGRAPHY

GSC P 89-1E pp.145-154
EMPR OF 1989-10
EMPR FIELDWORK 1988 pp.241-250
EMPR EXPL 1975-E180; *1977-E222
EMPR ASS RPT 346, 2479, 54967, *6690, *16858
EMPR GEM 1969-54; 1970-65
EMPR AR 1929-C112-113; 1935 Geology Map after p. 88
GSC MAP 1418A; 9-1957
EMPR BULL *63
EMPR PF (Geology Map, 1:31 250 Scale, Newmont Exploration of Canada, 1960's)

DATE CODED: 1988/06/23 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 223**

NATIONAL MINERAL INVENTORY:

NAME(S): **FEWRIGHT CK. PLACER**, GLACIER CREEK, UNUK RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 26 36 N
LONGITUDE: 130 36 40 W
ELEVATION: 190 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Placer claims located at the mouth of Fewright (Glacier) Creek. Cabin location from Geology Map in Minister of Mines, Annual Report, 1935, after page B8.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6256587
EASTING: 400677

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Gold
COMMENTS: Placer gold.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Gravel

HOSTROCK COMMENTS: Area of placer gravels is underlain by Stuhini Group rocks and further westwards (upstream) by Hazelton Group rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1929
SAMPLE TYPE: Bulk Sample

COMMODITY	GRADE	
Gold	14.0000	Grams per tonne

COMMENTS: River gravels approximated 14.0 grams per tonne placer gold.
REFERENCE: Annual Report 1929, page C112,

CAPSULE GEOLOGY

Fewright (Glacier) Creek flows eastward into the Unuk River and is underlain by Upper Triassic Stuhini Group sediments near the mouth. Further to the west, the Stuhini Group rocks are in contact with Lower Jurassic Hazelton Group volcanics and volcaniclastics of the Unuk River Formation.

In 1929, two claims were located near the mouth of Fewright Creek (Glacier Creek). Gravels were reported to carry free gold on the surface to the amount of $10 gold per ton (gold was valued at $20.718 per ounce in 1929 and this is equivalent to approximately 14 grams per tonne gold).

BIBLIOGRAPHY

GSC P 89-1E pp.145-154
EMPR OF 1989-10
EMPR FIELDWORK 1988 pp.241-250
GSC P 89-1E, pp. 145-154
EMPR AR *1929-C112; 1935 Geology Map after page B8
GSC MAP 1418A; 9-1957
EMPR BULL *63
EMPR PF (Geology Map - 1:31,250 scale - Newmont Exploration of Canada,

BIBLIOGRAPHY

1960's; Mandy, J.T. - Sketch map of Unuk River (1930))

DATE CODED: 1988/06/23 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 224**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOMER 3**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 24 57 N
LONGITUDE: 130 37 45 W
ELEVATION: 275 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing on Newmont Map (Property File). Located on the west side of the Unuk River, at the north end of a narrow lake along the Flory Creek fault.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6253553
EASTING: 399491

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Magnetite
ALTERATION: Pyrite Epidote Sericite
ALTERATION TYPE: Carbonate Pyrite Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au G04 Besshi massive sulphide Cu-Zn

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Gossan
Carbonatized Gouge
Biotite Schist
Greenstone
Andesitic Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Syn-mineralization Post-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Stuhini Group rocks comprised of volcanic siltstone, sandstone, conglomerate and some breccia. The Flory Creek fault trends northwestwards and cuts altered Stuhini Group rocks. On the west side of the fault the rocks are comprised mainly of biotite-rich schists while on the east side, disseminated magnetite and epidote occur in greenstones and sericitized andesitic porphyry.

A gossanous zone within the fault hosts disseminations and fracture fillings of pyrite and chalcopyrite. The fault gouge is carbonitized and hosts up to 5 per cent pyrite (Newmont Map located in Property File).

BIBLIOGRAPHY

EMPR BULL *63
GSC P 89-1E pp.145-154
EMPR OF 1989-10
EMPR FIELDWORK 1988 pp.241-250
Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B45)
EMPR AR 1911-66,67
GSC MAP 1418A; 9-1957
EMPR PF (*Geology Map - 1:31,250 scale - Newmont Exploration of Canada, 1960's)
EMPR ASS RPT 16858

DATE CODED: 1988/06/27
DATE REVISED: 1988/12/15
CODED BY: LLC
REVISED BY: LLD
FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104B 225**

NATIONAL MINERAL INVENTORY:

NAME(S): **SIX MILE 2**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 24 31 N
LONGITUDE: 130 38 19 W
ELEVATION: 270 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing on Newmont Map (Property File). Located on the west side of the Unuk River at the south end of a narrow lake.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6252763
EASTING: 398890

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Magnetite
ALTERATION: Epidote
ALTERATION TYPE: Epidote
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Shale
Argillite
Tuff
Biotite Schist
Greenstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Syn-mineralization
Post-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Stuhini Group rocks comprised of volcanic siltstone, sandstone, conglomerate and breccia. Locally, the Flory Creek Fault trends northwestwards cutting the altered Stuhini Group rocks. On the west side of the fault the rocks are comprised mainly of bedded shales, argillite, tuffs and biotite-rich schists. On the west side, disseminated magnetite and epidote occur in massive greenstone. Minor chalcopyrite and up to 5 per cent disseminated pyrite occur within an adjacent to the fault zone.

BIBLIOGRAPHY

GSC P 89-1E pp.145-154
EMPR OF 1989-10
EMPR FIELDWORK 1988 pp.241-250
EMPR BULL *63
GSC MAP 1418A; 9-1957
EMPR PF (*Geology Map - 1:31,250 scale - Newmont Exploration of Canada, 1960's)

DATE CODED: 1988/06/27 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 226**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH FORK**, HAR COPPER, ILIAD, HAR #1 GROUP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 28 35 N
LONGITUDE: 130 33 08 W
ELEVATION: 365 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Copper occurrence shown on Newmont Map (Property File). Located on the east side of Harrymel Creek, about 2.5 kilometres north of the junction of Harrymel Creek and the Unuk River.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6260182
EASTING: 404390

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Malachite Magnetite
COMMENTS: Exact mineralogy not specified.
ASSOCIATED: Magnetite
ALTERATION: Epidote Malachite
ALTERATION TYPE: Epidote Oxidation
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic			Unnamed/Unknown Informal

LITHOLOGY: Medium Grained Diorite
Diorite
Quartz Diorite
Banded Dioritic Schist
Chlorite Epidote Phyllite
Volcanic Sandstone
Siltstone
Volcaniclastic

HOSTROCK COMMENTS: Triassic or younger quartz diorite intrudes Stuhini Group volcaniclastics.

GEOLOGICAL SETTING
TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

A Triassic or younger quartz diorite stock intrudes the Upper Triassic Stuhini Group volcanic sandstone, siltstone, conglomerate and breccia.

The area of the showing is underlain by a medium grained diorite which is partly epidotized and hosts minor disseminated magnetite. Malachite staining and minor chalcopyrite occur within the diorite.

The contact zone between the diorite and Stuhini Group rocks is marked by sheared and banded dioritic schist with associated chlorite-epidote phyllites.

BIBLIOGRAPHY

GSC P 89-1E, pp. 145-154
EMPR OF 1989-10
EMPR FIELDWORK 1988, pp. 241-250
Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B48)
EMPR ASS RPT *345, 16858
EMPR AR 1935(Geology Map,after p.B8); 1961-116
GSC MAP 9-1957;1418A
EMPR BULL *63
EMPR PF (*Geology Map - 1:31,250 scale - Newmont Exploration of

BIBLIOGRAPHY

Canada, 1960's)

DATE CODED: 1988/06/27
DATE REVISED: 1988/12/15

CODED BY: LLC
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104B 227**

NATIONAL MINERAL INVENTORY:

NAME(S): **SULPHIDE CK. PLACER**, SULPHURETS CK. JUNCTION

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 29 09 N
LONGITUDE: 130 30 20 W
ELEVATION: 240 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Placer claims located at the junction of Sulphurets (formerly called Sulphide) Creek and the Unuk River. Cabin location from Geology Map in Minister of Mines, Annual Report, 1935, after page B8.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6261169
EASTING: 407287

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Gold
COMMENTS: Placer gold.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Gravel

HOSTROCK COMMENTS: Area of placer gravels is underlain by Hazelton Group rocks of the Unuk River Formation.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1935
SAMPLE TYPE: Bulk Sample

COMMODITY	GRADE	
Gold	1.0300	Grams per tonne

COMMENTS: Composite sample from sand barrs at the mouth of Sulphurets Creek.
REFERENCE: Annual Report 1935, page B10,

CAPSULE GEOLOGY

The area around the junction of Sulphurets (formerly Sulphide) Creek and the Unuk River is underlain by Lower Jurassic Hazelton Group volcanics and volcaniclastics of the Unuk River Formation. The rocks are comprised of altered tuffs and lithic tuffs with minor chert, andesite and chloritic schists.

In 1929, free gold was reported in river gravels at the junction of Sulphurets (Sulphide) Creek and Unuk River. The gold is described as flaky and considerably worn and fine colours were seen in every pan of material tested. Local irregularities were noted in the bedrock near the placer gravels.

In 1935, a composite sample, taken from sand bars at the mouth of Sulphurets Creek, which contained abundant alluvial pyrite assayed 1.03 grams per tonne gold, trace silver, trace copper (Annual Report 1935, page B10).

BIBLIOGRAPHY

GSC P 89-1E pp.145-154
EMPR OF 1989-10
EMPR FIELDWORK 1988 pp.241-250
GSC P 89-1E, pp. 145-154
EMPR AR *1929-C112-113; 1935-B10 and Geology Map after P.B8
GSC MAP 1418A; 9-1957
EMPR BULL *63

BIBLIOGRAPHY

EMPR PF (Geology Map - 1:31,250 scale - Newmont Exploration of Canada, 1960's; Mandy, J.T. - Sketch map fo Unuk River (1930))

DATE CODED: 1988/06/27 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 228**

NATIONAL MINERAL INVENTORY:

NAME(S): **GC**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 23 24 N
LONGITUDE: 130 29 20 W
ELEVATION: 550 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located near mouth of Gracey Creek. Identified from Newmont Exploration Ltd. Geology Map (Property File).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6250482
EASTING: 408083

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Unknown
COMMENTS: Unknown copper mineralization.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: L04 Porphyry Cu ± Mo ± Au G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Volcanic Rock
Sediment/Sedimentary Rock
Cataclasite

HOSTROCK COMMENTS: Mineralization occurs near contact of Stuhini and Hazelton Group in unspecified rock type. It is not known which group hosts occurrence.

GEOLOGICAL SETTING
TECTONIC BELT:
TERRANE:

CAPSULE GEOLOGY

Copper mineralization is reported to occur in the country rock on the east side of Gracey Creek about 780 metres upstream from its confluence with the South Unuk River (Property File- Newmont Map).

The area is underlain by Lower Jurassic Unuk River Formation rock (Hazelton Group) in fault contact with Upper Triassic Stuhini Group rock. Later cataclastic deformation was developed along the northerly trending contact within Lower Jurassic sedimentary and volcanic rock, dykes and small plutons.

No geological description is available for this occurrence.

BIBLIOGRAPHY

GSC P 89-1E pp.145-154
EMPR OF 1989-10
EMPF PF (*Geology Map - 1:31,250 scale - Newmont Exploration of Canada Ltd., 1960's)
EMPR FIELDWORK 1987, pp. 199-209; 1988 pp.241-250
EMPR OF 1988-4
EMPR BULL 63
GSC MAP 9-1957; 1418A

DATE CODED: 1988/06/27 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/12/21 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 229**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRANITE CREEK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 22 16 N
LONGITUDE: 130 24 23 W
ELEVATION: 1675 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 3 kilometres east of the South Unuk River, and 2 kilometres north of Divelbliss Creek. Identified from Newmont Exploration Ltd. Geology Map, Property File.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6248272
EASTING: 413132

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Malachite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: G04 Besshi massive sulphide Cu-Zn L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Unuk River	

LITHOLOGY: Amphibolite
Cataclasite
Volcanic
Sediment/Sedimentary

HOSTROCK COMMENTS: The Unuk River Formation although composed mainly of volcanic and sedimentary rocks is metamorphosed in and near a cataclasite zone.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP:
GRADE: Amphibolite

CAPSULE GEOLOGY

This occurrence is located about 3 kilometre east of the South Unuk River and 2 kilometres north of Divelbliss Creek. The area is underlain by volcanic breccia, conglomerate sandstone and siltstone of the Lower Jurassic Unuk River Formation, Hazelton Group.

A north west trending cataclasite zone is developed in the Lower Jurassic rocks along the South Unuk River where they are in fault contact with Upper Triassic Stuhini Group rock. The complex alteration and deformation in this area are also related to regional folding and Jurassic and Tertiary plutonism (Grove, Bulletin 63).

Traces of copper mineralization are reported to occur in an area of amphibolitic rock just east of the cataclasite zone. Copper stains (malachite) were also observed in rock less than a kilometre to the southwest (Property File (Geology Map - 1:31,250 scale - Newmont Exploration of Canada Ltd., 1960's)).

BIBLIOGRAPHY

EMPR ASS RPT 17055, 17056
EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209; 1988 pp.241-250
EMPR OF 1988-4, 1989-10
EMPR PF (*Geology Map - 1:31,250 scale - Newmont Exploration of Canada Ltd., 1960's)
GSC P 89-1E pp.145-154
GSC MAP 9-1957; 1418A

DATE CODED: 1988/06/27 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/12/20 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 230**

NATIONAL MINERAL INVENTORY:

NAME(S): **ILIAD**, ILIAD 4, HAR #1 GROUP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 28 59 N
LONGITUDE: 130 33 53 W
ELEVATION: 275 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing on Newmont Map (Property File). Located along the west bank of Harrymel Creek, about 3.0 kilometres north of the junction of Harrymel Creek and the Unuk River.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6260942
EASTING: 403637

COMMODITIES: Zinc, Iron, Magnetite

MINERALS
SIGNIFICANT: Sphalerite, Pyrite, Magnetite, Specularite
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Igneous-contact, Industrial Min.
TYPE: G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic			Unnamed/Unknown Informal

LITHOLOGY: Gossan
Volcaniclastic
Andesitic Tuff
Chert
Argillite
Banded Dioritic Schist
Diorite
Quartz Diorite

HOSTROCK COMMENTS: Triassic or younger quartz diorite intrudes Stuhini Group volcaniclastics.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE:

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Stuhini Group volcanic siltstone, sandstone, conglomerate and breccia. On the east side of Harrymel Creek, the Stuhini Group rocks are intruded by a Triassic or younger quartz diorite stock.

A north trending fault parallels Harrymel Creek and separates the altered volcaniclastics from silicified and banded dioritic schist which marks the contact between the diorite intrusions and Stuhini Group rocks.

A gossanous zone occurs along the fault and hosts disseminated and fracture fillings of sphalerite, specular hematite, pyrite and about 10 per cent magnetite. The gossanous rocks on the west side of the fault vary from altered andesitic tuff, silicified chert to argillite.

BIBLIOGRAPHY

GSC P 89-1E pp.145-154
EMPR OF 1989-10
EMPR FIELDWORK 1988 pp.241-250
Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B47)
EMPR ASS RPT 345, 16858
EMPR AR 1935 Geology Map after p. B8; 1961-116
GSC MAP 1418A; 9-1957

BIBLIOGRAPHY

EMPR BULL *63
EMPR PF (*Geology Map - 1:31,250 scale - Newmont Exploration of Canada, 1960's)

DATE CODED: 1988/06/27 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 231**

NATIONAL MINERAL INVENTORY:

NAME(S): **FRED**, DAN, MCQUILLAN RIDGE, MAXWELL SMART

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B07E
BC MAP:
LATITUDE: 56 25 18 N
LONGITUDE: 130 32 04 W
ELEVATION: 1325 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing on Newmont Map (Property File). Located immediately east of the Max deposit (104B 013) on McQuillan Ridge.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6254068
EASTING: 405349

COMMODITIES: Copper, Gold, Silver

MINERALS

SIGNIFICANT: Chalcopyrite, Malachite, Pyrite
ALTERATION: Malachite, Epidote, Pyrite
ALTERATION TYPE: Oxidation, Epidote, Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic			Unnamed/Unknown Informal

LITHOLOGY: Gossan
Diorite
Quartz Diorite
Feldspar Porphyry Dike
Dioritic Dike
Volcaniclastic
Sediment/Sedimentary

HOSTROCK COMMENTS: Triassic or younger quartz diorite intrudes Stuhini Group rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	0.6000	Grams per tonne
Gold	0.0500	Grams per tonne

COMMENTS: Sample from gossanous zone in sheared diorite.
REFERENCE: Assessment Report 16858.

CAPSULE GEOLOGY

A Triassic or younger diorite to quartz diorite stock intrudes the Upper Triassic Stuhini Group volcaniclastics and sediments on the south side of the Unuk River, opposite the mouth of Harrymel Creek.

Minor copper mineralization occurs within the medium grained diorite which is in fault(?) contact with altered Stuhini Group sediments. Minor disseminated chalcopyrite with sporadic malachite staining occurs within epidotized diorite intrusive and gossanous zones along a north-northwest trending lineament. The diorite is partly silicified and hosts abundant pyrite within or near the north-northwest trending lineament or shear zone.

Malachite staining and minor dissiminated pyrite occurs within medium grained feldspar porphyry dykes and dioritic dykes which cut both the quartz diorite intrusive and altered sediments.

BIBLIOGRAPHY

EM EXPL 1999-1-11
EMPR ASS RPT 1835; *16858
EMPR BULL 63
EMPR FIELDWORK 1988 pp.241-250
EMPR GEM 1969-54,372
EMPR OF 1989-10
EMPR PF (*Geology Map - 1:31,250 scale - Newmont Exploration of Canada, 1960's)
GSC MAP 1418A; 9-1957
GSC P 89-1E pp. 145-154
WWW http://www.infomine.com/

DATE CODED: 1988/06/27 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/15 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 232**

NATIONAL MINERAL INVENTORY:

NAME(S): **TET**, COREY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 27 46 N
LONGITUDE: 130 24 50 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 3 kilometres east of Mount Madge on unnamed mountain top. Identified from Newmont Exploration Ltd. Geology Map(Property File).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6258484
EASTING: 412879

COMMODITIES: Gold Silver Copper

MINERALS
SIGNIFICANT: Tetrahedrite
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Tuff
Volcaniclastic
Pillow Lava
Argillite
Diorite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1987

COMMODITY	GRADE	
Silver	20.5000	Grams per tonne
Gold	2.4700	Grams per tonne

REFERENCE: Assessment Report 17404.

CAPSULE GEOLOGY

The occurrence is located about 6 kilometres east of the South Unuk River and 3 kilometres south of Sulphurets Creek. The area is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. The formation consists of thick-bedded epicalstic volcanic rocks and lithic tuffs with closely associated pillow lavas, carbonate lenses and thin bedded silstones. The rock is moderately folded and extensively faulted. A small stock of Jurassic and younger(?) diorite has intruded these rocks within 2 kilometres to the west of the showing.

Tetrahedrite is reported to occur in a a fault zone that cuts unspecified rock types (Newmont Exploration Geology Map, Property File). Alteration and deformation in the area are complex and are related to regional folding and Jurassic and Tertiary plutonism. In addition, the degree of dynamic metamorphism increases toward the South Unuk River cataclasite zone (Grove, Bulletin 63).

In 1987, Bighorn Development Corporation collected several rock samples in the area. One sample taken about 300 metres to the southwest of the tetrahedrite showing contained 2.47 grams per tonne gold and 20.5 grams per tonne silver (Assessment Report 17404).

BIBLIOGRAPHY

EMPR ASS RPT 16364, *17404
EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209; 1988 pp. 241-250

BIBLIOGRAPHY

EMPR OF 1988-4, 1989-10
EMPR PF (*Geology Map - 1:31,250 scale - Newmont Exploration of Canada Ltd., 1960's)
GSC MAP 9-1957; 1418A
GSC P 89-1E pp.145-154

DATE CODED: 1988/06/28 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1989/01/25 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 233**

NATIONAL MINERAL INVENTORY:

NAME(S): **GFJ**, COREY, GOLD FOR JACK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 27 11 N
LONGITUDE: 130 23 33 W
ELEVATION: 1860 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Identified from Assessment Report 17404 and from Fieldwork 1988 article by J.M. Britton. Coordinates are for area of high grade sample. See also Corey (104B 385).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6257375
EASTING: 414175

COMMODITIES: Gold, Silver, Copper, Zinc

MINERALS

SIGNIFICANT: Arsenopyrite, Pyrite, Sphalerite, Chalcopyrite, Tetrahedrite, Gold
ASSOCIATED: Siderite, Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Ash Tuff
Schistose Siltstone
Amphibolite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1987

COMMODITY	GRADE	
Silver	145.0000	Grams per tonne
Gold	121.0000	Grams per tonne

REFERENCE: Assessment Report 17407.

CAPSULE GEOLOGY

This area is underlain by rocks of the Lower Jurassic Unuk River Formation of the Hazelton Group. The formation consists primarily of thick-bedded epiclastic volcanic rocks and lithic tuffs with closely associated pillow lavas, carbonate lenses and thin-bedded siltstones. The rock is moderately folded and extensively faulted. Alteration and deformation in the area are complex and are related to regional folding and Jurassic and Tertiary plutonism. In addition, the degree of dynamic metamorphism increases toward the South Unuk River cataclasite zone (Grove, Bulletin 63). The GFJ prospect occurs in variably foliated andesitic ash tuffs with thin interbeds of foliated to schistose siltstone. The occurrence consists of apparently flat-lying, zoned, siderite-quartz-sulphide veins that contain up to 121 grams per tonne gold and 145 grams per tonne silver (Assessment Report 17404). The veins are poorly exposed. Float blocks observed in 1988 display symmetrical zoning from margin to core across vein widths of 10 to 15 centimetres. Vein margins are 1 to 2 centimetres of thin white quartz layers separated by hairline accumulations of very fine-grained tin-white sulphide, probably arsenopyrite. The core is a very coarse-grained intergrowth of siderite, milky quartz, and cubes and clusters of pyrite with lesser amounts of sphalerite and chalcopyrite as crystals and irregular masses. Rare tetrahedrite and visible gold have been observed (Fieldwork 1988). Samples containing up to 27.4 grams per tonne gold were collected up to 500

CAPSULE GEOLOGY

metres east-northeast of the above mentioned high grade sample. Newmont Exploration Canada Ltd. explored the area in the 1960's and reported a showing consisting of 10 per cent pyrite and some chalcopyrite occuring in chloritic amphibolite located about 400 metres northwest of the high-grade GFJ sample (Newmont Map).

The following note is from the Kenrich Mining Corporation web site (http://www.kenrichmining.com), June 1998. The GFJ showing is located immediately north of the Unuk Finger and west of Mandy Glacier. The showing is a shear controlled, flat lying, pyritic quartz vein, approximately 750 metres long and from 0.5 to 1.0 metres wide. The vein structure appears to have a shallow dip. Mineralization is composed of banded quartz, chlorite, pyrite, arsenopyrite, tetrahedrite and native gold veins hosted by andesitic tuff. Patchy chlorite-sericite alteration is present. Three isolated exposures were sampled, returning assay values up to 72.7 grams per tonne gold and 562 grams per tonne silver.

BIBLIOGRAPHY

EMPR ASS RPT *16364, *17404
EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209; *1988, pp. 241-250
EMPR OF 1988-4; 1989-10
EMPR PF (*Geology Map-1:31,250 scale-Newmont Exploration of Canada Ltd., 1960's; Statement of Material Facts - Catear Resoruces Ltd., 1987; Kenrich Mining Corporation Website (May 1999): Corporate Profile, GFJ Showing, 1 p.)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
GCNL #148, 1988; #230(Dec.1), 1997
N MINER Feb.2, 1987; May 4, 1998
V STOCKWATCH Jul.14, 1987
WWW http://www.kenrichmining.com
Equity Preservation Corp. Stewart-Sulphurets-Iskut Compilation Dec. 1988 (Showing No. B52)

DATE CODED:	1989/01/03	CODED BY:	GJP	FIELD CHECK:	N
DATE REVISED:	1998/06/02	REVISED BY:	LDJ	FIELD CHECK:	N

MINFILE NUMBER: **104B 234**

NATIONAL MINERAL INVENTORY:

NAME(S): **MANDY GLACIER**, COREY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 27 07 N
LONGITUDE: 130 24 31 W
ELEVATION: 1370 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located approximately 2.5 kilometres southeast of Mount Madge (Newmont Exploration Ltd. Geology Map, 1960's)

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6257271
EASTING: 413179

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrrhotite Magnetite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Volcanic Rock
Sediment/Sedimentary
Hornblende Diorite

HOSTROCK COMMENTS: Unuk River Formation volcanics and sediments are intruded by Jurassic and younger diorite. The host of mineralization is unknown.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine

CAPSULE GEOLOGY

The area is underlain by a stock of Middle Jurassic and younger(?) hornblende diorite that has intruded the Lower Jurassic Unuk River Formation, Hazelton Group. This stock is located about 2.5 kilometres southeast of Mount Madge. A small glacier called Mandy Glacier flanks the stock to the west. The Unuk River Formation rocks consist mainly of volcanic breccia, conglomerate, sandstone and siltstone.

Alteration and deformation in the area are complex and are related to regional folding and Jurassic and Tertiary plutonism. In addition, the degree of dynamic metamorphism increases toward the South Unuk River cataclasite zone (Grove, Bulletin 63).

Quartz with magnetite, pyrrhotite and chalcopyrite is reported to occur (Geology Map - Newmont Exploration). The host rock was not specified.

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EMPR OF 1989-10
EMPR ASS RPT 16364, 17404
EMPR PF (*Geology Map - 1:31,250 Scale: Newmont Exploration of Canada Ltd., 1960's)
EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209; 1988 pp.241-250
GSC MAP 9-1957; 1418A

DATE CODED: 1988/06/27 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1989/01/10 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 235**

NATIONAL MINERAL INVENTORY:

NAME(S): **UNUK FINGER**, COREY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 26 16 N
LONGITUDE: 130 23 19 W
ELEVATION: 1981 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the east side of Unuk Finger Mountain. Identified from Newmont Exploration Ltd. Geology Map (Property File).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6255669
EASTING: 414380

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Carbonate Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Phyllonite
Volcaniclastic
Tuff
Pillow Lava
Sediment/Sedimentary
Hornblende Diorite

HOSTROCK COMMENTS: The host rock is a phyllonite of unknown original lithology.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Metamorphism due to regional folding, plutonism & dynamic metamorphism

CAPSULE GEOLOGY

This occurrence is located within one kilometre to the east of Unuk Finger Mountain peak.

The area is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. The formation consists of thick-bedded epiclastic volcanic rocks and lithic tuffs with closely associated pillow lavas, carbonate lenses and thin-bedded siltstones. The rock is moderately folded and extensively faulted. A small stock of Middle Jurassic and younger(?) hornblende diorite has intruded these rocks immediately to the west of the showing. Unuk Finger Mountain peak is itself composed of this diorite.

Alteration and deformation in the area are complex and are related to regional folding and Jurassic and Tertiary plutonism. In addition, the degree of dynamic metamorphism increases toward the South Unuk River cataclasite zone (Grove, Bulletin 63).

Iron carbonate, quartz, pyrite, chalcopyrite and arsenopyrite are reported to occur in a wide zone of silicious phyllonite (Newmont Map).

BIBLIOGRAPHY

EMPR ASS RPT 16364, 17404
EMPR PF (*Geology Map - 1:31,250 Scale: Newmont Exploration of Canada Ltd., 1960's)
EMPR BULL 63
EMPR OF 1988-4; 1989-10
EMPR FIELDWORK 1987, pp. 199-209; 1988 pp.241-250
GSC MAP 9-1957; 1418A

BIBLIOGRAPHY

GSC P 89-1E pp.145-154

DATE CODED: 1988/06/30 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1989/01/10 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 236**

NATIONAL MINERAL INVENTORY:

NAME(S): **TED MORRIS GLACIER**, COREY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 25 26 N
LONGITUDE: 130 22 04 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: One showing exists at above coordinates, another exists about 400 metres west and another 600 metres south. Located west of Ted Morris Glacier, 8 kilometres east of the South Unuk River and 8 kilometres south of Sulphurets Creek (Newmont Exploration Ltd. Map). Three samples anomalous in gold, were collected 500 metres north, 1000 metres southwest and 750 metres south of the given coordinates (Assessment Report 17404).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6254098
EASTING: 415634

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: L04 Porphyry Cu ± Mo ± Au G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Eocene			Lee Brant Stock

ISOTOPIC AGE: 52.4 +/- 1.8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Hornblende

LITHOLOGY: Greywacke
Phyllonite
Diorite Porphyry
Volcaniclastic
Tuff
Pillow Lava
Sediment/Sedimentary
Meta Sediment/Sedimentary
Quartz Monzonite

HOSTROCK COMMENTS: Host rock is not specified but is likely Unuk River Formation rock. Age date from D. Alldrick (Personal Comunication Jan. 1989).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	0.9500	Grams per tonne

REFERENCE: Assessment Report 17404,

CAPSULE GEOLOGY

Three copper showings occur within one kilometre to the west of the upper reaches of Ted Morris Glacier. This glacier is located about 8 kilometres east of the South Unuk River and 8 kilometres south of Sulphurets Creek.

The area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. The formation consists of thick-bedded epiclastic volcanic rocks and lithic tuffs with closely associated pillow lavas, carbonate lenses and thin-bedded siltstones. The rock is moderately folded and extensively faulted. The northeastern contact of the Eocene Lee Brant Stock is found about 2 kilometres

CAPSULE GEOLOGY

west of this occurrence. The stock is composed of quartz monzonite and has been dated at 52.4 +/- 1.8 Ma (Personal Communication D. Alldrick).

Alteration and deformation in the area are complex and related to regional folding and Jurassic and Tertiary plutonism. In addition, the degree of dynamic metamorphism increases toward the South Unuk River cataclasite zone (Grove, Bulletin 63).

The northeastern most showing reportedly contains pyrrhotite and 1 per cent copper. About 600 metres south of it, a pyritic showing contains some pyrrhotite and chalcopyrite and another showing, 400 metres west, contains up to 0.75 per cent copper. The host rock was not reported, but phyllonite was mapped just west of the occurrence area, diorite porphyry just east and sheared greywacke to the south (Newmont Exploration Ltd. - Geology map, Property File).

Two rock samples, separated by over a kilometre, contained 0.4 grams per tonne and 0.950 grams per tonne gold (Assessment Report 17404).

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EMPR BULL 63
EMPR OF 1988-4; 1989-10
EMPR FIELDWORK 1987, pp. 199-209; 1988 pp.241-250
GSC MAP 9-1957; 1418A
GSC P 89-1E pp.145-154
PERS COMM D.J. Alldrick

DATE CODED: 1988/07/28 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1989/01/03 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 237**

NATIONAL MINERAL INVENTORY:

NAME(S): **TMG**, COREY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 24 51 N
LONGITUDE: 130 20 44 W
ELEVATION: 1371 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The above coordinates are for the central showing. The eastern showing is located about 650 metres east-southeast at the same elevation. The westernmost showing is located about 630 metres west-northwest of the central showing at the same elevation. A fourth showing occurs about 400 metres southwest of the western showing at a lower elevation. Identified from Newmont Exploration Ltd. Geology Map (Property File).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6252989
EASTING: 416983

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrrhotite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic
TYPE: I06 Cu±Ag quartz veins G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Unuk River	
Eocene			Lee Brant Stock

ISOTOPIC AGE: 52.4 +/- 1.8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Hornblende

LITHOLOGY: Phyllite
Schistose Argillite
Schistose Sandstone
Quartz Monzonite

HOSTROCK COMMENTS: Mineralization occurs in metasediments, one kilometre east of quartz monzonite. Age date from D.J. Alldrick (Pers. Comm., January 1989).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels
COMMENTS: Occurs in metasediments within 1 kilometre of granodiorite stock.

CAPSULE GEOLOGY

This occurrence is located about 1 kilometre to the west of Ted Mossir Glacier and 7 kilometres east of the South Unuk River.

The area is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. The formation consists of thick-bedded epiclastic volcanic rocks and lithic tuffs with closely associated pillow lavas, carbonate lenses and thin-bedded siltstones. The rocks are moderately folded and extensively faulted. The eastern contact of the Eocene Lee Brant Stock is found less than 1 kilometre west of the showing. The stock is composed of quartz monzonite and has been dated at 52.4 million years plus or minus 1.8 million years (Pers. Comm., D.J. Alldrick).

Alteration and deformation in the area are complex and are related to regional folding and Jurassic and Tertiary plutonism. In addition, the degree of dynamic metamorphism increases toward the South Unuk River cataclasite zone (Grove, Bulletin 63).

Three showings of chalcopyrite and pyrrhotite occur within 1.5 kilometre of each other at the same elevation along the west-southwest edge of Ted Morris Glacier. The eastern most showing occurs in an area of black phyllite. The central showing occurs as disseminations in an area of schistose argillites and sandstone, and the western most showing occurs in a quartz vein within unknown host rock (Newmont map).

CAPSULE GEOLOGY

Less than 400 metres southwest of the quartz vein showing, at a lower elevation, is another showing of chalcopyrite and pyrrhotite with up to 5 per cent pyrite (Newmont map).

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EMPR ASS RPT 16364, 17404
EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
EMPR OF 1988-4; 1989-10; 1999-2; 1999-14
EMPR PF (*Geology Map - 1:31,250 Scale: Newmont Exploration of Canada Ltd., 1960's)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
PERS COMM (D.J. Alldrick)

DATE CODED: 1988/07/28 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1989/01/10 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 238**

NATIONAL MINERAL INVENTORY:

NAME(S): **THAT 5**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 26 46 N
LONGITUDE: 130 18 13 W
ELEVATION: 1675 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located just east of the uppermost reaches of Ted Morris Glacier, near boundary of the That 5 and That 6 claims. Identified from Newmont Exploration Ltd. Geology Map (Property File) and Open File 1988-4.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6256494
EASTING: 419638

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Phyllite
Pelite
Tuff

HOSTROCK COMMENTS: Mineralization occurs in metamorphosed pelites and tuffs.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Mineralization occurs in belt of metamorphic rock.

CAPSULE GEOLOGY

This showing is located between upper Sulphurets Glacier and Ted Morris Glacier within a north trending band of true phyllites. These phyllites were developed from pelites and tuffs now believed corellative with rocks of the Upper Triassic Stuhini Group. Metamorphism is believed to be Cretaceous. The genesis and limits of this belt are unknown (Fieldwork 1987, p. 205).

A quartz vein hosts pyrrhotite, chalcopyrite and pyrite. Another quartz vein, 350 metres southwest, hosts pyrrhotite and chalcopyrite (Open File 1988-4; Newmont Map).

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EMPR PF (*Geology Map - 1:31250 Scale - Newmont Exploration of Canada Ltd., 1960's)
EMPR BULL 63
EMPR OF *1988-4 ; 1989-10
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
Gunning, M.H., (1986): Late Triassic to Middle Jurassic (Norian to Oxfordian) Volcanic and Sedimentary Stratigraphy and Structure in the Southeastern Part of the Iskut Map Sheet, Northcentral British Columbia; unpublished B.Sc. Thesis, University of British Columbia, page 85

DATE CODED: 1988/07/13 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/07/24 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 239**

NATIONAL MINERAL INVENTORY:

NAME(S): **COREY 16**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 26 50 N
LONGITUDE: 130 21 23 W
ELEVATION: 950 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Identified from Newmont Exploration Ltd. geology map (Property File). Located at the eastern edge of the toe of Ted Morris Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6256681
EASTING: 416388

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I06 Cu±Ag quartz veins
G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Unknown

HOSTROCK COMMENTS: Volcaniclastics and tuffaceous rocks are the predominate rock of the formation.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

A trace of chalcopyrite is reported to occur in unspecified host rock east and adjacent to the toe of Ted-Morris Glacier (Newmont Exploration Ltd.).

The area is underlain by rocks of the Lower Jurassic Unuk River Formation , Hazelton Group. The western geologic boundary of a north trending band of Upper Triassic Stuhini Group rock occurs to the immediate east of the showing. The Unuk River Formation consists of thick-bedded epiclastic volcanic rocks and lithic tuffs with closely associated pillow lavas, carbonate lenses and thin-bedded siltstones. The rock is moderately folded and extensively faulted.

Alteration and deformation in the area are complex and are related to regional folding and Jurassic and Tertiary plutonism. In addition, the degree of dynamic metamorphism increases toward the South Unuk River cataclasite zone (Grove, Bulletin 63).

BIBLIOGRAPHY

EMPR PF *(Geology Map- 1:31250 Scale - Newmont Exploration of Canada Ltd., 1960's)
EMPR ASS RPT 16364, 17404
EMPR BULL 63
EMPR OF 1988-4; 1989-10
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/13 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/07/21 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 240**

NATIONAL MINERAL INVENTORY:

NAME(S): **C-10 (COREY)**, COREY , MOUNT MADGE, C-10

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 27 24 N
LONGITUDE: 130 25 53 W
ELEVATION: 1371 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Identified from Assessment Report 16364. Located on the east side of Mount Madge.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6257826
EASTING: 411787

COMMODITIES: Gold, Silver, Copper, Zinc

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite, Pyrrhotite
COMMENTS: Massive copper and pyrrhotite occur as float.
ASSOCIATED: Quartz
ALTERATION: Chlorite, Sericite
ALTERATION TYPE: Chloritic, Sericitic, Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Unnamed/Unknown Formation	

LITHOLOGY: Chlorite Sericite Schist
Tuff
Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Post-mineralization
GRADE:
COMMENTS: Area metamorphism-result of folding, plutonism & dynamic metamorphism.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1986
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	1.3000	Grams per tonne

REFERENCE: Assessment Report 16364.

CAPSULE GEOLOGY

The C-10 prospect is located approximately 6 kilometres east of the confluence of the Unuk and South Unuk River, between Mandy Glacier and Mount Madge.

The area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. The formation consists of thick-bedded epiclastic volcanic rocks and lithic tuffs with closely associated pillow lavas, carbonate lenses and thin-bedded siltstones. The rock is moderately folded and extensively faulted.

Alteration and deformation in the area are complex and are related to regional folding and Jurassic and Tertiary plutonism. In addition, the degree of dynamic metamorphism increases towards the South Unuk River cataclasite zone (Grove, Bulletin 63).

Mineralization is hosted by chloritic sericite schist that, prior to intense alteration, was a tuffaceous volcanic. These schists contain up to 30 per cent quartz veinlets and occasional thick quartz lenses. Abundant pyrite forms up to 10 per cent of the rock with chalcopyrite and minor fine sphalerite also occurring. Float boulders containing massive pyrrhotite and chalcopyrite have been found nearby.

CAPSULE GEOLOGY

A sample of the pyritic sericite schist contained 1.30 grams per tonne gold. A pyrrhotite-chalcopyrite float sample contained 9.53 grams per tonne gold and 115.89 grams per tonne silver (Assessment Report 16364). Another sample taken from a location 600 metres to the west-northwest contained 2.06 grams per tonne gold. A float sample found about 1 kilometre north of this assayed 55.54 grams per tonne silver (Assessment Report 17404).

The showing was drilled in 1988 by Catear-Bighorn.

BIBLIOGRAPHY

EMPR ASS RPT *16364, *17404
EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209; *1988, pp. 241-250
EMPR OF 1988-4; 1989-10
EMPR PF (Geology Map- 1:31,250 Scale - Newmont Exploration of Canada Ltd., 1960's; Statement of Material Facts - Catear Resources Ltd., 1987; Kenrich Mining Corporation (May 1998): Corporate Profile, C-10 Showing, 1 p.)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
GCNL #148, 1988; #220(Nov.17), 1997
N MINER Feb. 2, 1987; July 7, 1997
V Stockwatch July 14, 1987
WWW http://www.kenrichmining.com
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B52)

DATE CODED: 1988/07/13 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/07/20 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 241**

NATIONAL MINERAL INVENTORY:

NAME(S): **DELTA SOUTHWEST**, DELTA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 22 00 N
LONGITUDE: 130 08 41 W
ELEVATION: 1371 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 4 kilometres north of Frank MacKie Glacier (Assessment Report 14607).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6247478
EASTING: 429285

COMMODITIES: Gold, Silver, Copper, Lead

MINERALS

SIGNIFICANT:	Tetrahedrite	Pyrite	Gold	
ALTERATION:	Carbonate	Sericite	Quartz	Pyrite
ALTERATION TYPE:	Carbonate	Sericitic	Silicific'n	Pyrite
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER:	Vein	Disseminated	Massive
CLASSIFICATION:	Hydrothermal	Epigenetic	
TYPE:	I02 Intrusion-related Au pyrrhotite veins		

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic Eocene	Hazelton	Mount Dilworth	Unnamed/Unknown Informal

LITHOLOGY: Rhyolite Tuff
Carbonaceous Argillite

HOSTROCK COMMENTS: Feldspar porphyry intrudes just east of mineralized Mount Dilworth Formation rock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1985

COMMODITY	GRADE	
Silver	10.6300	Grams per tonne
Gold	2.0600	Grams per tonne
Copper	0.0100	Per cent
Lead	0.1100	Per cent

REFERENCE: Assessment Report 14607,

CAPSULE GEOLOGY

The occurrence is located within a narrow band of felsic pyroclastic rock of the Mount Dilworth Formation, Hazelton Group. This unit conformably overlies the Betty Creek Formation and may paraconformably underlie the Salmon River Formation which occurs to the immediate east of the mineralized zone. The mineralization occurs in an area of intense quartz-pyrite-carbonate-sericite alteration (Open File 1988-4; Fieldwork 1987).

The area is comprised of calcareous rhyolite tuffs with flat to shallow dips into the hill. Underlying rocks consist of carbonaceous argillites with some limey sections. A steep dipping 150 degree trending cross fault cuts these rocks. A small body of Eocene age feldspar porphyry intrudes just east of the area of interest.

A number of mineralized "minor steep dragfold nose dilations" and tension faults contain pyrite and tetrahedrite respectively. In one location visible gold was observed with the tetrahedrite. The tension faults appear to feather off of the main fault.

One sample from a large gossanous outcrop containing massive pyrite assayed 2.06 grams per tonne gold, 10.63 grams per tonne silver, 0.01 per cent copper, 0.11 per cent lead, 0.02 per cent zinc and 0.05 per cent stibnite. The highest silver value obtained was

CAPSULE GEOLOGY

46.29 grams per tonne (Assessment Report 14607).
Five diamond-drill holes were collared in this area in 1986 with a total of 300 metres drilled. The highest value obtained was 0.375 grams per tonne gold; no anomalous silver was found (Assessment Report 15645).

BIBLIOGRAPHY

EMPR ASS RPT 11716, 13403, *14607, *15645, 15668, 16840, 16911
EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102; 1987, pp. 199-209
EMPR OF 1987-22; 1988-4
EMPR BULL 63
EMPR EXPL 1983-520; 1984-386; 1986-C440; 1987-C372
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/13 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/08/17 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 242**

NATIONAL MINERAL INVENTORY:

NAME(S): **DELTA NORTH**, DELTA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 22 32 N
LONGITUDE: 130 07 38 W
ELEVATION: 1580 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 5 kilometres north of Frank Mackie Glacier (Assessment Report 14607).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6248449
EASTING: 430383

COMMODITIES: Gold, Silver, Lead, Zinc, Iron, Antimony

MINERALS

SIGNIFICANT: Galena, Sphalerite, Magnetite, Stibnite
ASSOCIATED: Siderite, Jamesonite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive, Podiform, Stratabound, Stratiform
CLASSIFICATION: Exhalative, Syngenetic, Industrial Min.
TYPE: I02 Intrusion-related Au pyrrhotite veins
J01 Polymetallic manto Ag-Pb-Zn
G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	
Eocene			Unnamed/Unknown Informal

LITHOLOGY: Siltstone
Sandstone
Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1985

COMMODITY	GRADE	
Silver	73.0300	Grams per tonne
Gold	1.8500	Grams per tonne
Iron	29.9400	Per cent
Lead	14.4100	Per cent
Antimony	6.1700	Per cent
Zinc	2.7700	Per cent

REFERENCE: Assessment Report 14607,

CAPSULE GEOLOGY

The area is underlain by rock of the Middle Jurassic Salmon River Formation siltstone sequence, Hazelton Group (Open File 1988-4). The sediments have been folded into synclines and anticlines with north trending fold axes. Small Eocene feldspar porphyry intrusions cut area rocks.

A large "sedex" pod containing jamesonite and siderite occurs in sediments. Snow cover prevented a complete investigation of this deposit. One sample contained 14.41 per cent lead, 2.77 per cent zinc, 25.94 per cent iron, 6.17 per cent antimony, 1.85 grams per tonne gold, and 73.03 grams per tonne silver (Assessment Report 14607).

The minerals are not indicated but are assumed to be galena, sphalerite, magnetite and stibnite.

BIBLIOGRAPHY

EMPR ASS RPT 11716, 13403, *14607, 15645, 16911
EMPR BULL 63
EMPR EXPL 1983-520; 1984-386; 1986-C440; 1987-C372

BIBLIOGRAPHY

EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102; 1987, pp. 199-209
EMPR OF 1987-22; 1988-4; 1999-2; 1999-14
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/13 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/08/16 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 243**

NATIONAL MINERAL INVENTORY:

NAME(S): **FORK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 03 34 N
LONGITUDE: 130 01 40 W
ELEVATION: 400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing extends for 400 metres between the Hope-Power zone(104B 154) and the Woodbine portal #2 (Open File 1987-22).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6213172
EASTING: 435999

COMMODITIES: Zinc Copper

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Pyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Silica Sericite Chlorite Limonite Pyrite
ALTERATION TYPE: Silicific'n Propylitic Oxidation Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Breccia Discordant
CLASSIFICATION: Hydrothermal Porphyry Epigenetic Epithermal
TYPE: G07 Subaqueous hot spring Ag-Au G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Folded Faulted
DIMENSION: 0400 x 0015 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		

LITHOLOGY: Andesite Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Aphanitic Andesite Flow
Andesite Breccia
Andesitic Dacitic Volcaniclastic
Dacitic Flow
Argillite
Siltstone

HOSTROCK COMMENTS: Texas Creek date is for Premier porphyry dyke (Fieldwork, 1985). Unuk River Formation age date from Brown, 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP:

PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

The Fork showing is located northwest of the main Silbak Premier mine, 22 km north of Stewart, B.C.. The showing was noted historically as part of a silicified zone along the "West" or "Northwest" mineralized zone which contains discrete pods of mineralization. For a more extensive capsule geology and bibliography refer to the Silbak Premier Mine (104B 054).

The area is located in the Intermontane Belt bounded on the west by the Coast Crystalline complex and on the east by the Bowser Basin, in the volcanic arc assemblage of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation. The Hazelton Group is a northwest trending belt of folded dacite flows, andesite flows, breccia and lapilli tuff containing a thick sequence of argillites and siltstones infolded along a synclinal axis.

The andesite, at least 750 metres thick, is intruded by Early

CAPSULE GEOLOGY

Jurassic Texas Creek plutonic suite dacitic porphyry dykes and is unconformably overlain by volcaniclastic and epiclastic rocks. Potassium feldspar porphyry (historically known as the "Premier Porphyry") is spatially associated with mineralization; this relationship is believed to indicate a Lower Jurassic mineralization age. The ore in the area is predominantly discordant but locally concordant with the moderately northwest-dipping andesite flows, breccias and dacite flows.

Hydrothermal alteration zones related to the mineralizing system are represented by a proximal silicification/quartz stockwork and potassium feldspar and/or sericite facies potassic alteration. Peripheral to mineralization is a propylitic alteration assemblage of carbonate, chlorite and pyrite.

The Fork showing is about 15 metres wide and extends for 400 metres between the Hope-Power zone (104B 154) and the Woodbine workings (104B 090) along the steep to vertical "Northwest" or "West" zone. The mineralization is not significantly offset by the Cascade or Lesley Creek faults. Mineralization, similar to the Hope-Power showing and the Woodbine workings, is within silicified and brecciated rock along the same porphyry-andesite contact as the Hope-Power showing. The porphyry is 50 to 75 metres wide and a limonitic, silicified and pyritized alteration zone is proximal to the contact.

Mineralization consists of massive sphalerite pods, disseminated pyrite and disseminated chalcopyrite. Gangue minerals are quartz, potassium feldspar, chlorite, carbonate and others.

BIBLIOGRAPHY

FOR AN EXTENSIVE BIBLIOGRAPHY ON SILBAK PREMIER MINE SEE 104B 054
GSC P 89-1E, pp. 145-154
EMPR ASS RPT *15762
Brown, D.A., (1987): Geologic Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia (M.Sc. Thesis, University of British Columbia (copy in Property File 104B 054)
EMPR OF *1987-22
EMPR FIELDWORK 1982, pp. 183-195; 1983, pp. 149-164; 1984, pp. 316-342; 1985, pp. 217-218; 1986, pp. 81-102; 1987, pp. 349-353, pp. 489-493
EMPR BULL 58; 63
GSC MEM 175
EMPR EXPL 1980-459

DATE CODED: 1988/12/14 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 244**

NATIONAL MINERAL INVENTORY:

NAME(S): **TAU**, UPPER TAU, KLINE

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 00 57 N
LONGITUDE: 130 02 31 W
ELEVATION: 957 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Sample location on map by Kretschmar, 1979. Located 500 metres west of Skookum lake, south of Alaska-Premier workings.

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6208332
EASTING: 435044

COMMODITIES: Gold Copper

MINERALS
SIGNIFICANT: Pyrite Arsenopyrite Pyrrhotite Chalcopyrite
COMMENTS: trace pyrrhotite and chalcopyrite.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Irregular
MODIFIER: Folded

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Granodiorite Dike
Andesite Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Granitic Intrusive
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for Premier porphyry dyke in Silbak Mine area (Fieldwork 1985). Unuk River Formation age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Located at the western margin of the Intermontane Belt.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1979
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	0.4800	Grams per tonne

COMMENTS: Sample 79-1040 over 1.5 metres.
REFERENCE: Houston Oil and Minerals Corp.,1979,

CAPSULE GEOLOGY

The Upper Tau showing is located 500 metres west of Skookum Lake, 13 kilometres north of Hyder, Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the volcanic arc assemblage of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic

CAPSULE GEOLOGY

Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek granodiorite, Eocene granitic Hyder intrusives and lamprophyre dykes.

This occurrence is most likely associated with mineralization at the Alaska-Premier (104B 064) workings located 1.2 kilometres north of this showing. A sample from a tuff xenolith in a Texas Creek granodiorite dyke contains pyrite, arsenopyrite and minor pyrrhotite and chalcopyrite. This sample assayed 0.48 grams per tonne gold over 1.5 metres (Houston Oil and Minerals Corp., 1979).

BIBLIOGRAPHY

CJES VOL 10, Part 1, 1973, pp. 408-420
Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)
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USGS BULL 722; 800; *807-85,86; *1024-140; 1425
EMPR BULL 58; 63
GSC MEM 175
EMPR FIELDWORK 1983, pp. 149-165; 1984, pp. 316-342; 1985, pp. 217-219
EMPR REGIONAL PF (Mineral Terranes of Alaska, 1982 Plate F; Sutherland-Brown, A., (1951): Cordilleran Structure in Canada and Alaska)
EMPR PF (*Kretschmar, D., (1979): Report and Map, Houston Oil and Minerals Corp., in 104B 064)
CIMM SPEC VOL #8 pp. 149-170, pp. 215-229

DATE CODED: 1988/07/13 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 245**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER BAR**

STATUS: Showing
REGIONS: British Columbia, Alaska
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 03 39 N
LONGITUDE: 130 08 46 W
ELEVATION: 588 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location from United States Geological Survey, Bulletin 807. Located within the United States, north of West Fork Trail and 2 kilometres north of Salmon River bridge.

MINING DIVISION: Alaska, USA
UTM ZONE: 09 (NAD 83)
NORTHING: 6213442
EASTING: 428634

COMMODITIES: Copper Lead

MINERALS
SIGNIFICANT: Chalcopyrite Galena Pyrite
ASSOCIATED: Quartz Barite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Folded
DIMENSION: 0084 x 0053 x 0001 Metres
STRIKE/DIP: 140/45E
TREND/PLUNGE:
COMMENTS: Vein attitude. Exposed along strike for 76 to 91 metres and vertically for 53 metres, up to 1 metre wide.

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE:	210+24-14 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE:	194.8 +/- 2.0 Ma		
DATING METHOD:	Uranium/Lead		
MATERIAL DATED:	Zircon		
Eocene			Hyder Pluton

LITHOLOGY: Dacitic K-Feldspar Porphyry Dike
Andesite Lapilli Tuff
Andesite Flow
Andesite Breccia
Argillite
Siltstone
Dacitic Porphyry Sill
Granitic Intrusive
Lamprophyre Dike

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork 1985). Unuk River Fm. age date from Brown, 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

CAPSULE GEOLOGY

The Silver Bar claim is located north of the West Fork trail and 2 kilometres north of Salmon River bridge, in southeastern Alaska.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline complex and on the east by the Bowser Basin, is part of the Stikinia Terrane.

The showing is hosted by the Upper Triassic to Lower Jurassic Hazelton Group Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills, Eocene granitic Hyder

CAPSULE GEOLOGY

intrusives and lamprophyre dykes.
The showing consists of a quartz vein, hosted by a Texas Creek porphyry dyke, striking 140 degrees and dipping 45 degrees east. The vein has been exposed along strike for 76 to 91 metres, a vertical extent of 53 metres and is up to 1 metre wide. The vein is mineralized locally with shoots and small pockets and bands containing chalcopyrite, galena and pyrite with associated barite.

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CIM SPEC VOL #8, pp. 149-170, 215-229
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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/13 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/12/28 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 246**

NATIONAL MINERAL INVENTORY:

NAME(S): **AUGUSTUS**, RAE, STELLAR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 23 23 N
LONGITUDE: 130 02 33 W
ELEVATION: 518 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located at the tip of Canoe Glacier in an area where Augustus, Tiberius and Drusus claims meet (Assessment Report 14659). Visited in 1988 by J.M. Britton of the Ministry of Energy, Mines and Petroleum Resources, Geological Survey Branch.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6249944
EASTING: 435639

COMMODITIES: Zinc Copper

MINERALS
SIGNIFICANT: Sphalerite Chalcopyrite Pyrite
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Dacite

HOSTROCK COMMENTS: Economic mineralization occurs in Betty Creek Formation. Mount Dilworth Formation underlies property also.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The property is underlain by three Lower to Middle Jurassic formations: Betty Creek, Mount Dilworth, and Salmon River, that form a moderately-east dipping conformable sequence. Upper Betty Creek Formation consists of heterogeneous grey, green, and locally, red dacitic tuffs or flows with thin interbeds of green and reddish conglomerate and wacke. Mount Dilworth Formation consists of white weathering dacitic to rhyodacitic lapilli tuff and ash tuff. Lower Salmon River Formation is black, turbiditic siltstone and shale with thin horizons containing calcareous concretions.

Mineralization in the Betty Creek Formation consists of quartz-carbonate-pyrite veinlets which occur in thin (less than 3 metres) iron carbonate alteration zones. Trace amounts of chalcopyrite and "blond zinc" are reported.

Mt. Dilworth felsic pyroclastics locally have weakly disseminated pyrite.

Basal members of the Salmon River Formation carry thin (hairline to 2 centimetre) seams of pyrite.

No high gold, silver or copper analyses were returned. The highest zinc analysis was 189 parts per million.

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GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B65)

DATE CODED: 1988/07/13 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1989/01/04 REVISED BY: JMB FIELD CHECK: Y

MINFILE NUMBER: **104B 247**

NATIONAL MINERAL INVENTORY:

NAME(S): **GERMANICUS**, STELLAR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 23 09 N
LONGITUDE: 130 03 08 W
ELEVATION: 609 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located south and adjacent to the toe of Canoe Glacier in the north-east corner of the Germanicus claim (Assessment Report 14659). Visited by J.M. Britton of the Geological Survey Branch of Energy, Mines and Petroleum Resources.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6249520
EASTING: 435032

COMMODITIES: Silver Copper

MINERALS
SIGNIFICANT: Pyrite
ASSOCIATED: Quartz Carbonate Chlorite
COMMENTS: Iron carbonate mineral reported.
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Dacite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1985
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	38.1000	Grams per tonne
Copper	0.2100	Per cent

REFERENCE: Assessment Report 14659

CAPSULE GEOLOGY

The area is underlain by three Lower to Middle Jurassic formations; Betty Creek, Mount Dillworth and Salmon River, that form a moderately east dipping conformable sequence. Upper Betty Creek Formation consists of heterogeneous grey, green and, locally, red dacitic tuffs or flows with thin interbeds of green and reddish conglomerate and wacke. Mount Dillworth Formation consists of white weathering dacitic to rhyodacitic lapilli tuff and ash tuff. Lower Salmon River Formation is black, turbiditic siltstone and shale with thin horizons containing calcareous concretions.

Mineralization occurs within a 200 by 500 metre area of iron carbonate alteration within Betty Creek Formation. Thin pyrite-quartz-carbonate chlorite veinlets occur that locally carry trace amounts of chalcopyrite. Veins and alteration appear to be controlled by fractures in the host rocks. One sample of these veins contained 38.1 grams per tonne silver and 0.21 per cent copper (Assessment Report 14659).

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GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/13 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1989/01/04 REVISED BY: JMB FIELD CHECK: Y

MINFILE NUMBER: **104B 248**

NATIONAL MINERAL INVENTORY:

NAME(S): **HEMLO WEST 15**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 41 13 N
LONGITUDE: 131 07 42 W
ELEVATION: 275 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing located on the south side of the Iskut River on the Hemlo West 15 claim (Assessment Report 11320, Figure 4).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6284563
EASTING: 369636

COMMODITIES: Copper, Gold, Silver

MINERALS
SIGNIFICANT: Chalcopyrite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Malachite, Epidote, Chlorite
ALTERATION TYPE: Propylitic, Oxidation, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Porphyry, Igneous-contact
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Lower Jurassic	Stuhini	Undefined Formation	Coast Plutonic Complex

LITHOLOGY: Siltstone
Argillaceous Siltstone
Chert
Quartz Sandstone
Orthoclase Porphyry

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1983
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	4.2000	Grams per tonne
Gold	0.0200	Grams per tonne
Copper	0.0700	Per cent

COMMENTS: Sample G69, disseminated pyrite and chalcopyrite mineralization.
REFERENCE: Assessment Report 11320, Figure 4,

CAPSULE GEOLOGY

Regional mapping indicates the area is underlain by Mesozoic and older sediments and volcanics which have been intruded by granitic rocks of the Coast Plutonic Complex.

The oldest rocks consist of a thick sequence of weakly metamorphosed siltstones and argillites which are considered to be pre-Triassic in age. Overlying this sequence are black shales, siltstones, greywacke and conglomerate which may be correlative with the Stuhini Group. Corals from limestone beds within these rocks have been dated as Upper Triassic. This sedimentary sequence is overlain by a chaotic mixture of Lower Jurassic to Triassic volcanics of the Hazelton Group (Unuk River Formation). They consist of andesitic to rhyolitic pyroclastics and flows.

Intruding the Mesozoic rocks are Lower Jurassic plutonic rocks which range in composition from syenite to diorite. Contact metamorphism consists of large zones of hydrothermal alteration with the formation of some migmatites and cataclasites.

CAPSULE GEOLOGY

On the property, the dominant sedimentary rock type consists of black to grey, foliated and well-bedded argillaceous siltstone. The siltstone grades into well-indurated, poorly foliated and well-bedded quartz sandstone. Other sediments include massive chert and inter-bedded chert. The volcanics consist mainly of mafic volcanic tuffs and breccias with dark grey to green mafic volcanic flows which include feldspar porphyry volcanic flows.

Orthoclase porphyry occurs as a small stock centered about the Hemlo West 15 claim. The intrusive is characterized by 1 to 3 centimetre long orthoclase phenocrysts in a medium to fine-grained plagioclase-pyroxene matrix. Alteration from this intrusion consists mainly of chloritization and some epidotization with intense quartz veining developed within and proximal to the intrusive.

Mineralization on the Hemlo West 15 claim consists of quartz veins and disseminated mineralization which appears to be related to the orthoclase porphyry intrusion. Associated with the porphry intrusion is veined and disseminated pyrite with chalcopyrite and some malachite which is considered to be part of a pyrite halo surrounding the intrusion. In 1983, a sample of disseminated pyrite and chalcopyrite in siltstone assayed 0.02 grams per tonne gold, 4.2 grams per tonne silver and 0.07 per cent copper (Assessment Report 11320). In 1986, a sample from heavily epidotized and chloritized siltstone with 3.0 per cent disseminated pyrite assayed 0.05 grams per tonne gold (Assessment Report 15336).

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EMPR ASS RPT *11320, *15336, *17122
EMPR AR 1966-34-37
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
N MINER Oct.3, 1988
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
EMPR PR (Nagy, L.J., (1986): Geochemical Report on the Aurum Group, Iskut River Area, November 21, 1986, in Statement of Material Facts #69/87, for Golden Band Resources Inc., May 12, 1987)

DATE CODED: 1988/07/11 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/10/17 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 249** NATIONAL MINERAL INVENTORY:

NAME(S): **AURUM**, HEMLO WEST 13, GRACE, LIZA

STATUS: Showing MINING DIVISION: Liard
REGIONS: British Columbia
NTS MAP: 104B11E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 43 01 N NORTHING: 6287788
LONGITUDE: 131 04 05 W EASTING: 373429
ELEVATION: 1065 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Sample location from the north end of Hemlo West 13 claim, near L.80+00E and 46+50N (Report by Nagy in Statement of Material Facts, Golden Band Resources Inc., May 12, 1987).

COMMODITIES: Gold Copper Silver

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Epidote Chlorite
ALTERATION TYPE: Propylitic Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au I02 Intrusion-related Au pyrrhotite veins
DIMENSION: STRIKE/DIP: 160/90E TREND/PLUNGE:
COMMENTS: Quartz vein 20 centimetres wide strikes 160 degrees with a near vertical dip to the east.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Jurassic-Cretaceous			Texas Creek Plutonic Suite

LITHOLOGY: Argillaceous Siltstone
Siltstone
Quartz Sandstone
Tuff
Chert
Orthoclase Porphyry

HOSTROCK COMMENTS: Plutonic rocks are part of the Texas Creek-Galore suite.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	2.3000	Grams per tonne
Gold	7.0970	Grams per tonne

COMMENTS: Chip sample taken across a 20 centimetre wide quartz vein.
REFERENCE: Property File, Report by Nagy, Statement of Material Facts,

CAPSULE GEOLOGY

Regional mapping indicates the area is underlain by Mesozoic and older sediments and volcanics which have been intruded by granitic rocks of the Texas Creek-Galore plutonic suite

The oldest rocks consist of a thick sequence of weakly metamorphosed siltstones and argillites which are considered to be pre-Triassic in age. Overlying this sequence are black shales, siltstones, greywacke and conglomerates of the Stuhini Group. Corals from limestone beds within these rocks have been dated as Upper Triassic.

Intruding the Mesozoic rocks are Jurassic to Cretaceous plutonic rocks which range in composition from syenite to diorite. Contact

CAPSULE GEOLOGY

metamorphism consists of large zones of hydrothermal alteration with the formation of some migmatites and cataclasites.

On the property, the dominant sedimentary rock type consists of black to grey, foliated and well-bedded argillaceous siltstone. The siltstone grades into well-indurated, poorly foliated and well-bedded quartz sandstone. Other sediments include massive chert and inter-bedded chert. The volcanics consist mainly of mafic volcanic tuffs and breccias with dark grey to green mafic volcanic flows which include feldspar porphyry volcanic flows.

An orthoclase porphyry stock intrudes the sediments and volcanics near the southwestern corner of the Hemlo West 13 claim. This small stock is characterized by 1 to 3 centimetre long orthoclase phenocrysts in a medium to fine-grained plagioclase-pyroxene matrix. Alteration associated with this intrusion consists mainly of chloritization and epidotization.

Large areas of this intrusive body were reported to carry disseminated chalcopyrite with associated gold values. Widespread disseminated and fracture-controlled pyrite and chalcopyrite occur in the surrounding rocks. Isolated quartz veins with minor pyrite and chalcopyrite mineralization are common. At the north end of the Hemlo West 13 claim, several narrow quartz veins were mapped crosscutting the main creek. The main creek follow a fault which cuts argillaceous siltstone, tuff and quartz sandstone. In 1986, a chip sample taken across a 20 centimetre vein assayed 7.097 grams per tonne gold and 2.3 grams per tone silver (Assessment Report 15336).

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EMPR AR 1966-34-37
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GSC MEM 246
N MINER Oct.3, 1988
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EMPR PF (Nagy, L.J., (1986): *Geochemical Report on the Aurum Group, Iskut River Area, Nov. 21, 1986, in Statement of Material Facts #69/87 for Golden Band Resources Inc., May 12, 1987

DATE CODED: 1988/07/11 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/10/17 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 250** NATIONAL MINERAL INVENTORY:

NAME(S): **SNIP**, TWIN, SNIP 1,
ROPE, TARA , TWIN WEST

STATUS: Past Producer Underground MINING DIVISION: Liard
REGIONS: British Columbia
NTS MAP: 104B11E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 40 07 N NORTHING: 6282486
LONGITUDE: 131 06 32 W EASTING: 370764
ELEVATION: 0305 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Twin zone, on the south side of the Iskut River, west of Bronson Creek and south of Monsoon Lake (Prospectus - Snip Project, Cominco Ltd. and Delaware Resources Corp. (January 1988)).

COMMODITIES: Gold Silver Zinc Copper Lead

MINERALS

SIGNIFICANT: Pyrite Sphalerite Chalcopyrite Galena Pyrrhotite
Molybdenite Arsenopyrite Hessite Cosalite Tellurobismuthite
COMMENTS: Minor bismuth and lead tellurides including volynskite.
ASSOCIATED: Quartz Carbonate
ALTERATION: Biotite Chlorite K-Feldspar Carbonate
ALTERATION TYPE: Potassic Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Epigenetic Mesothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 1000 x 500 Metres STRIKE/DIP: 120/50W TREND/PLUNGE:
COMMENTS: Twin zone mineralized shear dips between 30 to 90 degrees southwest.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Unuk River	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Feldspathic Greywacke
Feldspathic Siltstone
Feldspathic Wacke
Feldspathic Intrusive
Hornfels
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact Regional RELATIONSHIP: GRADE: Hornfels

INVENTORY

ORE ZONE: SNIP REPORT ON: Y

CATEGORY: Combined YEAR: 1998
QUANTITY: 210470 Tonnes

COMMODITY	GRADE	
Gold	23.2500	Grams per tonne

COMMENTS: Proven and probable reserves at January 1, 1998.
REFERENCE: Prime Resources Group Inc., Press Release, January 22, 1998.

ORE ZONE: SNIP REPORT ON: Y

CATEGORY: Possible YEAR: 1998
QUANTITY: 23590 Tonnes

COMMODITY	GRADE	
Gold	25.7500	Grams per tonne

COMMENTS: Geological resources (mineralized material) at January 1, 1998.
REFERENCE: Prime Resources Group Inc., Press Release, January 22, 1998.

CAPSULE GEOLOGY

The region near the junction of the Craig and Iskut rivers is

CAPSULE GEOLOGY

underlain by a series of folded and faulted volcanics, volcaniclastic and clastic sedimentary rocks of Mesozoic age. Precise correlations are uncertain, but the thick clastic sedimentary sequence of the Snip occurrence is thought to be correlated with to the Lower-Middle Jurassic Hazelton Group (Unuk River Formation). These layered rocks are intruded by intermediate to felsic stocks and plutons of Jurassic and younger age that are related to the Tertiary-Jurassic Coast Plutonic Complex. The area is extensively cut by regional thrust faults and more regional northeast and northwest striking normal block faults.

The Twin zone is a 0.5 to 15(?)-metre wide sheared quartz-carbonate-sulphide vein that cuts through a massively bedded feldspathic greywacke-siltstone sequence. Bedding strikes from 045 to 100 degrees and dips 10 to 45 degrees northwest. A post-mineralization dyke divides the vein into two parts for most of its length.

Gold mineralization occurs in 1 centimetre to 1 metre alternating bands of massive (streaky) calcite, heavily disseminated to massive pyrite, biotite-calcite as thin bands or streaks, or in quartz with sulphides in a crackle breccia or pyritic to non-pyritic fault gouge.

The Twin zone mineralization consists of two zones occupying a 120 degree structure with dips varying from 30 to 90 degrees southwest. The dip length of the deposit is about 500 metres and has been traced over a strike length of 1000 metres. Abundant calcite occurs throughout the mineralized zone with sulphides consisting of pyrite, pyrrhotite, chalcopyrite, sphalerite, galena, molybdenite and arsenopyrite. Minor/trace amounts of bismuth and lead tellurides, including tellurobismuthite, cosalite, hessite and volynskite have been noted in thin sections. Narrow parts of the mineralized zone often comprise dominantly one band of sulphide while thicker sections show repetitive banding of all ore types. The thicker sections also contain interbands of biotite-carbonate-potassium feldspar-altered feldspathic wacke. Later shearing has developed a strong to moderate foliation within this zone and is best defined in the biotite (chlorite)-rich bands. Vein boundaries are usually sharp with well-defined gold values plus lower grade values in the immediate footwall and hanging wall. Minor fault offsets were noted and extensive right lateral tension gashes are common.

Reserves estimated by Cominco at January 1, 1995 were 625,000 tonnes grading 26.5 grams per tonne gold, sufficient until the fourth quarter of 1998 (Information Circular 1995-9, page 6).

Proven and probable ore reserves at January 1, 1996 were 347,782 tonnes grading 26.7 grams per tonne gold. In addition, there are possible reserves of 132,890 tonnes grading 23.6 grams per tonne gold (George Cross News Letter No.64 (March 29), 1996).

Proven and probable ore reserves at January 1, 1997 were 334,720 tonnes grading 24.7 grams per tonne gold. Geological resources were 17,235 tonnes grading 19 grams per tonne gold (George Cross News Letter No. 25 (February 5), 1997).

The Snip Mine is owned and operated by Prime Resources Group Inc. at January 1, 1998 were 210,470 tonnes grading 23.25 grams per tonne gold. Geological resources (mineralized material) were 23,590 tonnes grading 25.75 grams per tonne gold (Prime Resources Group Inc., Press Release, January 22, 1998).

In December 1998, International Skyline Gold and Homestake Canada, a wholly owned subsidiary of Homestake Mining, agreed to explore and possibly mine a portion of Skyline's claims neighbouring the Snip mine. See Bronson Slope for details (104B 077).

Mining was completed and production suspended during the second quarter of 1999. Reclamation activities have started and will be completed by the end of 1999. Recovery of about 2500 kilograms of gold from the tailings pond may be considered.

From 1991 to 1999, the Snip Mine produced 32.093 million grams of gold, 12.183 million grams of silver and 249,276 kilograms of copper from about 1.2 million tonnes.

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EMR MP CORPFILE Skyline Explorations Ltd.
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
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GCNL #74,#142,#148,#150,#159,#172,#189,#191,#198, 1986; #54,#149, #151,#155,#193,#224,#234,#237 1987; #16,#52,#53,#59,#65,#74,#75, #77,#101,#111,#142,#153, 1988; *#10,#14,#153(Aug.10),#214(Nov.7), 1989; #52(Mar.14),#102(May 28), 1990; #128(Jul.4),#81(Apr.26), 1991; #106(June 2), 1992; #43(Feb.29),#64 (Mar.29), 1996; #148(Aug.1), #25(Feb.5),#30(Feb.12), 1997; #18 (Jan.27), #36 (Feb.20), #80(Apr.27), #143(July 27), #207(Oct.28), #237(Dec.10), 1998
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N MINER Aug.25, Oct.20, 1986; Jul.6,27, Oct.19, Nov.30, Dec.14, 1987; Jan.18, Feb.1, Mar.1,7,21,28, Apr.4,11, May 9,30, Jun.6,13, Jul.4, Aug.1, Oct.17, Dec.19, 1988; Jan.30, Mar.6, June 12, Nov.13, 1989; Mar.19,26, June 4,11,18, Jul.9,30, Aug.13, Sept.24, 1990; Mar.1, May 6,13 *Aug.5, 1991; Aug.10, 1992; Mar.8, *Apr.19, May 10, June 28, Aug.30, Nov.22, 1993; Jan.24, Feb.28, Apr.11, 1994; Feb.27, Mar.6, May 15, June 26, Nov.6, 1995; Mar.4, Apr.8, May 27, Aug.12, 1996; Feb.17, Oct.27, 1997; Feb.2, Mar.2, May 4, June 1,8, Aug.3, Sept.21, Dec.21, 1998; Feb.15, Aug.16, 1999
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PR REL Delaware Resources Corp.: 1985-Annual Report; Jul.10,21, Aug.5,19,Sept.22,29,Oct.7,13,Nov.29, 1986; Jan.16,Feb.7,Mar.16, 24,Jul.28,Aug.4,6,14,28,Oct.1,22,23,Nov.4,19,Dec.3, 1987; Jul.21, 1988; Sept.30-Financial Statement; Delaware Resources Corp./ Cominco Ltd., Prospectus, Jan., 1988
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The Province, Jan. 13, 1991
EMPR OF 1998-10

DATE CODED: 1988/05/09 CODED BY: GSA FIELD CHECK: N
DATE REVISED: 1997/04/10 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 251**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIDE NORTHWEST**, TIDE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 16 48 N
LONGITUDE: 130 06 01 W
ELEVATION: 1525 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 2 kilometres west of the Bowser River and 3 kilometres north of Berendon Glacier. Area of high gold and silver identified from Assessment Report 11528.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6237788
EASTING: 431877

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Lower Jurassic			Summit Lake Stock

ISOTOPIC AGE: 192 +/- 2 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Tuff
Andesitic Flow
Hornblende Granodiorite

HOSTROCK COMMENTS: Mineralization occurs in an area of andesitic volcanics. Plutonic rock occurs within 1.5 kilometres. Age date from Fieldwork 1985, page 218.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: NORTHWEST REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	65.4900	Grams per tonne
Gold	2.0600	Grams per tonne

REFERENCE: Assessment Report 11528.

CAPSULE GEOLOGY

The area is composed of ash tuffs with lesser dust and lapilli tuffs and interbedded augite porphyry of the Lower Jurassic Unuk River Formation, Hazelton Group. A north trending extension of Lower Jurassic Summit Lake Stock hornblende granodiorite intrudes the volcanics. This intrusive lobe is from 300 to 500 metres wide and separates andesitic volcanics to the west from dacitic volcanics to the east. The northern limit of the intrusion appears to be the east trending East Gold Fault. This occurrence is located about 1.5 kilometres west of the northern limit of the intrusion and about 500 metres south of the East Gold Fault.

A map of rock sample assays from Assessment Report 11528 shows an area of high gold and silver. The best assay obtained was 2.06 grams per tonne gold and 65.49 grams per tonne silver. Several other samples contained much less significant amounts of gold and silver.

In the Tide claim area high gold and silver are associated with shears and related quartz veins containing pods of arsenopyrite and/or quartz veins with sphalerite, galena, tetrahedrite, chalcopyrite and pyrite.

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pp. 217-224; 1986, pp. 81-102
GSC MAP 9-1957; 1418A; 307A; 315A
GSC MEM 175
EMPR EXPL 1980-465; 1981-90; 1983-521; 1984-385; 1987-C375
GCNL #179, 1982; #70,#122, 1984
N MINER March 4, 1982; April 12, 1984
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/13 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/07/26 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 252**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIDE NORTH**, TIDE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 16 17 N
LONGITUDE: 130 05 34 W
ELEVATION: 1550 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 2 kilometres west of the Bowser River and 2.5 kilometres north of Berendon Glacier (Assessment Report 11528).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6236822
EASTING: 432326

COMMODITIES: Gold, Silver, Zinc, Lead, Copper

MINERALS
SIGNIFICANT: Arsenopyrite, Sphalerite, Galena, Chalcopyrite, Pyrite
ASSOCIATED: Quartz, Calcite
ALTERATION: Chlorite, Silica
ALTERATION TYPE: Chloritic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Podiform, Massive, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins; I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Lower Jurassic			Summit Lake Stock

ISOTOPIC AGE: 192 +/- 2 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Flow
Andesitic Tuff
Hornblende Granodiorite

HOSTROCK COMMENTS: Mineralization occurs within volcanics. Age date from Fieldwork 1985, page 218.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: NORTH
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1983

COMMODITY	GRADE	
Silver	24.4000	Grams per tonne
Gold	87.7700	Grams per tonne

COMMENTS: Values are generally lower.
REFERENCE: Assessment Report 11528.

CAPSULE GEOLOGY

The area is composed of ash tuffs with lesser dust and lapilli tuffs and interbedded augite porphyry of the Lower Jurassic Unuk River Formation, Hazelton Group. A north trending extension of Lower Jurassic Summit Lake Stock hornblende granodiorite intrudes the volcanics. This intrusive lobe is from 300 to 500 metres wide and separates andesitic volcanics to the west from dacitic volcanics to the east (Open File 1987-22).

The North Zone, located 600 metres west of the intrusive, is a zone of discontinuous northeast trending shears and related veins that cut andesitic flows over a length of 550 metres and a width of 65 metres. The veins range up to 20 centimetres in width and may host small pods of massive arsenopyrite up to 5 centimetres wide, as well as disseminated pyrite and arsenopyrite. One narrow vein was reported to contain minor amounts of sphalerite, galena and a trace of chalcopyrite. Some calcite veining was observed and some calcite also occurs with the quartz veins. Chloritic alteration is characteristic

CAPSULE GEOLOGY

of the shear zones and some areas of weak silicification and pyritization also occur. Minor amounts of veinlet pyrite was observed adjacent to shears.

Samples contained up to 87.77 grams per tonne gold and 24.40 grams per tonne silver, but were generally closer to the sample that contained 18.44 grams per tonne gold and 18.51 grams per tonne silver.

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EMPR ASS RPT 8656, 9687, *11528, 13072, 15410, 15626, 17894, 20771
EMPR BULL 63
EMPR OF 1987-22
EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102
GSC MAP 9-1957; 307A; 315A; 1418A
GSC MEM 175
EMPR EXPL 1980-45; 1981-90; 1983-521; 1984-385; 1987-C375
GCNL #79, 1982; #70,#122, 1984
N MINER March 4, 1982; April 12, 1984
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B82)

DATE CODED:	1988/07/13	CODED BY:	GJP	FIELD CHECK:	N
DATE REVISED:	1988/07/25	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104B 253**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIDE SOUTH**, TIDE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 15 37 N
LONGITUDE: 130 05 47 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 2 kilometres west of the Bowser River and 1 kilometre north of Berendon Glacier. Identified from Assessment Report 11528.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6235589
EASTING: 432082

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS
SIGNIFICANT: Arsenopyrite, Sphalerite, Galena, Tetrahedrite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Malachite, Chlorite
ALTERATION TYPE: Oxidation, Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stockwork, Podiform, Massive, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins; I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
DATING METHOD:	Uranium/Lead		
Lower Jurassic			Summit Lake Stock
ISOTOPIC AGE:	192 +/- 2 Ma		
DATING METHOD:	Lead/Lead		
MATERIAL DATED:	Zircon		

LITHOLOGY: Andesitic Tuff
Andesitic Flow
Hornblende Granodiorite
Gossan

HOSTROCK COMMENTS: Mineralization occurs in area of andesitic volcanics. Plutonic rock occurs within one kilometre. Age date from Fieldwork 1985, page 218.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SOUTH

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1983

COMMODITY	GRADE	
Silver	192.6900	Grams per tonne
Gold	115.8900	Grams per tonne

COMMENTS: Most samples assayed much lower but were still significant.
REFERENCE: Assessment Report 11528.

CAPSULE GEOLOGY

The area is composed of ash tuffs with lesser dust and lapilli tuffs and interbedded augite porphyry of the Lower Jurassic Unuk River Formation, Hazelton Group. A north trending extension of Lower Jurassic Summit Lake Stock hornblende granodiorite intrudes the volcanics. This intrusive lobe is from 300 to 500 metres wide and seperates andesitic volcanics to the west from dacitic volcanics to the east (Open File 1987-22).

The South Zone is located 1 kilometre to the west of the granodiorite intrusive in an area of andesitic volcanics. It is a north trending gossanous shear zone which covers an area of approximately 1800 by 20 metres. The zone encloses two distinctive types of mineralization: 1) Northeast trending chlorite altered shears host veins and lenses of quartz which contain pods of arsenopyrite. These veins and lenses range from 1 to 10 centimetres in width. Numerous thin

CAPSULE GEOLOGY

pyrite veinlets occur with a similar trend, 2) A generally random oriented network of quartz veining with shallow dips host coarse disseminated sphalerite, galena, tetrahedrite and malachite. Pyrite veinlets may also carry sphalerite and galena.

Shear zones also host fracture controlled pyrite-arsenopyrite veinlets and disseminations.

The highest assay obtained from this zone was 115.89 grams per tonne gold and 192.69 grams per tonne silver. The type of sample material analyzed was not reported. Several other samples taken over a large area contained much lower but significant amounts of gold and silver (Assessment Report 11528).

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EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102
EMPR OF 1987-22
GSC MAP 9-1957; 307A; 315A; 1418A
GSC MEM 175
GSC P 89-1E, pp. 145-154
GCNL #179, 1982; #70,#122, 1984
N MINER March 4, 1982; April 12, 1984
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B82)

DATE CODED: 1988/07/13 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/07/26 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 254**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIDE TV 86-1**, TIDE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 15 20 N
LONGITUDE: 130 04 19 W
ELEVATION: 650 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 300 metres northeast of the toe of Berendon Glacier. Mineralization found in one drill hole (Assessment Report 15626).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6235039
EASTING: 433588

COMMODITIES: Gold Silver Copper

MINERALS
SIGNIFICANT: Pyrite Arsenopyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Massive
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au L02 Porphyry-related Au

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
DATING METHOD:	Uranium/Lead		
Lower Jurassic			Summit Lake Stock
ISOTOPIC AGE:	192 +/- 2 Ma		
DATING METHOD:	Uranium/Thorium		
MATERIAL DATED:	Zircon		

LITHOLOGY: Granodiorite
Tuff

HOSTROCK COMMENTS: Mineralization occurs in Summit Lake granodiorite that has intruded Hazelton Group volcanics. Age date from Fieldwork 1985, page 218.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1986
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	13.0300	Grams per tonne
Gold	3.1800	Grams per tonne

COMMENTS: Assay from a 1.37 metre section of drill core.
REFERENCE: Assessment Report 15626.

CAPSULE GEOLOGY

The occurrence is located just northeast of the toe of Berendon Glacier. The area is underlain by strata of the Lower Jurassic Unuk River Formation, Hazelton Group. These strata consist of argillaceous sediments, outcropping at lower elevations, overlain by dacitic tuffs and andesitic fragmentals. A north trending extension of Lower Jurassic Summit Lake stock hornblende granodiorite intrudes the country rock. This intrusive lobe is from 300 to 500 metres wide and separates the dacitic tuffs on its east from the andesitic fragmentals on its west.

Mineralization was encountered in drill hole TV 86-1, which was drilled on an electromagnetic anomaly and a zone of arsenopyrite filled fractures in granodiorite. This north trending hole cut granodiorite for the first 105 metres and tuffaceous rocks for the last 100 metres.

Quartz veins up to 15 centimetres wide cut the granodiorite and contain up to 8 per cent pyrite and 1 per cent arsenopyrite. A few

CAPSULE GEOLOGY

minor quartz veins contain up to 70 per cent arsenopyrite and 10 per cent pyrite. Silicified sections of the granodiorite contain up to 10 per cent pyrite, 2 per cent arsenopyrite and minor chalcopyrite.

A weighted average of two assays from adjacent drill sections gave 3.18 grams per tonne gold and 13.03 grams per tonne silver over a combined length of 1.37 metres. This drill interval consisted of silicified granodiorite with arsenopyrite and chalcopyrite (Assessment Report 15626).

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EMPR OF 1987-22
EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102
GSC MAP 9-1957; 307A; 315A; 1418A
GSC MEM 175
EMPR EXPL 1980-465; 1981-90; 1983-521; 1984-385; 1987-C375
GCNL #179, 1982; #70,#122, 1984
N MINER Mar.4, 1982; Apr.12, 1984
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/13 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/07/27 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 255**

NATIONAL MINERAL INVENTORY:

NAME(S): **BIG BOWL (INEL)**, INEL 1, INEL 3

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 36 58 N
LONGITUDE: 130 58 13 W
ELEVATION: 1020 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing lies above Bronson Glacier, along a western facing bowl, paralleling Bronson Creek (Grove, E.W., 1987). Part of Inel property (104B 113).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6276391
EASTING: 379090

COMMODITIES: Zinc, Lead, Gold, Silver, Copper

MINERALS

SIGNIFICANT: Sphalerite, Galena, Chalcopyrite, Pyrite
ALTERATION TYPE: Oxidation, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins; G04 Besshi massive sulphide Cu-Zn
I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 1600 Metres
STRIKE/DIP:
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic-Cretaceous			Coast Plutonic Complex

LITHOLOGY: Gossan
Volcanic Conglomerate
Volcanic Breccia
Breccia
Alaskite
Diorite Dike

HOSTROCK COMMENTS: Alaskite pluton intrudes Hazelton Group rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks, Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	36.6800	Grams per tonne
Gold	5.7600	Grams per tonne
Copper	0.0400	Per cent
Lead	1.0800	Per cent
Zinc	2.6000	Per cent

COMMENTS: Sample taken from the south fork of Big Bowl Creek.
REFERENCE: Grove, 1987.

CAPSULE GEOLOGY

The oldest rocks consist of Permian limestone and Pennsylvanian to Permian carbonaceous strata that are highly contorted and deformed. Unconformably overlying this strata is an Upper Triassic (?) shale unit and a volcanic-sedimentary sequence correlated to the Lower Jurassic Hazelton Group, Unuk River Formation. The Unuk River Formation is overlain with an angular unconformity by the Middle Jurassic Betty Creek Formation which is characterized by planar bedded, bright red and green volcaniclastics, breccias, chert and carbonate lenses.

The bulk of the country rock underlying the Inel property includes a layered Unuk River Formation sequence comprising basalt rhyolitic breccias, flows and clastic sediments, andesitic volcani-

CAPSULE GEOLOGY

clastics, conglomerates, and minor limestones with intercalated basalt flows and breccias. North of the property this Lower Jurassic sequence includes a thick south dipping fossil-rich limestone dated as Toarcian, or Late Lower Jurassic and equivalent to the upper member of the Unuk River Formation (Grove 1973,1987).

South of Snippaker Peak the Lower Jurassic sequence is unconformably overlain by gently dipping Middle Jurassic Betty Creek Formation equivalents. The rocks include volcanic sandstone, volcanic breccia and andesitic basaltic flows.

The Lower Jurassic rocks are cut by a long, narrow, high angle alaskite (quartz-feldspar porphyry) pluton which extends from the south boundary of the Inel claims, north across Snippaker Ridge just south of Snippaker Peak. At the south, the contacts are marked by wide, granitized margins with zinc-silver mineralization on the west, and oxidized copper-molybdenum on the east. In the Main Sulphide zone area the east contact is marked by a swarm of narrow dykes. The dykes and mineralized country rocks have been faulted, deformed, and cut by wide pyrite-quartz-feldspar injection breccia dykes (refer to Inel, 104B 113).

The Big Bowl zone lies above Bronson Glacier and extends about 1600 metres across the Inel 1 claim and part of the Inel 3 claim. It is part of a broad alteration zone within the Lower Jurassic Hazelton Group Unuk River Formation rocks.

The host rocks consist of volcanic conglomerates and breccias which have been complexly intruded and altered to feldspathic, pyritic material in which sphalerite, chalcopyrite and galena are disseminated. The rocks are deeply weathered, forming bright gossan areas along the lower slopes. The alaskite intrusive is strongly altered and contains disseminated pyrite but has resisted oxidation. These rocks have all been cut by narrow diorite dykes and northeast trending faults. A sample taken from the south fork of Big Bowl Creek assayed 0.04 per cent copper, 1.08 per cent lead, 2.607 per cent zinc, 36.68 grams per tonne silver and 5.76 grams per tonne gold. Another sample taken from the adjacent upper Zinc Creek assayed 0.16 per cent copper, 0.327 per cent lead, 3.90 per cent zinc, 16.46 grams per tonne silver and 2.74 grams per tonne gold (Grove, 1987).

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GSC MEM 246
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Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
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DATE CODED: 1988/07/14 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/10/20 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 256**

NATIONAL MINERAL INVENTORY:

NAME(S): **WOLVERINE (INEL)**, INEL 6, SLOCUM 2, KEDGE 2

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 37 24 N
LONGITUDE: 130 53 40 W
ELEVATION: 775 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located in the steep, forested bluffs along Monument Creek, a north flowing tributary of Snippaker Creek, south of the Iskut River (Grove, E.W., 1987). Part of the Inel property (104B 113).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6277063
EASTING: 383765

COMMODITIES: Zinc, Silver, Copper, Lead, Gold

MINERALS

SIGNIFICANT: Chalcopyrite, Magnetite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Malachite, Azurite
COMMENTS: Copper oxides.
ALTERATION TYPE: Oxidation, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound, Disseminated, Vein
CLASSIFICATION: Epigenetic, Replacement, Skarn
TYPE: K01 Cu skarn; K04 Au skarn; I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Pennsylvan.-Permian	Unnamed/Unknown Group	Undefined Formation	
Lower Jurassic	Hazelton	Unuk River	
Jurassic-Cretaceous			Coast Plutonic Complex

LITHOLOGY: Limestone, Volcanic Sediment/Sedimentary, Volcaniclastic, Alaskite

HOSTROCK COMMENTS: Paleozoic rocks have been overthrust onto Hazelton Group rocks and cut by stock-like alaskite plutons.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks; Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1984

COMMODITY	GRADE	
Silver	75.4300	Grams per tonne
Gold	0.5500	Grams per tonne
Copper	5.5500	Per cent
Lead	1.4800	Per cent
Zinc	7.0000	Per cent

COMMENTS: Sample of sulphides from a limestone band with volcanic sediments.
REFERENCE: Grove, 1987,

CAPSULE GEOLOGY

The oldest rocks consist of Permian limestone and Pennsylvanian to Permian carbonaceous strata that are highly contorted and deformed. Unconformably overlying this strata is an Upper Triassic (?) shale unit and a volcanic-sedimentary sequence correlated to the Lower Jurassic Hazelton Group, Unuk River Formation. The Unuk River Formation is overlain with an angular unconformity by the Middle Jurassic Betty Creek Formation which is characterized by planar bedded, bright red and green volcaniclastics, breccias, chert and carbonate lenses.

CAPSULE GEOLOGY

The bulk of the country rock underlying the Inel property includes a layered Unuk River Formation sequence comprising basalt rhyolitic breccias, flows and clastic sediments, andesitic volcaniclastics, conglomerates, and minor limestones with intercalated basalt flows and breccias. North of the property this Lower Jurassic sequence includes a thick south dipping fossil-rich limestone dated as Toarcian, or Late Lower Jurassic and equivalent to the upper member of the Unuk River Formation (Grove 1973,1987).

South of Snippaker Peak the Lower Jurassic sequence is unconformably overlain by gently dipping Middle Jurassic Betty Creek Formation equivalents. The rocks include volcanic sandstone, volcanic breccia and andesitic basaltic flows.

The Lower Jurassic rocks are cut by a long, narrow, high angle alaskite (quartz-feldspar porphyry) pluton which extends from the south boundary of the Inel claims, north across Snippaker Ridge just south of Snippaker Peak. At the south, the contacts are marked by wide, granitized margins with zinc-silver mineralization on the west, and oxidized copper-molybdenum on the east. In the Main Sulphide zone area the east contact is marked by a swarm of narrow dykes. The dykes and mineralized country rocks have been faulted, deformed, and cut by wide pyrite-quartz-feldspar injection breccia dykes (refer to Inel, 104B 113).

The Wolverine zone is located near the northeast corner of the Inel property where massive Paleozoic slabs have been overthrust onto Lower and Middle Jurassic strata. Stock-like alaskite plutons and dykes have cut a dominantly volcaniclastic sequence. Sampling along the steep bluffs above Monument Creek has produced assay results as high as 5.55 per cent copper, 1.48 per cent lead, 7.0 per cent zinc, 75.43 grams per tonne silver and 0.55 grams per tonne gold (Grove, 1987). The high grade assay results reflect mineralization in which chalcopyrite, magnetite, pyrite, as well as copper oxides (malachite, azurite) were found in limestone bands up to 6.0 metres intercalated within volcanic sediments. This showing is described as a gold-bearing copper skarn.

Other mineralization consists of quartz-sulphide stockwork vein systems which crosscut the same host rocks. The overall mineralized zone is described as about 200 metres wide but has not been traced laterally.

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DATE CODED: 1988/07/14 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/10/20 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 257**

NATIONAL MINERAL INVENTORY: 104B10 Zn1

NAME(S): **EAST RIDGE (INEL)**, EAST RIDGE, INEL 7, INEL 4

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 36 36 N
LONGITUDE: 130 55 23 W
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6275628
EASTING: 381968

COMMENTS: Located due east of the Main Sulphide and Discovery zones on the Inel property (104B 113), on the east side of Snippaker Ridge (Grove, 1987).

COMMODITIES: Copper, Lead, Zinc, Silver, Gold

MINERALS

SIGNIFICANT: Arsenopyrite, Sphalerite, Galena, Pyrite
ASSOCIATED: Quartz
ALTERATION TYPE: Pyrite, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic, Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au; I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Banded Lithic Tuff
Volcanic Sandstone
Volcaniclastic
Volcanic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1983

COMMODITY	GRADE	
Silver	51.4200	Grams per tonne
Gold	0.5000	Grams per tonne
Copper	0.1200	Per cent
Lead	2.0900	Per cent
Zinc	8.7600	Per cent

COMMENTS: Sample from sulphide vein.
REFERENCE: Assessment Report 11312, Figure 3,

CAPSULE GEOLOGY

The oldest rocks consist of Permian limestone and Pennsylvanian to Permian carbonaceous strata that are highly contorted and deformed. Unconformably overlying this strata is an Upper Triassic (?) shale unit and a volcanic-sedimentary sequence correlated to the Lower Jurassic Hazelton Group, Unuk River Formation. The Unuk River Formation is overlain with an angular unconformity by the Middle Jurassic Betty Creek Formation which is characterized by planar bedded, bright red and green volcaniclastics, breccias, chert and carbonate lenses.

The bulk of the country rock underlying the Inel property includes a layered Unuk River Formation sequence comprising basalt rhyolitic breccias, flows and clastic sediments, andesitic volcaniclastics, conglomerates, and minor limestones with intercalated basalt flows and breccias. North of the property this Lower Jurassic sequence includes a thick south dipping fossil-rich limestone dated as Toarcian, or Late Lower Jurassic and equivalent to the upper member

CAPSULE GEOLOGY

of the Unuk River Formation (Grove 1973,1987).

South of Snippaker Peak the Lower Jurassic sequence is unconformably overlain by gently dipping Middle Jurassic Betty Creek Formation equivalents. The rocks include volcanic sandstone, volcanic breccia and andesitic basaltic flows.

The Lower Jurassic rocks are cut by a long, narrow, high angle alaskite (quartz-feldspar porphyry) pluton which extends from the south boundary of the Inel claims, north across Snippaker Ridge just south of Snippaker Peak. At the south, the contacts are marked by wide, granitized margins with zinc-silver mineralization on the west, and oxidized copper-molybdenum on the east. In the Main Sulphide zone area the east contact is marked by a swarm of narrow dykes. The dykes and mineralized country rocks have been faulted, deformed, and cut by wide pyrite-quartz-feldspar injection breccia dykes (refer to Inel, 104B 113).

Prospecting on the east side of Snippaker Ridge revealed a large number of quartz-sulphide veins cutting thinly banded lithic tuff and volcanic sandstone. These units are regarded as the upper members within the Lower Jurassic Unuk River Formation. The mineralized veins host arsenopyrite and pyrite as well as occasional sphalerite and galena. The veins occur within a restricted zone due east of the Main Sulphide zone. Sampling the veins in 1984, gave relatively uniform values up to 5.04 per cent copper, 2.00 per cent lead, 9.95 per cent zinc, 36.34 grams per tonne silver and 6.10 grams per tonne gold (Grove, 1987). In 1983, two samples from these veins assayed 0.12 per cent copper, 2.09 per cent lead, 8.76 per cent zinc, 51.42 grams per tonne silver, 0.50 grams per tonne gold and 0.15 per cent copper, 0.39 per cent lead, 8.84 per cent zinc, 13.7 grams per tonne silver and 0.137 grams per tonne gold, respectively (Assessment Report 11312, Figure 3).

Further sampling towards the top of the ridge indicated significant gold and silver values and may reflect the Moonlight (104B 322) and the Inel Ridge zones (104B 258).

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GCNL #152,#185,#245, 1988
PR REL Inel Resources Ltd., *Aug.5,*Sept.23, 1988

DATE CODED: 1988/07/14 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/11/07 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 258**

NATIONAL MINERAL INVENTORY: 104B10 Zn1

NAME(S): **INEL RIDGE**, MOONLIGHT, INEL, INEL 2, WHITE BEAR, RIDGE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 37 01 N
LONGITUDE: 130 56 52 W
ELEVATION: 1675 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on Snippaker Ridge with the Inel Ridge zone on the west side and the Moonlight zone on the high east side (Grove, 1987, Figure 5).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6276444
EASTING: 380473

COMMODITIES: Silver, Gold, Copper, Zinc, Lead

MINERALS

SIGNIFICANT: Pyrite, Sphalerite, Galena, Chalcopyrite, Arsenopyrite
ASSOCIATED: Quartz, Calcite, Carbonate
ALTERATION: Pyrite
ALTERATION TYPE: Pyrite, Silicific'n, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork, Disseminated
CLASSIFICATION: Epigenetic, Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Middle Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Volcanic Sandstone
Volcanic Siltstone
Fine Grained Volcanic Sandstone
Banded Tuff
Lithic Tuff
Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: RIDGE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	570.8000	Grams per tonne
Gold	7.8000	Grams per tonne

COMMENTS: Prospecting sample #1206
REFERENCE: Inel Resources Ltd., Press Release, August 5, 1988.

CAPSULE GEOLOGY

The oldest rocks consist of Permian limestone and Pennsylvanian to Permian carbonaceous strata that are highly contorted and deformed. Unconformably overlying this strata is an Upper Triassic (?) shale unit and a volcanic-sedimentary sequence correlated to the Lower Jurassic Hazelton Group, Unuk River Formation. The Unuk River Formation is overlain with an angular unconformity by the Middle Jurassic Betty Creek Formation which is characterized by planar bedded, bright red and green volcaniclastics, breccias, chert and carbonate lenses.

The bulk of the country rock underlying the Inel property includes a layered Unuk River Formation sequence comprising basalt rhyolitic breccias, flows and clastic sediments, andesitic volcaniclastics, conglomerates, and minor limestones with intercalated basalt flows and breccias. North of the property this Lower Jurassic sequence includes a thick south dipping fossil-rich limestone dated as Toarcian, or Late Lower Jurassic and equivalent to the upper member

CAPSULE GEOLOGY

of the Unuk River Formation (Grove 1973,1987).

South of Snippaker Peak the Lower Jurassic sequence is unconformably overlain by gently dipping Middle Jurassic Betty Creek Formation equivalents. The rocks include volcanic sandstone, volcanic breccia and andesitic basaltic flows.

The Lower Jurassic rocks are cut by a long, narrow, high angle alaskite (quartz-feldspar porphyry) pluton which extends from the south boundary of the Inel claims, north across Snippaker Ridge just south of Snippaker Peak. At the south, the contacts are marked by wide, granitized margins with zinc-silver mineralization on the west, and oxidized copper-molybdenum on the east. In the Main Sulphide zone area the east contact is marked by a swarm of narrow dykes. The dykes and mineralized country rocks have been faulted, deformed, and cut by wide pyrite-quartz-feldspar injection breccia dykes (refer to Inel, 104B 113).

In 1984, prospecting along both sides of the upper Snippaker Ridge was concentrated within the upper members of the Unuk River Formation just below the contact between the rocks and the overlying Middle Jurassic Betty Creek Formation volcanics. As a result, the Inel Ridge zone was discovered on the high east side of Snippaker Ridge.

On the west side of the ridge, quartz-calcite-sulphide veins and disseminated sulphide mineralization occurs within fine-grained, thin-bedded volcanic sandstone/siltstone over a strike length of about 1.0 kilometre. The mineralization occurs within the upper members of the Unuk River Formation which includes known mineralization within the Discovery and Main Sulphide zones (104B 113). These rocks lie directly below the unconformity with the Betty Creek Formation. Fifty prospect samples of vein and host rock from this zone assayed as high as 5.80 per cent copper, 63.10 per cent lead, 22.50 per cent zinc, 2925 grams per tonne silver and 108.5 grams per tonne gold (Grove, 1987).

The mineralization appears to be an apparent quartz-carbonate-sulphide vein stockwork within a pyritized halo. Mineralization includes pyrite, sphalerite, galena, chalcopyrite and arsenopyrite. Prospecting samples within the Ridge zone assayed 7.6 grams per tonne gold and 40.11 grams per tonne silver over 1.06 metres and 7.8 grams per tonne gold and 590.8 grams per tonne silver over 1.7 metres (Inel Resources Ltd., Press Release, August 5, 1988).

Surface drilling on the Ridge zone returned 29.8 grams per tonne gold over 2.25 metres and 8.5 grams per tonne gold over 1.5 metres from drill hole S88-12 (Inel Resources Ltd., Press Release, September 23, 1988).

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PR REL Inel Resources Ltd., *Aug.5,*Sept.23, 1988
GCNL #152,#185,#245, 1988

DATE CODED: 1988/07/14 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/10/22 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 259**
NATIONAL MINERAL INVENTORY: 104B10 Zn1

NAME(S): **SUPERIOR (INEL)**, INEL 3, ICE CAVE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 36 19 N
LONGITUDE: 130 58 08 W
ELEVATION: 1210 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Superior zone located southwest of Main Sulphide and Discovery zones (Inel, 104B 113) above Bronson Glacier (Grove, 1987, Figure 5).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6275183
EASTING: 379140

COMMODITIES: Zinc, Silver, Gold, Lead, Copper

MINERALS
SIGNIFICANT: Pyrrhotite, Sphalerite
ASSOCIATED: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic, Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Volcanic Sandstone
Volcanic Siltstone
Andesitic Breccia
Rhyolitic Flow
Rhyolitic Breccia

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1984

COMMODITY	GRADE	
Silver	67.5400	Grams per tonne
Gold	0.4100	Grams per tonne
Copper	0.1500	Per cent
Lead	1.7900	Per cent
Zinc	12.9900	Per cent

COMMENTS: Sample from trench.
REFERENCE: Grove, 1987,

CAPSULE GEOLOGY

The oldest rocks consist of Permian limestone and Pennsylvanian to Permian carbonaceous strata that are highly contorted and deformed. Unconformably overlying this strata is an Upper Triassic (?) shale unit and a volcanic-sedimentary sequence correlated to the Lower Jurassic Hazelton Group, Unuk River Formation. The Unuk River Formation is overlain with an angular unconformity by the Middle Jurassic Betty Creek Formation which is characterized by planar bedded, bright red and green volcaniclastics, breccias, chert and carbonate lenses.

The bulk of the country rock underlying the Inel property includes a layered Unuk River Formation sequence comprising basalt rhyolitic breccias, flows and clastic sediments, andesitic volcaniclastics, conglomerates, and minor limestones with intercalated basalt flows and breccias. North of the property this Lower Jurassic sequence includes a thick south dipping fossil-rich limestone dated as Toarcian, or Late Lower Jurassic and equivalent to the upper member of the Unuk River Formation (Grove 1973,1987).

South of Snippaker Peak the Lower Jurassic sequence is unconform-

CAPSULE GEOLOGY

ably overlain by gently dipping Middle Jurassic Betty Creek Formation equivalents. The rocks include volcanic sandstone, volcanic breccia and andesitic basaltic flows.

The Lower Jurassic rocks are cut by a long, narrow, high angle alaskite (quartz-feldspar porphyry) pluton which extends from the south boundary of the Inel claims, north across Snippaker Ridge just south of Snippaker Peak. At the south, the contacts are marked by wide, granitized margins with zinc-silver mineralization on the west, and oxidized copper-molybdenum on the east. In the Main Sulphide zone area the east contact is marked by a swarm of narrow dykes. The dykes and mineralized country rocks have been faulted, deformed, and cut by wide pyrite-quartz-feldspar injection breccia dykes (refer to Inel, 104B 113).

Prospecting in 1983 and 1984 led to trenching above Bronson Glacier southwest of the main mineralized areas. The Superior zone was discovered and consisted of pyrrhotite and sphalerite in sub-parallel quartz-sulphide veins. The trenched material graded as high as 0.15 per cent copper, 1.79 per cent lead, 12.99 per cent zinc, 67.54 grams per tonne silver and 0.41 grams per tonne gold (Grove, 1987). The host rocks consist of thin-bedded volcanic sandstone and siltstone that are part of a sedimentary sequence intercalated within a thick andesite breccia. This andesitic breccia is the lower member in the Hazelton Group Unuk River Formation and is overlain by contrasting light colored rhyolitic fragmental/flow sequence.

Talus covers most of the area above Bronson Glacier. Blocks up to 0.9 by 1.2 metres, of silver-bearing galena, sphalerite and pyrite, occur here. The source of this material has not been found.

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GCNL #245, 1988

DATE CODED: 1988/07/14 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/10/20 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 260**

NATIONAL MINERAL INVENTORY:

NAME(S): **MCFADDEN (REG)**, SOUTH GOLD, REG, STONEHOUSE, JOHNNY MOUNTAIN

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 37 22 N
LONGITUDE: 131 03 26 W
ELEVATION: 1350 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: McFadden ara of sulphide float lies west of the main Stonehouse Gold zone (104B 107), immediately below Johnny Glacier on Johnny Mountain.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6277289
EASTING: 373777

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Gold Pyrite Chalcopyrite
COMMENTS: Sulphide float.
ALTERATION TYPE: Pyrite Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unconsolidated
CLASSIFICATION: Unknown
TYPE: C01 Surficial placers

HOST ROCK
DOMINANT HOSTROCK: Volcanic

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

LITHOLOGY: Unconsolidated Glacial Rock

HOSTROCK COMMENTS: Source of sulphide-rich McFadden Float zone is unknown.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

INVENTORY

ORE ZONE: MCFADDEN REPORT ON: Y

CATEGORY: Indicated YEAR: 1984
QUANTITY: 27216 Tonnes

COMMODITY	GRADE	
Gold	96.0000	Grams per tonne

COMMENTS: Sulphide float; measurable reserve estimate to give an inventory of 2,381,400 grams gold.
REFERENCE: Property File - Skyline Explorations Ltd., Reg Project (1984).

CAPSULE GEOLOGY

The McFadden zone, consists of a sulphide "float zone" or moraine train that extends about 350 metres in length and 40 metres in width on Johnny Mountain. Indicated reserves at McFadden are 27,216 tonnes grading 96.0 grams per tonne gold; sulphide float; measurable reserve estimate to give an inventory of 2,381,400 grams gold (Property File - Skyline Explorations Ltd., Reg Project (1984).

A second resource outlined by surface exploration includes an extensive blanket of gold-bearing eluvial material extending downslope from the east end of the main Stonehouse (104B 107) gold zone. Preliminary work indicates this material has an area of at least 260,000 square metres with a minimum depth of one to two metres. At present, only the -80 fraction has been assayed in detail and averages 1.5 grams per tonne gold (Grove, E.W., 1987).

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GSC MAP 9-1957; 311A; 1418A
NAGMIN Jun.7, 1985
GSC P 89-1E, pp. 145-154
Placer Dome File

DATE CODED: 1988/07/14 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/20 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 261**

NATIONAL MINERAL INVENTORY:

NAME(S): **TWO BARREL (REG)**, B2, REG,
STONEHOUSE, JOHNNY MOUNTAIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 38 15 N
LONGITUDE: 131 04 16 W
ELEVATION: Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the flats on the west side of Johnny Mountain, north of the Stonehouse Gold Zone (104B 107) along an existing road.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6278953
EASTING: 372975

COMMODITIES: Silver, Lead, Zinc, Gold

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite, Galena
ALTERATION: K-Feldspar, Pyrite, Sericite, Carbonate, Epidote, Silica
ALTERATION TYPE: Potassic, Pyrite, Sericitic, Carbonate, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated, Stratabound
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Lower Jurassic			Coast Plutonic Complex

LITHOLOGY: Sediment/Sedimentary Rock
Volcaniclastic
Feldspar Porphyry
K-Feldspar Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PLUTONIC ROCKS RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1984
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	183.7700	Grams per tonne
Gold	0.3100	Grams per tonne
Lead	5.0000	Per cent
Zinc	9.7000	Per cent

REFERENCE: Skyline Explorations Ltd., Reg Project, 1984 Promotional Brochure.

CAPSULE GEOLOGY

In 1984 a bulldozer investigation of coincident geochemical and geophysical anomalies uncovered a sedimentary hosted silver-lead-zinc deposit. This new zone was traced along the flats on the west side of Johnny Mountain for about 155 metres in one area and about 52 metres in another.

The area of the Two Barrel silver-lead-zinc zone is underlain by an Upper Triassic to Lower Jurassic sedimentary/volcanic sequence that has been correlated with the Hazelton Group, Unuk River Formation. Some of the Upper Triassic stratified sequence may be correlative with upper members of the Stuhini Group. Locally, these stratified rocks have been intruded by a potassic-feldspar porphyry stock of probable Lower Jurassic age that is part of the Coast Plutonic Complex. The altered and deformed country rocks have undergone k-feldspar alteration as well as sericitization, carbonitization, silicification and pyritization (refer to Stonehouse, 104B 107).

In 1984, mineralization comprising pyrite, chalcopyrite, sphal-

CAPSULE GEOLOGY

erite and galena was uncovered in altered Upper Triassic sediments. A sample from this showing assayed 0.31 grams per tonne gold, 183.77 grams per tonne silver with 50.0 per cent lead and 9.7 per cent zinc (Skyline Explorations Ltd., Reg Project 1984 Promotional Brochure).

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GSC MEM 246
GSC MAP 9-1957; 311A; 1418A
GSC P 89-1E, pp. 145-154
NAGMIN Jun.7, 1985
EMPR AR 1968-41
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Placer Dome File

DATE CODED: 1988/07/14 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/20 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 262**

NATIONAL MINERAL INVENTORY:

NAME(S): **C1 (REG)**, REG, STONEHOUSE, JOHNNY MOUNTAIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 37 17 N
LONGITUDE: 131 05 12 W
ELEVATION: 945 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6277189
EASTING: 371966

COMMENTS: Located south of the Stonehouse Gold zone (104B 107) on the west slopes of Johnny Mountain, east of the Jekill River.

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite, Galena
ASSOCIATED: Quartz
ALTERATION: Pyrite
ALTERATION TYPE: Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal, Epigenetic, Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Quartz Vein
Sediment/Sedimentary Rock
Volcaniclastic
Grit
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1984

COMMODITY	GRADE	
Silver	78.5100	Grams per tonne
Gold	25.0000	Grams per tonne
Lead	1.8000	Per cent
Zinc	0.7000	Per cent

COMMENTS: Sample from quartz vein in altered sediments.
REFERENCE: Skyline Explorations Ltd., Reg Project, 1984 Promotional Brochure.

CAPSULE GEOLOGY

With the area of the C1 zone average assays of 34.28 grams per tonne gold occur in quartz veins that crosscut altered sediments and volcaniclastics. These showings lie below the Stonehouse Gold Deposit (104B 107) on Johnny Flats. The juncture below the Johnny Mountain main Gold zone and the hummocky Johnny Flats is marked by a strong northeast trending fault that appears to seperate a feldspar porphyry/ volcaniclastic sequence from a thick, tightly folded greywacke, lithic wacke, siltstone sequence. Movement along this fault is right lateral and exhibits about 150 metres offset (Grove, 1987).

Rocks on the Johnny Flats comprise a sequence of intercalated phyllitic grit, siltstone and thin rhyolitic members. These Upper Triassic to Lower Jurassic rocks have been correlated to the Lower Jurassic Hazelton Group, Unuk River Formation. Some of the Upper Triassic sequence may be correlative with upper members of the

CAPSULE GEOLOGY

Stuhini Group. These stratified Jurassic-Triassic rocks are intruded by intermediate to felsic stocks and plutons of Jurassic and younger age and are related to the Coast Plutonic Complex.

Mineralization associated with the quartz veining within the altered sediments consists mainly of pyrite with some sphalerite, galena and chalcopyrite. In 1984, samples taken from this area assayed 25.0 grams per tonne gold, 78.51 grams per tonne silver, 1.8 per cent lead, 0.7 per cent zinc and 11.79 grams per tonne gold, 40.11 grams per tonne silver, 0.3 per cent lead with 1.0 per cent zinc. Another sample from a quartz vein assayed 33.57 grams per tonne gold, 50.06 grams per tonne silver with 2.8 per cent lead and 1.6 per cent zinc (Skyline Explorations Ltd., Reg Project, 1984 Promotional Brochure).

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EMPR ASS RPT 630, 769, 5275, 9090, 9964, 10510, 13245, 13674
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GSC P 89-1E, pp. 145-154
Placer Dome File

DATE CODED: 1988/07/14 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/20 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 263**

NATIONAL MINERAL INVENTORY:

NAME(S): **C2 (REG)**, REG, STONEHOUSE, JOHNNY MOUNTAIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 38 02 N
LONGITUDE: 131 07 21 W
ELEVATION: 330 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located east of the Jekill River about 2.5 kilometres north of the junction of the Craig and Jekill Rivers, along a small tributary creek, part of the Reg property (104K 107).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6278648
EASTING: 369811

COMMODITIES: Gold, Silver, Lead, Zinc

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite, Galena
COMMENTS: Minor lead and zinc values.
ALTERATION: K-Feldspar, Pyrite, Epidote, Chlorite, Carbonate
ALTERATION TYPE: Potassic, Pyrite, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated, Vein
CLASSIFICATION: Epigenetic, Mesothermal, Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins
SHAPE: Irregular
MODIFIER: Sheared
COMMENTS: Mineralization is related to a prominantly sheared contact zone.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Volcaniclastic
Volcanic Rock
Sediment/Sedimentary Rock
Biotite Phyllonite
Sericite Phyllonite
Feldspar Porphyry
K-Feldspar Syenite

HOSTROCK COMMENTS: Jurassic to Triassic stratified volcanic and sedimentary rocks are intruded by Jurassic and younger plutons.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks, Syn-mineralization, Post-mineralization
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1984

COMMODITY	GRADE	
Silver	50.0600	Grams per tonne
Gold	4.8000	Grams per tonne
Lead	0.7000	Per cent
Zinc	0.3000	Per cent

COMMENTS: Sample location 83 from C2 map area.
REFERENCE: Skyline Explorations Ltd., Reg Project, 1984 Promotional Brochure.

CAPSULE GEOLOGY

The C2 zone mineralization occurs west of the Stonehouse Gold deposit (104B 107) along the east side of the Craig River within a prominently sheared contact zone. This pyritized sheared zone lies between the contact of an Upper Triassic to Lower Jurassic volcanic/ sedimentary sequence that has in part been correlated to the Jurassic

CAPSULE GEOLOGY

Hazelton Group, Unuk River Formation. Some of these altered, stratified rocks may be correlative to upper members of the Triassic Stuhini Group. The stratified Jurassic-Triassic rocks are intruded by intermediate to felsic stocks and plutons of Jurassic and younger age that are related to the Coast Plutonic Complex.

Alteration includes pyritization, silicification and carbonatization as well as k-feldspathization (refer to Stonehouse - 104B 107). The altered and deformed country rocks have undergone repeated deformation and alteration as recognized by the occurrence of epidote clasts within the biotite and sericite phyllonites.

Mineralization within the C2 zone consists mainly of pyrite with minor chalcopyrite, sphalerite and galena associated with a prominent shear. Assays from this area average about 3.4 grams per tonne gold. In 1984, a sample of pyritic mataerial taken from the sheared rock at location 83, assayed 4.8 grams per tonne gold, 50.06 grams per tonne silver, 0.7 per cent lead and 0.3 per cent zinc (Skyline Explorations Ltd., Reg Project, 1984 Promotional Brochure).

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Placer Dome File
Skyline Explorations Ltd., *Reg Project, 1984 Promotional Brochure
WWW http://www.infomine.com/

DATE CODED: 1988/07/14 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/12/20 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 264**
NATIONAL MINERAL INVENTORY: 104B11 Cu3

NAME(S): **C3 (REG)**, ROAD, JOHNNY MOUNTAIN, SKY CREEK, C-3

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 39 25 N
LONGITUDE: 131 05 24 W
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located in the north part of the Reg 8 claim, on the south side of Sky Creek, south of the Iskut River.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6281152
EASTING: 371882

COMMODITIES: Gold, Silver, Copper, Lead, Zinc

MINERALS
SIGNIFICANT: Pyrite, Galena, Chalcopyrite, Sphalerite, Gold
COMMENTS: Minor lead and zinc, free gold reported in the Road showing vein.
ASSOCIATED: Quartz
ALTERATION: Pyrite, K-Feldspar, Epidote, Sericite, Chlorite, Biotite
ALTERATION TYPE: Pyrite, Potassic, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Massive, Disseminated
CLASSIFICATION: Igneous-contact, Epigenetic, Mesothermal, Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Lower Jurassic			Coast Plutonic Complex

LITHOLOGY: Volcaniclastic
Biotite Phyllonite
Sericite Phyllonite
Volcanic Rock
Sediment/Sedimentary Rock
Feldspar Porphyry
Syenite
Syeno Diorite

HOSTROCK COMMENTS: Stratified rocks are correlated with the Hazelton Group, but may in part, be correlative with upper members of Triassic Stuhini Group.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks, Syn-mineralization, Post-mineralization
GRADE: Greenschist, Hornfels

INVENTORY
ORE ZONE: SKY CREEK
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	57.1900	Grams per tonne

COMMENTS: Surface sample.
REFERENCE: Skyline Explorations Ltd. Press Release: August 4, 1988.

CAPSULE GEOLOGY

The C-3 zone mineralization (or Sky Creek Zone) was discovered in 1983 along the south side of Sky Creek. It consists of a large area of iron enrichment which hosts assays of about 3.4 grams per tonne gold.

The area is underlain by an Upper Triassic to Lower Jurassic sedimentary/volcanic sequence which has been correlated with the Hazelton Group, Unuk River Formation. Some of the stratified rocks may be correlative with upper members of the Stuhini Group. The stratified Jurassic-Triassic rocks have been intruded by intermediate

CAPSULE GEOLOGY

to felsic stocks and plutons of Jurassic and younger age that are related to the Coast Plutonic Complex.

The showings lie in altered Upper Triassic volcaniclastics near the contact of a massive syenitic feldspar porphyry intrusion. This potassic-feldspathized syenite-syenodiorite stock is of probable Lower Jurassic age and is comprised of potassic-feldspar phenocrysts in a fine-grained matrix of biotite, sericite, quartz and some calcite. The altered and deformed country rocks have undergone potassic-feldspar alteration as well as repeated deformation and alteration as recognized by the occurrence of epidote clasts within the biotite and sericite phyllonites (refer to Stonehouse, 104B 107).

The C-3 Zone mineralization comprises a wide pyritic alteration zone localized in sedimentary volcaniclastic rocks near the north boundary of the Reg property. Showings occur within the main Sky Creek and in a small accessible area west of the creek. In 1985, trenching and mapping indicated the presence of massive pyrite lenses, averaging about 6.0 metres in width, in potassic-feldspar, quartz, calcite alteration zone within the stratified sediments. One pyrite lens assayed up to 61.37 grams per tonne gold across 30 centimetres. Other samples showed the presence of up to 120.3 grams per tonne silver, and up to 5.8 per cent copper plus minor lead and zinc (Grove, 1987).

The C-3 mineral zone lies near the west contact of a large salmon pink syenite porphyry. The mineralization appears to be spatially related to the syenitic pluton and directly associated with the potassic-feldspar alteration. Surface sampling in the Sky Creek Zone has returned assays of 15.56 to 57.19 grams per tonne gold (Skyline Explorations Ltd., Press Release, August 4, 1988). A 0.3 metre sample taken from the Road Showing assayed as high as 2493.0 grams per tonne gold (Skyline Exploration Ltd., Press Release, June 15, 1988). The Road showing vein consists of pyrite-quartz-chalcopyrite and chlorite hosted by a biotite-rich foliated metasediment. Free gold was reported to occur in the quartz (George Cross Newsletter #125, June 29, 1988).

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PR REL Skyline Explorations Ltd.: *Reg Project, Promotional Brochure, 1984; Oct.24,25, 1985; Aug.15,Sept.4,Development-Reg Property, 1986; Jan.,May 15, 1987, Annual Report 1987; *Jun.15,Aug.4, 1988
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DATE CODED: 1988/07/14 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/11/11 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 265**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOG JAM CREEK**, ZEEHAN 12, STAR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 34 21 N
LONGITUDE: 131 12 08 W
ELEVATION: 130 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located along the shores of Craig River. Lower Log Jam Trench location from Plan numbers 12 and 12A (Poloni, 1987).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6271971
EASTING: 364703

COMMODITIES: Gold Copper Silver

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite Magnetite
ASSOCIATED: Quartz
ALTERATION: Sericite Chlorite
ALTERATION TYPE: Silicific'n Sericitic Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Breccia Massive
CLASSIFICATION: Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
I02 Intrusion-related Au pyrrhotite veins
G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary			Coast Plutonic Complex
Pennsylvan.-Permian			Stikine Assemblage

LITHOLOGY: Breccia
Greenstone
Meta Sediment/Sedimentary
Brecciated Sandstone
Siliceous Meta Sediment/Sedimentary

HOSTROCK COMMENTS: Lower Tertiary feldspar porphyry intrudes Paleozoic sediments and volcanics along the west side of the Craig River.

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks
METAMORPHIC TYPE: Contact Regional
RELATIONSHIP: Syn-mineralization Post-mineralization
GRADE: Greenschist
COMMENTS: Located along contact between Coast Crystalline-Intermontane Belts.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	1.9000	Grams per tonne
Gold	1.0300	Grams per tonne
Copper	0.0030	Per cent

COMMENTS: Sample T-139 (of massive sulphide mineralization) from Lower Log Jam Creek trench.
REFERENCE: Assessment Report 16620.

CAPSULE GEOLOGY

The area is underlain by a sequence of metamorphosed Paleozoic sediments and volcanics comprised mainly of argillite, chert, quartzite, slate, shale, schist, minor limestone and tuff. The Paleozoic rocks are unconformably overlain by the Lower Jurassic Hazelton Group volcaniclastics and sediments of the Unuk River Formation.

A Lower Tertiary feldspar porphyry stock (related to the Coast Plutonic Complex) intrudes the Paleozoic rocks and is exposed along the west side of the Craig River.

Locally, the Log Jam Creek-Pyrite Creek area is underlain by metamorphosed Pennsylvanian to Permian sediments comprised of silicified metasediments, greenstone and breccia. In the lower Log

CAPSULE GEOLOGY

Jam Creek area the greenstone hosts abundant chlorite and sericite and is crosscut by abundant quartz veining. Some quartz veining hosts up to 5.0 centimetres of pyrite and chalcopyrite mineralization. A zone of massive pyrite, chalcopyrite and magnetite mineralization occurs within a breccia zone. Sample T065, taken from the massive mineralized breccia in the lower Log Jam Creek trench, assayed 0.43 grams per tonne gold and 0.0275 per cent copper. Samples of the massive sulphide mineralization from the trench assayed 1.03 grams per tonne gold, 1.9 grams per tonne silver, 0.003 per cent copper and 0.24 grams per tonne gold, 0.8 grams per tonne silver, 0.002 per cent copper, respectively (Assessment Report 16620).

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NW PROSPECTOR Aug./Sept., 1988
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/15 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/09/26 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 266** NATIONAL MINERAL INVENTORY:

NAME(S): **PYRITE CREEK**, ZEEHAN 12, STAR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 34 16 N
LONGITUDE: 131 11 56 W
ELEVATION: 275 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the east side of the Craig River on a small tributary creek called Pyrite Creek. Trench location from Plan numbers 12 and 12A (Poloni, 1987).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6271810
EASTING: 364902

COMMODITIES: Gold, Silver, Copper

MINERALS
SIGNIFICANT: Pyrite, Chalcopyrite, Magnetite
ASSOCIATED: Quartz, Carbonate
ALTERATION: Sericite, Chlorite
ALTERATION TYPE: Silicific'n, Sericitic, Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Breccia, Massive
CLASSIFICATION: Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au; G04 Besshi massive sulphide Cu-Zn
I02 Intrusion-related Au pyrrhotite veins
DIMENSION:
STRIKE/DIP: 030/50N
TREND/PLUNGE:
COMMENTS: Massive mineralization in a shear zone that strikes 030 to 035 degrees and dips 50 degrees northwest.

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Tertiary			Coast Plutonic Complex
Pennsylvan.-Permian			Stikine Assemblage

LITHOLOGY: Meta Sediment/Sedimentary
Brecciated Sandstone
Breccia
Silica Meta Sediment/Sedimentary

HOSTROCK COMMENTS: Lower Tertiary feldspar porphyry intrudes Paleozoic sediments and volcanics along the west side of the Craig River.

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks, Syn-mineralization, Post-mineralization
GRADE: Greenschist
COMMENTS: Located along contact between Coast Crystalline & Intermontane Belts.

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	54.0000	Grams per tonne
Gold	5.5000	Grams per tonne
Copper	3.6800	Per cent

COMMENTS: Sample T-132 from massive sulphide zone in Pyrite Creek trench.
REFERENCE: Assessment Report 16620.

CAPSULE GEOLOGY

The area is underlain by a sequence of metamorphosed Paleozoic sediments and volcanics comprised mainly of argillite, chert, quartzite, slate, shale, schist, minor limestone and tuff. The Paleozoic rocks are unconformably overlain by the Lower Jurassic Hazelton Group volcaniclastics and sediments of the Unuk River Formation.

A Lower Tertiary feldspar porphyry stock (related to the Coast Plutonic Complex) intrudes the Paleozoic rocks and is exposed along the west side of the Craig River.

CAPSULE GEOLOGY

Locally, the Log Jam - Pyrite Creek area is underlain by metamorphosed Pennsylvanian to Permian sediments comprised of silicified metasediments, sandstone and breccia. Along Pyrite Creek lenses of limestone occur within brecciated sandstone that hosts abundant quartz and carbonate. A zone of massive pyrite, chalcopyrite and magnetite occurs along a sheared zone that strikes 030 to 035 degrees and dips 45 to 50 degrees northwest. This zone of massive sulphide mineralization is accompanied by abundant sericite and chlorite within the altered sediment.

Sample T-111 collected from the Pyrite Creek trench assayed 0.64 grams per tonne gold, 4.0 grams per tonne silver, 0.135 per cent copper, 0.017 per cent lead and 0.008 per cent zinc. Two samples from the massive sulphide zone assayed 5.5 grams per tonne gold, 54.0 grams per tonne silver, 3.86 per cent copper and 2.2 grams per tonne gold, 16.8 grams per tonne silver, 0.437 per cent copper, respectively (Assessment Report 16620).

BIBLIOGRAPHY

EMPR EXPL 1983-527; 1987-C380
EMPR ASS RPT 11342, *16620
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
EMPR PF (*Poloni, J.R., (1987): Report on the Geological and Geochemical Surveys 1987 Zeehan (8-14) Mineral Claims, Oct. 17, 1987 in Statement of Material Facts #41/88 for Tanker Oil and Gas Ltd., May 13, 1988)
NW PROSPECTOR. Aug/Sept. 1988
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/15 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/09/26 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 267**

NATIONAL MINERAL INVENTORY:

NAME(S): **ZEEHAN**, ZEEHAN 13, ZEEHAN CENTRAL, STAR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 33 54 N
LONGITUDE: 131 12 46 W
ELEVATION: 213 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the east side of the Craig River. Mineralized location from Plan No. 11 (Poloni, 1987).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6271157
EASTING: 364027

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite Pyrrhotite Magnetite
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary			Coast Plutonic Complex
Pennsylvan.-Permian			Stikine Assemblage

LITHOLOGY: Meta Sediment/Sedimentary
Quartzite
Phyllite
Coarse Grained Sandstone
Siltstone
Feldspar Porphyry

HOSTROCK COMMENTS: Lower Tertiary feldspar porphyry intrudes Paleozoic metasediments and volcanics.

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Plutonic Rocks
GRADE: Greenschist
COMMENTS: Located at the boundary of Coast Crystalline & Intermontane Belts.

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	0.1200	Grams per tonne

COMMENTS: Sample T-125 of quartz vein with pyrite and pyrrhotite.
REFERENCE: Assessment Report 16620, Figure 10.

CAPSULE GEOLOGY

The area is underlain by a sequence of metamorphosed Paleozoic sediments and volcanics comprised mainly of argillite, chert, quartzite, slate, shale, schist, minor limestone and tuff. The Paleozoic sediments are intruded by a Lower Tertiary feldspar porphyry (related to the Coast Plutonic Complex) exposed along the west side of the Craig River.

Locally, the central Zeehan claims are underlain by metamorphosed Pennsylvanian to Permian sediments and volcanics. The metasediments are comprised of quartzite and phyllites with coarse sandstone and siltstone. Quartz veining and some quartz-carbonate veins host pyrite, chalcopyrite and magnetite mineralization within the altered sediments.

In 1987, a sample taken from a quartz vein with pyrite and pyrrhotite assayed 0.12 grams per tonne gold. Another sample taken from a quartz vein with pyrite and chalcopyrite assayed 0.05 grams per tonne gold and 0.015 per cent copper (Assessment Report 16620, Figure 10).

BIBLIOGRAPHY

EMPR EXPL 1983-527; 1987-C380
EMPR ASS RPT 11342, *16620
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
EMPR PF (*Poloni, J.R., (1987): Report on the Geological and Geochemical Surveys 1987 Zeehan (8-14) Mineral Claims, Oct. 17, 1987 in Statement of Material Facts #41/88 for Tanker Oil and Gas Ltd., May 13, 1988)
NW PROSPECTOR Aug./Sept., 1988
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/15 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/09/26 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 268**

NATIONAL MINERAL INVENTORY:

NAME(S): **HANGOVER TRENCH**, BURNIE 1, REG, STANLEY 7, JOHNNY MOUNTAIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 36 10 N
LONGITUDE: 131 07 19 W
ELEVATION: 140 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the west shores of the Jekill River about 1.0 kilometre south of the junction of the Craig and Jekill Rivers. Rock sample location from Hangover Trench (Ikona, C.K., 1987, Figure 5).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6275185
EASTING: 369738

COMMODITIES: Silver, Copper, Lead, Zinc, Gold

MINERALS

SIGNIFICANT: Freibergite, Tetrahedrite, Chalcopyrite, Pyrite, Pyrrhotite, Galena, Malachite, Azurite
ASSOCIATED: Quartz, Carbonate
ALTERATION: Malachite, Azurite, Clay, Sericite
ALTERATION TYPE: Oxidation, Argillic, Sericitic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia
CLASSIFICATION: Epigenetic, Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Breccia
Brecciated Rhyodacite
Brecciated Felsite
Volcaniclastic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks
GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1987

COMMODITY	GRADE	
Silver	709.6990	Grams per tonne
Gold	0.1710	Grams per tonne
Copper	1.0450	Per cent
Lead	0.3700	Per cent
Zinc	0.1810	Per cent

COMMENTS: Sample 1-32-072 from Hangover Trench mineralization.
REFERENCE: Property File: Ikona, C.K., 1987, page 8.

CAPSULE GEOLOGY

The oldest rock units consist of Upper Triassic epiclastic volcanics, marbles, sandstones and siltstones which may be correlative with the Stuhini Group. These, in turn, are overlain by sedimentary and volcanic rocks of the Jurassic Hazelton Group. The Hazelton Group is subdivided into the Lower Jurassic Unuk River Formation comprised predominantly of volcanics and sediments which include lithic tuffs, pillow lavas with carbonate lenses and thin-bedded siltstones. These are overlain by the Middle Jurassic Betty Creek Formation characterized by bright red and green volcaniclastic agglomerates, andesitic flows, chert and carbonate lenses.

The volcanic and sedimentary sequences were intruded by the Tertiary-Cretaceous Coast Plutonic Complex. A wide variety of intrusive phases are present including granodiorite, quartz monzonite and

CAPSULE GEOLOGY

diorite. Small satellitic plugs from the main batholith are important for localizing mineralization.

The predominant lithologies on the property consist of marine sediments, volcaniclastics and volcanic flows mainly of the Lower Jurassic Hazelton Group. A mass of quartz diorite, which is probably associated with the Lower Cretaceous Coast Plutonic Complex, intrudes the stratigraphic sequence in the southwest corner of the property.

A sedimentary facies appears to predominate at lower elevations along the Jekill River valley on the western side of the claim group. Volcaniclastics, agglomerates and flows become more prevalent higher in the section towards the centre of the property on the east side of the Jekill River.

A silver showing carrying up to 438.8 grams per tonne silver and 1.7 per cent copper occurs on the northwestern edge of the property on the west side of the Jekill River (Assessment Report 13244). The showing is called the Hangover Trench and consists of thin 1 to 3 centimetre wide, quartz and carbonate veins trending 045 and 315 degrees within brecciated and silicified rhyodacite or felsite. The breccia fragments are cemented by a quartz, carbonate and potassium feldspar matrix. Mineralization consists of freibergite, tetrahedrite, chalcopyrite, malachite, azurite, pyrite, pyrrhotite and galena. Clay and sericitic alteration is associated with the veins. Similar, but less extensive, veins containing the same mineralization occur on the property south of the trench and west of the Jekill River.

In 1987, a grab sample from the Hangover Trench assayed 0.17 grams per tonne gold, 709.7 grams per tonne silver, 1.05 per cent copper, 0.37 per cent lead and 0.18 per cent zinc. Another grab sample assayed 0.07 grams per tonne gold, 718.96 grams per tonne silver, 1.07 per cent copper, 0.15 per cent lead and 0.20 per cent zinc (Property File: Ikona, C.K., 1987)

BIBLIOGRAPHY

EMPR PF (*Ikona, C.K., (1987): Geological Report on the Dan 1-3 and Burnie 1-4 Claims, May 1987 in Statement of Material Facts, #123/87, for Androne Resources Ltd., Sept. 8, 1987)
EMPR EXPL 1983-524; 1984-387,388
EMPR ASS RPT *11327, *13244, *16957
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map Area (104B), Northwestern British Columbia, pages A1-A5 in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, Oct. 16-19, 1988
GSC P 89-1E, pp. 145-154
Placer Dome File

DATE CODED: 1988/07/15 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/09/28 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 269**

NATIONAL MINERAL INVENTORY:

NAME(S): **BURNIE 1**, AREA B, JOHNNY MOUNTAIN, ANDRONE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 35 23 N
LONGITUDE: 131 05 33 W
ELEVATION: 365 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the east side of the Jekill River; rock sample location in Area B from Ikona, C.R., 1987, Figure 5.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6273676
EASTING: 371501

COMMODITIES: Silver Gold

MINERALS

SIGNIFICANT: Pyrite Tetrahedrite Chalcopyrite Pyrrhotite Galena
ASSOCIATED: Quartz Carbonate Calcite
ALTERATION: Chlorite
ALTERATION TYPE: Silicific'n Propylitic Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Cretaceous			Coast Plutonic Complex

LITHOLOGY: Silica Meta Sediment/Sedimentary
Argillite
Argillaceous Siltstone
Volcanic Flow
Basalt
Rhyodacite
Fragmental Tuff
Lithic Tuff
Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Regional
RELATIONSHIP: Syn-mineralization
Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	15.8000	Grams per tonne
Gold	0.4500	Grams per tonne

COMMENTS: Rock sample 15945 from marine metasediments.
REFERENCE: Assessment Report 16957.

CAPSULE GEOLOGY

The oldest rock units consist of Upper Triassic epiclastic volcanics, marbles, sandstones and siltstones which may be correlative with the Stuhini Group. These, in turn, are overlain by sedimentary and volcanic rocks of the Jurassic Hazelton Group. The Hazelton Group is subdivided into the Lower Jurassic Unuk River Formation comprised predominantly of volcanics and sediments which include lithic tuffs, pillow lavas with carbonate lenses and thin-bedded siltstones. These are overlain by the Middle Jurassic Betty Creek Formation characterized by bright red and green volcaniclastic agglomerates, andesitic flows, chert and carbonate lenses.

The volcanic and sedimentary sequences were intruded by the

CAPSULE GEOLOGY

Tertiary-Cretaceous Coast Plutonic Complex. A wide variety of intrusive phases are present including granodiorite, quartz monzonite and diorite. Small satellitic plugs from the main batholith are important for localizing mineralization.

The predominant lithologies on the property consist of marine sediments, volcaniclastics and volcanic flows mainly of the Lower Jurassic Hazelton Group. A mass of quartz diorite, which is probably associated with the Cretaceous Coast Plutonic Complex, intrudes the stratigraphic sequence in the southwest corner of the property.

Low grade regional metamorphism has occurred within the marine sediments, and the foliation is usually conformable with bedding. Fault and shear zones trend 135 degrees and about 045 degrees occassionally following bedding planes. Andesite and basalt dykes follow the 045 degree structures while felsite dykes are related to the 135 degrees structures.

Mineralization consists mainly of pyrite with traces of tetrahedrite, chalcopyrite, pyrrhotite and galena in thin quartz and carbonate veins. These veins range in thicknesses from 1 millimetre to 1 metre, with silicification manifested by crystalline to opaque to grey-white milky quartz and calcite usually occurring as a secondary vein. Host rocks consist mainly of argillite, argillaceous siltstone and metasediments interbedded with basalt to rhyodacite flows and sills(?), fragmental tuff and lapilli tuff. Chlorite is abundant within these rocks which have undergone various degrees of propylitic, argillic or potassic alteration.

In 1987, a sample taken from a quartz vein within silicified metasediments assayed 0.45 grams per tonne gold, 15.8 grams per tonne silver, 0.01 per cent copper, 0.075 per cent lead and 0.018 per cent zinc (Assessment Report 16957). In 1984, two rock chip samples taken from this quartz vein system in Area B, within the silicified metasediments, assayed 5.8 grams per tonne gold, 61.7 grams per tonne silver, with 0.036 per cent zinc and 5.8 grams per tonne gold, 27.4 grams per tonne silver and 0.048 per cent zinc, respectively (Ikona, 1987).

BIBLIOGRAPHY

EMPR PF (*Ikona, C.K., (1987): Geological Report on the Dan 1-3 and Burnie 1-4 Claims, May 1987 in Statement of Material Facts #123/87 for Androne Resources Ltd., Sept. 8, 1987)
EMPR EXPL 1983-524; 1984-387,388
EMPR ASS RPT *11327, *13244, *16957
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map Area (104B), Northwestern British Columbia, pages A1-A5 in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, Oct. 16-19, 1988
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/15 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/09/28 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 270**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRACE**, BURNIE 2 (AREA C), ANDRONE, JOHNNY MOUNTAIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 36 02 N
LONGITUDE: 131 04 14 W
ELEVATION: 1082 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located east of the Jekill River, in the central portion of the property, south of First Basin Creek (Assessment Report 16957, Figure 3).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6274841
EASTING: 372885

COMMODITIES: Gold, Silver, Copper

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Galena, Malachite, Azurite
ASSOCIATED: Quartz
ALTERATION: Malachite, Azurite, Hematite, Chlorite, Pyrolusite
ALTERATION TYPE: Silicific'n, Pyrite, Propylitic, Argillic, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic, Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins
DIMENSION:
STRIKE/DIP:
TREND/PLUNGE: 135/
COMMENTS: Mineralized shear zones trend about 135 degrees.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Argillite
Argillaceous Siltstone
Siltstone
Greywacke
Lapilli Tuff
Crystal Fragmental Tuff
Agglomerate
Volcanic Flow
Volcanic Sill

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	113.6000	Grams per tonne
Gold	5.1400	Grams per tonne
Copper	3.7590	Per cent

COMMENTS: Sample 3139 from silicified and hematized sediments with 10.0 per cent pyrite and malachite.
REFERENCE: Assessment Report 16957.

CAPSULE GEOLOGY

The oldest rock units consist of Upper Triassic epiclastic volcanics, marbles, sandstones and siltstones which may be correlative with the Stuhini Group. These, in turn, are overlain by sedimentary and volcanic rocks of the Jurassic Hazelton Group. The Hazelton Group is subdivided into the Lower Jurassic Unuk River Formation comprised predominantly of volcanics and sediments which include lithic tuffs, pillow lavas with carbonate lenses and thin-bedded siltstones. These are overlain by the Middle Jurassic Betty Creek Formation character-

CAPSULE GEOLOGY

ized by bright red and green volcaniclastic agglomerates, andesitic flows, chert and carbonate lenses.

The volcanic and sedimentary sequences were intruded by the Tertiary-Cretaceous Coast Plutonic Complex. A wide variety of intrusive phases are present including granodiorite, quartz monzonite and diorite. Small satellitic plugs from the main batholith are important for localizing mineralization.

The predominant lithologies on the property consist of marine sediments, volcaniclastics and volcanic flows. The marine sediments consist of argillites, argillaceous siltstones, and siltstone with some quartzite, greywacke and carbonates. These sediments are interbedded with contemporaneous marine volcanics ranging from rhyodacite to basalt in composition. Volcanic facies include crystal fragmental tuff, lithic tuff, breccias, agglomerate, flows and sills.

Low grade regional metamorphism has occurred within the marine sediments which contain abundant chlorite. Foliation is usually conformable with the bedding. Fault and shear zones trend 135 degrees and about 045 degrees with andesite and basalt dykes following the 045 degree structures and felsite dykes related to the 135 degree structures.

Mineralization is associated with silicified fracture or shear zones that have undergone various degrees of calcic, propylitic and argillic alteration. The Grace 2 showing is situated in the central portion of the property, south of First Basin Creek. The showing consists of a sheared zone trending about 135 degrees, within bedded marine sediments and fragmental volcanic tuffs. The zone is silicified, pyritized and contains malachite and hematite as surface oxidation products. Pyrolusite occurs along fractures. In 1987, a sample of this silicified and hematized sediment with 10 per cent pyrite assayed 5.14 grams per tonne gold, 113.6 grams per tonne silver and 3.759 per cent copper. Another sample assayed 3.39 grams per tonne gold, 78.4 grams per tonne silver, 4.977 per cent copper with 0.445 per cent lead and 0.401 per cent zinc. A sample of silicified and pyritized tuffs and marine sediments assayed 11.21 per cent gold, 54.1 grams per tonne silver and 1.109 per cent copper (Assessment Report 16957).

The Grace 1 showing is located 400 metres northeast of the Grace 2 showing and also occurs within a silicified shear zone which trends 135 degrees in sediments and tuffs. Mineralization consists of pyrite, chalcopyrite, galena, malachite and azurite. A sample from this showing assayed 0.47 grams per tonne gold, 27.8 grams per tonne silver and 1.342 per cent copper (Assessment Report 16957).

BIBLIOGRAPHY

EMPR PF (*Ikona, C.K., (1987): Geological Report on the Dan 1-3 and Burnie 1-4 Claims, May 1987 in Statement of Material Facts #123/87 for Androne Resources Ltd., Sept. 8, 1987)
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EMPR ASS RPT *11327, *13244, *16957
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map Area (104B), Northwestern British Columbia, pp. A1-A5 in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, Oct. 16-19, 1988
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/15 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/09/28 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 271**

NATIONAL MINERAL INVENTORY:

NAME(S): **BURNIE 2**, AREA C, JOHNNY MOUNTAIN, ANDRONE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 35 47 N
LONGITUDE: 131 03 18 W
ELEVATION: 1530 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located east of Jekill River near the crest of First Basin; mineralized vein location from Assessment Report 16957, Figure 3.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6274349
EASTING: 373825

COMMODITIES: Lead, Silver, Gold, Copper, Zinc

MINERALS

SIGNIFICANT: Pyrite, Galena, Sphalerite, Malachite
ASSOCIATED: Quartz
ALTERATION: Hematite, Jarosite, Malachite, Pyrite, Chlorite
ALTERATION TYPE: Oxidation, Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins
DIMENSION: 0001 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Large mineralized quartz vein trends 045 degrees.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Dacitic Flow
Dacitic Tuff
Crystal Fragmental Tuff
Argillite
Argillaceous Siltstone
Siltstone
Agglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	106.1000	Grams per tonne
Gold	2.0900	Grams per tonne
Copper	0.1190	Per cent
Lead	1.3110	Per cent
Zinc	0.1320	Per cent

COMMENTS: Sample 15976 of mineralized quartz vein in silicified and pyritized volcanics and sediments.
REFERENCE: Assessment Report 16957.

CAPSULE GEOLOGY

The oldest rock units consist of Upper Triassic epiclastic volcanics, marbles, sandstones and siltstones which may be correlative with the Stuhini Group. These, in turn, are overlain by sedimentary and volcanic rocks of the Jurassic Hazelton Group. The Hazelton Group is subdivided into the Lower Jurassic Unuk River Formation comprised predominantly of volcanics and sediments which include lithic tuffs, pillow lavas with carbonate lenses and thin-bedded siltstones. These are overlain by the Middle Jurassic Betty Creek Formation character-ized by bright red and green volcaniclastic agglomerates, andesitic

CAPSULE GEOLOGY

flows, chert and carbonate lenses.

The volcanic and sedimentary sequences were intruded by the Tertiary-Cretaceous Coast Plutonic Complex. A wide variety of intrusive phases are present including granodiorite, quartz monzonite and diorite. Small satellitic plugs from the main batholith are important for localizing mineralization.

The predominant lithologies on the property consist of marine sediments, volcaniclastics and volcanic flows. The marine sediments consist of argillites, argillaceous siltstones and siltstone with some quartzite, greywacke and carbonates. These sediments are interbedded with contemporaneous marine volcanics ranging from rhyodacite to basalt in composition. Volcanic facies include crystal fragmental tuff, lithic tuff, breccias, agglomerate, flows and sills.

Low grade regional metamorphism has occurred within the marine sediments which contain abundant chlorite. Foliation is usually conformable with the bedding. Fault and shear zones trend 135 degrees and about 045 degrees with andesite and basalt dykes following the 045 degree structures and felsite dykes related to the 135 degree structures.

A large quartz vein, up to 1.0 metre thick, occurs above the Grace 1 and 2 showings (refer to Grace 104B 270), at an elevation of 1530 metres. It trends about 045 degrees within sheared dacitic flows and tuffs, and marine sediments. Mineralization associated with the quartz vein includes pyrite, galena, sphalerite and malachite. The zone is silicified, pyritized and contains abundant hematite, jarosite and pyrolusite. In 1987, a chip sample from this vein assayed 2.09 grams per tonne gold, 106.1 grams per tonne silver, 0.119 per cent copper, 1.311 per cent lead and 0.132 per cent zinc (Assessment Report 16957).

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GSC MEM 246
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map Area (104B), Northwestern British Columbia, pp. A1-A5 in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, Oct. 16-19, 1988
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/15 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/09/29 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 272**

NATIONAL MINERAL INVENTORY:

NAME(S): **DAN 2**, THIRD BASIN GOSSAN, AREA D, ANDRONE, JOHNNY MOUNTAIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 34 27 N
LONGITUDE: 131 01 37 W
ELEVATION: 1830 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located east of the Jekill River, south of Kalahin Mountain between two icefields. Sample location from Figure 5, Ikona, C.K., 1987.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6271824
EASTING: 375475

COMMODITIES: Lead, Zinc, Silver, Gold, Copper

MINERALS

SIGNIFICANT: Pyrite, Galena
ASSOCIATED: Quartz
ALTERATION: Hematite, Chlorite, Goethite, Jarosite, Pyrolusite, Pyrite
ALTERATION TYPE: Silicific'n, Oxidation, Chloritic, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Siliceous Siltstone
Siliceous Argillite
Gossan
Chlorite Siltstone
Hematite Argillite
Volcaniclastic
Tuff
Volcanic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: GOSSAN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	1087.1200	Grams per tonne
Gold	13.0300	Grams per tonne
Copper	0.2500	Per cent
Lead	1.5000	Per cent
Zinc	3.0600	Per cent

COMMENTS: Sample 32-094 taken from Third Basin gossan (Area D) of Dan 2 claim.
REFERENCE: Property File: Ikona, C.K., 1987, page 11.

CAPSULE GEOLOGY

The oldest rock units consist of Upper Triassic epiclastic volcanics, marbles, sandstones and siltstones which may be correlative with the Stuhini Group. These, in turn, are overlain by sedimentary and volcanic rocks of the Jurassic Hazelton Group. The Hazelton Group is subdivided into the Lower Jurassic Unuk River Formation comprised predominantly of volcanics and sediments which include lithic tuffs, pillow lavas with carbonate lenses and thin-bedded siltstones. These are overlain by the Middle Jurassic Betty Creek Formation character-ized by bright red and green volcaniclastic agglomerates, andesitic

CAPSULE GEOLOGY

flows, chert and carbonate lenses.

The volcanic and sedimentary sequences were intruded by the Tertiary-Cretaceous Coast Plutonic Complex. A wide variety of intrusive phases are present including granodiorite, quartz monzonite and diorite. Small satellitic plugs from the main batholith are important for localizing mineralization.

The predominant lithologies on the property consist of marine sediments, volcaniclastics and volcanic flows. The marine sediments consist of argillites, argillaceous siltstones, and siltstone with some quartzite, greywacke and carbonates. These sediments are interbedded with contemporaneous marine volcanics ranging from rhyodacite to basalt in composition. Volcanic facies include crystal fragmental tuff, lithic tuff, breccias, agglomerate, flows and sills.

Low grade regional metamorphism has occurred within the marine sediments which contain abundant chlorite. Foliation is usually conformable with the bedding. Fault and shear zones trend 135 degrees and about 045 degrees with andesite and basalt dykes following the 045 degree structures and felsite dykes related to the 135 degree structures.

Locally, mineralization appears to be associated with base metals in distinct quartz vein systems. Pyritization, of up to 15 per cent, is commonly associated with silicified zones. Upon weathering, these zones develop moderate to intense gossans composed of hematite, goethite, jarosite and pyrolusite.

Mineralization occurs within the Third Basin Gossan (Area D) in silicified and hematized argillites and silicified and chloritized siltstones. Within these altered sediments are abundant quartz stringers. As well, disseminated pyrite with traces of galena occur within these altered, gossanous rocks.

In 1987, a grab of argillite with quartz stringers and traces of pyrite and galena assayed 0.685 grams per tonne gold, 43.8 grams per tonne silver, 0.04 per cent copper, 0.674 per cent lead and 2.205 per cent zinc (Assessment Report 16957).

In 1984, a rock chip sample from Area D assayed 13.03 grams per tonne gold, 1097.1 grams per tonne silver, 0.25 per cent copper, 1.50 per cent lead and 3.06 per cent zinc (Property File: Ikona, C.K., 1987).

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EMPR PF (*Ikona, C.K., (1987): Geological Report on the Dan 1-3 and Burnie 1-4 Claims, May 1987 in Statement of Material Facts #123/87 for Androne Resources, Sept. 8, 1987)
EMPR EXPL 1983-524; 1984-387,388
EMPR ASS RPT *11327, *13244, *16957
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/15 CODED BY: LLC FIELD CHECK: N
DATE REVISED: 1988/09/29 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 273**

NATIONAL MINERAL INVENTORY:

NAME(S): **BACH**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B14E
BC MAP:
LATITUDE: 56 46 32 N
LONGITUDE: 131 02 48 W
ELEVATION: 730 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showings located around a small lake - about 5.0 kilometres north-northeast of Mt. Verrett and 10.0 kilometres due east of Twin Glacier. Location of rock sample from Assessment Report 9192.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6294271
EASTING: 374932

COMMODITIES: Copper, Silver, Gold

MINERALS
SIGNIFICANT: Pyrite
ALTERATION TYPE: Pyrite, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated, Vein
CLASSIFICATION: Igneous-contact, Epigenetic, Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Mesozoic	Stuhini	Undefined Formation	Coast Plutonic Complex

LITHOLOGY: Gossan
Agglomerate
Porphyritic Basalt Flow
Diorite
Limestone
Conglomerate

HOSTROCK COMMENTS: Dioritic stock intrude probable Upper Triassic volcanics and sediments.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
Plutonic Rocks RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

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

COMMODITY	GRADE	
Silver	8.9100	Grams per tonne
Gold	1.0300	Grams per tonne
Copper	0.1500	Per cent

COMMENTS: Rock sample 4000 D is a 10 kilogram sample.
REFERENCE: Assessment Report 9192.

CAPSULE GEOLOGY

The Bach claims straddle a contact between a Mesozoic dioritic intrusive related to the Coast Plutonic Complex and Triassic volcanics and sediments of the Stuhini Group. The diorite occupies the southwestern portion of the claims and is well exposed on the steeper slopes. Gossanous patches accentuate the diorite-volcanic contact and the sequence intermediate to mafic volcanics as well as a thick bed of limestone occur to the northeast of the diorite.

The volcanics strike about 130 degrees, sub-parallel to the volcanic-diorite contact. They are comprised mainly of porphyritic basalt flows and agglomerate. They are overlain by a slightly recrystallized banded limestone and coarse conglomerate.

The diorite consists of a light grey, medium-grained rock comprised mainly of feldspar and hornblende with minor biotite and quartz.

CAPSULE GEOLOGY

Pyrite is ubiquitous within all rocks, except the limestone, and occurs as fine-grained disseminations. Near the diorite-volcanic contact higher concentrations of pyrite are marked by brown-red gossan zones. Within these gossanous zones the pyrite occurs as disseminations and fracture fillings.

In 1980, a 10.0 kilogram rock sample was taken from a pyrite-rich gossan zone and assayed 1.03 grams per tonne gold, 8.91 grams per tonne silver, 0.15 per cent copper and 0.01 per cent lead with 0.01 per cent zinc (Assessment Report 9192).

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GSC MAP 9-1957; 311A; 1418A
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/15 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/12/22 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 274**

NATIONAL MINERAL INVENTORY:

NAME(S): **XRAY**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 31 02 N
LONGITUDE: 130 13 50 W
ELEVATION: 1509 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Identified from Esso Minerals Unpublished Report. Located from Open File 1988-4.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6264326
EASTING: 424283

COMMODITIES: Copper Molybdenum

MINERALS
SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Intermediate Pyroclastic
Intermediate Flow
Mafic Pyroclastic
Mafic Flow

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Molybdenite and minor chalcopyrite occur as scattered disseminations and as fracture fillings with and without quartz (Lomenda, 1983). Mineralization occurs in an area primarily underlain by intermediate to mafic pyroclastic and flows of the Lower Jurassic Unuk River Formation, Hazelton Group (Open File 1988-4).

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EMPR AR 1935-B7,B12; 1961-9; 1962-8; 1964-19; 1967-31; 1968-45
EMPR GEM 1972-515; 1974-334
EMPR EXPL 1975-E182; 1976-E182; 1977-E223; 1980-464
EMPR BULL 63
EMPR OF 1988-4
EMPR FIELDWORK 1987, pp. 199
GSC MAP 9-1957; 1418A
EMPR PF (*Lomenda, M.G. (1983): Geology, Alteration and Mineralization of the Mitchell-Sulphurets Ridge and Snowfield Gold Zone for Esso Minerals Canada Ltd. (unpublished); Geology Map-1:31250 scale, Newmont Exploration of Canada Ltd., 1960's)
Kirkham, R.V., (1963): The Geology and Mineral Deposits in the Vicinity of the Mitchell and Sulphurets Glaciers, M.Sc. Thesis, University of British Columbia
GSC P 89-1E, pp. 145-154
Simpson, T.M., (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho

DATE CODED: 1988/07/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/09/29 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 275**

NATIONAL MINERAL INVENTORY:

NAME(S): **DANE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 31 36 N
LONGITUDE: 130 16 12 W
ELEVATION: 625 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Identified from Esso Minerals Canada Ltd., Unpublished Report (located in Property File).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6265421
EASTING: 421876

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Massive
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
L04 Porphyry Cu ± Mo ± Au
I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Intermediate Pyroclastic
Intermediate Flow
Mafic Pyroclastic
Mafic Flow
Monzonite

HOSTROCK COMMENTS: Mineralized volcanics occur immediately south of monzonitic intrusive.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Massive chalcopyrite in veinlets was reported to occur in the country rock about 0.5 kilometres west of the toe of Mitchell Glacier (Bridge et al, 1981).

The area is underlain primarily by intermediate to mafic pyroclastics and flows of the Lower Jurassic Unuk River Formation, Hazelton Group. A stock of Jurassic monzonite to quartz monzonite has intruded the strata to the immediate north (Open File 1988-4).

BIBLIOGRAPHY

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EMPR AR 1935-B7,B12; 1961-9; 1962-8; 1964-19; 1967-31; 1968-45
EMPR GEM 1972-515; 1974-334
EMPR EXPL 1975-E182; 1976-E182; 1977-E223; 1980-464
EMPR BULL 63
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EMPR PF (*Bridge, D.A., Ferguson, L.J. and Brown, M.G. (1981): 1980 Exploration Report on the Sulphurets Property, p. 31 for Esso Minerals Canada Ltd. (unpublished); Bridge, D. and Melnyk, W. (1982): 1981 Exploration Report on the Sulphurets Property for Esso Minerals Canada Ltd. (unpublished); Melnyk, W. (1983): 1983 Exploration Report on the Sulphurets Property for Esso Minerals Canada Ltd. (unpublished); Geology Map-1:31,250 Scale-Newmont Exploration of Canada Ltd., 1960's)
Kirkham, R.V., (1963): The Geology and Mineral Deposits in the Vicinity of the Mitchell and Sulphurets Glaciers, M. Sc. Thesis, University of British Columbia
Simpson, T.M., (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis,

BIBLIOGRAPHY

University of Idaho

DATE CODED: 1988/09/30 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 276**

NATIONAL MINERAL INVENTORY:

NAME(S): **TEDRAY 12**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 29 14 N
LONGITUDE: 130 13 32 W
ELEVATION: 1219 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located approximately 750 metres east of Sulphurets Glacier and 3 kilometres northwest of Brucejack Lake (Open File 1988-4). Identified from Newmont Exploration Geology Map (Property File). Occurs in central area of Tedray 12 claim.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6260981
EASTING: 424531

COMMODITIES: Gold Silver Copper Iron

MINERALS
SIGNIFICANT: Chalcopyrite Magnetite Arsenopyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Industrial Min.
TYPE: I02 Intrusion-related Au pyrrhotite veins
I05 Polymetallic veins Ag-Pb-Zn±Au
G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Siltstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

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

COMMODITY	GRADE	
Silver	7.8900	Grams per tonne
Gold	12.3400	Grams per tonne

REFERENCE: Bridge et al, 1981: 1980 Exploration Rpt. for Esso Minerals, Unpubld.

CAPSULE GEOLOGY

The area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks consist of mixed sedimentary rocks overlain by volcanics of andesitic composition. The Brucejack fault and associated splay faults cut the country rock in a north-south to northwest direction. North of Brucejack Lake, the fault system is bounded on the east by rocks of the Lower Jurassic Betty Creek Formation, Hazelton Group. A variety of Jurassic hornblende syenite and alkali feldspar syenites occur in the area.

Chalcopyrite, magnetite and arsenopyrite occur in an area comprised of siltstone (Newmont Exploration Ltd., Geology Map-Property File). The arsenopyrite occurs in a vein about 200 metres south of the chalcopyrite-magnetite showing. Grab samples of the vein assayed 12.34 grams per tonne gold and 7.89 grams per tonne silver (Bridge et al, 1981).

The character of the copper-iron showing is not documented.

BIBLIOGRAPHY

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EMPR OF *1988-4
EMPR FIELDWORK 1987, pp. 199-209
GSC MAP 9-1957; 1418A
EMPR PF (*Bridge, D.A., Ferguson, L.J., Brown, M.G.(1981): 1980 Exploration Report on the Sulphurets Property for Esso Minerals Canada Ltd. (unpublished), p. 49; Geology Map-1:31250 scale, Newmont Exploration of Canada Ltd., 1960's)

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Simpson, T.M., (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho

DATE CODED: 1988/07/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 277**

NATIONAL MINERAL INVENTORY:

NAME(S): **RR**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 28 21 N
LONGITUDE: 130 13 24 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 2.5 kilometres west of Brucejack Lake adjacent Sulphurets Glacier (Open File 1988-4).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6259340
EASTING: 424639

COMMODITIES: Barite

MINERALS
SIGNIFICANT: Barite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: I10 Vein barite

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Sediment/Sedimentary Rock
Volcanic Rock

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Barite veins occur adjacent to the western edge of Sulphurets Glacier near Sulphurets Creek (Open File 1988-4). The area is underlain by sediments and volcanics of the Lower Jurassic Unuk River Formation, Hazelton Group.

BIBLIOGRAPHY

EMPR OF *1988-4
EMPR BULL 63
EMPR FIELDWORK 1982, p. 171; 1987, pp. 199-209
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/09/29 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 278**

NATIONAL MINERAL INVENTORY:

NAME(S): **KERR 15**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 26 46 N
LONGITUDE: 130 15 36 W
ELEVATION: 1800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 500 metres east of Sulphurets Glacier West. Identified from Minister of Mines, Annual Report 1968, figure 8 and Open File 1988-4.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6256444
EASTING: 422327

COMMODITIES: Copper Lead

MINERALS
SIGNIFICANT: Chalcopyrite Galena
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Sediment/Sedimentary Rock
Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This occurrence is situated on the western flank of Sulphurets Mountain approximately 600 metres east of Sulphurets Glacier West.

Chalcopyrite and galena occur in an area underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group (Annual Report 1968, Figure 8). The area is underlain by mixed sedimentary rocks with tuffaceous interbeds (Open File 1988-4). No further details of the showing are available.

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EMPR AR *1968, Figure 8
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GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B56)

DATE CODED: 1988/07/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/09/13 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 279**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIKE PEAK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 27 07 N
LONGITUDE: 130 18 39 W
ELEVATION: 1829 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located near the top of Mike Peak Mountain (Open File 1988-4).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6257152
EASTING: 419206

COMMODITIES: Asbestos

MINERALS
SIGNIFICANT: Asbestos Actinolite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Industrial Min.
TYPE: M06 Ultramafic-hosted asbestos

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unuk River	

LITHOLOGY: Phyllite
Pelite
Tuff

HOSTROCK COMMENTS: Mineralization occurs in metamorphosed pelites and tuffs.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
COMMENTS: Mineralization occurs within a belt of metamorphic rock.

PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

Actinolite asbestos is reported to occur within a north trending band of phyllites between Sulphurets Glacier and Ted Morris Glacier (Newmont Map). These phyllites were developed from pelites and tuffs now believed corellative, with rocks of the Upper Triassic Stuhini Group. Metamorphism is believed to be Cretaceous. The genesis and limits of this belt are unknown (Fieldwork 1987, page 205).

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DATE CODED: 1988/07/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/07/15 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 280**

NATIONAL MINERAL INVENTORY:

NAME(S): **TREATY EAST**, TREATY, TREATY CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 35 34 N
LONGITUDE: 130 07 26 W
ELEVATION: 1525 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located between Treaty and South Treaty Glacier. Identified from Assessment Report 16841.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6272622
EASTING: 430984

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L02 Porphyry-related Au H05 Epithermal Au-Ag: low sulphidation

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Andesitic Tuff
Dacitic Tuff
Andesite
Dacite
Tuffaceous Breccia
Lapilli Tuff
Volcanic Flow

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1987

COMMODITY	GRADE	
Gold	2.3600	Grams per tonne

COMMENTS: Sample TR 56.
REFERENCE: Assessment Report 16841.

CAPSULE GEOLOGY

The Treaty East occurrence area is underlain by massive green and grey andesitic to dacitic tuff, lapilli tuff, tuff breccia and minor flows of the Lower Jurassic Betty Creek Formation, Hazelton Group (Open File 1988-4). The beginning of a large gossanous area, known as the Treaty Gossan (104B 078), occurs within a few hundred metres to the southwest of the occurrence.

A grab sample of andesite containing 10 per cent disseminated pyrite and minor quartz veinlets assayed 2.36 grams per tonne gold and 3.3 grams per tonne silver (Assessment Report 16841). The veinlets are up to 1 millimetre wide and have no visible sulphides. The sample was taken from the dump pile of an old trench.

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EMPR BULL 63
EMPR EXPL 1980-466; 1986-C441; 1987-C377
EMPR FIELDWORK 1987, pp. 199-209
EMPR OF 1988-4
EMPR PF (Britten, R.M., (1983): Regional Geological Assessment of the Stewart-Sulphurets Area, and Geology and Alteration of the Sulphurets Prospect Area for Esso Minerals Canada Ltd.

BIBLIOGRAPHY

(unpublished); Geology Map - 1:31,250 scale, Newmont Exploration of Canada Ltd., 1960's)
GSC MAP 9-1957; 1418A
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Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B35)
Simpson, T.M., (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho

DATE CODED: 1988/07/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/11/17 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 281**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTHWEST (MCLYMONT)**, MCLYMONT 3, WARRIOR 4

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 50 21 N
LONGITUDE: 130 56 57 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of mineralized zone west of Newmont Lake on the McLymont 3 claim; location of 1987-88 diamond drilling (Assessment Report 16932).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6301176
EASTING: 381091

COMMODITIES: Gold, Silver, Copper, Barite

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite, Galena, Magnetite, Specularite, Barite
ASSOCIATED: Barite, Calcite, Gypsum
ALTERATION: Hematite, Garnet
ALTERATION TYPE: Silicific'n, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound, Layered, Podiform, Breccia
CLASSIFICATION: Epigenetic, Replacement, Industrial Min.
TYPE: I02 Intrusion-related Au pyrrhotite veins; G07 Subaqueous hot spring Ag-Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Unnamed/Unknown Informal
Upper Paleozoic			Stikine Assemblage

LITHOLOGY: Bedded Sandstone, Silica Sandstone, Marble, Chert, Hornfels, Conglomerate, Granite

HOSTROCK COMMENTS: Jurassic(?) quartz-rich granite intrudes Mississippian and Permian Stikine Assemblage sediments and volcanics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
PLUTONIC ROCKS RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	1362.1400	Grams per tonne
Gold	55.0200	Grams per tonne
Copper	0.9700	Per cent

COMMENTS: 11.2 metre intersection from Diamond-drill Hole 87-29.
REFERENCE: Assessment Report 16932.

CAPSULE GEOLOGY

The Northwest Zone (McLymont Creek property, McLymont 3 claim) is underlain by Mississippian and Permian sediments and volcanics of the Stikine Assemblage. The Mississippian package structurally overlies Permian stratigraphy along a northeast trending, steeply dipping reverse or thrust fault. The Mississippian straigraphy consists of a thin bedded clastic marine succession comprising coarse crinoidal limestone, siltstone, sandstone, turbidites, lesser chert and polymictic conglomerate. Permian(?) stratigraphy consists of hornblende-plagioclase porphyritic maroon andesite breccia flows, maroon lahar, lapilli tuff, and associated volcanic sediments. A Jurassic quartz rich granite pluton intrudes the stratified rocks and

CAPSULE GEOLOGY

occurs as dykes along pervasive northeast trending faults.

Gold mineralization is associated with major steeply dipping northeasterly trending structures. Mineralization occurs as stratabound replacement type bodies and replacement mantos within and along contacts of gently dipping Mississippian marble and chert layers. Locally, the marble is replaced by extensive barite and barite/pyrite breccia. Gold is associated with silver and copper, zinc and lead is associated with pyrite, magnetite, chalcopyrite, specular hematite, calcite, quartz and minor barite.

In 1987, an 11.2 metre intersection from drill hole 87-29 assayed 55.02 grams per tonne gold, 1362.14 grams per tonne silver and 0.97 per cent copper. Another 9.1 metre intersection from drill hole 87-25 assayed 13.85 grams per tonne gold, 3.77 grams per tonne silver and 0.23 per cent copper (Gulf International Minerals Ltd., 1988 Information Circular). A rock chip sample, taken from the Northwest grid area, assayed 15.09 grams per tonne gold and 7.54 grams per tonne silver (Assessment Report 16932).

Diamond drilling in 1989, defined mineralization in the Northwest Zone along a strike length of 300 metres to a depth of 200 metres. Selected samples assayed 6.58 grams per tonne gold and 4.80 grams per tonne silver over a 7.2 metre intersection (drill hole 89-59), 10.59 grams per tonne gold, 3.43 grams per tonne silver, and 0.11 per cent copper over a 3.9 metre intersection (drill hole 89-64) (Gulf International Minerals Limited, Press Release, 1989).

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EMPR GEM 1972-519
EMPR EXPL 1980-470; *1983-529
EMPR ASS RPT 4150, 9224, *10418, *11319, *16932
GSC MEM 246
GSC MAP 9-1957; 311A; 1418A
V STOCKWATCH Jun.9,Oct.28,Dec.4, 1987; Aug.23, 1988
GCNL #110,#217, 1987; #45,#107,#137,#138,#151,#159,#181, 1988
PR REL (Gulf International Minerals Ltd., Nov.6, 1986; Jun.8,Jul.16, Sept.15,Oct.28, 1987; *Sept.19,Oct.4,5, 1988)
EMPR PF (*Yeager, D.A. and Ikona, C.K. (1987): Geological Report on the McLymont Claim Group, Feb. 1987 in Statement of Material Facts #70/87 for Gulf International Minerals Ltd., May 14, 1987; *Gulf International Minerals, McLymont Project, 1988 Information Circular)
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
NW PROSPECTOR Aug/Sept., 1988, p. 19
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Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B5)

DATE CODED: 1988/07/15 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/12/05 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 282**

NATIONAL MINERAL INVENTORY: 104B15 Cu1

NAME(S): **GAB 9**, WARRIOR 7, GAB 7, KEN, JAZZMAN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 51 00 N
LONGITUDE: 130 55 19 W
ELEVATION: 1160 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located along a northeast trending fault structure that cuts through the centre of the Gab 7 claim.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6302335
EASTING: 382785

COMMODITIES: Gold, Silver, Copper

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Magnetite
ASSOCIATED: Barite
ALTERATION: Limonite
COMMENTS: Sulphide-oxides.
ALTERATION TYPE: Oxidation, Pyrite, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated, Vein
CLASSIFICATION: Skarn, Epigenetic
TYPE: K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic			Stikine Assemblage

LITHOLOGY: Skarn
Sediment/Sedimentary Rock
Andesite Agglomerate
Andesite
Limestone

HOSTROCK COMMENTS: The Stikine Assemblage comprises Mississippian and Permian sediments and volcanics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	17.1400	Grams per tonne

COMMENTS: Gold-bearing sulphide oxide material from northeast trending fault.
REFERENCE: Vancouver Stockwatch, September 26, 1988.

CAPSULE GEOLOGY

The Gab claims are underlain by Permian and Mississippian volcanics and sediments of the Stikine Assemblage. The Mississippian stratigraphy overlies the Permian separated by a steep northeast trending thrust or reverse fault.

Mineralization on the property is associated with skarn development within the Mississippian sediments. The mineral assemblage consists of massive to disseminated magnetite, barite, pyrite and chalcopyrite with associated gold values.

To the north the rocks are predominantly sedimentary units of Paleozoic age consisting of crinoidal limestone, chert, quartzite, argillite, slate and schist.

Mineralization on the Gab claims is associated with a major northeast trending fault extending through the Gab 7 and 9 claims. Gold-bearing sulphide oxide material found within this northeast

CAPSULE GEOLOGY

trending fault on the Gab 9 claim has returned values in excess of 17.14 grams per tonne gold (Vancouver Stockwatch, September 26, 1988). Anomalous gold values are also reported along this northwest structure on the Gab 7 claim (the Northwest showing - 104B 333).

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EMPR GEM 1972-519
EMPR EXPL 1980-470; 1983-529
EMPR ASS RPT 536, *4150, 9224, *10418, 11319, *17210
GSC MEM 246
GSC MAP 9-1957; 311A; 1418A
GCNL #180, 1988
V STOCKWATCH Aug.30(p.12),*Sept.26(p.11),Dec.15(p.l2), 1988
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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/07/15 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/12/05 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 283**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOODOO WEST 6**, HOODOO WEST 1

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B14W
BC MAP:
LATITUDE: 56 46 47 N
LONGITUDE: 131 25 36 W
ELEVATION: 814 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the western side of Hoodoo Glacier between Hoodoo Mountain and Surprise Mountain to the southwest.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6295493
EASTING: 351733

COMMODITIES: Copper Molybdenum

MINERALS
SIGNIFICANT: Chalcopyrite Molybdenite Arsenopyrite Pyrite
ALTERATION TYPE: Argillic
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary			Coast Plutonic Complex

LITHOLOGY: Quartz Monzonite
Gossan

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks
PHYSIOGRAPHIC AREA: Boundary Ranges
COMMENTS: Porphyry mineralization associated with Coast Plutonic intrusives.

CAPSULE GEOLOGY

The Hoodoo West occurrence is situated in an area where numerous small plutons are separated by Paleozoic to Mesozoic stratified rocks. The property is underlain by both intrusive and stratified rocks with areas to the south and west becoming dominantly intrusive while stratified rocks continue to the northeast. Locally, three groups of bedded rocks have been recognized, all of which have been cut by intrusives. The oldest rocks consist of schistose basaltic to rhyolitic pyroclastics, sediments and limestones. The second unit is made up predominantly of thin-bedded cherts with minor siltstone. Quartz-pyrite fracture fillings do occur within this unit. The third unit consists of well-bedded coarse to fine volcaniclastics, sediments and, possibly, minor flows. Intrusives noted include quartz monzonite, biotite granodiorite, hornblendite, fine-grained feldspar porphyry diorite and a quartz-eye felsite.

Minor copper and molybdenite mineralization occurs in a quartz stockwork within a quartz monzonite intrusive. A large gossanous zone of intense argillic alteration within the quartz monzonite yielded subanomolous values of arsenic and antimony.

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GSC MEM 246
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Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B7)

DATE CODED: 1988/07/15 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/10/21 REVISED BY: JNR FIELD CHECK: N

MINFILE NUMBER: **104B 284**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOODOO NORTH**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B14W
BC MAP:
LATITUDE: 56 49 50 N
LONGITUDE: 131 19 09 W
ELEVATION: 1130 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located immediately to the north of Hoodoo Mountain, north of the Iskut River (Note: located just north of Hoodoo Discovery 104B 127).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6300922
EASTING: 358491

COMMODITIES: Silver

MINERALS
SIGNIFICANT: Pyrite Argentite Pyrargyrite Cinnabar Bornite
ALTERATION TYPE: Carbonate Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au G07 Subaqueous hot spring Ag-Au
DIMENSION: 0500 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Gossan zone.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Upper Triassic			Stikine Assemblage

LITHOLOGY: Carbonatized Mafic Pyroclastic
Gossan

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact Regional Plutonic Rocks RELATIONSHIP: GRADE: Greenschist
COMMENTS: Near contact between Coast Crystalline & Intermontane tectonic belts.

CAPSULE GEOLOGY

The Hoodoo occurrence is underlain by a sequence of mafic to felsic volcanics, primarily pyroclastic in character. The volcanic rocks have been subsequently intruded by a gabbroic body. Late intrusive mafic dykes related to recent volcanism in the area have intruded all rock types.

The volcanics trend west-northwest, dipping from 70 degrees north to near vertical. The mafic to intermediate volcanics are generally dark grey to black and consist of a series of tuffs and lapilli tuffs with minor agglomeratic horizons. The felsic volcanics are typically pyroclastic in nature, made up predominently of tuffs, lapilli tuffs and agglomerates. Also recognized are two unique sub-units of finely laminated cherty tuffs and heterolithic tuffs.

The North Zone occurs at the structural top of a carbonatized mafic volcanic unit. Anomalous silver values occur along the entire exposed strike length of the 500 metre long gossan zone. The silver rich veins are sporadic and do not appear to be fracture controlled. Mineralization within the pyritized, quartz-carbonate altered zones includes argentite, pyrargyrite, cinnabar and bornite (Equity Preservation Corp., 1988).

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EMPR ASS RPT 11331, *12614
EMPR EXPL 1984-389
GSC MEM 246
V STOCKWATCH Nov.16, 1988, p. 12
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Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B6)

DATE CODED: 1988/07/15 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/10/18 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 285**

NATIONAL MINERAL INVENTORY:

NAME(S): **TEDRAY 10**, MCQUILLAN, SULPHURETS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E 104B08W
BC MAP:
LATITUDE: 56 29 36 N
LONGITUDE: 130 15 06 W
ELEVATION: 762 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: This occurrence is located adjacent the northern edge of Sulphurets Glacier. Located from Open File, Figure 6, 1988-4. Occurs on Tedray 9 and Tedray 10 claims.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6261690
EASTING: 422936

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Malachite
COMMENTS: Other copper minerals may occur.

ALTERATION:	Malachite	Pyrite	Quartz	Sericite
ALTERATION TYPE:	Oxidation	Pyrite	Silicific'n	Sericitic

MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Arkosic Wacke
Lithic Wacke
Siltstone
Conglomerate
Tuff
Monzonite
Quartz Monzonite

HOSTROCK COMMENTS: Mineralization occurs in an area of sedimentary rocks near Jurassic aged monzonitic intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1980

COMMODITY	GRADE	
Copper	0.2400	Per cent

COMMENTS: Sampled across 48.77 metres. Other samples contain up to 1.03 grams per tonne gold.
REFERENCE: Esso Minerals Canada Ltd., Unpublished Report by Bridge et al, 1981.

CAPSULE GEOLOGY

This occurrence is located near the northern margin of Sulphurets Glacier and is primarily underlain by mixed sedimentary rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. These sediments may consist of arkosic and lithic wacke, siltstone, conglomerate and tuffaceous interbeds. Intrusions of Jurassic monzonite to quartz monzonite are exposed nearby to the north and southeast (Open File 1988-4).

Copper mineralization, up to 1 per cent, is reported to occur in an area of pyrite-quartz-sericite alteration (Newmont Exploration Ltd. Map-Property File). Malachite is the only form of copper mineralization reported (Open File 1988-4).

A sample taken across 48.77 metres contained 0.245 per cent copper. Higher grade sections contained up to 1.03 grams per tonne gold (Bridge et al, 1981).

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DATE CODED: 1988/07/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/09/15 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 286**

NATIONAL MINERAL INVENTORY:

NAME(S): **MCK 6**, SEABEE, MCQ

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01W
BC MAP:
LATITUDE: 56 14 25 N
LONGITUDE: 130 20 08 W
ELEVATION: 1370 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of McK 6 claim (Assessment Report 96).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6233624
EASTING: 417225

COMMODITIES: Zinc Copper Lead

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

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Tertiary			Unnamed/Unknown Informal

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesite
Porphyritic Andesite
Siltstone
Tuff
Limestone
Quartz Diorite

HOSTROCK COMMENTS: Isotopic Age reference from Brown, D.A., 1987.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The McK 6 occurrence lies 3.3 kilometres north of the Granduc ore deposit (104B 021), south of the South Leduc Glacier. The occurrence is located near the east boundary of the 120-metre-wide, north-trending South Unuk cataclasite zone (Lower Jurassic). The area is underlain by north striking and steeply west dipping volcanics and sediments of the Lower Jurassic Unuk River Formation (Hazelton Group). Andesites and porphyritic andesites lie to the east and siltstones, tuffs and limestones lie to the west. West of the volcanic-sediment contact the rocks are metamorphosed to chlorite schist, biotite schist, impure sheared limestone, limey argillite and chert. All rocks are cut by Tertiary quartz diorite plutons and dykes.

Mineralization consists pyrite and sphalerite within narrow quartz veins within the andesite. Considerable quartz float, with pyrite, chalcopyrite and galena, lies 500 kilometres to the west.

BIBLIOGRAPHY

EMPR ASS RPT *96, 328
EMPR BULL 63
EMPR MAP 1956 (Map of the Granduc Area)
GSC MAP 9-1957; 1418
GSC P 89-1E, pp. 145-154
Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak Premier Mine, Northwestern British Columbia, M.Sc. Thesis, University of British Columbia (in Property File: 104B 054)
Equity Preservation Corp. (Stewart-Sulphurets-Iskut Compilation, Dec.

BIBLIOGRAPHY

1988, Showing No. B74)

DATE CODED: 1988/07/25 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 287**

NATIONAL MINERAL INVENTORY:

NAME(S): **COREY 6**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 26 15 N
LONGITUDE: 130 25 45 W
ELEVATION: 1700 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Mineralization is reported to occur on the Corey 6 claims which exist on and west of Unuk Finger Mountain (Assessment Report 16364).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6255690
EASTING: 411879

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: M02 Tholeiitic intrusion-hosted Ni-Cu

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal
Eocene			Lee Brant Stock

ISOTOPIC AGE: 52.4 +/- 1.8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Hornblende

LITHOLOGY: Coarse Grained Gabbro
Diorite

HOSTROCK COMMENTS: Mineralization occurs in gabbro related to a Jurassic and younger diorite intrusion emplaced in Unuk River Formation.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine
COMMENTS: Mineralization occurs in stock of diorite emplaced in Stikina Terrane.

CAPSULE GEOLOGY

The occurrence is located on the Corey 6 claim which exist immediately west of Unuk Finger Mountain. The area is underlain by the Lower Jurassic Unuk River Formation, Hazelton Group. The formation consists of thick-bedded epiclastic volcanic rocks and lithic tuffs with closely associated pillow lavas, carbonate lenses and thin-bedded siltstones. The rock is moderately folded and extensively faulted according to Grove (Bulletin 63). A diorite stock of Middle Jurassic and younger age is emplaced in the country rock along the northeast part of the claim area. The northern contact of the Eocene Lee Brant Stock occurs within a few kilometres to the southwest of the occurrence.

Alteration and deformation in the area are complex and are related to regional folding and Jurassic and Tertiary plutonism. In addition the degree of dynamic metamorphism increases toward the South Unuk River cataclasite zone (Grove, Bulletin 63).

A coarse-grained black gabbro plug apparently part of, or related to, the Jurassic diorite stock is reported to contain 2.5 per cent coarse pyrite and pyrrhotite with traces of fine chalcopyrite (Assessment Report 16364).

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EMPR PF (Geology Map-1:31,250 Scale - Newmont Exploration of Canada Ltd., 1960's)
EMPR BULL 63
EMPR OF 1988-4; 1989-10
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

BIBLIOGRAPHY

Pers. Comm. (D.J. Alldrick: Lee Brant Stock age date)

DATE CODED: 1988/07/21 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 288**

NATIONAL MINERAL INVENTORY:

NAME(S): **CATSPAW SOUTH**, CATSPAW

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 17 09 N
LONGITUDE: 130 05 35 W
ELEVATION: 1234 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 4.5 kilometres south of Frank Mackie Glacier and 1.75 kilometres west of the Bowser River (Prospectus-Wedgewood Resources Ltd.).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6238430
EASTING: 432334

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Galena Pyrite Arsenopyrite
ASSOCIATED: Quartz
ALTERATION: Sericite Silica
ALTERATION TYPE: Sericitic Silicific'n
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Quartz Sericite Schist
Siltstone
Tuff
Feldspar Porphyry

HOSTROCK COMMENTS: Mineralization is presumed to be in sericite schist alteration zones although not specifically indicated in reports.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP:
GRADE:

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	328.3000	Grams per tonne
Gold	2.5500	Grams per tonne

COMMENTS: Sample taken over a 1.68 metre width.
REFERENCE: Assessment Report 17027.

CAPSULE GEOLOGY

The occurrence is located between Frank Mackie and Berendon Glacier. The area is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group, consisting mainly of siltstone and ash tuffs with lesser dust and lapilli tuffs and interbedded augite porphyry. Feldspar porphyry flows also occur (Open File 1987-22).

Mineralization is associated with zones of alteration consisting of quartz-sericite-schist which cut across the strata. A brecciated quartz stockwork averaging 1.22 metres in width over an indicated length of 150 metres was discovered in 1987. The structure has a trend of 120 degrees with an apparent vertical dip. Mineralization consists of galena, pyrite, and arsenopyrite. Several chip samples contained significant gold and silver with the best assaying 2.55 grams per tonne gold, 328.3 grams per tonne silver and 23,885 grams per tonne arsenic over 1.68 metres (Assessment Report 17027).

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EMPR ASS RPT 8768, 15975, *17027
EMPR EXPL 1980-466

BIBLIOGRAPHY

EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102; 1987, pp. 199-209
EMPR OF 1987-2; 1988-4
EMPR BULL 63
EMPR PF (*Prospectus - Wedgewood Resources Ltd., 1988)
GSC MAP 9-1957; 307A; 315A; 1418A
GSC MEM 175
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/08/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/11/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 289**

NATIONAL MINERAL INVENTORY:

NAME(S): **DELTA NORTHEAST**, DELTA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 22 28 N
LONGITUDE: 130 07 15 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 5 kilometres north of Frank Mackie Glacier (Assessment Report 14607).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6248319
EASTING: 430775

COMMODITIES: Gold, Silver, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Sphalerite, Galena, Chalcopyrite, Argentite, Gold, Tetrahedrite, Bornite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Malachite, Azurite, Sericite
ALTERATION TYPE: Oxidation, Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins; I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	
Eocene			Unnamed/Unknown Informal

LITHOLOGY: Sericite Schist
Siltstone
Feldspar Porphyry

HOSTROCK COMMENTS: Sediments are altered to sericite schist.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
GRADE:

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1985
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	1357.3800	Grams per tonne
Gold	64.4600	Grams per tonne
Copper	0.4500	Per cent
Lead	0.6400	Per cent
Zinc	1.8600	Per cent

REFERENCE: Assessment Report 14607.

CAPSULE GEOLOGY

The area is underlain by rock of the Middle Jurassic Salmon River Formation siltstone sequence, Hazelton Group. The sediments have been folded into synclines and anticlines with north trending fold axes. Small Eocene feldspar intrusions occur in this area.

A mineralized zone occurs within a north trending, 100 to 150 metre wide, band of sericite schist. This zone consists of small bands of pyrite, silicified sections and quartz veins. The quartz veins carry pyrite, chalcopyrite, bornite, tetrahedrite, argentite, sphalerite, galena, native gold, malachite and azurite. The sample with the highest assay contained 0.45 per cent copper, 0.64 per cent lead, 1.86 per cent zinc, 0.34 per cent antimony, 64.46 grams per tonne gold and 1357.38 grams per tonne silver (Assessment Report 14607).

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EMPR ASS RPT 11716, 13403, *14607, 15645, 16911

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EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102; 1987, pp. 199-209
EMPR OF 1987-22; 1988-4
EMPR BULL 63
EMPR EXPL 1983-520; 1984-386; 1986-C440; 1987-C372
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B66)

DATE CODED: 1988/08/16 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1989/01/09 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 290**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOSH**, SHAN, MAY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 39 05 N
LONGITUDE: 130 48 57 W
ELEVATION: 1065 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the east side of Snippaker Creek, about 4.1 kilometres south of the Unuk River (within syenodiorite) on the Josh claim (Assessment Report 11306).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6280055
EASTING: 388670

COMMODITIES: Molybdenum, Copper, Silver, Barite

MINERALS
SIGNIFICANT: Molybdenite, Chalcopyrite, Barite, Pyrite
ASSOCIATED: Quartz, Barite, Carbonate
ALTERATION: Chlorite, Epidote
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Stockwork, Disseminated
CLASSIFICATION: Porphyry, Industrial Min.
TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic			Coast Plutonic Complex
Paleozoic-Mesozoic			Stikine Assemblage

LITHOLOGY: Syeno Diorite
Syeno Diorite Porphyry
Granodiorite
Skarn
Limestone
Calcareous Volcanic
Andesitic Volcanic Breccia

HOSTROCK COMMENTS: Syenodiorite intrudes Mesozoic and older rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: STOCKWORK
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1983
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	1.0000	Grams per tonne
Barite	0.0200	Per cent
Copper	0.0200	Per cent
Molybdenum	1.2900	Per cent

COMMENTS: Grab sample TB-R56 taken from quartz stockwork within syeno-diorite.
REFERENCE: Assessment Report 11306.

CAPSULE GEOLOGY

The area lies on the east flank of the Coast Plutonic Complex, which consists of quartz monzonite stocks with satellitic bodies of syenite and diorite. The area is underlain by Mesozoic and older rocks consisting of shales, limestones and acid to intermediate volcanics and volcaniclastics which have been intruded by elements of the Coast Intrusions.

Locally, the claims are underlain by a succession of limestone, volcanics and related sediments of probable Paleozoic and Mesozoic age which have undergone numerous periods of deformation and intrusions.

The oldest rocks appear to belong to a thick sequence of

CAPSULE GEOLOGY

andesitic volcanic breccia which also contains minor tuff and argillite beds. A thick unit of light grey, banded, fossiliferous (crinoidal) limestone, of possible Permian age, is intercalated with the andesitic breccias.

These units are intruded by elements of the Coast Intrusions in the forms of a syenodiorite porphyry and later granodiorite. The syenodiorite is characterized by 1.0 to 1.5 centimetre hornblende phenocrysts. The main body strikes northeast across the property and locally, occurs both as sills and dykes within the layered rocks.

The granodiorite occurs as near vertical dykes within the syenodiorite porphyry. It is characterized by a fine-grained matrix with 1 to 3 millimetre biotite grains.

Rock alteration consists mainly of propylitization with silicification and contact metasomatism resulting in the formation of actinolite-epidote skarns within the limestone and calcareous volcanics. Occasional zones of silicification occur within the finer-grained volcanics. Propylitic alteration is widespread and is characterized by quartz-epidote veining and the alteration of mafic minerals to epidote and chlorite.

Mineralization on the property occurs within skarns, late quartz veins and weak quartz stockworks. Mineralization related to skarns is best developed within the limestone and calcareous volcanic rocks (refer to Shan, 104B 023). The mineralization associated with late, often vuggy, quartz veins occurs on the Josh 3 claim (refer to Josh 3, 104B 291). The weak quartz stockwork mineralization is developed throughout the main mass of syenodiorite porphyry located mainly on the Josh claim.

The quartz stockwork is comprised of narrow, 5 millimetre wide quartz stringers, trending north with steep dips. Mineralization consists mainly of pyrite with minor chalcopyrite and molybdenite. Associated rock alteration is predominantly propylitic. Stockwork development is more intense adjacent to the granodiorite dykes. Although, the dykes are often fractured and segmented, they are not cut by the stockwork. Quartz-barite veinlets with associated pyrite occur within the syenodiorite stockwork.

In 1983, a grab sample from the syenodiorite with quartz stockworks hosting pyrite, molybdenite and chlorite assayed 1.29 per cent molybdenum, 0.02 per cent copper, 0.02 per cent barite and 1.0 grams per tonne silver. Another 1.6 metre grab sample taken from a barite-carbonate stringer within the syenodiorite assayed 0.04 per cent copper (Assessment Report 11306).

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EMPR AR 1963-9; 1964-18
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EMPR GEM 1972-518
EMPR PF (Todoruk, S.L., Ikona, C.K., (1987): Geological Report on the Cam 5,6 Mineral Claims, Feb. 1987 in Statement of Material Facts #98/87 for Gigi Resources Ltd., Jul. 23, 1987; *Caulfield, D.A., Ikona, C.K., (1987): Geological Report on the Josh, Josh 2-4 Mineral Claims, May 1987 in Statement of Material Facts #73/88 for Redwood Resources Inc., Nov.24, 1988)
EMR MP CORPFILE (Skyline Explorations Ltd.)
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
GSC P 89-1E, pp. 145-154
GCNL #10, 1984
PR REL Goldrea Resources Corp., Dec.31, 2002
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map Area (104B), Northwestern British Columbia, pp. A1-A5 in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, Oct. 16-19, 1988
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B21)

DATE CODED: 1988/08/23 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1989/01/23 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 291**
NATIONAL MINERAL INVENTORY: 104B10 Zn2

NAME(S): **JOSH 3**, JOSH, MAY, SHAN, SNIP

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 38 27 N
LONGITUDE: 130 47 45 W
ELEVATION: 1460 Metres
LOCATION ACCURACY: Within 500M
MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6278848
EASTING: 389865
COMMENTS: Located on the east side of Snippaker Creek about 5.0 kilometres south of the Iskut River; location from trenched area on Josh 3 claim (Assessment Report 13321).

COMMODITIES: Gold, Silver, Copper, Zinc, Lead, Magnetite

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite, Bornite, Galena, Magnetite
ASSOCIATED: Quartz, Epidote
ALTERATION: Epidote, Chlorite, Garnet
ALTERATION TYPE: Silicific'n, Skarn, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia, Massive
CLASSIFICATION: Replacement, Igneous-contact, Industrial Min.
TYPE: K01 Cu skarn
K02 Pb-Zn skarn
K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Unnamed/Unknown Group	Undefined Formation	
Mesozoic			Coast Plutonic Complex
Permian			Stikine Assemblage

LITHOLOGY: Quartz Breccia
Epidote Quartz Garnet Skarn
Limestone
Andesitic Volcanic Breccia
Calcareous Volcanic
Syeno Diorite
Syeno Diorite Porphyry
Granodiorite

HOSTROCK COMMENTS: Mesozoic and older volcanics and volcaniclastics with Permian(?) limestones are intruded by satellitic bodies of syenodiorite.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
Plutonic Rocks RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1984

COMMODITY	GRADE	
Silver	164.2300	Grams per tonne
Gold	3.3600	Grams per tonne
Copper	4.9000	Per cent
Lead	0.0700	Per cent
Zinc	0.3400	Per cent

COMMENTS: Grab sample DR-42, taken from mineralized quartz vein breccia near Trench 2.
REFERENCE: Assessment Report 13321, Figure 6.

CAPSULE GEOLOGY

The area lies on the east flank of the Coast Plutonic Complex, which consists of quartz monzonite stocks with satellitic bodies of syenite and diorite. The area is underlain by Mesozoic and older

CAPSULE GEOLOGY

rocks consisting of shales, limestones and acid to intermediate volcanics and volcaniclastics which have been intruded by elements of the Coast Intrusions.

Locally, the claims are underlain by a succession of limestone, volcanics and related sediments of probable Paleozoic and Mesozoic age which have undergone numerous periods of deformation and intrusion.

The oldest rocks appear to belong to a thick sequence of andesitic volcanic breccia which also contains minor tuff and argillite beds. A thick unit of light grey, banded, fossiliferous (crinoidal) limestone, of possible Permian age, is intercalated with the andesitic breccias.

These units are intruded by elements of the Coast Intrusions in the forms of a syenodiorite porphyry and later granodiorite. The syenodiorite is characterized by 1.0 to 1.5 centimetre hornblende phenocyrsts. The main body strikes northeast across the property and locally, occurs both as sills and dykes within the layered rocks.

The granodiorite occurs as near vertical dykes within the syenodiorite porphyry. It is characterized by a fine-grained matrix with 1 to 3 millimetre biotite grains.

Mineralization on the property occurs within chalcopyrite-magnetite-sphalerite skarns (refer to Shan, 104B 023), weak quartz stockworks (refer to Josh, 104B 290) and within silicified pyrite-chalcopyrite limestone replacements. On the Josh 3 claim, massive pyrite and chalcopyrite with minor amounts of sphalerite, bornite, galena and magnetite occur within quartz vein breccia replacements in the limestone. The syenodiorite intrusions are intimately associated with mineralized zones.

In the northern part of the Josh 3 claim area gold mineralization was mapped along a northeast trending draw, marking a limestone-volcanic contact. In 1984, a chip sample taken across 1.2 metre assayed 4.2 per cent copper and 3.7 grams per tonne gold (Assessment Report 13321). Sulphide mineralization consisted of pyrite and chalcopyrite within an epidote-quartz-garnet skarn in a zone approximately 2.0 metres wide.

Another skarnified zone, wedged between two syenodiorite masses within the northern part of the claim, hosts mineralized late quartz veins. In 1984, two trenches were blasted across this zone. The main zone consists of a 2.5 to 5.0 metre wide, resistant quartz vein with breccia fragments. Drusy and coarsely crystalline quartz lined cavities are common throughout the vein breccia. Chalcopyrite and pyrite occur with minor sphalerite, bornite and galena. In 1984, a selected sample of the trench material assayed 3.36 grams per tonne gold, 164.23 grams per tonne silver, 4.9 per cent copper, 0.34 per cent zinc and 0.07 per cent lead (Assessment Report 13321).

Alteration consists mainly of silicification and skarnification of the chemically receptive limestone near the intrusive body. Epidote is associated with the late quartz veining. Propylitic alteration is widespread and is characterized by the alteration of mafic minerals to epidote and chlorite.

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EMPR ASS RPT 570, 4140, 11306, *13321, 16855
EMPR EXPL 1983-524,525; 1984-388
EMPR GEM 1972-518
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EMR MP CORPFILE (Skyline Explorations Ltd.)
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
GSC P 89-1E, pp. 145-154
GCNL #10, 1984
WWW http://www.infomine.com/
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B21)

MINFILE NUMBER: **104B 292**

NATIONAL MINERAL INVENTORY:

NAME(S): **GIM (ZONE 1)**, KYLE, ZAPPA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 39 56 N
LONGITUDE: 130 53 57 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the eastern flank of Snippaker Mountain, about 3.0 kilometres south of the junction of the Iskut River and Snippaker Creek.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6281770
EASTING: 383605

COMMODITIES: Copper, Iron, Silver, Lead, Zinc, Magnetite

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrite, Magnetite
ASSOCIATED: Quartz
ALTERATION: Limonite
COMMENTS: Mineralized zone is hosted within a zone of decayed limonitic boxwork.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Massive
CLASSIFICATION: Epigenetic, Mesothermal, Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins
DIMENSION: 0010 x 0001 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Mineralized quartz vein 10 metres long and varies 6 to 8 centimetres in width.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite
Andesite Agglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1987

COMMODITY	GRADE	
Silver	8.0000	Grams per tonne
Copper	0.1680	Per cent
Iron	33.1300	Per cent
Lead	0.0610	Per cent
Zinc	0.0380	Per cent

COMMENTS: Sample # 13418.
REFERENCE: Property File: Todoruk, S.L., Ikona, C.K., (1988).

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Hazelton Group rocks of the Unuk River Formation. Locally, these rocks are comprised of varigated red, green and maroon volcanic breccia, conglomerate, sandstone, siltstone and tuff. Upper Triassic sediments and volcanics also occur and are correlated with the Stuhini Group.

The Gim claim is predominantly underlain by andesite to andesite agglomerate of the Lower Jurassic Unuk River Formation. These volcanics may in part, be correlative with upper members of the Stuhini Group. In 1987, a quartz vein carrying pyrite and chalcopyrite was exposed for approximately 10 metres of strike length. The vein varies between 6.0 to 8.0 centimetres in width and is hosted within a zone of extremely crumbly limonitic boxwork. This decayed zone varies in width up to 1.0 metre. Fine-grained, massive pyrite with

CAPSULE GEOLOGY

minor magnetite occurs along the vein. A sample taken from this showing in 1987 assayed 0.168 per cent copper, 0.061 per cent lead, 0.038 per cent zinc, 33.13 per cent iron, 4.43 per cent arsenic, 8.0 grams per tonne silver and 0.065 grams per tonne gold (Todoruk, S.L., 1988).

Approximately 100 metres northeast of this mineralized zone is another gossanous, limonite-stained outcrop. In 1987 samples from this zone assayed 0.04 per cent copper, 0.01 per cent tungsten, 11.74 per cent iron, 7.5 grams per tonne silver, 0.36 grams per tonne gold and 0.072 per cent copper, 0.021 per cent tungsten, 6.66 per cent iron, 4.8 grams per tonne silver and 0.6 grams per tonne gold, respectively (Todoruk, S.L., 1988).

The mineralization consists of multi-element values within quartz veins associated with extremely limonitic boxwork. To the northwest of these showings, gold and silver values are associated with narrow quartz veins (refer to Gim Zone 2, 104B 293).

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GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
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GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B20)

DATE CODED: 1988/09/07 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1989/01/23 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 293**

NATIONAL MINERAL INVENTORY:

NAME(S): **GIM (ZONE 2)**, KYLE, ZAPPA

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 40 04 N
LONGITUDE: 130 54 27 W
ELEVATION: 795 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the eastern flank of Snippaker Mountain, about 2.8 kilometres south of the junction of the Iskut River and Snippaker Creek. Showing is located in the northwest corner of the property by the Legal Corner Post of the Gim mineral claim.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6282032
EASTING: 383101

COMMODITIES: Gold, Silver, Bismuth, Arsenic

MINERALS

SIGNIFICANT: Gold Pyrite
COMMENTS: Visible gold was reported in quartz veins.
ASSOCIATED: Quartz
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Mesothermal Industrial Min.
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite
Andesite Agglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	24.2000	Grams per tonne
Arsenic	0.0150	Per cent
Gold	127.0900	Grams per tonne
Bismuth	0.0650	Per cent

COMMENTS: Sample #13464.
REFERENCE: Property File: Todoruk, S.L., Ikona, C.K., (1988).

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Hazelton Group rocks of the Unuk River Formation. Locally, these rocks are comprised of varigated red, green and maroon volcanic breccia, conglomerate, sandstone, siltstone and tuff. Upper Triassic sediments and volcanics also occur and are correlated with the Stuhini Group.

The Gim claim is predominantly underlain by andesite and andesite agglomerate of the Lower Jurassic Unuk River Formation. These volcanics may in part, be correlative with upper members of the Stuhini Group. In 1987, an auriferous quartz-pyrite vein was discovered near the northwest corner of the property by the Legal Corner Post. Visible gold was reported to occur within the vein. The quartz vein is approximately 5 metres of strike length and 7 metres of down dip extension. Widths vary from 1.0 to 4.0 centimetres across.

A sample taken in 1987 from the quartz vein hosting pyrite, visible gold and limonite assayed 94.56 grams per tonne gold, 9.4 grams per tonne silver, 0.056 per cent bismuth and 0.023 per cent arsenic.

CAPSULE GEOLOGY

Another sample from the gold-bearing quartz vein assayed 127.09 grams per tonne gold, 24.2 grams per tonne silver, 0.065 per cent bismuth and 0.015 per cent arsenic (Property File: Todoruk, S.L., 1988).

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EMPR PF (*Todoruk, S.L., Ikona, C.K., (1988): Geological Report on the Gim Mineral Claim, Feb. 1988, in Statement of Material Facts #60/88, Kyle Resources Ltd., Jun. 29, 1988)

EMPR ASS RPT 17127

GSC MAP 9-1957; 311A; 1418A

GSC MEM 246

NW PROSPECTOR Aug/Sept, 1988

GSC P 89-1E, pp. 145-154

Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B20)

DATE CODED: 1988/09/07 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1988/09/07 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 294**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRUCEJACK FLAT**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 28 17 N
LONGITUDE: 130 11 57 W
ELEVATION: 1356 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 1.0 kilometre west of Brucejack (Assessment Report 6255).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6259190
EASTING: 426126

COMMODITIES: Gold Silver Lead Zinc

MINERALS
SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Massive
CLASSIFICATION: Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
I02 Intrusion-related Au pyrrhotite veins
K02 Pb-Zn skarn

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Limy Rock
Sandstone
Wacke
Lapilli Tuff

HOSTROCK COMMENTS: Showing is reported to occur in limy material.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Silver	1028.5800	Grams per tonne
Gold	102.8600	Grams per tonne

REFERENCE: Personal Communication, J.M. Britton.

CAPSULE GEOLOGY

The area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks consist of sandstone, wackes, and shale overlain by lapilli-tuff of andesitic composition. The Brucejack fault and associated splay faults cut the country rock in a north-south to northwest direction. North of Brucejack Lake, the fault system is bounded on the east by rocks of the Lower Jurassic Betty Creek Formation, Hazelton Group. A variety of Jurassic hornblende syenite and alkali feldspar syenites occur in the area.

Several lead-zinc showings were discovered on the Red River claim in 1976 by Granduc Mines Ltd. (Assessment Report 6255). These sphalerite and galena showings were reported to occur in hornfelsed arenaceous rock (Exploration in British Columbia, 1976).

This particular showing occurs about 1.0 kilometre west of Brucejack Lake on Brucejack Flats. Massive galena and sphalerite are reported to occur in limy material. Samples contained 102.86 grams per tonne gold and 1028.58 grams per tonne silver (Personal Communication: J.M. Britton, 1988).

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DATE CODED: 1988/09/09 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 295**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD BUG**, WARATAH 5, TUNGCO

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 41 00 N
LONGITUDE: 131 01 34 W
ELEVATION: 200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located along the south shores of the Iskut River, about 3.0 kilometres east of the mouth of Bronson Creek, on the west side of the Waratah property.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6283971
EASTING: 375885

COMMODITIES: Gold, Silver, Copper, Zinc, Lead

MINERALS

SIGNIFICANT: Pyrite, Magnetite, Chalcopyrite, Galena, Sphalerite
ASSOCIATED: Quartz
ALTERATION: Chlorite, Carbonate, Pyrite
ALTERATION TYPE: Chloritic, Pyrite, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic, Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Volcaniclastic
Agglomerate
Andesitic Agglomerate
Meta Sediment/Sedimentary

HOSTROCK COMMENTS: Stratified rocks are correlative with upper members of the Stuhuni Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	10.4200	Grams per tonne

COMMENTS: Chip sample across 0.9 metre from discovery trench.
REFERENCE: Vancouver Stockwatch, July 27, 1988.

CAPSULE GEOLOGY

Paleozoic limestone with overlying metamorphosed sediments and volcanics are unconformably overlain by Mesozoic volcanic arc assemblages and sediments. Monotis fossils found within this assemblage on the north slope of Snippaker Peak give an age of Upper Triassic. The stratified rocks are correlative with upper members of the Stuhini Group.

The property is underlain mainly by a basic volcaniclastic unit believed to be of Upper Triassic age and to be correlative with the Stuhini Group. Intrusive bodies include an orthoclase porphyry plug at the junction of Bronson Creek and the Iskut River and a large quartz monzonite to granodiorite intrusion along the east margin of the property.

The volcaniclastic is described as an andesitic agglomerate, comprised of unreworked volcanic fragments up to 2 centimetres in length and subrounded to subangular feldspar porphyry clasts. The matrix of this porphyry consists of an aphanitic mass of andesitic to basaltic composition which exhibits pervasive chlorite alteration.

The agglomerate has undergone weak regional greenschist facies

CAPSULE GEOLOGY

metamorphism and is altered by pervasive carbonate, chlorite and to a lesser extent, epidote. The agglomerate also hosts 1 to 3 per cent disseminated magnetite.

Mineralization on the Waratah property may be classified into three categories: native gold-pyrite veins in a monzonite intrusion (refer to Golden Arrow, 104B 296); several copper-gold veins (refer to Waratah 6, 104B 204); and copper-lead-zinc-silver-gold veins both occurring within andesitic agglomerate.

The Gold Bug zone is located on the western side of the Waratah property and is reported to strike over 60 metres. Mineralization in the zone is comprised of semi-massive pyrite, magnetite and chalcopyrite within quartz-chlorite veins that are characterized by the presence of galena and sphalerite. This veining is similar to the copper-gold veins on the Waratah 6 claim. Alteration consists of a narrow envelope which consists of pervasive chlorite-carbonate alteration penetrated by a network of carbonate-quartz-pyrite veinlets adjacent to the vein walls.

The lead and zinc mineralization is accompanied by lower gold values, generally ranging between 0.3 to 3.4 grams per tonne gold, and higher silver values.

An 8.5 metre sample from Trench 22, taken across a massive sulphide zone (pyrite-magnetite-chalcopyrite) in a quartz-chlorite vein called the Upper Gold Bug vein assayed 10.4 grams per tonne gold, 20.4 grams per tonne silver, 0.4 per cent copper, 0.03 per cent lead and 0.86 per cent zinc. A grab sample taken from a 20 by 40 centimetre pod within this vein assayed 20.1 grams per tonne gold, 16.5 grams per tonne silver, 0.4 per cent copper, 0.03 per cent lead and 0.39 per cent zinc (Assessment Report 16904). Samples from trenches on the Gold Bug zone taken in 1988 ranged from 7.37 grams per tonne gold over 0.3 metres to 29.7 grams per tonne gold over 0.77 metres (Vancouver Stockwatch, Sept. 2, 1988).

The Boot zone, located about 400 metres west of the Gold Bug vein, hosts gold mineralization that appears to be structurally controlled within a faulted and intensely altered sedimentary unit (refer to Boot 104B 297).

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GSC MAP 9-1957; 311A; 1418A
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N MINER *Aug.22, 1988
V STOCKWATCH *Jul.13,27,*Sept.2, 1988
NW PROSPECTOR Jun/Jul, Aug/Sept, 1988
PR REL Tungco Resources Corporation, Dec.1, 1987
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/09/14 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 296**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN ARROW**, WARATAH 7, TUNGCO

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 40 57 N
LONGITUDE: 130 56 55 W
ELEVATION: 135 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 10 kilometres south of the Iskut River on the Waratah 7 claim, location from Trench 19 (Assessment Report 16904).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6283741
EASTING: 380629

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Gold Pyrite
ASSOCIATED: Quartz
COMMENTS: Unidentified steely-blue mineral associated with the gold deposition.
ALTERATION: Chlorite Pyrite Carbonate
ALTERATION TYPE: Chloritic Pyrite Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Mesothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins
I05 Polymetallic veins Ag-Pb-Zn±Au
L02 Porphyry-related Au

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Cretaceous-Tertiary			Coast Plutonic Complex

LITHOLOGY: Monzonite
Quartz Monzonite
Granodiorite
Agglomerate
Andesitic Agglomerate
Volcaniclastic

HOSTROCK COMMENTS: Monzonite likely part of Coast Plutonic Complex. Stratified rocks are correlative with upper members of the Stuhini Group.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine
METAMORPHIC TYPE: Contact Regional
RELATIONSHIP: Syn-mineralization Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	69.6000	Grams per tonne

COMMENTS: Surface grab sample from Golden Arrow showing.
REFERENCE: Vancouver Stockwatch, August 13, 1987.

CAPSULE GEOLOGY

Paleozoic limestone with overlying metamorphosed sediments and volcanics are unconformably overlain by Mesozoic volcanic arc assemblages and sediments. Monotis fossils found within this assemblage on the north slope of Snippaker Peak give an age of Upper Triassic. The stratified rocks are correlative with upper members of the Stuhini Group.

The property is underlain mainly by a basic volcaniclastic unit believed to be of Upper Triassic age and to be correlative with the Stuhini Group. Intrusive bodies include an orthoclase porphyry plug at the junction of Bronson Creek and the Iskut River and a large quartz monzonite to granodiorite intrusion along the east margin of the property.

The volcaniclastic is described as an andesitic agglomerate,

CAPSULE GEOLOGY

comprised of unreworked volcanic fragments up to 2 centimetres in length and subrounded to subangular feldspar porphyry clasts. The matrix of this porphyry consists of an aphanitic mass of andesitic to basaltic composition which exhibits pervasive chlorite alteration.

The agglomerate has undergone weak regional greenschist facies and is altered by pervasive carbonate, chlorite and to a lesser extent, epidote. The agglomerate also hosts 1 to 3 per cent disseminated magnetite.

Mineralization on the Waratah property may be classified into three catagories: copper-gold veins (refer to Waratah 6, 104B 204) and copper-lead-zinc-silver-gold veins (refer to Gold Bug, 104B 295) both within andesitic agglomerate and native gold-pyrite veins associated with a monzonite intrusion.

The Golden arrow showing and a second vein to the west, are located in the eastern part of the property. The Golden Arrow showing consists of a relatively unaltered monzonite intrusive body hosting a 10 to 30 centimetre wide quartz-chlorite vein mineralized with pyrite, native gold and an unidentified steely-blue mineral that is associated with the gold deposition. The pyrite exhibits a number of textural styles including fine disseminations, coarse crystalline grains and banding which may indicate more than a single phase of deposition.

Wallrock alteration consist mainly of chlorite and pyrite which is restricted to only a few centimetres on either side of the vein structure. Minor carbonate is associated with the quartz veining.

The Golden Arrow vein is controlled by about a 70 degree trending fracture with a moderate dip to the south and is offset by several northwest trending faults with minor right lateral movements.

A 0.33 metre wide chip sample of quartz-chlorite veining, taken across the Golden Arrow vein assayed 53.28 grams per tonne gold and 22.67 grams per tonne silver. Another 0.23 metre wide chip sample assayed 151.9 grams per tonne gold and 2.0 grams per tonne silver (Assessment Report 16904).

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GSC MEM 246
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GCNL Jul.25, 1987
N MINER Aug.22, 1988
PR REL Tungco Resources Corporation, Dec.1, 1987
V STOCKWATCH *Aug.13, 1987
WWW http://www.infomine.com/
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Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B17)

DATE CODED: 1988/09/14 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1989/02/01 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 297**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHOPIN**, BOOT (WARATAH), WARATAH 5, TUNGCO

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 40 55 N
LONGITUDE: 131 02 03 W
ELEVATION: 200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located near the west end of the Waratah property along the south shores of the Iskut River about 400 metres west of the Gold Bug Zone (104B 295).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6283831
EASTING: 375387

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Limonite
ALTERATION TYPE: Oxidation Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Mesothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Greywacke
Argillite
Meta Sediment/Sedimentary

HOSTROCK COMMENTS: Triassic volcanics and sediments are thought to be correlative with the Stuhini Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	3.6300	Grams per tonne

COMMENTS: Grab sample from Boot Zone.
REFERENCE: Vancouver Stockwatch, Sept.2, 1988.

CAPSULE GEOLOGY

Paleozoic limestone with overlying metamorphosed sediments and volcanics are unconformably overlain by Mesozoic volcanics and sediments probably correlative with the Hazelton Group. Monotis fossils found within this assemblage on the north slope of Snippaker peak give an age of Upper Triassic.

The property is underlain mainly by a basic volcaniclastic unit believed to be correlative with the Stuhini Group. This volcaniclastic is thought to be in fault contact with a well-altered sedimentary unit in the far west end of the property. The metasediment is thought to be similar to the pyritic greywacke and metasediments described in the Yellow Bluff showing (refer to Chopin, 104B 298) located about 1.0 kilometre to the south.

In 1988, gold mineralization in the Boot zone was located about 400 metres west of the Gold Bug vein (refer to Gold Bug, 104B 295). This gold mineralization appears to be structurally controlled within a faulted, highly altered sedimentary unit. Alteration and pyrite mineralization are associated with extensive quartz-calcite veining and abundant limonitic staining.

CAPSULE GEOLOGY

A grab sample taken from the Boot zone assayed 3.63 grams per tonne gold. Another sample taken over 0.7 metres assayed 24.3 grams per tonne gold (Vancouver Stockwatch, Sept.2, 1988).

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PR REL Tungco Resources Corporation - Sept.14,Dec.1, 1987
NW PROSPECTOR Jun./Jul., Aug./Sept., 1988
V STOCKWATCH *Sept.2, 1988
N MINER Aug.22, 1988
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988

DATE CODED: 1988/09/21 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1998/01/15 REVISED BY: GSB FIELD CHECK: N

MINFILE NUMBER: **104B 298**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHOPIN**, YELLOW BLUFF, CHOPIN 1, WINSLOW GOLD CORP.

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 40 14 N
LONGITUDE: 131 02 57 W
ELEVATION: 460 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 1.0 kilometre south of the Iskut River along a prominant, altered "yellow bluff"; location from Assessment Report 16684, Figure 11.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6282591
EASTING: 374430

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
COMMENTS: Traces of chalcopyrite.
ASSOCIATED: Quartz Calcite
ALTERATION: Limonite Chlorite
COMMENTS: Unidentified translucent, soft green, semi-micaceous mineral.
ALTERATION TYPE: Silicific'n Oxidation Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Massive
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins
DIMENSION: 0365 x 0125 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Yellow Bluff alteration zone with pyrite mineralization is about 365 by 125 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Greywacke
Banded Siltstone
Meta Sediment/Sedimentary
Volcaniclastic
Andesitic Tuff
Limestone

HOSTROCK COMMENTS: Stratified rocks correlate with Hazelton Group, however some units may, in part, be correlative with upper members of Stuhini Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	0.3000	Grams per tonne

COMMENTS: Sample 87 9034R, taken from pyrite mineralization in the Yellow Bluff zone.
REFERENCE: Assessment Report 16684.

CAPSULE GEOLOGY

Permian to Upper Triassic basement shales and limestones are unconformably overlain by Jurassic Hazelton Group volcanics and sediments. The Bronson Creek-Iskut River area is generally underlain by the Lower Jurassic Unuk River Formation consisting of greywacke, argillite and volcaniclastics which are unconformably (?) overlain by the Betty Creek Formation comprised of a complex of sandstones, siltstones, conglomerates, breccias, tuffs and porphyritic andesitic flows.

CAPSULE GEOLOGY

The central part of the property is underlain by a 600 to 800 metre thick volcaniclastic-andesitic tuff unit of the Unuk River Formation. To the west it is interbedded with black argillite which may, in part, be correlative with upper members in the Stuhini Group. A lesser member of this unit is a grey limestone up to 5 to 10 metres thick. East of the main Handel Fault, within Snippaker Ridge saddle, the limestone hosts fossils that are reported to be of Upper Triassic to Lower Jurassic age.

Underlying the volcaniclastic-andesitic tuff unit along the western part of the property is a fine to medium-grained greywacke that is at least 600 metres thick. Alteration within the greywacke unit is extensive. Locally, it contains large zones of dark green hydrothermal, chloritic alteration. Very localized, yellow-rust colored alteration due to clay minerals and the oxidation of pyrite to limonite is widespread in the Yellow Bluff zone.

Banded siltstone is found within the greywacke. The bands are white to buff colored, calcareous and range from 1 to 20 millimetres in width. Along the north slopes, in the Yellow Bluff area, the bands are sometimes green. Bedding strikes about 065 degrees and dips near vertically to the south.

Alteration and pyrite mineralization in the Chopin (Yellow Bluff) zone extends over 365 metres vertically by a width of about 125 metres. Mineralization is almost exclusively pyrite with trace amounts of chalcopyrite. Pyrite occurs as fracture fillings and is often massive in coarse, 1 to 3 millimetre cubes, within a vuggy, leached, limonitic siliceous boxwork. The pyrite is characteristically white or silver-white in color. The massive pyrite mineralization is controlled by fractures with only about 1 per cent disseminated pyrite between the fractures. Massive pyrite occurs in fractures which trend about 330 degrees. Mineralization also occurs in two other fracture sets which trend 040 degrees and 060 degrees, respectively.

Calcite is a pervasive mineral in the pyritic stockwork. It is not often found as massive vein filling. Quartz is usually associated with the larger, massive pyrite filled fractures. An unidentified translucent green, semi-micaceous, extremely soft mineral is found in the upper third of the Chopin face.

In 1983, 15 rock samples were collected from the Chopin face. One sample assayed 0.0054 grams per tonne gold and 2.0 grams per tonne silver (Assessment Report 11326). In 1987, a sample taken from the Yellow Bluff zone assayed 0.134 grams per tonne gold and 0.065 per cent copper. Another sample assay 0.3 grams per tonne gold (Assessment Report 16684).

Approximately 1250 metres east of the Yellow Bluff, a massive pyrite pod was located and a 0.5 metre rock chip sample taken across the pod assayed 24.0 grams per tonne gold and 31.8 grams per tonne silver (Assessment Report 16684).

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GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B18)

DATE CODED: 1988/09/22 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 299** NATIONAL MINERAL INVENTORY:

NAME(S): **RIDGE (CHOPIN)**, CHOPIN I, HANDEL, WINSLOW GOLD CORP.

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 39 55 N
LONGITUDE: 131 02 29 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 2.0 kilometres south of the Iskut River on Snippaker Ridge; location from rock chip sampling in Assessment Report 16684, Figure 21.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6281990
EASTING: 374889

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Pyrite Arsenopyrite Sphalerite Chalcopyrite Galena
ASSOCIATED: Calcite Quartz
ALTERATION: Limonite
ALTERATION TYPE: Carbonate Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Breccia
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins
DIMENSION: 0150 Metres STRIKE/DIP: 125/60S TREND/PLUNGE:
COMMENTS: Mineralized zone strikes over 150 metres, trending 125 degrees and dipping 60 degrees south.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Volcaniclastic
Andesitic Tuff
Argillite
Limestone
Greywacke

HOSTROCK COMMENTS: Stratified rocks correlate with the Hazelton Group however, some units may, in part, be correlative with upper members of the Stuhini Group.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	50.0000	Grams per tonne
Gold	4.7500	Grams per tonne

COMMENTS: Sample 33977 of arsenopyrite-pyrite mineralization from the Ridge showing.
REFERENCE: Assessment Report 16684.

CAPSULE GEOLOGY

Permian to Upper Triassic basement shales and limestones are unconformably overlain by Jurassic Hazelton Group volcanics and sediments. The Bronson Creek-Iskut River area is generally underlain by the Lower Jurassic Unuk River Formation consisting of greywacke, argillite and volcaniclastics which are unconformably (?) overlain by the Betty Creek Formation comprised of a complex of sandstones, siltstones, conglomerates, breccias, tuffs and porphyritic andesitic flows.

The central part of the property is underlain by a 600 to 800 metre thick volcaniclastic-andesitic tuff unit of the Unuk River

CAPSULE GEOLOGY

Formation. To the west it is interbedded with black argillite which may, in part, be correlative with upper members of the Stuhini Group. A lesser member of this unit is a grey limestone up to 5 to 10 metres thick. East of the main Handel Fault, within Snippaker Ridge saddle, the limestone hosts fossils that are reported to be of Upper Triassic to Lower Jurassic age.

The volcaniclastic-andesitic tuff is the cliff-forming unit most prevalent along Snippaker Ridge. It is grey to green in color and ranges from massive, medium-grained to fine-grained clastic, pebbly or conglomeratic. The unit is calcareous throughout and appears to be in contact with the underlying argillites at an elevation of about 1000 metres. This unit is coarser west of the Handel Fault and hosts argillite clasts up to 10 to 15 millimetres across. Calcite stringers, occasional quartz veins and traces of disseminated pyrite are found throughout the unit.

The Ridge showings are located in the cliffs on the north side of Snippaker Ridge and extend along strike for about 150 metres. They are similar to the Handel showing (refer to Handel, 104B 205), and each is a shear controlled pod up to 0.5 metres in width and 5.0 metres in length, containing veins and veinlets of carbonate, pyrite and other sulphides. They are characterized by extensive rust-staining, which is dark purple in some areas. The altered rock is usually soft, porous and pale green in color.

Pyrite and arsenopyrite are the most abundant and both occur as coarse grains. Sphalerite is also abundant with minor amounts of chalcopyrite and galena.

The mineralized zone trends about 125 degrees and dips about 60 degrees to the south.

In 1987, two rock samples from the Ridge showing assayed 4.2 grams per tonne gold, 11.9 grams per tonne silver and 4.75 grams per tonne gold, 50.0 grams per tonne silver. Another sample assayed 7.6 grams per tonne gold and 74.5 grams per tonne silver (Assessment Report 16684).

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GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B18)

DATE CODED: 1988/09/22 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 300** NATIONAL MINERAL INVENTORY:

NAME(S): **BRONSON**, CHOPIN II, BRONSON GRID,
WINSLOW GOLD CORP., BRONSON CREEK (S AND T), UPPER BRONSON

STATUS: Prospect MINING DIVISION: Liard
REGIONS: British Columbia
NTS MAP: 104B11E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 39 34 N NORTHING: 6281374
LONGITUDE: 131 03 34 W EASTING: 373763
ELEVATION: 430 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located along the northeast side of Bronson Creek, about 2.5 kilometres south of the Iskut River; location of drill hole W87-3, (Assessment Report 16684, Figure 22).

COMMODITIES: Gold, Copper, Zinc, Silver, Lead

MINERALS
SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite, Galena, Hydrozincite, Magnetite
ASSOCIATED: Calcite, Quartz
ALTERATION: Limonite, Chlorite
ALTERATION TYPE: Chloritic, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Breccia, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins; I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: STRIKE/DIP: 100/50N TREND/PLUNGE:
COMMENTS: Mineralized zone strikes 95 to 110 degrees and dips 50 degrees north.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Greywacke
Banded Siltstone

HOSTROCK COMMENTS: Stratified rocks correlate with the Hazelton Group and some units may be correlated with upper members of the Stuhini Group.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	4.3000	Grams per tonne
Gold	0.9500	Grams per tonne
Copper	0.1920	Per cent
Lead	0.0200	Per cent
Zinc	1.2500	Per cent

COMMENTS: Sample 33511 from Bronson Grid, pyrite-chalcopyrite-sphalerite mineralization.
REFERENCE: Assessment Report 16684.

CAPSULE GEOLOGY

Permian to Upper Triassic basement shales and limestones are unconformably overlain by Jurassic Hazelton Group volcanics and sediments. The Bronson Creek-Iskut River area is generally underlain by the Lower Jurassic Unuk River Formation consisting of greywacke, argillite and volcaniclastics which are unconformably (?) overlain by the Betty Creek Formation comprised of a complex of sandstones, siltstones, conglomerates, breccias, tuffs and porphyritic andesitic flows.

The central part of the property is underlain by a 600 to 800 metre thick volcaniclastic-andesitic tuff unit of the Unuk River

CAPSULE GEOLOGY

Formation. To the west it is interbedded with black argillite which may be part of the upper members of the Stuhini Group. A lesser member of this unit is a grey limestone up to 5 to 10 metres thick. East of the main Handel Fault, within Snippaker Ridge saddle, the limestone hosts fossils that are reported to be of Upper Triassic to Lower Jurassic age.

Underlying the volcaniclastic-andesitic tuff unit along the western part of Snippaker Ridge is a fine to medium-grained greywacke that is at leat 600 metres thick. In the Bronson Grid area the greywacke ranges from fine-grained at upper elevation to medium and coarser-grained along lower elevations. Mineralization in the form of pyrite, sphalerite, galena, chalcopyrite and magnetite occurs within the greywacke at lower elevations.

The unit is well fractured and carries 1 to 4 per cent pyrite mineralization disseminated and along fractures. Alteration within the greywacke unit is substantial. Locally, large zones of dark green hydrothermal chloritic alteration with or without brecciation occur. Yellow to rust colored, limonitic staining due to the oxidation of pyrite is abundant. Calcite veining is abundant with minor silicification and quartz veining.

Found within the greywacke unit are beds of fine to very fine-grained siltstone with white to buff colored bands 1 to 200 millimetres thick. Drill core sections show the banded siltstone is found in thicknesses exceeding 20 metres. Bedding is horizontal in the Bronson Grid area. Fractures strike predominantly 310 to 335 degrees and dip about 75 degrees southwest.

The Bronson showings are characterized by highly visible rust staining and a chalky, cream or bluish colored surficial coating. Pyrite is abundant occurring usually as coarse crystals. Fine-grained sphalerite, plus or minus galena and hydrozincite, are present in abundance along small scale fractures up to 0.5 centimetre wide. The mineralized zone trends about east-west (striking 095 to 110 degrees) and dips about 50 degrees north.

A zone of abundant pyrite associated with calcite veins with no other mineralization was intersected in drill hole W87-7. Samples taken over 1.5 metres starting at 36.9 metres assayed 2.33 grams per tonne and 2.6 grams per tonne gold. A 0.75 metre sample at 105.6 metres in drill hole W87-6, in a dark green chlorite altered zone with pyrite and chalcopyrite assayed 2.0 grams per tonne gold, 19.7 grams per tonne silver, 0.54 per cent copper and 0.067 per cent zinc. A grab sample of pyrite-chalcopyrite-sphalerite mineralization with the greywacke assayed 0.95 grams per tonne gold, 4.3 grams per tonne silver, 0.192 per cent copper, 1.25 per cent zinc and 0.02 per cent lead (Assessment Report 16684).

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Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B18)

DATE CODED: 1988/09/23 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1993/12/14 REVISED BY: GSB FIELD CHECK: N

MINFILE NUMBER: **104B 301**

NATIONAL MINERAL INVENTORY:

NAME(S): **TEDRAY 12 SOUTHEAST**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 29 05 N
LONGITUDE: 130 13 02 W
ELEVATION: 1402 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Identified from Newmont Exploration Ltd. Map (Property File). Occurs on Tedray 12 claim.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6260694
EASTING: 425040

COMMODITIES: Lead Zinc

MINERALS
SIGNIFICANT: Galena Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks consist of sediments overlain by volcanics of andesitic composition. The Brucejack fault and associated splay faults cut the country rock in a north-south to northwest direction. North of Brucejack Lake the fault system is bounded on the east by rocks of the Lower Jurassic Betty Creek Formation, Hazelton Group. A variety of Jurassic hornblende syenites and alkali feldspar syenites occur in the area.

Galena and sphalerite occur in an area of andesitic volcanics (Newmont Exploration Ltd. Map-Property File). No further information on this occurrence is rpeorted.

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DATE CODED: 1988/09/13 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 302**

NATIONAL MINERAL INVENTORY:

NAME(S): **DAWSON - ROSS 2**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 31 40 N
LONGITUDE: 130 12 35 W
ELEVATION: 1372 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Identified and located from Assessment Report 499. Located on the cancelled Dawson Ross 2 claim, now covered by Ice 5 claim (northwest portion).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6265478
EASTING: 425586

COMMODITIES: Manganese

MINERALS
SIGNIFICANT: Rhodochrosite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: H06 Epithermal Mn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Porphyritic Flow

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic rock of the Hazelton Group. The north trending Brucejack Fault System is bounded on the west by Unuk River Formation rock. Between the Brucejack fault and a north trending splay fault to the east is a block of Betty Creek Formation rock. A syn to post volcanic K-feldspar-potassium feldspar porphyry intrusion is bounded by these same two north trending faults and is separated from the block of Betty Creek Formation rock to the north by another northwest trending fault (Open File 1988-4).

A 0.61 metre wide vein of rhodochrosite is reported to occur within a porphyritic flow that appears to be located within the block of Betty Creek Formation rock (Assessment Report 499).

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EMPR AR 1935-B7,B12; 1961-9; 1962-8; 1964-19; 1967-31; 1968-45
EMPR GEM 1972-515; 1974-334
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DATE CODED: 1988/09/19 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/09/19 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 303**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOHN BULL 1**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 31 33 N
LONGITUDE: 130 13 39 W
ELEVATION: 1220 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located and identified from Assessment Report 499. Located on the cancelled John Bull 1 claim now apparently covered by the Xray 7 claim.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6265281
EASTING: 424488

COMMODITIES: Lead

MINERALS

SIGNIFICANT:	Galena	Pyrite				
ASSOCIATED:	Quartz	Barite				
ALTERATION:	Sericite	Pyrite	Silica	Chlorite		
ALTERATION TYPE:	Sericitic		Pyrite		Silicific'n	Chloritic
MINERALIZATION AGE:	Unknown					

DEPOSIT

CHARACTER: Vein Podiform
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Occurrence is a lens-shaped mass of quartz, barite, and pyrite.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Chlorite Schist
Pyroclastic
Volcanic Flow

HOSTROCK COMMENTS: Chlorite Schist was probably originally an andesitic tuff.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

This occurrence is located just south of Mitchell Glacier in an area underlain by Lower Jurassic Unuk River Formation rock, Hazelton Group. This formation is composed primarily of intermediate to mafic pyroclastics and flows with minor interbeds of siltstone and wacke. The north trending Brucejack Fault System cuts the country rock within a kilometre to the east of the occurrence. A large gossanous pyrite-quartz-sericite alteration zone covers much of the area with the rocks being locally foliated to schistoses in texture (Open File 1988-4).

Numerous small pieces of pyrite-barite float, hosting small amounts of galena, were found near a quartz-barite-pyrite lens that occurs within chlorite schist. This lens is 0.3 metres wide by 6 metres long (Assessment Report 499).

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DATE CODED: 1988/09/19 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 304**

NATIONAL MINERAL INVENTORY:

NAME(S): **ZEEHAN SOUTH**, 72 K CREEK, CAMP CREEK, ZEEHAN 13, STAR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 33 42 N
LONGITUDE: 131 13 39 W
ELEVATION: 152 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the east side of Craig River, along a small tributary called 72K Creek. Mineralized location from Plan 5 (Poloni, 1987).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6270815
EASTING: 363111

COMMODITIES: Gold Copper

MINERALS
SIGNIFICANT: Pyrite Pyrrhotite
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary			Coast Plutonic Complex
Pennsylvan.-Permian			Stikine Assemblage

LITHOLOGY: Meta Sediment/Sedimentary
Limy Meta Sediment/Sedimentary
Shaly Meta Sediment/Sedimentary
Black Shale
Brecciated Quartz Carbonate Vein
Feldspar Porphyry

HOSTROCK COMMENTS: Lower Tertiary feldspar porphyry intrudes Paleozoic metamorphosed sediments and volcanics.

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact Regional
Plutonic Rocks
RELATIONSHIP: Syn-mineralization Post-mineralization
GRADE: Greenschist
COMMENTS: Located at boundary of Coast Crystalline and Intermontane Belts.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	0.0200	Grams per tonne
Copper	0.0120	Per cent

COMMENTS: Sample T-085 from disseminated pyrite, pyrrhotite mineralization.
REFERENCE: Assessment Report 16620, Figure 4.

CAPSULE GEOLOGY

The area is underlain by a sequence of metamorphosed Paleozoic sediments and volcanics comprised mainly of argillite, chert, quartzite, slate, shale, schist, minor limestone and tuff. These Paleozoic rocks are unconformably overlain by the Lower Jurassic Hazelton Group volcaniclastics and sediments of the Unuk River Formation.

Locally, the Zeehan claims are underlain by metamorphosed Pennsylvanian to Permian sediments and volcanics. An altered, Lower Tertiary feldspar porphyry plug intrudes these rocks and is exposed along the west side of the Craig River. This feldspar porphyry plug is comprised dominantly of coarse-grained feldspar phenocrysts and locally, hosts disseminated pyrite, pyrrhotite and minor chalcopyrite (refer to Mill, 104B 305).

The 72K Creek appears to cut a sequence of shaly metasediments which include black shales and limy metasediments, which locally con-

CAPSULE GEOLOGY

tain brecciated quartz-carbonate veins and stringers mineralized with pyrite and pyrrhotite. In 1987, two samples collected from these mineralized veins assayed 0.02 grams per tonne gold, 1.2 grams per tonne silver, 0.012 per cent copper, 0.01 per cent zinc and 0.02 grams per tonne gold, 0.9 grams per tonne silver, 0.096 per cent copper with 0.01 per cent zinc (Assessment Report 16620, Figure 4).

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EMPR ASS RPT 11342, *16620
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
EMPR PF (*Poloni, J.R., (1987): Report on the Geological and Geochemical Surveys 1987 Zeehan (8-14) Mineral Claims, Oct.17, 1987 in Statement of Material Facts #41/88 for Tanker Oil and Gas, May 13, 1988)
NW PROSPECTOR Aug/Sept., 1988
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/09/23 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 305**

NATIONAL MINERAL INVENTORY:

NAME(S): **MILL**, ZEEHAN, GOSSAN CREEK, FALLS CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11W 104B11E
BC MAP:
LATITUDE: 56 34 49 N
LONGITUDE: 131 13 25 W
ELEVATION: 335 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the west side of the Craig River along Gossan Creek, sample T-034 location (Poloni, 1987, Figure 3).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6272879
EASTING: 363417

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrrhotite Pyrite
COMMENTS: Traces of gold mineralization.
ALTERATION: Sericite
ALTERATION TYPE: Pyrite Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary			Coast Plutonic Complex
Pennsylvan.-Permian			Stikine Assemblage

LITHOLOGY: Hornfels
Mylonite
Meta Sediment/Sedimentary
Siltstone
Cherty Siltstone
Chert
Volcaniclastic
Feldspar Porphyry

HOSTROCK COMMENTS: Lower Tertiary feldspar porphyry intrudes Paleozoic volcanics and sediments.

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine
METAMORPHIC TYPE: Contact RELATIONSHIP:
GRADE: Hornfels
COMMENTS: Located at boundary of Coast Crystalline & Intermontane Belts.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Copper	0.0220	Per cent

COMMENTS: Rock sample T-034, taken along Gossan Creek.
REFERENCE: Assessment Report 16620, Figure 3.

CAPSULE GEOLOGY

The area is underlain by a sequence of metamorphosed Paleozoic sediments and volcanics comprised mainly of argillite, chert, quartzite, slate, shale, minor limestone and tuff. These Pennsylvanian to Permian sediments and volcanics have been intruded by porphyritic monzonite stocks and by a granodiorite batholith, both related to the Coast Plutonic Complex. The porphyritic monzonite plugs are thought to be Cretaceous-Tertiary and the granodioritic rocks are Lower Tertiary (GSC Map 1418A).

The Craig River valley follows a northeast structural trend where extensional faults predominate. The Lower Tertiary intrusives also follow this trend.

The oldest rocks on the property consist of siltstone, cherty

CAPSULE GEOLOGY

siltstone, and chert with minor volcaniclastic interbeds. The feldspar porphyry intrusive is comprised dominantly of coarse-grained, white feldspar phenocrysts, probably orthoclase, in a fine-grained, biotite-feldspar and sericite matrix.

The northwest trending Gossan and Falls Creeks cut the contact zone between the Tertiary feldspar porphyry plug and the Paleozoic metasediments which locally contain disseminated sulphides of pyrite, pyrrhotite and chalcopyrite. Small mylonite zones and some hornfels mark the contact zone. Alteration consists mainly of pyritization and some sericitization.

In 1987, samples were collected from metasediments adjacent to the contact zone. One sample assayed 0.022 per cent copper and another assayed 0.014 per cent copper (Assessment Report 16620).

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EMPR EXPL *1983-528; 1987-C380
EMPR ASS RPT *12312, *16620
GSC MEM 246
GSC MAP 9-1957; 311A; 1418A
EMPR PF (*Poloni, J.R., (1987): Report on the Geological and Geochemical Survey 1987 Zeehan (8-14) Mineral Claims, Oct.17, 1987 in Statement of Material Facts #41/88 for Tanker Oil and Gas, May 13, 1988)
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/09/23 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 306**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH CREEK**, ZEEHAN 8, STAR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 36 04 N
LONGITUDE: 131 08 19 W
ELEVATION: 215 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 1.0 kilometre south of the junction of the Craig and Jekill Rivers, immediately east of the Craig River. Mineralized location from samples collected in the North Creek area (Poloni, 1987, Figure 3).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6275031
EASTING: 368709

COMMODITIES: Copper Lead Zinc

MINERALS
SIGNIFICANT: Chalcopyrite Sphalerite Galena Pyrite
COMMENTS: Sulphide mineralogy not reported.
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary			Coast Plutonic Complex
Pennsylvan.-Permian			Stikine Assemblage

LITHOLOGY: Meta Sediment/Sedimentary
Black Shale
Quartzite
Phyllite
Sandstone
Siltstone
Feldspar Porphyry

HOSTROCK COMMENTS: Lower Tertiary feldspar porphyry intrudes Paleozoic sediments and volcanics.

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact Regional
Plutonic Rocks RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Located along contact between Coast Crystalline & Intermontane Belts.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Copper	0.3450	Per cent
Zinc	4.5000	Per cent

COMMENTS: Sample T130, taken from a small creek, just east of the Craig River.
REFERENCE: Assessment Report 16620, Figure 3.

CAPSULE GEOLOGY

The area is underlain by a sequence of metamorphosed Paleozoic sediments and volcanics comprised mainly of argillite, chert, quartzite, slate, shale, minor limestone and tuff. The Paleozoic sediments are intruded by a Lower Tertiary feldspar porphyry (related to the Coast Plutonic Complex) exposed along the west side of the Craig River.

Locally, the area around North Creek on the east side of the Craig River is underlain by metamorphosed Pennsylvanian to Permian sediments and volcanics. The metasediments are comprised of black shales, quartzite, phyllite, sandstone and siltstone. Quartz veining and some quartz-carbonate veins are abundant.

CAPSULE GEOLOGY

In 1987 prospecting in the North Creek area indicated values of copper, lead and zinc within the altered sediments. Two grab samples assayed 0.345 per cent copper, 4.50 per cent zinc and 0.140 per cent copper, 3.20 per cent lead with 0.80 per cent zinc, respectively (Assessment Report 16620).

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EMPR EXPL 1983-527; 1987-C380
EMPR ASS RPT 11342, *16620
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/09/26 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 307**

NATIONAL MINERAL INVENTORY:

NAME(S): **BURTON**, CUMMINGS, STAR, B CREEK, HAG

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 33 44 N
LONGITUDE: 131 06 43 W
ELEVATION: 625 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6270653
EASTING: 370213

COMMENTS: Located on the northwest slopes of Brunt Mountain, along the west side of the Jekill River. Location of mineralized quartz vein on B Creek from Assessment Report 9190.

COMMODITIES: Gold, Silver, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Pyrrhotite, Galena, Sphalerite, Magnetite
ASSOCIATED: Quartz, Calcite
ALTERATION: Chlorite, Pyrite
ALTERATION TYPE: Chloritic, Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Pennsylvan.-Permian			Stikine Assemblage

LITHOLOGY: Andesite, Greenstone, Meta Sediment/Sedimentary, Tuff

HOSTROCK COMMENTS: Mineralization occurs within a quartz vein along a tuff or sediment-andesite contact.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks
GRADE: Greenschist
COMMENTS: Located along boundary of Coast Crystalline & Intermontane Belts.

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1980
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	72.3400	Grams per tonne
Gold	4.0500	Grams per tonne
Copper	0.0040	Per cent
Lead	1.1600	Per cent
Zinc	0.0100	Per cent

COMMENTS: Sample 6447, quartz vein with sphalerite, galena and magnetite of "B" Creek.
REFERENCE: Assessment Report 9190.

CAPSULE GEOLOGY

The area is underlain by a sequence of metamorphosed Paleozoic sediments and volcanics that are unconformably overlain by the Lower Jurassic Hazelton Group volcaniclastics and sediments of the Unuk River Formation.

Lower Tertiary feldspar porphyry stock (related to the Coast Plutonic Complex) intrudes the Paleozoic rocks. The intrusives are exposed along the west shores of the Craig River and more monzonitic or granodioritic stocks are exposed to the south along the east side of the Jekill River.

On the property, the most abundant package of rocks consist of

CAPSULE GEOLOGY

metamorphosed Pennsylvanian to Permian sediments and volcanics which occupy the western half of the claims. Massive dark green andesitic flows are interbedded with limestones, rusty argillites, tuff, phyllites and quartzite. The andesites or greenstones are resistant weathering, host abundant chlorite and are peppered with disseminated pyrite and pyrrhotite. Overlying these units is a white crystalline Permian limestone which is exposed on the northern part of Brunt Mountain and north of the claims (refer to Craig River, 104B 005).

Deformation of the rock units results from folding along a northwest-southeast axial trace with warping and shearing along a northeast direction.

Mineralization occurs within quartz veins associated with pyritic siliceous zones in the tuffs or sediments. In "B" Creek, mineralization occurs along a sediment-andesite contact. Sulphide mineralogy includes pyrite, galena, sphalerite and magnetite within a quartz vein that averages 5 metres in width and 35 metres in length. The vein follows the contact zone. In 1980, a mineralized sample from this vein assayed 4.05 grams per tonne gold, 72.34 grams per tonne silver, 1.16 per cent lead, 0.01 per cent zinc and 0.004 per cent copper (Assessment Report 9190).

To the east, within another small creek valley, a calcite vein within the andesite hosts pyrite, chalcopyrite, galena and magnetite. Sample 6448 from this vein assayed 0.309 grams per tonne gold, 14.40 grams per tonne silver, 0.02 per cent lead, 0.03 per cent zinc and 1.86 per cent copper (Assessment Report 9190).

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EMPR EXPL 1980-469; 1983-527
EMPR ASS RPT *9190, *11342, *16894, 17130
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
GCNL Mar.28, 1983
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B24)

DATE CODED: 1988/09/26 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 308**

NATIONAL MINERAL INVENTORY:

NAME(S): **STAR**, A CREEK, BURTON, HAG

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 33 59 N
LONGITUDE: 131 06 45 W
ELEVATION: 480 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6271117
EASTING: 370193

COMMENTS: Located on the northwest slopes of Brunt Mountain, along the west side of the Jekill River. Location of mineralized quartz vein along "A" Creek from Assessment Reports 9190 and 11342.

COMMODITIES: Lead, Silver, Gold, Copper, Zinc

MINERALS

SIGNIFICANT: Pyrite, Galena, Chalcopyrite, Sphalerite, Argentite, Tetrahedrite
ASSOCIATED: Quartz
ALTERATION TYPE: Pyrite, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Pennsylvan.-Permian			Stikine Assemblage

LITHOLOGY: Siliceous Tuff
Meta Sediment/Sedimentary
Limestone
Greenstone
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks
GRADE: Greenschist
COMMENTS: Located along boundary of Coast Crystalline & Intermontane Belts.

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1983

COMMODITY	GRADE	
Silver	367.5400	Grams per tonne
Gold	1.5800	Grams per tonne
Copper	0.1800	Per cent
Lead	8.7000	Per cent
Zinc	0.0400	Per cent

COMMENTS: Sample from 0.5 metre wide quartz vein on "A" Creek.
REFERENCE: Assessment Report 11342.

CAPSULE GEOLOGY

The area is underlain by a sequence of metamorphosed Paleozoic sediments and volcanics that are unconformably overlain by the Lower Jurassic Hazelton Group volcaniclastics and sediments of the Unuk River Formation.

A Lower Tertiary feldspar porphyry stock (related to the Coast Plutonic Complex) intrudes the Paleozoic rocks. The intrusives are exposed along the west shores of the Craig River and more monzonitic or granodioritic stocks are exposed to the south along the east side of the Jekill River.

On the property, the most abundant package of rocks consist of metamorphosed Pennsylvanian to Permian sediments and volcanics which occupy the western half of the claims. Massive dark green andesitic flows are interbedded with limestones, rusty argillites, phyllites and

CAPSULE GEOLOGY

quartzite. The andesites or greenstones are resistant weathering, host abundant chlorite and are peppered with disseminated pyrite and pyrrhotite. Overlying these units is a white crystalline Permian limestone which is exposed on the northern part of Brunt Mountain and north of the claims (refer to Craig River, 104B 005).

Deformation of the rock units results from folding along a northwest-southeast axial trace with warping and shearing along a northeast direction.

Mineralization occurs in quartz veins that are generally conformable with bedding and are associated with pyritic siliceous tuffs or sediments, particularly with its interbedded limestone members. A 0.5 metre wide vein on "A" Creek hosts mineralization which consists of pyrite, galena, chalcopyrite, sphalerite, argentite and tetrahedrite. In 1983, a sample taken from this vein assayed 1.58 grams per tonne gold, 367.54 grams per tonne silver, 0.18 per cent copper, 8.70 per cent lead, 0.04 per cent zinc (Assessment Report 11342).

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EMPR EXPL 1980-469; 1983-527
EMPR ASS RPT 9190, *11342, *16894, 17130
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
GCNL Mar.28, 1983
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B24)

DATE CODED: 1988/09/27 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 309**

NATIONAL MINERAL INVENTORY:

NAME(S): **OK 2**, MITCHELL

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 31 29 N
LONGITUDE: 130 17 16 W
ELEVATION: 747 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Identified from Assessment Report 15688.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6265225
EASTING: 420778

COMMODITIES: Gold, Copper, Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite, Tetrahedrite, Molybdenite
ASSOCIATED: Quartz
ALTERATION: Silica, Sericite, Pyrite, Jarosite
ALTERATION TYPE: Silicific'n, Sericitic, Pyrite, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Undifferentiated Sediment/Sedimentary
Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1986
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Gold	3.0900	Grams per tonne

REFERENCE: Assessment Report 15688.

CAPSULE GEOLOGY

This showing occurs along Sulphurets Creek about 2 kilometres west of the toe of Mitchell Glacier. The area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. Rocks are reported to consist of a green-grey lapilli tuff, grey tuff and an intervening package of undifferentiated sediments. The sediments and grey tuff are the most intensely altered. The sediments are characterized by intense silicification, sericitization, pyritization, and jarosite staining.

Northeast trending quartz veins occur primarily within the altered sediments. These veins contain pyrite with minor amounts of chalcopyrite, tetrahedrite or molybdenite. Samples assay up to 3.09 grams per tonne gold (Assessment Report 15688).

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EMPR GEM 1972-515; 1974-334
EMPR BULL 63
EMPR OF 1988-4
EMPR FIELDWORK 1987, p. 199
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BIBLIOGRAPHY

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Simpson, T.M., (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho

DATE CODED: 1988/09/30 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 310** NATIONAL MINERAL INVENTORY:

NAME(S): **BILLY GOAT BOWL (STU)**, STU 2, KESTREL

STATUS: Showing MINING DIVISION: Liard
REGIONS: British Columbia
NTS MAP: 104B10W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 38 27 N NORTHING: 6279043
LONGITUDE: 130 54 49 W EASTING: 382643
ELEVATION: 1340 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located just southeast of the toe of Zappa Glacier, along the west side of Snippaker Creek, about 6 kilometres south of the Iskut River; location of mineralized rock samples from Assessment Report 16930.

COMMODITIES: Gold Silver Zinc Lead Copper Arsenic

MINERALS
SIGNIFICANT: Pyrite Galena Sphalerite Chalcopyrite
ASSOCIATED: Calcite Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Mesothermal Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 0700 x 0500 Metres STRIKE/DIP: /65S TREND/PLUNGE: 090/
COMMENTS: General trend of mineralized veins in Billy Goat Bowl zone.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Fine Grained Black Argillite
Siliceous Fine Grained Black Siltstone
Siliceous Greywacke
Feldspar Porphyry Dike
Andesite Dike
Iron Carbonate Vein

HOSTROCK COMMENTS: Stratified rocks are correlated with Hazelton Group and some units may, in part, correlate with upper members of the Stuhini Group.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	61.0270	Grams per tonne
Gold	10.4570	Grams per tonne
Copper	0.2060	Per cent
Lead	3.9970	Per cent
Zinc	2.3420	Per cent

COMMENTS: Sample 13129, a 0.15 metre wide sample from mineralized iron-carbonate vein in Area 6.
REFERENCE: Assessment Report 16930.

CAPSULE GEOLOGY

The oldest rocks in the area consist of Paleozoic crinoidal limestone which overlies metamorphosed sedimentary and volcanic members. Unconformably overlying the Paleozoic limestone unit are Upper Triassic Hazelton Group island are volcanics and sediments. Monotis fossils have been recognized on the north slope of Snippaker Peak giving an age of Upper Triassic. Some of the stratified rocks may be correlated with upper members of the Stuhini Group.

On the property, limestone is the oldest unit which is success-

CAPSULE GEOLOGY

ively overlain by an argillite/siltstone/greywacke sequence which in turn is overlain by an andesite agglomerate unit. Feldspar porphyry and andesite dykes cut both the argillite/siltstone/greywacke and agglomerate.

In the central part of the Stu 2 claim, grey, massive, sometimes recrystallized limestone, forms an east-west trending wedge which is possibly in fault contact with the argillite/siltstone/greywacke sequence. This sedimentary sequence is bedded, fine-grained, black and is often silicified and strongly fractured. The sequence hosts known mineralization in areas of feldspar-porphyry and andesite dyking.

In the Billy Goat Bowl Zone, mineralization is found covering an area of at least 500 by 700 metres, just southeast of the toe of Zappa Glacier. The gold-bearing mineralization occurs in iron-carbonate (calcite) veins which often host pyrite with minor galena and sphalerite. Sulphide veins vary from 2 to 4 centimetres and swell up to over 1.0 metres in width. The veins have been traced up to 50 metres along strike length and the general trend of the mineralized veins is about 090 degrees dipping 65 degrees south.

In 1987, a 0.35 metre wide sample taken from an iron-carbonate vein with massive pyrite assayed 17.21 grams per tonne gold. Seven other areas hosting similar mineralized iron-carbonate and quartz veins with pyrite plus or minus galena, plus or minus sphalerite, plus or minus chalcopyrite, were sampled. A 0.5 metre wide sample from Area 2 assayed 8.06 grams per tonne gold, 77.83 grams per tonne silver, 0.195 per cent copper, 0.10 per cent lead, 0.556 per cent zinc and 0.519 per cent arsenic. A 0.8 metre sample from Area 7 assayed 4.49 grams per tonne gold, 72.0 grams per tonne silver, 0.225 per cent copper, 7.08 per cent lead and 3.28 per cent zinc (Assessment Report 16930).

At least one prominent feldspar porphyry dyke trending 040 degrees with a vertical dip, averaging 35 to 50 metres in width, appears to be responsible for mineralization in the Billy Goat Bowl Zone. Iron-carbonate/sulphide and mineralized quartz veins have only been seen adjacent to this dyke. Also, related to the mineralization are several narrower andesite dykes which range up to 1.0 to 1.5 metre width.

In addition to the iron-carbonate/pyrite veins, several quartz veins were found to host sphalerite plus chalcopyrite plus galena. These veins host anomalous zinc values with very low gold values.

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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/10/13 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 311**

NATIONAL MINERAL INVENTORY:

NAME(S): **CENTRAL STU 2**, STU 2, KESTRAL

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 38 22 N
LONGITUDE: 130 54 04 W
ELEVATION: 1493 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the southern flank of Snippaker Mountain, east of Zappa Glacier.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6278868
EASTING: 383405

COMMODITIES: Gold, Copper, Silver, Arsenic

MINERALS

SIGNIFICANT: Sphalerite, Galena, Chalcopyrite, Pyrite
ASSOCIATED: Quartz
COMMENTS: Sulphide veins.
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic, Mesothermal, Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Fine Grained Black Argillite
Siliceous Fine Grained Black Siltstone
Siliceous Greywacke
Andesite Agglomerate
Feldspar Porphyry Dike
Andesite Dike

HOSTROCK COMMENTS: Stratified rocks are correlated with Hazelton Group and some units may, in part, correlate with upper members of the Stuhini Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	29.1420	Grams per tonne
Arsenic	3.8670	Per cent
Gold	11.7250	Grams per tonne
Copper	0.4250	Per cent

COMMENTS: Sample 13181 is a 0.5 metre wide sample from a dyke swarm.
REFERENCE: Assessment Report 16930.

CAPSULE GEOLOGY

The oldest rocks in the area consist of Paleozoic crinoidal limestone which overlies metamorphosed sedimentary and volcanic members. Unconformably overlying the Paleozoic limestone unit are Upper Triassic to Jurassic Hazelton Group or Stuhini Group island arc volcanics and sediments. Monotis fossils have been recognized on the north slope of Snippaker Peak giving an age of Upper Triassic.

On the property, limestone is the oldest unit which is successively overlain by an argillite/siltstone/greywacke sequence which in turn is overlain by an andesite agglomerate unit. Feldspar porphyry and andesite dykes cut both the argillite/siltstone/greywacke and agglomerate.

In the central part of the Stu 2 claim, grey, massive, sometimes recrystallized limestone forms an east-west trending wedge which is

CAPSULE GEOLOGY

possibly in fault contact with the argillite/siltstone/greywacke sequence. This sedimentary sequence is bedded, fine-grained, black and is often silicified and strongly fractured. The sequence hosts known mineralization in areas of feldspar-porphyry and andesite dyking (refer to Billy Goat Bowl Zone, 104B 310).

In the southeast, Central Stu 2 Zone mineralization is related to the intrusion of andesite and feldspar-porphyry dykes. The andesite dykes vary from 0.5 to 1.0 metre in width and often occur in swarms. The feldspar-porphyry dykes range from 2 to 4 metres in width.

Pyritic sulphide veins occur immediately adjacent to several andesite dykes. The dykes and veins have a general east-west trend and dip steeply to the south with individual widths ranging up to 30 to 40 centimetres across. A 0.5 metre wide sample from one of these mineralized veins assayed 11.725 grams per tonne gold, 29.14 grams per tonne silver, 0.425 per cent copper and 3.867 per cent arsenic. Another 0.5 metre sample assayed 12.136 grams per tonne gold, 19.885 grams per tonne silver, 0.457 per cent copper and 4.339 per cent arsenic (Assessment Report 16930).

Toward the east part of the Central Stu 2, narrow auriferous quartz vein stringers with galena, sphalerite and chalcopyrite are hosted within andesite agglomerate and in close proximity to feldspar porphyry dyking. In 1987, a 0.03 metre sample assayed 68.98 grams per tonne gold, 38.056 grams per tonne silver, 0.11 per cent copper, 1.49 per cent zinc and 1.19 per cent lead (Assessment Report 16930).

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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/10/13 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 312**

NATIONAL MINERAL INVENTORY:

NAME(S): **ISKUT 2**, MERIDOR, JOANN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 42 24 N
LONGITUDE: 131 07 42 W
ELEVATION: 150 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located just north of the Iskut River, at the toe of the south-facing slope of Mount Verrett; location of mineralized sample (Dandy, L., 1988).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6286757
EASTING: 369705

COMMODITIES: Gold, Copper, Silver

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrite, Magnetite
COMMENTS: Traces of pyrrhotite, sphalerite, galena, molybdenite and bornite were reported.
ALTERATION: Limonite, Chlorite, Garnet, Biotite
ALTERATION TYPE: Oxidation, Chloritic, Pyrite, Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated, Massive
CLASSIFICATION: Porphyry, Igneous-contact, Skarn, Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins; I05 Polymetallic veins Ag-Pb-Zn±Au; L04 Porphyry Cu ± Mo ± Au; K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Jurassic-Cretaceous			Coast Plutonic Complex
Permian			Stikine Assemblage

LITHOLOGY: Pyrite Argillite
Pyrite Chert
Limy Argillite
Skarn
Epidote Quartz Tremolite Skarn
Syenite Porphyry
Diorite

HOSTROCK COMMENTS: Syenite porphyry is thought to be Jurassic to Cretaceous in age and related to the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
Plutonic Rocks RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	2.2000	Grams per tonne
Gold	0.5300	Grams per tonne
Copper	0.0570	Per cent

COMMENTS: Sample 16405.
REFERENCE: Property File: Dandy, L., 1988.

CAPSULE GEOLOGY

Correlations and ages of formations are under investigation and subject to refinements. The oldest non-metamorphic formations are Permian limestones, overlain by a thick sequence of Permian or Triassic volcanics with intercalated sediments. These are overlain by Triassic clastics and limestone.

The property lies within intensely gullied terrain. The oldest rocks exposed consist of Late Paleozoic to Permian greenstone, limestone, shale and clastic sediments. These are overlain by Upper

CAPSULE GEOLOGY

Triassic to Lower Jurassic andesitic volcanics and sedimentary rocks. These are intruded by Jurassic and Cretaceous diorite and hornblende diorite. Recent basalt and ash is found in the northern part of the property.

Localized showings on the property are within a package of Permian(?) or older silty or limy argillites with chlorite, biotite and minor garnet. These sedimentary rocks are intruded by a syenite porphyry on the southeast part of the claims. Several northeast trending right lateral faults occur, as well as crossfaults. Bedded rocks strike about 270 degrees with dips over 45 degrees to the southwest. An occurrence of magnetite skarn with minor chalcopyrite is reported from where a fault, trending about 045 degrees, appears to follow the contact of the syenite porphyry. The magnetite and minor chalcopyrite is described as occurring in epidote-quartz-tremolite skarn.

Anomalous gold values occur within pyritized chert and argillite. Along the western claim boundary pyrite and limonite occur in the chert. In 1987, a grab sample of pyritic chert assayed 0.53 grams per tonne gold, 2.2 grams per tonne silver, 0.057 per cent copper (Dandy, L., 1988). A 2.0 metre wide pyrite vein also occurs in this vicinity.

Drilling in 1988 intersected abundant disseminated pyrite (up to 10 per cent) and disseminated and stringer veins of chalcopyrite (up to 0.5 per cent). Trace amounts of pyrrhotite, sphalerite, molybdenite, galena and bornite have been reported (George Cross Newsletter July 26, 1988). At least ten zones of gold mineralization have been intersected in 7 of the first 25 holes (Equity Preservation Corp., 1988).

The mineralization shows a broad zoning pattern across the length of the property. A 457 metre wide porphyry copper and molybdenum core is surrounded by a broad pyrite halo containing gold and copper values. To the north and northwest, the disseminated pyrite mineralization abuptly changes to mineralized shear zones carrying quartz and sulphide veins (refer to Ray, 104B 079 and Ray No. 2, 104B 088).

In 1988, a rock assay from the far northwest boundary of the property was reported to have assayed 65.5 grams per tonne gold (Supplement to Northern Miner, Oct.3, 1988). Mineralization in this area consists of semi-massive to massive sulphide mineralization from a zone which ranges 9.1 to 33.5 metres in width. Gold values range up to 29.6 grams per tonne gold. Three or four mineralized zones are present within this northwest-southeast structure which projects inwards toward the centre of the claims (Northwest Prospector Jan./Feb., 1989).

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NW PROSPECTOR Jan./Feb., 1989
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B12)
Placer Dome File

DATE CODED: 1988/10/06 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 313**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAGNETITE (STU)**, STU 2, KESTREL

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 38 23 N
LONGITUDE: 130 53 36 W
ELEVATION: 1432 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Skarn zone located on the southern flank of Snippaker Mountain, east of Zappa Glacier.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6278885
EASTING: 383883

COMMODITIES: Copper, Gold, Silver, Magnetite, Zinc, Lead, Arsenic, Bismuth

MINERALS
SIGNIFICANT: Magnetite, Chalcopyrite, Pyrite
ALTERATION: Malachite, Azurite
ALTERATION TYPE: Skarn, Oxidation, Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Massive
CLASSIFICATION: Skarn, Industrial Min.
TYPE: K04 Au skarn; I02 Intrusion-related Au pyrrhotite veins; I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Massive Magnetite Skarn
Skarn
Limestone
Pyrite Sediment/Sedimentary
Pyrite Calcareous Sediment/Sedimentary

HOSTROCK COMMENTS: Stratified rocks are correlated with Hazelton Group and some units may, in part, be correlated with upper members of the Stuhini Group.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	13.0300	Grams per tonne
Gold	2.9500	Grams per tonne
Copper	0.4590	Per cent

COMMENTS: A 0.5 metre sample from skarned, massive magnetite zone.
REFERENCE: Assessment Report 16930.

CAPSULE GEOLOGY

The oldest rocks in the area consist of Paleozoic crinoidal limestone which overlies metamorphosed sedimentary and volcanic members. Unconformably overlying the Paleozoic limestone unit are Upper Triassic to Jurassic Hazelton Group or Stuhini Group island are volcanics and sediments. Monotis fossils have been recognized on the north slope of Snippaker Peak giving an age of Upper Triassic.

On the property, limestone is the oldest unit which is successively overlain by an argillite/siltstone/greywacke sequence which in turn is overlain by an andesite agglomerate unit. Feldspar porphyry and andesite dykes cut both the argillite/siltstone/greywacke and agglomerate.

In the central part of the Stu 2 claim, grey, massive, sometimes recrystallized limestone forms an east-west trending wedge which possibly is in fault contact with the argillite/siltstone/greywacke

CAPSULE GEOLOGY

sequence. This sedimentary sequence is bedded, fine-grained, black and is often silicified and strongly fractured. This sequence hosts known mineralization in areas of feldspar-porphyry and andesite dyking (refer to Billy Goat Bowl Zone, 104B 310 and Central Stu 2, 104B 311).

The Magnetite Zone consists of a lens of skarned massive magnetite with minor chalcopyrite with malachite and azurite measuring about 15 metres by 1 metre. It is located near the southeast claim boundary of the Stu 2 claim. A narrow limestone band overlies this zone. In 1987, a 0.5 metre sample assayed 2.95 grams per tonne gold, 13.03 grams per tonne silver and 0.459 per cent copper. Another grab sample assayed 0.86 grams per tonne gold, 34.63 grams per tonne silver, 2.026 per cent copper and 1.51 per cent zinc (Assessment Report 16930).

Within the southeast corner of the Stu 2, about 300 metres north of the Magnetite Zone, samples of pyritic, calcareous rock located near the faulted limestone ridge returned anomalous gold values. A 0.5 metre grab sample assayed 32.81 grams per tonne gold and another 0.3 metre sample assayed 23.59 grams per tonne gold 9 (Assessment

Further east, several hundred metres south of the limestone ridge in pyritic sediments a grab sample assayed 10.90 grams per tonne gold, 179.31 grams per tonne silver, 0.116 per cent copper, 0.106 per cent zinc, 0.07 per cent lead, 0.91 per cent arsenic and 0.11 per cent bismuth (Assessment Report 16930).

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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/10/14 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 314** NATIONAL MINERAL INVENTORY:

NAME(S): **SECOND BASIN NORTH**, BURNIE 2, JOHNNY MOUNTAIN, ANDRONE

STATUS: Showing MINING DIVISION: Liard
REGIONS: British Columbia
NTS MAP: 104B11E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 35 26 N NORTHING: 6273717
LONGITUDE: 131 03 53 W EASTING: 373209
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located east of the Jekill River on the north side of Second Basin; location of rock sample 15944 (Assessment Report 16957, Figure 3).

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Tetrahedrite Chalcopyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Chlorite Hematite
ALTERATION TYPE: Silicific'n Pyrite Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Pyrite Argillaceous Siltstone
Gossan
Siltstone
Argillite
Andesite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	67.1000	Grams per tonne
Gold	1.5400	Grams per tonne
Lead	1.1099	Per cent
Zinc	0.2387	Per cent

COMMENTS: Sample 15944.
REFERENCE: Assessment Report 16957.

CAPSULE GEOLOGY

The oldest rock units consist of Upper Triassic epiclastic volcanics, marbles, sandstones and siltstones which may be correlative with the Stuhini Group. These, in turn, are overlain by sedimentary and volcanic rocks of the Jurassic Hazelton Group. The Hazelton Group is subdivided into the Lower Jurassic Unuk River Formation comprised predominantly of volcanics and sediments which include lithic tuffs, pillow lavas with carbonate lenses and thin-bedded siltstones. These are overlain by the Middle Jurassic Betty Creek Formation characterized by bright red and green volcaniclastic agglomerates, andesitic flows, chert and carbonate lenses.

The volcanic and sedimentary sequences were intruded by the Tertiary-Cretaceous Coast Plutonic Complex. A wide variety of intrusive phases are present including granodiorite, quartz monzonite and diorite. Small satellitic plugs from the main batholith are important for localizing mineralization.

CAPSULE GEOLOGY

The predominant lithologies on the property consist of marine sediments, volcaniclastics and volcanic flows. The marine sediments consist of argillites, argillaceous siltstones and siltstone with some quartzite, greywacke and carbonates. These sediments are interbedded with contemporaneous marine volcanics ranging from rhyodacite to basalt in composition. Volcanic facies include crystal fragmental tuff, lithic tuff, breccias, agglomerate, flows and sills.

Low grade regional metamorphism has occurred within the marine sediments which contain abundant chlorite. Foliation is usually conformable with the bedding. Fault and shear zones trend 135 degrees and about 045 degrees with andesite and basalt dykes following the 045 degree structures and felsite dykes related to the 135 degree structures.

Along the north wall of Second Basin, and andesite dyke trending about 045 degrees cuts hematized argillaceous siltstone. The altered and sheared siltstone is pyritized and hosts abundant quartz and calcite stringers. Pyritization is associated with these sheared and silicified zones and moderate to intense gossans have developed depending on the degree of weathering.

Several samples collected in 1987 from the north wall of Second Basin returned good values. One sample assayed 2.53 grams per tonne gold, 21.6 grams per tonne silver, 0.026 per cent copper, 0.376 per cent lead and 1.001 per cent zinc. Another sample assayed 1.54 grams per tonne gold, 67.1 grams per tonne silver, 0.021 per cent copper, 1.110 per cent lead and 0.239 per cent zinc (Assessment Report 16957).

Mineralization in this gossanous area consists mainly of pyrite with traces of galena, chalcopyrite, tetrahedrite and sphalerite.

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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/10/26 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 315**

NATIONAL MINERAL INVENTORY:

NAME(S): **SECOND BASIN GOSSAN**, BURNIE 2, DAN 2, ANDRONE, JOHNNY MOUNTAIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 35 17 N
LONGITUDE: 131 02 45 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located west of the Jekill River with the Second Basin gossan; location of rock sample 15912 (Assessment Report 16957, Figure 3).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6273404
EASTING: 374361

COMMODITIES: Silver, Gold, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite, Galena
ASSOCIATED: Quartz, Calcite
ALTERATION: Hematite, Jarosite, Chlorite, Goethite, Pyrolusite, Pyrite
ALTERATION TYPE: Silicific'n, Pyrite, Oxidation, Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Pyrite Rhyodacite Tuff
Gossan
Argillite
Siltstone
Fine Grained Sandstone
Volcanic Tuff
Volcanic Flow
Andesite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	288.9000	Grams per tonne
Gold	2.1600	Grams per tonne
Copper	0.1210	Per cent
Lead	0.0350	Per cent
Zinc	0.0310	Per cent

COMMENTS: Sample #15912; quartz vein (12 centimetre) with pyrite, chalcopyrite, galena and sphalerite.
REFERENCE: Assessment Report 16957.

CAPSULE GEOLOGY

The oldest rock units consist of Upper Triassic epiclastic volcanics, marbles, sandstones and siltstones which may be correlative with the Stuhini Group. These, in turn, are overlain by sedimentary and volcanic rocks of the Jurassic Hazelton Group. The Hazelton Group is subdivided into the Lower Jurassic Unuk River Formation comprised predominantly of volcanics and sediments which include lithic tuffs, pillow lavas with carbonate lenses and thin-bedded siltstones. These are overlain by the Middle Jurassic Betty Creek Formation characterized by bright red and green volcaniclastic agglomerates, andesitic

CAPSULE GEOLOGY

flows, chert and carbonate lenses.

The volcanic and sedimentary sequences were intruded by the Tertiary-Cretaceous Coast Plutonic Complex. A wide variety of intrusive phases are present including granodiorite, quartz monzonite and diorite. Small satellitic plugs from the main batholith are important for localizing mineralization.

The predominant lithologies on the property consist of marine sediments, volcaniclastics and volcanic flows. The marine sediments consist of argillites, argillaceous siltstones and siltstone with some quartzite, greywacke and carbonates. These sediments are interbedded with contemporaneous marine volcanics ranging from rhyodacite to basalt in composition. Volcanic facies include crystal fragmental tuff, lithic tuff, breccias, agglomerate, flows and sills.

Low grade regional metamorphism has occurred within the marine sediments which contain abundant chlorite. Foliation is usually conformable with the bedding. Fault and shear zones trend 135 degrees and about 045 degrees with andesite and basalt dykes following the 045 degree structures and felsite dykes related to the 135 degree structures.

Locally, mineralization appears to be associated with base metals in distinct quartz vein systems. Pyritization, of up to 15 per cent, is commonly associated with silicified zones. Upon weathering, these zones develop moderate to intense gossans composed of hematite, goethite, jarosite and pyrolusite.

In the Second Basin Gossan area, there are several shears in the metasediments. A 135 degree trending shear hosts a hornblende porphyry dyke while 045 degree trending shears are silicified and host abundant quartz and calcite veins.

In 1987 a sample from a 12 centimetre wide quartz vein with pyrite, chalcopyrite, galena and sphalerite assayed 2.16 grams per tonne gold, 288.9 grams per tonne silver, 0.12 per cent copper, 0.035 per cent lead and 0.031 per cent zinc (Assessment Report 16957). This quartz vein is within pyritized rhyodacitic tuff and metasediments comprised of altered argillite, siltstone and fine-grained sandstone.

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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/10/28 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 316**

NATIONAL MINERAL INVENTORY:

NAME(S): **EXPOSURE SHOWING**, DAN, AREA D,
ANDRONE, JOHNNY MOUNTAIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 34 37 N
LONGITUDE: 131 03 03 W
ELEVATION: 1850 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Large gossan located on a ridge between the Second and Third Basins as indicated in Figure 3, Assessment Report 16957.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6272177
EASTING: 374017

COMMODITIES: Silver, Gold, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite, Galena, Pyrrhotite, Tetrahedrite
ASSOCIATED: Quartz, Calcite, Carbonate
ALTERATION: Epidote, Chlorite, Hematite, Pyrolusite, Goethite, Pyrite
ALTERATION TYPE: Silicific'n, Propylitic, Argillic, Oxidation, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Cretaceous-Tertiary			Coast Plutonic Complex

LITHOLOGY: Phyllite
Phyllitic Argillite
Argillaceous Siltstone
Gossan
Basalt
Rhyodacite Porphyry Tuff
Quartz Diorite
Felsite Dike

HOSTROCK COMMENTS: Quartz diorite intrudes marine sediments, volcaniclastics and volcanics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks
GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	79.1000	Grams per tonne
Gold	0.9900	Grams per tonne
Copper	0.2265	Per cent
Lead	1.0054	Per cent
Zinc	0.1741	Per cent

COMMENTS: Sample 15920, from mineralized quartz vein system.
REFERENCE: Assessment Report 16957.

CAPSULE GEOLOGY

The oldest rock units consist of Upper Triassic epiclastic volcanics, marbles, sandstones and siltstones which may be correlative with the Stuhini Group. These, in turn, are overlain by sedimentary and volcanic rocks of the Jurassic Hazelton Group. The Hazelton Group is subdivided into the Lower Jurassic Unuk River Formation comprised predominantly of volcanics and sediments which include lithic tuffs,

CAPSULE GEOLOGY

pillow lavas with carbonate lenses and thin-bedded siltstones. These are overlain by the Middle Jurassic Betty Creek Formation characterized by bright red and green volcaniclastic agglomerates, andesitic flows, chert and carbonate lenses.

The volcanic and sedimentary sequences were intruded by the Tertiary-Cretaceous Coast Plutonic Complex. A wide variety of intrusive phases are present including granodiorite, quartz monzonite and diorite. Small satellitic plugs from the main batholith are important for localizing mineralization.

The predominant lithologies on the property consist of marine sediments, volcaniclastics and volcanic flows. The marine sediments consist of argillites, argillaceous siltstones and siltstone with some quartzite, greywacke and carbonates. These sediments are interbedded with contemporaneous marine volcanics ranging from rhyodacite to basalt in composition. Volcanic facies include crystal fragmental tuff, lithic tuff, breccias, agglomerate, flows and sills.

Low grade regional metamorphism has occurred within the marine sediments which contain abundant chlorite. Foliation is usually conformable with the bedding. Fault and shear zones trend 135 degrees and about 045 degrees with andesite and basalt dykes following the 045 degree structures and felsite dykes related to the 135 degree structures.

A quartz diorite mass intrudes the sediments and volcanics and is exposed in the southwestern part of the property. The intrusive is medium to coarse-grained and is comprised of sub to euhedral crystals. A satellite plug of this intrusion occurs on the ridge between Second and Third Basins, immediately north of the main pluton.

The Exposure Showing is located immediately north of the quartz diorite stock. Felsite dyke swarms and strong quartz vein systems crosscut the phyllite, phyllitic argillite, argillaceous siltstones and basalt to rhyodacitic porphyry tuffs. Silicification is manifested as crystalline to opaque to milky grey-white quartz breccias, stockworks and veins which range from 1 millimetre to 1 metre in width, with calcite often occurring as secondary veins.

Pyritization of up to 15 per cent is associated with these silicified zones. Upon weathering, moderate to intense gossans have developed and consist of hematite, goethite, jarosite and pyrolusite.

The rocks in the Exposure Showing have undergone various degrees of propylitic, argillic, sericitic and potassic alteration and contain abundant epidote and chlorite. Quartz and quartz-carbonate veins host pyrite, chalcopyrite, sphalerite, galena and trace pyrrhotite and tetrahedrite. In 1987, a sample from this silicified zone assayed 0.99 grams per tonne gold, 79.1 grams per tonne silver, 0.227 per cent copper, 1.005 per cent lead and 0.174 per cent zinc. Another sample from this mineralized quartz vein system assayed 0.995 grams per tonne gold, 41.1 grams per tonne silver and 2.954 per cent copper (Assessment Report 16957).

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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/10/28 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 317**

NATIONAL MINERAL INVENTORY:

NAME(S): **VER 1**, MOUNT VERRETT, HEMLO, HEMLO WEST 18

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 43 43 N
LONGITUDE: 131 03 41 W
ELEVATION: 5550 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located just west of the peak of Mount Verrett, along the northern boundary of the Ver 1 claim (Assessment Report 17122, Figure 2).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6289074
EASTING: 373876

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Pyrite Arsenopyrite
ALTERATION: Epidote Pyrite
ALTERATION TYPE: Propylitic Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Podiform Disseminated
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact
TYPE: I02 Intrusion-related Au pyrrhotite veins
DIMENSION: 0002 x 0001 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Pods or lenses of pyrite in foliated granodiorite.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Jurassic-Cretaceous	Stuhini	Undefined Formation	Texas Creek Plutonic Suite

LITHOLOGY: Mafic Flow
Foliated Granodiorite

HOSTROCK COMMENTS: Mineralization occurs within a shear/vein zone in mafic volcanics and as pods or lenses in foliated granodiorite.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional Plutonic Rocks RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SHEAR REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	20.1250	Grams per tonne

COMMENTS: Sample from a shear/vein zone.
REFERENCE: Assessment Report 17122.

CAPSULE GEOLOGY

Regional mapping indicates the area is underlain by Mesozoic sediments and volcanics which has been intruded by granitic rocks of the Texas Creek-Galore plutonic suite.

The oldest rocks consist of a thick sequence of weakly metamorphosed siltstones and argillites which are considered pre-Triassic in age. Overlying this sequence are black shales, siltstones, greywacke and conglomerates of the Stuhini Group. Corals from the limestone beds within these rocks have been dated as Upper Triassic.

Intruding the Mesozoic rocks are Jurassic to Cretaceous plutonic rocks which range in composition from syenite to diorite. Contact metamorphism consists of large zones of hydrothermal alteration with the formation of migmatites and cataclasites.

Little is known of detailed structure in the area, but a number of concentric features occur and these are probably tension fractures related to the intrusion of a granodiorite pluton which occurs just northwest of Mount Verrett.

Several areas with anomalous gold values occur in rocks toward the northern boundary of the Ver 1 claim, west of Mount Verrett. A

CAPSULE GEOLOGY

sample from a shear/vein zone assayed 20.125 grams per tonne gold (Assessment Report 17122). Mapping indicated a strong linament with up to 5.0 per cent pyrite crosscutting a mafic flow. Other samples from this area assayed up to 1.5 grams per tonne gold.

A second area, about 320 metres to the northeast, hosts up to 10.0 per cent pyrite in approximately a 50 metre square within foliated granodiorite. The pyrite occurs as disseminated crystals up to 0.5 centimetres and as pods or lenses up to 1.0 by 2.0 metres in area, with minor epidote and possibly some arsenopyrite. A 2.0 metre channel sample taken across a 10.0 metre width assayed 2.363 grams per tonne gold and 0.17 grams per tonne silver (Assessment Report 17122).

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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/11/02 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 318**

NATIONAL MINERAL INVENTORY:

NAME(S): **SERICITE EAST**, GOSSAN 6, TAMI, SERICITE RIDGE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 35 01 N
LONGITUDE: 130 52 01 W
ELEVATION: 1280 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6272597
EASTING: 385331

COMMENTS: Located on the east side of Sericite Ridge, west of Snippaker Creek on the Gossan 6 claim.

COMMODITIES: Copper, Gold, Silver

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Malachite
ASSOCIATED: Quartz
ALTERATION: Malachite, Chlorite, Sericite, Limonite, Hematite, Pyrite
ALTERATION TYPE: Propylitic, Oxidation, Silicific'n, Sericitic, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork, Disseminated
CLASSIFICATION: Porphyry, Igneous-contact
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb), I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Mesozoic			Coast Plutonic Complex

LITHOLOGY: Sericite Chlorite Schist
Siliceous Siltstone
Hornfels
Gossan
Phyllite
Volcaniclastic
Felsic Volcanic
Andesitic Tuff
Quartz Monzonite
Monzonite

HOSTROCK COMMENTS: Undivided Triassic-Jurassic volcanic and sedimentary sequence is intruded by Triassic and younger quartz monzonite.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
Plutonic Rocks RELATIONSHIP: Pre-mineralization, Syn-mineralization, Post-mineralization
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	9.9000	Grams per tonne
Gold	0.4500	Grams per tonne
Copper	0.8304	Per cent

COMMENTS: Sample of sericite-chlorite schist with disseminated chalcopyrite and pyrite.
REFERENCE: Assessment Report 16931.

CAPSULE GEOLOGY

The area is underlain by Triassic and younger quartz monzonite and related hypabyssal rocks with lesser amounts of an undivided Triassic to Jurassic assemblage of Stuhini Group or Hazelton Group (Unuk River Formation) andesitic tuffs, greywackes and siltstones.

CAPSULE GEOLOGY

Schists and phyllites derived from the felsic to intermediate volcanics and volcaniclastics, overlie most of the intrusive body. Mafic to felsic dykes and quartz veining crosscut all rock types.

The intrusive, which is part of the Coast Plutonic Complex, is comprised of a medium-grained monzonite to quartz monzonite with a penetrative foliation in and around major structural features that varies between 005 to 020 degrees and dips 28 to 76 degrees.

Several dykes of varying composition related to the monzonite intrusive and later, basalt dykes, occupy fractures in the intrusive and overlying volcano/sedimentary unit. The dykes vary from 1 to 5 metres in width and show prominent east and northeast trends.

A prominent, highly hematite and limonite stained interbedded volcaniclastic and sedimentary unit occurs in sharp contact with the underlying monzonite. The volcaniclastic unit is comprised of a fine-grained latitic matrix and angular fragments up to 2 centimetres in diameter. The matrix is highly fractured and foliated, contains disseminated pyrite, and is intensely altered to sericite and minor chlorite. Siltstone beds are pale to medium grey, laminated, locally up to 20 metres thick and weakly hornfelsed.

A thick sequence of grey to green, well laminated siltstone is prevalent in the southern end of Sericite Ridge. It is highly fractured, iron-stained and hosts pyrite as fracture fillings and local disseminations.

An intensely sericitized felsic volcanic rock, described as sericite-chlorite-schist with disseminated pyrite and chalcopyrite assayed 0.45 grams per tonne gold, 9.9 grams per tonne silver and 0.83 per cent copper. Another, 1.0 metre chip sample from a quartz stockwork infilling a shear zone in silicified siltstone, which hosts disseminated pyrite and patches of malachite assayed 0.395 grams per tonne gold, 16.8 grams per tonne silver, 0.315 per cent copper, 0.064 per cent zinc and 0.025 per cent lead (Assessment Report 16931).

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GSC P 89-1E, pp. 145-154
Chevron File

DATE CODED: 1988/11/07 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 319**

NATIONAL MINERAL INVENTORY:

NAME(S): **HAG**, HAG 2, STAR, WEST GRID

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 34 55 N
LONGITUDE: 131 09 33 W
ELEVATION: 785 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the east side of Brunt Creek, along a steep cliff face on the Hag 2 claim, location of mineralized sample from Assessment Report 16894.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6272938
EASTING: 367380

COMMODITIES: Gold, Copper, Lead

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Galena
ASSOCIATED: Quartz, Carbonate
ALTERATION: Chlorite, Carbonate, Epidote, Pyrite
ALTERATION TYPE: Chloritic, Carbonate, Silicific'n, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Cretaceous-Tertiary			Coast Plutonic Complex
Permian-Triassic			Stikine Assemblage

LITHOLOGY: Gossan
Sandstone
Wacke
Mafic Flow
Tuff
Diorite
Diorite Sill

HOSTROCK COMMENTS: Gossan occurs in altered sandstone or wacke.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Regional
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist
COMMENTS: Located at boundary of Coast Crystalline and Intermontane Belts.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	1.7600	Grams per tonne

COMMENTS: Sample CE 42100W 18100N, from silicified and pyritized gossan.
REFERENCE: Assessment Report 16894.

CAPSULE GEOLOGY

The oldest sequence of rocks consists of Permian to Lower Triassic limestones, siltstones, shales and conglomerates that overlie metamorphosed sedimentary and volcanic rocks. These rocks are extensively deformed and are thought to have been emplaced by thrust faulting.

The Upper Triassic to Lower Jurassic section is comprised of miogeosynclinal volcanics and sediments which have been correlated with the Hazelton Group, Unuk River Formation.

The claims are underlain by Triassic and older sedimentary rocks and Triassic and Jurassic volcanic and sedimentary rocks correlative in part with either the Hazelton or Stuhini Groups. All of these

CAPSULE GEOLOGY

rocks have been intruded by younger diorite plugs or sills which are medium-grained, magnetic and often contain extensive epidote alteration.

The sediments include quartz sandstones, siltstones, cherts and dolomitic limestones, occasionally with intercalated mafic tuffs or flows with minor lapilli tuff and breccia. All the units have been affected by chlorite alteration and minor pyritization.

In 1987, prospecting uncovered a narrow but strong gossan associated with quartz veins. It contains between 5 to 10 per cent pyrite and has undergone intense chlorite and carbonate alteration. Host rocks are described as altered sandstone or wacke. A sample from this gossan assayed 1.76 grams per tonne gold and 0.31 grams per tonne silver (Assessment Report 16894).

About 250 metres north of this gossan, a mafic flow was mapped which hosts strong quartz and carbonate veining with minor pyrite, chalcopyrite and galena.

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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/11/09 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 320**
NATIONAL MINERAL INVENTORY: 104B10 Zn1

NAME(S): **NUNATAK (INEL)**, ZINC KNOB, INEL 3

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 36 10 N
LONGITUDE: 130 57 38 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located south of the Inel property, Main Sulphide Zone (104B 113), from trench samples (Assessment Report 11312).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6274890
EASTING: 379644

COMMODITIES: Gold, Silver, Zinc, Lead, Copper

MINERALS
SIGNIFICANT: Pyrite, Galena, Sphalerite, Arsenopyrite
ASSOCIATED: Quartz
ALTERATION TYPE: Pyrite, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stratabound, Disseminated, Vein
CLASSIFICATION: Epigenetic, Replacement, Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au; G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
J01 Polymetallic manto Ag-Pb-Zn

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Bedded Sediment/Sedimentary
Volcaniclastic
Siltstone
Volcanic Sandstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1984

COMMODITY	GRADE	
Silver	15.6000	Grams per tonne
Gold	4.1100	Grams per tonne
Copper	0.0300	Per cent
Lead	0.6300	Per cent
Zinc	1.9100	Per cent

COMMENTS: Sample from trench taken across 7 metres.
REFERENCE: Property File: Grove, E.W., 1987.

CAPSULE GEOLOGY

The oldest rocks consist of Permian limestones and Pennsylvanian to Permian carbonaceous strata that are highly contorted and deformed. Unconformably overlying this strata is an Upper Triassic(?) shale unit and a volcanic-sedimentary sequence correlated to the Lower Jurassic Hazelton Group, Unuk River Formation. The Unuk River Formation is overlain with an angular unconformity by the Middle Jurassic Betty Creek Formation which is characterized by planar bedded, bright red and green volcaniclastics, breccias, chert and carbonate lenses.

The bulk of the country rock underlying the Inel property includes a layered Unuk River Formation sequence comprising basal rhyolitic breccias, flows and clastic sediments, andesitic volcaniclastics, conglomerates, minor limestones with intercalated basalt flows and breccias. North of the property this Lower Jurassic sequence includes a thick south dipping fossil-rich limestone dated as Toarcian, or late Lower Jurassic and equivalent to the Upper Member of the Unuk River Formation (Grove, E.W., 1973, 1987).

CAPSULE GEOLOGY

South of Snippaker Peak the Lower Jurassic sequence is unconformably overlain by gently dipping Middle Jurassic Betty Creek Formation equivalents. The rocks include volcanic sandstone, volcanic breccia, and andesitic to basaltic flows.

The Lower Jurassic rocks are cut by a long, narrow, high angle alaskite (quartz-feldspar porphyry) pluton which extends from the south boundary of the Inel claims, north across Snippaker Ridge just south of Snippaker Peak. At the south, the contacts are marked by wide, granitized margins with zinc-silver mineralization on the west, and oxidized copper-molybdenum on the east. In the Main Sulphide Zone area the east contact is marked by a swarm of narrow dykes. The dykes and mineralized country rocks have been faulted, deformed, and cut by wide pyrite-quartz-feldspar injection breccia dykes (refer to Inel, 104B 113).

The Nunatak Zone was trenched in 1973, and the mineralization is associated with the Hazelton Group Unuk River Formation rocks, south of the Main Sulphide Zone (104B 113).

In 1984, mapping and trenching within what is now called Zinc Knob, revealed an altered, folded, thin-bedded sedimentary sequence including apparently stratabound sulphides. Mineralization consists of pyrite, galena and sphalerite lenses that are cut by quartz, pyrite and arsenopyrite veins. A 7.0 metre sample taken from a trench that cut across part of the mineralization assayed 0.03 per cent copper, 0.63 per cent lead, 1.91 per cent zinc, 15.6 grams per tonne silver and 4.11 grams per tonne gold (Grove, E.W., 1987).

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GSC MEM 246
GSC MAP 9-1957; 311A; 1418A
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EMPR PF (Graf, C.W., (1982): Report on Claims in the Snippaker Creek area of British Columbia for Active Mineral Explorations, December 1982; Skyline Explorations Ltd., (1984): Information Circular on Inel Project; Grove, E.W., (1987): *Exploration and Development Proposal for Inel Resources Ltd. on the Inel Property (March 6, 1987) in Prospectus for Inel Resources Ltd., July 10, 1987)
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DATE CODED: 1988/11/10 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 321**

NATIONAL MINERAL INVENTORY:

NAME(S): **BIG ROCK (INEL)**, BIG KNOB, INEL, INEL 6

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 37 03 N
LONGITUDE: 130 55 25 W
ELEVATION: 1295 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing was located in 1984, from follow-up work regarding anomalous silt samples (Assessment Report 11312, Figure 3); location from Grove, E.W., 1987.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6276464
EASTING: 381957

COMMODITIES: Silver, Lead, Zinc, Copper, Gold

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite
COMMENTS: Massive sulphide lens.
ALTERATION TYPE: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Igneous-contact
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic-Cretaceous			Coast Plutonic Complex

LITHOLOGY: Sediment/Sedimentary
Volcanic Sediment/Sedimentary
Volcaniclastic
Alaskite

HOSTROCK COMMENTS: Mineralization occurs at the contact between in alaskite pluton and Lower Jurassic sediments of the Unuk River Formation.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine

CAPSULE GEOLOGY

The oldest rocks consist of Permian limestones and Pennsylvanian to Permian carbonaceous strata that are highly contorted and deformed. Unconformably overlying this strata is an Upper Triassic(?) shale unit and a volcanic-sedimentary sequence correlated to the Lower Jurassic Hazelton Group, Unuk River Formation. The Unuk River Formation is overlain with an angular unconformity by the Middle Jurassic Betty Creek Formation which is characterized by planar bedded, bright red and green volcaniclastics, breccias, chert and carbonate lenses.

The bulk of the country rock underlying the Inel property includes a layered Unuk River Formation sequence comprising basal rhyolitic breccias, flows and clastic sediments, andesitic volcaniclastics, conglomerates, minor limestones with intercalated basalt flows and breccias. North of the property this Lower Jurassic sequence includes a thick south dipping fossil-rich limestone dated as Toarcian, or late Lower Jurassic and equivalent to the upper members of the Unuk River Formation (Grove, E.W., 1973, 1987).

South of Snippaker Peak the Lower Jurassic sequence is unconformably overlain by gently dipping Middle Jurassic Betty Creek Formation equivalents. The rocks include volcanic sandstone, volcanic breccia, and andesitic to basaltic flows.

The Lower Jurassic rocks are cut by a long, narrow, high angle alaskite (quartz-feldspar porphyry) pluton which extends from the south boundary of the Inel claims, north across Snippaker Ridge just south of Snippaker Peak. At the south, the contacts are marked by wide granitized margins with zinc-silver mineralization on the west, and oxidized copper-molybdenum on the east. In the Main Sulphide Zone area the east contact is marked by a swarm of narrow dykes. The dykes and mineralized country rocks have been faulted, deformed and cut by wide pyrite-quartz-feldspar injection breccia dykes (refer to Inel,

CAPSULE GEOLOGY

104B 113).

The Big Rock showing was located in 1984. Trenching and mapping exposed at least one massive sulphide lens localized at the contact with the main alaskite pluton and hosting sediments of the Lower Jurassic Unuk River Formation. Sulphides include pyrite, chalcopyrite, sphalerite and galena with reported high grade silver assays (Grove, E.W., 1987).

BIBLIOGRAPHY

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EMPR EXPL *1980-467; *1983-524
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DATE CODED: 1988/11/08 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 322**

NATIONAL MINERAL INVENTORY: 104B10 Zn1

NAME(S): **MOONLIGHT (INEL)**, SNIPPAKER RIDGE SOUTH, INEL RIDGE, INEL 4

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 36 08 N
LONGITUDE: 130 56 19 W
ELEVATION: 1555 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the east side of Snippaker Ridge south (Grove, E.W., 1987) and sample locations from Assessment Report 11312, Figure 3.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6274790
EASTING: 380989

COMMODITIES: Gold, Silver, Zinc, Copper, Lead

MINERALS

SIGNIFICANT: Pyrite, Sphalerite, Chalcopyrite, Galena
ASSOCIATED: Quartz, Carbonate
ALTERATION: Pyrite
ALTERATION TYPE: Pyrite, Silicific'n, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork
CLASSIFICATION: Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins
I05 Polymetallic veins Ag-Pb-Zn±Au
J01 Polymetallic manto Ag-Pb-Zn
G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Middle Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Volcanic Sandstone
Volcanic Siltstone
Volcaniclastic
Tuff
Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: MOONLIGHT
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1984
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	15.0900	Grams per tonne
Gold	13.3700	Grams per tonne
Copper	0.1800	Per cent
Zinc	6.5600	Per cent

COMMENTS: High grade prospecting samples.
REFERENCE: Property File: Grove, E.W., 1987.

CAPSULE GEOLOGY

The oldest rocks consist of Permian limestones and Pennsylvanian to Permian carbonaceous strata that are highly contorted and deformed. Unconformably overlying this strata is an Upper Triassic(?) shale unit and a volcanic-sedimentary sequence correlated to the Lower Jurassic Hazelton Group, Unuk River Formation. The Unuk River Formation is overlain with an angular unconformity by the Middle Jurassic Betty Creek Formation which is characterized by planar bedded, bright red and green volcaniclastics, breccias, chert and carbonate lenses.

The bulk of the country rock underlying the Inel property includes a layered Unuk River Formation sequence comprising basal rhyolitic breccias, flows and clastic sediments, andesitic volcaniclastics, conglomerates, minor limestones with intercalated basalt

CAPSULE GEOLOGY

flows and breccias. North of the property this Lower Jurassic sequence includes a thick south dipping fossil-rich limestone dated as Toarcian, or late Lower Jurassic and equivalent to the Upper Member of the Unuk River Formation (Grove, E.W., 1973, 1987).

South of Snippaker Peak the Lower Jurassic sequence is unconformably overlain by gently dipping Middle Jurassic Betty Creek Formation equivalents. The rocks include volcanic sandstone, volcanic breccia, and andesitic to basaltic flows.

The Lower Jurassic rocks are cut by a long, narrow, high angle alaskite (quartz-feldspar porphyry) pluton which extends from the south boundary of the Inel claims, north across Snippaker Ridge just south of Snippaker Peak. At the south, the contacts are marked by wide granitized margins with zinc-silver mineralization on the west, and oxidized copper-molybdenum on the east. In the Main Sulphide Zone area the east contact is marked by a swarm of narrow dykes. The dykes and mineralized country rocks have been faulted, deformed and cut by wide pyrite-quartz-feldspar injection breccia dykes (refer to Inel, 104B 113).

In 1984 prospecting along both sides of the upper Snippaker Ridge was concentrated within the upper members of the Unuk River Formation just below the contact between these rocks and the overlying Middle Jurassic Betty Creek Formation volcanics. As a result the Inel Ridge Zone (104B 258) was discovered on the west side and the new Moonlight Zone was discovered on the high east side of Snippaker Ridge.

Like the Inel Ridge Zone, the Moonlight Zone comprises quartz-carbonate-sulphide stockwork veins within pyritized fine-grained volcanic sediments. These strata, comprised of volcanic sandstone/siltstone, are unconformably overlain by the Betty Creek equivalents to the north and south along the ridge.

Both the Inel Ridge and Moonlight Zones display widespread vein stockworks and sulphide mineralization and both show significant values in gold and silver as well as zinc and copper. Prospecting in 1984, returned values from samples from the Moonlight Zone as high as 0.18 per cent copper, minor lead, 6.56 per cent zinc, 15.09 grams per tonne silver and 13.37 grams per tonne gold (Property File: Grove, E.W., 1987).

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PR REL (Inel Resources Ltd., Aug.5,Sept.28, 1988)
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GCNL #152,#185, 1988

DATE CODED: 1988/11/12 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 323** NATIONAL MINERAL INVENTORY:

NAME(S): **PYRAMID SADDLE**, GOSSAN 10-13, PYRAMID HILL, GOSSAN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 34 47 N
LONGITUDE: 130 57 05 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located within a prominent saddle west of Pyramid Peak, detailed sampling locations from Assessment Report 16931, Figure 8.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6272308
EASTING: 380133

COMMODITIES: Copper, Gold, Silver, Zinc

MINERALS
SIGNIFICANT: Pyrite, Chalcopyrite, Malachite, Sphalerite
ASSOCIATED: Quartz
ALTERATION: Chlorite, Epidote, Diopside, Garnet, Tremolite, Actinolite, Biotite
ALTERATION TYPE: Skarn, Silicific'n, Oxidation, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stratabound, Stockwork, Disseminated
CLASSIFICATION: Epigenetic, Skarn, Igneous-contact
TYPE: K01 Cu skarn; I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Skarn
Chlorite Epidote Diopside Skarn
Hornfels
Hornfels Siltstone
Tuffaceous Siltstone
Siltstone
Volcaniclastic
Calcareous Siltstone
Granodiorite

HOSTROCK COMMENTS: Bedded sedimentary sequence may be correlated with the Hazelton Group, or in part, with upper members of the Stuhini Group.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Plutonic Rocks
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	2.9000	Grams per tonne
Gold	0.3300	Grams per tonne
Copper	0.2940	Per cent

COMMENTS: 1.0 metre chip sample, PYCH-60, from skarn with stockwork and disseminated pyrite and chalcopyrite.
REFERENCE: Assessment Report 16931, Figure 8.

CAPSULE GEOLOGY

The area is underlain by an undivided assemblage of sedimentary and volcanic rocks ranging from Upper Triassic to Jurassic in age, which are intruded by Middle Mesozoic phases of the Coast Plutonic Complex.

The stratified rocks are composed of submarine to sub-aerial fragmental volcanic rocks that are interlayered with sequences of

CAPSULE GEOLOGY

argillite, banded siltstone, greywacke, conglomerate and minor impure limestone which are thought to be correlative with the Lower Jurassic Hazelton Group, Unuk River Formation or the Upper Triassic Stuhini Group.

Structurally, the rock units have a general northwest trend and have undergone regional greenschist facies metamorphism. They are strongly deformed and are cut by numerous northeast trending faults and fractures.

Pyramid Hill is underlain mainly by a southwest dipping, 450 to 500 metre thick succession of sedimentary and volcaniclastic rocks. The sedimentary rocks are predominantly thin-bedded, locally calcareous, pale to dark grey siltstones grading upwards into tuffaceous siltstones. Higher in the succession, the sequence is characterized by massive tuffs and lapilli tuffs. Numerous granodiorite and orthoclase porphyry dyke-like apophyses of the Coast Plutonic Complex intrude both the siltstone and volcaniclastic units.

Varying degrees of sulphide-bearing skarn alteration is developed within the volcaniclastics and tuffaceous siltstones in areas adjacent to the intrusions. Skarn alteration is comprised of massive, medium-grained chlorite plus or minus diopside with lesser amounts of quartz and epidote, isolated clusters of coarse, brown garnet, scattered tremolite-actinolite and sulphides.

The basal siltstone unit is hornfelsed with secondary biotite, is siliceous and hosts pyrite-rich areas adjacent to the intrusives.

The skarn related mineralization at Pyramid Hill appears to be stratabound and has selectively followed a sequence of tuffs and lapilli tuffs within a bedded succession of siltstones and tuffaceous siltstones. Gold-bearing sulphides, predominantly pyrite and chalcopyrite, occur as fine-grained disseminations, masses, veins and veinlets concentrated along the contacts between dykes and skarn-altered volcaniclastics.

A grab sample taken from chlorite-epidote plus or minus diopside skarn-altered volcaniclastic rock with 5 per cent pyrite and minor chalcopyrite assayed 1.204 per cent copper, 18.4 grams per tonne silver and 1.62 grams per tonne gold. Another grab sample from quartz stockwork infills within a 1.0 metre wide shear in banded siltstone with patches of malachite assayed 0.315 per cent copper, 16.8 grams per tonne silver and 0.395 grams per tonne gold (Assessment Report 16931).

Continuous chip sampling within the Pyramid Saddle area was concentrated within the skarn-altered volcaniclastics which host pyrite, chalcopyrite, malachite and minor sphalerite within veins, quartz stockworks and as disseminations. Chip samples indicated anomalous copper and gold values. A 1.0 metre chip sample from PYCH-60 assayed 0.17 per cent copper, 1.0 grams per tonne silver, 0.075 grams per tonne gold and another 1.0 metre sample assayed 0.294 per cent copper, 2.9 grams per tonne silver and 0.33 grams per tonne gold (Assessment Report 16931, Figure 8).

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EMPR ASS RPT 11313, 11332, 13728, 14055, *16931
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N MINER Apr.19, 1984
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DATE CODED: 1988/11/16 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 324**

NATIONAL MINERAL INVENTORY:

NAME(S): **IAN 4**, IAN, BAX

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 42 43 N
LONGITUDE: 130 58 00 W
ELEVATION: 579 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located near the middle of the Ian 4 claim, sample location GR-17 from Assessment Report 16953, Figure 5.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6287049
EASTING: 379617

COMMODITIES: Zinc, Copper

MINERALS
SIGNIFICANT: Pyrite, Sphalerite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated, Stratabound
CLASSIFICATION: Skarn, Epigenetic, Igneous-contact
TYPE: K02 Pb-Zn skarn

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Cretaceous-Tertiary			Coast Plutonic Complex
Paleozoic			Stikine Assemblage

LITHOLOGY: Skarn
Limestone

HOSTROCK COMMENTS: Paleozoic (?) limestone is unconformable with stratified volcanic and sedimentary rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
Plutonic Rocks RELATIONSHIP: Pre-mineralization, Syn-mineralization, Post-mineralization
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: SKARN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Copper	0.2700	Per cent
Zinc	3.0500	Per cent

COMMENTS: Sample #87-AGR-017, consist of pyrite and sphalerite in skarn.
REFERENCE: Assessment Report 16953.

CAPSULE GEOLOGY

The oldest rocks in the area consist of complexly folded and metamorphosed schists and gneisses of probable mid-Paleozoic age. The metamorphic rock is overlain by a white to grey crystalline limestone, probably Permian in age. This Paleozoic sedimentary sequence also includes minor greenstones.

This sequence is overlain by a Mesozoic volcanic and sedimentary sequence. This is regarded as an Upper Triassic sequence due to the presence of Monotis fossils on the north slope of Snippaker Peak. These rocks are correlative with the Stuhini Group volcanics.

The Mesozoic sequences are intruded by plutonic rocks of quartz monzonite to quartz diorite composition. These intrusions are Upper Cretaceous to Lower Tertiary in age and are related to the Coast Plutonic Complex.

The claims are underlain by a sequence of sedimentary and volcanic rocks which have been intruded by several small stocks of various compositions. The dominant lithology west of the Verrett River is comprised of an andesitic volcanic unit with characteristic rounded inclusions of plagioclase. This volcanic porphyry hosts

CAPSULE GEOLOGY

abundant magnetite and is pervasively altered with epidote and chlorite.

Volcanic rocks are relatively rare on the claims east of the Verrett River. Argillite is the most common sedimentary rock on the property. It is dark grey to black in color, homogeneous and is intensely fractured. There are zones of intensely silicified material adjacent to the volcanics. Hornfels occur in argillites peripheral to some of the intrusives and intense silicification and minor chloritization is associated with the hornfelsed zones. Oxidation is pronounced locally, forming gossanous zones.

Limestone is frequently interbedded with the argillites and outcrops of siltstone and chert are found in the northern part of the Ian 4 claim. The crystalline limestone is buff-colored and resistant and may be unconformable with the other volcanic and sedimentary lithologies.

There are a number of small, medium-grained intrusives which outcrop on the Ian 4 claim. These represent a variety of lithologies ranging in composition from granitic to syenitic to dioritic.

Mineralization occurs near the middle of the Ian 4 claim at an elevation of about 580 metres. There is a minor development of skarn in a limestone outcrop which is in close proximity to intermediate volcanics. In 1987, a grab sample of this material, which contained a significant amount of pyrite and sphalerite assayed 3.05 per cent zinc, 0.27 per cent copper (Assessment Report 16953).

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V STOCKWATCH Nov.8, 1988, p. 3
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/11/08 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 325**

NATIONAL MINERAL INVENTORY:

NAME(S): **IAN NORTH**, IAN 4, IAN, BAX

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 43 16 N
LONGITUDE: 130 56 53 W
ELEVATION: 823 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located in the northeast corner of the Ian 4 claim, sample location MR-12 from Assessment Report 16953, Figure 5.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6288037
EASTING: 380785

COMMODITIES: Zinc Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite Sphalerite
ASSOCIATED: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic
TYPE: G04 Besshi massive sulphide Cu-Zn
J01 Polymetallic manto Ag-Pb-Zn
I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION:
STRIKE/DIP: 091/55N
TREND/PLUNGE:
COMMENTS: Mineralized shear zone.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Paleozoic			Stikine Assemblage

LITHOLOGY: Siliceous Argillite
Hornfels

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist
Hornfels

INVENTORY

ORE ZONE: SKARN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Copper	2.9900	Per cent
Zinc	4.0400	Per cent

COMMENTS: Sample #87-AMR-012, consists of pyrite, chalcopyrite and sphalerite in a shear zone.
REFERENCE: Assessment Report 16953, Figure 5.

CAPSULE GEOLOGY

The oldest rocks in the area consist of complexly folded and metamorphosed schists and gneisses of probable mid-Paleozoic age. The metamorphic rock is overlain by a white to grey crystalline limestone, probably Permian in age. This Paleozoic sedimentary sequence also includes minor greenstones.

This sequence is overlain by a Mesozoic volcanic and sedimentary sequence. This is regarded as an Upper Triassic sequence due to the presence of Monotis fossils on the north slope of Snippaker Peak. These rocks are correlative with the Stuhini Group volcanics.

The Mesozoic sequences are intruded by plutonic rocks of quartz monzonite to quartz diorite composition. These intrusions are Upper Cretaceous to Lower Tertiary in age and are related to the Coast Plutonic Complex.

The claims are underlain by a sequence of sedimentary and volcanic rocks which have been intruded by several small stocks of various compositions. The dominant lithology west of the Verrett

CAPSULE GEOLOGY

River is comprised of an andesitic volcanic unit with characteristic rounded inclusions of plagioclase. This volcanic porphyry hosts abundant magnetite and is pervasively altered with epidote and chlorite.

Volcanic rocks are relatively rare on the claims east of the Verrett River. Argillite is the most common sedimentary rock on the property. It is dark grey to black in color, homogeneous and is intensely fractured. There are zones of intensely silicified material adjacent to the volcanics. Hornfels occur in argillites peripheral to some of the intrusives and intense silicification and minor chloritization is associated with the hornfelsed zones. Oxidation is pronounced locally, forming gossanous zones.

In the northeast corner of the property, at an elevation of about 825 metres, is a showing with pyrite, chalcopyrite and sphalerite mineralization associated with a shear zone in siliceous argillite. The shear zone strikes 091 degrees, dips 55 degrees to the north and is traceable for about 15 metres. In 1987, a grab sample from this shear zone assayed 4.04 per cent zinc and 2.99 per cent copper (Assessment Report 16953).

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V STOCKWATCH Nov.8, 1988, p. 3
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/11/09 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 326**

NATIONAL MINERAL INVENTORY:

NAME(S): **CAM 9**, NORMAN, MAY 1, JOSH

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W 104B10E
BC MAP:
LATITUDE: 56 38 54 N
LONGITUDE: 130 45 58 W
ELEVATION: 760 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located in a north-south trending valley in the south central part of the Cam 9 claim, sample location NK-57 from Assessment Report 16955, Figure 5.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6279635
EASTING: 391709

COMMODITIES: Copper, Silver, Zinc, Gold, Magnetite

MINERALS

SIGNIFICANT: Pyrite, Sphalerite, Chalcopyrite, Magnetite
ALTERATION: Actinolite, Garnet, Magnetite
ALTERATION TYPE: Skarn, Silicific'n, Propylitic, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated, Stratabound, Podiform, Massive
CLASSIFICATION: Skarn, Epigenetic, Igneous-contact, Industrial Min.
TYPE: K01 Cu skarn, K02 Pb-Zn skarn
DIMENSION:
STRIKE/DIP: 090/45N
TREND/PLUNGE:
COMMENTS: Attitude of massive limestone marker horizon.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Cretaceous-Tertiary			Coast Plutonic Complex

LITHOLOGY: Argillaceous Skarn
Actinolite Garnet Skarn
Magnetite Skarn
Limestone
Argillite
Chert
Quartz Diorite
Quartz Monzonite

HOSTROCK COMMENTS: Stratified rock may be part of Hazelton Group, or in part, may be correlative with upper members of the Stuhini Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SKARN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	187.5000	Grams per tonne
Gold	0.1100	Grams per tonne
Copper	10.9900	Per cent
Zinc	0.2690	Per cent

COMMENTS: Sample 87-NK-R57 from pyrite-magnetite bearing skarn.
REFERENCE: Assessment Report 16955.

CAPSULE GEOLOGY

The oldest rocks are complexly folded and metamorphosed schists and gneisses of mid-Paleozoic age. The metamorphic rock is overlain by white to grey crystalline limestone of probable Permian age. This sequence is overlain by a Mesozoic volcanic and sedimentary sequence which is regarded as Upper Triassic due to the presence of Monotis fossils on the north slope of Snippaker Peak. These rocks may, in

CAPSULE GEOLOGY

part, be correlative with either the Hazelton Group (Unuk River Formation) or the Stuhini Group.

The Paleozoic and Mesozoic rocks are intruded by plutonic rocks of quartz monzonite to quartz diorite composition. They range from Upper Cretaceous to Early Tertiary in age and are related to the Coast Plutonic Complex.

Most of the Cam 9 claim is underlain by a sedimentary sequence which has been intruded by at least three small igneous bodies of variable composition and texture. There is a prominant, massive layer of grey-white, crystalline limestone which occurs as a marker horizon across the claims. This unit strikes east-west and dips between 40 to 50 degrees north.

A moderately to intensely altered sequence of argillites, cherts and minor andesites occupies the remainder of the claim. Propylitization and silicification are pervasive throughout the unit and pyritization is ubiquitous in the southwest corner of the claim. Actinolite-garnet skarns are commonly well developed in limestones adjacent to the intrusives. Semi-massive magnetite (2.0 metre thick layer) was also located within skarned rocks.

Significant sulphide mineralization was found in the valley which transects the south-central part of the Cam 9 claim. Semi-massive to massive occurrences of pyrite, chalcopyrite and sphalerite are found in skarn horizons in limestone. Pyrite cubes over 1.0 centimetres across are found and the sphalerite is generally fine-grained, massive and brown in colour.

Sulphide mineralization generally occurs in small, localized pods of irregular shape which average about 1.0 metre in diameter. Most of the sulphide mineralization appears to be within argillaceous horizons in the skarn.

The grab sample from a pyrite-magnetite bearing skarn in 1987 assayed 10.99 per cent copper, 0.269 per cent zinc, 0.11 grams per tonne gold and 187.5 grams per tonne silver. Another sample from a pod of pyrite and sphalerite in limestone assayed 0.82 per cent copper, 16.30 per cent zinc, 0.1 grams per tonne gold and 58.4 grams per tonne silver (Assessment Report 16955).

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Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
EMPR PF (Norman Resources Ltd., Statement of Material Facts #110/87, Aug.25, 1987)

DATE CODED: 1988/11/10 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 327**

NATIONAL MINERAL INVENTORY:

NAME(S): **CAM SOUTH**, CAM 9, NORMAN, MAY 1

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10E
BC MAP:
LATITUDE: 56 38 53 N
LONGITUDE: 130 45 00 W
ELEVATION: 1112 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located in the southeast corner of the Cam 9 claim, location of sample KR-66 from Assessment Report 16955, Figure 7.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6279579
EASTING: 392696

COMMODITIES: Copper, Lead, Zinc, Silver, Molybdenum

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Galena, Molybdenite
ASSOCIATED: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Cretaceous-Tertiary			Coast Plutonic Complex

LITHOLOGY: Arkosic Sediment/Sedimentary
Arenaceous Sediment/Sedimentary
Argillaceous Sediment/Sedimentary
Limestone
Skarn
Quartz Diorite
Quartz Monzonite

HOSTROCK COMMENTS: Stratified rocks may be part of the Hazelton Group, or in part, correlative with upper members of the Stuhini Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	1.4000	Grams per tonne
Copper	0.0230	Per cent
Lead	0.4580	Per cent
Zinc	0.0040	Per cent

COMMENTS: Sample KR-60 taken from a mineralized quartz vein.
REFERENCE: Assessment Report 16955, Figure 7.

CAPSULE GEOLOGY

The oldest rocks are complexly folded and metamorphosed schists and gneisses of mid-Paleozoic age. The metamorphic rock is overlain by white to grey, crystalline limestone of probable Permian age. This sequence is overlain by a Mesozoic volcanic and sedimentary sequence which is regarded as Upper Triassic due to the presence of Monotis fossils on the north slope of Snippaker Peak. These rocks may, in part, be correlative with either the Hazelton Group (Unuk River Formation) or the Stuhini Group.

The Paleozoic and Mesozoic rocks are intruded by plutonic rocks of quartz monzonite to quartz diorite composition. They range from

CAPSULE GEOLOGY

Upper Cretaceous to Early Tertiary in age and are related to the Coast Plutonic Complex.

Most of the Cam 9 claim is underlain by a sedimentary sequence which has been intruded by at least three small igneous bodies of variable composition and texture. There is a prominant, massive layer of grey-white, crystalline limestone which occurs as a marker horizon across the claims. This unit strikes east-west and dips between 40 to 50 degrees north.

Actinolite-garnet skarns are well developed in limestones adjacent to the intrusives. Sulphide mineralization also occurs within the skarned sediments (refer to Cam 9, 104B 322).

Medium-grained arkosic to arenaceous sediments occur in the southeastern corner of the Cam 9 claim. They appear to be in gradational contact with the argillites and argillaceous sediments in the central and west parts of the claim.

At least two minor intrusions of quartz monzonite to granodioritic composition, occur in the southwestern part of the Cam 9 claim.

In the southeast corner of the claim are a series of quartz veins which occur near a contact between granodiorite and arkosic sediments. Pyrite occurs in all of these quartz veins in addition to minor chalcopyrite, galena and molybdenite. The veins range from 3 to 10 centimetres in width and generally strike toward the east with near vertical dips.

In 1987, sample KR-66 assayed 0.14 per cent copper and another sample from these veins, KR-60 assayed 0.023 per cent copper, 0.458 per cent lead and 0.004 per cent zinc with 1.4 grams per tonne silver (Assessment Report 16955, Figure 7).

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EMPR PF (Norman Resources Ltd., Statement of Material Facts #110/87, Aug.25, 1987)

DATE CODED: 1988/11/10 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 328**

NATIONAL MINERAL INVENTORY:

NAME(S): **GIGI (CAM 6)**, CAM 5-6

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 39 43 N
LONGITUDE: 130 51 28 W
ELEVATION: 307 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located along the east side of Snippaker Creek within a small tributary creek, location of sample KR-10 from Assessment Report 16956, Figure 5.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6281299
EASTING: 386131

COMMODITIES: Copper Silver

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite Malachite Azurite
ALTERATION: Rhodochrosite Actinolite Magnetite Hematite Epidote Garnet Calcite
COMMENTS: Andradite garnet.
ALTERATION TYPE: Pyrite Oxidation Silicific'n Skarn
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Igneous-contact Epigenetic Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au K01 Cu skarn

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Upper Triassic	Stuhini	Undefined Formation	
Cretaceous-Tertiary			Coast Plutonic Complex

LITHOLOGY: Felsic Intrusive
Intermediate Intrusive
Skarn
Rhodochrosite Actinolite Skarn
Magnetite Epidote Garnet Skarn
Limestone
Argillite

HOSTROCK COMMENTS: Stratified rock are correlated with the Hazelton Group and may, in part, correlate with upper members of the Stuhini Group.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Contact
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	9.7000	Grams per tonne
Copper	0.6900	Per cent

COMMENTS: Grab sample KR-10 of pyritized intrusive with chalcopyrite, malachite and azurite.
REFERENCE: Assessment Report 16956.

CAPSULE GEOLOGY

The oldest rocks are complexly folded and metamorphosed schists and gneisses of mid-Paleozoic age. The metamorphic rock is overlain by white to grey crystalline limestone of probable Permian age. This sequence is overlain by a Mesozoic volcanic and sedimentary sequence which is regarded as Upper Triassic due to the presence of Monotis fossils on the north slope of Snippaker Peak. These rocks may, in part, be correlative with either the Hazelton Group (Unuk River Formation) or the Stuhini Group.

The Paleozoic and Mesozoic rocks are intruded by plutonic rocks of quartz monzonite to quartz diorite composition. They range from

CAPSULE GEOLOGY

Upper Cretaceous to Early Tertiary in age and are related to the Coast Plutonic Complex.

The central part of the property is underlain by a plutonic rock of felsic to intermediate composition which intrudes a sedimentary sequence.

The sedimentary rocks outcrop near the eastern and western boundaries of the Cam 5 and 6 claims. Argillite is the predominant sediment with minor limestone on the west side of the claims. The argillite is oxidized and the oxidation is associated with silicification. Limestone is the only sedimentary rock on the east side of the property. Skarnification is common due to its proximity to the plutonic contact. Skarn mineral assemblages consist of some magnetite and/or hematite with calcite and minor epidote and andradite garnet. In some cases rhodochrosite and actinolite with calcite are the sole constituents of the skarn.

There are some minor occurrences of pyritization within and adjacent to the plutonic rocks. A grab sample, of the pyritized felsic intrusive rock which hosted minor chalcopyrite, malachite and azurite, assayed 0.69 per cent copper, 9.7 grams per tonne silver and 0.001 grams per tonne gold (Assessment Report 16956).

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DATE CODED: 1988/11/21 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 329**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOY 1**, JOY 2, BRENWEST, BAX

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W 104B11E
BC MAP:
LATITUDE: 56 43 33 N
LONGITUDE: 130 59 44 W
ELEVATION: 275 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 300 metres east of the Verrett River in a small tributary creek bed, location of shear zone from Assessment Report 16794, Figure 4.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6288646
EASTING: 377894

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ALTERATION: Epidote
ALTERATION TYPE: Pyrite Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Unknown
TYPE: I02 Intrusion-related Au pyrrhotite veins
COMMENTS: Shear zone with gold-bearing pyrite mineralization.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Paleozoic	Stuhini	Undefined Formation	Stikine Assemblage

LITHOLOGY: Gouge
Massive Intermediate Volcanic
Andesitic Volcanic
Limestone
Greenstone

HOSTROCK COMMENTS: Paleozoic (?) limestone is unconformable with stratified volcanic and sedimentary rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SHEAR
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Gold	1.3500	Grams per tonne

COMMENTS: Sample of pyritized volcanic material from shear zone.
REFERENCE: Assessment Report 16794.

CAPSULE GEOLOGY

The oldest rocks in the area are complexly folded and metamorphosed schists and gneisses of probable Mid-Paleozoic age. These are overlain by white to grey crystalline limestone which is thought to be part of a Late Paleozoic sedimentary sequence that includes minor greenstone (Stikine Assemblage).

These rocks are overlain by a Mesozoic volcanic and sedimentary sequence which is regarded as Upper Triassic due to the presence of Monotis fossils. The rocks are correlative with the Stuhini Group.

The dominant lithology on the property is an extensive unit of massive, intermediate volcanics which are characterized by the presence of rounded inclusions of plagioclase porphyry material. Propylitic alteration is pervasive and intense within this unit, with saussuritized plagioclase phenocrysts and massive epidote occurring as fracture infillings.

A massive unit of grey-white, crystalline limestone, occasionally

CAPSULE GEOLOGY

with abundant crinoid fossil fragments occurs along the east side of the Verrett River on the Joy 1 claim. It is a resistive unit and outcrops as predominant hummocks and is thought to be unconformable with the volcanic and sedimentary sequence that occupies most of the Joy claims.

A zone of pyrite mineralization occurs near the convergence of two small shears in a creek bed, approximately 300 metres east of the Verrett River on the Joy 1 claim. Host rocks are massive andesitic volcanics. In 1987, a sample of this pyritized material assayed 1.35 grams per tonne gold (Assessment Report 16794).

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V STOCKWATCH Nov.18, 1988, p. 3
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B15)

DATE CODED: 1988/11/20 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 330**

NATIONAL MINERAL INVENTORY:

NAME(S): **IAN 6**, VANSTATES

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 43 11 N
LONGITUDE: 130 55 55 W
ELEVATION: 535 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the north side of the Iskut River, east of Verrett Creek on the the Ian 6 claim, location of mineralized sample (Assessment Report 17149, Figure 5).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6287854
EASTING: 381767

COMMODITIES: Gold, Silver, Copper

MINERALS
SIGNIFICANT: Arsenopyrite, Pyrrhotite, Chalcopyrite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Pyrite, Epidote
ALTERATION TYPE: Silicific'n, Pyrite, Epidote, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Breccia
CLASSIFICATION: Hydrothermal, Epigenetic, Igneous-contact
TYPE: I02 Intrusion-related Au pyrrhotite veins, I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Coast Plutonic Complex
Permian-Triassic			Stikine Assemblage

LITHOLOGY: Andesite
Meta Argillite
Argillite
Volcanic Rock
Limestone
Hornblende Granodiorite
Granodiorite
Diorite

HOSTROCK COMMENTS: Permian to Triassic (?) volcanic and sedimentary rocks are intruded by satellitic plutons of the Coast Plutonic Complex.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
Plutonic Rocks RELATIONSHIP:
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	6.1000	Grams per tonne
Gold	2.1000	Grams per tonne

COMMENTS: Sample GR-28, from mineralized quartz vein in andesite.
REFERENCE: Assessment Report 17149, Figure 5.

CAPSULE GEOLOGY

The area is underlain by a sequence of Permian to Triassic (?) sedimentary and volcanic rocks which have been intruded by at least three phases of plutonic rocks related to the Coast Plutonic Complex.

Volcanic rocks of probable andesitic composition, appear greyish green in colour and have a slight phyllitic texture. Pervasive, mild propylitic alteration occurs in this unit and silicification, epidotization and pyritization are locally intense.

The southwestern part of the Ian 6 claim is underlain by argillite and meta-argillites that are essentially devoid of texture or bedding. Moderate to strong propylitic alteration is evident as well as bleaching. The argillites are interbedded with buff-coloured,

CAPSULE GEOLOGY

crystalline limestone. Minor development of epidote-garnet-wollastonite skarn occurs within limestone adjacent to an intrusive (refer to Ian 8 - 104B 331).

A hornblende granodiorite intrusive occurs in the western part of the Ian 6 claim. A pyritic intrusion of probable granodiorite composition intrudes the volcanics in the northwestern part of the property. Elsewhere dioritic intrusions occur.

Sulphide mineralization is abundant in the volcanic rocks exposed in the northwestern part of the Ian 6 claim. Pyritization is ubiquitous and chalcopyrite and arsenopyrite occur in quartz veins or stringers within these rocks. In 1987, a sample taken from a pyrite-rich quartz stringer, assayed 2.1 grams per tonne gold and 6.1 grams per tonne silver (Assessment Report 17149).

Copper and silver values occur within quartz vein material from meta-argillites near the centre of the Ian 6 claim. These showings are described as vuggy, brecciated quartz veins with pyrite, chalcopyrite and pyrrhotite mineralization. A sample from this zone assayed 2.74 per cent copper and 21.1 grams per tonne silver (Assessment Report 17149).

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DATE CODED: 1988/12/05 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1989/01/02 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 331**

NATIONAL MINERAL INVENTORY:

NAME(S): **IAN 8**, VANSTATES

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 42 14 N
LONGITUDE: 130 54 01 W
ELEVATION: 265 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 1.0 kilometre north of the Iskut River, midway between the Verrett River and McLymont Creek; location of mineralized sample (Assessment Report 17149, Figure 5).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6286038
EASTING: 383655

COMMODITIES: Silver, Copper, Zinc, Molybdenum

MINERALS
SIGNIFICANT: Chalcopyrite, Molybdenite, Sphalerite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Epidote, Garnet, Wollastonite, Pyrite
COMMENTS: Manganese stained skarn.
ALTERATION TYPE: Skarn, Propylitic, Epidote, Pyrite, Silicific'n, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stratabound, Vein
CLASSIFICATION: Igneous-contact, Skarn
TYPE: K01 Cu skarn
K02 Pb-Zn skarn
L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Coast Plutonic Complex
Permian-Triassic			Stikine Assemblage

LITHOLOGY: Argillite
Limestone
Skarn
Epidote Garnet Wollastonite Skarn
Andesitic Volcanic
Hornblende Granodiorite
Granodiorite
Granite

HOSTROCK COMMENTS: Permian to Triassic(?) volcanic and sedimentary rocks are intruded by satellitic plutons of the Coast Plutonic Complex.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
Plutonic Rocks RELATIONSHIP:
GRADE: Greenschist, Hornfels

INVENTORY
ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	11.4000	Grams per tonne
Copper	1.2900	Per cent

COMMENTS: Sample KR-18, from quartz vein in limestone with chalcopyrite and minor molybdenite.
REFERENCE: Assessment Report 17149, Figure 5.

CAPSULE GEOLOGY

The area is underlain by a sequence of Permian to Triassic(?) sedimentary and volcanic rocks which have been intruded by at least three phases of plutonic rocks related to the Coast Plutonic Complex.

Volcanic rocks of probable andesitic composition, appear greyish green in colour and have a slight phyllitic texture. Pervasive, mild propylitic alteration occurs in this unit and silicification, epidotization and pyritization are locally intense.

CAPSULE GEOLOGY

The southwestern part of the Ian 6 claim (104B 330) is underlain by argillite and meta-argillites that are essentially devoid of texture or bedding. Moderate to strong propylitic alteration is evident as well as bleaching. The argillites are interbedded with buff-coloured, crystalline limestone. Minor development of epidote-garnet-wollastonite skarn occurs within limestone adjacent to an intrusive in the southern part of the property. Bleaching, silicification and oxidation also occur.

Much of the Ian 8 claim is underlain by an intrusive stock of granite to granodiorite composition. The intrusive material is medium to coarse-grained with crystal development exceedingly poor in the peripheral areas of the stock and feldspar crystals of up to 3.0 centimetres in length located in the central part of the stock. This intrusive has undergone widespread epidote alteration.

A distinctive hornblende granodiorite intrusive occurs in the southwestern part of the Ian 6 claim and is spatially associated with mineralized skarns.

Several minor showings are located in the southern part of the Ian 8 claim near a creek which flows west and appears to follow a major fault. Several grab samples taken from showings located in close proximity to the hornblende granodiorite intrusion yielded enhanced values of silver, copper, zinc and gold. A grab sample taken from an intensely silicified contact of this intrusion and argillite assayed 0.163 grams per tonne gold. Elsewhere in this vicinity, a sample taken from a large quartz vein in limestone near this intrusive contact, which hosted abundant chalcopyrite with minor molybdenite, assayed 1.29 per cent copper and 11.4 grams per tonne silver (Assessment Report 17149).

Immediately north of the legal corner post between the Ian 6 and Ian 8 claims, a grab sample of epidote-rich, manganese stained skarn material which hosted significant pyrite and sphalerite mineralization in close proximity to this intrusive contact, assayed 2.22 per cent zinc (Assessment Report 17149, Figure 7).

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GCNL #116, 1988
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/12/05 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 332**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTHEAST (MCLYMONT)**, MCLYMONT 4, WARRIOR, DIRK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 48 47 N
LONGITUDE: 130 53 35 W
ELEVATION: 1005 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located east of McLymont Creek on the north side of the Iskut River on the McLymont 4 claim. Location of mineralized rock samples from along the creeks (Assessment Report 16932, Figure 5).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6298174
EASTING: 384433

COMMODITIES: Gold, Silver

MINERALS

SIGNIFICANT:	Pyrite	Gold	Sphalerite		
ASSOCIATED:	Quartz	Calcite			
ALTERATION:	Graphite	Limonite	Pyrite		
ALTERATION TYPE:	Silicific'n	Carbonate	Pyrite	Oxidation	
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER: Vein, Massive
CLASSIFICATION: Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Unnamed/Unknown Informal
Upper Paleozoic			Stikine Assemblage

LITHOLOGY: Graphitic Siltstone
Pyrite Siltstone
Chert
Sandstone
Granite

HOSTROCK COMMENTS: Jurassic(?) quartz-rich granite intrudes Mississippian and Permian Stikine Assemblage sediments and volcanics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
Plutonic Rocks RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	2.7400	Grams per tonne
Gold	3.2900	Grams per tonne

COMMENTS: 7.6 centimetre grab sample from quartz-calcite stringer with pyrite and sphalerite.
REFERENCE: Assessment Report 16932.

CAPSULE GEOLOGY

The oldest rocks on the McLymont property are located in the Northwest Grid area (104B 281) where a several hundred metre thick succession of flat lying, finely-banded, indurated siltstone, chert, sandstone, marble and minor conglomerate have been intruded by a widespread underlying granite. The sequence is about 200 metres thick, generally upright, has undergone pervasive hornfelsing and hosts fine-grained garnet porphyroblasts. The thin-bedded sedimentary sequence hosts crinoidal marble (Mississippian age).

Much of the McLymont claim group is underlain by a Jurassic(?) coarse-grained, quartz-rich, pink granite or quartz syenite intrusion. It underlies and has intruded the stratified rocks and occurs as narrow dykes along pervasive northeast trending faults.

CAPSULE GEOLOGY

In the central part of the property are numerous quartz-pyrite veins in the quartz-rich granite. The walls of the veins are enriched by k-feldspar. These auriferous quartz-pyrite veins are cut by a series of en echelon ankerite vein swarms that are generally oriented northwest and northeast. They are essentially ubiquitous throughout the northern parts of the claim group and are considered as late replacement veins formed along fractures in both the country rock and intrusive granite.

Mapping in the Northeast Grid area on the McLymont 4 claim indicated the area was underlain by a probable extension of the flat lying banded siltstone, chert, sandstone and volcanic succession which is thought to be Mississippian and older. Locally the strata is represented by dark siltstone with graphitic partings and is generally less indurated than strata with the Northwest Grid area. These rocks have been cut by narrow dykes of quartz-rich granite and are also very rusty with limonite staining. To the east and northeast, granite dominates and encloses scattered pendants of pyritic siltstone.

Within the Northeast Zone, several outcrops along the creeks were found to contain massive pyrite with some sphalerite. This mineralization appeared to be localized within intensely altered, pyritized, graphitic siltstone. Rock samples in 1987 indicated the presence of significant gold. In 1988, a drill hole reportedly returned a 3.66 metre intersection containing visible gold (George Cross Newsletter #138, July 19, 1988).

A grab sample taken from a 7.6 centimetre wide quartz-calcite stringer with pyrite and sphalerite assayed 3.29 grams per tonne gold and 2.74 grams per tonne silver. Another 35.6 centimetre vein with pyrite assayed 0.1 grams per tonne gold with 2.74 grams per tonne silver (Assessment Report 16932).

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V STOCKWATCH Jun.9,Oct.28,Dec.4, 1987
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Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B5)

DATE CODED: 1988/12/05 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1990/11/02 REVISED BY: VK FIELD CHECK: N

MINFILE NUMBER: **104B 333**

NATIONAL MINERAL INVENTORY:

NAME(S): **GAB NORTHWEST**, NORTHWEST, INTERNATIONAL PRISM, GAB 7, GAB 10

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 52 12 N
LONGITUDE: 130 54 06 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Northwest showing located along a northeast trending fault near the centre of the Gab 7 claim.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6304526
EASTING: 384084

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Tetrahedrite Malachite
ASSOCIATED: Barite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation Carbonate Skarn
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K04 Au skarn

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic			Stikine Assemblage

LITHOLOGY: Skarn

HOSTROCK COMMENTS: Mississippian and Permian volcanic and sedimentary rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP:
GRADE: Hornfels

CAPSULE GEOLOGY

On the Gab claims, the southwestern part of the property is underlain by andesite and andesite agglomerate of Permian age which are part of the Mississippian and Permian Stikine Assemblage. A major northeast trending thrust or reverse fault bisects the property. Mineralization may be related to this major structure.

Mineralization on the property is associated with skarn development within the lower sequence of sediments in the overthrust package of rocks. The mineral assemblage consists of massive to disseminated magnetite, barite, pyrite and chalcopyrite with associated gold values.

To the north the rocks are predominantly sedimentary units of Paleozoic age consisting of crinoidal limestone, chert, quartzite, argillite, and slate.

The Gab Northwest showing is reportedly located near the centre of the Gab 7 claim along this northeast trending fault structure. The occurrence, located near the centre of the claim, is thought to be the northeast extension of the McLymont Northwest Zone (104B 281). The Gab Northwest showing contains tetrahedrite, malachite and barite mineralization which is thought to be related to the other gold-bearing skarn mineralization in this area (George Cross Newsletter #180, Sept. 19, 1988).

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DATE CODED: 1988/12/23 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 334**

NATIONAL MINERAL INVENTORY:

NAME(S): **CUBA**, GAB 8, INTERNATIONAL PRISM, GAB 7

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 52 19 N
LONGITUDE: 130 51 36 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6304673
EASTING: 386629

COMMENTS: Cuba showing is located near the eastern boundary of the Gab 8 claim.

COMMODITIES: Silver, Zinc, Copper, Barite

MINERALS

SIGNIFICANT: Sphalerite, Chalcopyrite, Pyrite
ASSOCIATED: Barite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated, Massive
CLASSIFICATION: Replacement, Epigenetic, Industrial Min.
TYPE: J01 Polymetallic manto Ag-Pb-Zn, K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic			Stikine Assemblage

LITHOLOGY: Limestone
Andesite

HOSTROCK COMMENTS: Mississippian and Permian volcanic and sedimentary rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	729.0000	Grams per tonne

COMMENTS: Grab sample from copper-barite mineralized areas.
REFERENCE: George Cross Newsletter #62, August 23, 1988.

CAPSULE GEOLOGY

On the Gab claims, the southwestern part of the property is underlain by Permian(?) andesite and andesite agglomerate of the Paleozoic Stikine Assemblage.

Mineralization on the property consists of massive to disseminated magnetite, barite, pyrite and chalcopyrite with associated gold values.

The Cuba showing, located near the eastern part of the Gab 8 claim, is mineralized with coarse bladed radiating barite gangue intergrown with sphalerite and pyrite in open space fillings and vein replacements of limestone. A grab sample taken in 1989 assayed 0.002 grams per tonne gold, 125 grams per tonne silver and 5.88 per cent zinc (Open File 1989-2).

In 1988, 19 samples from two copper-barite areas assayed in the range of 35.66 to 2468.2 grams per tonne silver. The seven best samples averaged 1023.0 grams per tonne silver (George Cross Newsletter #162, Aug. 23, 1988).

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DATE CODED: 1988/12/20 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1990/03/27 REVISED BY: VK FIELD CHECK: Y

MINFILE NUMBER: **104B 335**

NATIONAL MINERAL INVENTORY:

NAME(S): **GAB 12**, SOUTHWEST, CONSOLIDATED SEA GOLD, DIRK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 49 04 N
LONGITUDE: 130 58 40 W
ELEVATION: 1150 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 2.0 kilometres southwest of Newmont Lake, sample locations from Assessment Report 17131, Figure 6.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6298846
EASTING: 379277

COMMODITIES: Silver, Zinc, Lead, Copper, Arsenic, Gold

MINERALS

SIGNIFICANT: Pyrite, Magnetite
ASSOCIATED: Barite, Calcite, Gypsum
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform, Vein
CLASSIFICATION: Hydrothermal, Epigenetic, Industrial Min.
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic			Stikine Assemblage

LITHOLOGY: Andesite Agglomerate
Carbonatized Andesitic Agglomerate

HOSTROCK COMMENTS: Permian(?) andesite agglomerate.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact, Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	39.0800	Grams per tonne

COMMENTS: Drill hole 88-1, 1.2 metre intersection.
REFERENCE: George Cross Newsletter, #182, 1988.

CAPSULE GEOLOGY

Flat lying Permian and Mississippian sedimentary and volcanic rocks of the Stikine Assemblage were mapped on the property near the eastern claim boundary of the Gab 12 claim. Thin-bedded sandstone, chert and thick-bedded crinoidal limestone comprise the major rock types. A major northeast trending fault structure passes through these units. Mineralization associated with this structure consists of barite, calcite and gypsum with massive fine to coarse-grained magnetite, chalcopyrite, sphalerite and galena.

Stratigraphically above the major northeast trending fault and Paleozoic rocks is a thick sequence of conglomerate which is characterized at its base by large fragments of limestone ranging 50 to 70 centimetres across.

Near the south-central boundary of the Gab 12 claim is a Paleozoic (Mississippian?) argillite-chert-sandstone-limestone conglomerate unit which trends between 230 to 240 degrees with a vertical dip. This unit is within a predominantly argillite sequence of bedded rocks with the same trend.

Intrusive rocks in the claim area consist mainly of a large quartz porphyry stock along the east margins of the property and syenite or syenodiorite plugs immediately west of the Gab 11 northwest

CAPSULE GEOLOGY

corner.
The Southwest zone mineralization on the Gab 12 claim consists of a zone of gold mineralization occurring within iron-carbonate veins and pods varying from 2 centimetres in to excess of 3 to 4 metres. Mineralization consists of coarse-grained pyrite with lesser magnetite. The zones are hosted in a sequence of carbonate altered andesite agglomerate. A major structural lineament passes through the area trending 070 degrees. The individual veins/pods range up to 63.7 grams per tonne gold. In 1987, chip sample 16045 assayed 0.76 grams per tonne gold, 0.6 grams per tonne silver, 0.059 per cent zinc, 0.0112 per cent lead, 0.041 per cent copper and 0.084 per cent arsenic. Another sample assayed 10.38 grams per tonne gold and 1.24 per cent arsenic (Assessment Report 17131).
Diamond-drill hole 88-1 intersected 1.2 metres grading 39.08 grams per tonne gold including 0.6 metres of 77.14 grams per tonne gold in the southwest zone (George Cross Newsletter, #182, 1988).

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DATE CODED: 1988/12/20 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1990/03/27 REVISED BY: VK FIELD CHECK: N

MINFILE NUMBER: **104B 336**

NATIONAL MINERAL INVENTORY:

NAME(S): **GAB 11**, SOUTHEAST, GAB 12, CONSOLIDATED SEA GOLD, DIRK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 48 54 N
LONGITUDE: 130 57 05 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6298491
EASTING: 380879

COMMENTS: Located about 2.0 kilometres southwest of Newmont Lake on the east boundary of the Gab 11 and 12 claims, mineralized located from Assessment Report 17131, Figure 6.

COMMODITIES: Gold, Arsenic, Iron, Copper, Silver

MINERALS
SIGNIFICANT: Pyrite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Massive
CLASSIFICATION: Epigenetic, Industrial Min.
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic			Stikine Assemblage

LITHOLOGY: Chert
Sandstone
Limestone
Sediment/Sedimentary Rock
Volcanic Rock

HOSTROCK COMMENTS: Permian(?) andesite agglomerate.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist, Hornfels

INVENTORY

ORE ZONE: SOUTHEAST
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Silver	16.9000	Grams per tonne
Arsenic	0.7900	Per cent
Gold	23.5000	Grams per tonne
Copper	0.1200	Per cent
Iron	28.8400	Per cent

COMMENTS: Sample 15398 is mineralized talus from the Southeast Zone.
REFERENCE: Assessment Report 17131.

CAPSULE GEOLOGY

Flat lying Permian and Mississippian sedimentary and volcanic rocks were mapped on the property near the eastern claim boundary of the Gab 12 claim. Thin-bedded sandstone, chert and thick-bedded crinoidal limestone comprise the major rock types. A major northeast trending fault structure passes through these units. Mineralization associated with this structure consists of barite, calcite and gypsum with massive fine to coarse-grained magnetite, chalcopyrite, sphalerite and galena.

Stratigraphically above the major northeast trending fault and Paleozoic rocks is a thick sequence of conglomerate which is characterized at its base by large fragments of limestone ranging 50 to 70 centimetres across.

Near the south-central boundary of the Gab 12 claim is an Paleozoic (Mississippian?) argillite-chert-sandstone-limestone

CAPSULE GEOLOGY

conglomerate unit which trends between 230 to 240 degrees with a vertical dip. This unit is within a dominantly argillite sequence of bedded rocks with the same trend.

Intrusive rocks in the claim area consist mainly of a large quartz-rich granite (Jurassic?) along the east margins of the property and syenite or syenodiorite plugs immediately west of the Gab 11 northwest corner.

Mineralization in the Southeast Zone consists of massive fine-grained pyrite which host anomalous values in gold. The mineralization lies east of the main northeast trending structure within Mississippian sedimentary and volcanic rocks. A sample of talus from this zone assayed 23.5 grams per tonne gold, 16.9 grams per tonne silver, 0.12 per cent copper, 0.02 per cent lead, 0.02 per cent zinc, 0.79 per cent arsenic and 28.84 per cent iron (Assessment Report 17131).

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DATE CODED: 1988/12/20 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 337**

NATIONAL MINERAL INVENTORY:

NAME(S): **GAB 12 NORTHEAST**, NORTHEAST

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 49 55 N
LONGITUDE: 130 57 37 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located in the northeast corner of the Gab 12 claim, adjacent to the McLymont Northwest zone (104B 281). Location of mineralized zone from Assessment Report 17131, Figure 6.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6300392
EASTING: 380390

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Pyrite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic			Stikine Assemblage

LITHOLOGY: Gossan

HOSTROCK COMMENTS: The Stikine Assemblage comprises Mississippian and Permian volcanic and sedimentary rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: NORTHEAST
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	26.7000	Grams per tonne

COMMENTS: Sample from gossanous zone.
REFERENCE: George Cross Newsletter, #159, 1988.

CAPSULE GEOLOGY

Flat lying Mississippian and Permian sedimentary and volcanic rocks of the Stikine Assemblage were mapped on the property near the eastern boundary of the Gab 12 claim. Thin-bedded sandstone, chert and thick-bedded crinoidal limestone comprise the major rock types. A major northeast trending fault structure passes through these units. Mineralization associated with this structure consists of barite, calcite and gypsum with massive fine to coarse-grained magnetite, chalcopyrite, sphalerite and galena.

Stratigraphically above the major northeast trending fault and Paleozoic rocks is a thick sequence of conglomerate which is characterized at its base by large fragments of limestone ranging 50 to 70 centimetres across.

Intrusive rocks in the claim area consist mainly of a large quartz-rich granite stock along the east margins of the property and syenite or syenodiorite plugs immediately west of the Gab 11 northwest corner.

The Northeast zone consists of a large gossanous outcrop several hundred metres in diameter that is located in the northeast corner of the Gab 12 claim. Several gold-bearing samples were collected from this area. Surface samples assayed between 6.8 and 26.7 grams per tonne gold (George Cross Newsletter, #159, 1988).

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EM BULL 104

BIBLIOGRAPHY

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GSC MAP 9-1957; 311A; 1418A
GSC MEM 246
GSC P 89-1E, pp. 145-154
GCNL #159,#175, 1988
NW PROSPECTOR Aug./Sept., 1988, p. 19
Anderson, R.G. (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988

DATE CODED: 1989/01/04 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1990/03/27 REVISED BY: VK FIELD CHECK: N

MINFILE NUMBER: **104B 338**

NATIONAL MINERAL INVENTORY:

NAME(S): **KING**, TICKER TAPE, NEW, DARWIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W 104B14E
BC MAP:
LATITUDE: 56 46 32 N
LONGITUDE: 130 59 54 W
ELEVATION: 600 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Exact location was not reported; location from Prime Capital Corporation, Iskut River Gold Camp Poster, July 1988.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6294184
EASTING: 377886

COMMODITIES: Gold Silver Bismuth

MINERALS
SIGNIFICANT: Gold Pyrite Bismuthinite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Mesozoic			Coast Plutonic Complex
Permian			Stikine Assemblage

LITHOLOGY: Volcanic Vein
Sediment/Sedimentary Vein
Limestone
Felsic Intrusive
Intermediate Intrusive

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
Plutonic Rocks RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: KING VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	122.0000	Grams per tonne
Gold	864.0000	Grams per tonne

COMMENTS: 20.0 centimetre chip sample taken across the King Vein and adjacent wallrock.
REFERENCE: Statement of Material Facts #66/88, Adrian Resources Ltd., Aug.5/88.

CAPSULE GEOLOGY

The area is underlain by an undivided assemblage of Permian and/or Triassic volcanics and sedimentary rocks that have been intruded by intermediate to felsic stocks and plutons related to the Mesozoic Coast Plutonic Complex.

The western half of the New 7 claim is underlain by stratified sedimentary and volcanic rocks of Triassic age. A narrow band of Permian limestone occurs near the western boundary of the claims. Immediately south of the property, a small acid intrusive plug occurs.

A showing called the King Vein (exact location not reported) was systematically chip sampled at 2.0 metre intervals over a strike length of 104 metres. Sample results reported for the eastern 40 metres of the King Vein indicate an average grade of 13.13 grams per tonne gold over an average vein width of 1.12 metres. Fourteen channel samples ranged from 4.1 to 690.5 grams per tonne gold of which 11 assays were greater than 34.3 grams per tonne gold (George Cross Newsletter #166, Aug.29, 1988).

Another newly discovered quartz vein, called the Darwin Vein,

CAPSULE GEOLOGY

located about 28.0 metres below and subparallel to the King Vein, was found to contain visible gold.

Visible gold and bismuthinite(?) were reported adjacent to sulphide zones, within the King Vein. A grab sample of this mineral assayed 1725 grams per tonne gold and 0.4825 per cent bismuth. A 20 centimetre chip sample taken across the vein and adjacent wall rock assayed 864.0 grams per tonne gold and 122.0 grams per tonne silver. The highest silver value reported from the King Vein was 398.0 grams per tonne silver (Statement of Material Facts #66/88 for Adrian Resources, Aug.5, 1988).

BIBLIOGRAPHY

EMPR PF (*Caufield, D.A., Ikona, C.K., (1987): Geological Report on the New 7 & 8 Mineral Claims, May 1987 in Statement of Material Facts #128/87 for Ticker Tape Resources Ltd., Sept.17, 1987; Statement of Material Facts #66/88 for Adrian Resources, Aug.5, 1988, page 10; Statement of Material Facts #88/89 for Adrian Resources, Dec.8, 1988, p. 9)
GSC MEM 246
GSC MAP 9-1957; 311A; 1418A
GCNL *#166,Aug.29, 1988
Prime Capital Corporation, Iskut River Gold Camp Poster, July 1988
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/01/05 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 339**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH**, TICKER TAPE, NEW, KING

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W 104B14E
BC MAP:
LATITUDE: 56 47 04 N
LONGITUDE: 130 59 56 W
ELEVATION: 750 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Exact location not reported; location from Prime Capital Corporation, Iskut River Gold Camp Poster, July 1988.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6295174
EASTING: 377880

COMMODITIES: Silver Lead Zinc Gold

MINERALS
SIGNIFICANT: Sphalerite Galena Pyrite
COMMENTS: Exact mineralogy not reported.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stratiform
CLASSIFICATION: Volcanogenic
TYPE: I02 Intrusion-related Au pyrrhotite veins
G04 Besshi massive sulphide Cu-Zn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Mesozoic			Coast Plutonic Complex
Permian			Stikine Assemblage

LITHOLOGY: Volcanic
Sediment/Sedimentary
Limestone
Felsic Intrusive
Intermediate Intrusive

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	44.9000	Grams per tonne
Lead	0.8800	Per cent
Zinc	2.6000	Per cent

COMMENTS: 18.0 metre mineralized intersection in Drill Hole 87-3.
REFERENCE: George Cross Newsletter #166, Aug. 29, 1988.

CAPSULE GEOLOGY

The area is underlain by an undivided assemblage of Permian and/or Triassic volcanics and sedimentary rocks that have been intruded by intermediate to felsic stocks and plutons related to the Mesozoic Coast Plutonic Complex.

The western half of the New 7 claim is underlain by stratified sedimentary and volcanic rocks of Triassic age. A narrow band of Permian limestone occurs near the western boundary of the claims. Immediately south of the property, a small acid intrusive plug occurs.

A stratified gold-silver-lead-zinc mineral occurrence, called the North Zone, was located in 1987 north of the King Vein (refer to 104B 338). Seven holes were drilled in 1987 and Hole 87-5 intersected 1.0 metres of 7.3 grams per tonne gold. Hole 87-3 intersected 18.0 metres of 44.9 grams per tonne silver, 2.6 per cent zinc and 0.88 per cent lead (George Cross Newsletter #166, August 29. 1988). Testing for a north strike extension and downdip continuity is continuing.

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EMPR PF (*Caufield, D.A., Ikona, C.K., (1987): Geological Report on the New 7 & 8 Mineral Claims, May 1987 in Statement of Material Facts #128 for Ticker Tape Resources Ltd., Sept.17, 1987; *Statement of Material Facts #66/88 for Adrian Resources, Aug.5, 1988)
GSC MEM 246
GSC MAP 9-1957; 311A; 1418A
GCNL *#166,Aug.29, 1988
Prime Capital Corporation, Iskut River Gold Camp Poster, July 1988
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/01/05 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 340**

NATIONAL MINERAL INVENTORY:

NAME(S): **COREY SOUTH**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 26 06 N
LONGITUDE: 130 26 31 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Coordinates are for the gossan zone sample on Corey 36 claim. Another anomalous silver sample occurs 750 metres to the southwest at 914 metres elevation on the Corey 39 claim.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6255428
EASTING: 411085

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Unknown
COMMENTS: Mineralization not reported.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Eocene			Lee Brant Stock

ISOTOPIC AGE: 52.4 Ma +/- 1.8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Hornblende

LITHOLOGY: Volcanic Breccia
Conglomerate
Sandstone
Siltstone
Quartz Monzonite

HOSTROCK COMMENTS: Host rocks were not reported. Rock types listed here are the general area types. Age date from D.J. Alldrick (Pers. Comm.).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1987

COMMODITY	GRADE	
Silver	61.7100	Grams per tonne
Gold	6.1000	Grams per tonne

REFERENCE: Assessment Report 17404.

CAPSULE GEOLOGY

Bighorn Development Corporation reported high gold values from two rock samples occurring in their Corey 36 and Corey 39 claims. The samples are located just over 2.0 kilometres east of the South Unuk River at 914 and 1200 metres elevation. The lower sample contained 54.17 grams per tonne silver and the higher sample, located about 750 metres to the northwest in a gossan zone, contained 6.10 grams per tonne gold and 61.71 grams per tonne silver (Assessment Report 17404). Sample descriptions were not reported.

The area is underlain primarily by volcanic breccia, conglomerate, sandstone and siltstone of the Lower Jurassic Unuk River Formation, Hazelton Group. The northwest contact of the Eocene Lee Brant Stock occurs within a few kilometres to the southwest of the showings. The stock is composed of massive, coarse to medium-grained, pinkish quartz monzonite (Grove, Bulletin 63).

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EMPR ASS RPT 16364, *17404
EMPR PF (Geology Map - 1:31250 Scale - Newmont Exploration of Canada Ltd., 1960's; Statement of Material Facts, Catear Resources Ltd., 1987)
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
EMPR OF 1988-4; 1989-10
GSC MAP 9-1957; 307A
GSC P 89-1E, pp. 145-154
V STOCKWATCH July 14, 1987
GCNL #148, 1988
N MINER Feb.2, 1987
Pers. Comm. (D.J. Alldrick)

DATE CODED: 1988/12/22 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 341**

NATIONAL MINERAL INVENTORY:

NAME(S): **DELTA NORTHWEST**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 22 20 N
LONGITUDE: 130 08 13 W
ELEVATION: 1615 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located near northern boundary of Delta claim about 4.0 kilometres north of Frank Mackie Glacier (Assessment Report 16911).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6248088
EASTING: 429776

COMMODITIES: Silver, Gold, Copper

MINERALS
SIGNIFICANT: Tetrahedrite, Chalcopyrite, Pyrite
ASSOCIATED: Quartz, Carbonate
ALTERATION: Silica, Malachite, Azurite
ALTERATION TYPE: Silicific'n, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 0005 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Vein is 5.0 metres long and up to 0.15 metre wide.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic	Hazelton	Salmon River	

LITHOLOGY: Siltstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	6.1400	Grams per tonne

COMMENTS: This sample also assayed 14,263 grams per tonne silver.
REFERENCE: Assessment Report 16911.

CAPSULE GEOLOGY

A mineralized vein is hosted by rock of the Middle Jurassic Salmon Creek Formation (Siltstone Sequence), Hazelton Group (Open File 1988-4). The sediments have been folded into synclines and anticlines with north trending fold axes. Small Eocene feldspar intrusions occur in the area.

The vein is about 5.0 metres in length, varies from 2.0 to 15 centimetres in width, and appears to be a fracture filling in a silicified zone within black siltstone. The vein is composed of quartz carbonate and massive tetrahedrite along with malachite, chalcopyrite, azurite and pyrite. Small parallel fractures in the vicinity are also mineralized, but to a much lesser degree.

Two character samples from the vein contained 14,263 grams per tonne silver and 6.14 grams per tonne gold, and 17,966 grams per tonne silver and 4.32 grams per tonne gold (Assessment Report 16911).

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EMPR ASS RPT 11716, 13403, *14607, *15645, 15668, 16840, *16911
EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102; 1987, pp. 199-209
EMPR OF 1987-22; 1988-4
EMPR BULL 63
EMPR EXPL 1983-520; 1984-386; 1986-C440; 1987-C372
GSC MAP 9-1957; 1418A

BIBLIOGRAPHY

GSC P 89-1E, pp. 145-154

DATE CODED: 1988/12/20 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1989/02/01 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 342**

NATIONAL MINERAL INVENTORY:

NAME(S): **NURSE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 15 18 N
LONGITUDE: 130 24 22 W
ELEVATION: 1181 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located immediately south of the South Unuk Glacier (Assessment Report 16910).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6235350
EASTING: 412886

COMMODITIES: Silver, Lead, Zinc, Copper, Gold

MINERALS
SIGNIFICANT: Galena, Sphalerite, Pyrite, Chalcopyrite, Bornite
ASSOCIATED: Quartz
ALTERATION: Silica, Biotite
ALTERATION TYPE: Silicific'n, Propylitic, Biotite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Triassic			Unnamed/Unknown Informal
Tertiary			Coast Plutonic Complex

LITHOLOGY: Andesitic Tuff
Sediment/Sedimentary
Monzonite

HOSTROCK COMMENTS: Host rocks are probably(?) Hazelton Group. Regional mapping shows the area to be composed of Triassic gneisses.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine, Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	433.0000	Grams per tonne
Gold	0.2000	Grams per tonne
Copper	0.1600	Per cent
Lead	53.3000	Per cent
Zinc	7.8000	Per cent

REFERENCE: Assessment Report 16910.

CAPSULE GEOLOGY

The area is underlain by north trending Triassic gneisses that are bounded on the west by granitic rock of the Tertiary Coast Plutonic Complex, and on the east by the South Unuk cataclasite zone. The gneisses are thin layered, fine-grained light and dark coloured hornblende biotite gneisses. Tertiary granitic plutons transect the gneisses and have narrow contact metamorphic aureoles (Grove, Bulletin 63).

The Nurse occurrence consists of two mineralized quartz veins, an "upper" and "lower", which occur immediately south of the South Unuk Glacier. Teuton Resources reported the country rocks to be composed of sediments, predominantly siliceous siltstone, probably of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks are characterized by the development of secondary biotite, quartz and mild propylitic alteration. The lower vein occurs in an andesitic tuff that forms a discrete unit within the sediments. Dyke swarms, composed of monzonite, were observed cutting the sediments (Assessment

CAPSULE GEOLOGY

Report 16910).

The two veins cut across the bedding about 200 metres apart and share the same general attitude. The lower and upper veins are exposed for a distance of 70.0 metres and 100 metres respectively. Mineralization consists of massive galena, sphalerite, pyrite and minor chalcopyrite and bornite.

A high grade sample from the lower vein contained 473 grams per tonne silver, 53.3 per cent lead, 7.80 per cent zinc, 0.16 per cent copper and 0.2 grams per tonne gold (Assessment Report 16910).

A boulder train, approximately 100 metres long, was located downhill from the western trace of the lower quartz vein. A sample from a 1.5 metre quartz boulder containing galena, pyrite and minor chalcopyrite and sphalerite assayed 223.0 grams per tonne silver, 5.2 grams per tonne gold, 3.63 per cent lead, 0.02 per cent zinc and 0.01 per cent copper (Assessment Report 16910).

BIBLIOGRAPHY

EMPR ASS RPT *16910
EMPR PF (Geology Map - 1:31250 Scale: Newmont Exploration of Canada Ltd., 1960's)
EMPR BULL 63
EMPR OF 1988-4; 1989-10
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/12/19 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 343**

NATIONAL MINERAL INVENTORY:

NAME(S): **CATSPAW 146**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 17 26 N
LONGITUDE: 130 05 09 W
ELEVATION: 1006 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located between Berendon and Frank Mackie Glaciers, just over 1.0 kilometre west of the Bowser River. Identified from Assessment Report 17027.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6238948
EASTING: 432789

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins
COMMENTS: Mineralization occurs in shear-breccia zone.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Volcanic Breccia
Siltstone
Tuff
Feldspar Porphyry

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1987

COMMODITY	GRADE	
Gold	1.1500	Grams per tonne

REFERENCE: Assessment Report 17027.

CAPSULE GEOLOGY

The Catspaw 146 occurrence is located between Frank Mackie and Berendon Glaciers. The area is underlain by rock of the Lower Jurassic Unuk River Formation, Hazelton Group. These consist mainly of siltstones and ash tuff with lesser dust and lapilli tuff and interbedded augite porphyry. Feldspar porphyry flows also occur (Open File 1987-22).

A 0.76 metre wide zone of sheared, brecciated, pyritized volcanic is reported. A grab sample contained 1.15 grams per tonne gold (Assessment Report 17027).

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EMPR ASS RPT 8768, 15975, *17027
EMPR FIELDWORK 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217-224; 1986, pp. 81-102; 1987, pp. 199-209
EMPR OF 1987-22; 1988-4
EMPR BULL 63
EMPR EXPL 1980-466
EMPR PF (*Prospectus: Wedgewood Resources Ltd., 1988)
GSC MAP 9-1957; 307A; 315A; 1418A
GSC MEM 175
GSC P 89-1E, pp. 145-154

DATE CODED: 1988/11/22
DATE REVISED: / /

CODED BY: GJP
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **104B 344**

NATIONAL MINERAL INVENTORY:

NAME(S): **UNUK (ZONE 2)**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 34 51 N
LONGITUDE: 130 23 26 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located along the western margin of Bruce Glacier Icefield (Assessment Report 17087).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6271593
EASTING: 414583

COMMODITIES: Gold Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Gossan
Volcanic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1987
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Gold	0.9950	Grams per tonne

COMMENTS: May be a chip or grab (ie. unknown type).
REFERENCE: Assessment Report 17087.

CAPSULE GEOLOGY

The area of the Unuk (Zone 2) occurrence is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. According to Grove (Bulletin 63) the formation, in the mineralized area, is composed of volcanic breccia, conglomerate, sandstone, siltstone and crystal and lithic tuff.

A large gossanous area was located at an elevation of between 1370 and 1525 metres, immediately west of a large icefield.

In 1987 four rock samples were taken; one chip and three float samples, the latter apparently derived from the gossan. The samples were generally described as silicified volcanic rocks containing up to 30 per cent pyrite plus/minus chalcopyrite. The highest assay result was reported to be 0.995 grams per tonne gold. An average of the 4 samples was 0.296 grams per tonne gold (Assessment Report 17087). The company doing the assessment work did not report which assays were from float or which were from outcrop samples.

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DATE CODED: 1988/12/14 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 345**

NATIONAL MINERAL INVENTORY:

NAME(S): **UTC (SULPHURETS)**, SULPHURETS, RED RIVER, BRUCEJACK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 28 03 N
LONGITUDE: 130 11 34 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 75 metres east of the West Zone (104B 193).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6258751
EASTING: 426512

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Unknown
COMMENTS: If similar to West Zone, main minerals include electrum and pyrite.
ASSOCIATED: Quartz
COMMENTS: Assumed to be a similar to quartz-stockwork setting of West Zone.
ALTERATION: Sericite Silica
ALTERATION TYPE: Sericitic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stockwork Vein
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins G07 Subaqueous hot spring Ag-Au
COMMENTS: Assumed to be of similar deposit nature as West Zone.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Andesitic Lapilli Tuff
Sandstone
Wacke
Shale
Hornblende Syenite
Alkali Feldspar Syenite

HOSTROCK COMMENTS: Jurassic syenite occur within a few hundred metres of the UTC zone.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: UTC REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	1572.0000	Grams per tonne
Gold	409.0000	Grams per tonne

COMMENTS: From a 9.14 metre drill section.
REFERENCE: Newhawk Gold Mines Ltd., Press Release: Oct. 31, 1988.

CAPSULE GEOLOGY

The area is underlain by rocks of the Lower Jurassic Unuk River Formation, Hazelton Group. These rocks consist of sandstone, wackes, and shale overlain by lapilli-tuff of andesitic composition. The Brucejack fault and associated splay faults cut the country rock in a north-south to northwest direction. North of Brucejack Lake, the fault system is bounded on the east by rocks of the Lower Jurassic Betty Creek Formation, Hazelton Group. A variety of Jurassic hornblende syenite and alkali feldspar syenites occur in the area.

Several diamond-drill holes have been drilled to explore the UTC Zone, discovered in the 1988 drill program that tested the West Zone (104B 193) at depth. Drilling first intersected significant mineralization 300 metres below surface and about 75 metres east of the West Zone which dips steeply northeast and strikes 138 degrees.

The nature of the deposit was not described but is likely

CAPSULE GEOLOGY

similar to the epithermal-quartz stockwork character of the West Zone. West Zone veins occur within intensely quartz-sericite altered tuff-breccia adjacent to a volcanic-sedimentary contact. A hornblende-feldspar-porphyry-syenite intrusion occurs immediately west of the West Zone.

A 9.14 metre drill section from the UTC Zone assayed 409 grams per tonne gold and 1572 grams per tonne silver (Newhawk Gold Mines Ltd., Press Release, Oct. 31, 1988).

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N MINER Dec.29, 1983; Jul.4,Aug.8,Sept.9,23,Oct.14,Dec.16, 1985; June 2,July 14,Aug.25,Sept.8,22,Oct.13,Nov.24,Dec.4,30, 1986; Apr.1,20,Feb.9,Sept.14,Dec.1,14,30, 1987; May 2,Jun.6,Aug.1,8, Oct.17,Nov.7, 1988
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N MINER MAG *Jan. 1989
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DATE CODED: 1988/01/10 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 346**

NATIONAL MINERAL INVENTORY:

NAME(S): **CANNONBALL**, VERJOY, RET 7, RET 6, PRISM

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W 104B15W
BC MAP:
LATITUDE: 56 44 50 N
LONGITUDE: 130 57 07 W
ELEVATION: 1525 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Location taken from Pezgold Resource Corporation, Prism-Verjoy Project 1:50000 claim map, submitted January 09, 1989. Showing is located in the southwest corner of the Ret 7 claim.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6290949
EASTING: 380630

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
COMMENTS: Exact mineralogy not reported.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins L02 Porphyry-related Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Cretaceous-Tertiary			Coast Plutonic Complex
Lower Permian			Stikine Assemblage

LITHOLOGY: Intrusive Rock
Granodiorite
Granite
Quartz Monzonite
Volcanic Rock
Sediment/Sedimentary Rock

HOSTROCK COMMENTS: Coast Plutonic rocks intrude Stuhini Group volcanics and sediments.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	2.0900	Grams per tonne

REFERENCE: George Cross Newsletter #162, Aug. 23, 1988.

CAPSULE GEOLOGY

Upper Triassic island arc volcanics and sediments unconformably overlie Paleozoic crinoidal limestones and metamorphosed sediments and volcanics. These Upper Triassic volcanics have been correlated with the Stuhini Group.

The Coast Plutonic Complex batholithic intrusions ranging from Cretaceous to Tertiary age, intrude the volcanic and sedimentary sequences. Composition of these intrusions varies from quartz monzonite to granodiorite to granite.

Locally, the eastern portion of the Ret 7 and Ret 6 claims are underlain by the Coast Plutonic Complex intrusives ranging from quartz monzonite, to granodiorite, to gabbro and granite. These rocks are exposed predominantly at the higher elevations.

At lower elevations, the property is predominantly underlain by a series of Triassic volcanic rocks and sediments belonging to the Stuhini Group.

Major fault structures with attendant joint and fracture patterns crosscut the property. Attitudes vary between north to northwest and east-west.

CAPSULE GEOLOGY

In 1988, the Cannonball showing was located in the southwest corner of the Ret 7 claim. Seven grab samples have assayed in the range of 0.89 to 2.1 grams per tonne gold (George Cross Newsletter #162, August 23, 1988, page 2).

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GSC P 89-1E, pp. 145-154

DATE CODED: 1988/01/09 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 347**

NATIONAL MINERAL INVENTORY:

NAME(S): **EGG**, VERJOY, RET 7

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W 104B10W
BC MAP:
LATITUDE: 56 45 49 N
LONGITUDE: 130 53 32 W
ELEVATION: 1375 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Location taken from Pezgold Resource Corporation, Prism-Verjoy Project 1:50000 claim map, submitted January 9, 1989. Showing is located about 1.6 kilometre northeast of the Cannonball Showing (104B 346).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6292670
EASTING: 384332

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Pyrite
COMMENTS: Exact mineralogy not reported.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins L02 Porphyry-related Au

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Unnamed/Unknown Informal
Upper Paleozoic			Stikine Assemblage

LITHOLOGY: Intrusive Rock
Granodiorite
Granite
Quartz Monzonite
Volcanic Rock
Sediment/Sedimentary Rock

HOSTROCK COMMENTS: Jurassic(?) intrusive rocks intrude Mississippian and Permian Stikine Assemblage volcanic and sedimentary rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	1.5100	Grams per tonne

REFERENCE: George Cross Newsletter #162, August 23, 1988, page 2.

CAPSULE GEOLOGY

Intrusions of Jurassic(?) age intrude the Mississippian volcanic and sedimentary sequences. Composition of these intrusions varies from quartz monzonite to granodiorite to granite.

Locally, the eastern portion of the Ret 7 and Ret 6 claims are underlain by intrusives. These rocks are exposed predominantly at the higher elevations.

At lower elevations, the property is predominantly underlain by a series of Upper Paleozoic volcanic rocks and sediments belonging to the Stikine Assemblage.

Major fault structures with attendant joint and fracture patterns crosscut the property. Attitudes vary between north to northwest and east-west.

In 1988, the Egg showing was located on the Ret 7 claim, about 1.6 kilometre northeast of the Cannonball showing (104B 346). One grab sample taken from the Egg showing assayed 1.5 grams per tonne gold (George Cross Newsletter #162, August 23, 1988, page 2).

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EM BULL 104

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DATE CODED: 1988/01/09 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1989/01/02 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 348**

NATIONAL MINERAL INVENTORY:

NAME(S): **ARGENT**, VERJOY, JOY 6

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 43 35 N
LONGITUDE: 130 54 25 W
ELEVATION: 915 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Location taken from Pezgold Resource Corporation Prism-Verjoy Project 1:50000 Claim map, submitted January 9, 1989. Showing is located on the Joy 6 claim.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6288553
EASTING: 383317

COMMODITIES: Silver Gold

MINERALS
SIGNIFICANT: Unknown
COMMENTS: Exact mineralogy for the high grade silver showing was not reported.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Cretaceous-Tertiary			Coast Plutonic Complex
Permian			Stikine Assemblage

LITHOLOGY: Volcanic Rock
Sediment/Sedimentary Rock
Intrusive Rock

HOSTROCK COMMENTS: Coast Plutonic rocks intrude Upper Triassic volcanics and sediments.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE
Silver	2065.0000 Grams per tonne

COMMENTS: Grab sample from high grade silver mineralization.
REFERENCE: George Cross Newsletter #162, August 23, 1988, page 2.

CAPSULE GEOLOGY

Upper Triassic island arc volcanics and sediments unconformably overlie Paleozoic crinoidal limestones and metamorphosed sediments and volcanics. These Upper Triassic volcanics have been correlated with the Stuhini Group.

The Coast Plutonic Complex batholithic intrusions ranging from Cretaceous to Tertiary age, intrude the volcanic and sedimentary sequences. Composition of these intrusions varies from quartz monzonite to granodiorite to granite. Plutonic rocks are exposed at higher elevations.

At lower elevations, the property is predominantly underlain by a series of Triassic volcanic rocks and sediments belonging to the Stuhini Group.

Major fault structures with attendant joint and fracture patterns crosscut the property. Attitudes vary between north to northwest and east-west.

In 1988, high grade silver mineralization was located in the southeast corner of the Joy 6 claim. This showing, known as the Argent showing, assayed 146.4, 524.56, 2065.0, 4387.8, and 12,673.1 grams per tonne silver from grab samples. The highest grade silver sample also assayed 4.22 grams per tonne gold (George Cross Newsletter #162, August 23, 1988).

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V STOCKWATCH *Aug.23, 1988
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988

DATE CODED: 1988/01/09 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 349**

NATIONAL MINERAL INVENTORY:

NAME(S): **STILL**, SECRETARIAT

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 31 11 N
LONGITUDE: 130 59 06 W
ELEVATION: Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Located on the Still/Secretariat claims (Vancouver Stockwatch, Oct. 14, 1988). Exact location of mineralized veins was not reported.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6265690
EASTING: 377876

COMMODITIES: Gold Silver Lead Zinc

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

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

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Lower Jurassic	Hazelton	Unuk River	
Cretaceous-Tertiary			Coast Plutonic Complex

LITHOLOGY: Argillite
Greywacke
Siltstone
Epiclastic
Marble

HOSTROCK COMMENTS: Host rocks are Upper Triassic and therefore probably Stuhini Group. Coast Plutonic Complex rock intrudes regionally.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1988

COMMODITY	GRADE	
Silver	13.7000	Grams per tonne
Gold	29.4200	Grams per tonne
Lead	0.8300	Per cent
Zinc	0.3600	Per cent

COMMENTS: Chip across a 30 centimetre quartz vein.
REFERENCE: Vancouver Stockwatch Oct. 14, 1988.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic epiclastic volcanics, marbles, sandstones and siltstones which may be correlative with the Stuhini Group. These, in turn, are overlain by sedimentary and volcanic rocks of the Jurassic Hazelton Group. The Hazelton Group is subdivided into the Lower Jurassic Unuk River Formation comprised predominantly of volcanics and sediments which include lithic tuffs, pillow lavas with carbonate lenses and thin-bedded siltstones. These are overlain by the Middle Jurassic Betty Creek Formation characterized by bright red and green volcaniclastic agglomerates, andesitic flows, chert and carbonate lenses.

The volcanic and sedimentary sequences are intruded by the Tertiary-Cretaceous Coast Plutonic Complex. A wide variety of intrusive phases are present including granodiorite, quartz monzonite and diorite. Small satellitic plugs from the main batholith are important for localizing mineralization.

The Still occurrence is underlain by argillite, greywacke and

CAPSULE GEOLOGY

siltstone. A chip sample was taken across a 30.0 centimetre wide quartz vein mineralized with pyrite, pyrrhotite, galena and sphalerite. The sample assayed 29.42 grams per tonne gold, 13.7 grams per tonne silver, 0.83 per cent lead and 0.36 per cent zinc (Vancouver Stockwatch, October 14, 1988).

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DATE CODED:	1989/01/10	CODED BY:	GJP	FIELD CHECK:	N
DATE REVISED:	1989/01/10	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104B 350**

NATIONAL MINERAL INVENTORY:

NAME(S): **ADRIAN**, NEW

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 45 37 N
LONGITUDE: 130 59 45 W
ELEVATION: 470 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Location from Open File RGS-18, Figure 22. Rock samples were collected in the vicinity of the Geochemical Reconnaissance silt sample reported as 5300 part per billion gold.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6292479
EASTING: 377989

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Pyrite
COMMENTS: Exact mineralogy not reported.
ASSOCIATED: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Mesothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Unnamed/Unknown Informal
Upper Paleozoic			Stikine Assemblage

LITHOLOGY: Volcanic
Volcaniclastic
Limestone
Intrusive
Quartz Vein

HOSTROCK COMMENTS: Mississippian and Permian volcanic and sedimentary rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	30.0000	Grams per tonne

COMMENTS: One of nine grab samples from mineralized zone.
REFERENCE: George Cross Newsletter, #165, 1988, page 3.

CAPSULE GEOLOGY

The area is underlain by Upper Paleozoic Stikine Assemblage rocks which host thin-bedded limestone and volcanic arc-like mafic to felsic volcanic flows, tuffs and volcaniclastics. Locally, these rocks have been intruded by Jurassic(?) stocks and plutons.

Prospecting and sampling on the Adrian property has resulted in the discovery of a network of gold bearing quartz veins. The veins are located in the vicinity of the Regional Geochemical Reconnaissance silt sample which returned gold values as high as 5300 parts per billion (Open File RGS-18, Figure 22). This area is located about 1.5 kilometres south of the King vein (refer to 104B 338).

In 1988, nine grab samples were collected from the vein mineralization and assays ranged from 2.7 grams per tonne to 30.0 grams per tonne gold (George Cross Newsletter, #165, 1988, page 3). The mineralization is reported to occur over an area of about 1.0 by 0.3 kilometres, near the north central part of the property.

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EM BULL 104

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DATE CODED: 1988/01/10 CODED BY: LLD FIELD CHECK: N
DATE REVISED: 1989/01/02 REVISED BY: LLD FIELD CHECK: N

MINFILE NUMBER: **104B 351** NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN MARMOT (SULPHURETS)**, WEASEL, DEBBIE, PTARMIGAN, SULPHURETS

STATUS: Showing MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B08E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 29 32 N NORTHING: 6261516
LONGITUDE: 130 12 20 W EASTING: 425773
ELEVATION: 1750 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 1.0 kilometre north of the Goldwedge (104B 105) minesite.

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS
SIGNIFICANT: Pyrite Tetrahedrite Galena Sphalerite
ASSOCIATED: Quartz Calcite
ALTERATION: Carbonate Sericite Pyrite
ALTERATION TYPE: Carbonate Sericitic Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Discordant Disseminated
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins
SHAPE: Regular
DIMENSION: STRIKE/DIP: 160/80 TREND/PLUNGE:

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Lapilli Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	120.6900	Grams per tonne
Gold	165.0500	Grams per tonne

COMMENTS: From a 3.0 metre trench sample.
REFERENCE: Northern Miner October 17, 1988.

CAPSULE GEOLOGY

A large hill covered in gossanous scree is a prominent feature 1000 metres north of the Goldwedge (104B 105) minesite. The hill has attracted sampling in the past, assays from sulphide-rich, oxidized scree samples returned low gold-silver values.

Sampling in 1988 focused on several crudely parallel quartz and carbonate-quartz veins that stick up as resistant spines through the scree and strike 160 degrees and dip 80 degrees northeast. From northeast to southwest the veins were named: Ptarmigan, Golden Marmot, Weasel and Debbie. The veins are either massive quartz or massive carbonate (calcite) with minor quartz nodules and seams. The veins usually host only minor visible sulphides; mainly pyrite but locally some medium-grained tetrahedrite and galena/sphalerite.

Surface chip samples from the zone assayed as high as 32.78 grams per tonne gold and 120.69 grams per tonne silver over 2.5 metres. Trench samples assayed as high as 165.05 grams per tonne gold and 120.69 grams per tonne silver over 3.0 metres (Northern Miner, Oct. 17, 1988).

The diamond-drill hole on the Golden Marmot vein reached 125 metres and intersected a narrow, low-grade vein at depth. The diamond-drill hole on the Ptarmigan vein was about 192 metres deep and intersected two quartz vein structures. The country rock was

CAPSULE GEOLOGY

massive andesitic lapilli tuff throughout. The rocks are assigned to the Lower Jurassic Unuk River Formation of the Hazelton Group. The tuff had been deformed (stretched lapilli), weakly foliated, bleached (pale green colour) and flooded with carbonate and sericite alteration and trace very fine pyrite.

BIBLIOGRAPHY

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Kirkham, R.V., (1963): The Geology and Mineral Deposits in the Vicinity of the Mitchell and Sulphurets Glaciers, M.Sc. Thesis, University of British Columbia
EMPR OF 1988-4
EMPR FIELDWORK 1987, pp. 199-209
GSC MAP 9-1957; 1418A
N MINER *Oct.17, 1988
GSC P 89-1E, pp. 145-154
Simpson, T.M., (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho

DATE CODED: 1988/11/29 CODED BY: DJA FIELD CHECK: Y
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 352**

NATIONAL MINERAL INVENTORY:

NAME(S): **COLAGH**, MACGOLD, ICE, HIGH GRADE, J.R., MACGOLD SOUTH, COPPERKING

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10E
BC MAP:
LATITUDE: 56 35 07 N
LONGITUDE: 130 38 41 W
ELEVATION: 1440 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing was discovered in 1988 by C.W.P. Russell during a reconnaissance mapping traverse for the Department of Energy and Mines, Geological Survey Branch.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6272433
EASTING: 398983

COMMODITIES: Silver, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Galena, Sphalerite, Arsenopyrite
ASSOCIATED: Quartz
ALTERATION: Malachite, Azurite
ALTERATION TYPE: Propylitic, Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork, Massive
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
SHAPE: Tabular
DIMENSION: 600 x 5 Metres
STRIKE/DIP:
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Undefined Formation	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Dacitic Ash Tuff
Andesite
Dacite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Post-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The deposit is situated within Upper Triassic to Lower Jurassic volcanic and sedimentary rocks. The main host lithology is dacitic ash tuff. These rocks may be correlative with the Hazelton Group or the Stuhini Group. This area is situated in the Boundary Ranges within the Intermontane Belt.

The showing is situated just below a receding tongue of ice to the south of the Copper King Glacier. Apparently this showing has only recently been exposed from the ice.

Mineralization consists of massive pyrite, chalcopyrite, galena, arsenopyrite and sphalerite in a stockwork of epigenetic hydrothermal quartz veins.

Although the mineralization is exposed in scattered outcrops in a snowfield, the zone is at least 600 metres long and 5 metres thick.

The showing was discovered by C.W.P. Russell during a reconnaissance mapping traverse in 1988. The area was subsequently staked as the Macgold claims and acquired by Ecstall Mining Corp. and Omega Gold Corp. Other showings on the property include the Ice, High Grade and J.R.

BIBLIOGRAPHY

EMPR ASS RPT *19657, *20736, 20737
EMPR BULL 63
EMPR FIELDWORK 1988, pp. 241-250
EMPR OF MAP 1989-10
GSC MAP 9-1957; 311A; 1418A
GSC MEM 246

BIBLIOGRAPHY

GSC P 89-1E, pp. 145-154
WWW http://www.infomine.com/

DATE CODED: 1988/08/30 CODED BY: CR FIELD CHECK: N
DATE REVISED: 1989/01/16 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 353**

NATIONAL MINERAL INVENTORY:

NAME(S): **SOB**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 31 48 N
LONGITUDE: 130 17 57 W
ELEVATION: 1220 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located north of Mitchell Creek about 2 kilometres west of Mitchell Glacier (Assessment Report 9234).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6265825
EASTING: 420089

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Malachite
ASSOCIATED: Quartz Calcite
ALTERATION: Carbonate Silica
ALTERATION TYPE: Carbonate Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Argillite
Greywacke
Andesitic Dacitic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Sob showing is hosted by rocks of the Lower Jurassic, Unuk River Formation, Hazelton Group. The rocks include argillite and greywacke, some of which have been hornfelsed. These sediments are black, well foliated and may be relatively siliceous and massive or fissile and slaty. A series of andesitic to dacitic dyke swarms intrude these sediments particularly at the 900-1100 metre elevation level.

Several quartz-calcite veins occur in the vicinity of the dykes. The veins are up to 20 centimetres thick, host minor pyrite and are oriented conformable and oblique to bedding. A carbonate alteration zone extends 2-10 metres out from the veins. This zone is siliceous and contains finely disseminated pyrite and copper staining.

One sample from the carbonate alteration zone assayed 0.07 grams per tonne gold, 0.34 grams per tonne silver, 0.01 per cent lead and 0.004 per cent copper (Assessment Report 9234).

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EMPR EXPL 1980-467
GSC MAP 9-1957; 1418A
Kirkham, R.V., (1963): The Geology and Mineral Deposits in the Vicinity of the Mitchell and Sulphurets Glaciers, M.Sc. Thesis, University of British Columbia
EMPR PF (Newmont Exploration of Canada Ltd., Geology Map-1:31,250-Scale, 1960's; Esso Mineral Canada Ltd., (unpublished report)-Bridge, D.A., Ferguson, L.J. and Brown, M.G., (1981): 1980 Exploration Report on the Sulphurets Property)
GSC P 89-1E, pp. 145-154
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BIBLIOGRAPHY

University of Idaho

DATE CODED: 1989/01/11 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1989/01/11 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 354**

NATIONAL MINERAL INVENTORY:

NAME(S): **TM**, ELGAR, COREY, TED MORRIS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 28 53 N
LONGITUDE: 130 23 16 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: From Assessment Report 9233. Located about 1.5 kilometres south of Sulphurets Creek and 2.5 kilometres west of Ted Morris Creek.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6260522
EASTING: 414530

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Galena Chalcopyrite Sphalerite Arsenopyrite
ASSOCIATED: Quartz
ALTERATION: Malachite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I02 Intrusion-related Au pyrrhotite veins
SHAPE: Tabular
DIMENSION: 1 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Veins up to 1.0 metre wide reported.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1980

COMMODITY	GRADE	
Silver	13.7100	Grams per tonne
Gold	3.1200	Grams per tonne
Copper	0.4800	Per cent
Lead	0.3800	Per cent
Zinc	0.4000	Per cent

REFERENCE: Assessment Report 9233.

CAPSULE GEOLOGY

Several scattered mineralized quartz veins up to 1 metre in width are hosted by andesite or argillite. These rocks are correlative with the Stuhini Group (Personal Communication, D.J. Alldrick). Veins contain pyrite-galena-chalcopyrite-sphalerite and/or arsenopyrite.

A sample from the Elgar showing assayed 3.12 grams per tonne gold, 13.71 grams per tonne silver, 0.38 per cent lead, 0.40 per cent zinc and 0.48 per copper (Assessment Report 9233).

The following note is from the Kenrich Mining Corporation web site (http://www.kenrichmining.com), June 1998. The TM (Ted Morris) showing is a large vertical, altered and silicified shear zone, located on a cliff face, along an unnamed creek just to the west of the Ted Morris Glacier. The shear is several metres wide and has a vertical dimension of 400 metres. The mineralized area is approximately three metres wide and consists of a quartz- sulphide alteration zone hosted within intermediate to mafic volcanic rocks. The zone trends about 090 degrees, with a dip of 80 degrees to the south. A one metre malachite stain marks the area and there is extensive iron and manganese staining throughout the exposure.

CAPSULE GEOLOGY

Mineralization consists primarily of pyrite, arsenopyrite and chalcopyrite hosted within quartz/chlorite veins. An east-west linear feature which runs under both the TM and GFJ (104B 233) showings suggests that the two showings are connected. A second set of veins can be seen near the top of the ridge above the TM showing A grab sample from the TM showing assayed 42.17 grams per tonne gold.

BIBLIOGRAPHY

EMPR ASS RPT *9233
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EMPR EXPL 1980-465
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
EMPR INF CIRC 1997-1, p. 28
EMPR OF 1988-4; 1989-10
EMPR PF (Newmont Exploration of Canada Ltd., Geology Map, 1:31,250 Scale, 1960's; Kenrich Mining Corporation (June 1998, Nov. 1999): Corporate Profile, TM Showing, 6 p.)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
GCNL #230(Dec.1), 1997
N MINER May 4, 1998
WWW http://kenrichmining.com

DATE CODED:	1989/01/11	CODED BY:	GJP	FIELD CHECK:	N
DATE REVISED:	1996/06/02	REVISED BY:	LDJ	FIELD CHECK:	N

MINFILE NUMBER: **104B 355**

NATIONAL MINERAL INVENTORY:

NAME(S): **COREY 34**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 28 39 N
LONGITUDE: 130 28 08 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on northwest side of Mount Madge about 1.5 kilometres south of Sulphurets Creek near northwest corner of Corey 34 claim (Assessment Report 17404).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6260193
EASTING: 409525

COMMODITIES: Silver

MINERALS
SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Breccia
Andesite
Tuff
Argillite
Conglomerate

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1987

COMMODITY	GRADE	
Silver	61.7000	Grams per tonne

REFERENCE: Assessment Report 17404.

CAPSULE GEOLOGY

A rock sample taken on the northwest side of Mount Madge (about 1.5 kilometres south of Sulphurets Creek) contained 61.7 grams per tonne silver (Assessment Report 17404). Details of the occurrence were not reported.

The area near the junction of Sulphurets Creek and the Unuk River is underlain by a series of north to northwest trending Hazelton Group intermediate (dacite/andesite) composition volcanic flows, pyroclastics and pillow lavas of the Lower Jurassic Unuk River Formation. Locally, they consist of red, green and purple volcanic breccia, conglomerate, sandstone, argillaceous siltstone with intercalated crystal and lithic tuffs. The stratigraphic and structural relationships are not well-defined but the regional strike is to the northeast with an east dip.

BIBLIOGRAPHY

EMPR ASS RPT 16364, *17404
EMPR BULL 63
EMPR EXPL 1987-C374
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
EMPR OF 1989-10
EMPR PF (Newmont Exploration of Canada Ltd., Geology Map, 1:31,250 Scale, 1960's; Catear Resources Ltd., Statement of Material Facts, 1987)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

BIBLIOGRAPHY

GCNL #148, 1988
V STOCKWATCH Sept.8, 1988

DATE CODED: 1989/01/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 356**

NATIONAL MINERAL INVENTORY:

NAME(S): **GORGE**, HEMLO WEST 16, ISK 1

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 42 58 N
LONGITUDE: 131 08 07 W
ELEVATION: 205 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of Gorge showing from 1:50,000 scale, Property Summary map of the Iskut Joint Venture, submitted January 19, 1989.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6287822
EASTING: 369312

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Pyrite
COMMENTS: Exact sulphide mineralogy not reported.
ALTERATION TYPE: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Massive Disseminated
CLASSIFICATION: Epigenetic
TYPE: I02 Intrusion-related Au pyrrhotite veins
COMMENTS: Mineralization occurs within an east-west trending shear zone.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Volcanic Rock
Mafic Volcanic
Mafic Flow
Feldspar Porphyry Volcanic Flow
Sediment/Sedimentary Rock
Chert
Siltstone
Limestone

HOSTROCK COMMENTS: Probable Middle to Upper Triassic Stuhini Group rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	11.0700	Grams per tonne

COMMENTS: 6.19 metre intersection from Hole I 88-6; includes 0.7 metre of 86.78 grams per tonne gold.
REFERENCE: Press Release: American Ore Ltd., November 10, 1988.

CAPSULE GEOLOGY

Regional mapping indicates the area of the claims is underlain by Mesozoic and older sediments and volcanics which have been intruded by granitic rocks of the Coast Plutonic Complex.

The oldest rocks consist of a thick sequence of weakly metamorphosed siltstones and argillites which are considered to be pre-Triassic in age. Overlying this sequence are black shales, siltstone, greywacke and conglomerates. Corals from limestone beds within these beds has been dated as Upper Triassic and are thought to be correlative with the Stuhini Group.

On the property the Upper Triassic sedimentary rocks are dominated by black to grey, foliated and well-bedded argillaceous siltstone. The siltstone grades into well-indurated, poorly foliated and well-bedded chert with some limestone. The volcanics consist mainly of mafic flows which include feldspar porphyry volcanic flows.

In 1988, ten holes were drilled to test mineralization in the

CAPSULE GEOLOGY

Gorge showing which is located in the west central part of the property. The showing consists of semi-massive to massive sulphide mineralization within an east-west trending shear zone. Two chip samples from this zone assayed 125.5 grams per tonne gold over 1.0 metre and 166.6 grams per tonne gold over 1.0 metre (Press Release: American Ore Ltd., November 10, 1988).

Drilling encountered several good grade intersections. A 6.19 metre intersection from drill hole I88-6 averaged 11.07 grams per tonne gold. Another 5.9 metre intersection from drill hole I88-8 assayed 10.66 grams per tonne gold including a 3.8 metre section averaging 15.29 grams per tonne gold (American Ore Ltd., Annual Report 1987).

BIBLIOGRAPHY

EMPR EXPL 1986-C443,444
EMPR ASS RPT 15336, 17122
EMPR PF (Nagy, L.J., (1986): Geochemical Report on the Aurum Group, Iskut River Area, Nov.21, 1986 in Statement of Material Facts #69/87 for Golden Band Resources Inc., May 12, 1987; Dandy, L., (1988): Geological Report on the Iskut River Property in Statement of Material Facts #43/88 for Meridor Resources, May 19, 1988; *Map-1:50,000 scale Property Summary Map for the Iskut Joint Venture, submitted Jan.19, 1989)
American Ore Ltd.: *Annual Report, 1987
PR REL (*American Ore Ltd., Nov.10, 1988)
GCNL *#218, 1988
V STOCKWATCH *Sept.8, 1988
GSC MEM 246
GSC MAP 9-1957; 311A; 1418A
GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B13)
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988

DATE CODED: 1989/01/19 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 357**

NATIONAL MINERAL INVENTORY:

NAME(S): **GREGOR**, ISK 1, GREY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 43 35 N
LONGITUDE: 131 08 00 W
ELEVATION: 335 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of the Gregor showing from 1:50,000 scale Property Summary Map of the Iskut Joint Venture, submitted January 19, 1989.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6288962
EASTING: 369467

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Magnetite
COMMENTS: Exact sulphide mineralogy not reported.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Massive Disseminated
CLASSIFICATION: Epigenetic

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Mafic Volcanic
Volcanic Rock
Volcaniclastic
Mafic Flow
Feldspar Porphyry Volcanic Flow

HOSTROCK COMMENTS: Probable Middle to Upper Triassic Stuhini Group rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	45.6000	Grams per tonne
Gold	1.7000	Grams per tonne

COMMENTS: 1.5 metre intersection from drill hole I88-1.
REFERENCE: Press Release: American Ore Ltd., November 10, 1988.

CAPSULE GEOLOGY

Regional mapping indicates the area of the claims is underlain by Mesozoic and older sediments and volcanics which have been intruded by granitic rocks of the Coast Plutonic Complex.

The oldest rocks consist of a thick sequence of weakly metamorphosed siltstones and argillites which are considered to be pre-Triassic in age. Overlying this sequence are black shales, siltstone, greywacke and conglomerates. Corals from limestone beds within these beds has been dated as Upper Triassic and are thought to be correlative with the Stuhini Group.

On the property the Upper Triassic sedimentary rocks are dominated by black to grey, foliated and well-bedded argillaceous siltstone. The siltstone grades into well-indurated, poorly foliated and well-bedded chert with some limestone. The volcanics consist mainly of mafic flows which include feldspar porphyry volcanic flows.

The Gregor Showing was located in 1988 over coincident gold-in-soil anomalies, electromagnetic (VLF) and magnetic anomalies in the northwest corner of the property on the ISK-1 claim. The showing is comprised of massive to semi-massive magnetite mineralization in sheared mafic volcanics. A continuous chip sample from a trench which partially exposed the zone on surface assayed 4.94 grams per tonne gold over 2.7 metres, including a 0.76 metre interval grading 11.49

CAPSULE GEOLOGY

grams per tonne gold (Press Release: American Ore Ltd., November 10, 1988).

Drilling encountered no significant mineralization in holes 4 and 5. In drill hole I88-1, a 1.5 metre intersection assayed 1.7 grams per tonne gold and 45.6 grams per tonne silver (American Ore Ltd., Annual Report, 1987).

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EMPR EXPL 1986-C443,444
EMPR ASS RPT 15336, 17122
EMPR PF (Nagy, L.J., (1986): Geochemical Report on the Aurum Group Iskut River Area, Nov.21, 1986 in Statement of Material Facts #69/87 for Golden Band Resources Inc., May 12, 1987; Dandy, L., (1988): Geological Report on the Iskut River Property in Statement of Material Facts #43/88 for Meridor Resources, May 19, 1988; *Map-1:50,000 scale Property Summary Map for the Iskut Joint Venture, submitted Jan.19, 1989)
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PR REL (*American Ore Ltd., Nov.10, 1988)
GCNL *#173,*#218, 1988
V STOCKWATCH *Sept.8, 1988
GSC MEM 246
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GSC P 89-1E, pp. 145-154
Equity Preservation Corp. Compilation: Stewart-Sulphurets-Iskut, Dec. 1988, (Showing No. B13)
Anderson, R.G., (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map area (104B), Northwestern British Columbia, pp. A1-A5, in Geology and Metallogeny of Northwestern British Columbia, Smithers Exploration Group, G.A.C. Cordilleran Section Workshop, October 16-19, 1988

DATE CODED: 1989/01/19 CODED BY: LLD FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 358** NATIONAL MINERAL INVENTORY: 104B1 Au5

NAME(S): **AMBER**, LAST CHANCE 1, SILVER BASIN

STATUS: Showing MINING DIVISION: Skeena
REGIONS: British Columbia
NTS MAP: 104B01E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 07 13 N NORTHING: 6219947
LONGITUDE: 130 01 58 W EASTING: 435789
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Location from Energy, Mines and Petroleum Resources Open File 1987-22, Symbol 40. Uncertainty due to vagueness of location description in Minister of Mines Annual Report 1935.

COMMODITIES: Gold Silver Zinc Lead Copper

MINERALS

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

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic Replacement
SHAPE: Irregular
MODIFIER: Folded Sheared
DIMENSION: 0003 Metres STRIKE/DIP: 315/60W TREND/PLUNGE:
COMMENTS: Silicified zones strike generally north-northeast and dip 50 to 70 degrees west. Widths vary from 1.52 to 4.57 metres.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

ISOTOPIC AGE: 210+24-14 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

Lower Jurassic — Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Andesitic Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Andesitic Flow
Andesitic Breccia
Argillite
Siltstone

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, D.A., 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: Located at western margin of Intermontane Belt.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1935
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	20.5700	Grams per tonne
Gold	0.6900	Grams per tonne

COMMENTS: Across 1.5 metre of best mineralization.
REFERENCE: Minister of Mines Annual Report 1935.

CAPSULE GEOLOGY

The Amber occurrence is located on Hercules Creek on the south-east corner of the historic Last Chance #1 claim. We have assumed that the occurrence on the Last Chance claim and the Amber (Westmin/

CAPSULE GEOLOGY

D. Alldrick) are the same. Exact location is uncertain, but the showing is in the area and there has been mineralization identified at this location.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the volcanic arc assemblage of the Stikinia Terrane.

The mineralization is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes and sills.

Silicified zones within andesitic tuffs are mineralized with pyrite and minor sphalerite, galena and chalcopyrite. The zones appear to follow notheast striking, 50 to 60 degree northwest dipping shear zones which also contain quartz and calcite stringers with pyrite, galena and sphalerite.

These silicified zones are exposed in at least six opencuts and an adit, varying in elevation from 975 to 1021 metres over an area of approximately 182 metres.

A sample across 1.52 metres of the best mineralization exposed, assayed 0.69 grams per tonne gold and 20.57 grams per tonne silver (Ministry of Mines Annual Report 1935-B6).

BIBLIOGRAPHY

EMPR AR *1935-B6
EMPR OF 1987-22
GSC MEM 175
EMPR BULL 58; 63
GSC MAP 9-1957; 307A; 315A; 1418A
EMPR FIELDWORK 1980, pp. 201-209; 1982, pp. 182-195; 1983, pp. 149-164; 1984, pp. 316-341; 1985, pp. 217,218; 1986, pp. 81-102
GSC P 89-1E, pp. 145-154
Galley, A., (1981): Volcanic Stratigraphy and Gold-Silver Occurrences on the Big Missouri Claim Group, Stewart, British Columbia, M. Sc. Thesis, University of Western Ontario

DATE CODED: 1989/01/16 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: 1989/01/16 REVISED BY: DJA FIELD CHECK: Y

MINFILE NUMBER: **104B 359**

NATIONAL MINERAL INVENTORY:

NAME(S): **FAIR**, SILVER COIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B01E
BC MAP:
LATITUDE: 56 05 11 N
LONGITUDE: 130 01 21 W
ELEVATION: 791 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on Fair Crown Grant (Lot 2839), (Grove, E.W., 1981).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6216166
EASTING: 436373

COMMODITIES: Silver

MINERALS

SIGNIFICANT: Tetrahedrite
ASSOCIATED: Quartz
ALTERATION: Silica Pyrite
ALTERATION TYPE: Silicific'n Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic Porphyry
SHAPE: Irregular
MODIFIER: Folded Sheared
DIMENSION: 0006 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Well-mineralized porphyry zone.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
ISOTOPIC AGE: 210+24-14 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			
Lower Jurassic			Texas Creek Plutonic Suite
ISOTOPIC AGE: 194.8 +/- 2.0 Ma			
DATING METHOD: Uranium/Lead			
MATERIAL DATED: Zircon			

LITHOLOGY: Andesitic Lapilli Tuff
Dacitic K-Feldspar Porphyry Dike
Andesitic Flow
Andesitic Breccia
Argillite
Siltstone

HOSTROCK COMMENTS: Texas Creek date is for "Premier" porphyry dyke in Silbak Premier area (Fieldwork, 1985). Unuk River Fm. age date from Brown, D.A., 1987.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP:
COMMENTS: Located near western margin of Intermontane Belt.

PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

The Fair showing is located on the Fair crown grant (L. 2839) on the Big Missouri pack trail south of the Big Missouri deposit (104B 046). The property was examined by Granduc Mines Ltd. in 1967.

Located in the Intermontane Belt, the area, bounded on the west by the Coast Crystalline Complex and on the east by the Bowser Basin, is part of the volcanic arc assemblage of the Stikinia Terrane.

Mineralization is hosted by the Upper Triassic to Lower Jurassic Hazelton Group, Unuk River Formation metavolcanics. The Hazelton Group is a northwest trending steeply east dipping belt of folded andesitic lapilli tuffs, flows and breccia containing a thick sequence of argillite and siltstone infolded along a synclinal axis. The sequence is intruded by the Early Jurassic Texas Creek plutonic suite of dacitic porphyry dykes.

Host rocks in the area have been silicified, pyritized and sheared. The showing consists of a quartz vein mineralized with minor tetrahedrite. At the south end of the crown grant there is a well mineralized (minerals undefined) porphyry zone about 6.1 metres wide which has not been broken into. No other information is

CAPSULE GEOLOGY

available.

BIBLIOGRAPHY

EMPR BULL 58; 63
EMPR OF 1987-22
EMPR FIELDWORK 1978, p. 104; 1982, pp. 183-195; 1983, pp. 149-165;
1984, pp. 316-342; 1985, pp. 217-219; 1986, pp. 81-102; 1987,
pp. 211-216,349-352,489-493
EMPR ASS RPT 448
EMPR PF (*Grove, E.W., (1981): Geological Report on the Silver Coin
claim group, Salmon River district, Northwestern British Columbia)
GSC P 89-1E, pp. 145-154
Brown, D.A., (1987): Geological Setting of the Volcanic-Hosted Silbak
Premier Mine, Northwestern British Columbia, M.Sc. Thesis,
University of British Columbia (in Property File: 104B 054)

DATE CODED: 1989/01/23 CODED BY: DEJ FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 360**

NATIONAL MINERAL INVENTORY: 104B8 Cu2

NAME(S): **SGW**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E 104B08W
BC MAP:
LATITUDE: 56 28 47 N
LONGITUDE: 130 14 56 W
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Identified from R.V. Kirkham's M.Sc. Thesis, 1963. Located along western margin of Sulphurets Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6260172
EASTING: 423079

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Igneous-contact

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Tuff
Diabase

HOSTROCK COMMENTS: Diabase dyke of unknown affinity intrudes Hazelton Group rock.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Pyrrhotite and chalcopyrite veins from 1.0 to 60.0 centimetres in width occur in association with a diabase dyke along the west side of Sulphurets Glacier.

The area is underlain by tuffite of the Lower Jurassic Unuk River Formation, Hazelton Group.

BIBLIOGRAPHY

EMPR OF 1988-4
EMPR FIELDWORK 1987, pp. 199-209
EMPR AR 1968-45,Fig.8
GSC P 89-1E, pp. 145-154
GSC MAP 9-1957; 1418A
Kirkham, R.V., (1963): *The Geology and Mineral Deposits in the Vicinity of Sulphurets Glacier, M.Sc. Thesis, University of British Columbia
Simpson, T.M., (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho

DATE CODED: 1989/01/27 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1989/01/27 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 361**

NATIONAL MINERAL INVENTORY:

NAME(S): **TWIN CREEKS**, REG

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B11E
BC MAP:
LATITUDE: 56 38 14 N
LONGITUDE: 131 05 37 W
ELEVATION: 1050 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6278964
EASTING: 371594

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS
SIGNIFICANT: Galena Pyrite Sphalerite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Triassic-Jurassic

DEPOSIT
CHARACTER: Massive Shear Vein
CLASSIFICATION: Epigenetic Hydrothermal Epithermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au G04 Besshi massive sulphide Cu-Zn
SHAPE: Tabular
DIMENSION: 250 x 10 Metres STRIKE/DIP: 090/ TREND/PLUNGE: 030/
COMMENTS: Plunge may vary +/- 5 degrees.

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unuk River	

LITHOLOGY: Wacke
Siltstone

HOSTROCK COMMENTS: Unit of slightly metamorphosed wackes, and siltstones.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels
COMMENTS: Hornfels metamorphism by local intrusion 200 m southeast of showing.

CAPSULE GEOLOGY

A massive sulphide deposit discovered during the Ministry of Energy, Mines and Petroleum Resources, Geological Survey Branch 1989 field season is located on the Reg #1 and #3 claims of Skyline Gold Corporation (Johnny Mountain mine site). The property is located approximately 80 kilometres northwest of Stewart, British Columbia within the Liard Mining District.

The showing consisting of a 10 to 30 centimetre thick horizon of massive sulphides including galena, pyrite, sphalerite, and possible chalcopyrite with minor oxidation to limonite. Approximately 10 per cent of the horizon consists of gangue, primarily quartz.

The deposit is stratiform to metawackes above and below, locally metamorphosed 100 metres to the southeast to hornfels facies. Ages of host rocks are approximately Triassic-Jurassic, lying within the Hazelton Supergroup. The deposit is considered to be of epigenetic hydrothermal origin, possibly associated with local minor shearing. The deposit can be located in two parallel creek beds approximately 250 metres apart.

Active trenching and sampling is presently being conducted by Sky Creek Exploration Camp for Skyline Gold Corp.

BIBLIOGRAPHY

EMPR FIELDWORK 1989, p. 123
Placer Dome File

DATE CODED: 1989/08/31 CODED BY: SH FIELD CHECK: Y
DATE REVISED: 1998/12/08 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 362**

NATIONAL MINERAL INVENTORY:

NAME(S): **KIRK MAGNETITE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 37 13 N
LONGITUDE: 130 47 55 W
ELEVATION: 1480 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6276565
EASTING: 389635

COMMODITIES: Magnetite Asbestos

MINERALS
SIGNIFICANT: Magnetite Serpentine
ASSOCIATED: Serpentine Antigorite
ALTERATION: Limonite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Concordant
CLASSIFICATION: Skarn Industrial Min.
TYPE: K03 Fe skarn
SHAPE: Tabular
DIMENSION: 0003 Metres STRIKE/DIP: 122/28N TREND/PLUNGE:

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Limestone
Fine Grained Andesitic Tuff

HOSTROCK COMMENTS: Rocks are lithologically similar to Permian (and older) Stikine assemblage. Stratigraphic assignment is provisional.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

CAPSULE GEOLOGY

A magnetite skarn was discovered on the Josh claims by a Geological Survey Branch crew during the 1989 field season. The showing is lcoated east of Snippaker Creek, approximately 80 kilometres northwest of Stewart, B.C.

Skarn layers up to 3 metres thick occur along the contact between andesite tuffs and crystalline limestone. The mineralization is massive magnetite with serpentine, epidote, antigorite and pale green mica as silicates.

The host rocks are assigned to the Upper Triassic Stuhini Group (Alldrick et al, 1990, Open File 1990-16) but may be Permian Stikine Assemblage (Logan et al, 1990, Open File 1990-2). The showing occurs near the contact with the Lehto pluton and is possibly a result of contact metamorphism.

No work has been done on the showing to date.

BIBLIOGRAPHY

EMPR OF 1990-2; *1990-16; 1995-25
EMPR FIELDWORK *1989, pp. 115-125

DATE CODED: 1989/11/27 CODED BY: BF FIELD CHECK: N
DATE REVISED: 1989/11/27 REVISED BY: BF FIELD CHECK: N

MINFILE NUMBER: **104B 363**

NATIONAL MINERAL INVENTORY:

NAME(S): **SKARN CREEK CU**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 37 41 N
LONGITUDE: 130 56 36 W
ELEVATION: 1650 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6277673
EASTING: 380780

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Malachite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Skarn

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesitic Tuff
Limestone

HOSTROCK COMMENTS: Rocks are lithologically similar to Permian (and older) Stikine Assemblage. Stratigraphic assignment is provisional.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP: Syn-mineralization
GRADE: Hornfels

CAPSULE GEOLOGY

A prominent malachite stain was seen during 1989 Geological Survey Branch field work, on some cliffs in the headwaters of "Skarn Creek". The showing was not visited.

Local geology is a sequence of andesitic tuffs, interbedded with subordinate wacke, siltstone and limestone. Limestone (mostly recrystallized occurs as thin beds or olistostranal debris within the volcanoclastic rocks. Monzodioritic intrusions of probably Jurassic age cut the sequence.

Host rocks are tentatively assigned to the Triassic Stuhini Group but they are similar to Permian and older Stikine Assemblage.

No work is known to have been done on the showing.

BIBLIOGRAPHY

EMPR OF 1990-2; *1990-16
EMPR FIELDWORK *1989, pp. 115-125

DATE CODED: 1989/12/01
DATE REVISED: 1990/05/31
CODED BY: BF
REVISED BY: JMB
FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104B 364**

NATIONAL MINERAL INVENTORY:

NAME(S): **ENTERPRISE**, CAM 4

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 36 53 N
LONGITUDE: 130 48 18 W
ELEVATION: 1280 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located just above treeline on the east side of Snippaker Creek.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6275957
EASTING: 389227

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS
SIGNIFICANT: Limonite Malachite
COMMENTS: No fresh sulphides observed.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Igneous-contact
TYPE: L04 Porphyry Cu ± Mo ± Au L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesitic Tuff
Limy Mudstone

HOSTROCK COMMENTS: Rocks are lithologically similar to Permian (and older) Stikine Assemblage. Stratigraphic assignment is provisional.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP: Syn-mineralization
GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	197.0000	Grams per tonne
Gold	52.6000	Grams per tonne
Copper	29.5000	Per cent
Lead	0.0314	Per cent
Zinc	0.1600	Per cent

REFERENCE: Personal communication with J.M. Britton 1990.

CAPSULE GEOLOGY

The showing consists of malachite stained limonitic sponge in very altered andesitic ash tuff or limy sediments near the intrusive contact of the Lehto pluton, a large monzodioritic stock that is locally characterized by very coarse K-feldspar phenocrysts.

Host rocks are provisionally assigned to the Stuhini Group (Upper Triassic) but may be Permian or older Stikine Assemblage.

Mineralization may be a product of contact metamorphism. However there are abundant thin to thick quartz veins in the marginal zone of the pluton that may be evidence of a later hydrothermal event.

Best assay from a grab sample returned 52.6 grams per tonne gold, 197 grams per tonne silver, 2.95 per cent copper, 0.0314 per cent lead, and 0.16 per cent zinc (personal communication with J.M. Britton 1990).

BIBLIOGRAPHY

EMPR OF 1990-16
EMPR FIELDWORK 1989, pp. 115-125
EMPR ASS RPT 17129

DATE CODED: 1990/12/14
DATE REVISED: / /
CODED BY: JMB
REVISED BY:
FIELD CHECK: Y
FIELD CHECK:

MINFILE NUMBER: **104B 365**

NATIONAL MINERAL INVENTORY:

NAME(S): **G.S.B.**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 26 38 N
LONGITUDE: 130 15 32 W
ELEVATION: 1815 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the west side of a nunatak at the head of Sulphurets Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6256196
EASTING: 422391

COMMODITIES: Lead, Zinc, Copper, Gold, Silver

MINERALS
SIGNIFICANT: Galena, Sphalerite, Pyrite, Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 0005 Metres
STRIKE/DIP: 126/50S
TREND/PLUNGE:
COMMENTS: Five metre wide zone of unknown length/depth; zone is well foliated.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesitic Lapilli Tuff

HOSTROCK COMMENTS: Host rocks are probably Late Triassic Stuhini Gorup. On Open File 1988-4 host rocks are Unit 1, Norian-Hettangian L. Unuk R. Formation.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	1000.0000	Grams per tonne
Gold	0.3900	Grams per tonne
Copper	0.1100	Per cent
Lead	8.4900	Per cent
Zinc	5.7800	Per cent

REFERENCE: Personal communication with J.M. Britton, 1990.

CAPSULE GEOLOGY

The G.S.B. showing consists of a well-foliated 5 metre wide zone of galena, sphalerite, pyrite and possibly chalcopyrite mineralization in grey-green, hornblende-phyritic andesitic lapilli tuff to tuff breccia. THe zone strikes 126 degrees, dips 80 degrees southwest and is of unknown length and depth. Mineralization occurs as blebs, stringers, and disseminations.

Host rocks are provisionally assigned to the Upper Triassic Stuhini Gorup, but may be Lower Jurassic Hazelton Group.

Within one kilometre east and west of the G.S.B. showing are small gossans with quartz veins and malachite staining including traces of chalcopyrite. It is not known whether all this mineralization is contemporaneous.

A grab sample of the G.S.B. showing analysed by the Geological Survey Branch returned; 0.39 grams per tonne gold, 1000 grams per tonne silver, 0.11 per cent copper, 8.49 per cen lead, and 5.78 per cent zinc (personal communication with J.M. Britton, 1990).

BIBLIOGRAPHY

EMPF OF 1988-4
EMPR FIELDWORK 1987, pp. 199-209

DATE CODED: 1990/12/14 CODED BY: JMB FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 366**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPARTACUS**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10E
BC MAP:
LATITUDE: 56 34 42 N
LONGITUDE: 130 41 09 W
ELEVATION: 1355 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located in a creek below the adit portal of the E & L nickel prospect (104B 006).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6271721
EASTING: 396440

COMMODITIES: Silver Copper Gold

MINERALS
SIGNIFICANT: Chalcopyrite Tetrahedrite Malachite Azurite Pyrite
COMMENTS: Sulphides in quartz vein.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic
TYPE: L01 Subvolcanic Cu-Ag-Au (As-Sb) I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Regular
DIMENSION: 0002 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Approximate east-west strike with steep northerly dip.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Undefined Group	Betty Creek	

LITHOLOGY: Dacitic Ash Lapilli Tuff

HOSTROCK COMMENTS: Dacitic volcanic tuffs. Mt Dilworth and Betty Creek Fms not distinguishable at this location. Host unit assignment is arbitrary (FW 1989).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Pre-mineralization
GRADE: Zeolite

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	1500.0000	Grams per tonne
Gold	0.0820	Grams per tonne
Copper	3.1500	Per cent

COMMENTS: Sample was from 2 metres of exposed vein, 8 centimetres wide with 2 centimetre massive disseminated sulphides.
REFERENCE: Personal communication with Kirk Hancock, 1990.

CAPSULE GEOLOGY

The showing occurs in the creek below the E & L nickel prospect adit at 1355 metres elevation. It consists of a single quartz-sulphide vein in dacitic plagioclase porphyritic ash-lapilli tuffs of the Early Jurassic Betty Creek Formation. The quartz vein is eight centimetres wide and is exposed along strike for two metres. Mineralization consists of a central, 2 centimetre zone of massive and disseminated sulphides, chalcopyrite, pyrite, tetrahedrite, with secondary malachite and azurite.

An assay of a 2 metre chip sample along strike yielded 1500 grams per tonne silver, 3.15 per cent copper, and 0.082 grams per tonne gold (personal communication with Kirk Hancock, 1990). The showing was discovered by Geological Survey Branch geologists during mapping near the E & L prospect in 1989.

BIBLIOGRAPHY

EMPR FIELDWORK 1989, pp. 337-341

BIBLIOGRAPHY

DATE CODED: 1990/02/12 CODED BY: KDH FIELD CHECK: Y
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104B 367**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIC**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B15W
BC MAP:
LATITUDE: 56 47 10 N
LONGITUDE: 130 44 57 W
ELEVATION: 1430 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6294942
EASTING: 393140

COMMODITIES: Gold, Silver, Copper, Iron

MINERALS

SIGNIFICANT: Arsenopyrite, Magnetite, Pyrite, Chalcopyrite
ALTERATION: Garnet, Feldspar, Calcite, Epidote, Quartz, Ankerite
ALTERATION TYPE: Skarn, Epidote, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform, Massive
CLASSIFICATION: Skarn
TYPE: K04 Au skarn; K03 Fe skarn
DIMENSION: 6 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Zone of massive magnetite 5 to 7 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic			Stikine Assemblage
Upper Devonian			Unnamed/Unknown Informal

LITHOLOGY: Marble
Tuff
Andesitic Tuff
Lapilli Tuff
Mafic Quartz Diorite
Quartz Diorite Sill
Plagioclase Porphyritic Quartz Diorite
Hornblende Plagioclase Porphyritic Granodiorite
Tuffaceous Sediment/Sedimentary

HOSTROCK COMMENTS: Host rocks probably belong to the Devonian to Permian Stikine Assemblage.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Copper	0.3100	Per cent
Gold	2.9000	Grams per tonne
Silver	1.6000	Grams per tonne

COMMENTS: High values from 2 mineralized grab samples. Also, 0.98 per cent arsenic, 0.0078 per cent antimony, 0.0083 per cent selenium.
REFERENCE: Ray and Webster, unpublished data.

CAPSULE GEOLOGY

The Tic skarn is located approximately 11.5 kilometres southeast of Newmont Lake.

The area is underlain by a steeply dipping, deformed package of andesitic ash and lapilli tuffs, bedded tuffaceous sediments and thin marble beds. These are locally epidotized and silicified and are intruded by numerous sills and dikes of hornblende plagioclase-porphyritic quartz diorite and granodiorite. Locally, the intrusions contain elongate screens of the host tuffs.

The skarn is developed along the southeast margin of a steeply dipping and northeast-striking marble unit, 70 to 100 metres thick.

CAPSULE GEOLOGY

The coarse-grained, recrystallized marble is strongly foliated and contains thin, deformed silty layers and pods of pink, crystalline calcite. A zone of massive magnetite, 5 to 7 metres wide, lies along the contact between the marble to the northwest and tuffs and mafic quartz diorite to the southeast. The contact between the magnetite zone and the marble is generally sharp but locally it is marked by either a 1 metre zone of orange-coloured ankeritic alteration or irregular pods of coarse crystalline pyrite up to 15 centimetres in diameter. Deformed pods of pyrite up to 30 centimetres wide, and thin pyrite veins, occur within the magnetite unit and the adjacent marble. Locally, the magnetite also contains some carbonate clots and small, euhedral quartz crystals.

A nearby sill of mafic hornblende quartz diorite is moderately to extensively altered to endoskarn; it contains widespread epidote, local pockets rich in brown-coloured garnet, and veins of pyrite and potassium feldspar. Farther from the skarn, the intrusions tend to be fresher. Local silification and epidote-carbonate-pyrite alteration occurs in both the intrusions and country rocks up to 400 metres south and southwest of the Tic skarn, though no additional magnetite-rich skarn was seen. In places, the rocks are overprinted by narrow, southeast-trending, fracture-controlled zones of orange to brown-coloured ankeritic alteration. At one locality, southwest of the skarn, the altered tuffs are also cut by thin veins (less than 2 centimetres) that contain calcite, epidote and coarse, black tourmaline; X-ray diffraction analysis indicates the latter is dravite (M. Chowdry, personal communication, 1990).

Two mineralized grab samples assayed up to 0.98 per cent arsenic, 0.31 per cent copper, 2.9 grams per tonne gold, 1.6 grams per tonne silver, 0.0078 per cent antimony and 0.0083 per cent selenium (Ray and Webster, unpublished data).

BIBLIOGRAPHY

EMPR FIELDWORK *1990, pp. 245-253
EMPR Ray and Webster, unpublished data

DATE CODED: 1991/02/06 CODED BY: IW FIELD CHECK: Y
DATE REVISED: 1993/07/02 REVISED BY: DEG FIELD CHECK: Y

MINFILE NUMBER: **104B 368**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELMER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10W
BC MAP:
LATITUDE: 56 36 49 N
LONGITUDE: 130 46 17 W
ELEVATION: 1725 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: East of Snippaker Creek approximately 4.5 kilometres north of Snippaker air strip.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6275780
EASTING: 391286

COMMODITIES: Copper Iron

MINERALS
SIGNIFICANT: Magnetite Pyrite Chalcopyrite
ALTERATION: Epidote Feldspar Tremolite Actinolite Quartz Carbonate Pyroxene
COMMENTS: Lizardite and garnet were observed in float.
ALTERATION TYPE: Skarn Epidote
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K03 Fe skarn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Stuhini	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Tuff
Porphyritic Quartz Monzonite
Ash Tuff
Tuffaceous Sediment/Sedimentary
Limestone
Marble
Mafic Andesite Sill

HOSTROCK COMMENTS: The quartz monzonite is Early Jurassic in age.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Elmer skarn is located east of Snippaker Creek about 4.5 kilometres north of the Snippaker airstrip.

The area is underlain by a package of altered, massive to bedded ash tuffs, tuffaceous sediments and massive limestones (of the Jurassic Stuhini Group?). The units strike east-southeast and dip steeply north.

These are intruded by early dikes and sills of altered, Lower Jurassic porphyritic quartz monzonite and late epidotized mafic andesite sills. The quartz monzonite contains variable amounts of megacrystic potassium feldspar, up to 2.5 centimetres long, together with some coarse hornblende phenocrysts. The intrusions, which locally contain xenoliths, are sporadically epidotized and cut by veinlets of potassium feldspar and pyrite.

Both the tuff-sediment package and the intrusions are cut by numerous northeast to north-northeast striking faults.

The extensive gossanous skarn occurs on a steep, west-facing slope. Farther upslope to the east, the mountaintop appears to be underlain by carbonate and there are numereous gossans that could mark other skarns.

The Elmer skarn is hosted by bedded tuff close to its faulted contact with a quartz monzonite intrusion. The banded skarn is characterized by an assemblage of epidote, potassium feldspar, tremolite-actinolite, quartz, carbonate and minor pyroxene cut by veinlets of epidote and potassium feldspar. Metallic minerals include magnetite, with moderate amounts of pyrite and traces of chalcopyrite. Pyrite veins ranging up to 4 centimeres in width also occur. No garnet was seen in outcrop, but mafic hornblende diorite

CAPSULE GEOLOGY

and marble float at the toe of the glacier below the skarn outcrop contain veins of brown garnet rimmed with epidote. Boulders of magnetite-pyrite-bearing marble with yellow-green lizardite were also seen at this locality.

Assay results on two mineralized samples collected from this skarn show only low values of gold, silver and base metals.

BIBLIOGRAPHY

EMPR FIELDWORK *1990, pp. 245-253

DATE CODED: 1991/02/06 CODED BY: IW FIELD CHECK: Y
DATE REVISED: 1993/07/02 REVISED BY: DEJ FIELD CHECK: N

MINFILE NUMBER: **104B 369**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEEDEE**, UNUX B

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 34 54 N
LONGITUDE: 130 13 34 W
ELEVATION: 1860 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: On north edge of large icefield from which flow the Treaty Atkins Rounsefell and Jack Glaciers.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6271493
EASTING: 424685

COMMODITIES: Gold, Lead, Zinc, Copper

MINERALS
SIGNIFICANT: Galena, Sphalerite, Chalcopyrite, Pyrite
ASSOCIATED: Ankerite, Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Breccia, Discordant
CLASSIFICATION: Hydrothermal, Epigenetic

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Hazelton	Unnamed/Unknown Formation	

ISOTOPIC AGE: Transitional unit.

LITHOLOGY: Siltstone
Greywacke
Marl

HOSTROCK COMMENTS: Host rocks are mainly sediments that are stratigraphically transitional between Stuhini and Hazelton groups. No formal name.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Zeolite Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1990

COMMODITY	GRADE	
Gold	5.5700	Grams per tonne

REFERENCE: Assessment Report 19675.

CAPSULE GEOLOGY

According to Assessment Report 19675 the Beedee showing consists of "tectonic megabreccias" within well-bedded siltstone and greywacke that are intruded by sills of plagioclase-hornblende porphyry. The carbonate-bearing breccias contain pyrite-galena-sphalerite minerlization generally grading less than 300 to 400 parts per billion gold. A zone of more siliceous breccias within pyrite-galena-sphalerite-chalcopyrite mineralizaiton ran up to 5.57 grams per metric tonne gold.

Small areas of gold soil anomalies occur downslope.

Also present are small (less than or equal to one metre wide) lead-zinc-ankerite veins in marl units that have been intruded by plagioclase-hornblende porphyry. No dimensions are reported.

Host rocks are mainly sedimentary sequences that are assigned to a unit that is transitional between Upper Triassic Skuhini Group and Lower Jurassic Hazelton Group. Near the Beedee showing, plagioclase-hornblende porphyritic rocks have been identified as tuffs or flows (Open File 1991-21) rather than sills (as reported in Assessment Report 19675).

BIBLIOGRAPHY

EMPR ASS RPT *19675
EMPR OF 1988-4; *1991-21

BIBLIOGRAPHY

EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209
GSC P 89-1E, pp. 145-154; 90-1E, pp. 131-139

DATE CODED: 1991/09/30 CODED BY: JMB FIELD CHECK: N
DATE REVISED: 1991/12/31 REVISED BY: JMB FIELD CHECK: N

MINFILE NUMBER: **104B 370**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAMA SUSU-A**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 35 43 N
LONGITUDE: 130 11 24 W
ELEVATION: 1662 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the east side of Upper Atkins Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6272969
EASTING: 426929

COMMODITIES: Gold, Silver, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Galena, Chalcopyrite, Pyrite
ASSOCIATED: Limonite, Azurite, Malachite, Wad
ALTERATION: Sericite, Quartz, Calcite
ALTERATION TYPE: Sericitic, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Discordant, Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 20 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Mineralization mostly found in boulder in a 30 by 30 metre area, traceable to less than or equal to one metre wide shear veins.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesite Lapilli Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Zeolite Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	13.7500	Grams per tonne
Silver	181.7200	Grams per tonne
Copper	1.6500	Per cent
Lead	28.6000	Per cent
Zinc	37.4000	Per cent

COMMENTS: Highest assays of float samples; not outcrop.
REFERENCE: Assessment Report 21318.

CAPSULE GEOLOGY

Assessment Report 21318 states: "This showing covers an area of about 30 by 30 metres consisting mostly or talus with a few tiny outcrops. Numerous boulders with up to 20 per cent pyrite, 40 per cent limonite, 60 to 70 per cent galena, 2 to 3 per cent chalcopyrite, wad and minor azurite-malachite staining are scattered over the area. A trail of heavily mineralized boulders appears to be the surface expression of an underlying shear vein which where exposed does not exceed 40 centimetres in width. The apparent strike of the vein is northeast-southwest. The showing appears to represent a series of discrete northeast trending shear veins developed in andesite lapilli tuffs over a width of approximately 20 metres. Varying degrees of sericite, quartz, pyrite and calcite alteration are present across the zone.

Samples from the zone returned the highest gold assays received, 0.170 ounce per ton (#34504) and 0.401 ounce per ton (#34505), while

CAPSULE GEOLOGY

silver assays from these samples are 5.30 ounce per ton and 4.90 ounce per ton respectively. Base metals values are also anomalous with up to 1.65 per cent copper (#34509), 28.6 per cent lead (#34504), and 37.4 per cent zinc (#34507). All of the previously mentioned results were from float samples of sulphide bearing vein material".

Host rocks are assigned to the Unuk River Formation of the Lower Jurassic Hazelton Group. Approximately one kilometre north of the showing fossils indicative of a Hettangian to Sinemurian age have been reported (Open File 1991-21). The fossils appear to be within the same rock sequence as the showing but may be higher in the section, and thus are a minimum age for the host rocks.

BIBLIOGRAPHY

EMPR ASS RPT *21318
EMPR OF 1988-4; *1991-21
EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209
GSC P 89-1E, pp. 145-154; 90-1E, pp. 131-139

DATE CODED: 1991/10/01 CODED BY: JMB FIELD CHECK: N
DATE REVISED: 1991/12/31 REVISED BY: JMB FIELD CHECK: N

MINFILE NUMBER: **104B 371**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAMA SUSU-B**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 35 50 N
LONGITUDE: 130 11 15 W
ELEVATION: 1814 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located east of Upper Atkins Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6273183
EASTING: 427086

COMMODITIES: Gold, Silver, Copper, Lead, Zinc, Antimony

MINERALS

SIGNIFICANT: Galena, Stibnite, Chalcopyrite
ASSOCIATED: Pyrite, Wad, Limonite, Malachite, Azurite, Sphalerite
ALTERATION: Sericite, Quartz
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Discordant
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Shear zone may be up to 20 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Pyroclastic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Zeolite Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1990

COMMODITY	GRADE	
Silver	7.1000	Grams per tonne
Copper	0.7800	Per cent
Zinc	1.0600	Per cent
Gold	3428.6000	Grams per tonne
Lead	20.7000	Per cent

COMMENTS: Best assays were from several float samples.
REFERENCE: Assessment Report 21318.

CAPSULE GEOLOGY

The following description is slightly modified from Assessment Report 21318: Mama Susu-B "numerous boulders containing up to 60 to 70 per cent galena, 10 per cent stibnite, malachite-azurite and sphalerite occur over a talus covered area measuring approximately 50 by 20 metres. The mineralization is related to a 20 metre wide shear zone developed in andesitic pyroclastics, a substantial portion of which have been almost totally replaced by sericite and quartz. This zone can be considered to be the northeast extension of the mineralization encountered in Mama Susu-A (104B 370). Talus cover in the area between Mama Susu-A and B conceals any potential mineralization along the structure.

Results from this zone were similar to those in Mama Susu-A with gold and silver assays of 0.207 ounce per ton and 100 ounce per ton (#34706) and 0.142 ounce per ton and 83.1 ounce per ton (#34513) respectively. These were both float samples of massive sulphide material consisting predominantly of galena. Grab samples from outcrop include 0.045 ounce per ton gold and 8.25 ounce per ton

CAPSULE GEOLOGY

silver (#34705) and 0.078 ounce per tone gold and 6.91 ounce per ton silver (#34514). Base metal assays wre not as high as those from Mama Susu-A but are nonetheless significant. Sample #34706 contained the highest copper (0.78 per cent), lead (20.7 per cent), and zinc (1.06 per cent). Other values of significance are lead 10.9 per cent (#34513) and 3.99 per cent (#34514)."

According to Open File 1991-21, this showing occurs at or just below the contact between Unuk River Formation and overlying Betty Creek Formation. Fossils found approximately 500 metres along strike to the northwest indicate a Hettangian to Sinemurian age for these rocks.

BIBLIOGRAPHY

EMPR ASS RPT *21318
EMPR OF 1988-4; *1991-21
EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209
GSC P 89-1E, pp. 145-154; 90-1E, pp. 131-139

DATE CODED: 1991/10/01 CODED BY: JMB FIELD CHECK: N
DATE REVISED: 1991/12/31 REVISED BY: JMB FIELD CHECK: N

MINFILE NUMBER: **104B 372**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAMA SUSU-C**, BIG PELLA, C-1

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 36 01 N
LONGITUDE: 130 11 27 W
ELEVATION: 1814 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located east of Upper Atkins glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6273526
EASTING: 426888

COMMODITIES: Gold, Silver, Antimony, Lead, Copper, Zinc

MINERALS

SIGNIFICANT: Stibnite, Galena, Pyrite
ASSOCIATED: Sphalerite, Chalcopyrite, Arsenopyrite, Limonite, Wad, Malachite, Azurite
ALTERATION: Sericite, Quartz
ALTERATION TYPE: Sericitic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform, Discordant, Breccia
CLASSIFICATION: Hydrothermal, Epithermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I09 Stibnite veins and disseminations
SHAPE: Irregular
MODIFIER: Sheared
DIMENSION: 50 x 15 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Mineralization as irregular pods of massive sulphide, up to 130 centimetres in diameter; in 10 to 15 metre wide zone.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Pyroclastic, Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Zeolite Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1990

COMMODITY	GRADE	
Gold	0.5500	Grams per tonne
Silver	401.1500	Grams per tonne
Copper	0.2000	Per cent
Lead	16.3000	Per cent
Zinc	0.3900	Per cent

COMMENTS: Highest assays of several outcrop or suboutcrop samples.
REFERENCE: Assessment Report 21318.

CAPSULE GEOLOGY

The following description is slightly modified from Assessment Report 21318: "The area of the showing is extensively talus-covered and likely represents a northeast striking shear zone, developed in andesite pyroclastics and siltstones. It is 10 to 15 metres wide and can be traced for approximately 50 metres before being lost in talus cover. The zone is almost completely sericitized and locally silicified with up to 10 per cent disseminated pyrite and pockets of up to 90 per cent massive stibnite, 30 per cent galean, and 50 per cent pyrite. Some boulders indicate that nearby exposures of quartz cemented breccia constitute part of the zone.

Gold analyses ranged from a low of 0.004 ounce per ton to a high of 0.016 ounce per ton in sample #34515. Silver values ranged from

CAPSULE GEOLOGY

1.5 ounce per ton to a high of 11.7 ounce per ton (#34516). This is likely related to the low base metal content which returned only two anomalous lead values, from samples #34516 (1.55 per cent) and #34515 (1.27 per cent). Sample #34515 is possibly in place while #34516 is float material.

The massive sulphide bodies constitute irregular pods, up to 130 centimetres in diameter with no apparent prevalent attitude, but many of the pods are only partially exposed by trenches, so their full extent remains to be determined. The sulphides include galena, pyrite and stibnite (constituting up to 50 per cent of the pod) with lesser amounts of sphalerite, chalcopyrite and arsenpyrite. In places these minerals are totally oxidized to limonite, manganese-oxides and malachite-azurite. The bulk of the mineralization occurs in strongly fractured to brecciated zones, which occur more frequently in the siltstone unit. The mechanism controlling emplacement of these sulphides bodies is not yet known however it is possible that faults cross cutting the major shear zones acted as ground preparation for ore bearing solutions.

The presence of stibnite as well as very well defined colloform textures in the sulphides (R. Kirkham - personal communication) point to an epithermal origin of the mineralization, although part may have originated in a much higher temperature regime as indicated by the very coarse grained textures of some of the sulphides.

Copper and zinc values ranged from 0.01 per cent to 0.2 per cent, and 0.01 per cent to 0.39 per cent respectively. Significant lead assays include the following: 6.50 per cent (#34707), 9.47 per cent (#34728), 11.96 per cent (#34726) and 16.30 per cent (#34724). All of the above samples are grab samples of outcrop or subcrop.

Zone C-1, believed to be an extension of Mama Susu-C, is located 300 metres to the south-southwest. The zone consists of several quartz veins up to 50 centimetres wide carrying galena, minor chalcopyrite and abundant manganese stain. The veins are hosted by pyroclastics and sediments and strike north to northeast. Several grab samples collected from the zone assayed anomalous gold values up to 370 parts per billion (#34726). Silver assays returned higher values of 8.99 ounce per ton (#34711), 9.44 ounce per ton (#34726), 12.64 ounce per ton (#34724) and 27.4 ounce per ton (34707). Base metal values were low with a maximum of 0.2 per cent copper (#34707), 16.3 per cent lead (#34724) and 0.39 per cent zinc (#34708)."

According to Open File 1991-21 this showing occurs at or just below the contact between the Unuk River Formation and overlying Betty Creek Formation of the Lower Jurassic Hazelton Group. Fossils found within 100 metres of the showing indicate a Hettangain to Sinemurian age for these rocks.

BIBLIOGRAPHY

EMPR ASS RPT *21318
EMPR OF 1988-4; *1991-21
EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209
GSC P 89-1E, pp. 145-154; 90-1E, pp. 131-139

DATE CODED: 1991/10/01 CODED BY: JMB FIELD CHECK: N
DATE REVISED: 1991/12/31 REVISED BY: JMB FIELD CHECK: N

MINFILE NUMBER: **104B 373**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAMA SUSU-D**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 36 14 N
LONGITUDE: 130 11 16 W
ELEVATION: 1890 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located east of Upper Atkins Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6273925
EASTING: 427082

COMMODITIES: Silver, Copper, Lead, Zinc, Antimony, Gold

MINERALS

SIGNIFICANT: Galena, Pyrite, Sphalerite, Stibnite
ASSOCIATED: Limonite, Wad, Malachite, Azurite, Quartz
ALTERATION: Sericite, Calcite, Chlorite
ALTERATION TYPE: Sericitic, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Discordant, Podiform
CLASSIFICATION: Hydrothermal, Epithermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au; I09 Stibnite veins and disseminations
SHAPE: Irregular
MODIFIER: Sheared
COMMENTS: A 30 metre wide mineralized shear zone with pockets of massive sulphides.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Andesitic Pyroclastic, Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Zeolite, Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1990

COMMODITY	GRADE	
Gold	0.3400	Grams per tonne
Silver	442.3000	Grams per tonne
Copper	0.7300	Per cent
Lead	2.8600	Per cent
Zinc	3.7300	Per cent

COMMENTS: Assay samples are from subcrop.
REFERENCE: Assessment Report 21318.

CAPSULE GEOLOGY

The following description is modified slightly from Assessment Report 21318: "Mama Susu-D, E and F shwoings (104B 373, 374, 375) are all located in a small valley containing an outflow stream fed by an icefield, and are separated from each other by varying widths of less intensely altered (sericite-calcite-chlorite-limonite) andesitic pyroclastics and siltstones. They consists of shear zones 30, 20 and 50 metres wide separated by 70 and 100 metres respectively, all striking northeast-southwest. All are very strongly to completely altered to sericite with auxiliary quartz and disseminated pyrite (up to 5 per cent). Locally they contain poickets of massive sulphide with galena (up to 30 per cent), pyrite (up to 50 per cent), limonite (up to 50 per cent), sphalerite (up to 10 per cent) and minor stibnite, wad and malachite-azurite staining.

Gold and silver assays of grab samples from Mama Susu-D were

CAPSULE GEOLOGY

generally low, with a high of 0.010 ounce per ton gold in sample #34556 and 12.9 ounce per ton silver in sample #34523. Base metals ranged from 0.01 per cent to 0.73 per cent copper, 0.04 per cent to 2.86 per cent lead, and 0.07 per cent to 3.73 per cent zinc. All the highest base metal assays were derived from sample #34523 which consisted of strongly sericitized andesitic tuffs with 1 to 2 per cent galena, limonite and wad. All of the above samples were collected from subcrop."

According to Open File 1991-21 this showing occurs in the Betty Creek Formation of the Lower Jurassic Hazelton Group. Fossils found approximately 500 metres south of the showing, in rocks that appear to be correlative with those that host the showing, indicate Hettangian to Sinemurian (or Pliensbachian) ages.

BIBLIOGRAPHY

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EMPR OF 1988-4; *1991-21
EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209
GSC P 89-1E, pp. 145-154; 90-1E, pp. 131-139

DATE CODED: 1991/10/01 CODED BY: JMB FIELD CHECK: N
DATE REVISED: 1991/12/31 REVISED BY: JMB FIELD CHECK: N

MINFILE NUMBER: **104B 374**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAMA SUSU-E**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 36 14 N
LONGITUDE: 130 11 22 W
ELEVATION: 1814 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located east of Upper Atkins Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6273927
EASTING: 426980

COMMODITIES: Silver, Copper, Lead, Zinc, Antimony, Gold

MINERALS

SIGNIFICANT: Galena, Pyrite, Sphalerite, Stibnite
ASSOCIATED: Limonite, Wad, Malachite, Azurite, Quartz
ALTERATION: Sericite, Calcite, Chlorite
ALTERATION TYPE: Sericitic, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Discordant, Podiform
CLASSIFICATION: Hydrothermal, Epithermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Sheared
COMMENTS: A 20 metre wide mineralized shear zone with pockets of massive sulphides.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Andesitic Pyroclastic, Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Zeolite, Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	0.2060	Grams per tonne
Silver	699.4300	Grams per tonne
Copper	0.1000	Per cent
Lead	3.3100	Per cent
Zinc	0.3400	Per cent

COMMENTS: Highest assays are from several float and chip samples.
REFERENCE: Assessment Report 21318.

CAPSULE GEOLOGY

The following description is modified slightly from Assessment Report 21318: Mama Susu-D, E and F showings (104B 373, 374, 375) are all located in a small valley containing an outflow stream fed by an icefield, and are separted from each other by varying widths of less intensely altered (sericite-calcite-chlorite-limonite) andesitic pyroclastics and siltstone. They consists of shear zones 30, 20 and 50 metres wide separated by 70 and 100 metres respectively, all striking northeast-southwest. All are very strongly to completely altered to sericite with auxiliary quartz and disseminated pyrite (up to 5 per cent). Locally they contain pockets of massive sulphide with galena (up to 30 per cent), pyrite (up to 50 per cent), limonite (up to 50 per cent), sphalerite (up to 10 per cent) and minor stibnite, wad and malachite-azurite staining.

Gold assays from Mama Susu-E were quite low, ranging from below

CAPSULE GEOLOGY

detection limits to 0.006 ounce per ton (#34525). Silver was also low though 3 samples assayed greater than 2 ounces per ton including 20.4 ounce per ton from sample #34526. Copper ranged from 97 parts per million to a high of 0.10 per cent (#34526), lead from 352 parts per million to 3.31 per cent (#34526) and zinc from 81 parts per million to 0.34 per cent (#34524). Samples #34524 and #34525 are float material while #34526 was a 1.0 metre chip sample of intensely sericitized andesitic tuffs? with 2 to 3 per cent pyrite, 3 to 5 per cent galena and abundant limonite."

According to Open File 1991-21 this showing occurs in the Betty Creek Formation of the Lower Jurassic Hazelton Group. Fossils found approximatley 500 metres south of the showing of rocks that are probably correlative and along strike, indicate Hettangain to Sinemurian (or Pliensbachian) ages.

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EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209
GSC P 89-1E, pp. 145-154; 90-1E, pp. 131-139

DATE CODED: 1991/10/01 CODED BY: JMB FIELD CHECK: N
DATE REVISED: 1991/12/31 REVISED BY: JMB FIELD CHECK: N

MINFILE NUMBER: **104B 375**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAMA SUSU-F**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B09E
BC MAP:
LATITUDE: 56 36 13 N
LONGITUDE: 130 11 34 W
ELEVATION: 1722 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located east of Upper Atkins Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6273900
EASTING: 426775

COMMODITIES: Silver, Copper, Lead, Zinc, Antimony, Gold

MINERALS

SIGNIFICANT: Galena, Pyrite, Sphalerite, Stibnite
ASSOCIATED: Limonite, Wad, Malachite, Azurite, Quartz
ALTERATION: Sericite, Calcite, Chlorite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Discordant, Podiform
CLASSIFICATION: Hydrothermal, Epithermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I09 Stibnite veins and disseminations
SHAPE: Irregular
MODIFIER: Sheared
COMMENTS: A 50 metre wide mineralized shear zone with pockets of massive sulphides.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Pyroclastic, Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Zeolite, Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1990

COMMODITY	GRADE	
Gold	0.5500	Grams per tonne
Silver	1835.3300	Grams per tonne
Copper	0.6100	Per cent
Lead	42.7000	Per cent
Zinc	8.2900	Per cent

COMMENTS: Selected grab samples.
REFERENCE: Assessment Report 21318.

CAPSULE GEOLOGY

The following description is slightly modified from Assessment Report 21318: "Mama Susu-D, E and F shwoings (104B 373, 374, 375) are all located in a small valley containing an outflow stream fed by an icefield, and are separated from each other by varying widths of less intensely altered (sericite - calcite - chlorite - limonite) andesitic pyroclastics and siltstones. They consists of shear zones 30, 20 and 50 metres wide separated by 70 and 100 metres respectively, all striking northeast-southwest. All are very strongly to completely altered to sericite with auxiliary quartz and disseminated pyrite (up to 5 per cent). Locally they contain pockets of massive sulphides with galena (up to 30 per cent), pyrite (up to 50 per cent), limonite (up to 50 per cent), sphalerite (up to 10 per cent) and minor stibnite, wad and malachite-azurite staining.

Gold and silver results from Mama Susu-F were low, ranging from 20 parts per billion to a high of 550 parts per billion gold in

CAPSULE GEOLOGY

massive sulphide (#46017) and two significant silver assays of 11.18 ounce per ton (#46014) and 53.53 ounce per ton (#46017). Base metal results were lower than expected except for select grabs which assayed as high as 42.70 per cent lead (#46017) and 9.16 per cent lead (#34531). Copper values were low except for sample #46017 which assayed 6058 parts per million. Zinc returned three strongly anomalous values of 5.16 per cent (#46017), 6.72 per cent (#34530) and 8.29 per cent (#34531). Samples #34530 and #34531 consisted of mineralized silicified siltstone and andesite tuff respectively."

According to Open File 1991-21 this showing occurs in the Unuk River Formation of the Lower Jurassic Hazelton Group, slightly below the contact with overlying Betty Creek Formation strata. Fossils found approximately 400 metres to the south of the showing in rocks that are apparently correlative and along strike, indicated a Hettangian to Sinemurian age.

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GSC P 89-1E, pp. 145-154; 90-1E, pp. 131-139

DATE CODED: 1991/10/01 CODED BY: JMB FIELD CHECK: N
DATE REVISED: 1991/12/31 REVISED BY: JMB FIELD CHECK: N

MINFILE NUMBER: **104B 376**

NATIONAL MINERAL INVENTORY:

NAME(S): **SIB**, LULU, MARGUERITE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 35 35 N
LONGITUDE: 130 29 19 W
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Lulu zone, 2.5 kilometres west of the Unuk River and approximately 3 kilometres south-southeast of Tom Mackay Lake, 80 kilometres north of Stewart (Summary Report in Statement of Material Facts #42-91, Silver Butte Resources Ltd., May 24, 1991).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6273080
EASTING: 408589

COMMODITIES: Gold, Silver, Antimony, Zinc

MINERALS

SIGNIFICANT: Pyrite, Stibnite, Sphalerite, Gold, Pyrargyrite, Arsenopyrite
COMMENTS: Rare native gold, pyrargyrite and arsenopyrite.
ALTERATION: Silica, Albite, Pyrite, Sericite, K-Feldspar
ALTERATION TYPE: Silicific'n, Albitic, Sericitic, Potassic, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated, Stockwork
CLASSIFICATION: Epigenetic, Hydrothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins; I09 Stibnite veins and disseminations

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Mount Dilworth	
Lower Jurassic	Hazelton	Betty Creek	

LITHOLOGY: Mudstone, Felsic Volcanic, Andesitic Lapilli Tuff, Agglomerate, Chert, Siltstone, Greywacke, Granodiorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist
COMMENTS: Lower greenschist facies.

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	1059.5000	Grams per tonne
Gold	14.4000	Grams per tonne

COMMENTS: Sample across 14 metres.
REFERENCE: Statement of Material Facts #42-91, Summary Report on the Sib Claims.

CAPSULE GEOLOGY

Bedrock in the Unuk map area consists of a thick (more than 5000 metres) succession of Upper Triassic to Middle Jurassic volcano-sedimentary arc-complex lithologies (Stuhini and Hazelton groups) underlain by Permian and older arc and shelf sequences (Stikine Assemblage) and overlain by Middle and Upper Jurassic marine-basin sediments (Bowser Lake Group). Rocks have been folded, faulted and weakly metamorphosed, mainly during Cretaceous time. Dioritic to granitic rocks that crop out east and west of the Prout Plateau represent at least four intrusive episodes spanning Triassic to Tertiary time. Remnants of Pleistocene to Recent basaltic eruptions are preserved locally (Exploration in British Columbia 1989).

CAPSULE GEOLOGY

The Sib property is situated on the west limb of a 9-kilometre long, 3-kilometre wide north-northeast trending anticline comprised of Lower Jurassic Betty Creek and Mount Dilworth formations (Hazelton Group) volcano-sedimentary lithologies. These are overlain by and/or are in fault contact with synclinally folded Lower-Middle Jurassic Salmon River Formation (Hazelton Group) and Jurassic-Lower Cretaceous Bowser Lake Group sediments. The Betty Creek and Mount Dilworth formations stratigraphy is continuous along the length of both the Sib property and the adjoining Eskay Creek property (104B 008) to the north-northeast. The 21 zone deposits of Eskay Creek are approximately 4 kilometres along strike to the northeast of the Sib property boundary, and are hosted by carbonaceous mudstones and rhyolite-mudstone breccias that are correlated with the unnamed lower member of the Salmon River Formation (see Eskay Creek).

Along the eastern side of the Sib property, Betty Creek Formation lithologies predominate. These include a 396 to 1828-metre thick section of tan weathering, pale green andesitic plagioclase porphyritic lapilli tuff and agglomerate containing lesser amounts of interbedded crystal tuff and black mudstone. A mudstone unit comprises sedimentary-epiclastic rocks interbedded with minor tuffaceous and volcanic fragmental rocks. The unit is from 48 to 914 metres thick and includes interbedded mudstone, sandstone, conglomerate and ash and crystal tuff. An andesitic conglomerate unit occurs as a 487-metre long and up to 91-metre wide lens.

Mount Dilworth Formation rocks occur along the western half of the property. A felsic volcanic unit, ranging in width from 121 metres to greater than 396 metres, comprises massive, banded and brecciated grey to white cherty felsic rock and includes several interbeds of mudstone-looking rock. Black, variably siliceous, carbonaceous mudstone up to 20 metres thick occur as interbeds in the felsic rocks. The Lulu zone mineralization occurs in this mudstone. A mudstone approximately 149 metres lower in the stratigraphic section than the "Lulu mudstone" hosts the Marguerite zone mineralization.

Overlying the Mount Dilworth lithologies are Salmon River Formation interbedded black cherts, carbonaceous mudstone and siltstone, and banded greywacke and siltstone.

Granodiorite dykes/sills are subparallel to stratigraphy within Mount Dilworth felsic rocks and occur in the northwest end of the property. The dykes or sills are up to 24 metres thick and 304 metres long and comprise grey to grey-green aphanitic to augite-feldspar porphyritic granodiorite.

Bowser Lake Group sediments comprised of moderate northwest dipping siltstone, sandstone and conglomerate occur in the extreme northwest corner of the property and are in fault contact with underlying Salmon River Formation rocks.

In general, the rocks on the Sib property form a simple homoclinal sequence trending approximately 035 degrees and dipping 20-80 degrees northwest.

Two distinct parallel zones of alteration occur concordant with stratigraphy at Sib. The eastern zone (or Central Anomalous zone) includes a 9-kilometre long linear trend of conspicuous gossans situated along the western margin of the Betty Creek Formation volcanics, and extends north to the Eskay Creek property. This trend encompasses the North, Battleship Knoll, Adit, 1100, South and Meadow zones at Sib. Alteration along this zone comprises intensely potassium metasomatized, brecciated, quartz flooded, pyritized andesitic tuffs with intermittent zones of discontinuous quartz-potassium feldspar-sulphide veins, vein breccias and stockworks. In 1990, all but one of twenty drill holes testing the eastern zone intersected stockworks carrying gold concentrations in the range of 0.34 to 4.29 grams per tonne over widths of up to 19 metres.

The western zone of alteration occurs west of the eastern zone within the felsic rocks of the Mount Dilworth Formation. The alteration comprises extensive and locally intense pervasive silicification and sodium metasomatism. Albitites have also been extensively developed. Drill holes targeted at mudstone interbedded in the felsic assemblage intersected gold and silver mineralization over wide intervals. Below an extensive interval of silicified and albitized felsic strata, drill hole 90-30 intersected 21 metres of black siliceous carbonaceous mudstone (Lulu mudstone). A 14 metre interval of the mudstone is mineralized with disseminated pyrite, framboidal pyrite, laminar pyrite and disseminated and fracture-controlled stibnite and sphalerite. Native gold, pyrargyrite and arsenopyrite occur in trace amounts. Gold and silver assayed 14.4 grams per tonne and 1059.5 grams per tonne respectively, across 14 metres (Summary Report in Statement of Material Facts #42-91). A short interval of the felsic hanging wall is sericitic. In the

CAPSULE GEOLOGY

immediate footwall of the Lulu mudstone, felsic strata are highly pyritic and sericitic. The Lulu mineralization is underlain, 149 metres lower in the stratigraphic section, by the mineralized "Marguerite mudstone", which is the lowermost mudstone interbedded within the Mount Dilworth Formation felsic volcanics. A drill core assay across 4.5 metre assayed 3.5 grams per tonne gold and 36.3 grams per tonne silver (Summary Report in Statement of Material Facts #42-91).

Heritage Explorations Ltd. drilled 3 core holes in the Lulu Zone during 2002 and intersected 11.7 metres grading 19.5 grams per tonne gold and 1,602.9 grams per tonne silver in drillhole 2-113.

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EMPR OF 1989-10; 1999-2; 1999-14
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
GCNL #229 (Nov.), 1991
N MINER Dec.2, 2002
PERS COMM J.M. Britton (1991)
PR REL Heritage Explorations Ltd., Nov.19, 2002
WWW http://www.infomine.com/
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Gunning, M.H. (1986): Late Triassic to Middle Jurassic (Norian to Oxfordian) Volcanic and Sedimentary Stratigraphy and Structure in the Southeastern part of the Iskut map sheet, North-Central British Columbia, Unpublished B.Sc. Thesis, University of British Columbia, 85 pages.
*Statement of Material Facts #42-91, May 24, 1991 - Summary Report on the Sib Claims (March 11, 1991)

DATE CODED: 1991/12/03 CODED BY: GO FIELD CHECK: N
DATE REVISED: 1991/12/03 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104B 377** NATIONAL MINERAL INVENTORY:

NAME(S): **ROCK AND ROLL**, BLACK DOG, SRV

STATUS: Developed Prospect MINING DIVISION: Liard
REGIONS: British Columbia
NTS MAP: 104B11E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 56 43 06 N NORTHING: 6288261
LONGITUDE: 131 14 02 W EASTING: 363286
ELEVATION: 106 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Black Dog zone, 250 metres south of the Iskut River, 7 kilometres west of the Bronson Creek airstrip and the Snip mine (104B 250), 120 kilometres north-northwest of Stewart (Assessment Report 20884).

COMMODITIES: Zinc Lead Copper Gold Silver

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Sphalerite Galena Chalcopyrite
ALTERATION: Clinozoisite Actinolite Chlorite Sericite Quartz Calcite
ALTERATION TYPE: Silicific'n Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated Massive Stockwork
CLASSIFICATION: Volcanogenic
TYPE: G04 Besshi massive sulphide Cu-Zn I02 Intrusion-related Au pyrrhotite veins
SHAPE: Tabular
MODIFIER: Sheared Faulted
DIMENSION: 200 x 150 x 25 Metres STRIKE/DIP: /20S TREND/PLUNGE:
COMMENTS: Black Dog horizon; strikes northwest and dips 20-30 degrees southwest.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Graphitic Argillite
Siliceous Mudstone
Andesite Tuff
Aphyric Andesite Tuff
Porphyritic Andesite
Ash Crystal Tuff
Siltstone
Hornblende Diorite
Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: BLACK DOG REPORT ON: Y

CATEGORY: Indicated YEAR: 1991
QUANTITY: 580544 Tonnes

COMMODITY	GRADE	
Silver	335.9000	Grams per tonne
Gold	2.4000	Grams per tonne
Copper	0.6400	Per cent
Lead	0.7900	Per cent
Zinc	3.0800	Per cent

COMMENTS: Preliminary reserves within a 700-metre portion of the Black Dog horizon.
REFERENCE: Northern Miner - October 28, 1991, page 3.

CAPSULE GEOLOGY

The Rock and Roll property is underlain by a thick sequence of northwest trending, moderately deformed sedimentary and volcanic rocks of probable Triassic age. Four types of intrusive stocks and dykes outcrop in the area.

The occurrence area is divided into two generalized lithological packages along a northwest boundary that bisects Lost Lake. To the

CAPSULE GEOLOGY

west, limestone and calcareous pelitic sediments occur with andesite flows and minor fine buff ash tuff; small-scale intrusives comprising andesite porphyry dykes, melanocratic plagioclase porphyry and melanocratic hornblende diorite occur in this area. To the east the geologic setting is distinguished by the absence of limestone and an increase in the volcanic component. Lithologies include phyric to aphyric andesite tuffs or flows, intermediate ash crystal tuff, hypabyssal andesite to diorite, siltstone, argillite, graphitic argillite and minor chert. Medium-grained melanocratic hornblende diorite stocks outcrop just north of Lost Lake and bounds the mineralized Black Dog zone to the northeast. A felsic feldspar porphyry dyke outcrops 300 metres east of the Black Dog zone.

Detailed mapping and drilling at the Black Dog zone indicate phyric/aphyric andesite tuffs or flows are conformably interbedded and overlie siltstone, argillite and graphitic argillite. Further down sequence, apparently conformable and fault-bounded hypabyssal hornblende diorite occurs in close association with porphyritic andesite. This unit appears to be underlain by additional siltstone and argillite units. Fine ash crystal tuff occurs throughout the sequence.

Sulphide mineralization at the Black Dog zone is hosted within structurally deformed silicified mudstone to graphitic argillite units at or near phyric/aphyric tuff contacts. The Black Dog zone is characterized structurally by pervasive moderate to strong shearing and cataclastic deformation, with abundant small-scale folds visible. Northeast and northwest normal(?) faults trend through the area; northeast shears cut sulphide mineralization in one trench.

Petrographic studies of core samples identified the alteration products clinozoisite and actinolite and minor chlorite and sericite. Quartz and calcite exist as stringers.

The Black Dog horizon is a stratigraphic section hosting three zones of base metal mineralization that occur as wispy stringers, and disseminated to well-laminated semimassive and massive sulphides. The sulphides consist of pyrrhotite, pyrite, sphalerite, galena and minor chalcopyrite with lesser arsenopyrite and tetrahedrite. This mineralization strikes northwest and dips 20-30 degrees southwest. Each zone averages 7 metres in width; overall, the Black Dog horizon is approximately 25 metres thick. Drilling has tested the horizon over a 250 metre length and a downdip length of 200 metres. A recent discovery, the SRV zone, has also been made.

Preliminary (indicated) reserves within a 700-metre portion of the Black Dog horizon are 580,544 tonnes grading 3.08 per cent zinc, 0.79 per cent lead, 0.64 per cent copper, 2.4 grams per tonne gold and 335.9 grams per tonne silver (Northern Miner - October 28, 1991, page 3).

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GSC MEM 246
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N MINER Sept.17, Dec.24, 1990; Feb.11,18, Apr.8,15, May 20, Oct.7,28, 1991
PR REL *Prime Equities Inc. Jan.30, 1991 - Rock and Roll Project
WWW http://www.infomine.com/
Anderson, R.G. (1988): A Paleozoic and Mesozoic Stratigraphic and Plutonic Framework for the Iskut Map Area (104B), Northwestern B.C. pp.A1-A5 in Geology and Metallogeny of Northwestern B.C., Smithers Exploration Group, G.A.C. Cordilleran Section Workshop Oct.16-19, 1988
EMPR OF 1998-10

DATE CODED: 1991/12/04 CODED BY: GO FIELD CHECK: N
DATE REVISED: 1991/12/04 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104B 378**

NATIONAL MINERAL INVENTORY:

NAME(S): **FORGOLD**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B15E
BC MAP:
LATITUDE: 56 54 59 N
LONGITUDE: 130 39 07 W
ELEVATION: Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6309294
EASTING: 399429

COMMODITIES: Copper, Lead, Zinc, Silver, Gold

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite, Galena
ASSOCIATED: Quartz, Carbonate
ALTERATION: Sericite
MINERALIZATION AGE: Upper Triassic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epithermal, Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
MODIFIER: Sheared

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	

LITHOLOGY: Lapilli Tuff
Crystal Tuff
Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
COMMENTS: Adjacent to the Forrest Kerr fault.

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1992
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	3.8700	Grams per tonne

COMMENTS: From a 1.58-metre drill section.
REFERENCE: Assessment Report 22623.

CAPSULE GEOLOGY

Rock and silt geochemistry sampling discovered base and precious metal mineralization in highly leached, sericite altered lapilli tuff and crystal tuff west of Downpour Creek, just south of the Goz/RDN claims.

Grab samples from the Forgold epithermal gold and silver-bearing pyrite and chalcopyrite stringer veins yielded up to 30.5 grams per tonne gold and 15.85 per cent copper (Assessment Report 20540). Malensek et al (Assessment Report 20722) divided the veins into three types, all of which appear to be structurally controlled by the Forrest Kerr fault. Steeply dipping chalcopyrite, galena and sphalerite stringers contain 31.50 per cent copper and up to 0.9 grams per tonne gold. Quartz-carbonate stockwork veins contain sphalerite, galena and chalcopyrite. A silicified, disseminated chalcopyrite zone grades up to 2.09 grams per tonne gold and 14.70 per cent zinc. Disseminated chalcopyrite associated with the stringers grades up to 112.46 grams per tonne gold and 17.16 per cent copper.

A small drill program in 1992 outlined two significant zones: 3.87 grams per tonne gold over 1.58 metres, and 19.20 grams per tonne gold over 0.82 metre (Assessment Report 22623). The drilling indicated that the gold mineralization appears to be narrow and discontinuous.

CAPSULE GEOLOGY

The mineralization appears to be hosted by tuffaceous rocks of the Upper Triassic Stuhini Group. Proximal stocks of monzonite (Unit LTmz, Open File 1990-2) may be associated with the alteration, as it appears to be to the north on the Goz/RDN claims (104G 144).
The property is held by Ecstall Mining Corporation.

BIBLIOGRAPHY

EMPR ASS RPT 20540, 20722, 21868, 22623
EMPR OF 1990-2
EMPR PF (Ecstall Mining Corporation Website (Sept. 1998): Bronson Creek Area, 1 p.)
N MINER Aug.5, Aug.12, 1991
WWW http://www.ecstall.com; http://www.infomine.com/

DATE CODED:	1993/03/25	CODED BY:	JD	FIELD CHECK:	N
DATE REVISED:	1998/12/09	REVISED BY:	GO	FIELD CHECK:	N

MINFILE NUMBER: **104B 379**

NATIONAL MINERAL INVENTORY:

NAME(S): **NEW**, ICE, VER,
VER 3-4, ICE 3, RET,
KING

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B14E 104B15W
BC MAP:
LATITUDE: 56 49 59 N
LONGITUDE: 131 00 07 W
ELEVATION: Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Used to be Ret claims, Ticker Tape Resources.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6300589
EASTING: 377852

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Gold
ASSOCIATED: Pyrochlore Bismuth Antimony
ALTERATION: Quartz Carbonate Chlorite
MINERALIZATION AGE: Triassic

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
I09 Stibnite veins and disseminations
I02 Intrusion-related Au pyrrhotite veins
K01 Cu skarn
SHAPE: Irregular
COMMENTS: Roughly northeast trending.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Devonian			Stikine Assemblage

LITHOLOGY: Sediment/Sedimentary
Volcanic
Carbonate

HOSTROCK COMMENTS: Hostrock unknown, underlain by units DSv, DSc and DSfv (Open File 1990-2).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The New, Ice and Ver claims, centred on Verret Creek, were soil, stream and rock sampled with subsequent drilling and geophysics in 1987 and 1988. This resulted in the discovery of base metal-silver skarns and gold-quartz veins. Further prospecting and geochemical work in 1989 discovered more quartz vein, shear and skarn mineralization.

Narrow quartz veins proximal to the King vein assayed up to 187.6 grams per tonne gold. These veins contain rare visable gold, pyrite, bismuthinite and stibnite; pyrite-chalcopyrite and quartz-carbonate stringers are also present. Quartz veins in the Rumble Creek area assayed 51.4 grams per tonne gold and 16.5 grams per tonne gold. Float material in the Cripple Creek area returned values as high as 1993.4 grams per tonne silver. The mineralization is mainly within strongly quartz-carbonate-chlorite altered rocks. Follow-up drilling in the King vein area in 1990 failed to intersect economic mineralization.

The claims are underlain by steeply westward dipping sediments, volcanics and carbonates of the Lower Devonian Stikine Assemblage (units DSv and DSc that overlie complexly folded and faulted intermediate volcanic rocks of unit DSfv).

BIBLIOGRAPHY

EM BULL 104
EMPR ASS PRT *20666, *21340
EMPR OF 1990-2

DATE CODED: 1993/03/24 CODED BY: JD FIELD CHECK: N
DATE REVISED: 1993/03/24 REVISED BY: JD FIELD CHECK: N

MINFILE NUMBER: **104B 380**

NATIONAL MINERAL INVENTORY:

NAME(S): **FORREST**, FORREST 1-15, NORTHRIDGE, RIDGE, SOUTH FORREST

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B15E
BC MAP:
LATITUDE: 56 45 59 N
LONGITUDE: 130 41 07 W
ELEVATION: Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6292649
EASTING: 396988

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS
SIGNIFICANT: Chalcopyrite Arsenopyrite
ASSOCIATED: Galena Bornite
ALTERATION: Chlorite Carbonate Sericite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stockwork Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic Igneous-contact
TYPE: I02 Intrusion-related Au pyrrhotite veins
DIMENSION:
STRIKE/DIP: 360/90
TREND/PLUNGE:
COMMENTS: Strongly associated with the Forrest Kerr Pluton.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian			Stikine Assemblage

DATING METHOD: Fossil
MATERIAL DATED: Carbonate

LITHOLOGY: Andesite
Meta Volcanic
Meta Sediment/Sedimentary
Gabbro

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Forrest claims extend approximately 10 kilometres north from the Iskut River along the west side of Forrest Kerr Creek. They contain 11 mineral occurrences concentrated in four areas; South Forrest, Ridge, Midway and North Ridge. A brief prospecting program in 1988 discovered shear-related quartz vein mineralization and was followed up in 1989 by more intensive mapping, geochemistry, geophysics and trenching. Several targets were trenched and drilled in 1990 (Assessment Report 20562).

In general, mineralization is in extensive quartz stockworks and veins (the Forrest System) strike either 135/70NE or 360/90; then appear to be strongly associated with the Forrest Kerr fault. Grab samples retrun up to 17.1 grams per tonne gold. Mineralization on the claims consists of gold- and silver-bearing quartz chalcopyrite veins. Visable gold occurs with bornite and hematite in quartz veins that assay up to 110.4 grams per tonne gold. Other significant mineralization peripheral to the Forrest system includes stratiform/shear related semi-massive chalcopyrite and quartz vein talus with up to 198.8 grams per tonne gold.

Drilling in 1990 on the Canyon Shear, a northeast trending fault system, produced a 1.5 metre intercept of 019.4 grams per tonne gold (Assessment Report 20562). The host is oxidized, sheared andesite altered to chlorite, carbonate, and sericite. Hihgly altered quartz stockwork-hosted gold mineralization was drilling in the Creek Shear. In several drill holes, andesite-hosted mineralization was zoned from upper chalcopyrite-rich rock to lower coarsely crystalline arsenopyrite-bearing rock. The former zone contains higher gold values than the latter. A 7 metre chalcopyrite intercept assayed 3.5 grams per tonne gold, 60.3 grams per tonne silver and 3.76 per cent copper. Another 16 metre intercept assayed 4.5 grams per tonne gold

CAPSULE GEOLOGY

and 0.69 per cent copper (Assessment Report 20562).

The veins and shear zones are hosted by deformed Lower Devonian metavolcanic and metasedimentary rocks of the Stikine Assemblage close to the contact with gabbroic rocks of the Late Devonian FKP. Plagioclase porphyritic diorite intrusions (qd) are spatially related to veins.

In 1995, with Explore B.C. Program support, Imco Resources Ltd. carried out a program of geological mapping and sampling, soil sampling, VLF-EM and magnetometer surveys and 1421 metres of diamond drilling in 11 holes. Results of all this work were inconclusive (Explore B.C. Program 95/96 - M154).

BIBLIOGRAPHY

EM BULL 104
EMPR ASS RPT 20562
EMPR Explore B.C. Program 95/96 - M154
EMPR OF 1990-2
WWW http://www.infomine.com/

DATE CODED: 1993/03/25 CODED BY: JD FIELD CHECK: N
DATE REVISED: 1995/12/29 REVISED BY: JD FIELD CHECK: N

MINFILE NUMBER: **104B 381**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAND**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 24 18 N
LONGITUDE: 130 06 01 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located west of Bowser River between 2 lobes of ice of the Knipple Glacier, about 54 kilometres north of the community of Stewart (Assessment Report 19620).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6251700
EASTING: 432099

COMMODITIES: Lead, Zinc, Copper, Silver

MINERALS

SIGNIFICANT: Pyrite, Tetrahedrite, Chalcocite, Galena, Sphalerite, Chalcopyrite
ASSOCIATED: Quartz, Calcite
ALTERATION: Limonite, Malachite, Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	
Jurassic	Hazelton	Salmon River	

LITHOLOGY: Lithic Tuff
Dacitic Andesitic Tuff
Porphyritic Volcanic
Andesite
Dacite
Greywacke

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

At the Land showing, several small locally limonitic quartz-calcite veins are mineralized with minor amounts of pyrite, tetrahedrite, chalcocite, galena, sphalerite and chalcopyrite. Malachite and azurite are also evident. The veins are hosted in a sequence comprising andesitic to dacitic tuffs, lithic tuff, porphyritic volcanics and greywacke of the Lower Jurassic Betty Creek Formation (Hazelton Group) and Lower-Middle Jurassic Salmon River Formation (Hazelton Group). A 1.2 metre chip sample from a vein yielded 0.6 per cent lead, 25 grams per tonne silver and 0.6 per cent zinc (Assessment Report 19620, page 6).

BIBLIOGRAPHY

EMPR ASS RPT *19620
EMPR OF 1988-4; 1994-14
EMPR BULL 63
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1995/03/15 CODED BY: GO FIELD CHECK: N
DATE REVISED: 1995/03/15 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104B 382**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIPPY LAKE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 22 36 N
LONGITUDE: 130 01 53 W
ELEVATION: 609 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the south side of the Bowser River about 50 kilometres north of the community of Stewart (Assessment Report 18670).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6248480
EASTING: 436303

COMMODITIES: Lead Zinc Copper Silver

MINERALS
SIGNIFICANT: Galena Sphalerite Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE:

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

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Salmon River	

LITHOLOGY: Siltstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEINS
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Silver	194.7000	Grams per tonne

REFERENCE: Assessment Report 18670.

CAPSULE GEOLOGY

The Tippy Lake property is underlain by volcanic and sedimentary rocks of the Lower-Middle Jurassic Salmon River Formation, Lower Jurassic Betty Creek Formation and Upper Triassic-Lower Jurassic Unuk River Formation, all of the Hazelton Group. Numerous quartz veins are hosted in siltstone of the Salmon River Formation and are mineralized with argentiferous galena, sphalerite and chalcopyrite. A rock sample assayed 194.7 grams per tonne silver (Assessment Report 18670).

BIBLIOGRAPHY

EMPR ASS RPT *18670, 19961, 21306
EMPR OF 1988-4; 1994-14
EMPR BULL 63
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154

DATE CODED: 1995/03/16 CODED BY: GO FIELD CHECK: N
DATE REVISED: 1995/03/16 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104B 383**

NATIONAL MINERAL INVENTORY:

NAME(S): **ESKAY (CANAMERA)**, BONSAI

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B10E
BC MAP:
LATITUDE: 56 36 14 N
LONGITUDE: 130 33 07 W
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located just southeast of the toe of Melville Glacier, about 81 kilometres north-northwest of the community of Stewart (Assessment Report 22894).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6274371
EASTING: 404728

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stockwork Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I02 Intrusion-related Au pyrrhotite veins
DIMENSION: Metres STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Undefined Formation	

LITHOLOGY: Crystal Lithic Tuff
Felsic Volcanic
Argillaceous Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP:
GRADE:

INVENTORY

ORE ZONE: TRENCHES
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1992
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	79.5000	Grams per tonne
Gold	2.5000	Grams per tonne

REFERENCE: Assessment Report 22894.

CAPSULE GEOLOGY

The Bonsai property is underlain by Lower to Middle Jurassic rocks of the Hazelton Group consisting mainly of calcalkaline andesite and derived volcaniclastic sedimentary rocks. A thin, sheared mudstone unit trends north on the eastern edge of the Melville Glacier.

Trenching and sampling in 1992 were confined to gossanous outcrops located a few hundred metres southeast of the toe of Melville Glacier. A repetitive sequence of two north-trending units, felsic volcanics and argillitic siltstones, are cut by east-west shears. The felsic volcanics consist of pale to dark grey crystal lithic tuffs, silicified and brecciated, with 2-3 per cent disseminated euhedral pyrite and minor massive layered pyrite bands. The sedimentary unit consists of black, schistose argillitic siltstone/mudstone containing trace to 2 per cent disseminated fine-grained pyrite and rare 1 millimetre thick fine grained pyrite bands.

Three trenches tested zones of intense pyrite and quartz-calcite stockwork mineralization. Chip samples analysed up to 2.5 grams per tonne gold and 79.5 grams per tonne silver (Assessment Report 22894).

Work done in 1995 by Prime Resources Group Inc., with support

CAPSULE GEOLOGY

from the Explore B.C. Program, consisted of rock and soil sampling and 1180 metres of diamond drilling in 5 holes. Betty Creek and Mount Dilworth formations were identified within a lower sequence. An upper sequence correlative with the Salmon River Formation and containing rare lenses of bedded pyrite was also identified. Best results obtained were 1330 parts per billion gold from rock chips (Explore B.C. Program 95/96 - M24).

BIBLIOGRAPHY

EMPR OF 1989-10
EMPR ASS RPT *22894
EMPR Explore B.C. Program 95/96 - M24
GSC MEM 246
GSC P 89-1E, pp. 145-154
GSC MAP 9-1957; 311A; 7780G; 1418A
Gunning, M.H. (1986): Late Triassic to Middle Jurassic (Norian to Oxfordian) Volcanic and Sedimentary Stratigraphy and Structure in the Southeastern part of the Iskut map sheet, Northcentral British Columbia; unpublished B.Sc. Thesis, University of British Columbia

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1996/10/29 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104B 384**

NATIONAL MINERAL INVENTORY:

NAME(S): **ISKUT WOLLASTONITE**, ISK, CLIFF, BRY, GLACIER, BARTNICK, ISK WOLLASTONITE, BRIL, ZIPPA MOUNTAIN

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104B11W
BC MAP:
LATITUDE: 56 39 10 N
LONGITUDE: 131 18 07 W
ELEVATION: 1371 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Wollastonite occurrences located on Zippa Mountain between elevations of 1219 and 1524 metres, about 113 kilometres northwest of the community of Stewart and 12 kilometres west of the Snip mine, 104B 250 (G. Ray, personal communication, 1995). See also Zippa (104B 123).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6281105
EASTING: 358877

COMMODITIES: Wollastonite

MINERALS
SIGNIFICANT: Wollastonite
ALTERATION: Wollastonite
ALTERATION TYPE: Skarn
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Massive
CLASSIFICATION: Skarn Industrial Min.
TYPE: K09 Wollastonite skarn
DIMENSION: 300 x 100 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Bril zone.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Triassic			Unnamed/Unknown Informal

LITHOLOGY: Carbonate
Leucocratic Syenite
Mafic Syenite
Nepheline Syenite
Pyroxenite

HOSTROCK COMMENTS: Zippa Mountain pluton.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: BRIL REPORT ON: Y

CATEGORY: Measured YEAR: 1997
QUANTITY: 1020000 Tonnes

COMMODITY	GRADE
Wollastonite	58.1400 Per cent

COMMENTS: Proven resource in the Main zone of the Bril deposit. Cut off of 50 per cent wollastonite.
REFERENCE: GCNL #55 (March 19), 1998.

ORE ZONE: CLIFF REPORT ON: Y

CATEGORY: Inferred YEAR: 1995
QUANTITY: 2000000 Tonnes

COMMODITY	GRADE
Wollastonite	80.0000 Per cent

COMMENTS: Estimated open pittable, high aspect ratio ore grading 80 per cent plus wollastonite.
REFERENCE: Super Twins Resources Ltd., Iskut Wollastonite Deposit Brochure.

CAPSULE GEOLOGY

Newly discovered, high-grade wollastonite showings have been trenched and sampled by Super Twin Resources Ltd. These showings are

CAPSULE GEOLOGY

located at elevations of between 1219 and 1524 metres on Zippa Mountain, approximately 12 kilometres west of the Snip mine (104B 250) and four to five kilometres south of the Iskut River.

The Iskut Wollastonite skarns are hosted by Paleozoic carbonates immediately adjacent to the eastern margin of the Triassic Zippa Mountain pluton, which ranges compositionally from leuco-syenite to mafic syenite and pyroxenite (G. Ray, personal communication, 1995).

Five wollastonite showings have been identified and named Bry, Cliff, Glacier, Bartnick and Bril, and occur in an area of 6 by 5 kilometres. Of these, the Cliff (so named because it represents a 100 metre plus cliff of high-grade wollastonite) is considered the best. Super Twin Resources estimates it contains 2 million tonnes of open pittable, high aspect ratio ore grading 80 per cent plus wollastonite.

See Zippa (104B 123) for a description of the nepheline syenite. Uses of wollastonite include replacement for asbestos and glass fibre in construction materials.

In 1995, with Explore B.C. Program support, Super Twins Resources completed a program of prospecting, geological mapping, sampling, trenching and beneficiation/characterization testing. This work confirmed the existence of large deposits of high-grade wollastonite that could be concentrated and recovered by standard means. Three additional large deposits and one probable have been identified (Explore B.C. Program 95/96 - M137).

Drilling in 1996 tested the Cliff, Bartnick and Bril zones. The Bril deposit, 300 metres long by 100 metres wide, was defined by the company as having the best potential for mining and additional resources. The company hopes to establish a proven reserve of 18 million tonnes. A mine feasibility study is underway for production targeted to commence in 1997. Super Twins is now known as Whitegold Resources Corp.

Whitegold Resources Corp. has completed geological, engineering and environmental work in order to complete a full feasibility study by the fourth quarter of 1997. Approximately 1889 metres of diamond drilling, including 12 holes in the Main zone of the Bril deposit has outlined an orebody approximately 120 by 70 by 70 metres, with a 1.8 million tonne proven resource of high-grade wollastonite. Also, approximately 6.5 tonnes of wollastonite was collected from both trenches and the cliff face beneath the trenches at the Main zone of the Bril deposit. The company also investigated the possibility of mining the talus pile at the base of the Bril deposit. Preliminary work indicates a good enough quality, and high enough volume to be sufficient for at least the first year of production. Geological mapping has traced the wollastonite in the Main zone for a strike length of 1.4 kilometres (T. Schroeter, personal communication, 1997).

Whitegold Resources Corp. reports that tests on the wollastonite's potential as a filler for nylon have been positive. The tests, carried out by Suzorite Mica Products, indicate that the wollastonite is superior in product quality to comparable high-end products available in North America and competitive with some surface-treated grades (Industrial Specialities News, February 23, 1998).

During 1997, Whitegold Resources Corporation conducted extensive field and laboratory programs on the Isk property. These included 1890 metres of diamond-drilling in twelve holes in the Main zone of the Bril deposit which outlined a resource of 1.8 million tonnes of high-grade wollastonite (about 60 per cent, D. Hora, personal communication). Approximately 6.5 tonnes of wollastonite was collected from an area beneath the talus at the Main zone of the Bril deposit, and will be used for further marketing studies. Approximately 500 kilograms of representative samples were collected from the talus pile at the base of the Bril deposit and a ground-penetration radar survey was conducted to determine the depth of this material. Detailed geological mapping confirmed extensions and other zones of wollastonite on the property. The company completed airborne laser mapping and aerial photography for the proposed 16-kilometre pipeline corridor and the proposed 34-kilometre road extension to the Eskay Creek mine road. The company is preparing a detailed prospectus for submission to the Northwest Mine Development Committee in late 1997. If approved, the mine will create 20 full-time jobs and produce 24,000 tonnes of wollastonite annually, over a 90-day production period.

A proven resource of the Bril deposit is reported as 1,020,000 tonnes of 58.14 per cent wollastonite, using a 50 per cent cut off (GCNL #55 (March 19, 1998)). The five wollastonite deposits on the property represents a geological resource of 20,000,000 tonnes.

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EM EXPL 1996-A24; 1997-15
EMPR Explore B.C. Program 95/96 - M137
EMPR INF CIRC 1995-9, p. 20; 1996-1, p. 20; 1997-1, p. 23; 1998-1, p. 24; 1999-1, pp. 12, 14
GSC MAP 9-1957; 311A; 1418A
CIM 97 Vancouver Program, April 27-30, 1997), pp. 126-127
GCNL #29 (Feb.11), #55 (Mar.19), #94(May 15), 1998
WWW http://www.infomine.com/
Focus on Industrial Minerals, Vol. 3, Issue 1
Placer Dome File
Super Twins Resources Ltd., Iskut Wollastonite Deposit Brochure

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1997/05/26 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104B 385**

NATIONAL MINERAL INVENTORY:

NAME(S): **COREY (T.V.)**, T.V., TIM/VAL,
HUTCHINGS, TV, COREY,
KENRICH, MANDY CREEK, NICA 1,
KUMIKO, BATTLEMENT, PRU

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 31 45 N
LONGITUDE: 130 27 54 W
ELEVATION: 800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 10 kilometres south of the Eskay Creek mine (104B 008).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6265938
EASTING: 409887

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Arsenopyrite Sphalerite Pyrargyrite
Ruby Silver Stibnite
COMMENTS: Trace sphalerite, ruby silver and possibly stibnite.
ASSOCIATED: Quartz
ALTERATION: Orthoclase Sericite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Massive Stratabound
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn I02 Intrusion-related Au pyrrhotite veins
DIMENSION: 1500 x 90 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: T.V. zone with widths over 90 metres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Salmon River	

LITHOLOGY: Rhyolite
Breccia
Black Mudstone
Black Shale

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1996
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	120.3000	Grams per tonne
Gold	2.0700	Grams per tonne

COMMENTS: Drill intersection of 12.3 metres. The company estimates an inventory up to 3920 kilograms of gold and 111,000 kilograms of silver (Information Circular 1997-1, page 29).
REFERENCE: WWW http://www.kenrichmining.com.

CAPSULE GEOLOGY

At the Corey property, 10 kilometres south of the Eskay Creek mine (104B 008), drilling of 22 core holes by Kenrich Mining Corporation, resulted in the discovery of significant stratabound massive to semimassive gold-silver-zinc-lead mineralization (Hutchings horizon) in the TV (Tim/Val) zone. It lies 700 meters south of the northern boundary of the Corey Property and is within the same structural corridor as the "Jeff Grid" or "710/910" gold-silver-zinc discovery area of the Granges, Springer, Cove claims 700 meters further north. The TV Zone is in steep sided, subalpine terrain, at an elevation of 800 meters.

Rock units had been assigned to the Salmon River Formation felsic and mafic volcanic sequence with interbedded sediments. Rock types observed include amygdaloidal andesite or dacite, flow-banded

CAPSULE GEOLOGY

feldspar-phyric dacite tuff, autobreccia and lapilli tuff and black mudstone. All units are strongly overprinted with orthoclase feldspar and sericite alteration (potassic alteration).

Mineralization comprises pyrite, galena, arsenopyrite, with traces of sphalerite, ruby silver and possibly stibnite. Sulphides occur as disseminated grains, veinlets and colloform in-fillings in breccia, rhyolite and black mudstone.

The TV zone has been traced up to 1500 metres on strike with widths over 90 metres (Information Circular 1996-1, page 25). A 12.3-metre diamond drilling intersection assayed 2.07 grams per tonne gold and 120.3 grams per tonne silver (WWW http://www.kenrichmining.com), June 1998.

In 1996, Kenrich drill tested the TV, Cumberland (104B 011) and Bench (104B 010) zones. In addition, an 1100-kilometre airborne magnetic and radiometric was completed. Drilling on the Cumberland prospect identified two zones of massive pyrite, barite and sphalerite, including a new zone of high grade silver mineralization. The TV zone was extensively re-mapped and drilling located a new silver-rich (pyrargarite) portion hosted by black shales, extending the zone to the north and east. Three drill holes tested the Bench zone. The company estimates the mineral inventory of the TV zone at approximately 3920 kilograms of gold and 111,000 kilograms of silver (Information Circular 1997-1, page 29).

Homestake Canada Inc., under option from Kenrich, mapped the southwestern part of the PRU block. On the Kenrich block, Kenrich conducted geological mapping and prospecting and developed drill targets on the HSOV (104B 387), Mandy Creek, Nica 1, Sheelagh Creek (104B 389), TM (104B 354) and GFJ (104B 233) occurrences. Other showings in the block consist of Battlement (see Web site), CB (104B 388), C-10 (104B 240), MM (104B 390) and Kumiko.

The Kumiko showing is located on the south bank of Kumiko Creek at an elevation of 700 metres. The showing consists of a sheared zone of intermediate volcanics, approximately 2 metres in width with a trend of about 170 degrees. Discontinuous lenses and veins of quartz occur throughout and mineralization is spotty. Mineralization consists of pyrite, chalcopyrite, galena with minor malachite and azurite staining. An initial grab sample yielded assay results of 3.31 grams per tonne gold, 864 grams per tonne silver and 3.04 per cent lead. Follow up work consisted of chip sampling across the face of the shear zone. A series of four, one metre chip samples (true width 0.8 metres) were taken with one sample returning values of 12.96 grams per tonne gold and 56.6 grams per tonne silver. Notes on the Kumiko are from the Kenrich Mining Corporation web site (http://www.kenrichmining.com), June 1998.

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EM EXPL 1996-B10; 1997-15; 1998-28
EMPR BULL 63
EMPR INF CIRC 1995-9, p. 25; *1996-1, p. 25; 1997-1, p. 29; 1998-1, p. 28
EMPR OF 1988-4; 1989-10; 1999-2; 1999-14
EMPR PF (Kenrich Mining Corporation Website (May 1998, Nov. 1999): Corporate Profile, TV Zone, Battlement Zone, 15 p.)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
N MINER May 19, July 7, 1997; May 4, 1998
PR REL Kenrich Mining Corporation, Aug.6, 1998
WWW http://www.kenrichmining.com
Placer Dome File

DATE CODED: 1995/12/27 CODED BY: GO FIELD CHECK: N
DATE REVISED: 1998/06/02 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 386**

NATIONAL MINERAL INVENTORY:

NAME(S): **BIG SLEEP (SULPHURETS)**, BIG SLEEP EAST, GRACE, TRACHSEL

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B08E
BC MAP:
LATITUDE: 56 28 22 N
LONGITUDE: 130 11 33 W
ELEVATION: 1463 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Big Sleep zone located about 600 metres north of the West zone (104B 193) and 400 metres west of the northwest end of Brucejack Lake (Assessment Report 24610).

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6259338
EASTING: 426539

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Pyrite, Tetrahedrite, Galena, Sphalerite, Tennantite, Gold
ASSOCIATED: Quartz, Carbonate, Graphite, Barite, Arsenopyrite
ALTERATION: Sericite, Quartz, Pyrite
ALTERATION TYPE: Sericitic, Silicific'n, Pyrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stockwork, Vein, Breccia
CLASSIFICATION: Epithermal, Epigenetic
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation; G07 Subaqueous hot spring Ag-Au
DIMENSION: 260 x 50 x 20 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Big Sleep structure.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Altered Volcanic
Andesitic Tuff
Andesitic Flow
Andesite
Sediment/Sedimentary
Argillite
Argillaceous Conglomerate
Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Sulphurets property is underlain by Upper Triassic Stuhini Group and Lower Jurassic Hazelton Group andesitic tuffs, flows and minor sediments that have locally been extensively and pervasively quartz-sericite-pyrite altered. To date, at least 40 zones of quartz +/- carbonate veining, stockwork and breccia have been discovered on the property. Mineralization consists of up to 15 per cent disseminated pyrite within altered volcanics and trace to several per cent combined tetrahedrite, sphalerite, galena, pyrargyrite and rare electrum and native gold within quartz veins.

The Big Sleep and Big Sleep East zones form a sinuous east to southeast trending zone of quartz +/- carbonate stockwork and veining exposed over a 400 metre strike length. Both zones are hosted within quartz-sericite-pyrite altered volcanic rocks adjacent the contact between Jurassic sediments and volcanics. The two zones are offset from each other by roughly 50 metres of left-lateral displacement along several minor structures.

The Big Sleep structure consists of a 260 metre long, 3 to 20 metre wide quartz-carbonate vein within a halo of quartz stockwork up to 50 metres wide. The zone has a sinuous, S-shaped surface exposure with thickening of the quartz vein and local 'pooling' of sulphides in the hinges of the 'S'. The Big Sleep East is an east to southeast trending, vertically dipping quartz vein stockwork up to 14 metres in width, exposed over 140 metres, hosted within a 10 metre wide halo of

CAPSULE GEOLOGY

strong sericitic alteration. Vein material has undergone moderate to strong fracturing and brecciation. Mineralization consists of less than 1 per cent up to 10 per cent pyrite, tetrahedrite, galena, sphalerite and rare arsenopyrite. Graphite is common as fracture fill and crosscutting stringers within the quartz veins. Trench sampling from the Big Sleep East zone yielded up to 13.2 grams per tonne gold and 1011.2 grams per tonne silver across 0.7 metre (Assessment Report 24610).

The Trachsel zone forms part of a continuous 680 metre long northwest to west trending sinuous structure of quartz veining and stockwork that extends east and southeast along the Big Sleep zone, southeast along the Big Sleep East zone, and then southeast to south along the Trachsel zone, which pinches out just north of Brucejack Creek. The Trachsel zone is exposed for 280 metres along strike, is up to 12 metres wide, and consists of both vertical and shallowly dipping quartz veins hosted within silicified argillite and argillaceous conglomerate adjacent the contact between Jurassic sediments and volcanics. Sericite alteration is peripheral to the zone. Sulphide content within the veins is generally low, consisting of trace to minor amounts of pyrite, arsenopyrite, tennantite, tetrahedrite, sphalerite, galena and rare native gold. Trench sampling yielded up to 8.7 grams per tonne gold and 1797.3 grams per tonne silver across 0.75 metre (Assessment Report 24610).

The Grace zone is a zone of quartz +/- barite stockwork and veining hosted within quartz-sericite-pyrite altered andesitic volcanics, located west and northwest of the Big Sleep zone. The zone is from 3 to 15 metres wide, trends east to northeast, and dips between vertical and 60 degrees to the northeast. Mineralization consists of 1 to 10 per cent pyrite and trace tetrahedrite within altered rocks, and trace tetrahedrite, sphalerite and galena in the veins. The western end of the zone is characterized by a clam-shaped quartz vein/breccia 'blowout' of intense silicification, while the eastern portion of the zone appears to be folded around a local, east-west recumbent fold axis. Trench samples yielded up to 8.8 grams per tonne gold and 75.7 grams per tonne silver across a 1 metre width (Assessment Report 24610).

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EMPR BULL 63
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GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
Simpson, T.M. (1983): The Geology and Hydrothermal Alteration of the Sulphurets Deposits, Northwest British Columbia, M.Sc. Thesis, University of Idaho
Kirkham, R.V. (1963): The Geology and Mineral Deposits in the Vicinity of the Mitchell and Sulphurets Glaciers, M.Sc. Thesis, U.B.C.

DATE CODED: 1996/07/16 CODED BY: GO FIELD CHECK: N
DATE REVISED: 1996/07/16 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104B 387**

NATIONAL MINERAL INVENTORY:

NAME(S): **HSOV**, COREY , PRU, KENRICH

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 28 00 N
LONGITUDE: 130 24 00 W
ELEVATION: 1440 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Located across the valley to the east of Mount Madge.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6258899
EASTING: 413743

COMMODITIES: Zinc

MINERALS
SIGNIFICANT: Sphalerite Pyrite Marcasite
COMMENTS: Trace tetrahedrite.
ASSOCIATED: Quartz Gypsum Anhydrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated Massive
CLASSIFICATION: Hydrothermal Exhalative

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Rhyolite Breccia
Rhyolite
Black Shale
Mudstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Post-mineralization GRADE:

CAPSULE GEOLOGY

The HSOV showing, discovered in September 1996, is located across the valley to the east of Mount Madge at approximately 1440 metres elevation. The showing lies at the contact between rhyolite breccias and black shales; the horizon has been traced for one kilometre along strike and 500 metres down dip. Mineralization consists of a zone of semi-massive to massive marcasite and pyrite, with minor gypsum, anhydrite and sphalerite in a black, sooty matrix. The main part of the showing consists of three imbricate segments of a layer up to 3.5 metres thick which is exposed for 35 metres along strike with a thinner layer offset to the east which is up to one metre thick and exposed for 30 metres along strike. Blocky altered mudstone and felsic volcanic clasts are supported within a sponge like matrix of sulphides and sulphosalts along with gypsum associated with sulphidic tubules. Strong shearing and associated thrust faulting has complicated stratigraphy, however it remains that the mineralization is located at or near the mudstone/felsic breccia contact. The mineralogy, texture and setting all suggest that the showing is related to a submarine exhalative vent system ('black smoker').

Notes are from the Kenrich Mining Corporation web site (http://www.kenrichmining.com), June 1998. A grab sample returned 2.18 grams per tonne gold, 505.9 grams per tonne silver and 1.26 per cent copper (June 4, 1998 Press Release).

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EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
EMPR INF CIRC 19981, p. 28
EMPR OF 1988-4; 1989-10; 1999-2; 1999-14
EMPR PF (Kenrich Mining Corporation (May 1998, Nov. 1999):
Corporate Profile, HSOV Showing, 6 p.)
GSC MAP 9-1957; 1418A

BIBLIOGRAPHY

GSC P 89-1E, pp. 145-154
GCNL #230(Dec.1), 1997
N MINER May 4, 1998
PR REL Kenrich Mining Corporation, June 4,Aug.6, 1998
WWW http://www.kenrichmining.com
Placer Dome File

DATE CODED: 1998/06/02 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1998/06/02 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 388**

NATIONAL MINERAL INVENTORY:

NAME(S): **CB**, COREY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 23 00 N
LONGITUDE: 130 27 00 W
ELEVATION: 1020 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Located south of the Lee Brant Glacier.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6249688
EASTING: 410468

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Pyrite
COMMENTS: Trace tetrahedrite.
ASSOCIATED: Quartz Gypsum Anhydrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	

LITHOLOGY: Hornfels
Quartz Monzonite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Post-mineralization
GRADE:

CAPSULE GEOLOGY

The CB Showing is located south of the Lee Brant Glacier at an elevation of 1020 metres. The vein was located by prospecting the boulder train in the lateral moraine along the flanks of the Lee Brant Glacier and establishing the origin of quartz, sulphide bearing boulders. The showing consists of a pinch and swell quartz vein varying from 1.5 to 2.5 metres in width, trending 212 degrees and dipping from 77 to 81 degrees to the southeast with a true length of approximately 44 metres. The vein cuts across hornfelsed Stuhini Group sediments and quartz monzonite of the Lee Brant Stock. Mineralization consists of semi-massive to massive, medium to coarse grained pyrite. A preliminary grab sample yielded 4.53 grams per tonne gold and 50.7 grams per tonne silver. Chip sampling returned a result of 2.3 grams per tonne gold over a width of 0.6 metre.

Notes are from the Kenrich Mining Corporation web site (http://WWW.kenrichmining.com), June 1998.

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GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
WWW http://www.kenrichmining.com

DATE CODED: 1998/06/02 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1998/06/02 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 389**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHEELAGH CREEK**, COREY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 22 00 N
LONGITUDE: 130 26 00 W
ELEVATION: 1440 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Located on the east wall of a small intermittent stream draining from the north into Sheelagh Creek.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6247812
EASTING: 411458

COMMODITIES: Gold Silver

MINERALS
SIGNIFICANT: Pyrite
COMMENTS: Trace tetrahedrite.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	

LITHOLOGY: Sediment/Sedimentary

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Post-mineralization
GRADE:

CAPSULE GEOLOGY

The Sheelagh Creek showing is located on the east wall of a small intermittent stream draining from the north into Sheelagh Creek. The showing consists of a 2.5 to 3.5-metre wide quartz vein striking approximately 045 degrees and dipping about 75 degrees to the northwest. It is traceable over 8 metres before it disappears under the surrounding overburden. Mineralization consists of disseminated to semi massive pods of pyrite. Three one-metre chip samples were taken across the face of vein and produced assay results of 15.77 grams per tonne gold and 41.83 grams per tonne silver over 3.0 meters. A selected grab sample returned values of 61.37 grams per tonne gold and 109.4 grams per tonne silver.

Notes are from the Kenrich Mining Corporation web site (http://www.kenrichmining.com), June 1998.

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EMPR INF CIRC 1997-1, p. 29; 1998-1, p. 28
EMPR OF 1988-4; 1989-10
EMPR PF (Kenrich Mining Corporation (May 1998, Nov. 1999):
Corporate Profile, Sheelagh Creek Showing, 6 p.)
GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
GCNL #230(Dec.1), 1997
N MINER May 4, 1998
WWW http://www.kenrichmining.com; http://www.infomine.com/

DATE CODED: 1998/06/02 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1998/06/02 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 390**

NATIONAL MINERAL INVENTORY:

NAME(S): **MM**, COREY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104B08W
BC MAP:
LATITUDE: 56 28 20 N
LONGITUDE: 130 25 40 W
ELEVATION: 800 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Located on the east bank of Many Creek, approximately 1.5 kilometres northeast of Mount Madge.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6259552
EASTING: 412045

COMMODITIES: Gold, Silver, Copper, Zinc

MINERALS
SIGNIFICANT: Sphalerite, Galena, Arsenopyrite, Pyrite, Chalcopyrite, Tetrahedrite
COMMENTS: Trace tetrahedrite.
ASSOCIATED: Quartz
ALTERATION: Chlorite, Sericite, Ankerite, Fuchsite, Pyrite
ALTERATION TYPE: Chloritic, Sericitic, Quartz-Carb.
MINERALIZATION AGE: Unknown

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Betty Creek	
Lower Jurassic	Hazelton	Unuk River	

LITHOLOGY: Andesitic Tuff, Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Post-mineralization
GRADE:
COMMENTS: Area metamorphism-result of folding, plutonism & dynamic metamorphism.

CAPSULE GEOLOGY

The MM showing is located on the east bank of Many Creek, approximately 1.5 kilometres northeast of Mount Madge and at an elevation of 800 metres. The showing is a mylonitic zone in andesite volcanic rocks. It has been traced for over 50 metres and is up to 25 metres wide.

Mineralization lies within the Unuk River Member of the Betty Creek Formation composed of andesitic tuff, marked by a wide zone of ductile deformation and cataclasis. Alteration is intense, with pervasive bands and pods of ankerite, fuchsite, quartz-carbonate, sericite and pyrite. These rocks host sulphide mineralization as disseminations, vein stockworks and bands of sphalerite, galena, arsenopyrite, minor chalcopyrite, trace tetrahedrite and pyrite. Peripheral alteration consists of chlorite and ferrous carbonate. Cross cutting zones of shearing trends both parallel and at right angles to Mandy Creek.

Three trenches were excavated in 1993 over an exposed length of 50 metres and 25 metres width. A total of 17, one metre chip samples were taken with mixed results. Trench 101 returned a wide zone of anomalous but uneconomic values. The most significant chip sample returned 1.17 grams per tonne gold.

Notes are from the Kenrich Mining Corporation web site (http://WWW.kenrichmining.com), June 1998.

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EMPR BULL 63
EMPR FIELDWORK 1987, pp. 199-209; 1988, pp. 241-250
EMPR OF 1988-4; 1989-10
EMPR PF (Kenrich Mining Corporation (May 1998, Nov. 1999):
Corporate Profile, MM Showing, 1 p.)

BIBLIOGRAPHY

GSC MAP 9-1957; 1418A
GSC P 89-1E, pp. 145-154
WWW http://www.kenrichmining.com

DATE CODED: 1998/06/02 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1998/06/02 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104B 391**

NATIONAL MINERAL INVENTORY:

NAME(S): **MACK-GNC**, MACK, GNC

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104B09W
BC MAP:
LATITUDE: 56 36 47 N
LONGITUDE: 130 29 24 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Location of Mack 1 claim.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6275307
EASTING: 408552

COMMODITIES: Zinc, Copper, Silver

MINERALS
SIGNIFICANT: Pyrite, Sphalerite
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Stratabound, Disseminated
CLASSIFICATION: Hydrothermal, Volcanogenic

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Salmon River	
Lower Jurassic	Hazelton	Mount Dilworth	

LITHOLOGY: Carbonaceous Mudstone
Andesite
Rhyolite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The GNC property, 3.5 kilometres southwest of Eskay Creek (104B 008), is owned by Prime Resources Group Inc. and Canarc Resource Corp. Drilling intersected mineralization within similar stratigraphy to the Eskay Creek mine. Hangingwall rocks are mudstones and andesites; footwall rocks are rhyolites. A 3.3-metre intersection contains 30 per cent semi-massive sulphides, principally pyrite, and pervasive carbonate alteration. Underlying this zone, the footwall rhyolite breccias are altered to chlorite and sericite, followed by a thick, sericite-altered autobrecciated rhyolite sequence. Separate 1-metre intervales assayed up to 0.66 per cent zinc, 0.37 per cent copper, 6 grams per tonne silver and 0.063 grams per tonne gold (GCNL #29 (Feb.11), 1998).

BIBLIOGRAPHY

GCNL #29 (Feb.11), 1998

DATE CODED: 1998/08/19
DATE REVISED: 1998/09/23

CODED BY: LDJ
REVISED BY: LDJ

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **104F 001**

NATIONAL MINERAL INVENTORY: 104F16 Mo4

NAME(S): **STAN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104F16E
BC MAP:
LATITUDE: 57 56 05 N
LONGITUDE: 132 01 13 W
ELEVATION: 1800 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Centre of Stan claims.

MINING DIVISION: Liard
UTM ZONE: 08 (NAD 83)
NORTHING: 6425331
EASTING: 676415

COMMODITIES: Molybdenum

MINERALS
SIGNIFICANT: Molybdenite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Igneous-contact

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Quartz Monzonite
Meta Sediment/Sedimentary

HOSTROCK COMMENTS: Mineralization occurs at border of a pluton but description does not specify the actual host.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

Plutonic Rocks

CAPSULE GEOLOGY

Small high-grade pockets of molybdenite occur near the borders of a Tertiary-Cretaceous Stock that intrudes Upper Triassic metasediments.

BIBLIOGRAPHY

GSC MAP 7-1959; 1418A

DATE CODED: 1985/07/24
DATE REVISED: 1987/12/16

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104F 002**

NATIONAL MINERAL INVENTORY: 104F16 Mo1

NAME(S): **LLC**, BALSOM

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104F16E
BC MAP:
LATITUDE: 57 52 59 N
LONGITUDE: 132 04 07 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard

UTM ZONE: 08 (NAD 83)

NORTHING: 6419457
EASTING: 673804

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite Magnetite
ASSOCIATED: Pyrite Quartz Specularite
ALTERATION: Powellite
COMMENTS: Surface material is oxidized.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Disseminated
CLASSIFICATION: Hydrothermal Porphyry

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Cretaceous-Tertiary	Undefined Group	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Syenite
Andesite
Siltstone
Quartz Monzonite
Lamprophyre

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1968

COMMODITY	GRADE	
Molybdenum	0.1500	Per cent

COMMENTS: This is a value for molybdenite (not molybdenum), over a 55 metre length.
REFERENCE: EMR MP CORPFILE (Spartan Explorations Ltd.).

CAPSULE GEOLOGY

A small stock of Tertiary-Cretaceous quartz monzonite porphyry intrudes moderately dipping Upper Triassic andesite and finely bedded siltstone. An annular ring of syenite with hornfels and amphibolites approximately one kilometre in diameter surrounds the intrusive. The syenite is thought to be a product of metasomatism and hydrothermal alteration. Quartz monzonite dykes up to 1.5 metres wide cut the syenite near the main intrusive stock. The whole complex is cut by light green lamprophyre and andesitic dykes.

A strong steeply dipping fracture system trending north and northeast cuts the syenite and to a lesser extent the quartz porphyry, volcanics and sediments. Magnetite, specular hematite and molybdenite occur in fractures. The molybdenite occurs as fine-grained disseminated flakes within the quartz veins. This type of veining and mineralization were observed over much of the claim area but mainly within the syenite.

The main mineralized zones appear to be peripheral to the intrusive stock. The zones have a north-south elongation parallel to the more prominent faults. They are approximately 60 by 120 by 300 metres in plan with vertical exposures of 90 to 300 metres. Surface material is highly oxidized leaving vuggy quartz veins with

CAPSULE GEOLOGY

minor disseminations of molybdenite and powellite.
Average grades of 0.05 to 0.06 per cent molybdenite were obtained from surface samples. A 55 metre length of drill core contained 0.15 per cent molybdenite.

BIBLIOGRAPHY

EMPR ASS RPT 253, *1893
GSC MAP 7-1959, 1418A
EMPR MP CORPFILE (Spartan Explorations Ltd.)
EMPR AR 1958-6; 1959-6,144; 1968-38
EMPR GEM 1969-373; 1977-E223
EMPR PF (Big Red Claim)
Chevron File

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1987/12/16	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104F 003**

NATIONAL MINERAL INVENTORY: 104F16 Cu1

NAME(S): **KITCHENER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104F16E
BC MAP:
LATITUDE: 57 49 00 N
LONGITUDE: 132 07 07 W
ELEVATION: Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 08 (NAD 83)
NORTHING: 6411943
EASTING: 671155

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Bornite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Phyllite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Chalcopyrite, bornite and pyrite are observed on the north side of Mt. Kitchener in an area underlain by Upper Triassic sediments and metasediments. The mineralization consists of disseminated sulphides in a sheared phyllite.

BIBLIOGRAPHY

GSC MAP *7-1959, 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1987/12/17 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104F 004**

NATIONAL MINERAL INVENTORY: 104F16 Mo3

NAME(S): **CHUTINE LAKE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104F16W
BC MAP:
LATITUDE: 57 46 00 N
LONGITUDE: 132 22 07 W
ELEVATION: 790 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 08 (NAD 83)
NORTHING: 6405774
EASTING: 656526

COMMODITIES: Molybdenum

MINERALS
SIGNIFICANT: Molybdenite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Porphyry

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Granite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Veins and disseminated rosettes of coarse molybdenite occur in fine-grained Tertiary-Cretaceous leucogranite.

BIBLIOGRAPHY

GSC MAP *7-1959; 1418A
EMPR AR 1959-6

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1987/12/17 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104F 005**

NATIONAL MINERAL INVENTORY:

NAME(S): **TRI 6**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104F09E 104F09W
BC MAP:
LATITUDE: 57 36 50 N
LONGITUDE: 132 15 07 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of quartz veins and "hydrothermal breccia zone", about 1.5 kilometres west of Triumph Creek from a point about 11 kilometres up from its confluence with the Chutine River.

MINING DIVISION: Liard
UTM ZONE: 08 (NAD 83)
NORTHING: 6389050
EASTING: 664153

COMMODITIES: Gold, Silver, Copper, Zinc, Lead

MINERALS

SIGNIFICANT: Arsenopyrite, Pyrite, Galena, Sphalerite, Chalcopyrite, Pyrrhotite
ASSOCIATED: Quartz, Carbonate
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Siltstone
Basaltic Andesite
Argillite
Greywacke
Limestone
Phyllite
Greenstone
Pillow Basalt
Diorite
Granite

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1990

COMMODITY	GRADE	
Silver	179.4000	Grams per tonne
Gold	4.6000	Grams per tonne
Copper	0.3400	Per cent
Lead	2.3000	Per cent
Zinc	6.9000	Per cent

REFERENCE: Assessment Report 21202.

CAPSULE GEOLOGY

The Tri 6 area, as outlined by Souther (Geological Survey of Canada Map 7-1959), consists of a thick sequence of Middle (?) and Upper Triassic fine-grained sediments and minor intercalated volcanic rocks. The sediments consist of dark grey argillite, lighter grey silicious siltstone and fine-grained greywacke. Lenses of impure limestone and calcareous shale occur at several stratigraphic levels. The intercalated volcanics consist of green and greyish andesite, greenstone and pillow basalt. Granitic and dioritic rock of the Jurassic to Tertiary Coast Plutonic Complex intrude the older rocks away from the occurrence area.

CAPSULE GEOLOGY

Several quartz veins ranging from 0.05 to 3.5 metres in width and 80 metres in length occur within folded siltstones. The majority of the veins have a northwest strike and are steeply dipping. Sulphide mineralization consists of patchy areas of pyrite (2-5 per cent), galena (2-5 per cent), chalcopyrite (1-2 per cent), sphalerite (1-2 per cent) and arsenopyrite (up to 20 per cent). Brecciated fragments of siltstone and lesser dioritic fragments comprise 85 to 95 per cent of the rock. The matrix is 10 to 15 per cent quartz with 1 to 3 per cent pyrite. A 2.5-metre sample from one quartz vein assayed 1.0 gram per tonne gold, 63.3 grams per tonne silver and 0.5 per cent lead (Assessment Report 19143). Other vein samples had assay highs of 0.32 per cent copper and 0.82 per cent zinc. A hydrothermal breccia zone outcrops over a 30 by 30 metre area below the quartz veins and may be genetically related. Assays from this zone were not as significant; one sample over 1 metre yielded 12 grams per tonne silver with slightly elelevated gold.

A small quartz-carbonate alteration zone was located about 600 metres north of the quartz vein zone. Basaltic-andesite hosts the quartz-carbonate vein breccias and alteration zones. The weathered surface is gossanous. This zone is described as containing pyrite, chalcopyrite, arsenopyrite and galena as fracture fillings in localized shears estimated at up to 30 centimetres wide and 40 metres long. The highest gold values came from grab samples and range from 4.6 and 9.1 grams per tonne. One sample yielded 4.6 grams per tonne gold, 179.4 grams per tonne silver, 0.34 per cent copper, 2.3 per cent lead and 6.9 per cent zinc (Assessment Report 21202).

Also in the vicinity, small patches (1-15 centimetrs) of semi-massive pyrite, pyrrhotite and chalopyrite are found irregularly distributed in pillowed basalts. The patches concentrate in the intersticies along pillow boundaries. These sulphide patches were observed only close to the contact with phyllite. The best sample yielded 0.08 per cent copper over 30 centimetres (Assessment Report 19143).

BIBLIOGRAPHY

EMPR ASS RPT *19143, *21202
GSC MAP 7-1959; 1418A

DATE CODED: 1997/08/19 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1998/01/13 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104F 006**

NATIONAL MINERAL INVENTORY: 104F16 Mo2

NAME(S): **SAM**, ANG

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104F16E
BC MAP:
LATITUDE: 57 52 06 N
LONGITUDE: 132 11 13 W
ELEVATION: 1167 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Possible confusion of location and/or corelation of Sam and Ang properties.

MINING DIVISION: Liard
UTM ZONE: 08 (NAD 83)
NORTHING: 6417521
EASTING: 666858

COMMODITIES: Molybdenum

MINERALS
SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz
COMMENTS: Mineralization occurs in a gossan zone.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Argillite
Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This property is underlain by steeply dipping east trending Upper Triassic argillites and tuffs. Molybdenite occurs in quartz veinlets that cut these rocks in a gossan zone.

BIBLIOGRAPHY

EMPR ASS RPT 1786
EMPR AR 1962-7; 1963-7
EMPR GEM 1969-373
GSC MAP 7-1959; 1418A
EMR MP CORPFILE (Coronet Mines Ltd.)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1987/12/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104F 007**

NATIONAL MINERAL INVENTORY: 104F9 Cu1

NAME(S): **TAP**, GAY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104F09E
BC MAP:
LATITUDE: 57 33 36 N
LONGITUDE: 132 10 49 W
ELEVATION: 2330 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Claim location area is definite but specific showing location is not.

MINING DIVISION: Liard
UTM ZONE: 08 (NAD 83)
NORTHING: 6383229
EASTING: 668682

COMMODITIES: Gold Silver Copper Molybdenum

MINERALS
SIGNIFICANT: Pyrrhotite Molybdenite
COMMENTS: Unspecified copper mineralization occurs.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Undefined Group	Unnamed/Unknown Formation	
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Granitic Rock
Limestone

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

CAPSULE GEOLOGY

Gold, silver, and copper occur in pyrrhotite zones at the contact of a Tertiary-Cretaceous intrusive with Permian limestones. Molybdenite occurs in fractures within granitoid rock.

BIBLIOGRAPHY

EMPR AR *1967-29; 1968-39
EMPR ASS RPT 1701
GSC MAP 7-1959; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1987/12/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104F 008**

NATIONAL MINERAL INVENTORY: 104F16 Cu2

NAME(S): **EDSON**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104F16E
BC MAP:
LATITUDE: 57 50 30 N
LONGITUDE: 132 10 27 W
ELEVATION: 1050 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 08 (NAD 83)
NORTHING: 6414586
EASTING: 667740

COMMODITIES: Copper Silver Gold

MINERALS
SIGNIFICANT: Chalcopyrite Bornite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Podiform Massive
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Quartz Chlorite Mica Schist
Phyllite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1966
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	20.6000	Grams per tonne
Gold	0.3400	Grams per tonne
Copper	0.7000	Per cent

COMMENTS: This chip is approximately two metres in length.
REFERENCE: Annual Report 1966, page 24.

CAPSULE GEOLOGY

This occurrence is underlain by Upper Triassic metasediments that consist of severely crumpled and folded quartz-chlorite-mica schists and phyllites that have an 80 degree strike and steep north dips. Ten per cent of these contorted sediments are made up of white quartz in the form of irregular masses, gashes and disconnected pods scattered throughout the sediments.

Chalcopyrite and pyrite mineralization was observed in the above rock in granular pods and massive blebs which at least in part are connected with folding. The mineralized outcrops are scattered over a strike distance of about 300 metres with widths less than 60 centi-metres. The longest continual mineralized exposure was traced over 30 metres. A chip sample over 2 metres assayed 0.34 grams per tonne gold, 20.6 grams per tonne silver, and 0.70 per cent copper.

The massive white quartz veins and gashes are deficient in sulphides, except for a trace of chalcopyrite and bornite observed at one locality.

BIBLIOGRAPHY

EMPR AR 1966-24
GSC MAP 7-1959; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1987/12/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104F 009**

NATIONAL MINERAL INVENTORY: 104F16 Mo3

NAME(S): **CHUTINE NORTH**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104F16W
BC MAP:
LATITUDE: 57 48 00 N
LONGITUDE: 132 23 43 W
ELEVATION: 730 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 08 (NAD 83)
NORTHING: 6409422
EASTING: 654798

COMMODITIES: Molybdenum

MINERALS
SIGNIFICANT: Molybdenite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Porphyry

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Granite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Veins and disseminated rosettes of coarse molybdenite occur in fine-grained Tertiary-Cretaceous leucogranite.

BIBLIOGRAPHY

GSC MAP *7-1959; 1418A
EMPR AR 1959-6

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1987/12/17 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 001**

NATIONAL MINERAL INVENTORY: 104G13 Cu3

NAME(S): **POKE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G13W
BC MAP:
LATITUDE: 57 48 29 N
LONGITUDE: 131 51 52 W
ELEVATION: 850 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6410942
EASTING: 329811

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Biotite K-Feldspar
ALTERATION: K-Feldspar Biotite
ALTERATION TYPE: Potassic Biotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Jurassic-Cretaceous	Stuhini	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Volcanic
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks

PHYSIOGRAPHIC AREA: Taku Plateau

CAPSULE GEOLOGY

This occurrence is related to the marginal phase of a large Juro-Cretaceous granodiorite stock that cuts Upper Triassic volcanics of the Stuhini Group. The plutonics and volcanics have both undergone intense potash metasomatism near contacts, with formation of biotite and potash feldspar. The marginal phases of the intrusion are complex and show evidence of multiple intrusion.

Chalcopyrite is observed, dispersed and disseminated within fracture zones, in syenitized volcanics exposed along a stream bank near the intrusive contact. The intrusives are also reported to contain some copper mineralization.

BIBLIOGRAPHY

EM EXPL 1999-19-31
EMPR AR *1963-7; *1965-18
EMPR ASS RPT 535, 9092, 9193
GSC MAP 9-1957; 11-1971; 1418A
GSC MEM 246, p. 75
GSC P *71-44

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1987/12/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 002**

NATIONAL MINERAL INVENTORY: 104G13 Cu1

NAME(S): **GORDON**, LIMPOKE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G13W
BC MAP:
LATITUDE: 57 48 22 N
LONGITUDE: 131 47 37 W
ELEVATION: 500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6410550
EASTING: 334009

COMMODITIES: Copper

MINERALS

SIGNIFICANT:	Chalcopyrite	Malachite	Bornite	Pyrite
ASSOCIATED:	Malachite	Biotite	Epidote	
ALTERATION:	K-Feldspar	Epidote	Biotite	Magnetite
ALTERATION TYPE:	Potassic	Epidote		Biotite
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Jurassic-Cretaceous			Unnamed/Unknown Informal

LITHOLOGY: Syenite Porphyry
Volcanic
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks

PHYSIOGRAPHIC AREA: Taku Plateau

CAPSULE GEOLOGY

The Gordon occurrence is related to the marginal phase of a large Juro-Cretaceous granodiorite stock that cuts Upper Triassic volcanics of the Stuhini Group. The plutonics and volcanics have both undergone intense potash metasomatism near contacts, with formation of biotite and potash feldspar. The marginal phases of the intrusion are complex and show evidence of multiple intrusion.

The mineralized rocks consist of pink syenite porphyry and fine-grained dark green and pink porphyritic material that may be of volcanic origin. The syenite porphyry is a mottled pink and grey colour and is very magnetic. All the rocks are cut by veinlets of potash feldspar with pockets of coarse biotite, epidote and magnetite.

Disseminated pyrite mineralization is widespread. Scattered patches and disseminations of weak chalcopyrite mineralization with some malachite was observed in outcrops.

The Minister of Mines Annual Report of 1930 reports that a tunnel was driven west for 14 metres along a quartzose cross-fracture about 10 centimetres wide, carrying some chalcopyrite, bornite, and copper carbonate. The location of this work was identified as being about three kilometres north of the actual recorded claim site. The prospect was not considered of commercial interest at the time.

BIBLIOGRAPHY

EMPR AR *1930-118; *1966-22
EMPR ASS RPT 847
GSC MAP 9-1957; 11-1971; 309A; 1418A
GSC MEM 246, p. 75
GSC P *71-44

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1987/12/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 003**

NATIONAL MINERAL INVENTORY: 104G14 Cu1

NAME(S): **GLENORA-KING**, WINTER CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G14W
BC MAP:
LATITUDE: 57 54 35 N
LONGITUDE: 131 24 28 W
ELEVATION: 1375 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6421199
EASTING: 357338

COMMODITIES: Gold, Silver, Copper

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrrhotite, Pyrite
ASSOCIATED: Calcite, Serpentinite, Malachite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia, Podiform, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Augite Andesite Porphyry
Feldspar Andesite Porphyry
Rhyolite Tuff
Dacite Tuff
Andesite
Syenite
Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Taku Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1930

COMMODITY	GRADE	
Silver	72.0000	Grams per tonne
Gold	10.9700	Grams per tonne
Copper	9.7000	Per cent

REFERENCE: Annual Report 1930, page A119.

CAPSULE GEOLOGY

The area is underlain by a sequence of steeply dipping undifferentiated intermediate volanic rocks of the Upper Triassic Stuhini Group. These rocks are intruded to the north by a Juro-Cretaceous granitic complex consisting of granodiorite, diorites, and leucogranite. The property contains primarily augite andesite porphyry and feldspar andesite porphyry of varying composition and texture, as well as minor rhyolite-dacite tuffs, massive pyritiferous andesite, syenite and monzonite.

Mineralization is related to a late-stage fracture-shear system that is parallel or sub-parallel to the regional trend of the volcanic units. Sulphide minerals observed are pyrite, chalcopoyrite and pyrrhotite. Chalcopyrite occurs as fracture fillings in the volcanics and pyrrhotite and chalcopyrite occurs in minor lenses, up to 10 metres long. Brecciated calcareous gangue has been observed with these lenses. Blebby chalcopyrite is noted in minor quantities along heavily serpentinized shear surfaces in massive andesites. Mineralization is local and inconsistent throughout. Malachite staining is also observed.

Analysis of pyrrhotite-chalcopyrite lenses taken in 1929 indicated a high value of 10.97 grams per tonne gold, 72.0 grams per

CAPSULE GEOLOGY

tonne silver and 9.7 per cent copper. Samples from 1976 trenching contained highs of only 3.77 grams per tonne gold, 18.86 grams per tonne silver and 3.9 per cent copper. Generally samples contained values of less than 0.24 grams per tonne gold.

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EMPR GEM 1974-340; 1975-E184; 1976-E186
GSC MAP 9-1957; 11-1971; 309A
GSC MEM 246, p. 74
GSC P 71-44
GSC SUM RPT 1926, p. 34
Falconbridge File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/13 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 004**

NATIONAL MINERAL INVENTORY: 104G14 Au1

NAME(S): **BUCK BAR**

STATUS: Past Producer — Open Pit
REGIONS: British Columbia
NTS MAP: 104G14E
BC MAP:
LATITUDE: 57 52 14 N
LONGITUDE: 131 14 47 W
ELEVATION: 150 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6416511
EASTING: 366754

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Gold
COMMENTS: Placer gold.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unconsolidated
CLASSIFICATION: Placer

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

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

LITHOLOGY: Gravel
Clay

HOSTROCK COMMENTS: The Coast Mountains are considered to be the source of the gold-bearing glacial drift at Buck Bar.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Glenora Trench

CAPSULE GEOLOGY

Stikine River placer gold is believed to be derived from sources in the Coast Mountains and originated in post-glacial time. Glacial ice moved up the Stikine River as far as Telegraph Creek where it appears to have halted. The richest placer and the coarsest gold is found a few kilometres below on Buck Bar. At this bar bedrock is less than a metre above the river channel and is composed of sand-stone, which dips in a downstream direction. Most of the gold was recovered from the bedrock surface, within the clay and sand. Some gold occurs in bars lower down but it is very fine, flour gold.

The Stikine River formerly flowed along a west side terrace course below Hyland Creek. Buck Bar lies on this course and other parts of the old channel may contain gold.

The Stikine placers were discovered and worked in the 1860's. Buck Bar is known to have yielded $100 a day, per rocker (in 1860's dollar value). Work was done for a considerable period, though total production is unknown.

BIBLIOGRAPHY

EMPR BULL 28, pp. 56-57
EMPR AR 1931-52; 1933-61
GSC MEM *246, pp. 78-80
GSC P 71-44

DATE CODED: 1985/07/24 — CODED BY: GSB — FIELD CHECK: N
DATE REVISED: 1988/01/14 — REVISED BY: GJP — FIELD CHECK: N

MINFILE NUMBER: **104G 005**

NATIONAL MINERAL INVENTORY: 104G9 Au1

NAME(S): **HAWK**, KLASTLINE, KONA, EAST CREEK

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104G09W
BC MAP:
LATITUDE: 57 42 14 N
LONGITUDE: 130 29 37 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Hawk property is located about 2 kilometres west-southwest of Nuttlude Lake and about 9 kilometres east of Edziza Peak.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6396725
EASTING: 410991

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite, Galena, Arsenopyrite
ASSOCIATED: Quartz, Calcite
MINERALIZATION AGE:

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Andesite
Greywacke
Siltstone
Conglomerate
Agglomerate
Quartz Monzonite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Iskut Trench

INVENTORY

ORE ZONE: HAWK

REPORT ON: Y

CATEGORY: Indicated
YEAR: 1988
QUANTITY: 11520 Tonnes

COMMODITY	GRADE	
Gold	12.0000	Grams per tonne

REFERENCE: Prospectus, Moongold Resources Inc., October 14, 1988.

CAPSULE GEOLOGY

The Hawk or Klastline occurrence is located a few kilometres west of Nuttlude Lake, just southeast of Mount Edziza Peak. Mineralization was first evaluated in 1957 when Torbit Silver Mines explored a vein on the north side of Hawk Creek. Shawnigan (or possibly Shawinigan) Mining and Smelting Company Ltd. restaked the property and conducted an x-ray drilling program in 1967. Newhawk Gold Mines staked the Hawk claims in 1978 and conducted a geochemical survey followed by 278 metres of drifts and crosscuts on the vein in 1979 and 1980. Nine underground diamond-drill holes totalling 430 metres were completed in 1980 also. Cominco optioned the Hawk and the adjacent Spectrum (104G 036) in 1984 and conducted soil and geophysical surveys (mag and VLF). Cominco drilled 1199 metres in 10 holes in 1988-89 (apparently on the Spectrum part of the property). Between 1987 and 1989, Monogold optioned the property and completed a program of rock and soil sampling and geophysical surveys (mag, VLF, resistivity). In 1990 and 1991, Columbia Gold Mines optioned the Hawk claims from Newhawk and, also holding the Red Dog claims, drilled 3142 metres in 26 holes and excavated 631 metres of trenches. See Spectrum - 104G 036 for further information.

The property is underlain by Upper Triassic sedimentary and volcanic rocks which have been intruded by diorite and granodiorite

CAPSULE GEOLOGY

of Juro-Cretaceous Age. These rocks are overlain by a thick section of Tertiary and younger basalts, andesites and latite flows of the Mount Edziza eruption.

The Upper Triassic sediments consist of about 900 metres of volcanic agglomerate, greywacke, grit and chert breccia interbedded with tuffaceous siltstone. The volcanics are made up of about 1200 metres of green, purple and grey andesites with some greywackes, siltstone and conglomerate. These rocks are characterized by east trending open folds which are part of a broad anticline and syncline plunging gently to the west. This strata is intruded by northeast trending dykes of quartz monzonite related to the granodiorite plutons. It is also cut by steeply dipping northeast and northwest trending faults.

A number of northwest striking mineralized quartz veins occur in the Triassic volcanics. These veins range from 10 centimetres to over 1 metre in width, and often contain massive sections of pyrite and arsenopyrite with lesser amounts of sphalerite, galena and chalcopyrite in quartz and calcite gangue. High gold and silver values are found where the veins are mineralized with sphalerite and/or arsenopyrite.

One vein had been traced for over a 200 metre strike length on surface and was explored through underground workings in 1979/80. Continuity of the vein beetween surface and the underground level was established but high gold values were restricted to narrow widths averaging 0.3 metres. One drill intersection from work done in 1980 yielded a high value of 93.77 grams per tonne gold over 0.45 metres. A 50-centimetre chip sample across one of the veins also assayed 45.26 grams per tonne silver, 0.87 per cent zinc and 0.43 per cent lead. Indicated reserves of the Hawk are 11,520 tonnes grading 12.0 grams per tonne gold (Prospectus, Moongold Resources Inc., October 14, 1988).

Prospecting within an area near the mouth of East Creek that contained a gold occurrence found by Moongold Resources in 1989 resulted in the discovery of the East Creek Gold zone. Gold mineralization is hosted in a strong 015 degree trending steeply dipping siliceous shear zone that contains zones of massive pyrite, chalcopyrite, sphalerite and arsenopyrite. A chip sample taken across the zone in 1991 assayed 58.46 grams per tonne gold over 2.6 metres (Assessment Report 22838). The shear averages over 5 metres in width and can be traced to the northwest across East Creek where Moongold obtained values of 7.9 grams per tonne gold over 1.9 metres. Similar values were obtained by Columbia in 1991. Approximately 400 metres to the northwest of the original showing, sampling of similar mineralization yielded 11.6 grams per tonne gold over 2.5 metres (Assessment Report 22838, page 18).

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EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
EMPR EXPL 1979-283; 1980-475; 1984-390
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A
EMR MP CORPFILE (Torbrit Silver Mines Ltd.; Shawnigan Mining and Smelting Co.; Newhawk Gold Mines Ltd.; Northair Mines Ltd.)
EMR MIN BULL MR 223 B.C. 334

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/02 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 006**

NATIONAL MINERAL INVENTORY: 104G6 Cu1

NAME(S): **ALBERTA**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G06E
BC MAP:
LATITUDE: 57 16 52 N
LONGITUDE: 131 11 07 W
ELEVATION: 2133 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The Alberta claim group is located three kilometres northwest of Mount Hickman. Occurrence located from claim map.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6350793
EASTING: 368265

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Magnetite
ASSOCIATED: Malachite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Unknown	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Upper Triassic			Hickman Batholith

LITHOLOGY: Intermediate Flow
Mafic Flow
Granodiorite
Diorite
Pyroclastic Rock

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

CAPSULE GEOLOGY

The Alberta occurrence is located near the centre of the Upper Triassic Hickman batholith. The batholith is extremely heterogeneous, ranging from granodiorite to hornblendite. The showing occurs in a volcanic pendant within granodiorite to quartz diorite. The pendant consists of intermediate to mafic flows and pyroclastic rocks which could be Permian or Upper Triassic in age.

Mineralization consists of magnetite, chalcopyrite and minor malachite within fractures in the volcanic rocks.

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EMPR P 1989-1, pp. 251-267
EMPR OF 1989-7
EMPR AR *1965-36
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/03/31 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 007**

NATIONAL MINERAL INVENTORY: 104G11 Cu1

NAME(S): **CALLBREATH**, WINONA-VERNON, B, BM

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G11W
BC MAP:
LATITUDE: 57 43 49 N
LONGITUDE: 131 15 56 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6400937
EASTING: 365094

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Quartz Orthoclase
ALTERATION: Epidote Chlorite
ALTERATION TYPE: Epidote Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal Pegmatite

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic			Nightout Pluton

LITHOLOGY: Granodiorite
Pegmatite
Granodiorite Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine

CAPSULE GEOLOGY

The area is underlain by granodiorite of the Middle to Late Triassic Nightout pluton that underlies granodiorite some 130 square kilometres in area. Pegmatites occur along the north side of the intrusive about one kilometre south of its contact with Permian sediments. These pegmatites range from dykes, consisting mainly of quartz, to those consisting mainly of pink orthoclase. Most of these dykes are less than 30 centimetres wide and the more siliceous carry some copper mineralization in small fissures.

Kerr (GSC Memoir 246, page 74) describes one such occurrence observed in an old trench near Nightout Mountain. A shattered zone within the granodiorite, and up to 30 centimetres wide, is filled with pegmatite carrying bornite and chalcopyrite in fractures within the quartz. Up to five per cent of this zone may consist of bornite.

Chalcopyrite and bornite were also found in fractures and in quartz veins within the granodiorite some 150 metres north of the pegmatite. The veins are up to five centimetres wide and occur in a zone that has a trend of 240 degreees. The granodiorite is chloritized and epidotized adjacent to these fractures. Visual estimates of the zone indicate a grade of 0.5 to 1.0 per cent copper.

BIBLIOGRAPHY

EMPR ASS RPT *4717
GSC MEM *246, pp. 57,74
GSC P 71-44
GSC MAP 9-1957; 11-1971; 309A; 1418A
EMPR AR 1900-783
EMR MP CORPFILE (Bart Mines Ltd.)
EMPR FIELDWORK 1990, p. 144
EMPR OF 1990-1

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/02/11 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 008**

NATIONAL MINERAL INVENTORY: 104G12,13 Au3

NAME(S): **BARRINGTON RIVER**

STATUS: Past Producer — Open Pit
REGIONS: British Columbia
NTS MAP: 104G13W
BC MAP:
LATITUDE: 57 44 13 N
LONGITUDE: 131 46 12 W
ELEVATION: 260 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6402796
EASTING: 335096

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Gold
COMMENTS: Placer gold.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unconsolidated
CLASSIFICATION: Placer

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

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

LITHOLOGY: Gravel

HOSTROCK COMMENTS: F.A. Kerr (Memoir 246) thinks it likely that the gold source is around the intrusive mass of Limpoke and Spann Creek.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Taku Plateau

CAPSULE GEOLOGY

This placer gold deposit occurs on the Barrington River approximately five kilometres north of its confluence with the Chutine River. Upstream from this deposit the river drains an area of Upper Triassic volcanics and sediments of the Stuhini Group. A stock of Juro-Cretaceous granitic rock has intruded these volcanics and sediments several kilometres north of the occurrence.

A series of terraces were formed during high water levels just below where the Barrington River leaves a canyon and the topography flattens out. The base of each terrace is the base of the old river channel and the main production pit lies in one such position. A hole drilled in 1928 or 1929 to a depth of 30.5 metres is reported to have intersected 28.6 metres of "good pay". In 1932 a dredge failed to recover any gold and the operation was halted after 30 days due to boulder conditions. A drag-line shovel was set up in 1933 and 3400 grams of gold was recovered that year. About 7450 grams of gold was recovered by drag-line in 1935.

During the early 1930's individual workers recovered $2 to $6 worth of gold per day (gold = $15 per ounce). The ground worked by them consisted of 30 centimetres of gravel occurring above a clay horizon along the bank of the river. Some patches could be worked, with a maximum of 1.2 metres of stripping along a narrow strip of the bank.

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GSC MEM *246, p. 79
GSC MAP 9-1957; 11-1971; 309A; 1418A
GSC P 71-44
EMR MP COMM FILE (MR-Au-301.00 Placer British Columbia)
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EMPR OF 1990-1
Placer Dome File

DATE CODED: 1985/07/24 — CODED BY: GSB — FIELD CHECK: N
DATE REVISED: 1988/01/21 — REVISED BY: GJP — FIELD CHECK: N

MINFILE NUMBER: **104G 009**

NATIONAL MINERAL INVENTORY: 104G12 Cu1

NAME(S): **JACKSON**, BIK, JACKSON AND LADY JANE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 40 45 N
LONGITUDE: 131 41 52 W
ELEVATION: 890 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6396193
EASTING: 339138

COMMODITIES: Silver, Gold, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Chalcopyrite, Galena, Sphalerite, Pyrite
ASSOCIATED: Quartz, Calcite, Ankerite, Chlorite, Sericite
ALTERATION: Malachite, Azurite, Specularite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite
Andesitic Tuff
Andesitic Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Glenora Trench

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1931

COMMODITY	GRADE	
Silver	82.3000	Grams per tonne
Gold	0.7000	Grams per tonne
Copper	0.4000	Per cent

COMMENTS: Chip sample across a 1.06 metre quartz vein.
REFERENCE: Annual Report 1931, page 51.

CAPSULE GEOLOGY

The occurrence is hosted by Upper Triassic Stuhini Group rocks. These are mainly basalt to andesitic flows, breccias and tuffs which strike east and have steep dips.

A system of northeast to northwest trending fractures cuts through a ridge crest. This oxidized fracture system is essentially a quartz and carbonate filled breccia zone. The carbonate minerals are calcite, ankerite and probably dolomite. The vein quartz is sparsely mineralized with pyrite, chalcopyrite and galena, and the carbonates are associated with galena and sphalerite. Specularite, malachite and azurite, as well as sericite and chlorite are observed in the veins. The economic mineralization occurs as scattered grains and blebs.

The veins are up to 1.5 metres wide but pinch and swell over a short distance. They strike northwest to north within a belt 800 metres wide but individually they have been traced only a short distance. A sample across 1.06 metres of quartz vein contained 0.7 grams per tonne gold, 82.3 grams per tonne silver, 0.4 per cent copper and a trace of lead.

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EMPR AR *1929-C115; 1930-A118; *1931-51; 1932-61; 1935-B29; 1964-13
EMPR ASS RPT *591
GSC MEM *246, p. 76

BIBLIOGRAPHY

GSC MAP 9-1957; 11-1971; 309A; 1418A
EMR MP CORPFILE (Silver Standard Mines Ltd.)
GSC P 71-44
EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/21 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 010**

NATIONAL MINERAL INVENTORY: 104G12 Au1

NAME(S): **AUGUST**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 37 49 N
LONGITUDE: 131 33 27 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6390428
EASTING: 347295

COMMODITIES: Gold, Copper, Silver

MINERALS

SIGNIFICANT: Chalcopyrite, Bornite, Pyrite
ASSOCIATED: Quartz, Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1948

COMMODITY	GRADE	
Silver	27.4000	Grams per tonne
Gold	14.1000	Grams per tonne
Copper	2.0000	Per cent

COMMENTS: Chip sample across a 1.8 metre section.
REFERENCE: GSC Memoir 246, page 75.

CAPSULE GEOLOGY

This occurrence is underlain by Upper Triassic andesites of the Stuhini Group. These are badly shattered by numerous faults but not greatly altered. Four shatter zones occur in which the rock fragments have been partly or wholly cemented by calcite. These zones vary from 0.3 to 4.6 metres in width and may be up to 60 metres in length. Three of the zones strike northeast and the fourth strikes east. All dip steeply to the southeast.

Quartz veins bearing chalcopyrite, bornite and pyrite in scattered grains and irregular masses are found within the shattered zones. The veins are generally small, ranging from a few millimetres to several centimetres in width, but may attain widths up to 0.75 metres.

A sample of the 0.75 metre wide vein contained 63.8 grams per tonne gold, 7.2 grams per tonne silver and 2.1 per cent copper. A chip sample across a 1.8 metre section contained 14.1 grams per tonne gold, 27.4 grams per tonne silver and 2.0 per cent copper.

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EMPR ASS RPT *13662
EMPR AR 1906-58; *1919-81; *1930-119
GSC MEM *246, p. 75
GSC SUM RPT *1928, p. 25
GSC MAP 11-1971; 309A; 1418A
GSC P 71-44
EMPR FIELDWORK 1990, p. 141

BIBLIOGRAPHY

EMPR OF 1990-1

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/02/09 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 011**

NATIONAL MINERAL INVENTORY: 104G12 Cu2

NAME(S): **DRAPICH**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 37 08 N
LONGITUDE: 131 41 39 W
ELEVATION: 180 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6389477
EASTING: 339087

COMMODITIES: Copper, Silver, Lead, Zinc

MINERALS

SIGNIFICANT: Chalcopyrite, Sphalerite, Galena, Magnetite, Pyrite, Pyrrhotite
ASSOCIATED: Quartz, Siderite
ALTERATION: Garnet, Magnetite, Malachite, Azurite, Hematite
ALTERATION TYPE: Skarn, Oxidation
MINERALIZATION AGE: Middle Jurassic

DEPOSIT

CHARACTER: Massive, Disseminated
CLASSIFICATION: Skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

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

LITHOLOGY: Skarn
Hornblende Granodiorite
Limestone
Marble

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1930
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	55.0000	Grams per tonne

COMMENTS: A sample of 35 centimetres of quartz and siderite.
REFERENCE: Minister of Mines Annual Report 1930, page A118.

CAPSULE GEOLOGY

Middle Jurassic hornblende granodiorite has intruded Permian limestone resulting in skarn mineralization at the contact. Two long, narrow masses of limestone form rafts in trough-like depressions in the roof of the intrusion.

The limestone has been altered to marble, garnet and other calc-silicate minerals over widths from a few centimetres to three metres. Lenses of chalcopyrite, less than a metre in thickness and with limited length, occur in the skarn. Sphalerite, galena, hematite, magnetite, pyrite, pyrrhotite, malachite and azurite are also present.

A sample of 35 centimetres of quartz and siderite on the footwall contained a trace of gold and 55 grams per tonne silver.

BIBLIOGRAPHY

EMPR AR *1930-118; *1931-50
GSC MEM *246, p. 73
GSC MAP 9-1957; 11-1971; 309A; 1418A
GSC P 71-44
EMR MP CORPFILE (Bart Mines Ltd., Wally claims)
EMPR FIELDWORK 1990, p. 141

BIBLIOGRAPHY

EMPR OF 1990-1

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/25 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 012**

NATIONAL MINERAL INVENTORY: 104G12 Pb1

NAME(S): **STIKINE**, DEVILS ELBOW, PEACH AND APRICOT

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 34 12 N
LONGITUDE: 131 41 32 W
ELEVATION: 600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6384032
EASTING: 338987

COMMODITIES: Silver, Gold, Lead, Zinc, Copper, Tungsten

MINERALS

SIGNIFICANT: Galena, Sphalerite, Magnetite, Chalcopyrite, Scheelite, Pyrite, Pyrrhotite
ASSOCIATED: Quartz, Garnet, Epidote
ALTERATION: Magnetite, Garnet, Epidote, Wollastonite
ALTERATION TYPE: Skarn, Silicific'n
MINERALIZATION AGE: Middle Jurassic

DEPOSIT

CHARACTER: Podiform, Massive, Disseminated
CLASSIFICATION: Skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

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

LITHOLOGY: Limestone
Hornblende Granodiorite
Skarn

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: LENS
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1929
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	20.5700	Grams per tonne
Gold	0.6900	Grams per tonne
Tungsten	7.0000	Per cent
Zinc	4.0000	Per cent

COMMENTS: Sampled across a 3.7 metre section. The tungsten assay is from a chip sample of narrow width.
REFERENCE: Annual Report 1929, page 115.

CAPSULE GEOLOGY

Skarn mineralization occurs in pre-Permian limestone and other sediments near the contact with a stock of Middle Jurassic hornblende granodiorite. All the rocks, including the intrusive mass, have been intensely folded and much shattered by faults. The limestone is silicified and mineralized within a 30 metre zone along the line of igneous contact. Quartz, garnet, epidote, wollastonite and other minerals are developed.

The deposits consist of lenses with three different types of mineralization. The first is found at the contact and consists of massive magnetite and pyrrhotite with lesser copper and lead minerals along with a little quartz, garnet and other silicates. These masses are generally small with the largest being 15 metres long and less than a metre thick. Samples contained up to 0.09 per cent copper and 2.4 grams per tonne silver.

The second type is farther away from the contact and consists of galena and sphalerite with large amounts of quartz, garnet and other minerals in which the sulphides are scattered. The largest of these lenses is 3 metres wide. Samples contained up to 0.69 grams per tonne

CAPSULE GEOLOGY

gold, 20.57 grams per tonne silver, and 4 per cent zinc across 3.7 metres.

The third type, found in silicified limestone, is a single mass of chalcopyrite less than a metre across.

Scheelite associated with galena was also reported at this locality. Assays range from 1 to 7 per cent tungsten across narrow widths.

BIBLIOGRAPHY

EMPR AR 1914-100; 1915-67; *1919-82; *1929-115, 1930-117, 1931-51
EMPR ASS RPT *11262
GSC MEM *246, p. 72
GSC SUM RPT *1926, p. 21; 1928, p. 25
GSC P 71-44
EMR MP CORPFILE (Tungsten of B.C., Ltd.)
GSC MAP 9-1957; 11-1971; 309A; 1418A
EMPR BULL 10 (Revised), page 52
EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1; 1991-17

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/26 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 013**

NATIONAL MINERAL INVENTORY:

NAME(S): **APEX**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 31 52 N
LONGITUDE: 131 40 07 W
ELEVATION: 1520 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6379649
EASTING: 340228

COMMODITIES: Silver, Gold, Lead, Zinc, Copper, Tungsten

MINERALS

SIGNIFICANT: Galena, Sphalerite, Magnetite, Chalcopyrite, Scheelite, Pyrite, Pyrrhotite
COMMENTS: Kerr (Annual Report 1928): mineralogy similar to the "Devils Elbow" deposit 4 kilometres north.
ASSOCIATED: Quartz, Epidote, Garnet, Wollastonite
ALTERATION: Magnetite, Garnet, Epidote
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Middle Jurassic

DEPOSIT

CHARACTER: Podiform, Massive, Disseminated
CLASSIFICATION: Skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic			Stikine Assemblage

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This occurrence is underlain by pre-Permian limestone. Mineralization with associated altered limestone is exposed across the face of a large cliff in an irregular patchwork.

The mineralization is not described in detail although Kerr (GSC Summary Report 1928) states that it is of the same character as the Devils Elbow deposit some four kilometres to the north. (The Devils Elbow deposit is a skarn with three types of lens mineralization consisting of: 1) pyrrhotite-magnetite, 2) galena-sphalerlite, and 3) chalcopyrite.) Anomalous gold, silver, and tungsten values are reported at the Devils Elbow occurrence and narrow widths of scheelite were observed.

BIBLIOGRAPHY

EMPR AR 1929-115
GSC MEM *246, p. 73
GSC SUM RPT *1928, p. 25
GSC MAP 9-1957; 11-1971; 309A; 1418A
GSC P 71-44
EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1; 1991-17

DATE CODED: 1985/07/24
DATE REVISED: 1988/01/26

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104G 014**

NATIONAL MINERAL INVENTORY: 104G5 Mo1

NAME(S): **BEN**, DECKER CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G05W
BC MAP:
LATITUDE: 57 24 41 N
LONGITUDE: 131 58 19 W
ELEVATION: 1300 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Located 900 to 1460 metres elevation between headwaters of Decker Creek and Pendant Glacier, 13 kilometres due west of Stikine River (Geology, Exploration and Mining 1971-38).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6367083
EASTING: 321491

COMMODITIES: Molybdenum, Tungsten, Silver, Copper

MINERALS

SIGNIFICANT: Molybdenite, Chalcopyrite, Tetrahedrite
COMMENTS: Mineralization occurs in an altered breccia zone.
ASSOCIATED: Quartz, Pyrite
COMMENTS: Ubiquitous manganese oxide development.
ALTERATION TYPE: Silicific'n, Argillic, Sericitic, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork, Breccia
CLASSIFICATION: Epigenetic, Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Plutonic

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

LITHOLOGY: Granite
Diorite
Quartz Diorite
Hornblendite
Phyllite
Limestone
Meta Volcanic Rock
Felsic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine

CAPSULE GEOLOGY

The Ben occurrence is located within a large alteration zone which occurs along the contact of Middle Jurassic and Eocene age intrusive bodies. This zone is marked by a large gossan several kilometres in width. The zone separates medium to coarse-grained Eocene biotite granite and Middle Jurassic heterogeneous, fine to medium-grained quartz diorite to diorite to hornblendite. Recrystallized banded, dark and light grey limestone and associated foliated metavolcanic rocks and phyllitic rocks occur as small pendants within the dioritic rocks.

The contact of the two intrusive bodies strikes northwest and is characterized by moderate to pervasive silicification, argillic, sericite and pyrite alteration and a ubiquitous manganese oxide development. Alteration is best developed in the granite and in a non-descript felsic dyke which has intruded along the contact. Shearing or fault movement along the zone is uncertain.

Mineralization consists of disseminations and stringers of molybdenite and lesser chalcopyrite and tetrahedrite in quartz veinlets and stockworks and in pervasive silicified and breccia zones.

BIBLIOGRAPHY

EMPR P 1989-1, pp. 251-267
EMPR OF 1989-7; 1991-17
EMPR AR *1962-7; *1963-8
EMPR GEM *1971-38
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1418A

BIBLIOGRAPHY

GSC P 71-44
EMR MP CORPFILE (Dictator Mines Ltd.)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/02/15 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 015**

NATIONAL MINERAL INVENTORY: 104G6,7 Cu4

NAME(S): **SCHAFT CREEK**, LIARD COPPER, BIRD-SNO, PARAMOUNT, WEST BRECCIA

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104G06E 104G07W
BC MAP:
LATITUDE: 57 21 51 N
LONGITUDE: 130 59 25 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The deposit is located between Mess and Schaft creeks. See NABS 30 FR (104G 032).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6359676
EASTING: 380288

COMMODITIES: Copper, Molybdenum, Gold, Silver

MINERALS

SIGNIFICANT: Chalcopyrite, Bornite, Molybdenite, Chalcocite, Covellite, Copper, Galena, Sphalerite, Tetrahedrite, Pyrite
ASSOCIATED: Quartz, Calcite, K-Feldspar, Biotite
ALTERATION: Epidote, Chlorite, Sericite, K-Feldspar, Gypsum, Tourmaline
ALTERATION TYPE: Sericitic, Propylitic, Potassic
MINERALIZATION AGE: Middle Jurassic
ISOTOPIC AGE: 182 +/- 5 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Vein, Stockwork, Breccia, Disseminated
CLASSIFICATION: Porphyry, Hydrothermal, Volcanogenic, Syngenetic
TYPE: L04 Porphyry Cu ± Mo ± Au
DIMENSION: 900 x 600 x 300 Metres STRIKE/DIP: TREND/PLUNGE: 360/20
COMMENTS: Main deposit. Isotopic age date from Canadian Institute of Mining and Metallurgy June 1975.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Basaltic Augite Porphyry
Quartz Diorite
Quartz Monzonite
Granodiorite
Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

INVENTORY

ORE ZONE: SCHAFT CREEK REPORT ON: Y

CATEGORY: Combined YEAR: 1981
QUANTITY: 971495000 Tonnes

COMMODITY	GRADE	
Copper	0.2480	Per cent
Molybdenum	0.0200	Per cent
Silver	1.2000	Grams per tonne
Gold	0.1400	Grams per tonne

COMMENTS: Proven and probable open pit resource (0.033 per cent M0S2).
REFERENCE: CIM Special Volume 46, pages 239-246.

CAPSULE GEOLOGY

The Schaft Creek porphyry copper-molybdenum deposit is located on the western flank of a complex belt of rocks up to 10 kilometres wide and 50 kilometres long between Mess and Schaft creeks. This belt is overlain east of Mess Creek by a broad north trending belt of Cenozoic volcanics, while west of Schaft Creek three different intrusive units have formed another broad north trending belt. The deposit occurs near the eastern margin of one of these units, the Middle(?) Triassic-Middle Jurassic Hickman batholith, a crudely zoned complex with a core of pyroxene diorite grading to biotite

CAPSULE GEOLOGY

granodiorite at the edges. North of this batholith is a massive Tertiary-Cretaceous quartz monzonite, which intrudes both the batholith, and a Juro-Cretaceous granodiorite to quartz diorite intrusion.

Major north striking faults occupy the valley of Mess and Schaft creeks near the boundaries of the belt. The terrain between the creeks is underlain by complex stratigraphy composed mainly of Upper Triassic andesitic tuffs, flows, breccias and derived sediments. The oldest rocks in the belt are Permian limestones that appear to be in fault contact with the volcanics. Upper Triassic basaltic augite porphyry occurs as large dyke-like bodies cutting the volcanic pile. Quartz monzonite and dioritic rock related to the three intrusions, form small stocks and tabular bodies throughout this belt. Souther (Geological Survey of Canada Map 11-1971) also describes an area of Lower Jurassic conglomerate a few kilometres to the north of this occurrence. Rhyolite and diabase dykes of probable Cenozoic age are also numerous.

Mineralization occurs partly within a basin-like structure of fragmental and undivided green andesites, 900 metres in diameter. The basin is intruded by augite porphyry basalt and by vertical north striking quartz diorite dykes. A breccia cuts the western edge of the basin and trends north for at least 2700 metres. Post-mineralization mafic dykes are common. Later flat-lying fragmental purple andesites unconformably overlie the northeastern part of the deposit (Canadian Institute of Mining and Metallurgy June 1975).

The main deposit forms a relatively flat-bottomed basin about 300 metres thick and 610 metres wide that plunges 20 degrees north for at least 900 metres. The deposit is generally conformable with the lithological basin, but cuts its northern wall. A core of low-grade mineralization occurs in the northern half of the deposit. Two much smaller, but somewhat higher grade deposits are associated with the breccia.

Pyrite, chalcopyrite, bornite and molybdenite occur predominantly in fractured andesites. Less than 10 per cent of the mineralization occurs in felsic intrusives. Pyrite and bornite are mutually exclusive and most of the main deposit occurs within the bornite zone, with pyrite on the periphery. A barren zone, which contains no sulphides, conformably underlies the main deposit.

Feldspathization and hydrothermal alteration are associated with mineralization. A quartz vein stockwork with biotite and some potassium feldspar coincides with the low-grade core of the main deposit. The biotite has a potassium/argon age of 182 Ma +/- 5 Ma (Canadian Institute of Mining and Metallurgy June 1975). Epidote appears abruptly near the boundaries of the main deposit. Most mineralization occurs in an intermediate zone marked by chlorite-sericite alteration and the absence of epidote. Tourmaline and gypsum are locally abundant.

The distribution of most sulphide minerals is fracture-controlled. They occur in dry fractures or combined with quartz or quartz-calcite veinlets within the andesitic volcanics. The sulphides within the felsic intrusives are usually disseminated and seem to have replaced the mafic minerals. Trace amounts of covellite, chalcocite, tetrahedrite and native copper have been identified. Minor amounts of galena and sphalerite occur in the breccia zone and in small calcite veins. Gold and silver are associated with the sulphides and average 0.34 grams per tonne and 1.71 grams per tonne, respectively.

By 1976, mineable reserves calculated at an open pit stripping ratio of 1.5 (waste) to 1 (ore) were 330 million tonnes grading 0.4 per cent copper and 0.02 per cent molybdenum; preliminary estimates indicate that the mineralization will grade approximately 0.32 parts per million gold and 1.5 parts per million silver (CIM Special Volume 15 (1976), page 219).

Current theories of mineral genesis are controversial. Seraphim and Sutherland Brown (Canadian Institute of Mining and Metallurgy Special Volume 15, page 219) agree with Linder, preferring an explanation that the deposit is almost syngenetic, in part strata controlled, and directly linked to near surface volcanic activity. However, most experts still classify it as a porphyry.

Between 1968 and 1981, 60,200 metres of core drilling in 230 holes were completed which outlined a proven and probable open pit resource of 971,495,000 tonnes grading 0.298 per cent copper, 0.02 per cent molybdenum (0.033 per cent MoS_2), 0.14 grams per tonne gold and 1.2 grams per tonne silver (CIM Special Volume 46, pages 239-246). The property is owned by Liard Copper Mines Ltd., which is 78.05 per cent owned by Teck Corporation.

BIBLIOGRAPHY

EMPR AR 1959-7; 1964-13; 1965-40; 1966-26; 1967-29; 1968-39

BIBLIOGRAPHY

EMPR ASS RPT 588, 589, 4507, 4832, 4842, 5210, 5302, 7869, 8832, 9920
EMPR EXPL 1976-E184; 1977-E224; 1980-472; 1981-154
EMPR GEM 1969-46; 1970-49; 1971-39; 1972-527; 1973-505; 1974-337
EMPR MAP 58; 64; 65 (1989)
EMPR OF 1992-1; 1992-3; 1998-8-K, pp. 1-22
EMR MIN BULL MR 166; 223 B.C. 332
EMR MP CORPFILE (Silver Standard Mines Ltd.; Liard Copper Mines Ltd.; Schaft Creek; Bird)
GSC MAP 9-1957; 11-1971; 1418A
GSC P 71-44, p. 24
CIM BULL Vol. *68, No. 758, pp. 49-63, June 1975
CIM Spec. Vol. *15, p. 219; 37, pp. 178-190; *46, pp. 239-246
GCNL Mar. 19, 1964; June 24, 1971; #185, 1972; Sept. 5, 1975; Feb. 4, 1976; Aug. 4, Nov. 10, Dec. 8, #236, 1978; #135, July 13, 1979; #132, 1980; #120, #153, #171, 1981; #12, 1982; #135, 1984
N MINER Nov., 1972; Aug.21, Dec.4, 1975; Aug.10, Dec.14, 1978; July 19, 1979; Mar.5, Aug.13, 1981; Jan.28, May 27, 1982; June 18, Aug.27, 1990; Oct.28, 1991
W MINER Jan. 1979, p. 48; Feb. 1979, p. 77
EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/03/07 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 016**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOT**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 08 57 N
LONGITUDE: 131 20 57 W
ELEVATION: 1371 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location centres on three mineral occurrences. Additional mineralization occurs to the north in the vicinity of a small lake.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6336439
EASTING: 357881

COMMODITIES: Copper, Gold, Lead, Silver

MINERALS
SIGNIFICANT: Chalcopyrite, Galena, Pyrite, Magnetite, Pyrrhotite
ASSOCIATED: Quartz, Malachite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Porphyry, Igneous-contact

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Basaltic Augite Porphyry
Argillite
Limestone
Granite
Syenite Porphyry
Orthoclase Porphyritic Sill

HOSTROCK COMMENTS: Mineralization is mainly hosted by volcanics.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1965
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	10.2900	Grams per tonne
Gold	1.3700	Grams per tonne
Copper	0.3800	Per cent

COMMENTS: Sample taken over 4.6 metres.
REFERENCE: Assessment Report 717.

CAPSULE GEOLOGY

The Galore Creek region is underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments, with Permian sedimentary and metamorphic rocks, form the northern and eastern limit of the area with Permian limestone being the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a series of anticlines and synclines with west or north-west trending axes. Younger folds with north-northwest trending axes transect the earlier formed structures. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and two or more stocks. Eocene Age quartz monzonite stocks are the youngest rocks in the area.

The Lot group of claims covers part of the mountain ridges east of Galore Creek where several copper showings have been located. These rocks consist mainly of andesites and basaltic augite porphyry.

CAPSULE GEOLOGY

Thick sequences of Permian limestone with massive argillites outcrop at lower elevations. Many dyke-like intrusions of fine-grained diorite intrude the volcanic pile, as do irregular masses of leucocratic granite and syenite porphyry. The major structural feature is the Copper Canyon fault which strikes north and dips steeply to the east. Most of the intrusions are emplaced near the fault.

Several occurrences within a large area are reported: (1)disseminated pyrrhotite and chalcopyrite are identified in volcanic rocks near a diorite plug; (2)pyrite and copper minerals occupy a 130 degree trending shear in granites and (3)chalcopyrite, pyrite and malachite occurs in volcanic rocks cut by orthoclase porphyry sills and dykes. Four kilometres north, chalcopyrite mineralization occurs within faulted volcanic rocks located adjacent to the Copper Canyon fault. At the small lake 9 kilometres north are (1)quartz veins (0.10-1.2 metres wide) containing chalcopyrite and galena with gold and silver values, striking 120 degrees cutting volcanic rocks and (2) a greater than 5 metre zone of pyrite and magnetite with chalcopyrite occurs in a north striking, steeply dipping fault zone. A 4.6 metre sample from this contained 0.38 per cent copper, 10.29 grams per tonne silver, and 1.37 grams per tonne gold.

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EMPR FIELDWORK *1975, p. 79
EMPR ASS RPT *717
EMPR AR 1965-248
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1418A

DATE CODED: 1988/04/18 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/07/13 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 017**

NATIONAL MINERAL INVENTORY: 104G3 Cu17

NAME(S): **COPPER CANYON**, PENNY, CC, C.C.

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 06 59 N
LONGITUDE: 131 20 49 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Situated on the north side of the east arm of the headwaters of Galore Creek 93 kilometres south of Telegraph Creek, approximately 160 and 380 kilometres northwest of Stewart and Smithers respectively (Assessment Report 21062).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6332787
EASTING: 357890

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena Sphalerite
COMMENTS: Local occurrences of galena and sphalerite.
ASSOCIATED: Hematite Magnetite Anhydrite Fluorite Zeolite Gypsum Calcite
ALTERATION: K-Feldspar Biotite Pyrite Clay Hematite Chlorite Carbonate Epidote
COMMENTS: Also malachite, azurite, chrysocolla and garnet.
ALTERATION TYPE: Potassic Pyrite Argillic Propylitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stockwork
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 600 x 330 x 300 Metres
STRIKE/DIP:
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Jurassic	Stuhini	Undefined Formation	Galore Creek Intrusions

LITHOLOGY: Biotite Monzonite
Hornblende Syeno Monzonite
Syenite
Intrusive Breccia
Trachyandesite
Trachyte
Trachyte Tuff Breccia
K-Feldspar Syenite Porphyry Dike
Felsic Dike
Lamprophyre Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

INVENTORY

ORE ZONE: COPPER CANYON
REPORT ON: Y

CATEGORY: Indicated
YEAR: 1990
QUANTITY: 32400000 Tonnes

COMMODITY	GRADE	
Copper	0.7500	Per cent
Gold	1.1700	Grams per tonne
Silver	17.1000	Grams per tonne

COMMENTS: Drill indicated geological resources.
REFERENCE: CIM Special Volume 46, pages 645-649.

CAPSULE GEOLOGY

The Copper Canyon occurrence area is located along the south flank of the Stikine Arch and is dominated by deformed Mississippian to Middle(?) Jurassic island arc volcanics and sedimentary strata

CAPSULE GEOLOGY

intruded by coeval subvolcanic plutons, Jurassic to Tertiary satellitic Coast Plutonic Complex batholithic plugs and Tertiary felsic to intermediate stocks and dykes.

The Copper Canyon property largely covers a gossanous Upper Triassic to Middle Jurassic alkalic porphyry copper-gold-silver system north of the Copper Canyon Glacier. The system is associated with an irregular northeast elongate and southwesterly splayed, intensely fractured stock-like composite body of pre and intra-mineral alkalic intrusions (the Copper Canyon Intrusions which are correlated with the Early-Middle Jurassic Galore Creek Intrusions). The intrusions either dip or are indicated to plunge moderately to steeply to the northeast and have the general surface form of an inverted irregular U-shaped mass. These intrusions are emplaced into a gently to moderately northwesterly dipping comagmatic alkalic volcanic sequence (Upper Triassic Stuhini Group) along the footwall side of a moderately east dipping pre-alkaline intrusive thrust fault.

These rocks are complexly faulted by a system of northeast and north-northwest faults associated with the arms of the U-shaped intrusive mass. Thrust plate rocks comprise an overturned, moderately easterly dipping sequence of probable Stuhini Group volcanics adjacent the thrust, which are progressively overlain or fault juxtaposed to the east by a Middle Triassic assemblage of black shale, cherty mudstone and chert and Permian limestone. Most of the movement on the thrust fault is indicated to be pre-alkalic complex. Narrow felsic to intermediate and locally lamprophyre post-mineral Tertiary dykes trending northeast to north and west-northwest and steeply dipping, occur locally within and outside to the northeast and west of the property. They particularly occur within or near the Western and North Copper zones, and include a few curvilinear dykes extending fully across the mineralized alkalic complex and into thrust plate rocks with limited offsets due to post-emplacement movement on the thrust.

The Stuhini Group, west of the thrust fault, consists of a gently to moderately northwesterly dipping (average 30 degrees) sequence of grey, maroon, brown and rusty brown weathering alkalic volcanic flows and fragmentals. The sequence is subdivided into four main units, from bottom to top, comprising a trachyte tuff breccia unit, a trachyandesite unit, a trachyte flow unit and a thick trachyte fragmental flow unit.

The irregularly U-shaped body of Copper Canyon Intrusions are a stock-like composite mass of stocks and dykes, generally subdivided into several phases. A splayed extension to the north along the footwall of the thrust fault from the top of the north half of the U-shaped feature, define the North stock-Main body; a smaller lower arm with two associated separate, small outlying bodies to the south along the thrust fault define the North stock-Southeast apophyses. Other phases include a number of separate small dykes and stock-like bodies that occur to the southwest along the north arm of the intrusive complex and which define the Southwest intrusions. A series of generally north-northwest trending intra-mineral dykes are focused along the southwestern end of the north arm of the intrusive complex. Major northeast trending moderately to steeply outward dipping probable normal fault structures (West and East faults) both follow and controlled emplacement along the inner side of the U-shaped composite body.

The North stock-Main body is comprised predominantly of highly fractured, fine-grained, equigranular biotite monzonite. Two associated phases include a limited border phase of medium-grained hornblende syenomonzonite and a separate dyke-like body of intrusive breccia.

The North stock-Southeast apophyses includes a main body of fine to medium-grained biotite monzonite. Other associated bodies include a dyke-like mass consisting of monzonite intrusive breccia, a small local phase of pink syenite and two separate bodies of medium-grained hornblende monzonite and syenodiorite.

The Southwest intrusions include 3 separate intrusions consisting of medium-grained biotite monzonite, medium-grained monzonite and medium-grained syenite.

Intra-mineral dykes are comprised of potassium feldspar syenite megaporphyry, intrusive breccia, glomeroporphyrytic syenite-monzonite porphyry and medium-grained monzonite.

Post-mineral dykes are felsic to intermediate in composition and locally lamprophyric.

The porphyry mineralized system centred within the property consists of three large, interconnected tabular, arcuate or ring-shaped copper-gold-silver mineralized zones (Western, Eastern and North zones), each measuring up to 610 metres long and 274 metres wide, that are distributed in the general forms of a northeast

CAPSULE GEOLOGY

oriented, inverted, irregular U-shaped mineralized area associated with the similarly distributed alkalic intrusive complex. Irregularities in the U-shaped form of both mineralized zones and the alkalic complex include an extension to the north along the footwall of the thrust fault from the upper portion of the U-shaped feature and a smaller lower arm. Major northeast trending, moderately to steeply outward dipping, normal fault structures (West and East faults), follow the inner side of the U-shaped mineralized area and commonly define the footwall of concordantly dipping mineralized zones. Other similarly trending normal faults tend to occur in the vicinity of the hanging wall side of the Western and Copper zones. Also, a system of apparent strike-limited north-northwest trending and steeply easterly dipping faults occur within the northern arm of the U-shaped intrusive complex and are spatially associated with the Western zone and southeastern portion of the North zone which occurs along strike to the northeast from the Western zone.

Both the North and Eastern zones are hosted in the alkaline intrusive complex (North stock); whereas, the Western zone is dominantly hosted in alkaline volcanic rocks, although it is spatially related with a number of intrusive phases including a pre-mineral small central plug of altered syenite and intrusive breccia and a strike-limited north-northwest trending intra-mineral syenite megaporphyry dyke swarm. All mineralized zones are open along strike to the southwest and at depth to the northeast.

Hydrothermal alteration of all pre-Tertiary rocks is widespread, weakly to intensely developed, and is typically pervasive although fracture, shear and, to a certain extent, lithologically controlled. It occurs throughout and centred about the Copper Canyon Intrusions and proximal surrounding country rocks. Alteration products recognized in the system, exclusive of intra-mineral dykes, include potassium feldspar, biotite, garnet, white argillic clay minerals, chlorite, carbonate and local calc-silicate minerals with associated silicification, and sporadic epidote. Associated gangue minerals include specular hematite and earthy hematite, magnetite, anhydrite, fluorite and local zeolites (probably chabazite and natrolite), gypsum and calcite.

The Western, Eastern and North Copper mineralized zones are characterized by fracture-controlled and disseminated chalcopyrite (generally 1-3 per cent and locally up to 10 per cent) and pyrite (1-3 per cent) with related gold and silver values in association with pink, orange and brick-red potassium feldspar flooding and biotitization with common fine specular hematite and minor fluorite. Widespread malachite occurs in all zones on surface and local pads of malachite-azurite-chrysocolla with black copper oxides occur locally in the Western zone.

Drilling in 1990 in the Western zone has also identified i) an extensive, pervasive and fracture-controlled garnetized zone, with associated potassium feldspar and biotite and locally associated light-coloured calc-silicate altered and/or silicified zones, at depth adjacent or near to the footwall of the mineralized zone and ii) widespread and abundant late anhydrite-filled fractures, particularly at depth within the garnetized zone and within intra-mineral syenite dykes, that locally contain chalcopyrite and less frequently galena and sphalerite with associated fluorite, calcite and zeolites.

Best copper mineralization and most intense potassium feldspar flooding and biotitization encountered to date occur on surface and at depth in the Western zone, and to a lesser extent in the southwestern portion of the Eastern zone and in the southeastern portion of the North zone along strike the Western zone.

Mineralized zones i) are centred within a larger outer peripheral zone of pyritization (1-3 per cent pyrite; up to 5-10 per cent pyrite occurs in zones overlapping the outer margins of the copper zones) with associated weaker potassium feldspar flooding and biotitization that essentially encompasses the U-shaped intrusive complex and extends to the southwest beneath the Copper Canyon Glacier and ii) surround an inner pyritized region (5-15 per cent pyrite that also occurs overlapping the inner margins of the copper zones) with associated potassium feldspar flooding, biotitization and argillic alteration. The latter principally occurs along the footwall sides of the East and West faults adjoining the copper zones. Outwards, the pyritized zone is followed by widespread earthy hematite and propylitic altered (chlorite, carbonate and minor epidote) rocks to the northwest, north, northeast and southeast.

The original claims were staked in August 1956 by the American Metal Co. Ltd., a predecessor company of Canamax Resources Inc., to cover prominent malachite-stained limonitic outcrops. Limited small diameter diamond drilling (7 holes, 1009 metres) was conducted in 1957. Based on this drilling, 24.5 million tonnes

CAPSULE GEOLOGY

at 0.72 per cent copper, 0.41 grams per tonne gold and 10.3 grams per tonne silver was inferred (27 million tons grading 0.72 per cent copper, 0.012 ounces per ton gold and 0.30 ounces per ton silver).

Apart from limited geophysical surveys in the period 1962 to 1966, the property remained dormant until 1988, when it was re-examined by Canamax for its gold potential, and mapped by the British Columbia Geological Survey as part of regional mapping of the Galore Creek area (Fieldwork 1998). This coincided with a period of greatly increased exploration activity in northern British Columbia following the discovery of the Snip gold deposit (104B 250) in the Iskut River area 30 kilometres to the south-southeast.

In 1990, the Copper Canyon property was optioned to Consolidated Rhodes Resources Ltd., who carried out a diamond drilling program in the fall of that year totalling 3805 metres in 13 NQ diamond core holes. The property is held by Canada Tungsten Inc. as the C.C. claims.

Drill indicated resources (1990) of the Copper Canyon are 32.4 million tonnes grading 0.75 per cent copper, 17.1 grams per tonne silver, and 1.17 grams per tonne gold (CIM Special Volume 46, pages 645-649).

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CIM Spec. Vol. *46, pp. 645-649.
GCNL #156(Aug.14),#184(Sept.24),#195(Oct.9),#199(Oct.15), #209(Oct.29), 1990; #28(Feb.8),#107(June 4),#168(Aug.30), 1991
N MINER Oct.1,22, 1990; June 17, July 29, 1991
PR REL Eagle Plains Resources Ltd., Jan.9, 2003; Viceroy Resources Corp., Feb.24, 2003
WWW http://www.eagleplains.bc.ca

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/12/09 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104G 018**

NATIONAL MINERAL INVENTORY: 104G8 Mo1

NAME(S): **MARY**, GREG, TARA, ME, ROY, BALL CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G08W
BC MAP:
LATITUDE: 57 16 42 N
LONGITUDE: 130 25 00 W
ELEVATION: 1463 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The coordinates pinpoint an area of drilling activity on the Tara claim. This was formerly the Mary and Greg occurrences.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6349258
EASTING: 414588

COMMODITIES: Molybdenum Copper

MINERALS
SIGNIFICANT: Molybdenite Chalcopyrite Pyrite
ASSOCIATED: Quartz
COMMENTS: Iron stains are reported.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stockwork Breccia
CLASSIFICATION: Epigenetic Hydrothermal Porphyry

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Jurassic-Cretaceous	Undefined Group	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Quartz Diorite
Monzonite
Welded Tuff
Agglomerate
Lithic Tuff
Volcanic Flow
Volcanic Breccia

HOSTROCK COMMENTS: Mineralization occurs in both plutonic and volcanic rock.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine

CAPSULE GEOLOGY

This occurrence is situated about ten kilometres west of the Bowser Basin and several kilometres south of the Cenozoic volcanic eruptions of the Spectrum Range. The area is underlain by welded tuff, agglomerate lithic tuff, flows, and breccias of Upper Triassic Age. These have been intruded by a large quartz diorite to monzonite stock of Juro-Cretaceous Age. The margin of this stock is porphyritic, highly fractured and iron stained.

Small quantities of molybdenite, chalcopyrite and pyrite occur in quartz veinlets, on fractures, and in breccia zones in both intrusive and country rock.

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EMPR GEOLOGY *1975-G81
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GSC P *71-44, p. 28
Chevron File
Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/05/02 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 019**

NATIONAL MINERAL INVENTORY: 104G12 Au2

NAME(S): **MOUNTAIN GOAT**, KIRK COPPER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 37 59 N
LONGITUDE: 131 32 07 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6390688
EASTING: 348633

COMMODITIES: Gold Copper

MINERALS
SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Volcanic Conglomerate
Felsite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1948
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	13.7000	Grams per tonne

COMMENTS: From chip sample across 50 to 60 centimetres.
REFERENCE: GSC Memoir 246, page 76.

CAPSULE GEOLOGY

This occurrence is reported to be underlain by a reddish volcanic conglomerate in the vicinity of the old "August" prospect, at roughly the same elevation. The rock carries well-rounded volcanic boulders up to 45 centimetres in diameter. The beds strike north and dip 40 degrees to the east. The beds are cut by a very fine-grained felsite dyke which strikes at 55 degrees and dips 60 degrees northeast. The dyke is locally altered to a soft greenish mass.

Flat lenses of quartz containing a little bornite and chalcopyrite occur on either, and/or both, sides of this felsite dyke. The lenses are about one metre thick and can be traced for about 300 metres along the outcrop. Assays of samples taken from the best mineralized parts of the vein contained from 6.9 to 13.7 grams per tonne gold across widths of 50 to 61 centimetres.

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GSC MEM *246, p. 76
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GSC SUM RPT 1928, p. 25
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EMPR OF 1990-1

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/02/09 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 020**

NATIONAL MINERAL INVENTORY: 104G12 Au4

NAME(S): **LUCKY STRIKE**, STIKINE COPPER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 36 17 N
LONGITUDE: 131 43 30 W
ELEVATION: 450 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6387974
EASTING: 337182

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Gold, Galena, Chalcopyrite, Sphalerite, Pyrrhotite, Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic			Unnamed/Unknown Informal
Paleozoic			Stikine Assemblage

LITHOLOGY: Argillite
Argillaceous Sandstone
Quartzite
Hornblende Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1931

COMMODITY	GRADE	
Silver	13.7000	Grams per tonne
Gold	61.7000	Grams per tonne

COMMENTS: This sample was taken across 5 centimetres of mineralized fracture.
REFERENCE: Annual Report 1931, page 50.

CAPSULE GEOLOGY

Narrow quartz veins occur in pre-Permian argillite, argillaceous sandstone and quartzite close to the contact with a stock of Juro-Triassic hornblende granodiorite.

Specks of galena in quartz fragments are found in a northwest striking fracture zone. This zone is approximately a metre wide and has a 30 degree dip. A small fault-fracture contains isolated quartz fragments up to 34 centimetres long with sparse amounts of sphalerite, galena, pyrrhotite and rare specks of native gold. A sample across five centimetres contained 61.7 grams per tonne gold and 13.7 grams per tonne silver.

At a higher elevation a quartz vein 61 centimetres wide contains sphalerite, pyrrhotite, chalcopyrite and pyrite. This vein has been traced for about 61 metres showing good definition at all points of exposure. Assays contained a trace of gold and silver.

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EMPR AR *1931-50; 1932-61
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GSC MAP 9-1957; 11-1971; 309A; 1418A
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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/25 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 021**

NATIONAL MINERAL INVENTORY: 104G4 Cu3

NAME(S): **JW**, JACK WILSON CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 10 41 N
LONGITUDE: 131 35 33 W
ELEVATION: 350 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6340187
EASTING: 343286

COMMODITIES: Copper, Gold, Silver

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Sericite, Silica
ALTERATION TYPE: Propylitic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Porphyry

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Jurassic-Cretaceous	Stuhini	Undefined Formation	Coast Plutonic Complex

LITHOLOGY: Monzonite
Crystal Tuff
Amygdaloidal Andesite
Amygdaloidal Basalt
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	7.0000	Grams per tonne
Gold	1.2600	Grams per tonne
Copper	1.7200	Per cent

COMMENTS: Andesite with disseminated pyrite and chalcopyrite.
REFERENCE: Open File 1989-8.

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments, with Permian sedimentary and metamorphic rocks, form the northern and eastern limit of the area with Permian limestone being the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a series of anticlines and synclines with west or north-west trending axes. Younger folds with north-northwest trending axes transect the earlier formed structure. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and stocks. Eocene Age quartz monzonite stocks and are the youngest rocks in the area.

The JW is underlain by a fine-grained, green, massive subvolcanic monzonite of the Juro-Cretaceous Coast Plutonic Complex which intrudes Upper Triassic Stuhini Group amygdaloidal volcanics of andesitic to basaltic composition. The monzonite is strongly magnetic and carries widespread pyrite as disseminations and fracture-fillings.

CAPSULE GEOLOGY

Mineralized outcroppings are exposed along a small gorge on the north fork of a west-flowing tributary of Jack Wilson Creek. Sulphide mineralization occupies prominent northerly trending shear zones and vein systems marked by well-developed gossanous zones. Mineralization comprises chalcopyrite and pyrite in schistose, propylitically altered greenstones and crystal tuffs. In the creek valley, gold values are associated with sericitized, pyritized and silicifed zones in andesites. Gold-bearing quartz veins and silicifed shear zones cut the monzonite. A 13 metre sample across the monzonite returned 0.76 per cent copper with 6.8 grams per tonne silver and trace gold.

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EMPR ASS RPT 501, 669
EMPR FIELDWORK 1975, p. 79; 1988, p. 281
EMPR OF 1989-8
GSC P 71-44, p. 27
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1418A
Chevron File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 022**

NATIONAL MINERAL INVENTORY: 104G3 Cu7

NAME(S): **JW**, SPHAL 17, GOAT, KIM

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 03 29 N
LONGITUDE: 131 17 47 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6326191
EASTING: 360732

COMMENTS: Mineralization occurs on a south flowing tributary of Jack Wilson Creek. Coordinates are for a trench sample (Minister of Mines Annual Report 1965). A rock chip sample is at 450 metre elevation in the same tributary (Assessment Report 18114).

COMMODITIES: Copper, Gold, Silver

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Diatreme
COMMENTS: Mineralization occurs within a dyke-like body of intrusive breccia.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Eocene			Unnamed/Unknown Informal

LITHOLOGY: Monzonite
Diorite
Andesite Flow
Andesitic Agglomerate
Limy Tuff
Felsite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine

INVENTORY

ORE ZONE: JW
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	11.2700	Grams per tonne
Copper	0.1100	Per cent

COMMENTS: A 3.4 metre chip sample
REFERENCE: Assessment Report 18114.

ORE ZONE: BRECCIA
REPORT ON: N

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

COMMODITY	GRADE	
Silver	10.6300	Grams per tonne
Gold	0.2300	Grams per tonne
Copper	2.4500	Per cent

COMMENTS: This is a weighted average of samples representing an area of about 18 by 20 metres.
REFERENCE: Assessment Report 9614.

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments, with Permian sedimentary and metamorphic rocks, form the northern and eastern limit of the area with Permian limestone being the dominant rock.

CAPSULE GEOLOGY

North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a series of anticlines and synclines with west or north-west trending axes. Younger folds with north-northwest trending axes transect the earlier formed structure. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and stocks. Eocene Age quartz monzonite stocks are the youngest rocks in the area.

The JW occurrence is underlain by Juro-Cretaceous Coast Plutonic Complex monzonite with screens or pendants of altered Stuhini Group volcanics. These volcanics are generally of andesitic to basaltic composition but also contain units of felsic crystal tuff. Mineralized outcroppings are exposed along a small gorge of a south flowing tributary of Jack Wilson Creek.

Crystal tuff is exposed at the base of the gorge at an elevation of approximately 450 metres. Small cavities in the crystal tuff contain disseminated chalcopyrite and malachite with some pyrite. The monzonite is highly fractured and carries both veins and disseminations of pyrite and chalcopyrite. A 13 metre sample trench across monzonite at 350 metre elevation returned 0.76 per cent copper with 6.8 grams per tonne silver and trace gold (Minister of Mines Annual Report 1965, page 32).

Samples collected in 1988 for Bellex Mining Corp. contained up to 15.1 grams per tonne gold. A 3.4 metre chip sample of diorite containing pyrite and chalcopyrite assayed 11.27 grams per tonne gold and 0.11 per cent copper (Assessment Report 18114).

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GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1418A
EMR MP CORPFILE (Silver Standard Mines Ltd.)
V STOCKWATCH Jan.18, 1989

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/21 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 023**

NATIONAL MINERAL INVENTORY: 104G4 Cu2

NAME(S): **ANN**, SU, AR,
SPLIT CREEK, PAYDIRT, AS

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 03 34 N
LONGITUDE: 131 32 58 W
ELEVATION: 914 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6326890
EASTING: 345395

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Pyrite Magnetite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Eocene
ISOTOPIC AGE: 48.5 +/- 1.7 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Mesozoic-Cenozoic	Stuhini	Undefined Formation	Unnamed/Unknown Informal

ISOTOPIC AGE: 48.5 +/- 1.7 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Porphyritic Diorite
Porphyritic Granodiorite
Andesitic Tuff
Altered Greenstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1975
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Copper	0.2000	Per cent

COMMENTS: Copper values commonly range from 0.10 to 0.20 per cent throughout length of one drillhole.
REFERENCE: Assessment Report 5615.

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments, with Permian sedimentary and metamorphic rocks, form the northern and eastern limit of the area with Permian limestone being the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a series of anticlines and synclines with west or north-west trending axes. Younger folds with north-northwest trending axes transect the earlier formed structure. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and two or more stocks. Eocene Age quartz monzonite stocks are the youngest rocks in the area.

The Ann is hosted by an intrusion of fine-grained porphyritic diorite to granodiorite within fine to medium-grained andesitic tuffs

CAPSULE GEOLOGY

and altered greenstones. These rocks are so similar in appearance that distinguishing intrusive from extrusive is difficult. Propylitic alteration has extensively affected both the intrusive and the host volcanics. Disseminated pyrite mineralization is ubiquitous and chalcopyrite sparse. Specks of chalcopyrite occur close to some north to northwest trending faults and elsewhere in fractures with magnetite.

Diamond drill intersections assayed between trace and 0.32 per cent copper, with average values between 0.10 and 0.20 per cent copper (Jeffery, 1966). Panteleyev (1975) documents potassium-argon dates of 48.5 +/- 1.7 Ma from biotites associated with pyrite mineralization.

BIBLIOGRAPHY

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EMPR ASS RPT 643, *5615, *6022, 9999, 13917, 14980, 15753, 15806
EMPR EXPL 1981-177; 1985-C383; 1986-C445
EMPR FIELDWORK 1975, p. 79; 1988, p. 281
EMPR GEM 1975-E183; 1976-E184
EMPR OF 1989-8
GSC MAP 9-1957; 11-1971; 310A; 1410A
GSC MEM 246
GSC P *71-44, p. 27
Chevron File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/26 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 024**

NATIONAL MINERAL INVENTORY: 104G13 Cu2

NAME(S): **NEW LIMPOKE**, CO

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G13W
BC MAP:
LATITUDE: 57 46 08 N
LONGITUDE: 131 51 29 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6406568
EASTING: 330006

COMMODITIES: Copper, Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrrhotite, Pyrite, Molybdenite
ALTERATION: Biotite, K-Feldspar
ALTERATION TYPE: Potassic, Biotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Replacement, Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Jurassic-Cretaceous			Unnamed/Unknown Informal

LITHOLOGY: Granodiorite
Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Taku Plateau
TERRANE: Plutonic Rocks, Stikine

CAPSULE GEOLOGY

This occurrence is related to the marginal phases of a large Juro-Cretaceous granodiorite stock that cuts Upper Triassic volcanics of the Stuhini Group. The plutonics and volcanics have both undergone intense potash metasomatism near contacts, with formation of biotite and potash feldspar. The marginal phases of the intrusion are complex and show evidence of multiple intrusion.

Chalcopyrite occurs chiefly in northwest dipping, altered granodiorite rather than the volcanics. Disseminated chalcopyrite is sparse and the reported grade is low. Other sulphides include pyrite, pyrrhotite and molybdenite.

BIBLIOGRAPHY

EMPR AR *1965-18
GSC MAP 9-1957; 11-1917; 309A; 1418A
GSC P *71-44
GSC MEM 246, p. 75

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1987/12/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 025**

NATIONAL MINERAL INVENTORY: 104G12 Cu1

NAME(S): **LADY JANE**, BIK, JACKSON AND LADY JANE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 40 32 N
LONGITUDE: 131 42 45 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6395826
EASTING: 338245

COMMODITIES: Lead, Zinc, Copper, Silver, Gold

MINERALS

SIGNIFICANT: Chalcopyrite, Galena, Sphalerite, Pyrite
ASSOCIATED: Quartz, Calcite, Ankerite, Dolomite, Sericite, Chlorite
ALTERATION: Specularite, Malachite, Azurite
COMMENTS: Oxidation of rocks is observed.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite
Andesitic Tuff
Andesitic Breccia
Quartz Carbonate Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Glenora Trench

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1964

COMMODITY	GRADE	
Silver	1.7000	Grams per tonne
Copper	0.4000	Per cent
Lead	1.2000	Per cent
Zinc	0.6000	Per cent

REFERENCE: Assessment Report 591.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Stuhini Group rocks. These are mainly andesitic flows, breccias, and tuffs which strike east and have steep dips.

A system of northeast to northwest trending fractures cuts through a ridge crest. This oxidized fracture system is essentially a quartz and carbonate filled breccia zone. The carbonate minerals are calcite, ankerite and dolomite. Vein quartz is sparsely mineralized with pyrite, chalcopyrite and galena; carbonates contains galena and sphalerite. Specularite, malachite and azurite as well as sericite and chlorite are also observed with the veins. The sulphides occur as scattered grains and blebs.

The veins are up to 1.8 metres wide but pinch and swell over a short distance. The Lady Jane vein has been traced for a distance of 300 metres and a vertical range of about 90 metres. The strike is north and the dip is about 60 degrees to the west.

Average values from this occurrence are 1.2 per cent lead, 0.6 per cent zinc, 0.4 per cent copper, 1.7 grams per tonne silver and a trace of gold.

BIBLIOGRAPHY

EMPR AR *1929-C115; 1930-A118; *1931-51; 1932-61; 1935-B29; 1964-13
EMPR ASS RPT *591
GSC MEM *246, p. 76
GSC MAP 9-1957; 11-1971; 310A; 1418A
EMR MP CORPFILE (Silver Standard Mines Ltd.)
GSC P 71-44
EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 026**

NATIONAL MINERAL INVENTORY: 104G13 Fe1

NAME(S): **MH**, M.H., SHAKES CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G13E
BC MAP:
LATITUDE: 57 51 46 N
LONGITUDE: 131 43 27 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6416687
EASTING: 338388

COMMODITIES: Iron, Titanium, Copper

MINERALS

SIGNIFICANT: Magnetite, Ilmenite, Chalcopyrite
ASSOCIATED: Pyrite, Feldspar, Epidote, K-Feldspar
ALTERATION: Biotite, Epidote
ALTERATION TYPE: Biotite, Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Massive, Disseminated
CLASSIFICATION: Magmatic, Syngenetic, Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Ultramafic Intrusions

LITHOLOGY: Pyroxenite
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Taku Plateau
TERRANE: Plutonic Rocks, Stikine

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1965
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Iron	8.2500	Per cent
Titanium	0.8000	Per cent

COMMENTS: This chip sample was taken over a 15.5 metre length.
REFERENCE: Annual Report 1966, page 23.

CAPSULE GEOLOGY

The area is underlain by volcanic and sedimentary rocks of the Upper Triassic Stuhini Group. A magnetite-bearing, Juro-Triassic pyroxenite has intruded the country rock which is a dark-grey fine-grained andesitic rock. The largely uniform dark-green, massive, crystalline pyroxenite plug appears to be an oval shaped body (in plan) approximately 5 by 2.3 kilometres. It was observed to have a distinct layered structure by grain size with a roughly northeast strike and a dip of 30 degrees to the southeast.

The pyroxenite is mainly composed of green augite which is replaced in part by magnetite and minor amounts of olivine, biotite and pyrite. Scattered fine-grained pyroxene veins up to 4 centimetres in width occur with magnetite and feldspar with selvedges of pink potash feldspar. Minor stringers of pink potash feldspar and epidote are also observed.

The magnetite occurs interstitially as very fine to very coarse grains often forming irregular blebs. Two magnetite veins from 30 to 40 centimetres wide, were also found. These were rich in pyrite and contained small amounts of chalcopyrite. The magnetite is uniformly titaniferous containing up to four per cent titanium oxide. The titanium is presumed to be in the form of ilmenite.

An 18 metre chip sample near the centre of the plug assayed 6.51 per cent magentite iron and 0.83 per cent titanium. Another chip taken over 15.5 metres contained 8.25 per cent magentite iron and 0.80 per cent titanium. One 60 centimetre zone yielded 84 per

CAPSULE GEOLOGY

cent magentite but this type of mineralization is uncommon.

BIBLIOGRAPHY

EMPR ASS RPT *773
EMPR AR *1965-18; *1966-23
GSC MAP 9-1957; 11-1971
GSC P *71-44, p. 26
EMR MP CORPFILE (Stikine Iron Mines Ltd.; North Pacific Mines Ltd.)
EMPR OF *1988-28, p. 126

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/19 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 027**

NATIONAL MINERAL INVENTORY: 104G2 Cu2

NAME(S): **JAN 1-2**, BAM 8, BIG A, ARCTIC LAKE, BAM

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104G02W
BC MAP:
LATITUDE: 57 12 11 N
LONGITUDE: 130 53 31 W
ELEVATION: Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located in the Mess Creek valley, south of Arctic Lake.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6341576
EASTING: 385704

COMMODITIES: Copper, Silver, Arsenic, Cadmium, Zinc, Antimony

MINERALS

SIGNIFICANT: Tetrahedrite, Pyrite, Chalcopyrite
ALTERATION: Malachite, Azurite, Carbonate
ALTERATION TYPE: Carbonate, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Igneous-contact, Industrial Min.
TYPE: E02 Kipushi Cu-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Undefined Group	Unnamed/Unknown Formation	
Lower Jurassic	Undefined Group	Unnamed/Unknown Formation	
Triassic-Jurassic			Hickman Batholith

LITHOLOGY: Dolomite, Limestone, Chert, Quartz Diorite, Granite, Conglomerate, Arkosic Sandstone, Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Overlap Assemblage
METAMORPHIC TYPE: Contact
RELATIONSHIP: Syn-mineralization
GRADE:
COMMENTS: Metamorphic relationship is syn- and post-mineralization.

INVENTORY

ORE ZONE: JAN
REPORT ON: Y

CATEGORY: Unclassified
YEAR: 1967
QUANTITY: 272130 Tonnes

COMMODITY	GRADE	
Copper	0.7600	Per cent

COMMENTS: On Jan claims. Reserves are slightly under the figure indicated.
REFERENCE: Northern Miner - November 16, 1967.

CAPSULE GEOLOGY

The oldest rocks are Permian volcanics and volcaniclastics which include massive greenstone, chloritic phyllite, chlorite schist and minor greywacke. Overlying the volcanics, this unit is a relatively thick package of Permian dolomite and limestone with interbedded chert. Unconformably overlying the Permian section is a relatively thick sequence of Lower Jurassic clastic sediments comprised of polymictic pebble conglomerate, arkosic sandstone and argillites. These rocks are intruded by the Jurassic-Triassic Hickman Batholith which is comprised of quartz diorite to granite.

Adjacent to the intrusive contact the volcanics are iron stained and carbonate altered. There is an apparent fault contact between the two units and in areas chlorite schist hosts abundant quartz sweats parallel to the foliation. The dolomite has also been iron-carbonate altered and forms large orange cliffs on the west side of

CAPSULE GEOLOGY

the property.
The carbonate package hosts copper mineralization in the form of disseminated grains, blebs and veins of tetrahedrite. Also, disseminated mineralization occurs as irregular grains and blebs of tetrahedrite, minor chalcopyrite, pyrite, malachite and azurite within the Permian carbonates and the Lower Jurassic conglomerate and arkose. The Bam copper showing also hosts anomalous values of silver, zinc, arsenic, antimony and cadmium which are associated with the tetrahedrite.
Unclassified reserves of the Jan are 272,130 tonnes grading 0.76 per cent copper; reserves are slightly under the figure indicated (Northern Miner - November 16, 1967).

BIBLIOGRAPHY

EM BULL 104
EMPR AR 1964-18; 1966-31; 1967-30
EMPR ASS RPT 695, 1675, 4290, *11515, *12561, *15827
EMPR EXPL 1983-530,531; 1984-389,390
EMPR GEM 1972-519
EMPR OF 1992-1; 1992-5
EMR MIN BULL MR 223 B.C. 328
EMR MP CORPFILE (The Shawinigan Mining and Smelting Company)
GSC MAP 9-1957
GSC MEM 362
GSC P 71-44
CIM Special Volume 15, pp. 402-414

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1987/11/04 REVISED BY: LLC FIELD CHECK: N

MINFILE NUMBER: **104G 028**

NATIONAL MINERAL INVENTORY: 104G4 Cu5

NAME(S): **RM**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 03 02 N
LONGITUDE: 131 40 22 W
ELEVATION: 91 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard

UTM ZONE: 09 (NAD 83)

NORTHING: 6326188
EASTING: 337879

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Unknown
COMMENTS: Copper mineralization assumed to be chalcopyrite.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Plutonic

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

LITHOLOGY: Granodiorite
Quartz Diorite

HOSTROCK COMMENTS: There is no actual description of host rocks but the area is mapped as Juro-Cretaceous granitic rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The RM occurrence is situated on the eastern flank of the Coast Plutonic Complex. The rock directly underlying the RM claim area is mapped by Souther (GSC Map 11-1971) as granodiorite to quartz diorite of Juro-Cretaceous Age. These contact Upper Triassic Stuhini Group volcanics and sediments within a few kilometres to the east. No property geology is available for these claims but Annual Reports (1969, p. 41; 1970, p. 48) indicate that copper mineralization was found.

BIBLIOGRAPHY

EMPR ASS RPT 2057
EMPR AR 1968-2,41; 1969-46,273; 1970-48
GSC MEM 246
GSC P 71-44
GSC MAP 9-1957; 11-1971; 310A; 1418A

DATE CODED: 1988/04/25
DATE REVISED: 1988/04/25

CODED BY: GJP
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104G 029**

NATIONAL MINERAL INVENTORY: 104G3 Cu7

NAME(S): **SPHAL 27**, KIM, GOAT, TREK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 01 50 N
LONGITUDE: 131 19 30 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6323190
EASTING: 358893

COMMODITIES: Copper, Lead, Zinc, Gold, Silver

MINERALS

SIGNIFICANT: Pyrite, Pyrrhotite, Chalcopyrite, Galena, Sphalerite
ASSOCIATED: Quartz, Calcite, Pyrite, Pyrrhotite, Magnetite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Porphyry, Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Eocene			Unnamed/Unknown Informal

LITHOLOGY: Pyroxene Porphyry Flow
Andesitic Breccia
Crystal Tuff
Monzonite
Felsite
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1980

COMMODITY	GRADE	
Gold	1.8200	Grams per tonne
Copper	0.6700	Per cent

COMMENTS: Sample taken over 30 metres.
REFERENCE: Assessment Report 8424.

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments, with Permian sedimentary and metamorphic rocks, form the northern and eastern limit of the area with Permian limestone being the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a series of anticlines and synclines with west or north-west trending axes. Younger folds with north-northwest trending axes transect the earlier formed structure. Syenite (orthoclase porphyry) intrusions of Juro-Triassic age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and two or more stocks. Eocene Age quartz monzonite stocks are the youngest rocks in the area.

The Sphal 27 is underlain by Upper Triassic pyroxene porphyritic flows, andesitic breccias and crystal tuffs. These are intruded by north trending monzonite bodies. Prominent north-northeast trending faults have localized intrusions (monzonites and felsite bodies).

Mineralization is hosted by northeast trending faults and shear

CAPSULE GEOLOGY

zones containing massive to disseminated pyrite and pyrrhotite, chalcopyrite and lesser magnetite, galena and sphalerite. Shear zones and subparallel structures carry gold and silver values. Pervasive propylitic alteration and strong fracturing mark these mineralized shear zones. Numerous small showings are reported over a large area having several modes of occurrence:
(1) blebs of chalcopyrite in leucocratic felsite bordering the monzonite intrusive,
(2) disseminated chalcopyrite in monzonite and contacting andesites,
(3) minor chalcopyrite along fractures in small shear zones in andesite,
(4) small quartz/calcite lenses with patchy chalcopyrite.
One chip sample measuring 30 metres contained 0.67 per cent copper and 1.82 grams per tonne gold.

BIBLIOGRAPHY

EMPR AR 1963-8; 1964-17
EMPR ASS RPT *565, 681, *8424, *9614
EMPR EXPL 1980-471; 1981-72
EMPR FIELDWORK *1975, p. 79; 1988, p. 282
EMPR GEM 1970-60
EMPR OF 1989-8
EMR MP CORPFILE (Silver Standard Mines Ltd.)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44
WWW http://www.infomine.com/

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/20 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 030**

NATIONAL MINERAL INVENTORY: 104G6 Cu5

NAME(S): **NABS 21**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G06E
BC MAP:
LATITUDE: 57 23 27 N
LONGITUDE: 131 01 18 W
ELEVATION: 1065 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6362699
EASTING: 378489

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz Chlorite Magnetite
ALTERATION: Chlorite Malachite
ALTERATION TYPE: Oxidation Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Porphyry Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Middle Jurassic			Yehiniho Pluton
Triassic-Jurassic			Hickman Batholith

LITHOLOGY: Quartz Monzonite
Granite
Andesite Tuff
Andesite Flow
Andesite Breccia
Mafic Dike
Felsic Dike

HOSTROCK COMMENTS: Mineralization occurs primarily in plutonic rock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1966
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Copper	0.6600	Per cent

COMMENTS: Chip sample taken over 13 metres.
REFERENCE: Assessment Report 900.

CAPSULE GEOLOGY

The Nabs 21 occurrence is located on the eastern edge of Schaft Creek approximately 60 kilometres upstream from the confluence with the Stikine River.

The showing occurs along the eastern margin of the Middle Jurassic Yehiniko pluton which lies in the middle of the north trending Jurassic-Triassic Hickman batholith. The pluton consists of a distinctive tan to orange weathering, salmon pink, hornblende-biotite granite to quartz monzonite. It is medium to coarse grained and often contains magnetite. Mineralization occurs within the pluton very near its eastern margin where it intrudes Upper Triassic volcanic and sedimentary rocks of the Stuhini Group. These rocks consist mainly of andesitic tuffs, flows and breccias and lesser epiclastic rocks. These rocks are highly fractured but not strongly deformed although beding attitudes are variable. Although the contact zone is highly fractured and altered, the relationship is clearly intrusive. Narrow apophyses extend from the main body of the pluton. Younger, possibly Eocene or younger mafic and felsic dykes are also common in the area.

CAPSULE GEOLOGY

Mineralization consists of porphyry-style stockworks and disseminations of chalcopyrite and pyrite, often associated with quartz veinlets in highly fractured and chlorite altered quartz monzonite to granite. The surrounding volcanic rocks contain small amounts of chalcopyrite and malachite. A chip sample across 13 metres of mineralization contained 0.66 per cent copper with trace amounts of gold, silver and molybdenite (Assessment Report 900).

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EMPR OF 1989-7
EMPR FIELDWORK 1988, pp. 251-267
EMPR AR *1966-29; 1967-30
EMPR GEM 1969-46; 1970-49; 1971-39; 1972-527
EMPR EXPL 1978-E258
EMPR ASS RPT *900, *6939
GSC P *71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A
EMR MP CORPFILE (Paramount Mining Ltd.)
EMPR MP RESFILE (Schaft Creek)
CMH 1973-1974
N MINER Oct. 5, 1972
GCNL #194, 1972; Dec. 1973

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1988/03/03	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104G 031**

NATIONAL MINERAL INVENTORY: 104G6 Cu5

NAME(S): **NABS 13**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G06E
BC MAP:
LATITUDE: 57 23 00 N
LONGITUDE: 131 00 26 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6361839
EASTING: 379332

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Pyrite
ALTERATION: Epidote
ALTERATION TYPE: Epidote
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Igneous-contact

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Middle Jurassic			Yehiniho Pluton
Triassic-Jurassic			Hickman Batholith

LITHOLOGY: Andesite Flow
Hornblende Biotite Granite
Quartz Monzonite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Nabs 13 occurrence is located on the eastern edge of Schaft Creek approximately 61 kilometres upstream from the confluence with the Stikine River.

The showing lies near the eastern margin of the Middle Jurassic Yehiniko pluton and is hosted in Upper Triassic Stuhini Group volcanic rocks. The pluton lies in the middle of the north trending Jurassic-Triassic Hickman batholith. The pluton is composed of distinctive tan to orange weathering, pink, hornblende-biotite granite to quartz monzonite. Bordering the pluton to the east are often featureless green andesitic flows of the Stuhini Group. These rocks are poorly exposed. They are generally highly fractured and often epidotized.

The main showing consists of pyrite and chalcopyrite along a silicified fracture zone in the andesite. Massive bornite veinlets also occur and epidotization along fractures is common.

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EMPR EXPL 1978-E258
EMPR ASS RPT *900, *6939
GSC P *71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A
EMR MP CORPFILE (Paramount Mining Ltd.)
EMR MP RESFILE (Schaft Creek)
CMH 1973-1974
N MINER Oct. 5, 1972
GCNL #194, 1972; Dec. 1973

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/03/04 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 032**

NATIONAL MINERAL INVENTORY: 104G6 Cu5

NAME(S): **NABS 30 FR**, SCHAFT CREEK

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104G06E 104G07W
BC MAP:
LATITUDE: 57 22 29 N
LONGITUDE: 131 00 21 W
ELEVATION: 950 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6360878
EASTING: 379388

COMMODITIES: Copper, Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite, Bornite, Molybdenite
ASSOCIATED: Pyrite
ALTERATION: Quartz, Epidote
ALTERATION TYPE: Silicific'n, Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Porphyry, Igneous-contact
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Middle Jurassic			Yehiniho Pluton
Triassic-Jurassic			Hickman Batholith

LITHOLOGY: Intermediate Flow
Mafic Flow
Tuff
Volcanic Breccia
Sediment/Sedimentary
Augite Porphyritic Dike
Granite
Quartz Monzonite
Olivine Basalt Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: NABS
REPORT ON: Y

CATEGORY: Measured
YEAR: 1974
QUANTITY: 90700000 Tonnes

COMMODITY	GRADE	
Copper	0.3370	Per cent
Molybdenum	0.0470	Per cent

COMMENTS: This figure is probably part of the overall reserve for the Schaft Creek Deposit (104G 015).
REFERENCE: Northern Miner - January 3, 1974.

CAPSULE GEOLOGY

The Nabs 30 Fr occurrence is located on the east side of Schaft Creek approximately 62 kilometres upstream from the confluence with the Stikine River.

The showing is located along the eastern margin of the Middle Jurassic salmon pink granite to quartz monzonite of the Yehiniko pluton which lies in the middle of the north trending Jurassic-Triassic Hickman batholith. The granite contains both hornblende and biotite and weathers to a distinctive orange to tan colour. To the east of the pluton is a thick succession of fairly non-descript intermediate to mafic flows, tuffs and volcanic breccias with lesser sediments. The volcanic rocks are not highly deformed although bedding attitudes do vary considerably. Augite porphyritic dykes and sills discordant to bedding commonly cut through the volcanic pile. Granitic to quartz monzonite plugs and apophyses from

CAPSULE GEOLOGY

the main pluton are also common in the volcanics. East trending olivine-bearing basaltic dykes are abundant in the area and are likely related to the Late Tertiary Mount Edziza volcanic complex.

Mineralization is porphyry-style and consists of low grade disseminations and stockworks of pyrite, chalcopyrite, bornite and minor molybdenite hosted in highly fractured volcanic rocks. Silicification and epidote alteration are common along fractures.

Exploration work done on the property in conjuction with work done on the adjacent Schaft Creek deposit (104G 015) has outlined 90.7 million tonnes in the proven category grading 0.337 per cent copper and 0.047 per cent molybdenum; gold concentrations are low (Northern Miner - January 3, 1974).

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GSC P *71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A
EMR MP CORPFILE (Paramount Mining Ltd.)
EMR MP RESFILE (Schaft Creek)
CMH 1973-1974
N MINER Oct. 5, 1972
GCNL #194, 1972; Dec. 1973
CIM BULL Vol. 68, No. 758, pp. 49-63, June 1975
CIM Special Vol. 15, p. 219

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/02/03 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 033**

NATIONAL MINERAL INVENTORY: 104G16 Cu1

NAME(S): **QC**, PORPHYRY ZONE, BOOT, HBA, CLIFF, KING HENRY II, ELEANOR OF AQUITAINE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G16W
BC MAP:
LATITUDE: 57 45 39 N
LONGITUDE: 130 17 37 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The QC claim's Porphyry zone is located just south of Quash Creek, south of Coolridge Mountain, about 19 kilometres southwest of the town of Iskut (Assessment Report 22794, Figure 5).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6402818
EASTING: 423029

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Pyrite
COMMENTS: Molybdenite was found in float near this occurrence.
ALTERATION: Chlorite Epidote Sericite Azurite Malachite Clay K-Feldspar
ALTERATION TYPE: Propylitic Oxidation Argillic Potassic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Porphyry Epigenetic Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au
DIMENSION: 4000 x 800 Metres
STRIKE/DIP:
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Porphyritic Hornblende Diorite
Andesite
Argillite
Tuff

HOSTROCK COMMENTS: The main host is the porphyritic diorite.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Plutonic Rocks Stikine

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1991
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	0.0760	Grams per tonne
Copper	0.2490	Per cent

COMMENTS: From a 36-metre chip sample.
REFERENCE: Assessment Report 21903, page 14.

CAPSULE GEOLOGY

The QC property is located in the area of the Klastline Plateau about 19 kilometres southwest of the the town of Iskut. The QC occurrence was first staked in 1964 by Conwest Exploration Company Limited (as the QC claims) and some work may have occurred. They followed this up in 1965 with a geophysical survey (IP and mag.) and in 1969 with additional geochemical surveys and a ground magnetometer survey. The property was optioned by Amoco Canada Petroleum Company Limited in 1970 and they drilled 1949 metres in 9 diamond drill holes. Texas Gulf restaked the property in late 1976 as the King Henry II and Eleanor of Aquitaine claims and followed up in 1977 with a rock sampling progam. By 1980, these claims had lapsed and Teck Explorations Limited restaked some of the ground as the Boot claims. A small prospecting program was conducted and a few rock (12) and silt (2) samples were taken. Teck's Boot claims lapsed later-on but

CAPSULE GEOLOGY

Teck returned to the prospect in 1988 and staked the QC 1 to 15 claims. Teck conducted a regional geochemical survey program, collecting 187 rock, 34 silt and 1079 soil samples; 287 metres of trenching was also completed. However, although the QC 1 to 15 claims covered the Porphyry zone, Teck's work centred on the newly discovered polymetallic Vein zone (see QC - Vein zone (104G 160)) to the northwest. In 1990, Triumph Resources Ltd. optioned the QC claims from Teck and conducted some rock and soil sampling surveys over the Porphyry zone and Veins zone. Triumph re-optioned the property to Dryden Resources and late in 1990 they conducted more geochemical surveys and drilled 377 metres in 2 diamond drill holes on the Porphyry zone. In 1991, Dryden further tested the Porphyry zone, the Vein zone and areas previously untested. A total of 711.5 metres were drilled in 5 holes, 15.4 kilometres of magnetometer and induced polarization surveys were completed and 10 metres of trenching was done. At the same time, 333 rock and 1307 soil samples were collected. In 1992, Dryden collected 85 rock and 31 soil samples and excavated 5 trenches totalling 35 metres. To date (September 1998), no further work has been submitted for assessment on the QC property.

The QC porphyry prospect is underlain by Upper Triassic rocks of the Stuhini Group (Open File 1997-3). Property reports describe the rocks as green to grey altered tuffs of intermediate (andesitic) to felsic composition that contain minor interlayered argillite. Several irregular dyke to sill to plug-like bodies of fine to medium-grained hornblende (plus/minus biotite) diorite intruded the strata in the Early Jurassic.

Porphyry copper mineralization is generally restricted to the dioritic intrusions and to altered volcanics within 30 metres of the diorite-volcanic contact.

The zone of known porphyry alteration and mineralization extends in west-southwest direction from the area of the QC's HBA and Cliff zones to the Al property (104G 044) at the western end. This alteration consist of a propylitic zone about 4 kilometres long by 0.8 kilometres wide. Alteration intensity, including the presence of weak quartz veining, minor clay replacement of feldspar and minor potassium feldspar flooding increases with proximity to the diorite contact.

The style of mineralization is consistent throughout this zone with pyrite and chalcopyrite as the sole sulphides. Pyrite content ranges from 2-10 per cent, chalcoyrite from 0-1 per cent. Pyrite occurs with chalcopyrite as well as in a chalcopyrite-absent halo that extends up to 200 metres away from the copper mineralization. There is an apparent lack of gold accompaniment with the copper. Gold values appear to be associated with narrow dicontinuous quartz veins that occur randomly throughout the area. Chalcopyrite and pyrite with the Porphyry zone occurs as fine disseminations, fracture coatings and with quartz veins (less than 5 centimetres in width). Chalcopyrite is the main copper mineral but minor bornite, azurite and malachite also occur.

A 36-metre wide chip sample yielded 0.249 per cent copper and 0.076 grams per tonne gold (Assessment Report 21903, page 14).

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EMPR OF 1992-1; 1992-3; 1996-4; *1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A
EMR MP CORPFILE (Conwest Exploration Co. Ltd.)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/08 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 034**

NATIONAL MINERAL INVENTORY: 104G9 Cu1

NAME(S): **GJ**, GROAT CREEK, GOAT CREEK,
GROAT, RED, N,
SPIKE, G.J.

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G09E
BC MAP:
LATITUDE: 57 39 14 N
LONGITUDE: 130 14 37 W
ELEVATION: 1525 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The GJ prospect is located 25 kilometres southwest of the village of Iskut.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6390858
EASTING: 425786

COMMODITIES: Copper, Gold, Silver, Lead, Zinc

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrite, Sphalerite, Galena
ASSOCIATED: Quartz
ALTERATION: Ankerite, Sericite, Silica, Carbonate, Clay
ALTERATION TYPE: Carbonate, Silicific'n, Sericitic, Argillic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein, Stockwork, Disseminated, Massive
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Lower Jurassic	Stuhini	Unnamed/Unknown Formation	Unnamed/Unknown Informal

ISOTOPIC AGE: 205.1 +/- 0.8 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: zircon and titanite

LITHOLOGY: Hornblende Quartz Monzonite
Granodiorite
Sandstone
Siliceous Siltstone
Conglomerate
Chert
Volcanic
Quartzite

HOSTROCK COMMENTS: Mineralization occurs in plutonic rock and the sediment/volcanic stratigraphy. Isotopic age by R.M. Friedman (Fieldwork 1996, p. 295).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Plutonic Rocks, Stikine

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1981
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	85.7100	Grams per tonne
Gold	2.4000	Grams per tonne
Copper	2.1600	Per cent

COMMENTS: Copper and silver values are highs taken from 2 different 3 metre intervals; the gold value is a high from drill core but no length was given.
REFERENCE: Assessment Report 9773.

CAPSULE GEOLOGY

This GJ occurrence is located near the southwestern end of the Groat stock at the head of "Groat" Creek on the Klastline plateau. Exposure is poor except where the plateau is cut by deep creek drainages. Mineralization and alteration are similar to the Red-Chris deposit (104H 005) but less extensive.

Conwest Exploration Company Limited discovered the showings

CAPSULE GEOLOGY

early in 1964 and, staked the G.J. group of 196 claims. During 1965, induced polarization and magnetometer surveys were carried out over an area 1825 by 1825 metres. Amoco Canada Petroleum Company Ltd. optioned the property in 1970 and carried out geological mapping and 1530 metres of diamond drilling in 5 holes on GJ 149 and 151. Work during 1971 included geological mapping, a geochemical soil survey, an induced potential survey over 32 kilometres of line, and 2438 metres of diamond drilling in 14 hole on GJ 122, 124, 149, 151, N 18-20, and Red 17, 19 claims. The claims subsequently expired and the ground was restaked in 1975-76 by United Mineral Services Ltd. as the GJ (12 units), Spike 1 and Spike 2 claims (28 units). Norcen Energy Resources Limited optioned the property in 1976. Work during 1976 to 1977 by a wholly owned subsidiary, Great Plains Development Company of Canada, Ltd., included geochemical, magnetometer and induced potential (15.5 kilometres) surveys and trenching (22 metres). The option was given up in 1978. Dimac Resources Corp. purchased the property from United Mineral in 1979. Canev Resources Inc. of Denver optioned the property in February 1981. Work during the year included 1,780 metres of diamond drilling in 7 holes. The 1981 expenditures earned Canev a 50 per cent working interest in the property. The Canev interest was held in 1982 by Canorex International Inc. Dimac Resources Corp. was placed in receivership in 1983 and the property put up for sale. The Dimac interests wer acquired by International Curator Ltd. (formerly Canorex Minerals Ltd. in the early 1980s from the Royal Bank. Ascot Resources Ltd. optioned the GJ property from International Curator in in 1989. During 1989 and 1990, Ascot compiled existing data and conducted detailed stream silt sampling (76 samples), overburden drilling (1220.7 metres in 389 holes), contour soil sampling (295 samples), a 20.7-kilometre induced polarization survey, a 19.3-kilometre magnetometer survey and 1644.4 metres of drilling in 9 diamond-drill holes.

Most of the Groat stock and area was mapped as part of a 3-year regional mapping survey (1994-1995) headed by Chris Ash of the provincial Geological Survey Branch. Much of the following summary was taken from published reports of this survey (Fieldwork 1995, page 171).

The Early Jurassic Groat stock intrudes Upper Triassic Stuhini Group fine-grained clastic and pelagic sedimentary rocks consisting of bedded sandstone, siliceous siltstone, chert and graphitic chert. Volcanic siltstone, sandstone and conglomerate overlie these siliceous sediments to the north. To the south are coarse andesite and basalt derived conglomerates. The country rocks are cut by several coarsely augite-phyric mafic sills which, in turn, are cut by Groat dikes.

The Groat stock is a faulted, northeast trending, coarse-grained porphyritic to fine-grained equigranular intrusion with granodiorite to quartz monzonite modal compositions. A Uranium-Lead age date of 205.1 plus/minus 8 Ma was determined by R.M. Friedman of the University of British Columbia (Fieldwork 1996, page 295).

The most prominent alteration types are ankerite flooding and silicification. Several zones of intense ankerite alteration and brecciation, 10 to 30 metres wide, cross the area from east to west. Peripheral to these zones, the pluton and country rock are cut by abundant discrete veins of ankerite and calcite. The carbonate alteration was previously interpreted as pervasive potassium feldspar alteration. Minor quartz stockwork is present throughout the 1991 drillcore and some sedimentary (or volcanic?) units appear to be totally silicified, typically being logged as quartzite. Weak phyllic to argillic alteration is thought to be fairly common throughout the intrusive rocks in the deposit area.

Mineralization, hosted by siliceous sediments and by the southwestern part of the pluton, consists of pyrite and chalcopyrite in stringers, disseminations and in quartz and quartz-carbonate veins. Sphalerite and galena are present locally. Assays suggest that gold and copper values are higher in the pluton than in the country rock.

Assays from drill core indicate a maxiumum grade of 2.16 per cent copper over 3 metres (Assessment Report 9773). More commonly, copper grades from 0.2 to 0.7 per cent over intervals of 60 to 90 metres. Gold and silver values are high when copper is high. Gold values range from 0.69 to 2.40 grams per tonne in an approximate ratio of 0.34 grams per tonne gold for every 0.20 per cent copper (Assessment Report 9773). Silver values range between 3.43 and 13.7 grams per tonne, however, several 3 metre intervals assay greater than 34.29 grams per tonne and, one 3 metre section carried 85.71 grams per tonne silver (Assessment Report 9773).

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EMPR GEM 1970-58; 1971-40
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
EMR MP CORPFILE (Conwest Exploration Co. Ltd.; Dimac Resources Corp.)
GSC MAP 9-1957; 11-1971; 1418A
GSC P 71-44
PR REL Royal County Minerals Corp., Feb.17, 2003
WWW http://www.infomine.com/

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/10/09 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 035** NATIONAL MINERAL INVENTORY: 104G9 Ag1

NAME(S): **HORN**, SF, SILVER

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G09W
BC MAP:
LATITUDE: 57 42 41 N
LONGITUDE: 130 17 22 W
ELEVATION: 1700 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Horn workings, located 22 kilometres southwest of the village of Iskut (Assessment Report 21337).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6397310
EASTING: 423172

COMMODITIES: Silver, Gold, Lead, Zinc, Copper, Barite

MINERALS
SIGNIFICANT: Silver, Galena, Sphalerite, Chalcopyrite, Tetrahedrite, Barite
ASSOCIATED: Barite
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein, Stockwork, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Industrial Min.
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au, I10 Vein barite

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Conglomerate, Felsite, Volcanic Flow, Pyroclastic, Sediment/Sedimentary

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1965
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	49.0000	Grams per tonne

COMMENTS: From a 26.8-metre drill interval. This 1965 drill result was reported in the following 1980 Assessment Report.
REFERENCE: Assessment Report 8747.

CAPSULE GEOLOGY

The Horn prospect (previouly known as the SF) is situated on the Klastline Plateau 2.5 kilometres west of Nuttlude Lake.

This prospect occurs in an area regionally mapped as Unit lJavb (Open File 1997-3) of the Lower Jurassic Hazelton Group. This unit consists of andesitic volcanic breccias and conglomerates. These are described as grey-green and maroon, feldspar hornblende-porphyritic andesitic to dacitic debris flows and lahars; minor flows; with intervals of green and maroon epiclastic conglomerate and medium to coarse-grained crystal lithic wacke with angular, red mudstone fragments.

The Horn property was staked initially as the SF claims in 1964 when prospectors for Conwest Exploration Co. Ltd. located a number of galena-sphalerite plus/minus native silver veins in the Dedeia Creek area. Conwest followed up in 1965 by excavating 871 metres of trenches and drilling 326 metres in 3 diamond-drill holes. This work located a number of barite-rich shear and fracture zones within a red volcanic conglomerate. In 1979, the Horn and Silver claims were staked for D.A. McLeod who sold it to ERL Resources Ltd (who subsequently changed their name to Tenajon Silver Corp). In 1980,

CAPSULE GEOLOGY

ERL prospected and collected 181 soil samples. In 1981, Tenajon drilled 712 metres in 7 diamond-drill holes. A number of silver-bearing veins were discovered during this program. In 1989, the Horn property was optioned from Tenajon Resource Corp. by Ascot Resources Ltd. and Dryden Resource Corporation. Exploration work in 1989 consisted of examination of known showings, minimal stream silt sampling (7), contour soil sampling (96), rock sampling (24), prospecting and mapping. Detailed mapping and a further 119 rock samples and 69 soil samples were taken in 1990 for Ascot and Dryden.

Property rocks are described as a massive sequence of pebble and boulder conglomerate. This conglomerate has been subdivided into three units; the lower "red", the middle "green" and the upper "brown". This sequence dips to the west at about 50 degrees. These rocks are cut by four felsite sills, the largest almost 30 metres thick, dipping steeply north into the hillside. Recent regional mapping has assigned these felsites an Early Jurassic age. The mineralized area is cut by three large faults, two of which trend northeast and the third northwest.

The mineralization is contained in stockworks and veins of barite occurring primarily in red conglomerate along shear zones, fractures and near contacts with the felsite. Sulphides, including galena, sphalerite, chalcopyrite and tetrahedrite occur but are not abundant. Flakes of native silver have been found. The red conglomerates have been traced in an east direction for 4000 metres but the silver bearing zones are confined to a 650 metre section near the western end of the unit.

Several zones with significant silver mineralization were outlined on surface in 1965 with the best measuring 45 metres long by 4.2 metres wide and averaging 378.52 grams per tonne silver. In 1965, drilling results proved less interesting with the best section containing 49.0 grams per tonne silver over 26.8 metres. However, several short intervals from 0.5 to 1.5 metres contained from 103.0 to 343.0 grams per tonne silver. (All above 1965 results were reported in 1980 Assessment Reportr 8747.) Gold values from 1981 drill core were as high as 23.0 grams per tonne over one metre but were generally of subeconomic grade (Assessment Report 9469).

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EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
EMR MP CORPFILE (Conwest Expl. Co. Ltd.; Tenajon Silver Corp.)
GSC P *71-44, p. 27
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/10/07 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 036**

NATIONAL MINERAL INVENTORY: 104G9 Au2

NAME(S): **SPECTRUM**, RED DOG, PORPHYRY, QC, EAST QC, WEST QC, 500 COLOUR, FOG, SKARN, BOUNDARY, 4400

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104G09W
BC MAP:
LATITUDE: 57 41 12 N
LONGITUDE: 130 29 16 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located several kilometres southwest of Nuttlude Lake.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6394800
EASTING: 411296

COMMODITIES: Gold, Silver, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Chalcopyrite, Sphalerite, Galena, Arsenopyrite, Pyrrhotite, Pyrite, Magnetite, Gold
ASSOCIATED: Quartz, Carbonate
ALTERATION: Sericite, Biotite, Silica
ALTERATION TYPE: Potassic, Propylitic, Sericitic, Biotite, Silicific'n
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stockwork, Vein, Disseminated
CLASSIFICATION: Porphyry, Hydrothermal, Skarn
TYPE: L04 Porphyry Cu ± Mo ± Au
K SKARN
I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Jurassic-Cretaceous			Unnamed/Unknown Informal

LITHOLOGY: Andesitic Tuff, Cherty Tuff, Monzonite, Granodiorite Dike, Volcanic Flow, Sediment/Sedimentary, Limy Sediment/Sedimentary, Syenite, Pyroclastic

HOSTROCK COMMENTS: Mineralization occurs in Upper Triassic volcanics and sediments and in Juro-Cretaceous plutonic rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Iskut Trench
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: RED DOG
REPORT ON: Y

CATEGORY: Indicated
YEAR: 1991
QUANTITY: 504800 Tonnes

COMMODITY	GRADE	
Gold	9.6000	Grams per tonne

COMMENTS: Orcan Mineral Associates calculation based on a 5 grams per tonne gold cut-off.
REFERENCE: Assessment Report 22838.

QUANTITY: 274900 Tonnes

COMMODITY	GRADE	
Gold	15.7700	Grams per tonne

COMMENTS: Orcan Mineral Associates calculation based on 10 grams per tonne gold cut-off.
REFERENCE: Assessment Report 22838.

INVENTORY

ORE ZONE: TOTAL REPORT ON: Y

CATEGORY: Indicated YEAR: 1991
QUANTITY: 614700 Tonnes

COMMODITY	GRADE	
Gold	12.3000	Grams per tonne

COMMENTS: Columbia Gold Mines calculated a drill indicated geological reserve of the Porphyry, QC and 500 Colour zones using a 5 grams per tonne cut-off.
REFERENCE: Assessment Report 22838.

QUANTITY: 289600 Tonnes

COMMODITY	GRADE	
Gold	18.6500	Grams per tonne

COMMENTS: Columbia Gold Mines calculated based on a 10 grams per tonne cut-off.
REFERENCE: Assessment Report 22838.

CAPSULE GEOLOGY

The Spectrum-Red Dog property is located just southeast of Edziza Peak and 4 kilometres southwest of Nuttlude Lake. The property was originally staked as the Spectrum claims by Spartan Exploration Ltd. in 1969 in order to cover a copper occurrence there. Mitsui Mining and Smelting operated the property in 1970 followed by Imperial Oil Enterprises in the next 3 years. This work included geochemical and geophysical surveys culminating in 1973 in 4 diamond drill holles totalling 450 metres. The property was restaked as the Red Dog claims in 1975 and optioned to Consolidated Silver Ridge Mines Ltd. by owner Placer Development Ltd. This optionee worked the property by conducting more geochemical surveys in 1978 and trenching and 10 diamond drill holes totalling 828 metres in 1979. In 1980, Consolidated Silver, now the owner, drilled a further 18 holes totalling 2336 metres. Northcal Resources Ltd. (formerly Consolidated Silver Ridge) conducted an unspecified amount of work in 1981 and 1982, including more trenching (see the related GR occurrence - 104G 122). Cominco Ltd. optioned the property from Northcal and also Newhawk's Hawk claims to the north of the Red Dog claims, conducting a soil geochemistry program in 1984. The option lapsed the following year. Cominco returned in 1989 and drilled a further 10 diamond drill holes. In 1990 and 1991, Columbia Gold Mines, holding both the Red Dog and Hawk claims, drilled 3142 metres in 26 holes and excavated 631 metres of trenches. See Hawk - 104G 005 for further information.

The region of the Spectrum prospect is largely underlain by Late Tertiary and younger flows of the Mount Edziza eruptions. These rocks range from basaltic to rhyolitic in composition.

A thick sequence of Upper Triassic sedimentary and volcanic rock underlie the younger volcanics. A 900-metre thick package of agglomerate, greywacke, grit and chert breccia interbedded with tuffaceous siltstones is overlain by 1200 metres of green, purple and grey andesite and derived volcaniclastics. The volcanics are cut by andesite dykes and sills and irregular subvolcanic intrusive bodies. Small diorite and granodiorite intrusives of Jurassic to Cretaceous age cut all of the Triassic rocks. The Upper Triassic rocks are warped into open folds with east-west axes. These are cut into blocks by north, east, northwest and northeast striking faults.

Four types of mineralization occur in the Spectrum-Red Dog area: 1) Pyrite with minor pyrrhotite occurs as disseminations and fracture-fillings in Upper Triassic cherts, tuffs and flows. This mineralization is largely syngenetic with the volcanic assemblage. Estimates of pyrite content range from 2 to 10 per cent. 2) Pyrite, arsenopyrite, sphalerite and galena occur in narrow quartz-carbonate veins within the Upper Triassic sediments and volcanics. These veins range from less than one 1 centimetre to 30 centimetres in width and contain high gold and silver values, particularly where arsenopyrite and/or sphalerite occur. A one metre sample across a number of veinlets assayed 1.2 per cent zinc, 4.11 grams per tonne gold and 10.97 grams per tonne silver. 3) Pyrite, pyrrhotite, chalcopyrite and magnetite occur in irregular, metasomatic replacement masses in limy sediments. This showing is located a few hundred metres south of the main occurrence. A grab sample of syenite and skarn contained 0.5 per cent copper, 4.94 grams per tonne gold and 0.68 grams per tonne silver. 4) Pyrite and chalcopyrite occur as disseminations and fracture-fillings in a north-northeast striking granodiorite dike later called a monzonite dike) and adjacent wallrock that consists of Upper Triassic sediments and volcanics. The dyke varies from 50 to 100 metres in width and has been traced along strike for 1200 metres. It dips from 60 to 80 degrees to the west. This porphyry-type

CAPSULE GEOLOGY

mineralization is associated with sericite and secondary biotite alteration. A 15-metre section of drill core assayed 0.30 per cent copper. Samples of cherty tuff and pyroclastic wallrocks assayed up to 2.5 grams per tonne gold while the dyke rocks assayed up to 0.60 grams per tonne gold.

Drilling has defined an ore zone along and in the granodiorite dyke with about 50 per cent of the mineralization in the granodiorite and 50 per cent in siliceous volcanic and pyroclastic rock. The zone is 250 metres long by 45 metres wide. The zone is open to the north and south and at depth.

Columbia Gold Mines described several new zones after their 1991 work (Assessment Report 20860). The East QC, West QC and Porphyry Gold Zones contain visible gold, pyrite, arsenopyrite and minor base metals within potassic to propylitic altered andesitic tuffs. Several other previously zones of mineralization indicated on company maps include the Fog, Skarn, 500 Colour and Boundary zones and the 4400 vein.

The 500 Colour zone consists of a stockwork of quartz veins and veinlets which contain sphalerite, galena and chalcopyrite. Fine arsenopryite was found in thin seams adjacent to veins in one drill hole. The mineralization is spatially related to the the margins of the westerly dipping monzonite (granodiorite?) dyke. The East QC zone was outlined along a 550 metre length and to a depth of 90 metres. To 1991, the zone remained open along strike and to depth. The West QC zone trends northwesterly and dips steeply to the west having a strike length of 760 metres. The Porphyry zone was drilled along a 300 metres strike length to a depth of 60 metres. This zone is reported to be 30 metres west of the QC mineralization and is found within a broad zone of gold-copper mineralization.

Indicated reserves in 1983 at Red Dog were 2,177,040 tonnes grading 1.26 grams per tonne gold (Northair Mines Ltd. Annual Report 1983). In 1991, Columbia Gold Mines calculated a "drill indicated geological reserve" within the tested portion of the Porphyry, QC and 500 Colour Zones of 614,700 tonnes grading 12.3 grams per tonne gold using 5 grams per tonne gold as a cut-off (Assessment Report 22838). In the same year, Orcan Mineral Associates calculated "drill indicated reserves". One reserve was based on a 10 grams per tonne gold cut-off of 274,900 tonnes at an average grade of 15.77 grams per tonne gold and the second based on 5 grams per tonne gold cut-off of 504,800 tonnes grading 9.6 gram per tonne gold (Assessment Report 22838, page 8).

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EMPR EXPL *1978-E258; 1979-283; 1980-474; 1981-208; 1984-390
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR GEM 1970-57; 1971-41; *1972-531; 1973-506
EMPR MAP 65 (1989)
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
EMPR PF (Clippings)
EMR MIN BULL MR 223 B.C. 333
EMR MP CORPFILE (Spartan Exploration Ltd.; Consolidated Silver Ridge; Northair Mines Ltd.)
GSC MAP 9-1957; 11-1971; 1418A
GSC P 71-44
CIM Spec. Vol. 37, pp. 178-190
GCNL #233(Dec.1), 1983; #24(Feb.3),#122(Jun.25), 1984; #119(June 21), #164(Aug.25),#201(Oct.19), 1989; #81(Apr.26),#181(Sept.19), #184(Sept.24),#204(Oct.22),#219(Nov.13), 1990; #15(Jan.22), #48(Mar.8),#88(May 7),#117(June18),#130(Jul.8),#137(Jul.17), #138(Jul.18),#140(Jul.22),#146(Jul.30),#147(Jul.31),#149(Aug.2), #156(Aug.14),#172(Sept.6),#211(Nov.1), 1991; #60(Mar.25),#66 (Apr.2),#110(June 8),#130(July 7),#153(Aug.10),#174(Sept.9), 1992
N MINER Sept.4, 1989; Oct.29, 1990; May 20, July 15,22,29, Aug.5,12, 19, 1991; Mar.30, Apr.13, June 15, Aug.17, Sept.14, 1992
WWW http://www.infomine.com/
Chevron File
Falconbridge File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/01 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 037**

NATIONAL MINERAL INVENTORY: 104G6 Cu3

NAME(S): **HICKS**, PEPSI, BOY, BIG, SNO

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G06E
BC MAP:
LATITUDE: 57 20 04 N
LONGITUDE: 131 00 19 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The location covers a large claim area.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6356394
EASTING: 379289

COMMODITIES: Copper, Molybdenum

MINERALS
SIGNIFICANT: Bornite, Chalcopyrite, Molybdenite, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Igneous-contact

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Upper Triassic			Hickman Batholith
Middle Jurassic			Yehiniho Pluton

LITHOLOGY: Intermediate Flow
Mafic Flow
Volcanic Breccia
Sediment/Sedimentary
Augite Porphyritic Dike
Olivine Basalt Dike
Hornblende Biotite Granite
Quartz Monzonite

HOSTROCK COMMENTS: The primary host of mineralization are Triassic volcanic rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine, Plutonic Rocks
COMMENTS: Min'zation found mainly in volcanic, & lesser extent plutonic rocks.

CAPSULE GEOLOGY

The Hicks occurrence is located on the east side of Schaft Creek approximately 67 kilometres upstream from the confluence with the Stikine River.

The showing is located along the eastern margin of the Middle Jurassic salmon pink hornblende-biotite granite to quartz monzonite of the Yehiniko pluton which lies in the middle of the north trending Jurassic-Triassic Hickman batholith. The granite often weathers to a distinctive orange to tan colour. To the east of the batholith is a thick succession of non-descript intermediate to mafic flows, tuffs and volcanic breccias with lesser sediments. The volcanic rocks are not highly deformed although bedding attitudes vary considerably. Augite porphyritic dykes and sills discordant to bedding commonly cut through the volcanic pile. Apophyses and isolated plugs related to the main bodies of the Hickman and Yehiniko plutons occur throughout the volcanic rocks. East trending olivine-bearing basaltic dykes are abundant in the area and may be related to the Late Tertiary Mount Edziza volcanic complex.

Although some mineralization does occur within the plutonic rocks, most occurs within the highly fractured volcanics. Disseminations, stockworks and blebs of pyrite, chalcopyrite, bornite and lesser molybdenite occur.

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EMPR FIELDWORK 1988, pp. 251-267
EMPR OF 1989-7
EMPR ASS RPT 2297, *2954
EMPR GEM *1971-38; 1972-526
EMPR PF (Schaft Creek)

BIBLIOGRAPHY

CIM BULLETIN Vol. 68, No. 758, pp. 49-63, June 1975
GSC P 71-44
GSC MAP 1957-9; 11-1971; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/03/09 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 038**

NATIONAL MINERAL INVENTORY:

NAME(S): **LLK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 31 44 N
LONGITUDE: 131 31 50 W
ELEVATION: 1900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6379085
EASTING: 348482

COMMODITIES: Copper, Molybdenum, Silver, Gold

MINERALS

SIGNIFICANT: Malachite, Azurite, Chalcopyrite, Chalcocite, Molybdenite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Epidote, Saussurite, Quartz, Malachite, Azurite
COMMENTS: Gossan zones occur.
ALTERATION TYPE: Propylitic, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite, Granite, Syenite, Rhyolite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1972
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	120.0000	Grams per tonne
Gold	0.3400	Grams per tonne
Copper	11.3000	Per cent

COMMENTS: Chip sample taken across 1.2 metres.
REFERENCE: Assessment Report 3846.

CAPSULE GEOLOGY

This occurrence is underlain by undifferentiated volcanic and sedimentary rocks of the Upper Triassic Stuhini Group. The dominant rock type is a deformed, faulted and altered andesite, which is intruded within a few kilometres of the occurrence by a Middle Jurassic(?) granitic stock. Tabular to irregular masses of syenite and rhyolite intrude the andesite and the granitic stock. These exhibit similar deformation and alteration as the enclosing andesites.

The andesite is irregularly but pervasively altered by propylitization, producing zones of epidote and saussurite. Epidote is abundant as veins and fracture fillings, and is sometimes associated with white quartz.

Diffused pyrite in small irregular patches is common, and can form dark red gossans. Several major gossans in the area contain greater concentration of copper minerals. These occur as malachite and azurite with minor chalcopyrite and chalcocite. These minerals occur as tabular bodies, thin fracture fillings, and discontinuous veins up to 60 centimetres wide and 30 metres long. These veins are steeply dipping and have pronounced north and east trends. Molybdenite was also found in quartz veins about 5 centimetres wide and

CAPSULE GEOLOGY

traceable for a few metres. A chip sample taken across 1.2 metres contained 11.3 per cent copper, 120 grams per tonne silver, 0.34 grams per tonne gold, and a trace of molybdenite.

BIBLIOGRAPHY

EMPR ASS RPT *3029, 3238, 3843, 3846
EMPR GEM *1971-41; 1972-534
GSC P 71-44
GSC MEM 246
GSC SUM RPT 1928
GSC MAP 9-1957; 11-1971; 309A; 1418A
EMPR FIELDWORK 1990-141
EMPR OF 1990-1

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1988/01/28	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104G 039**

NATIONAL MINERAL INVENTORY:

NAME(S): **DOK 35**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 30 33 N
LONGITUDE: 131 31 39 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6376884
EASTING: 348583

COMMODITIES: Copper, Molybdenum

MINERALS

SIGNIFICANT: Malachite, Azurite, Chalcopyrite, Chalcocite, Molybdenite, Pyrite
ASSOCIATED: Quartz
ALTERATION: Epidote, Saussurite, Quartz, Malachite, Azurite
ALTERATION TYPE: Propylitic, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite, Granite, Syenite, Rhyolite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This occurrence is underlain by undifferentiated volcanic and sedimentary rocks of the Upper Triassic Stuhini Group. The dominant rock type is a deformed, faulted and altered andesite, which is intruded within a few kilometres of the occurrence by a granitic stock. Tabular to irregular masses of syenite and rhyolite intrude the andesite and the granitic stock. These share the deformation and alteration of the enclosing andesite.

The andesite is irregularly but pervasively altered by propylitization, producing zones of epidote and saussurite. Epidote is abundant as veins and fracture fillings, and is sometimes associated with white quartz.

Diffused pyrite in small irregular patches is common, and can form dark red gossans. Several major gossans in the area contain greater concentrations of copper minerals. These occur as malachite and azurite with minor chalcopyrite and chalcocite. These minerals occur as tabular bodies, thin fracture fillings, and discontinuous veins up to 60 centimetres wide and 30 metres long. These veins are steeply dipping and have pronounced north and east trends. Molybdenite was also found in quartz veins about 5 centimetres wide and traceable for a few metres.

BIBLIOGRAPHY

EMPR ASS RPT *3029, 3238, 3846, 3847
EMPR GEM *1971-41; 1972-534
GSC P 71-44
GSC MEM 246
GSC SUM RPT 1928
GSC MAP 9-1957; 11-1971; 309A; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/28 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 040**

NATIONAL MINERAL INVENTORY: 104G7 Cu1

NAME(S): **RUN**, MIX

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G07W
BC MAP:
LATITUDE: 57 17 53 N
LONGITUDE: 130 54 14 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6352169
EASTING: 385278

COMMODITIES: Copper, Gold, Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite, Bornite, Chalcocite, Magnetite, Pyrite
ASSOCIATED: Quartz, Calcite
ALTERATION: Feldspar, Calcite, Chlorite, Clay, Quartz, Hematite
ALTERATION TYPE: Potassic, Carbonate, Chloritic, Silicific'n, Oxidation, Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Porphyry, Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	
Triassic-Jurassic			Hickman Batholith

LITHOLOGY: Andesitic Pyroclastic, Syenitic Feldspar Porphyry

HOSTROCK COMMENTS: Mineralization occurs primarily in volcanic as well as plutonic rock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1986
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	4.7000	Grams per tonne
Copper	0.3700	Per cent

COMMENTS: The gold value was contained in a 1.5 metre sample, the copper in a 1 metre sample.
REFERENCE: Assessment Report 15603.

CAPSULE GEOLOGY

This occurrence is located near the eastern boundary of a complex belt of rocks, up to 10 kilometres wide and 50 kilometres long, between Mess and Shaft Creek. East of Mess Creek is a broad north trending belt of Cenozoic volcanics while west of Schaft Creek three different Mesozoic intrusive units form another broad north trending belt. Major north trending faults occupy the valleys of the two creeks. The complex terrain between the creeks is composed mainly of Upper Triassic volcanics and derived sediments. The oldest rock in the belt are Permian limestone that appear to be in fault contact with the volcanics. Upper Triassic basaltic augite porphyry occurs as large dyke-like bodies cutting the volcanic pile. Quartz monzonite and dioritic rock form small stocks and tabular bodies throughout this belt and are likely related to one of the three intrusive bodies. Rhyolite and diabase dykes of Cenozoic(?) age are also numerous.

This showing, just east of Mess Creek, is underlain primarily by Upper Triassic green andesitic pyroclastics and derived sediments that are intruded by two parallel northerly trending dyke swarms. The pink feldspar porphyry dykes are from 1 to 10 metres thick and are of syenitic composition. They have been related to similar

CAPSULE GEOLOGY

Tertiary-Cretaceous syenites in the Telegraph Creek area (Panteleyev, GEM 1973).

Feldspathization (pink) is the most common alteration, almost completely altering large volumes of volcanic rock adjacent to the feldspar porphyry intrusions. This type of alteration is usually accompanied by strong quartz veining. Carbonate alteration and strong chlorite and/or argillic alteration is present.

Pyrite is abundant throughout the area averaging from 1 to 3 per cent but may be as high as 10 per cent. Chalcopyrite, chalcocite, bornite, molybdenite, magnetite, and hematite occur often as fracture fillings and with quartz veins in the volcanic rock and as disseminations in the monzonite. The best showings occur near the contacts between the dyke swarms and the green andesitic rocks. One drill core sample contained 4.7 grams per tonne gold over a 1.5 metre length. Another 1 metre sample contained 0.37 per cent copper. The highest grades of gold are found in altered volcanics near the intrusive. One grab sample contained 10.8 grams per tonne gold (Assessment Report 15603).

BIBLIOGRAPHY

EMPR ASS RPT 3093, 3577, 3989, 4100, 4755, *6162, 6391, 6875, 10682, 10711, *15603
EMPR GEM 1971-39; 1972-529; *1973-504
EMPR EXPL 1976-E185; 1977-E225; 1980-473; 1982-384,385
GSC P 71-44
GSC MAP 9-1957; 11-1971, 1418A
EMR MP CORPFILE (Coseka Resources Ltd.; Wharf Resources Ltd.)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/03/10 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 041**

NATIONAL MINERAL INVENTORY: 104G7 Cu1

NAME(S): **RUN NORTH**, MIX

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G07W
BC MAP:
LATITUDE: 57 19 01 N
LONGITUDE: 130 54 17 W
ELEVATION: 820 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6354273
EASTING: 385286

COMMODITIES: Copper, Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite, Bornite, Chalcocite, Magnetite, Pyrite
ASSOCIATED: Quartz, Calcite
ALTERATION: Feldspar, Calcite, Chlorite, Clay, Quartz, Hematite
ALTERATION TYPE: Potassic, Carbonate, Chloritic, Silicific'n, Oxidation, Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Breccia, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Porphyry, Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	
Triassic-Jurassic			Hickman Batholith

LITHOLOGY: Andesitic Pyroclastic
Syenitic Feldspar Porphyry Breccia

HOSTROCK COMMENTS: Mineralization occurs in volcanic and plutonic rock but primarily in volcanic rock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1982
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Copper	0.2700	Per cent
Molybdenum	0.0120	Per cent

COMMENTS: These values are returned from a 3 metre sample.
REFERENCE: Assessment Report 10682.

CAPSULE GEOLOGY

This occurrence is located near the eastern boundary of a complex belt of rocks up to 10 kilometres wide and 50 kilometres long between Mess and Schaft Creek. The region to the East of Mess Creek is a broad north trending belt of Cenozoic volcanics while west of Schaft Creek three different Mesozoic intrusive units form another broad north trending belt. Major north trending faults occupy the valleys of the two creeks. The complex terrain between is mainly Upper Triassic volcanics and derived sediments. The oldest rocks in the belt are Permian limestone that appear to be in fault contact with the volcanics. Upper Triassic basaltic augite porphyry occurs as large dyke-like bodies cutting the volcanic pile. Quartz monzonite and dioritic rock form small stocks and tabular bodies throughout this belt and are likely related to one of the three intrusive bodies. Rhyolite and diabase dykes of Cenozoic Age(?) are also numerous.

This showing, east of Mess Creek, is underlain primarily by a series of Upper Triassic green andesitic pyroclastics and derived sediments that are intruded by two parallel north trending dyke swarms. These pink feldspar porphyry dykes are from 1 to 10 metres thick and are of syenitic composition. They have been related to

CAPSULE GEOLOGY

similar Tertiary-Cretaceous syenites in the Telegraph Creek area (Panteleyev, GEM 1973).

Feldspathization (pink) is the most common alteration, almost completely altering large volumes of volcanic rock adjacent to the feldspar porphyry intrusions. This alteration is usually accompanied by strong quartz veining. Carbonate alteration and strong chlorite and/or argillic alteration is also present.

Pyrite is abundant throughout the area averaging from 1 to 3 per cent but may be as high as 10 per cent. Chalcopyrite, chalcocite, bornite, molybdenite, magnetite, and hematite occur often as fracture fillings and with quartz veins in the volcanic rock and as disseminations in the monzonite. The best showings occur near the contacts between the dyke swarms and the green andesitic rocks.

One 3 metre length of drill core, cutting a feldspar porphyry breccia, contained 0.27 per cent copper and 0.012 per cent molybdenum (Assessment Report 10682).

BIBLIOGRAPHY

EMPR ASS RPT 3093, 3577, 3989, 4100, 4755, *6162, 6391, 6875, *10682, 10711, *15603
EMPR GEM 1971-39; 1972-529; *1973-504
EMPR EXPL 1976-E185; 1977-E225; 1980-473; 1982-384,385
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A
EMR MP CORPFILE (Coseka Resources Ltd.; Wharf Resources Ltd.)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/03/10 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 042**

NATIONAL MINERAL INVENTORY: 104G8 Mo1

NAME(S): **ME**, ROG, BALL CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G08W
BC MAP:
LATITUDE: 57 15 29 N
LONGITUDE: 130 24 52 W
ELEVATION: 762 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: This occurrence is primarily defined by two drill holes done on the ME claims in 1980, immediately south of Ball Creek.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6346998
EASTING: 414675

COMMODITIES: Copper, Molybdenum, Lead, Zinc, Gold, Silver

MINERALS

SIGNIFICANT: Chalcopyrite, Galena, Sphalerite, Molybdenite, Pyrrhotite, Pyrite
ASSOCIATED: Quartz, Carbonate
ALTERATION: Sericite, K-Feldspar, Silica, Epidote, Chlorite
COMMENTS: Mineralization occurs in a gossanous zone.
ALTERATION TYPE: Sericitic, Potassic, Oxidation, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Andesitic Pyroclastic, Basalt, Siltstone, Mudstone, Quartz Diorite, Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
YEAR: 1980

COMMODITY	GRADE	
Silver	11.6600	Grams per tonne
Gold	0.6900	Grams per tonne
Copper	0.1800	Per cent

COMMENTS: The copper and silver values are derived from two different 3 metre samples; the gold from a 0.5 metre sample.
REFERENCE: Assessment Report 8546.

CAPSULE GEOLOGY

This occurrence is situated about 10 kilometres west of the Bowser Basin and several kilometres south of the Cenozoic volcanics of the Spectrum Range. The area is underlain by Upper Triassic volcanics and sediments, comprised of andesitic pyroclastics, basalts, siltstones, and mudstones. These are intruded by a large quartz diorite to monzonite stock of Juro-Cretaceous age. Numerous faults cut through the area in several directions. One is parallel to Ball Creek and another is parallel to its north fork.

Prominent gossanous alteration zones occur throughout the area within the volcanics. Abundant pyrite is found in these zones as disseminations or as veinlets associated with epidote, chlorite, or pyrrhotite. Locally intense sericitization with some K-feldspar alteration occurs, often in areas of quartz veining. Copper mineralization occurs in a few places as disseminations but is primarily found with galena and sphalerite in carbonate veins. Small amounts

CAPSULE GEOLOGY

of chalcopyrite with pyrrhotite and pyrite are found in silicified zones identified in drill core. Minor amounts of molybdenite were noted in quartz veins.

One 3 metre section of drill core contained up to 0.18 per cent copper while another 3 metre section contained up to 11.66 grams per tonne silver. The highest gold value was 0.69 grams per tonne over a 0.5 metre length.

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EMPR AR 1929-114; 1963-9
EMPR GEM 1970-61; 1971-40; 1972-530; 1973-506; 1974-338
EMPR EXPL 1975-E184
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A
Placer Dome File
Chevron File

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1988/05/02	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104G 043**

NATIONAL MINERAL INVENTORY: 104G12 Cu4

NAME(S): **DOK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 33 11 N
LONGITUDE: 131 34 53 W
ELEVATION: 1300 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6381889
EASTING: 345542

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
COMMENTS: Copper carbonates occur with chalcopyrite in most surface exposures.
ASSOCIATED: Calcite
ALTERATION: Calcite Biotite Feldspar Chlorite Epidote
ALTERATION TYPE: Propylitic Potassic Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite
Basalt
Sediment/Sedimentary
Syenite
Rhyolite
Granodiorite
Quartz Monzonite

HOSTROCK COMMENTS: Chalcopyrite occurs in volcanics near contacts of syenite dykes.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks
COMMENTS: Mineralization is related to syenite dykes.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1971
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Copper	0.6600	Per cent

COMMENTS: Chip sample collected over thirty eight metres but generally along the trend of the occurrence.
REFERENCE: Assessment Report 3238.

CAPSULE GEOLOGY

This occurrence is underlain by undifferentiated volcanic and sedimentary rocks of the Upper Triassic Stuhini Group. In this area they are mainly andesitic and basaltic flows, tuffs and breccias with minor interbedded sediments consisting of siltstone, mudstone, limestone, and conglomerate. Large masses of granodiorite and quartz monzonite of probable Middle Jurassic age intrude these rocks within 3 kilometres of the occurrence. Tabular bodies of Juro-Triassic syenite along with rhyolite have intruded the volcanics and the granitic rocks.

Hydrothermal alteration varies from a very high grade biotite-feldspar alteration to a low grade chlorite epidote type. Calcite occurs as stringers or as trace amounts in the volcanics and may contain some mineralization.

Pyrite generally makes up one per cent of the volcanics but in altered zones may make up as much as 10 per cent of the rock, mostly along fractures. Chalcopyrite occurs in the volcanics along fractures or as disseminations. These occurrences are generally near

CAPSULE GEOLOGY

the syenite dykes and are contact controlled. Copper carbonates occur with chalcopyrite in most of the surface exposure.

Chip samples contained up to 0.66 per cent copper across 38 metres and 0.32 per cent across 23 metres. However, it is noted that sampling was done along a traverse close to the trend of the mineralization.

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EMPR ASS RPT 3029, *3238, 3846, 3847
EMPR GEM *1971-41; *1972-534
GSC P 71-44
GSC MEM 246
GSC SUM RPT 1928
GSC MAP 9-1957; 11-1971; 309A; 1418A
EMR MP CORPFILE (Empire Metals Corporation Limited)
EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1

DATE CODED:	1985/07/24	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1988/01/27	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104G 044**

NATIONAL MINERAL INVENTORY:

NAME(S): **AL**, AXE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G09W
BC MAP:
LATITUDE: 57 44 39 N
LONGITUDE: 130 20 07 W
ELEVATION: 1800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Al prospect is located about 23 kilometres west-southwest of the town of Iskut (Assessment Report 21127).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6401011
EASTING: 420514

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Chlorite Silica Saussurite
ALTERATION TYPE: Chloritic Silicific'n
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
Upper Triassic Unknown	Undefined Group	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Hornblende Diorite
Andesite
Andesitic Tuff
Lapilli Tuff
Mafic Tuff
Felsic Tuff
Greywacke
Argillite
Siltstone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Plutonic Rocks Stikine

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1971
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	0.7200	Grams per tonne
Copper	1.0600	Per cent

COMMENTS: The two values are from two different samples. The gold was value came from a 4 metre chip sample. Both values represent highs.
REFERENCE: Assessment Report 3239 (copper), 9642 (gold).

CAPSULE GEOLOGY

The Al porphyry prospect is located about 23 kilometres west-southwest of the village Iskut. In 1970 and 1971 Silver Standard Mines Ltd. staked the Al claims to cover several copper occurrences discovered by prospecting. Silver Standard conducted a limited mapping program and collected over 100 chip samples. TexasGulf Inc. optioned the property in 1977 and conducted a mapping and sampling program on the neighbouring QC property and completed a limited unspecified work program on the Al property. In 1980 and 1981, Teck Corporation examined the property as part of their evaluation of the QC, conducting 2.5 kilometres of self potential geopyhysics and taking 15 rock samples. In 1988, the Axe claims were staked over a large area by Kevin Whalen, including the Al property, and then sold (in part) to Dryden Resource Corporation. Initial exploration by Dryden in 1989 and 1990 consisted prospecting, silt,

CAPSULE GEOLOGY

soil and rock sampling. In 1991, Dryden followed up with an expanded geochemical program and 0.6 kilometres of induced polarization and magnetometer geophysics. No additional work has been filed for assessment to date (October, 1998).

The Al area has recently been mapped and assigned to the Upper Triassic Stuhini Group (Open File 1997-3). Property reports describe the rocks as green to maroon lapilli tuffs and tuffs that range from felsic to mafic in composition. Thin interbeds of greywacke, siltstone and argillite occur within the volcanics. Several irregular dyke to sill to plug-like bodies of fine to medium-grained hornblende (plus/minus biotite) diorite intruded the strata in the Early Jurassic.

The zone of known porphyry alteration and mineralization extends in an east-northeast direction from the Al area to the QC porphyry prospect area. This alteration consists of a propylitic zone about 4 kilometres long by 0.8 kilometres wide. See the QC deposit (104G 033) for further details.

Chalcopyrite and pyrite mineralization at the Al prospect occurs as fine disseminations, fracture coatings and with narrow quartz veins (less than 5 centimetres wide). The bulk of the copper mineralization occurs within a 10 to 20 metres wide diorite sill and within surrounding wallrock, within 30 metres of the sill. Mineralization has been emplaced in brittle fractures that exhibit local preferred orientations.

Alteration is pervasive in both intrusives and volcanics wherever mineralization occurs. The hornblende and biotite are strongly chloritized and the feldspar is saussuritized. Silicification and quartz veining is strong locally and pyrite is widespread as disseminations and in veinlets. Chalcopyrite occurs in silicified andesites but is most common in hornblende diorite, especially where silification and quartz veining is strong.

Over one hundred chip samples were taken in 1971 with assays mostly in the range of 0.1 to 0.2 per cent copper. One sample contained 1.06 per cent copper (Assessment Report 3239). Gold values are typically insignificant. One sample of highly pyritized siliceous andesite contained a high of 0.72 grams per tonne gold over a 4-metre length (Assessment Report 9642).

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EMPR ASS RPT *3239, *6760, *8425, *9642, 19804, *21127, *22165
EMPR EXPL 1980-475; 1981-71
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/10/05 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 045**

NATIONAL MINERAL INVENTORY: 104G9 Cu2

NAME(S): **WOLF**, GOAT, AXE, NOODLE, PUP

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G09E
BC MAP:
LATITUDE: 57 40 56 N
LONGITUDE: 130 10 18 W
ELEVATION: 1250 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Location of the Wolf prospect, about 20 kilometres southwest of the village of Iskut (Assessment Report 21858, Map 2).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6393936
EASTING: 430133

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite Barite
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein Massive Disseminated
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

ISOTOPIC AGE: 205.1 +/- 8 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: zircon and titanite

LITHOLOGY: Hornblende Diorite
Felsite Dike
Mafic Ash Tuff
Granodiorite
Quartz Monzonite

HOSTROCK COMMENTS: Age date by R.M. Friedman of the University of British Columbia (Fieldwork 1996, page 295).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Plutonic Rocks Stikine

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1991
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	0.1000	Grams per tonne
Copper	0.3000	Per cent

COMMENTS: From a 10.85-metre chip sample.
REFERENCE: Assessment Report 21858, page 17.

CAPSULE GEOLOGY

The Wolf prospect is located near the southern margin of the Klastline Plateau within an Early Jurassic intrusion known as the Groat Stock (Open File 1997-3).

Nuspar Resources Ltd. (formerly Spartan Explorations Ltd.) prospected the Wolf claims in 1974. A.C. Racicot did some minor trenching on the occurrence (held as the Goat claim) in 1976. Texasgulf followed up in 1977 with 17 metres of trenching on the Noodle claims. The Axe claims were staked in 1988, covering the Wolf ground, and was acquired by Ascot Resources Ltd. in 1989. The Axe property consisted of some 59 claims totalling 932 units. Work done on the Axe claims in 1990 and 1991 (primarily rock, soil and silt sampling) was spread over a number of showings on these extensive holdings. An induced polarization geophysical survey was conducted on the Wolf showing in 1991.

CAPSULE GEOLOGY

Most of the Groat stock and area was mapped as part of a 3-year regional mapping survey (1994-1995) headed by Chris Ash of the provincial Geological Survey Branch.

The Early Jurassic Groat stock intrudes a sedimentary unit of the Upper Triassic Stuhini Group consisting of volcanic sandstone, silstone, mudstone, and lesser sileceous mudstone and chert. The Groat stock is a faulted, northeast trending, coarse-grained porphyritic to fine-grained equigranular intrusion with granodiorite to quartz monzonite modal compositions. A Uranium-Lead age date of 205.1 plus/minus 8 Ma was determined by R.M. Friedman of the University of British Columbia (Fieldwork 1996, page 295).

Property rocks were described in 1991 as cherty siliceous mafic ash tuffs intruded by a leucocratic hornblende diorite plug. Some argillaceous sediments are interbedded with the tuffs in the Wolf area. A swarm of east trending, steeply dipping augite diorite dykes and a north trending set of felsite dikes are reported to cut the intrusive rocks.

The Wolf showing was described in the 1970s as chalcopyrite with malachite, azurite and pyrite occurring as disseminations in fractured diorite and as steeply dipping massive veinlets up to 15 centimetres wide, paralleling felsite dykes. The zone of disseminated copper mineralization extended with variation in grade for a distance of over 100 metres, with an inferred width of 60 metres and a vertical interval of 50 metres. A trench sample taken in 1977 contained a high of 0.13 per cent copper and 0.07 grams per tonne gold (Assessment Report 6541).

In 1991, a gold soil geochemical anomaly measuring 1 kilometre long by 100 to 200 metres wide was reported to occur within the main diorite stock. The trend of the anomaly is reported to be marked by numerous small north-south trending gossan structures which are weakly mineralized, the largest known as the the Wolf showing. Continuous chip samples yielded 0.3 per cent copper and 0.1 gram per tonne gold across 10.85 metres (Assessment Report 21858, page 17).

Barite also occurs as north trending striking veinlets in the diorite.

The Pup showing, about 400 metres to the southeast, consists of a gold geochemical anomaly in an area underlain by microdiorite. A chip sample from this area assayed 23.9 grams per tonne gold across 0.5 metres (Assessment Report 21858, page 17). This mineralization occurs near a 10 centimetres wide shear.

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EMPR ASS RPT *5190, *6090, *6541, 19491, 19801, 19802, 20688, 20715, 21128, 21156, *21858
EMPR 1974-338; 1977-E225
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A
EMR MP CORPFILE (Nuspar Resources Ltd.)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/23 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 046**

NATIONAL MINERAL INVENTORY: 104G3 Cu2

NAME(S): **JAY**, C

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G03E
BC MAP:
LATITUDE: 57 11 27 N
LONGITUDE: 131 09 29 W
ELEVATION: 1525 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Claim group located from claim map.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6340694
EASTING: 369587

COMMODITIES: Copper Gold Silver

MINERALS
SIGNIFICANT: Chalcopyrite Magnetite Pyrite
ASSOCIATED: Quartz Tourmaline
ALTERATION: Malachite Jarosite Goethite K-Feldspar
COMMENTS: Manganese oxide.
ALTERATION TYPE: Potassic Sericitic Propylitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic			Hickman Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1989
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	24.1000	Grams per tonne
Gold	2.7000	Grams per tonne
Copper	8.9000	Per cent

COMMENTS: High grade grab across 1.2 metres.
REFERENCE: Assessment Report 18555.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Hickman batholith quartz monzonite to monzodiorite. Mineralization occurs in a northwest and northeast trending fracture/joint set and north trending faults and fractures.

Mineralization consists of massive magnetite-quartz-tourmaline-chalcopyrite-pyrite veins and shears that range in width from less than 0.5 metres to 10.5 metres. Zones can be traced on surface in excess of 50 metres. The veins and shears are enveloped by potassic altered wallrock which grades outward into a weak phyllic zone and abruptly into a propylitic alteration zone. Mineralized zones are commonly marked by abundant malachite staining, as well as jarosite, goethite and manganese oxide.

BIBLIOGRAPHY

EMPR OF 1989-8
EMPR FIELDWORK 1988, pp. 269-284
EMPR ASS RPT 18555
EMPR AR *1965-36
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1985/07/24
DATE REVISED: 1988/03/31

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104G 047**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOAN AND MB**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04W
BC MAP:
LATITUDE: 57 06 57 N
LONGITUDE: 131 33 42 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard

UTM ZONE: 09 (NAD 83)

NORTHING: 6333193
EASTING: 344889

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Porphyry
COMMENTS: The deposit is close to Stikine Copper's Galore Creek copper porphyry deposit.

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Syenite
Andesitic Flow
Trachytic Flow
Volcanic Breccia
Tuff
Shaly Meta Sediment/Sedimentary

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments, with Permian sedimentary and metamorphic rocks, form the northern and eastern limit of the area with Permian limestone being the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a series of anticlines and synclines with east or northwest trending axes. Younger folds with north-northwest trending axes transect the earlier formed structures. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and stocks. Eocene Age quartz monzonite has formed several stocks and is the youngest rock in the area.

The Joan and MB occurrences lie near the eastern flank of the Coast Plutonic Complex in an area primarily underlain by Stuhini Group volcanics. These consist of fine-grained andesitic and trachytic flows, much volcanic breccia and tuff, as well as thin shaly meta-sedimentary layers. These rocks have a north to northeast strike and steep west dips. A feldspar porphyry sill (syenite) intrudes the country rocks and contains minor disseminated pyrite and chalcopyrite.

The eastern part of the occurrence area is bounded by the Stikine Copper (Galore Creek) syenite body where the surrounding rocks are in places, metamorphosed and highly schistose.

BIBLIOGRAPHY

EMPR ASS RPT *685
EMPR AR *1965-29(Fig. 3),34
EMPR FIELDWORK 1975, p. 79
GSC P 71-44
GSC MEM 246

BIBLIOGRAPHY

GSC MAP 9-1957; 11-1971; 310A; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 048**

NATIONAL MINERAL INVENTORY:

NAME(S): **JACK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 09 26 N
LONGITUDE: 131 34 19 W
ELEVATION: 800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6337822
EASTING: 344441

COMMODITIES: Lead, Zinc, Silver, Copper

MINERALS
SIGNIFICANT: Galena, Malachite, Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic, Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Tuffaceous Volcanic
Phyllite
Ankeritic Sediment/Sedimentary

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1987

COMMODITY	GRADE	
Silver	49.4000	Grams per tonne
Lead	1.0000	Per cent
Zinc	0.2100	Per cent

COMMENTS: Sample taken across 10 centimetres of quartz vein.
REFERENCE: Assessment Report 16531.

CAPSULE GEOLOGY

The Galore Creek region is underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments with Permian sedimentary and metamorphic rocks form the northern and eastern limit of the area with Permian limestone dominating. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a linked series of anticlines and synclines with west or northwest trending axes. Younger folds with north-northwest trending axes transect the earlier formed structure. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and two or more stocks. Several Eocene stocks composed of quartz monzonite are the youngest rocks in the region.

A two metre wide quartz vein carrying pyrite and galena occurs near the contact of folded and faulted tuffaceous volcanics and black phyllites with ankeritic sediments. Pyrite is common throughout the volcanics and prominent gossans are produced. Bright green malachite stained areas within the gossan zone occur occasionally. One 10 centimetre sample of the vein contained 49.4 grams per tonne silver, 0.21 per cent zinc, 0.29 grams per tonne gold, and greater than 1 per cent lead. A piece of malachite float, apparently from the above cliffs, contained 0.257 per cent copper.

Samples have yielded gold values up to 51.74 grams per tonne

CAPSULE GEOLOGY

(Vancouver Stockwatch Jan. 18, 1989).

BIBLIOGRAPHY

EMPR ASS RPT *16531, 18114
EMPR AR 1965-19
EMPR FIELDWORK 1975, pp. 79-81
CIM BULL July 1966, pp. 841-853
CIM SPECIAL VOL. 15, pp. 402-414
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A
V STOCKWATCH Jan.18, 1989

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/03/31 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 049**

NATIONAL MINERAL INVENTORY:

NAME(S): **BIK**, MESS CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G02W
BC MAP:
LATITUDE: 57 12 35 N
LONGITUDE: 130 57 32 W
ELEVATION: 1300 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6342432
EASTING: 381681

COMMODITIES: Copper, Silver, Zinc, Lead

MINERALS

SIGNIFICANT: Tetrahedrite, Chalcopyrite
ASSOCIATED: Quartz, Carbonate
ALTERATION: Silica, Carbonate, Malachite, Azurite
ALTERATION TYPE: Silicific'n, Carbonate, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Massive
CLASSIFICATION: Epigenetic, Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Undefined Group	Unnamed/Unknown Formation	
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Fossiliferous Limestone
Phyllite
Greywacke
Andesite
Basaltic Augite Porphyry
Flow Breccia
Tuff
Diorite
Syenite
Basalt

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1964

COMMODITY	GRADE	
Silver	819.0000	Grams per tonne
Copper	13.0000	Per cent
Lead	0.2000	Per cent
Zinc	2.8000	Per cent

COMMENTS: This grab sample also contained a trace of gold.
REFERENCE: Assessment Report 590.

CAPSULE GEOLOGY

The Bik-Mess Creek claim is underlain by Permian and older buff coloured limestone and phyllite along with greywacke and andesite that have a sub-schistose texture. These are overlain locally by Upper Triassic volcanics which consist of massive andesites, basaltic augite porphyry and flow breccias and tuffs. Lower Jurassic conglomerate and sandstones overlie these volcanics unconformably in the western part of the claim area. A sill-like mass of diorite to syenite of probable Juro-Cretaceous Age separate the Paleozoic rocks from the Triassic rocks. Younger lamprophyric and andesitic dykes cut the rocks near the dioritic sill.

The Paleozoic and Triassic rocks strike northeast and dip at about 60 degrees northwest. The sill is more or less concordant with these. The Jurassic rocks strike northwest and dip 25 to 30 degrees southwest. The volcanics in the north part of these claims are cut

CAPSULE GEOLOGY

by a spray of faults.
The principal showing is near the centre of a large outcrop of fossiliferous limestone. Here thin sheets and irregular blebs of tetrahedrite with some associated malachite stains are found with translucent quartz along a weak system of flat joints. A sample of this material contained 819.0 grams per tonne silver, 13.0 per cent copper, 2.8 per cent zinc, 0.2 per cent lead, and a trace of gold (Assessment Report 590). "Weak copper mineralization was also found along systems of sub-vertical north-south trending brittle shears. Mineralization consists of malachite, azurite, and minor chalcopyrite hosted in andesites and tuffs of probable Triassic age. Another showing of weak chalcopyrite, over an area of 3 by 9 metres, is found in silicified basalts with carbonate material. A 1.5 metre chip sample contained 0.66 per cent copper and only traces of gold and silver. Several other minor occurrences of chalcopyrite and tetrahedrite have been identified within the claim area and adjacent to it.

BIBLIOGRAPHY

EM BULL 104
EMPR AR 1964-13
EMPR ASS RPT *590
EMR MP CORPFILE (Silver Standard Mines)
GSC MAP 9-1957; 11-1971; 1418A
GSC P 71-44
Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/07/01 REVISED BY: DE FIELD CHECK: Y

MINFILE NUMBER: **104G 050**

NATIONAL MINERAL INVENTORY:

NAME(S): **HUMMINGBIRD**, TROPHY , SOUTH SCUD

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 09 58 N
LONGITUDE: 131 17 17 W
ELEVATION: 1585 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6338199
EASTING: 361640

COMMODITIES: Copper, Gold, Silver

MINERALS

SIGNIFICANT: Pyrite, Pyrrhotite, Chalcopyrite
ALTERATION: Garnet, Diopside, Chlorite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
SHAPE: Irregular
MODIFIER: Faulted

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Upper Triassic			Hickman Batholith
Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Limestone
Cherty Siltstone
Shale
Felsic Dike
Monzodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	48.3300	Grams per tonne
Gold	5.3400	Grams per tonne
Copper	4.2800	Per cent

REFERENCE: Assessment Report 17101.

CAPSULE GEOLOGY

The Hummingbird showing is underlain from west to east by Permian limestones, overlain in apparent conformity by Middle Triassic cherty siltstones and shale and limestone; in turn overlain by Upper Triassic Stuhini Group metavolcanic rocks. These massive andesites and breccias are intruded by mid-Upper Triassic Hickman batholith monzodiorite along a northwest trending faulted(?) contact. Northeast striking faults and shear zones appear to crosscut older northwest trending structures. Both structures contain mineralization and Tertiary(?) felsic dykes.

Skarn mineral assemblages (garnet, diopside, chlorite) and weak associated mineralization have developed in mid-Upper Triassic limestones adjacent to the northwest trending Hummingbird fault. Sulphides include pyrite, pyrrhotite and chalcopyrite which contain gold and silver values.

BIBLIOGRAPHY

EMPR FIELDWORK 1975, p. 79
EMPR ASS RPT *623, 17101

BIBLIOGRAPHY

EMPR AR 1964-13
EMPR OF 1989-8
EMPR P 1989-1
EMR MP CORPFILE (Silver Standard Mines Ltd.)
GSC P *71-44
GSC MEM 246
GSC MAP 9-1957; *11-1971; 310A; 1418A
Placer Dome File

DATE CODED: 1988/04/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/07/13 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 051**

NATIONAL MINERAL INVENTORY: 104G3 Cu5

NAME(S): **CW**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G03W 104G04E
BC MAP:
LATITUDE: 57 11 20 N
LONGITUDE: 131 30 02 W
ELEVATION: 1371 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6341185
EASTING: 348887

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Tetrahedrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Silica Malachite
ALTERATION TYPE: Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Intermediate Pyroclastic
Intermediate Volcanic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1964

COMMODITY	GRADE	
Gold	1.3700	Grams per tonne
Copper	1.1900	Per cent

REFERENCE: Assessment Report 621.

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments, with Permian sedimentary and metamorphic rocks, form the northern and eastern limit of the area with Permian limestone being the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a series of anticlines and synclines with east or northwest trending axes. Younger folds with north-northwest trending axes transect the earlier formed structures. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and two or more stocks. Eocene Age intrusions of quartz monzonite have formed several stocks and are the youngest rocks in the area.

Stuhini Group intermediate flows and pyroclastics host widely spaced quartz and quartz-carbonate veins that are more or less conformable with the notable schistosity of the volcanics. These veins range from about 2 to 60 centimetres in width and are seldom traceable for more than 15 metres. Fine to coarse specks and blebs of chalcopyrite and possibly some tetrahedrite occur in these veins. A 6.1 metre chip sample of sheared and silicifed volcanics contained 0.03 per cent copper. One grab sample of a malachite stained fracture contained 1.19 per cent copper and 1.37 grams per tonne gold. Another grab of a 2 to 5 centimetre wide vein contained

CAPSULE GEOLOGY

3.85 per cent copper.

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EMPR ASS RPT *621, 747, 937
EMPR AR 1964-13; *1965-31; 1966-25,252
EMPR GEM 1970-60
EMPR FIELDWORK *1975, p. 79
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1418A
EMR MP CORPFILE (Conwest Expl. Co. Ltd.)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/19 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 052**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAL**, REX, RUM

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 04 45 N
LONGITUDE: 131 35 32 W
ELEVATION: 1829 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6329183
EASTING: 342884

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Malachite Pyrite
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Jurassic-Cretaceous	Stuhini	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Andesite
Tuff
Granodiorite
Diorite

HOSTROCK COMMENTS: Volcanics are main host of mineralization.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments, with Permian sedimentary and metamorphic rocks, form the northern and eastern limit of the area with Permian limestone being the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a series of anticlines and synclines with east or northwest trending axes. Younger folds with north-northwest trending axe transect the earlier formed structures. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and two or more stocks. Eocene Age intrusions of quartz monzonite have formed several stocks and are the youngest rocks in the area.

This occurrence is located several kilometres southwest of Stikine Copper's Galore Creek porphyry copper deposits. The area is underlain by Stuhini Group volcanics consisting of andesite flows, tuffs and fragmentals. A body of Juro-Cretaceous granodiorite and diorite have intruded these volcanics. Feldspar porphyry is developed locally within the granodiorite.

Several quartz veins cut the volcanics but only one is mineralized. Malachite is found in a 0.6 to 1.5 metre wide vein that occupies a vertical shear striking northwest. Malachite stains with pyrite were also observed in a narrow fracture zone within the granodiorite nearby.

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EMPR AR 1965-36
EMPR ASS RPT *733
EMPR FIELDWORK 1975, p. 79

BIBLIOGRAPHY

GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1410A

DATE CODED: 1988/04/26 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 053**

NATIONAL MINERAL INVENTORY:

NAME(S): **TROPHY**, PTARMIGAN, SOUTH SCUD

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 09 58 N
LONGITUDE: 131 16 42 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6338179
EASTING: 362228

COMMODITIES: Gold, Silver, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Pyrite, Galena, Sphalerite, Chalcopyrite, Tetrahedrite, Electrum
ASSOCIATED: Quartz, Sericite, Pyrite, Carbonate, Arsenopyrite
COMMENTS: Iron carbonate
ALTERATION: Sericite, Pyrite, Chlorite
ALTERATION TYPE: Sericitic, Pyrite, Chloritic
MINERALIZATION AGE: Tertiary
ISOTOPIC AGE: DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein, Breccia
CLASSIFICATION: Epigenetic, Hydrothermal, Igneous-contact
DIMENSION: STRIKE/DIP: 030/80E TREND/PLUNGE:
COMMENTS: Mineralized vein fracture set.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Jurassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Middle Triassic			Hickman Batholith

LITHOLOGY: Andesite Flow Breccia, Andesite, Polymictic Conglomerate, Monzonite, Monzodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine, Plutonic Rocks

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1989
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	30.1700	Grams per tonne
Gold	5.4800	Grams per tonne
Zinc	1.1100	Per cent

COMMENTS: Grades occur over 11.1 metres in DDH TR88-4.
REFERENCE: Assessment Report 18555.

CAPSULE GEOLOGY

The Ptarmigan occurrence is underlain from west to east by Permian limestones, conformably overlain by Middle Triassic cherty siltstones and shale, in turn overlain by pervasively altered Upper Triassic Stuhini Group massive andesite and flow breccia which are intruded by monzonite to monzodiorite along a northwest trending faulted(?) contact. A Jurassic polymictic boulder conglomerate containing volcanic, sedimentary, granitic and rhyolite clasts outcrops in uncertain stratigraphic position nearby. Northeast striking faults and shear zones appear to crosscut older northwest trending structures. Both structures contain mineralization, the younger are sulphide-rich.

The Ptarmigan zone is a circular quartz-sericite-pyrite alteration zone, 50 metres in diameter, localized at the intersection of a northeast striking fault (Ptarmigan shear) and a northwest

CAPSULE GEOLOGY

trending fault separating Triassic-Jurassic volcanic and sedimentary strata and Middle Triassic Hickman batholith monzonite. The monzonite is brecciated into angular blocks as large as 0.5 by 1.5 metres which are locally aligned and commonly dip southwestward into the zone. Within the Ptarmigan zone the monzonite is pervasively sericitized and bleached. Iron carbonate and pyrite occur as stockwork veinlets and matrix replacements. Away from the Ptarmigan zone the monzonite is coarse-grained, massive and moderately chloritized. Adjacent to this intrusive breccia is an equally altered polymictic matrix-supported fault breccia containing well-rounded clasts of augite porphyry, monzonite, chert and feldspar porphyry. Angular blocks of altered monzonite, some veined by iron carbonate and pyrite are also present. The matrix is sericitized and locally completely replaced by pyrite. Clast lithologies are identical with those in the polymictic conglomerate overlying volcanics to the east.

Precious metal mineralization occupies narrow and widely spaced fractures, veinlets and stockworks which crosscut the pyrite alteration zone. Vein mineralogy comprises disseminations of pyrite, galena, sphalerite, chalcopyrite, tetrahedrite, minor arsenopyrite and electrum in a quartz-carbonate gangue. Mineralization is silver-rich with silver:gold ratios averaging 80:1; the silver mineral has not been identified.

BIBLIOGRAPHY

EMPR FIELDWORK 1975, p. 79; 1988, p. 282
EMPR OF 1989-8
EMPR ASS RPT *623, 18555
EMPR AR 1964-13
EMR MP CORPFILE (Silver Standard Mines Ltd.)
GSC P *71-44
GSC MAP 9-1957; *11-1971; 310A; 1418A
GSC MEM 246
Placer Dome File

DATE CODED: 1988/04/14 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/04/14 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 054**

NATIONAL MINERAL INVENTORY: 104G6 Asb1

NAME(S): **MOUNT HICKMAN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G06E
BC MAP:
LATITUDE: 57 15 44 N
LONGITUDE: 131 05 07 W
ELEVATION: 1700 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Occurrence is in ultramafic rocks which are in the summit area of Mount Hickman on the northeast spur 1 kilometre from the peak.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6348501
EASTING: 374228

COMMODITIES: Asbestos

MINERALS

SIGNIFICANT: Antigorite Tremolite Olivine Pyroxene Clinopyroxene
ASSOCIATED: Biotite Magnetite Chromite
ALTERATION TYPE: Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Replacement Epigenetic Igneous-contact Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic			Mount Hickman Ultramafics

LITHOLOGY: Olivine Clinopyroxenite
Peridotite
Dunite
Hornblende Diorite
Hornblendite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Syn-mineralization
GRADE: Hornfels

CAPSULE GEOLOGY

The Mount Hickman occurrence is located along the northern boundary of the Upper Triassic or older Mount Hickman Ultramafic complex which is located along the southeast boundary of the Upper Triassic Hickman batholith. The ultramafic complex is composed mainly of medium to coarse-grained, buff to brown to black weathering olivine clinopyroxenite to peridotite. These rocks contain anywhere form 5 to 20 per cent olivine which is generally wholly or partly serpentinized. Accessory magnetite and chromite are ubiquitous. In the central portion of the complex, several bodies of lighter weathering dunite occur within the pyroxenite. The contacts are sharp but the genetic relationship between the two main rock types is uncertain. Along the southeast margin of the complex, the olivine pyroxenites grade into hornblende-pyroxene gabbros with 5 to 15 per cent chalky white feldspar filling interstices between pyroxene grains. Magnetite is also abundant. This "border phase" of the complex appears to intrude pyroxene and feldspar porphyritic volcanic flows of the Upper Triassic Stuhini Group. To the north, a narrow belt of variably metamorphosed and altered volcanic rocks of uncertain age separate the ultramafic complex from hornblende diorite to hornblendite of the mafic phase of the Hickman pluton. These rocks grade into more intermediate quartz monzonites and granodiorites of the main phase of the pluton located to the north. The ultramafic rocks are unequivocally intruded by the main phase of the Hickman pluton; the genetic relationship between the pluton and ultramafic complex is uncertain.

Mineralization is comprised of narrow seams of antigorite which have partly or completely replaced olivine in the olivine clinopyroxenites of the ultramafic complex.

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EMPR FIELDWORK 1988, pp. 251-267
EMPR OF 1989-7; 1995-25

BIBLIOGRAPHY

EMPR AR 1960-131
GSC P *71-44, p. 20
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/03/28 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 055**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIDDLE SCUD**, BIK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G06W
BC MAP:
LATITUDE: 57 16 03 N
LONGITUDE: 131 17 13 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6349479
EASTING: 362086

COMMODITIES: Copper, Silver

MINERALS
SIGNIFICANT: Tetrahedrite
ALTERATION TYPE: Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Podiform, Massive
CLASSIFICATION: Epigenetic, Igneous-contact

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Unknown			Unnamed/Unknown Informal
Upper Triassic			Hickman Batholith

LITHOLOGY: Gabbro
Hornblende Gabbro
Quartz Diorite
Diorite
Limestone
Argillite
Volcanic Rock

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: LENS
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1964

COMMODITY	GRADE	
Silver	223.0000	Grams per tonne
Copper	49.5000	Per cent

COMMENTS: Selected sample of a very small lens of tetrahedrite.
REFERENCE: Assessment Report 589.

CAPSULE GEOLOGY

The Middle Scud occurrence is located on the east side of a small unnamed glacier which is located approximately 5 kilometres east of the Scud River.

The showing occurs near the western margin of the Upper Triassic Hickman batholith which forms the southern portion of the north trending Jurassic-Triassic Hickman batholith. In this area, a ubiquitous plagioclase megacrystic, magnetite-rich quartz diorite phase occurs along the margin of the pluton. Diorites and hornblende gabbros of the mafic phase of the pluton occur to the east of the megacrystic phase; the relationship of the megacrystic phase to the Hickman pluton is uncertain.

To the west of the quartz diorite phase are fine to medium-grained amphibolitic rocks. Massive dark grey to black gabbros are common. These rocks are clearly intruded by the megacrystic plutonic phase. Their protolith is uncertain; these rocks could represent both the metamorphism of Upper Triassic or Permian volcanic rocks and/or mafic intrusions. Thickly bedded, light grey to white, often fossiliferous Early Permian limestone with interbedded argillite and maroon volcanic rocks occur to the west of the amphibolitic rocks. Their contact appears to be fault-related with a steep to vertical,

CAPSULE GEOLOGY

north trending fault juxtaposing the two units.
Mineralization consists of a small lens 20 centimetres wide by 75 centimetres long and 30 centimetres deep of massive argentiferous tetrahedrite which occupies a small fracture in the amphibolitic rocks. The fracture was traced for 6 metres and a grab sample from the massive lens contained 49.5 per cent copper and 223 grams per tonne silver (Assessment Report 589). Such fractures in the amphibolitic rocks are commonly serpentinized.

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EMPR FIELDWORK 1988, pp. 251-267
EMPR OF 1989-7
EMPR ASS RPT *589
EMPR AR *1964-13
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/02/16 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 056**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH SCUD**, BIK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G06W
BC MAP:
LATITUDE: 57 22 59 N
LONGITUDE: 131 23 27 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6362554
EASTING: 356275

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Magnetite Pyrite
ASSOCIATED: Quartz
ALTERATION: Chlorite Epidote
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Podiform Massive
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite Flow
Andesite Tuff
Andesite Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The North Scud occurrence is located along the western edge of the Scud glacier roughly 10 kilometres north of the glacier toe.

The showing is hosted within a thick succession of volcanic rocks that have been tentatively correlated with the Upper Triassic Stuhini Group. The sequence is over 400 metres thick consisting of andesitic to basaltic, often pyroxene porphyritic flows which are commonly epidote and chlorite altered. Green to red ash tuffs also occur within the flows. A 100 metre section of volcanic conglomerate to breccia overlies the basal flows and tuffs. Andesitic and lesser granodioritic clasts occur in a fine, tuffaceous groundmass and can be up to 10 centimetres across. Epidote and chlorite alteration of these rocks is also common. The top of the volcanic pile consists of green to red tuff and lapilli tuff.

Apparently overlying these rocks is a thick sequence of tightly folded metasediments. Argillite, black phyllite and variably recrystallized black limestone occur. Green calcareous tuff with small interbeds of white limestone dominate in the west half and form the uppermost part of the sequence. Small isoclinal folds trend north. The correlation of these rocks with the Stuhini Group is less certain.

Middle Jurassic medium-grained, equigranular granodiorite occurs just north of the occurrence and the distinctive salmon pink granite of the Middle Jurassic Yehiniko pluton occurs to the west and east of the occurrence.

Mineralization occurs mainly in the basal andesite flows, tuffs and breccia. Four showings consist of massive seams of chalcopyrite and bornite with or without magnetite which are up to 15 centimetres wide and less than 4 metres long. A pyritic, 1.7 metre wide quartz vein within a fault breccia zone is also present in the area.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 251-267
EMPR OF 1989-7
EMPR AR *1964-13
EMPR ASS RPT *592

BIBLIOGRAPHY

GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A
GSC MEM 246

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/02/15 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 057**

NATIONAL MINERAL INVENTORY:

NAME(S): **COT AND BULL**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G07W
BC MAP:
LATITUDE: 57 27 35 N
LONGITUDE: 130 54 32 W
ELEVATION: 1700 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6370170
EASTING: 385482

COMMODITIES: Silver Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Tetrahedrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	
Permian	Undefined Group	Unnamed/Unknown Formation	
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Quartz Monzonite
Diorite
Limestone
Diorite Dike

HOSTROCK COMMENTS: Mineralization occurs in plutonic, volcanic and sedimentary rock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine
COMMENTS: Mineralization hosted by both Stikinia rocks and plutonics.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

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

COMMODITY	GRADE	
Silver	223.5400	Grams per tonne
Gold	0.0700	Grams per tonne
Copper	1.6600	Per cent

COMMENTS: Sample taken over a 20 centimetre length.
REFERENCE: Assessment Report 9479.

CAPSULE GEOLOGY

The area of the occurrence is underlain by Upper Triassic, tuffaceous to crystalline andesite. Pink quartz monzonite of Tertiary-Cretaceous Age form large stocks in the region and locally intrude the volcanics. Quartz diorite, of unknown age, intrudes locally and with the quartz monzonite it forms the main rock type in this claim area. A large block of limestone, at least 300 metres by 150 metres, of possible Permian Age is included in the igneous rock. Both intrusive and volcanic rocks are cut by swarms of diorite dykes.

Chalcopyrite, bornite, pyrite and tetrahedrite occur in widely spaced fractures in all the above rock types. This mineralization also occurs at the contact of quartz diorite and an andesite dyke. A sample of this contact zone over 20 centimetres assayed 1.66 per cent copper, 223.54 grams per tonne silver and 0.07 grams per tonne gold.

BIBLIOGRAPHY

EM BULL 104
EMPR ASS RPT *9479
EMPR EXPL 1981-47

BIBLIOGRAPHY

GSC MAP 9-1957; 11-1971; 1418A
GSC MEM 246
GSC P 71-44

DATE CODED: 1988/02/25 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 058**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARG WEST**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G05E
BC MAP:
LATITUDE: 57 27 47 N
LONGITUDE: 131 32 39 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6371790
EASTING: 347393

COMMODITIES: Copper, Molybdenum, Tungsten, Lead, Gold

MINERALS

SIGNIFICANT: Chalcopyrite, Molybdenite, Scheelite, Galena, Pyrite
ASSOCIATED: Quartz
ALTERATION: Chlorite, Pyrite, Epidote, Biotite
ALTERATION TYPE: Chloritic, Epidote, Biotite, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork
CLASSIFICATION: Hydrothermal, Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Middle Jurassic			Unnamed/Unknown Informal
Eocene			Unnamed/Unknown Informal

LITHOLOGY: Rhyolite Breccia
Granodiorite
Felsite Dike
Rhyolite Dike
Diorite Dike
Diabase Dike
Andesite

HOSTROCK COMMENTS: Mineralization is found in both the volcanics and the plutonics near their contact.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine, Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

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

COMMODITY	GRADE	
Gold	0.8600	Grams per tonne
Copper	0.2000	Per cent
Tungsten	0.1700	Per cent

COMMENTS: Best assay from various chip samples with a 2.5 metre average length.
REFERENCE: Assessment Report 9617.

CAPSULE GEOLOGY

The region around the occurrence is underlain by Middle Jurassic granodiorite which intrudes Upper Triassic volcanics and sediments of the Stuhini Group. The body was dated just east of the occurrence at 158 +/- 6 Ma (Fieldwork 1988). A roof pendant of volcanic breccia about 600 metres long and 300 metres wide extends northeast from Dokdaon Creek. The breccia clasts vary from felsitic to rhyolititic in nature. Eocene, north trending felsite and rhyolitic dykes cut the granodiorite and volcanic breccia. These dykes were also dated in the vicinity of the occurrence at 49.7 +/- 1.7 Ma (Fieldwork 1988). Later east trending dykes of fine-grained diorite and diabase cut all other rocks.

Mineralization occurs within a zone of pyritization and chloritic alteration in both the granodiorite and volcanic breccia near their contact. This zone has an average width of 100 metres and a traced

CAPSULE GEOLOGY

length of 250 metres. Further strike extensions are obscured by overburden at both ends. Secondary biotite and epidote are also observed.

The zone is host to a vein-fracture system with as many as 14 parallel quartz veinlets per metre, ranging from 0.3 to 8 centimetres in width. They contain pyrite, chalcopyrite, molybdenite, scheelite and minor galena. The veinlets are steep dipping with a northeast strike.

Assays from chip samples were consistently low with no values above 0.86 grams per tonne gold, 10.63 grams per tonne silver, 0.2 per cent copper, 0.17 per cent tungsten and 0.05 per cent molybdenum. Chip samples had an average length of about 2.5 metres.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 251-267
EMPR OF 1989-7; 1991-17
EMPR EXPL 1981-73
EMPR ASS RPT *9617
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1988/02/08 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 059**

NATIONAL MINERAL INVENTORY: 104G4 Cu1

NAME(S): **HORN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 09 22 N
LONGITUDE: 131 31 38 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Somewhere on the Horn claims near Saddlehorn Mountain.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6337597
EASTING: 347140

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Augite Porphyry Basalt
Basalt
Breccia
Latite Porphyry Dike
Felsite Dike

HOSTROCK COMMENTS: Dykes related to Juro-Triassic syenite stocks cut the mineralized volcanics.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments, with Permian sedimentary and metamorphic rocks, form the northern and eastern limit of the area. Permian limestone is the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Traissic rocks. Strata is folded into a series of anticlines and synclines with east or northwest trending axes. Younger folds with north-northwest trending axes transect the earlier formed structures. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and stocks. Eocene Age intrusions of quartz monzonite form stocks and are the youngest rocks in the area.

The Horn occurrence lies near the eastern flank of the Coast Plutonic Complex in an area primarily underlain by Stuhini Group volcanics. They consist of augite porphyry basalt flows, andesite flows, and breccia and calcareous tuff. Latite porphyry and felsite dykes from 3 to 6 metres wide cut these rocks. One of the latite dykes is traced to a tongue of syenite of the Galore Creek Syenite Complex. Augite porphyry basalt and basalts contain traces of chalcopyrite in fractures. Spotty malachite is also observed.

BIBLIOGRAPHY

EMPR ASS RPT *697
EMPR AR 1965-31,247
EMPR FIELDWORK *1975, p. 79
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1418A

BIBLIOGRAPHY

EMR MP CORPFILE (Silver Standard Mines)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 060**

NATIONAL MINERAL INVENTORY: 104G4 Cu4

NAME(S): **DEVILS CLUB**, GOAT

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 08 19 N
LONGITUDE: 131 32 48 W
ELEVATION: 1295 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Located east and adjacent to Stikine Copper's Galore Creek property, at an elevation from 1067 to 1524 metres.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6335693
EASTING: 345892

COMMODITIES: Copper Silver Gold

MINERALS
SIGNIFICANT: Unknown
COMMENTS: Copper mineralization is assumed to be chalcopyrite.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Volcanic
Sediment/Sedimentary
Syenite

HOSTROCK COMMENTS: The area of the occurrence is mapped as Stuhini Group volcanics and sediments.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1967
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Silver	96.0000	Grams per tonne
Gold	0.6900	Grams per tonne
Copper	3.5700	Per cent

COMMENTS: Assays from five channel samples taken from an 8.2 metre mineralized section.
REFERENCE: Northern Miner August 3, 1967.

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments with Permian sedimentary and metamorphic rocks form the northern and eastern limits of the area. Permian limestone is the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a linked series of anticlines and synclines with east or north-west trending axes. Younger folds with north-northwest trending axes transect the earlier formed structure. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and stocks. Eocene Age intrusions of quartz monzonite form stocks and are the youngest rocks in the area.

There is no available detailed information on the occurrence geology. However, it is known to be situated north of the Anuk River, and east of (and adjacent to) Stikine Copper's Galore Creek porphyry copper property at an elevation of 1067 to 1524 metres. This area is mapped as Stuhini Group volcanics and sediments (GSC Map 11-1971).

CAPSULE GEOLOGY

Assays from 5 channel samples from a mineralized section 8.2 metres wide in one trench contained gold ranging up to 0.69 grams per tonne, silver to 96.0 grams per tonne and copper to 3.57 per cent.

BIBLIOGRAPHY

N MINER *Aug 3, 1967
EMPR PF (*Financial Record July 22, 1967)
EMPR AR 1965-29 (fig.3); *1967-29
EMPR MP CORPFILE (Anuk River Mines Ltd.)

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/05/05 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 061**

NATIONAL MINERAL INVENTORY: 104G4 Zn1

NAME(S): **PERELESHIN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 12 09 N
LONGITUDE: 131 42 37 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6343184
EASTING: 336277

COMMODITIES: Copper Zinc

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Plutonic

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

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This occurrence lies on the eastern flank of the Coast Plutonic Complex in an area underlain by Juro-Cretaceous granodiorite. On the south end of Mount Pereleshin, veins bearing chalcopyrite were identified. East of Mount Pereleshin, at the contact of the granodiorite with Permian limestone, float consisting of calcite, pyrite and sphalerite was found.

BIBLIOGRAPHY

GSC MEM *246, p. 78
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC P 71-44

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 062**

NATIONAL MINERAL INVENTORY: 104G5 Cu1

NAME(S): **COS**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G05E
BC MAP:
LATITUDE: 57 18 46 N
LONGITUDE: 131 38 28 W
ELEVATION: 700 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6355290
EASTING: 340930

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Quartz
ALTERATION: Silica Chlorite
ALTERATION TYPE: Silicific'n Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic			Unnamed/Unknown Informal
Paleozoic			Stikine Assemblage

LITHOLOGY: Quartz Monzonite
Sandstone
Siltstone
Limestone
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

CAPSULE GEOLOGY

The Cos occurrence is located on the north bank of the Scud River approximately 11 kilometres east of the confluence with the Stikine River.

The showing is marked by a large and easily visible gossan which occurs at the faulted contact between Lower Jurassic quartz monzonite and Permian or older Stikine Assemblage sedimentary rocks. The quartz monzonite is medium-grained, potassium feldspar megacrystic and has 15-20 per cent mafic minerals with hornblende greater than biotite. The intrusion forms a roughly circular plug 10 kilometres in diameter that has been dated at 204 +/- 7 Ma (Fieldwork 1988). The quartz monzonite becomes highly altered (rusty, chloritic) around the fault zone. The sediments are also altered (rusty, silicified) around the fault zone and comprise light to medium grey, variably foliated sandstone and siltstone. Thin discontinuous horizons of highly recrystallized limestone occur within the metasediments. A well dated (Fieldwork 1988). Late-Early Permian sequence of limestone over 1000 metres thick overlies the foliated sedimentary rocks and lies further to the east. Only a few kilometres to the north, Middle Jurassic granodiorite intrudes both the quartz monzonite plug and the Paleozoic sediments.

Mineralization is poorly documented and comprises narrow quartz veinlets mineralized with bornite and chalcopyrite. The veinlets strike north parallel to the fault zone which can be traced ten's of kilometres to the south.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 251-267
EMPR OF 1989-7
EMPR AR *164-13
GSC MEM *246, p. 74
GSC P 71-44

BIBLIOGRAPHY

GSC MAP 9-1957; 11-1971; 310A; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/02/15 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 063**

NATIONAL MINERAL INVENTORY:

NAME(S): **LATE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G06E
BC MAP:
LATITUDE: 57 26 25 N
LONGITUDE: 131 01 13 W
ELEVATION: 1675 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6368200
EASTING: 378736

COMMODITIES: Copper, Gold

MINERALS

SIGNIFICANT: Chalcopyrite, Bornite
ASSOCIATED: Pyrite, Quartz, Feldspar
ALTERATION: Feldspar, Chlorite, Sericite, Quartz
ALTERATION TYPE: Sericitic, Chloritic, Potassic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Middle Jurassic			Yehiniho Pluton
Triassic-Jurassic			Hickman Batholith

LITHOLOGY: Hornblende Biotite Granite
Quartz Monzonite
Volcanic Greywacke
Lapilli Tuff
Volcanic Breccia
Pyroxene Porphyritic Andesite Flow
Pyroxene Porphyritic Basalt Flow

HOSTROCK COMMENTS: Mineralization occurs in both plutonic and volcanic rock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
GRADE: Hornfels
COMMENTS: Mineralization occurs in contact area of igneous and volcanic rock.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1980
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	0.2000	Grams per tonne
Copper	0.1600	Per cent

COMMENTS: Copper value from a 5 metre chip sample in intrusive rock; gold from value is from a chip sample in volcanic rock.
REFERENCE: Assessment Report 9660.

CAPSULE GEOLOGY

The Late occurrence is located on the east side of Schaft Creek approximately 55 kilometres upstream from the confluence with the Stikine River.

The showing is located along the eastern margin of the Middle Jurassic Yehiniko pluton. The pluton is comprised of a distinctive tan to orange weathering, salmon pink, hornblende-biotite granite to quartz monzonite and lies in the middle of the north trending Jurassic-Triassic Hickman batholith. To the east of the pluton lies a thick succession of Upper Triassic volcanic rocks of the Stuhini Group. The package consists of well bedded volcanic greywackes, lapilli tuffs and volcanic breccias that are overlain by more massive, often pyroxene porphyritic andesitic to basaltic flows. Regional bedding attitudes strike north and dip moderately to the east although local variations due to folding are common.

CAPSULE GEOLOGY

The intrusive-volcanic contact is characterized by an 80 metre thick metasomatized zone within the volcanics. The volcanics have been recrystallized and locally the contact is hornfelsed or altered to chloritic schist.

Alteration which includes feldspathization, sericitization and chloritization occurs in all units adjacent to the numerous east trending faults and shears. Sparse mineralization occurs throughout the adjacent areas but it is most prominent along the intrusive-volcanic contact and in shear/alteration zones. Within the volcanics and metasomatized contact zone are irregularly distributed fine specks of chalcopyrite and bornite. Two, three kilogram chip samples collected over 25 metres averaged 0.07 per cent copper and 0.2 grams per tonne gold.

Two types of mineralization occur within the intrusive rocks:
1) Disseminated to small massive clots of pyrite, chalcopyrite and bornite occur in narrow discontinuous widely distributed quartz veinlets.
2) Pyrite, chalcopyrite and bornite are found along silicified fractures adjacent to shear zones. This type of mineralization seldom exceeds 10 metres in width and fades vertically. Chip samples collected over 5 metres along the length of two adjacent shears contained 0.16 and 0.05 per cent copper, with negligible molybdenum, silver and gold.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 251-267
EMPR OF 1989-7
EMPR ASS RPT *9660
EMPR EXPL *1980-472
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1988/02/26 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 064**

NATIONAL MINERAL INVENTORY: 104G12 Cu3

NAME(S): **CONOVER MOUNTAIN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12W
BC MAP:
LATITUDE: 57 38 46 N
LONGITUDE: 131 46 29 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Showing is somewhere on Conover Mountain.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6392700
EASTING: 334401

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Calcite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Volcanic Rock
Sediment/Sedimentary Rock

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Veins containing quartz, calcite and chalcopyrite were reported on Conover Mountain. This occurrence is underlain by undifferentiated volcanic and sedimentary rocks of the Upper Triassic Stuhini Group (GSC Map 11-1971).

BIBLIOGRAPHY

GSC MEM *246, p. 78
GSC MAP 9-1957; 11-1971; 309A; 1418A
GSC P 71-44

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 065**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIST**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12W
BC MAP:
LATITUDE: 57 38 48 N
LONGITUDE: 131 49 49 W
ELEVATION: 1525 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6392899
EASTING: 331089

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Volcanic
Chert
Siltstone
Felsic Dike
Dioritic Dike
Schist
Gneiss
Quartz Monzonite

HOSTROCK COMMENTS: Felsic and dioritic dykes of unknown age intrude the volcanics in occurrence area.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1981

COMMODITY	GRADE	
Gold	0.5500	Grams per tonne
Copper	0.0100	Per cent

REFERENCE: Assessment Report 10476.

CAPSULE GEOLOGY

The area of the occurrence is underlain by undifferentiated sediments and volcanics of the Upper Triassic Stuhini Group. This group consists of mafic to intermediate volcanics, chert and siltstone. These rocks are intruded by felsic and dioritic dykes up to 150 metres in width. Just south of the occurrence a narrow exposure of Carboniferous or Permian schists and gneisses is truncated at its south end by a Tertiary-Cretaceous quartz-monzonite batholith.

A local zone of quartz veining within the volcanics and sediments contains traces of pyrite, pyrrhotite and chalcopyrite. Assays from this showing average 0.01 per cent copper and up to 0.55 grams per tonne gold. Samples of siltstone float containing chalcopyrite assayed 0.184 per cent copper, 13.03 grams per tonne silver and 0.2 grams per tonne gold.

BIBLIOGRAPHY

EMPR ASS RPT *9218, *10476
GSC MEM 246, p. 78
GSC P 71-44

BIBLIOGRAPHY

GSC MAP 9-1957; 11-1971; 309A; 1418A

DATE CODED: 1988/02/10 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 066**

NATIONAL MINERAL INVENTORY:

NAME(S): **STIKINE EAST**, BIK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 08 29 N
LONGITUDE: 131 24 05 W
ELEVATION: 1220 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6335683
EASTING: 354692

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: K-Feldspar
ALTERATION: K-Feldspar
ALTERATION TYPE: Potassic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Porphyry

HOST ROCK
DOMINANT HOSTROCK: Plutonic

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

LITHOLOGY: Syenite
Aplite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine
COMMENTS: A sill-like body of syenite is emplaced in Stikinia Terrane rock.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1964
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Copper	0.1000	Per cent

COMMENTS: Sample taken across 11.9 metres.
REFERENCE: Assessment Report 622.

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments with Permian sedimentary and metamorphic rocks are at the north and east limits of the area. Permian limestone is the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a linked series of anticlines and synclines with west or northwest trending axes. Younger folds with north-northwest trending axes transect the earlier formed structure. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and stocks. Eocene Age intrusions of quartz monzonite form stocks and are the youngest rocks in the area.

A sill-like mass of syenite, 0.8 by 1.6 kilometres in area, is intruded into Stuhini Group volcanics. The northern contact of the syenite with andesite is formed by a northeast striking fault. Near the northern limit of this mass the syenite is feldspathized and traces of disseminated chalcopyrite and bornite occur. Veinlets of violet feldspar and aplite are associted with the mineralization. One 11.9 metre sample across the syenite assayed 0.10 per cent copper.

BIBLIOGRAPHY

EMPR ASS RPT 593, *622, 687, 5093, 5104
EMPR AR 1964-13; *1965-29; 1966-25
EMPR GEM 1974-336
EMR MP CORPFILE (Silver Standard Mines Ltd.)
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1418A
EMPR FIELDWORK *1975, p. 79

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/15 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 067**

NATIONAL MINERAL INVENTORY:

NAME(S): **STIKINE NORTH**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 10 32 N
LONGITUDE: 131 26 48 W
ELEVATION: 823 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6339583
EASTING: 352089

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite
ALTERATION: K-Feldspar Garnet Amphibole Calcite Epidote Magnetite Pyrite
ALTERATION TYPE: Potassic Skarn Chloritic Pyrite Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Epigenetic Porphyry Igneous-contact Skarn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Syenite Porphyry
Andesitic Tuff
Volcanic Breccia
Andesite Flow
Basalt Flow
Augite Porphyry Basalt
Calcareous Argillite
Calcareous Conglomerate
Limestone

HOSTROCK COMMENTS: Mineralization is primarily within volcanics but also occurs within syenite porphyry.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1964
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Copper	0.1300	Per cent

COMMENTS: This sample was taken over an 18 metre length.
REFERENCE: Assessment Report 694.

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments with Permian sedimentary and metamorphic rocks are at the north and east limits of the area. Permian limestone is the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a linked series of anticlines and synclines with west or northwest trending axes. Younger folds with north-northwest trending axes transect the earlier formed structure. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and stocks. Eocene Age intrusions of quartz monzonite form stocks and are the youngest rocks in the area.

The area of interest is underlain mainly by dark green Stuhini

CAPSULE GEOLOGY

Group volcanics consisting of andesitic tuffs with subordinate volcanic breccias and flows. Flows of dark green basalt, which grade to augite porphyry basalt, are interbedded with andesites. Minor sedimentary beds are also interbedded with the volcanics. They consist of calcareous argillites and conglomerates with some beds of pure limestone. Dykes and sills of medium to coarse-grained syenite porphyry cut area rocks. The intrusives, up to 6.1 metres wide, strike north and dip 50 to 90 degrees west. The dykes are considered to be related to the syenite porphyry stocks of Stikine Copper's porphyry copper deposit a few kilometres to the south.

Weak pyrite-epidote alteration occurs in the volcanics. Strong alteration consisting of feldspar-amphibole-garnet-epidote is often accompanied by chalcopyrite and sometimes magnetite. Calcareous beds may be involved with this process. Magnetite also occurs as a primary constituent of the volcanics. The syenite porphyry dykes are weakly to moderately altered to chlorite and pink potash feldspar. Weak to moderately disseminated chalcopyrite occurs where feldspathization is strongest. Traces of chalcopyrite are also found in the volcanics adjacent to mineralized dykes.

The best copper mineralization is associated with calc-silicate alteration in the volcanics. One 6 metre sample contained 0.23 per cent copper. An 18 metre sample, which includes the 6 metre one, assayed 0.13 per cent copper.

BIBLIOGRAPHY

EMPR FIELDWORK *1975, p. 79
EMPR ASS RPT 688, 692, *694, 5093, 5104
EMPR AR 1964-13; *1965-29; 1966-25
EMPR GEM 1974-336
EMR MP CORPFILE (Silver Standard Mines Ltd.)
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 068**

NATIONAL MINERAL INVENTORY:

NAME(S): **AC**, ALPHA , PAYDIRT

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 03 46 N
LONGITUDE: 131 31 01 W
ELEVATION: 823 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6327188
EASTING: 347379

COMMODITIES: Copper

MINERALS

SIGNIFICANT:	Chalcopyrite	Pyrite	Bornite	Magnetite		
ALTERATION:	K-Feldspar	Biotite	Muscovite	Epidote	Malachite	
ALTERATION TYPE:	Potassic		Biotite	Epidote		Oxidation
MINERALIZATION AGE:	Unknown					

DEPOSIT

CHARACTER:	Vein	Disseminated		
CLASSIFICATION:	Epigenetic	Hydrothermal	Porphyry	Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Syenite
Porphyritic Granite
Andesite
Tuff
Volcanic Breccia

HOSTROCK COMMENTS: The intrusive rocks also contain copper and may be related to the Galore Creek syenite body.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments with Permian sedimentary and metamorphic rocks are at the northern and eastern limit of the area. Permian limestone is the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a linked series of anticlines and synclines with west or northwest trending axes. Younger folds with north-northwest trending axes transect the earlier formed structure. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and stocks. Eocene Age intrusions of quartz monzonite have formed several stocks and are the youngest rocks in the area.

This occurrence is located several kilometres to the southwest of Stikine Copper's Galore Creek porphyry copper deposits. The area is underlain by Stuhini Group volcanics consisting of altered andesites, tuffs and porphyrytic andesite containing amphibole and plagioclase. Explosion breccia has been noted in one locality. A body of feldspar porphyry consisting of syenitic to porphyritic granite is intruded into the volcanics. The potash feldspar appears to be a result of secondary hydrothermal alteration as are muscovite, biotite and epidote.

Two types of mineralization occur in this area:
1) Chalcopyrite and malachite are found along joints and disseminated in the volcanics near the intrusive contact. Pyrite is abundant.
2) Chalcopyrite with traces of bornite and malachite are disseminated throughout the feldspar porphyry. Pyrite is common in mineralized areas and traces of magnetite veinlets were also observed.

BIBLIOGRAPHY

EMPR ASS RPT 643, *846, 5615, 6022, 9999, 13917, 14988, 15753
EMPR AR 1965-40
EMPR FIELDWORK 1975, p. 79
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1410A

DATE CODED: 1988/04/26 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 069**

NATIONAL MINERAL INVENTORY:

NAME(S): **OP**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 13 30 N
LONGITUDE: 131 29 11 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6345172
EASTING: 349889

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Permian	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Volcanic
Hornfels
Limestone
Sediment/Sedimentary

HOSTROCK COMMENTS: The mineralization is associated with the Stuhini Group volcanics.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments with Permian sedimentary and metamorphic rocks are at the northern and eastern limit of the area. Permian limestone is the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a linked series of anticlines and synclines with west or northwest trending axes. Younger folds with north-northwest trending axes transect the earlier formed structure. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and stocks. Eocene Age intrusions of quartz monzonite have formed several stocks and are the youngest rocks in the area.

The OP claim area, located southwest of the Galore Creek-Scud River junction, has been mapped by Souther (GSC Map 11-1971) as consisting of Middle to Upper Permian limestone with minor sediments. These sediments are bounded to the south by a strong northwest trending fault, south of which exist Stuhini Group volcanics. Thin bands of hornfels, along with some highly weathered volcanics, occur intermittently along the fault.

Old trenches and pits revealed pyrite and pyrrhotite mineralization occurs in gossanous and weathered volcanics. Some minor chalcopyrite is associated with the iron sulphide mineralization.

BIBLIOGRAPHY

EMPR AR *1965-29(Fig. 3), 34
EMPR ASS RPT *682
EMPR FIELDWORK 1975, p. 29
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44

BIBLIOGRAPHY

WWW http://www.infomine.com/

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/19 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 070**

NATIONAL MINERAL INVENTORY:

NAME(S): **BJ**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G02W
BC MAP:
LATITUDE: 57 09 47 N
LONGITUDE: 130 56 11 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Mineralization occurs on claims which extend several kilometres along the west side of Mess Creek near its headwaters. Available data indicates several distinct occurrences but no details are available.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6337200
EASTING: 382893

COMMODITIES: Gold, Copper, Lead, Zinc, Silver, Tellurium, Bismuth

MINERALS

SIGNIFICANT: Gold, Chalcopyrite, Galena, Sphalerite, Telluride, Tellurobismuthite, Tetradymite, Tetrahedrite, Hessite, Pyrite
ASSOCIATED: Quartz, Carbonate, Siderite, Barite, Pyrite
ALTERATION: Silica, Sericite, Carbonate, K-Feldspar
COMMENTS: Assessment report states that "potassic" alteration occurred with some veins.
ALTERATION TYPE: Silicific'n, Sericitic, Carbonate, Potassic
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: 192 +/- 7 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Chromite-muscovite

DEPOSIT

CHARACTER: Vein, Stockwork, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Undefined Group	Unnamed/Unknown Formation	
Paleozoic			Stikine Assemblage

LITHOLOGY: Graphitic Schist
Quartz Sericite Schist
Chlorite Schist
Schist
Phyllite
Ash
Lapilli Tuff
Meta Diorite Sill
Meta Andesite
Diorite

HOSTROCK COMMENTS: Metasediment, metavolcaniclastic metavolcanic rocks of Probable devono-mississippian age host the mineralization.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Syn-mineralization, Post-mineralization
GRADE: Greenschist, Amphibolite

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Channel

COMMODITY	GRADE	
Gold	30.2700	Grams per tonne

COMMENTS: Channel sample taken over 1.5 metres.
REFERENCE: Property File (Iskut Gold Corporation - 1988 Prospectus).

CAPSULE GEOLOGY

"This occurrence area comprises poly deformed and metamophosed volcanics, volcaniclastics, sediments, and intrusives of possible Devono-Mississippian age". Upper Triassic volcanics and sediments overlie these unconformably to the northwest and are intruded by several plutonic units of batholithic size. The Paleozoic rocks have undergone a high degree of metamorphism and four phases of folding,

CAPSULE GEOLOGY

which combined have transformed these rocks into a variety of schists and phyllites. A unit described as green- stone and foliated greenstone on the property along with a dioritic rock, which is observed grading to foliated greenstone. Several distinct types of mineralization are hosted by these rocks.

Upper greenschist to lower amphibolite metamorphism has produced metamorphogenic quartz veins which are weakly pyritized and contain some chalcopyrite. Silica-potassic alteration peripheral to these veins is common. A telluride vein, exposed over 180 metres, is host to a mineral assemblage including gold, hessite, tetradymite, tellurobismuthite, galena, tetrahedrite, sphalerite, chalcopyrite and pryite. Vein margins are indistinct and show increasing silici-fication of wall rocks. Gold values are low with a high of 0.48 grams per tonne.

A second type of mineralization is hosted by quartz breccia veins. These are easily distinguished because they carry fragments of silicified wallrocks. They are mineralized with pyrite, galena and sphalerite, as well as gold within a fine-grained glassy quartz and barite matrix. This zone of veining occurs at the contact between quartz-sericite schist and metavolcanics along a strike length of at least 450 metres. Gold values from channel samples range up to 30.27 grams per tonne over 1.5 metres. Quartz-chalco-pyrite veins which are contemporaneous with the quartz breccia veins occur exclusively within iron-carbonate alteration zones. These narrow, sinuous veins also carry minor tetrahedrite.

Carbonate-sulphide veins with associated sericite and carbonate alteration contain massive to granular pyrite and arsenopyrite and scattered coarse blebs of sphalerite, chalcopyrite and galena in a siderite matrix. Gold mineralization is erratic but samples contain highs of up to 0.34 to 2.06 grams per tonne.

Sulphides are also found in ubiquitous carbonate alteration zones that are confined to massive chlorite schists and greenstones.

Disseminated pyrite is common, along with lesser arsenopyrite. Gold grades range from 1.0 to 3.1 grams per tonne.

A significant north-south trending zone of quartz-breccia veining containing sulphides was drilled in 1988. This zone appears to be hosted within quartz-sericite schist and green metavolcanics.

BIBLIOGRAPHY

EMPR ASS RPT *9040, *9692, *10917, *14982
EMPR EXPL 1980-471; 1981-92; 1986-C444
EMPR PF (*Prospectus 1988)
GSC MAP 9-1957; 11-1971; 1418A
GSC P 71-44
PR REL Roca Mines Inc., Feb.24, 2003

DATE CODED: 1988/02/14 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1991/07/01 REVISED BY: DE FIELD CHECK: Y

MINFILE NUMBER: **104G 071**

NATIONAL MINERAL INVENTORY: 104G9 Cu2

NAME(S): **ART**, AXE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G09E
BC MAP:
LATITUDE: 57 41 29 N
LONGITUDE: 130 11 52 W
ELEVATION: 1525 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: The location is for the centre of the Art 1-6 claim group as identified in Assessment Report 6090.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6394983
EASTING: 428594

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Unknown
COMMENTS: No available description.
COMMENTS: An alteration zone is reported.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Lower Jurassic	Stuhini	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Granodiorite
Quartz Monzonite
Sediment/Sedimentary Rock

HOSTROCK COMMENTS: Mineralization occurs in an alteration zone. The altered host rock was not described in the reports.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine Plutonic Rocks
COMMENTS: It is not known in which of the terranes mineralization occurs.

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1969
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Copper	0.4750	Per cent

COMMENTS: An average value of core from two short holes.
REFERENCE: Northern Miner December 25, 1969, page 12.

CAPSULE GEOLOGY

The Art occurrence is located on the southwest portion of the Klastline Plateau. The area has recently been mapped on a regional scale as Upper Triassic Stuhini Group sediments intruded by dikes, sills, plugs and plutons of Early Jurassic age (Open File 1997-3). The contact of the quartz monzonite to granodiorite Groat Stock occurs about 1 kilometre to the south of where the Art 1-6 claims appear on old provincial claim maps.

The Art 1-6 claims were staked in August 1969 by Spartan Exploration. Two short holes were drilled at this time. During 1970, geological mapping and prospecting were carried out by Mitsui Mining and Smelting Co. Ltd. under a joint venture agreement. The federal National Mineral Inventory (104G/9 Cu2) reports that Spartan Explorations Ltd. returned to the area in 1973 and "apparently" restaked the now lapsed Art claim area as the Wolf claims (104G 045). However, provincial claim maps from those years show that the Art 1-6 claims were located adjacent to the northwest of the Wolf claims and about 1.5 to 2 kilometres to the northwest of where the Wolf claim mineralization occurs. (It is possible that the Art 1-6 claims were mislocated on the claim map.) The extensive Axe property was staked in 1988 covering the Wolf ground and sold in part to Ascot Resources

CAPSULE GEOLOGY

Ltd. in 1989. Asocot explored the claims over the following two years. Although the Art showing was indicated on Ascot maps, no work was reported to have been done on it and no mention of it was made.

Little information on the occurrence is available. Copper mineralization is reported to occur in an alteration zone some 122 by 183 metres. Samples of core from two short holes 15.2 metres apart average 0.475 per cent copper (Northern Miner, December 25, 1969). These were not considered representitive values by the exploration company.

BIBLIOGRAPHY

ASS RPT 6090
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A
EMR MP CORPFILE (Nuspar Resources Ltd.)
N MINER *Dec. 25, 1969, p. 12

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/10/14 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 072**

NATIONAL MINERAL INVENTORY: 104G8 Au1

NAME(S): **BALL CREEK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G01W 104G08W
BC MAP:
LATITUDE: 57 14 24 N
LONGITUDE: 130 16 07 W
ELEVATION: Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: The location is the mouth of Ball Creek. The exact area of placer work is unknown.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6344815
EASTING: 423434

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Gold
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unconsolidated
CLASSIFICATION: Placer

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

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

LITHOLOGY: Gravel

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The area drained by Ball Creek is primarily underlain by units of Upper Triassic volcanics and/or sediments as well as Lower Jurassic conglomerate. These are intruded locally by bodies of Juro-Cretaceous hornblende diorite and Tertiary-Cretaceous felsite. They are overlain in the northern parts of the drainage area by Cenozoic, Spectrum Range basalts.

Between 1936 and 1940 placer operations recovered 93.3 grams of gold from Ball Creek. The source of the placer gold may be Upper Triassic volcanics which are known to host gold in significant amounts.

BIBLIOGRAPHY

EMPR BULL 28, p. 58
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1985/07/24
DATE REVISED: 1988/04/29

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **104G 073**

NATIONAL MINERAL INVENTORY:

NAME(S): **MESS**, MEST

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G07W
BC MAP:
LATITUDE: 57 28 41 N
LONGITUDE: 130 53 11 W
ELEVATION: 750 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6372173
EASTING: 386888

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Magnetite
ASSOCIATED: Siderite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	
Permian	Undefined Group	Unnamed/Unknown Formation	
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Quartz Monzonite
Andesite
Limestone

HOSTROCK COMMENTS: The actual host to the mineralization is not identified.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

CAPSULE GEOLOGY

This occurrence is located near the northwest corner of Mess Lake. The area is underlain by Upper Triassic andesites and Permian limestones which have been intruded by a Tertiary-Cretaceous quartz monzonite stock.

Siderite with irregular zones of magnetite and a trace of chalcopyrite was found in an unspecified host rock in one outcrop. The deposit characteristics of the siderite were not reported.

BIBLIOGRAPHY

EMPR ASS RPT *652
EMPR AR *1964-17
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/02/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 074**

NATIONAL MINERAL INVENTORY: 104G12 Cu4

NAME(S): **PR**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 32 10 N
LONGITUDE: 131 31 27 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6379875
EASTING: 348895

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Massive
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Diorite
Syenite Dike
Diorite Dike
Rhyolite Dike
Quartz Monzonite
Granodiorite

HOSTROCK COMMENTS: Mineralization in volcanics apparently related to syenite dykes.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This occurrence is underlain by undifferentiated volcanic and sedimentary rocks of the Upper Triassic Stuhini Group. In this area they are mainly andesitic and basaltic flows, tuffs and breccias with minor interbedded sediments consisting of siltstone, mudstone, limestone and conglomerate. Plugs of granodiorite and quartz monzonite along with Juro-Triassic stocks and dykes of syenite and tabular bodies of rhyolite also intrude these rocks. Younger dykes of diorite or monzonite intrude all other rock types.

A mineralized area above Strata Creek occurs in andesitic volcanics that are cut by syenite, rhyolite and diorite dykes. Float pieces below the rock bluffs carry zoned veins of massive chalcopyrite with pyrite rims. Near the top of the ridge at least two narrow veins of chalcopyrite occur. The chalcopyrite is less than 15 centimetres across. The sulphide veins and the syenite dykes have the same 20 degree strike and there appears to be some relationship between them. No values were reported from rocks sampled at this occurrence.

BIBLIOGRAPHY

EMPR ASS RPT 3029, 3238, *3846, 3847
EMPR GEM *1972-534
GSC MEM 246
GSC P 71-44
GSC SUM RPT 1928
GSC MAP 9-1957; 11-1971; 309A; 1418A
EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/28 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 075**

NATIONAL MINERAL INVENTORY:

NAME(S): **GU**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G05E
BC MAP:
LATITUDE: 57 29 20 N
LONGITUDE: 131 33 16 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6374688
EASTING: 346885

COMMODITIES: Copper, Lead, Zinc, Molybdenum, Tungsten

MINERALS

SIGNIFICANT: Chalcopyrite, Galena, Sphalerite, Molybdenite, Scheelite, Pyrite
ASSOCIATED: Quartz, Ankerite
ALTERATION: Chlorite
ALTERATION TYPE: Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Middle Jurassic	Stuhini	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Granodiorite
Feldspar Porphyritic Andesite Flow
Andesite Flow
Tuff
Siltstone
Limestone
Mudstone
Felsic Dike
Diorite Dike

HOSTROCK COMMENTS: Mineralization occurs in marginal contact zone of an intrusive stock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine

CAPSULE GEOLOGY

The Gu occurrence is located near the headwaters of Dokdaon Creek approximately 11 kilometres east of the Stikine River.

The showings are associated with east trending shear zones which crosscut Middle Jurassic granodiorite that was dated southeast of the showings at 138 +/- 6 Ma (Paper 1989-1). The granodiorite is typically medium-grained, with hornblende content greater than biotite. Small pendants of volcanic rocks correlated with the Upper Triassic Stuhini Group occur throughout the area. They are comprised of dark grey to green, massive to feldspar porphyritic andesite flows with lesser fine-grained tuffs, siltstones and mudstones. There are also minor limestone beds. Crosscutting both the volcanic rocks and the granodiorite are north trending felsic dykes which have been dated at 49.7 +/- 1.7 Ma (Paper 1989-1).

Fine quartz veining is found in the marginal contact zone of the granodiorite along regionally predominant joints, striking at 160 degrees. These fine quartz stringers are often only hairline fissure-fillings but may be up to over 2 centimetres in width. They consist of milky quartz containing mostly pyrite with specks of chalcopyrite, galena, sphalerite, molybdenite and occasional scheelite.

Sparse mineralization is also found in a shear zone cutting the the granodiorite. Fractures parallel to the fault or conjugate to it, contain chalcopyrite and are traced for approximately 1.6 kilometres. Mineralization does not occur more than 500 metres from the main fault and is sporadic, restricted and low grade. Some unmineralized ankerite veining and later diorite dykes occur in the shear zone. Chlorite alteration is observed nearby with barren quartz stringers.

BIBLIOGRAPHY

EMPR P 1989-1, pp. 251-267
EMPR OF 1989-7; 1991-17
EMPR ASS RPT 3029, 3238, 3846, *3847
EMPR GEM *1972-534
GSC MEM 246
GSC P 71-44
GSC SUM RPT 1928
GSC MAP 9-1957; 11-1971; 309A; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/29 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 076**

NATIONAL MINERAL INVENTORY: 104G16 Cu2

NAME(S): **CASTLE**, JO, CAS

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G16E
BC MAP:
LATITUDE: 57 48 44 N
LONGITUDE: 130 12 37 W
ELEVATION: 1850 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Castle property is located about 12 kilometres west-southwest of the town of Iskut (Open File 1997-3). Area of high gold from Castle 2 zone in the central area of the Castle 2 claim (Assessment Report 16897, Figure 6).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6408447
EASTING: 428090

COMMODITIES: Gold, Silver, Copper, Molybdenum, Lead

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Bornite, Malachite, Molybdenite, Galena, Gold
ASSOCIATED: Quartz
ALTERATION: Epidote, Chlorite, Sericite, Silica, Limonite, Pyrite, Magnetite
COMMENTS: Mineralization occurs in a gossan zone.
ALTERATION TYPE: Propylitic, Sericitic, Silicific'n, Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein, Shear
CLASSIFICATION: Hydrothermal, Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Andesitic Breccia, Andesite, Felsite Dike, Alkali Granite, Feldspar Porphyry Dike, Shale, Sediment/Sedimentary, Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: DRILLHOLE — REPORT ON: N

CATEGORY: Assay/analysis — YEAR: 1988
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	4.4600	Grams per tonne

COMMENTS: Sample across 7.6 metres.
REFERENCE: Vancouver Stockwatch Sept. 28, 1988.

ORE ZONE: SAMPLE — REPORT ON: N

CATEGORY: Assay/analysis — YEAR: 1987
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	54.5100	Grams per tonne
Gold	10.1500	Grams per tonne
Copper	0.7000	Per cent

COMMENTS: From a 0.3-metre chip sample.
REFERENCE: Assessment Report 16897.

CAPSULE GEOLOGY

The Castle prospect is located on the northern part of the Klastline Plateau about 12 kilometres west-southwest of the town of

CAPSULE GEOLOGY

Iskut.

Sumitomo Metal and Mining of Canada staked the Jo group of claims in 1970 and performed a soil sampling survey in 1971 followed up in 1973 with 549 metres of diamond drilling in 5 holes. The Jo claims lapsed and Teck Explorations staked the Castle 1 and 2 in 1980. Soil and rock surveys were conducted in 1980 and 1981 by Teck. In 1985, Teck's work on the Castle 2 claim included hand trenching, chip sampling, and a geophysical program (mag., self-potential and VLF-EM). Kappa Resource Corporation entered into a joint venture with Teck in 1987 and funded work consisting of an induced polarization survey (10.5 kilometres) and other geophysical surveys including mag. and Self Potential (14.5 kilometres each). Further soil and rock sampling surveys were conducted in 1987 also. The 1988 program by Teck (funded by Kappa) consisted of an 11 hole diamond drilling program for a total of 1190.2 metres. All holes were drilled along the mineralization zone to test an intense IP anomaly and three previously indentified gold showings. To September 1998, no further assessment work had been filed.

A 3-year mapping (1994-1996) program headed by Chris Ash of the B.C. Geological Survey has led to an updated stratigraphic framework for parts of NTS mapsheets 104G/9 and 16 and 104H12 and 13, including the area of the Castle prospect. This new interpretation is published in Fieldwork 1994, Fieldwork 1995; Fieldwork 1996; and Open File 1997-3.

Unit lJavb (Open File 1997-3) of the Lower Jurassic Hazelton Group underlies the Castle area and consists of andesitic volcanic breccias and conglomerates. These are described as grey-green and maroon, feldspar hornblende-porphyritic andesitic to dacitic debris flows and lahars; minor flows; with intervals of green and maroon epiclastic conglomerate and medium to coarse-grained crystal lithic wacke with angular, red mudstone fragments.

The geology of the Castle property is described in Assessment Reports as consisting mainly of purple and greenish andesite flows and pyroclastics. A sequence of shales, fine-grained sediments and minor limestone is separated from the volcanics by a fault. Younger felsite and feldspar porphyry dykes cut the above rocks and are probably related to a stock of Early Jurassic alkali granite/felsite reported to confine the mineralized zone to the northwest.

A strong gossanous/pyritic zone within propylitically altered (epidote and chlorite) volcanic breccia runs through the area in a northwest direction and is reported to be up to 200 metres wide and at least 1.3 kilometres in length. These propylitic altered volcanics are highly fractured and limonitic, hosting pyrite, chlorite and lesser epidote. Disseminated magnetite may be related to the propylitic alteration. Sericitic alteration is represented by intensely bleached zones of pyrite-sericite-quartz along relatively narrow structures (shears?) within the propylitic zone. It is these pyrite-sericite structures that are reported to host the gold. Calcite, barite and quartz veining are common but erratic.

An earlier report indicates the zones of highly bleached pyritic-sericite are associated with thin felsite dykes, quartz stringers and chalcopyrite mineralization. A sample of massive pyrite and chalcopyrite contained 10.80 per cent copper, 30.85 grams per tonne silver and 0.14 grams per tonne gold (Assessment Report 9117). One 3-metre section of silicified volcanics yielded 8.0 grams per tonne gold. Trace amounts of malachite, molybdenite, bornite and galena were observed, and at two surface locations visible gold was noted. A sample taken at a showing of native gold assayed 39.63 grams per tonne gold over 0.4 metres (Assessment Report 16897). Another sample yielded 10.15 grams per tonne gold, 54.51 grams per tonne silver and 0.70 per cent copper over 0.3 metres (Assessment Report 16897).

Gold mineralization is associated with silicification and disseminated to semi-massive sulphides in highly altered volcanic rocks. A diamond-drill hole intersection across 7.6 metres assayed 4.46 grams per tonne gold (Vancouver Stockwatch, 1988).

Chalcopyrite and bornite are also found external to the pyrite zone in fractures and with felsite dykes.

BIBLIOGRAPHY

EMPR GEM 1971-42; 1973-508
EMPR EXPL 1980-477; 1981-143; 1986-445
EMPR ASS RPT *3291, *9117, *9878, *14739, *16897, *18420
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; *1997-3
EMPR PF (*Kappa Resources Corp. Prospectus: Castle Group, March 1988)
GSC P 71-44

BIBLIOGRAPHY

GSC MAP 9-1957; 11-1971; 1418A
V STOCKWATCH *Sept.28, 1988

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/03 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 077**

NATIONAL MINERAL INVENTORY: 104G10 Cu1

NAME(S): **C 16**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G10W
BC MAP:
LATITUDE: 57 37 14 N
LONGITUDE: 130 58 00 W
ELEVATION: 990 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Vicinity of C 16 claim.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6388170
EASTING: 382535

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Pyrite Magnetite
ASSOCIATED: Quartz Calcite Chlorite Epidote
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Diorite
Andesite
Basaltic Augite Porphyry
Quartz Monzonite
Limestone
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This area of scattered mineralization is underlain by Upper Triassic, basaltic augite porphyry and andesite that have been intruded by a Tertiary-Cretaceous stock of quartz monzonite. The andesite is the dominant rock of the assemblage and may vary from tuffaceous to crystalline. It contains minor beds of chert and limestone and appears as diorite near the quartz monzonite contact.

At this occurrence mineralization is hosted by both andesitic and dioritic rocks. Quartz and quartz-calcite veins are associated with dominant northeast shears. These are found to contain chalcopyrite, bornite, magnetite, hematite and pyrite. Epidote and chlorite are also associated with these shears.

BIBLIOGRAPHY

EMPR ASS RPT 3845, 3983, *3984, 4638
EMPR GEM 1971-58; 1972-534; 1973-507; 1974-339
GSC MEM 246
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/02/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 078**

NATIONAL MINERAL INVENTORY: 104G6,7 Cu2

NAME(S): **ARC**, PORT, ROSE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G06E
BC MAP:
LATITUDE: 57 25 18 N
LONGITUDE: 131 03 12 W
ELEVATION: 1050 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6366188
EASTING: 376690

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Chalcocite Bornite Magnetite
ASSOCIATED: Pyrite Quartz Feldspar K-Feldspar Sericite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive Disseminated
CLASSIFICATION: Syngenetic Epigenetic Hydrothermal Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Cretaceous-Tertiary	Undefined Group	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Augite Andesite
Quartz Monzonite
Feldspar Porphyry Diabase Dike

HOSTROCK COMMENTS: Mineralization occurs within both plutonic and volcanic rocks and at their contacts.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine
COMMENTS: Mineralization occurs in plutonic & volcanic rock & in contact zone.

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1972
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Copper	0.3800	Per cent

COMMENTS: This chip sample was taken from a trench over a length of 3 metres.
REFERENCE: Assessment Report 3985.

CAPSULE GEOLOGY

This area is underlain by Upper Triassic intermediate volcanic flows, pyroclastics and derived sediments which occupy a north trending belt between Schaft and Mess Creek. Three intrusive units form a broad north trending belt west of Schaft Creek. In the occurrence area one of these units, a Tertiary-Cretaceous quartz monzonite, has intruded the volcanics. Feldspar porphyry diabase dykes cut all other rocks in the area.

Green, purple and grey augite andesite is the predominant volcanic. These volcanics strike at 10 degrees and dip 60 degrees east. These rocks contain small blebs of chalcocite, chalcopyrite, and bornite. Mineralization is thought to be syngenetic in origin and up to 10 per cent pyrite occurs locally.

The quartz monzonite is the main rock unit in this area. Jointing or fracturing is common in three directions, northeast, northwest, and east. Quartz and feldspar veins with a northwest strike cut the quartz monzonite. Chalcopyrite, bornite and rare pyrite occur in veins and shears, fractures and local disseminations. Sericite is observed in shears as well. The chalcopyrite filled fractures may contain quartz but some veins of chalcopyrite are up to 10 centimetres wide. A 3 metre long trench sample contained 0.38 per cent copper. The highest grade sample taken, called a "character" sample, contained a high of 0.77 per cent copper. Most samples were below 0.5 per cent copper.

CAPSULE GEOLOGY

Pyrite and magnetite are commonly found within the feldspar porphyry basalt. Some minor chalcopyrite is present along the intrusive-volcanic contact.

BIBLIOGRAPHY

EMPR ASS RPT *2784, *3985, 3986
EMPR GEM 1972-528
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/06 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 079**

NATIONAL MINERAL INVENTORY: 104G2 Cu1

NAME(S): **LITTLE LES**, MORE, TWO MORE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G02E
BC MAP:
LATITUDE: 57 07 33 N
LONGITUDE: 130 37 50 W
ELEVATION: 1524 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6332573
EASTING: 401287

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Galena Molybdenite Pyrite
ALTERATION: Chlorite Carbonate Pyrite Limonite
ALTERATION TYPE: Chloritic Carbonate Oxidation Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Jurassic-Cretaceous			Unnamed/Unknown Informal

LITHOLOGY: Tuff
Lithic Tuff
Syenite Porphyry
Diorite
Felsite Dike
Hornfels
Sediment/Sedimentary

HOSTROCK COMMENTS: Mineralization in the volcanics is related to syenite porphyry dykes.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1980
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	1.7100	Grams per tonne
Gold	0.4100	Grams per tonne
Copper	0.3000	Per cent

COMMENTS: This is a weighted average of 11 chip samples with an average width of 5.7 metres.
REFERENCE: Assessment Report 9041.

CAPSULE GEOLOGY

The occurrence area is underlain by a structurally complex assemblage of various Upper Triassic sedimentary and volcanic rocks that have been intruded by Juro-Creaceous diorite and an array of Tertiary-Cretaceous felsites and porphyritic dykes. The sediments consist of conglomerates, sandstones, shale, limestone and minor carbonate breccia. The volcanics are comprised of tuffs, lithic tuffs which have been hornfelsed locally.

A substantial gossan covers the area of interest. It contains pyrite, limonite, pyritic shears and highly bleached rock. Within the pyrite zone is an area of chloritic, carbonate rich, chalcopyrite-pyrite bearing volcanics about 50 by 200 metres in extent. Distinctive coarse syenite porphyry dykes are spatially associated with the mineralization. Fine biotite is present as are traces of galena and molybdenite.

Eleven chip samples were taken across some of the more highly mineralized areas. There returned a weighted average of 0.3 per cent copper, 1.71 grams per tonne silver and 0.41 grams per tonne gold

CAPSULE GEOLOGY

over an average sample width of 5.7 metres.
Disseminated and veinlet chalcopyrite mineralization occur in a prophylitic-pyrite alteration zone associated with potassium feldspar porphyry syenite dykes of probable late triassic to early Jurassic age. Host rocks are Upper Triassic sandstone and siltstone of the Stuhinin Group.
Grab sample 5.9 per cent copper and 13.1 grams per tonne gold.

BIBLIOGRAPHY

EMPR ASS RPT *9041
EMPR EXPL 1980-470
EMPR GEM 1971-37
GSC MAP 9-1957; 11-1971; 1418A
WWW http://www.infomine.com/index/properties/MORE_1-8_CLAIMS.html

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1992/02/21 REVISED BY: JD FIELD CHECK: Y

MINFILE NUMBER: **104G 080**

NATIONAL MINERAL INVENTORY: 104G10 Cu1

NAME(S): **IN 32**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G10W
BC MAP:
LATITUDE: 57 32 57 N
LONGITUDE: 130 56 37 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Scattered mineralization is found on and near the In 32 claim.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6380184
EASTING: 383684

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Magnetite
ASSOCIATED: Quartz
ALTERATION: Hematite Specularite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Basaltic Augite Porphyry
Quartz Monzonite
Limestone
Chert
Diorite

HOSTROCK COMMENTS: Mineralization occurs in andesite near a contact with quartz monzonite.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

CAPSULE GEOLOGY

This area of scattered mineralization is underlain by Upper Traissic andesite and basaltic augite porphyry that have been intruded by a stock of quartz monzonite of Tertiary-Cretaceous Age. The andesite is the dominant rock of the assemblage and varies from tuffaceous to crystalline, contains minor beds of chert and limestone and is frequently dioritic near the quartz monzonite contact.

Shears and quartz veins occur within the andesite, mainly south of a northeast trending fault and north of a northwest trending contact with quartz monzonite. Chalcopyrite, specularite, hematite and magnetite are carried by these shears and veins.

BIBLIOGRAPHY

EMPR ASS RPT *3845, 3983, 3984, 4638
EMPR GEM 1971-58; 1972-534; 1973-507; 1974-339
GSC MEM 246
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/02/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 081**

NATIONAL MINERAL INVENTORY: 104G13 Cu4

NAME(S): **VB 20**, TATLAN LAKE, CANYON

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G13E
BC MAP:
LATITUDE: 57 56 47 N
LONGITUDE: 131 40 02 W
ELEVATION: 1350 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6425857
EASTING: 342132

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite Magnetite
ALTERATION: Specularite Magnetite
COMMENTS: Skarn mineralization is reported but not described.
ALTERATION TYPE: Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
Andesite
Hornblende Diorite
Skarn

HOSTROCK COMMENTS: Skarn mineralization occurs in Upper Triassic limestone and andesite.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Taku Plateau

CAPSULE GEOLOGY

Skarn mineralization is developed within an Upper Triassic limestone unit and volcanic derived sediments of the Upper Triassic Stuhini Group adjacent to a Juro-Cretaceous hornblende diorite stock, 1.6 kilometres in diameter. Chalcopyrite, pyrite, pyrrhotite, magnetite and specular hematite are observed in outcrop, over an 800 by 400 metre area. A grab sample by Homestake Canada Inc. assayed 2.64 per cent copper, 59.0 grams per tonne silver and 2.78 grams per tonne gold (Assessment Report 20149).

BIBLIOGRAPHY

EMPR ASS RPT *5097, 19063, 20149, 21110, 21320
EMPR GEM *1974-339
GSC MAP 11-1971
GSC P 71-44
Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1999/06/21 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104G 082**

NATIONAL MINERAL INVENTORY: 104G13 Cu4

NAME(S): **VB 5**, TALTAN LAKE, CANYON

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G13E
BC MAP:
LATITUDE: 57 56 35 N
LONGITUDE: 131 39 52 W
ELEVATION: 1250 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6425479
EASTING: 342282

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
ASSOCIATED: Magnetite
ALTERATION: Specularite Malachite
COMMENTS: Skarn mineralization is reported but not described.
ALTERATION TYPE: Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
Andesite
Hornblende Diorite
Skarn

HOSTROCK COMMENTS: Skarn mineralization occurs in Upper Triassic limestone and volcanic sediments.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Taku Plateau

CAPSULE GEOLOGY

Skarn mineralization is developed within an Upper Triassic limestone unit and volcanic derived sediments of the Upper Triassic Stuhini Group adjacent to a Jurassic and/or Cretaceous hornblende diorite stock, 1.6 kilometres in diameter. Chalcopyrite, pyrite, pyrrhotite, magnetite and specular hematite are observed in outcrop.

BIBLIOGRAPHY

EMPR ASS RPT *5097, 20149, 21110, 21320
EMPR GEM *1974-339
GSC MAP 11-1971
GSC P 71-44
Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/15 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 083**

NATIONAL MINERAL INVENTORY: 104G13 Cu4

NAME(S): **VB 12**, TALTAN LAKE, CANYON

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G13E
BC MAP:
LATITUDE: 57 56 22 N
LONGITUDE: 131 38 22 W
ELEVATION: 870 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6425019
EASTING: 343745

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite Magnetite
ALTERATION: Magnetite Specularite
ALTERATION TYPE: Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
Andesite
Hornblende Diorite
Skarn

HOSTROCK COMMENTS: Skarn mineralization occurs in limestone and andesite.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Taku Plateau
TERRANE: Stikine Plutonic Rocks

CAPSULE GEOLOGY

Skarn mineralization is developed within an Upper Triassic limestone unit and volcanic derived sediments of the Upper Triassic Stuhini Group adjacent to a Juro-Cretaceous hornblende diorite stock. Chalcopyrite, pyrite, pyrrhotite, magnetite and specular hematite are observed in outcrop. A grab sample by Homestake Canada Inc. assayed 1.43 per cent copper and 7.9 grams per tonne silver (Assessment Report 20149).

BIBLIOGRAPHY

EMPR ASS RPT *5097, 20149, 21110
EMPR GEM *1974-339
GSC MAP 9-1957; 11-1971; 1418A
GSC P 71-44
Placer Dome File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1999/06/21 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104G 084**

NATIONAL MINERAL INVENTORY:

NAME(S): **GU NORTH**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G05E
BC MAP:
LATITUDE: 57 29 39 N
LONGITUDE: 131 33 08 W
ELEVATION: 1350 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6375270
EASTING: 347040

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite
ASSOCIATED: Ankerite Quartz Epidote
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Middle Jurassic	Stuhini	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Andesite Flow
Basalt Flow
Tuff
Volcanic Breccia
Siltstone
Mudstone
Conglomerate
Limestone
Felsic Dike
Biotite Hornblende Granodiorite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The Gu North occurrence is located near the headwaters of Dokdaon Creek approximately 11 kilometres east of the Stikine River.

Mineralization is hosted in ankerite veins which occur within a pendant of sedimentary and volcanic rocks correlated with the Upper Triassic Stuhini Group. The pendant occurs within a large body of medium-grained biotite-hornblende granodiorite of Middle Jurassic age. The volcano/sedimentary package consists mainly of massive to feldspar phyric andesitic to basaltic flows with lesser tuffs and volcanic breccia. Intercalated with the volcanics are lesser amounts of siltstone, mudstone and conglomerate with minor limestone. North trending felsic dykes occur to the west of the property and have been dated at 99.7 +/- 1.7 Ma (Paper 1989-1).

Just north of Gu Creek an ankerite vein 1.5 metres thick cuts the volcanic rocks. Traces of chalcopyrite with quartz and epidote occur in the volcanics near the vein. The granodiorite contact is is less than one kilometre away.

BIBLIOGRAPHY

EMPR P 1989-1, pp. 251-267
EMPR ASS RPT 3029, 3238, 3846, *3847
EMPR OF 1989-7
EMPR AR *1972-534
GSC MEM 246
GSC P 71-44
GSC SUM RPT 1928
GSC MAP 9-1957; 11-1971; 309A; 1418A

DATE CODED: 1988/01/29 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/01/29 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 085**

NATIONAL MINERAL INVENTORY: 104G12 Cu13

NAME(S): **MISSUSJAY MOUNTAIN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12W
BC MAP:
LATITUDE: 57 35 29 N
LONGITUDE: 131 46 07 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6386596
EASTING: 334517

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Undefined Group	Unnamed/Unknown Formation	
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Biotite Hornblende Quartz Monzonite
Meta Sediment/Sedimentary
Limestone

HOSTROCK COMMENTS: Host rock is not identified in literature.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine

CAPSULE GEOLOGY

Kerr (GSC MEM 248) states that somewhere on Missusjay Mountain veins carrying quartz, calcite and chalcopyrite were observed. Stringers of quartz carrying gold were also said to occur on the mountain's eastern slope. Permian and older metasediments and Permian limestone underlie the north and northeast flanks of the mountain. The west, south and southeast flanks are underlain by pink biotite-hornblende quartz monzonite of Tertiary-Cretaceous Age.

BIBLIOGRAPHY

GSC MEM *246, p. 78
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC P 71-44

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 086**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOAT**, GOAT HIDE, GOAT HORN,
MISTY MOUNTAIN, BILLY GOAT, NANNY GOAT,
LITTLE GOAT, RIVENDELL, GOAT-80,
GROAT CREEK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G09W
BC MAP:
LATITUDE: 57 39 21 N
LONGITUDE: 130 15 32 W
ELEVATION: 1550 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Goat occurrence is located about 25 kilometres southwest of the village of Iskut.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6391091
EASTING: 424878

COMMODITIES: Copper Gold Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Bornite Covellite Galena Pyrite
ASSOCIATED: Quartz
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Stockwork Vein
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Jurassic-Cretaceous			Unnamed/Unknown Informal

ISOTOPIC AGE: 205.1 +/- 0.8 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: zircon and titanite

LITHOLOGY: Hornblende Quartz Monzonite
Granodiorite
Sandstone
Siliceous Siltstone
Chert
Volcanic Rock
Quartzite

HOSTROCK COMMENTS: Mineralization occurs in the Groat stock and to a lesser extent the country rocks. Age date by R.M. Friedman (Fieldwork 1996, page 295).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks Stikine

PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
YEAR: 1980

COMMODITY	GRADE	
Gold	2.8500	Grams per tonne
Copper	1.1500	Per cent

COMMENTS: These assays were obtained from a 3.4-metre section.
REFERENCE: Assessment Report 8498.

CAPSULE GEOLOGY

The Goat porphyry prospect is situated on the southwest portion of the Klastline Plateau. The Goat-80 group of claims was staked on behalf of Texasgulf Canada in 1975 to cover some of the area originally held as the GJ claims but not including the original GJ showings (104G 034), which occurs less than 1 kilometre to the east. Work by Texasgulf centred on the Goat Hide claim, to the immediate west of the GJ claim, in an effort to find the extention of GJ mineralization on to the Texasgulf property. In 1976, a

CAPSULE GEOLOGY

10.6-kilometre induced polarization and magnetometer survey was conducted, 51 metres of trenching was done and a soil survey and mapping program conducted. In 1977, Texasgulf completed an 18.5-kilometre induced polarization survey, a 15.7-kilometre magnetometer survey, collected 117 soil and 19 silt samples and drilled 1524 metres in 10 diamond-drill holes. In 1980, Texasgulf Canada Limited drilled 1115 metres in 5 diamond-drill holes and collected 363 rock samples.

Most of the Groat stock and area was mapped as part of a 3-year regional mapping survey (1994-1995) headed by Chris Ash of the provincial Geological Survey Branch (Fieldwork 1995, page 171).

The Early Jurassic Groat stock intrudes Upper Triassic Stuhini Group fine-grained clastic and pelagic sedimentary rocks consisting of bedded sandstone, siliceous siltstone, chert and graphitic chert. Volcanic siltstone, sandstone and conglomerate overlie these siliceous sediments to the north. To the south are coarse andesite and basalt derived conglomerates. The country rocks are cut by several coarsely augite-phyric mafic sills which, in turn, are cut by Groat dikes.

The Groat stock is a faulted, northeast trending, coarse-grained porphyritic to fine-grained equigranular intrusion with granodiorite to quartz monzonite modal compositions. A Uranium-Lead age date of 205.1 plus/minus 8 Ma was determined by R.M. Friedman of the University of British Columbia (Fieldwork 1996, page 295).

Significant sulphide mineralization occurs in the intrusive and to a lesser degree in the country rock. This occurrence includes numerous small showings of disseminated, shear zone, and quartz vein stockwork mineralization. Pyrite and chalcopyrite are the most common sulphides with lesser amounts of sphalerite, bornite, covellite, galena, malachite and azurite. One 3.4-metre section of drill core contained 1.15 per cent copper and 2.85 grams per tonne gold (Assessment Report 8498).

BIBLIOGRAPHY

EMPR ASS RPT *6073, *6541, *8498
EMPR EXPL 1976-E185; 1977-E225; 1980-474
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; *1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A
Chevron File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/10/09 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 087**

NATIONAL MINERAL INVENTORY:

NAME(S): **SUN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G09E
BC MAP:
LATITUDE: 57 40 36 N
LONGITUDE: 130 14 04 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Sun showing, about 24 kilometres southwest of the village of Iskut (Assessment Report 6303).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6393384
EASTING: 426379

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcocite Malachite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Podiform
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	

LITHOLOGY: Tuff
Sediment/Sedimentary Rock

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1976

COMMODITY	GRADE	
Silver	35.6600	Grams per tonne
Copper	15.6500	Per cent

REFERENCE: Assessment Report 6303.

CAPSULE GEOLOGY

The Sun occurrence is located on the southwest portion of the Klastline Plateau. The area has recently been mapped on a regional scale as Upper Triassic Stuhini Group sediments intruded by dikes, sills, plugs and plutons of Early Jurassic age (Open File 1997-3). The Sun claims were owned and investigated by Great Plains Development Company Ltd. in 1976. An unknown amount of rock sampling and geological work was reported done on the claim covering the showing. No further work is reported on this showing to date (October, 1998).

One small occurrence of copper mineralization was found which consists of a pod of malachite up to 60 centimetres in diameter with a length up to 6.1 metres, and soft blue-black veinlets of chalcocite that occur in a band of tuff. Mineralization is thought to have resulted from fluids migrating along planes of weakness parallel to bedding. Two grab samples were taken, the first containing 12.13 per cent copper and 20.57 grams per tonne silver, and the second containing 15.65 per cent copper and 35.66 grams per tonne silver (Assessment Report 6303).

BIBLIOGRAPHY

EMPR ASS RPT *6303
EMPR EXPL *1977-E226
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3

BIBLIOGRAPHY

GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/10/13 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 088**

NATIONAL MINERAL INVENTORY: 104G3 Cu5

NAME(S): **CW - EAST**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 11 40 N
LONGITUDE: 131 26 29 W
ELEVATION: 460 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6341673
EASTING: 352484

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Upper Permian	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
Rhyolitic Flow
Tuff
Agglomerate
Argillite
Andesitic Flow

HOSTROCK COMMENTS: Mineralized veins occur in both volcanics and limestone.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1965

COMMODITY	GRADE	
Copper	2.5700	Per cent

COMMENTS: A trace of gold was also reported.
REFERENCE: Assessment Report 621.

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Juro-Cretaceous quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments with Permian sedimentary and metamorphic rocks are at the northern and eastern limit of the area. Permian limestone is the dominant rock. North trending faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a linked series of anticlines and synclines with east or north-west trending axes. Younger folds with north-northwest trending axis transect the earlier formed structure. Syenite (orthoclase porphyry) intrusions of Juro-Triassic Age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and stocks. Eocene Age quartz monzonite form stocks, and is the youngest rock in the area.

Copper mineralization occurs along Galore Creek in Stuhini Group rocks and in Middle to Upper Permian limestone, separated from each other by a major northwest trending fault. The Stuhini rocks are described as being composed of andesitic to rhyolitic flows, banded and massive tuffs, as well as agglomerates and minor argillite. The limestone forms a pure buff coloured band 300 to 600 metres wide.

Quartz and quartz-carbonate veins hosting specks and blebs of

CAPSULE GEOLOGY

chalcopyrite cut the volcanics, and in one place, the limestone. These veins range from 2 to 60 centimetres in width but are seldom traceable for more than 15 metres. A quartz-carbonate vein from 15 to 30 centimetres wide and 30 metres long is apparently emplaced along a fault in the limestone. A grab sample of a quartz vein in volcanics containing pyrite and chalcopyrite, contained 2.57 per cent copper and a trace of gold.

BIBLIOGRAPHY

EMPR AR 1964-13; *1965-31; 1966-25,252
EMPR ASS RPT *621, 937, 7474
EMPR FIELDWORK *1975, p. 79
EMPR GEM 1970-60
EMR MP CORPFILE (Conwest Expl. Co. Ltd.)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44
WWW http://www.infomine.com/

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/20 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 089**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARG EAST**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G05E
BC MAP:
LATITUDE: 57 27 48 N
LONGITUDE: 131 32 00 W
ELEVATION: 1190 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6371797
EASTING: 348044

COMMODITIES: Gold, Silver, Copper, Tungsten, Molybdenum

MINERALS

SIGNIFICANT:	Chalcopyrite	Pyrite			
ALTERATION:	Chlorite	Pyrite	Epidote	Biotite	Silica
ALTERATION TYPE:	Chloritic		Silicific'n	Epidote	Biotite
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Middle Jurassic			Unnamed/Unknown Informal
Eocene			Unnamed/Unknown Informal

LITHOLOGY: Felsite Rhyolite Breccia
Granodiorite
Felsite Dike
Rhyolite Dike
Diorite Dike
Diabase Dike

HOSTROCK COMMENTS: Mineralization is found in both the volcanic and the plutonic rock near the contact.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine, Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

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

COMMODITY	GRADE	
Silver	114.0000	Grams per tonne
Gold	1.2000	Grams per tonne
Copper	1.2400	Per cent
Molybdenum	0.0020	Per cent
Tungsten	0.2000	Per cent

COMMENTS: Values contained in a 1.9 metre chip sample.
REFERENCE: Assessment Report 9617.

CAPSULE GEOLOGY

The region of the occurrence is underlain by Middle Jurassic granodiorite which has intruded Upper Triassic volcanics and sediments of the Stuhini Group. This body has been dated at 158 +/- 6 Ma (Fieldwork 1988). A roof pendant of volcanic breccia about 600 metres long and 300 metres wide extends northeast from Dokdaon Creek. The breccia clasts vary from felsic to rhyolitic. Eocene north trending dykes of felsite to feldspar porphyry cut the granodiorite and volcanic breccia. These dykes have been dated at 49.7 +/- 1.7 Ma (Fieldwork 1988). Later east trending dykes of fine-grained diorite and diabase cut all other rocks.

Chalcopyrite is hosted by two faults that occur near the contact of the granodiorite and volcanic breccia. These faults have undergone intense bleaching, silicification and pyritization. The faults themselves lie within an envelope of pyritization and chloritic alteration. Secondary biotite and epidote were also observed. The

CAPSULE GEOLOGY

best of these structures trends north and can be traced for about 50 metres.

A 1.9 metre chip sample contained a high of 1.2 grams per tonne gold, 114.5 grams per tonne silver, 1.24 per cent copper, 0.2 per cent tungsten and 0.002 per cent molybdenum. Other chip samples contained much lower values.

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EMPR OF 1989-7; 1991-17
EMPR ASS RPT *9617
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1988/02/08 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/07/13 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 090**

NATIONAL MINERAL INVENTORY: 104G3 Cu1

NAME(S): **GALORE CREEK (CENTRAL ZONE)**, CENTRAL ZONE, STIKINE COPPER, GC, HAB, BUY, JUNCTION, NORTH JUNCTION, WEST RIM, BUTTE, SOUTHWEST, SADDLE, WEST FORK GLACIER, SOUTH BUTTE, SOUTH 110, MIDDLE CREEK

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 08 09 N
LONGITUDE: 131 27 20 W
ELEVATION: 730 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of the ore zone.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6335182
EASTING: 351393

COMMODITIES: Copper, Gold, Silver, Zinc, Molybdenum, Lead

MINERALS

SIGNIFICANT: Chalcopyrite, Bornite, Chalcocite, Sphalerite, Molybdenite, Galena, Scheelite, Gold, Silver, Pyrite, Tetrahedrite, Tennantite
COMMENTS: Minor galena, chalcocite and molybdenite. Trace tennanite, native silver, native gold, tetrahedrite and scheelite.
ASSOCIATED: Pyrite, Magnetite, Hematite, Garnet, Gypsum, Sericite, Chlorite, Albite
COMMENTS: Also apatite, calcite and anhydrite. Less commonly analcite, natrolite, sodalite, sphene, fluorite, barite, actinolite, vesuvianite and crocidolite.
ALTERATION: K-Feldspar, Biotite, Magnetite, Garnet, Diopside, Chlorite, Calcite, Epidote
COMMENTS: Propylitic alteration also may include albite. Calc-silicate alteration may include albite and anhydrite.
ALTERATION TYPE: Potassic, Skarn, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated, Stockwork
CLASSIFICATION: Porphyry, Hydrothermal
TYPE: L03 Alkalic porphyry Cu-Au
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 1700 x 500 x 450 Metres
STRIKE/DIP: 015/
TREND/PLUNGE:
COMMENTS: Central zone

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Meta Volcanic, Trachyte, Phonolite, Volcanic Breccia, Tuff, Pyroxene Basalt, Pyroxene Andesite, Sediment/Sedimentary, Syenite

HOSTROCK COMMENTS: Mineralization occurs in rock of volcanic origin that has been altered and metasomatized near syenite intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
Plutonic Rocks RELATIONSHIP:
GRADE: Hornfels

INVENTORY

ORE ZONE: CENTRAL REPORT ON: Y

CATEGORY: Indicated YEAR: 1992
QUANTITY: 233900000 Tonnes

COMMODITY	GRADE	
Silver	7.0000	Grams per tonne
Gold	0.3500	Grams per tonne
Copper	0.6700	Per cent

COMMENTS: Silver is estimated. Cutoff is 0.27 per cent copper equivalent.
REFERENCE: CIM Special Volume 46, page 642.

ORE ZONE: TOTAL REPORT ON: Y

CATEGORY: Indicated YEAR: 1992
QUANTITY: 284000000 Tonnes

COMMODITY	GRADE	
Copper	0.6700	Per cent

COMMENTS: Includes Central, Southwest (104G 095) and North Junction (104G 092).
REFERENCE: CIM Special Volume 46, page 642.

CAPSULE GEOLOGY

Twelve alkalic porphyry copper-gold deposits are known to occur within the Galore Creek syenite complex. This complex comprises a series of Late Triassic to Early Jurassic orthoclase-porphyry syenitic bodies which have intruded coeval Upper Triassic Stuhini Group volcanic rocks and related sediments. Faults which offset and segment the intrusive rocks and a sub-horizontal fracture cleavage are the two main structural elements in the syenite complex. The complex is roughly 5 by 2.5 kilometres in area.

The deposits are hosted primarily by highly altered potassium-enriched volcanic rocks and pipe-like breccias adjacent to syenite dikes and stocks. Typically, the deposits are manto-shaped and have a north to northeast trend related to the syenite contacts and zones of structural weakness.

The syenite complex is made up of four intrusive phases that are most closely associated with the copper deposits. Six other phases are recognized but are peripheral to the Central zone deposit. The copper-bearing rocks near the syenite intrusion are extensively metasomatized, recrystallized and locally brecciated. These may include pyroclastic and intrusive breccia, trachyte, phonolite, lithic tuff, crystal tuff, pyroxene basalt, pyroxene andesite and minor sediments. These rocks have been converted to skarns and fenitic porphyroids so that original rock types are unclear. The term "hornfels" was frequently applied to these meta-volcanic rocks in the early stages of exploration.

Alteration and mineralization are contemporaneous and spatially overlap. The hydrothermal system was extensive and the resultant alteration led to the formation of large gossans. Potassic alteration consisting of potassium feldspar, titanium biotite and magnetite have converted the syenites and volcanic rocks to pink, white and orange rocks composed mostly of orthoclase. Alteration of pyroxene, hornblende and biotite to assemblages of chlorite and calcite plus/minus albite and epidote characterizes the propylitic zone, best developed in the syenitic rocks. Calc-silicate alteration consisting of abundant garnet, diopside, epidote, albite and anhydrite is an unusual feature of the complex. Garnet replaces up to 50 per cent of the metavolcanic rocks and infills breccias near the northern end of the Central zone breccia pipe but is generally absent from the other deposits. However unusual this metasomatic overprint is, the distribution of sulphides, precious metal and magnetite is considered consistent with the expected zoning pattern for alkalic porphyry deposits.

The Central zone is by far the largest of the Galore Creek deposits, measuring greater than 1700 metres in length along a strike of 015 degrees. The zone is up to 500 metres wide and dips steeply to the west to a depth of at least 450 metres. The deposit is centred on an elongate, steeply dipping breccia pipe, the long axis of which is parallel to the trend of the deposit. The deposit is roughly tabular in shape and is composed of several parallel en echelon copper zones. Abundant post-mineral faulting has occurred but displacement appears small.

A weak to intense, pervasive biotite-potash feldspar alteration facies is observed in the host rocks, the bulk of which are metavolcanics. Many of the rocks appear to have originally been orthoclase-rich trachyte and phonolite. Other metavolcanic hosts include volcanic breccia, bedded and crystal tuff and pyroxene basalt. Lesser amounts of mineralization occurs in the syenite.

The ore minerals are chalcopyrite and bornite which occur in a

CAPSULE GEOLOGY

ratio of 10:1. They occur mainly as disseminations but also as replacements associated with mafic minerals, coarse masses in vein structures with garnet and gypsum, matrix replacement about breccia fragments, and as coarse veinlets or fracture-fillings. Other main minerals include pyrite, magnetite and hematite with lesser amounts of sphalerite. Minor amounts of galena, chalcocite and molybdenite are present, and traces of tennantite, native silver, native gold, tetrahedrite and scheelite have also been reported. The metavolcanics also contain 10 per cent or greater anhydrite, except where dissolved by groundwater or converted to gypsum near surface (Canadian Institute of Mining and Metallurgy Special Volume 15).

Other common gangue minerals found in the metavolcanics of the Central zone include sericite, chlorite, albite, apatite and calcite. Less common minerals include analcite, natrolite, sodalite, sphene, fluorite, barite, actinolite, vesuvianite and crocidolite (Minister of Mines Annual Report 1965, page 26).

Unclassified reserves in the Central zone are 125 million tonnes grading 1.06 per cent copper (CIM Special Volume 15 (1976), page 402). This includes 27,232,000 tonnes at 0.97 per cent copper, 7.5 grams per tonne silver and 0.37 gram per tonne gold (diluted) of open pit material (Canadian Mines Handbook 1985-86, page 381).

Galore Creek resources as of 1992 are as follows (CIM Special Volume 46, page 642):

Deposit (zone)	Tonnes	Cu (%)	Au (g/t)	Ag (g/t)	Cut-off
Central (104G 090)	233,900,000	0.67	0.35	7 (estimate)	0.27% Cu equivalent
Southwest (104G 095)	42,400,000	0.55	1.03	7 (estimate)	0.27% Cu equivalent
North Junction (104G 092)	7,700,000	1.50			0.40% Cu
Total	284,000,000	0.67			

Mineralization was first discovered in the Galore Creek valley in 1955. The claims that cover the property are wholly owned by Stikine Copper Ltd. which is controlled by Kennecott Canada Inc., Hudson Bay Mining and Smelting Co. Ltd. and Cominco Ltd. Until 1968, the property was operated by Kennco and work included 53,164 metres of diamond drilling in 235 holes and 807 metres of tunnelling in two adits. The Central zone was the focus of most of this work. No work was done from 1968 to 1972. In 1972, Hudson Bay Mining and Smelting became operator and in 1972 and 1973 an additional 25,352 metres of diamond drilling was completed in 111 holes. This work focused exclusively on blocking out reserves on the Central and North Junction zones. A futher 5,310 metres of diamond drilling was completed in 24 holes in 1976. In 1989, Mingold Resources Inc. (an affiliated company of Hudson Bay's) operated the property in order to investigate its gold potential. A further 1225 metres of diamond drilling in 18 holes was done by Mingold in 1990. Kennecott resumed operatorship of the project in 1991 and completed 13,830 metres of diamond drilling in 49 holes. An airborne geophysics survey and over 90 line kilometres in an induced polarization (IP) survey were also completed.

The other eleven porphyry occurrences on the property are: Junction (104G 091), North Junction (104G 092), West Rim (104G 093), Butte (104G 094), Southwest (104G 095), Saddle (104G 096), West Fork Glacier (104G 097), South Butte (104G 098), South 110 (104G 099), Middle Creek (104G 156) and North Rim (104G 157). A gold showing called Steep Creek (104G 158) is also within the complex and controlled by Stikine Copper Ltd.

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EMPR MAP 58; 64; 65 (1989)
EMPR OF 1989-8; 1992-1; 1992-3; 1995-25; 1998-8-F, pp. 1-60; 1998-8-G, pp. 1-30
EMR MIN BULL MR 166; 223 B.C. 330
EMR MP CORPFILE (Kennecott Copper Corp., Kennco Exp. Canada Ltd., Hudson Bay Mining and Smelting Co. Ltd., Stikine Copper Ltd.)

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CMH 1976, p. 302
N MINER May 3, 1973; Oct.28, 1991
Allen, D. (1966), UBC Masters Thesis
EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/07 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 091**

NATIONAL MINERAL INVENTORY: 104G3 Cu4

NAME(S): **GALORE CREEK - JUNCTION**, JUNCTION, GALORE CREEK, STIKINE COPPER, GC, HAB, BUY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 08 26 N
LONGITUDE: 131 29 06 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6335772
EASTING: 349630

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite, Bornite, Copper, Covellite, Chalcocite, Specularite, Pyrite
ALTERATION: K-Feldspar, Biotite, Malachite, Specularite
ALTERATION TYPE: Potassic, Biotite, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated, Vein, Stockwork
CLASSIFICATION: Porphyry, Hydrothermal
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Meta Volcanic
Syenite
Volcanic Breccia
Tuff
Phonolite
Trachyte
Cataclastic Breccia
Sediment/Sedimentary

HOSTROCK COMMENTS: Mineralization occurs mainly in metavolcanics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP: Plutonic Rocks
GRADE: Hornfels
COMMENTS: Mineralization occurs in contact zone of volcanics with syenite.

CAPSULE GEOLOGY

Twelve alkalic porphyry copper-gold deposits are known to occur within the Galore Creek syenite complex. This complex comprises a series of Late Triassic to Early Jurassic orthoclase-porphyry syenitic bodies which have intruded coeval Upper Triassic Stuhini Group volcanic rocks and related sediments. Faults which offset and segment the intrusive rocks and a sub-horizontal fracture cleavage are the two main structural elements in the syenite complex. The complex is roughly 5 by 2.5 kilometres in area.

The deposits are hosted primarily by highly altered potassium-enriched volcanic rocks and pipe-like breccias adjacent to syenite dikes and stocks. Typically, the deposits are manto-shaped and have a north to northeast trend related to the syenite contacts and zones of structural weakness.

The syenite complex is made up of four intrusive phases that are most closely associated with the copper deposits. Six other phases are recognized but are peripheral to the Central zone deposit. The copper-bearing rocks near the syenite intrusion are extensively metasomatized, recrystallized and locally brecciated. These may include pyroclastic and intrusive breccia, trachyte, phonolite, lithic tuff, crystal tuff, pyroxene basalt, pyroxene andesite and minor sediments. These rocks have been converted to skarns and fenitic porphyroids so that original rock types are unclear. The term "hornfels" was frequently applied to these meta-volcanic rocks in the early stages of exploration.

CAPSULE GEOLOGY

Alteration and mineralization are contemporaneous and spatially overlap. The hydrothermal system was extensive and the resultant alteration led to the formation of large gossans. Potassic alteration consisting of potassium feldspar, titanium biotite and magnetite have converted the syenites and volcanic rocks to pink, white and orange rocks composed mostly of orthoclase. Alteration of pyroxene, hornblende and biotite to assemblages of chlorite and calcite plus/minus albite and epidote characterizes the propylitic zone, best developed in the syenitic rocks. Calc-silicate alteration consisting of abundant garnet, diopside, epidote, albite and anhydrite is an unusual feature of the complex. Garnet replaces up to 50 per cent of the metavolcanic rocks and infills breccias near the northern end of the Central zone breccia pipe but is generally absent from the other deposits. However unusual this metasomatic overprint is, the distribution of sulphides, precious metal and magnetite is considered consistent with the expected zoning pattern for alkalic porphyry deposits.

The Junction deposit lies about 1.5 kilometres to the west of the main Galore Creek-Central Zone deposit. Barr (CIM Bulletin July 1966) describes the Junction deposit as follows: "The deposit trends slighty east of north and dips steeply to the north- west, parallel in strike attitude to the contact of a nearby mass of epidotized syenite porphyry which lies to the southeast. The deposit is controlled by a zone of fracturing in which both potash feldspar and hydrothermal biotite are the principal alteration products. The mineralization includes pyrite, chalcopyrite and minor bornite which occur as disseminations, fracture fillings and as stringer-like replacements. Specularite, which occurs as minute veinlets, is prominent on the southeast side of the southern part of the deposit. The upper part of the southern extension of the deposit contains many minerals typical of the oxide zone, including native copper, cuprite, covellite, chalcocite and malachite."

Please refer to the Central Zone deposit (104G 090) for further details of the Galore Creek deposits.

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EMPR BULL *92
EMPR GEM *1972-520; 1973-501; 1974-336
EMPR GEOLOGY 1976, p. 122
EMPR MAP 65
EMR MIN BULL MR 166
EMR MP CORPFILE (Kennecott Copper Corp., Kennco Exp. Canada Ltd., Hudson Bay Mining and Smelting Co. Ltd., Stikine Copper Ltd.)
EMR MP RESFILE (Central Zone, Galore Creek)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44, p. 24
CIM BULL *July 1966, pp. 841-853; Nov. 1968, p. 1329
CIM SPECIAL VOL. *15, pp. 402-414; *46, pp. 630-644
CIM TRANS VOL LXIX, p. 251
CMH 1976, p. 302
N MINER May 3, 1973
Allen, D. (1966) UBC Masters Thesis

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/08 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 092** NATIONAL MINERAL INVENTORY: 104G3 Cu4

NAME(S): **GALORE CREEK - NORTH JUNCTION**, NORTH JUNCTION, GALORE CREEK, STIKINE COPPER, GC, HAB, BUY

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 08 39 N
LONGITUDE: 131 29 09 W
ELEVATION: 1190 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6336176
EASTING: 349595

COMMODITIES: Copper, Anhydrite, Gypsum

MINERALS

SIGNIFICANT: Chalcopyrite, Bornite, Pyrite, Anhydrite, Gypsum
ASSOCIATED: K-Feldspar, Biotite
ALTERATION: K-Feldspar, Biotite, Anhydrite, Gypsum
ALTERATION TYPE: Potassic, Biotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Porphyry, Hydrothermal, Industrial Min.
TYPE: H08 Alkalic intrusion-associated Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Syenite Porphyry
Volcanic Breccia
Tuff
Phonolite
Trachyte
Sediment/Sedimentary
Cataclastic Breccia
Meta Volcanic

HOSTROCK COMMENTS: Mineralization occurs along the contact of two porphyry units.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine

INVENTORY

ORE ZONE: NORTH JUNCTION REPORT ON: Y

CATEGORY: Indicated YEAR: 1992
QUANTITY: 7700000 Tonnes

COMMODITY	GRADE	
Copper	1.5000	Per cent

COMMENTS: Cut-off is 0.40 per cent copper.
REFERENCE: CIM Special Volume 46, page 642.

CAPSULE GEOLOGY

Twelve alkalic porphyry copper-gold deposits are known to occur within the Galore Creek syenite complex. This complex comprises a series of Late Triassic to Early Jurassic orthoclase-porphyry syenitic bodies which have intruded coeval Upper Triassic Stuhini Group volcanic rocks and related sediments. Faults which offset and segment the intrusive rocks and a sub-horizontal fracture cleavage are the two main structural elements in the syenite complex. The complex is roughly 5 by 2.5 kilometres in area.

The deposits are hosted primarily by highly altered potassium-enriched volcanic rocks and pipe-like breccias adjacent to syenite dikes and stocks. Typically, the deposits are manto-shaped and have a north to northeast trend related to the syenite contacts and zones of structural weakness.

The syenite complex is made up of four intrusive phases that are most closely associated with the copper deposits. Six other phases

CAPSULE GEOLOGY

are recognized but are peripheral to the Central zone deposit. The copper-bearing rocks near the syenite intrusion are extensively metasomatized, recrystallized and locally brecciated. These may include pyroclastic and intrusive breccia, trachyte, phonolite, lithic tuff, crystal tuff, pyroxene basalt, pyroxene andesite and minor sediments. These rocks have been converted to skarns and fenitic porphyroids so that original rock types are unclear. The term "hornfels" was frequently applied to these meta-volcanic rocks in the early stages of exploration.

Alteration and mineralization are contemporaneous and spatially overlap. The hydrothermal system was extensive and the resultant alteration led to the formation of large gossans. Potassic alteration consisting of potassium feldspar, titanium biotite and magnetite have converted the syenites and volcanic rocks to pink, white and orange rocks composed mostly of orthoclase. Alteration of pyroxene, hornblende and biotite to assemblages of chlorite and calcite plus/minus albite and epidote characterizes the propylitic zone, best developed in the syenitic rocks. Calc-silicate alteration consisting of abundant garnet, diopside, epidote, albite and anhydrite is an unusual feature of the complex. Garnet replaces up to 50 per cent of the metavolcanic rocks and infills breccias near the northern end of the Central zone breccia pipe but is generally absent from the other deposits. However unusual this metasomatic overprint is, the distribution of sulphides, precious metal and magnetite is considered consistent with the expected zoning pattern for alkalic porphyry deposits.

Barr (CIM Bulletin July 1966) describes the North Junction deposit as follows: "The North Junction deposit outcrops in the northwest part of the Complex, approximately 1.6 kilometres distant from, and 300 metres higher in elevation than the uppermost exposures of the Central Zone. The deposit is localized along the contact between two porphyritic units of the Complex, and, like the Central Zone, trends slightly east of north and dips steeply to 60 degrees northwest. Sulphide mineralization includes chalcopyrite, bornite and pyrite, which occur principally as disseminated replacements associated with hydrothermal biotite and potash feldspar alteration. The metavolcanics, which host the mineralization of this deposit, also contain abundant anhydrite, commonly 10 per cent or greater. It occurs as veins or as a replacement mineral. Near surface it has been converted to gypsum."

The North Junction zone contains a mineral resource of 7,700,000 tonnes grading 1.50 per cent copper at a cut-off of 0.40 per cent copper (CIM Special Volume 46, page 642).

Please refer to the Central Zone deposit (104G 090) for further details of the Galore Creek deposits.

BIBLIOGRAPHY

EMPR AR 1956-14; 1957-74; 1961-78; 1962-7; 1963-8; 1964-15; *1965-19; 1966-25; 1967-29
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EMPR OF 1989-8
EMPR BULL *92
EMPR GEM *1972-520; 1973-501; 1974-336
EMPR GEOLOGY 1976, p. 122
EMPR MAP 65
EMR MIN BULL MR 166
EMR MP CORPFILE (Kennecott Copper Corp., Kennco Exp. Canada Ltd., Hudson Bay Mining and Smelting Co. Ltd., Stikine Copper Ltd.)
EMR MP RESFILE (Central Zone, Galore Creek)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44, p. 24
CIM BULL *July 1966, pp. 841-853; Nov. 1968, p. 1329
CIM SPECIAL VOL. *15, pp. 402-414; *46, pp. 630-644
CIM TRANS VOL LXIX, p. 251
CMH 1976, p. 302
N MINER May 3, 1973
Allen, D. (1966) UBC Masters Thesis
EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/08 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 093**

NATIONAL MINERAL INVENTORY: 104G3 Cu8

NAME(S): **GALORE CREEK - WEST RIM**, WEST RIM, GALORE CREEK, STIKINE COPPER, GC, HAB, BUY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 08 31 N
LONGITUDE: 131 29 36 W
ELEVATION: 1280 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6335945
EASTING: 349132

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Bornite
ALTERATION: K-Feldspar Biotite
ALTERATION TYPE: Potassic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Meta Sediment/Sedimentary
Meta Volcanic
Syenite
Volcanic Breccia
Tuff
Phonolite
Trachyte
Cataclastic Breccia
Sediment/Sedimentary

HOSTROCK COMMENTS: Mineralization occurs in metavolcanics and metasediments.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
Plutonic Rocks RELATIONSHIP:
GRADE: Hornfels
COMMENTS: Occurs in altered volcanics near contact with syenite intrusion.

CAPSULE GEOLOGY

Twelve alkalic porphyry copper-gold deposits are known to occur within the Galore Creek syenite complex. This complex comprises a series of Late Triassic to Early Jurassic orthoclase-porphyry syenitic bodies which have intruded coeval Upper Triassic Stuhini Group volcanic rocks and related sediments. Faults which offset and segment the intrusive rocks and a sub-horizontal fracture cleavage are the two main structural elements in the syenite complex. The complex is roughly 5 by 2.5 kilometres in area.

The deposits are hosted primarily by highly altered potassium-enriched volcanic rocks and pipe-like breccias adjacent to syenite dikes and stocks. Typically, the deposits are manto-shaped and have a north to northeast trend related to the syenite contacts and zones of structural weakness.

The syenite complex is made up of four intrusive phases that are most closely associated with the copper deposits. Six other phases are recognized but are peripheral to the Central zone deposit. The copper-bearing rocks near the syenite intrusion are extensively metasomatized, recrystallized and locally brecciated. These may include pyroclastic and intrusive breccia, trachyte, phonolite, lithic tuff, crystal tuff, pyroxene basalt, pyroxene andesite and minor sediments. These rocks have been converted to skarns and fenitic porphyroids so that original rock types are unclear. The term "hornfels" was frequently applied to these meta-volcanic rocks in the early stages of exploration.

CAPSULE GEOLOGY

Alteration and mineralization are contemporaneous and spatially overlap. The hydrothermal system was extensive and the resultant alteration led to the formation of large gossans. Potassic alteration consisting of potassium feldspar, titanium biotite and magnetite have converted the syenites and volcanic rocks to pink, white and orange rocks composed mostly of orthoclase. Alteration of pyroxene, hornblende and biotite to assemblages of chlorite and calcite plus/minus albite and epidote characterizes the propylitic zone, best developed in the syenitic rocks. Calc-silicate alteration consisting of abundant garnet, diopside, epidote, albite and anhydrite is an unusual feature of the complex. Garnet replaces up to 50 per cent of the metavolcanic rocks and infills breccias near the northern end of the Central zone breccia pipe but is generally absent from the other deposits. However unusual this metasomatic overprint is, the distribution of sulphides, precious metal and magnetite is considered consistent with the expected zoning pattern for alkalic porphyry deposits.

Barr (CIM Bulletin July 1966) offers the following brief description of the West Rim deposit: "The deposit is partly exposed in outcrops at an elevation of 1280 metres near the west margin of the complex. The deposit occurs in metasedimentary and metavolcanic rocks which are intruded by a variety of equigranular and porphyritic dykes. Chalcopyrite and bornite occur as erratic replacements in a north trending zone which dips steeply west."

Please refer to the Central Zone deposit (104G 090) for further details of the Galore Creek deposits.

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EMPR BULL *92
EMPR GEM *1972-520; 1973-501; 1974-336
EMPR GEOLOGY 1976, p. 122
EMPR MAP 65
EMR MIN BULL MR 166
EMR MP CORPFILE (Kennecott Copper Corp., Kennco Exp. Canada Ltd., Hudson Bay Mining and Smelting Co. Ltd., Stikine Copper Ltd.)
EMR MP RESFILE (Central Zone, Galore Creek)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44, p. 24
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CMH 1976, p. 302
N MINER May 3, 1973
Allen, D. (1966) UBC Masters Thesis

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/11 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 094**

NATIONAL MINERAL INVENTORY: 104G3 Cu9

NAME(S): **GALORE CREEK - BUTTE**, BUTTE, GALORE CREEK, STIKINE COPPER, GC, HAB, BUY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 07 41 N
LONGITUDE: 131 29 38 W
ELEVATION: 1220 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6334401
EASTING: 349042

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Chalcocite Cuprite Covellite
COMMENTS: Copper carbonates are also reported to occur.
ALTERATION: K-Feldspar Biotite Cuprite Malachite
ALTERATION TYPE: Potassic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Meta Volcanic
Syenite
Volcanic Breccia
Tuff
Phonolite
Trachyte
Cataclastic Breccia
Sediment/Sedimentary

HOSTROCK COMMENTS: Mineralization occurs mainly in metavolcanics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP: Plutonic Rocks
COMMENTS: Mineralization in volcanics at syenite contact.

PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Hornfels

CAPSULE GEOLOGY

Twelve alkalic porphyry copper-gold deposits are known to occur within the Galore Creek syenite complex. This complex comprises a series of Late Triassic to Early Jurassic orthoclase-porphyry syenitic bodies which have intruded coeval Upper Triassic Stuhini Group volcanic rocks and related sediments. Faults which offset and segment the intrusive rocks and a sub-horizontal fracture cleavage are the two main structural elements in the syenite complex. The complex is roughly 5 by 2.5 kilometres in area.

The deposits are hosted primarily by highly altered potassium-enriched volcanic rocks and pipe-like breccias adjacent to syenite dikes and stocks. Typically, the deposits are manto-shaped and have a north to northeast trend related to the syenite contacts and zones of structural weakness.

The syenite complex is made up of four intrusive phases that are most closely associated with the copper deposits. Six other phases are recognized but are peripheral to the Central zone deposit. The copper-bearing rocks near the syenite intrusion are extensively metasomatized, recrystallized and locally brecciated. These may include pyroclastic and intrusive breccia, trachyte, phonolite, lithic tuff, crystal tuff, pyroxene basalt, pyroxene andesite and minor sediments. These rocks have been converted to skarns and fenitic porphyroids so that original rock types are unclear. The term "hornfels" was frequently applied to these meta-volcanic rocks in the early stages of exploration.

CAPSULE GEOLOGY

Alteration and mineralization are contemporaneous and spatially overlap. The hydrothermal system was extensive and the resultant alteration led to the formation of large gossans. Potassic alteration consisting of potassium feldspar, titanium biotite and magnetite have converted the syenites and volcanic rocks to pink, white and orange rocks composed mostly of orthoclase. Alteration of pyroxene, hornblende and biotite to assemblages of chlorite and calcite plus/minus albite and epidote characterizes the propylitic zone, best developed in the syenitic rocks. Calc-silicate alteration consisting of abundant garnet, diopside, epidote, albite and anhydrite is an unusual feature of the complex. Garnet replaces up to 50 per cent of the metavolcanic rocks and infills breccias near the northern end of the Central zone breccia pipe but is generally absent from the other deposits. However unusual this metasomatic overprint is, the distribution of sulphides, precious metal and magnetite is considered consistent with the expected zoning pattern for alkalic porphyry deposits.

The Butte deposit outcrops on the western margin of the complex. Barr (CIM Bulletin, July 1966) offers the following brief description of the deposit: "The deposit appears to be localized by infolding of the altered Mesozoic rocks at the contact of porphyritic units of the Complex. A prominent west-dipping major fault structure bounds the western part of the deposit, and the northern portion of the syenite porphyry. The principal alteration products are biotite and potash feldspar. Mineralization occurs principally in disseminated form, and includes bornite, chalcopyrite and chalcocite, with secondary cuprite, covellite and copper carbonates."

Please refer to the Central Zone deposit (104G 090) for further details of the Galore Creek deposits.

BIBLIOGRAPHY

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EMPR GEOLOGY 1976, p. 122
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EMR MIN BULL MR 166
EMR MP CORPFILE (Kennecott Copper Corp.; Kennco Exp. Canada Ltd.; Hudson Bay Mining and Smelting Co. Ltd.; Stikine Copper Ltd.)
EMR MP RESFILE (Central Zone, Galore Creek)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44, p. 24
CIM BULL *July 1966, pp. 841-853; Nov. 1968, p. 1329
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CIM TRANS VOL LXIX, p. 251
CMH 1976, p. 302
N MINER May 3, 1973
Allen, D. (1966) UBC Masters Thesis

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/11 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 095** NATIONAL MINERAL INVENTORY: 104G3 Cu10

NAME(S): **GALORE CREEK - SOUTHWEST**, SOUTHWEST, GALORE CREEK, STIKINE COPPER, GC, HAB, BUY

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 07 21 N
LONGITUDE: 131 28 32 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6333742
EASTING: 350129

COMMODITIES: Copper, Silver, Gold, Iron

MINERALS

SIGNIFICANT: Chalcopyrite, Bornite, Magnetite, Pyrite
ALTERATION: K-Feldspar, Biotite, Chlorite, Hematite
ALTERATION TYPE: Potassic, Biotite, Propylitic, Chloritic, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia, Disseminated, Vein
CLASSIFICATION: Porphyry, Hydrothermal, Industrial Min.
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Syenite Porphyry
Meta Volcanic
Volcanic Breccia
Tuff
Phonolite
Trachyte
Cataclastic Breccia
Sediment/Sedimentary

HOSTROCK COMMENTS: Mineralization occurs mainly in brecciated syenite porphyry.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
GRADE: Hornfels
COMMENTS: Contact of syenite with volcanic has produced intensely altered zone.

INVENTORY

ORE ZONE: SOUTHWEST
REPORT ON: Y

CATEGORY: Indicated
YEAR: 1992
QUANTITY: 42400000 Tonnes

COMMODITY	GRADE	
Silver	7.0000	Grams per tonne
Gold	1.0300	Grams per tonne
Copper	0.5500	Per cent

COMMENTS: Silver is estimated. Cut-off is 0.27 per cent copper equivalent.
REFERENCE: CIM Special Volume 46, page 642.

CAPSULE GEOLOGY

Twelve alkalic porphyry copper-gold deposits are known to occur within the Galore Creek syenite complex. This complex comprises a series of Late Triassic to Early Jurassic orthoclase-porphyry syenitic bodies which have intruded coeval Upper Triassic Stuhini Group volcanic rocks and related sediments. Faults which offset and segment the intrusive rocks and a sub-horizontal fracture cleavage are the two main structural elements in the syenite complex. The complex is roughly 5 by 2.5 kilometres in area.

The deposits are hosted primarily by highly altered potassium-enriched volcanic rocks and pipe-like breccias adjacent to syenite dikes and stocks. Typically, the deposits are manto-shaped and have a north to northeast trend related to the syenite contacts and zones

CAPSULE GEOLOGY

of structural weakness.

The syenite complex is made up of four intrusive phases that are most closely associated with the copper deposits. Six other phases are recognized but are peripheral to the Central zone deposit. The copper-bearing rocks near the syenite intrusion are extensively metasomatized, recrystallized and locally brecciated. These may include pyroclastic and intrusive breccia, trachyte, phonolite, lithic tuff, crystal tuff, pyroxene basalt, pyroxene andesite and minor sediments. These rocks have been converted to skarns and fenitic porphyroids so that original rock types are unclear. The term "hornfels" was frequently applied to these meta-volcanic rocks in the early stages of exploration.

Alteration and mineralization are contemporaneous and spatially overlap. The hydrothermal system was extensive and the resultant alteration led to the formation of large gossans. Potassic alteration consisting of potassium feldspar, titanium biotite and magnetite have converted the syenites and volcanic rocks to pink, white and orange rocks composed mostly of orthoclase. Alteration of pyroxene, hornblende and biotite to assemblages of chlorite and calcite plus/minus albite and epidote characterizes the propylitic zone, best developed in the syenitic rocks. Calc-silicate alteration consisting of abundant garnet, diopside, epidote, albite and anhydrite is an unusual feature of the complex. Garnet replaces up to 50 per cent of the metavolcanic rocks and infills breccias near the northern end of the Central zone breccia pipe but is generally absent from the other deposits. However unusual this metasomatic overprint is, the distribution of sulphides, precious metal and magnetite is considered consistent with the expected zoning pattern for alkalic porphyry deposits.

Barr (CIM Bulletin July 1966) describes the southwest deposit as follows: "The deposit appears to be localized at the intersection of two fracture zones which have produced a local centre of brecciation in epidotized syenite porphyry lying 760 metres west of the south end of the Central Zone. Although erratic copper mineralization, in the form of oxide copper with sparse chalcopyrite, occurs in several outcrops in the vicinity of the southwest deposit, the discovery drill holes were spotted entirely on the basis of geophysical recommendations. The main part of the zone strikes east to southeast and dips steeply to the south. Surface alteration patterns indicate a northwest trending zone of pyritic mineralization flanked by hematitic alteration which extends to the northwest of the deposit. Potash feldspar, biotite and chlorite are the dominant alteration products. The mineralization in the deposit includes chalcopyrite with minor bornite, associated partly with pyrite and magnetite. Sulphides and magnetite occur as fracture fillings, coarse replacements and disseminations.

The Southwest zone contains a mineral resource of 42,400,000 tonnes grading 0.55 per cent copper, 1.03 grams per tonne gold, and 7 grams per tonne silver (estimated), at a cut-off of 0.27 per cent copper equivalent (CIM Special Volume 46, page 642).

Please refer to the Central Zone deposit (104G 090) for further details of the Galore Creek deposits.

BIBLIOGRAPHY

EMPR AR 1956-14; 1957-74; 1961-78; 1962-7; 1963-8; 1964-15; *1965-19; 1966-25; 1967-29
EMPR ASS RPT 177, 367, 368, 371, 372, 373, 444, 445, 19397, *20558, 21900
EMPR FIELDWORK *1975, p. 79; 1988, pp. 269-283
EMPR OF 1989-8
EMPR GEM *1972-520; 1973-501; 1974-336
EMPR GEOLOGY 1976, p. 122
EMPR MAP 65
EMR MIN BULL MR 166
EMR MP CORPFILE (Kennecott Copper Corp.; Kennco Exp. Canada Ltd.; Hudson Bay Mining and Smelting Co. Ltd.; Stikine Copper Ltd.)
EMR MP RESFILE (Central Zone, Galore Creek)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44, p. 24
CIM BULL *July 1966, pp. 841-853; Nov. 1968, p. 1329
CIM SPECIAL VOL. *15, pp. 402-414; *46, pp. 630-644
CIM TRANS VOL LXIX, p. 251
CMH 1976, p. 302
N MINER May 3, 1973
Allen, D. (1966) UBC Masters Thesis

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EMPR OF 1998-10

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/11 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 096**

NATIONAL MINERAL INVENTORY: 104G3 Cu13

NAME(S): **GALORE CREEK - SADDLE**, SADDLE, STIKINE COPPER, GC, HAB, BUY, GALORE CREEK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 06 37 N
LONGITUDE: 131 25 54 W
ELEVATION: 1520 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6332286
EASTING: 352737

COMMODITIES: Copper, Gold

MINERALS
SIGNIFICANT: Chalcopyrite, Bornite
ASSOCIATED: Magnetite
ALTERATION: K-Feldspar, Biotite, Malachite, Cuprite, Tenorite, Chrysocolla
ALTERATION TYPE: Potassic, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Breccia
CLASSIFICATION: Porphyry, Hydrothermal
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Syenite
Meta Volcanic
Tuff
Phonolite
Trachyte
Cataclastic Breccia
Sediment/Sedimentary

HOSTROCK COMMENTS: Mineralization occurs at contact of two syenite intrusions.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	3.9800	Grams per tonne
Copper	2.4900	Per cent

COMMENTS: From a 12-metre drill interval.
REFERENCE: Assessment Report 20558.

CAPSULE GEOLOGY

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The deposits are hosted primarily by highly altered potassium-enriched volcanic rocks and pipe-like breccias adjacent to syenite dikes and stocks. Typically, the deposits are manto-shaped and have a north to northeast trend related to the syenite contacts and zones of structural weakness.

The syenite complex is made up of four intrusive phases that are

CAPSULE GEOLOGY

most closely associated with the copper deposits. Six other phases are recognized but are peripheral to the Central zone deposit. The copper-bearing rocks near the syenite intrusion are extensively metasomatized, recrystallized and locally brecciated. These may include pyroclastic and intrusive breccia, trachyte, phonolite, lithic tuff, crystal tuff, pyroxene basalt, pyroxene andesite and minor sediments. These rocks have been converted to skarns and fenitic porphyroids so that original rock types are unclear. The term "hornfels" was frequently applied to these meta-volcanic rocks in the early stages of exploration.

Alteration and mineralization are contemporaneous and spatially overlap. The hydrothermal system was extensive and the resultant alteration led to the formation of large gossans. Potassic alteration consisting of potassium feldspar, titanium biotite and magnetite have converted the syenites and volcanic rocks to pink, white and orange rocks composed mostly of orthoclase. Alteration of pyroxene, hornblende and biotite to assemblages of chlorite and calcite plus/minus albite and epidote characterizes the propylitic zone, best developed in the syenitic rocks. Calc-silicate alteration consisting of abundant garnet, diopside, epidote, albite and anhydrite is an unusual feature of the complex. Garnet replaces up to 50 per cent of the metavolcanic rocks and infills breccias near the northern end of the Central zone breccia pipe but is generally absent from the other deposits. However unusual this metasomatic overprint is, the distribution of sulphides, precious metal and magnetite is considered consistent with the expected zoning pattern for alkalic porphyry deposits.

The Saddle deposit is located at the contact of what are called the Younger syenite and the Buckshot syenite porphyry intrusions. Barr (CIM Bulletin July 1966) offers the following description of the occurrence: "Observations indicate that the most strongly mineralized portion of the deposit trends east, with a 50 degrees north dip, coinciding with the strike trends of fracturing and a local deviation in the trend of the Buckshot porphyry contact. Much of the surficial portion of the deposit comprised a breccia which is composed of angular fragments of both Buckshot porphyry and Younger syenite, cemented together by magnetite. Drill-hole information indicates that copper mineralization is not restricted to the magnetite-cemented breccia, as weakly altered and highly fractured phases low in magnetite contain secondary copper oxides including cuprite, tenorite, malachite and possibly chrysocolla with associated chalcopyrite."

The deposit was investigated in the early 1990s by Mingold Resouces. At this time, the deposit was described as being comprised of a magnetite-cemented intrusive-fragment breccia containing varying amounts of chalcopyrite, malachite and bornite with associated gold values. Two diamond drill holes tested the breccia with one 12-metre interval averaging 3.98 grams per tonne gold and 2.49 per cent copper (Assessment Report 20558).

Please refer to the Central Zone deposit (104G 090) for further details of the Galore Creek deposits.

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EMPR OF 1989-8
EMPR GEM *1972-520; 1973-501; 1974-336
EMPR GEOLOGY 1976, p. 122
EMPR MAP 65
EMR MIN BULL MR 166
EMR MP CORPFILE (Kennecott Copper Corp.; Kennco Exp. Canada Ltd.; Hudson Bay Mining and Smelting Co. Ltd.; Stikine Copper Ltd.)
EMR MP RESFILE (Central Zone, Galore Creek)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44, p. 24
CIM BULL *July 1966, pp. 841-853; Nov. 1968, p. 1329
CIM SPECIAL VOL. *15, pp. 402-414; *46, pp. 630-644
CIM TRANS VOL LXIX, p. 251
CMH 1976, p. 302
N MINER May 3, 1973
Allen, D. (1966) UBC Masters Thesis

MINFILE NUMBER: **104G 097**

NATIONAL MINERAL INVENTORY: 104G3 Cu11

NAME(S): **GALORE CK - WEST FORK GLACIER**, WEST FORK GLACIER, GALORE CREEK, STIKINE COPPER, GC, HAB, BUY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 06 52 N
LONGITUDE: 131 27 54 W
ELEVATION: 870 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6332822
EASTING: 350735

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Magnetite Pyrite
ALTERATION: Chlorite Carbonate Orthoclase Gypsum
ALTERATION TYPE: Propylitic Chloritic Carbonate Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Syenite Porphyry
Syenite Breccia
Meta Volcanic

HOSTROCK COMMENTS: Mineralization occurs within syenite intrusions.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine

CAPSULE GEOLOGY

Twelve alkalic porphyry copper-gold deposits are known to occur within the Galore Creek syenite complex. This complex comprises a series of Late Triassic to Early Jurassic orthoclase-porphyry syenitic bodies which have intruded coeval Upper Triassic Stuhini Group volcanic rocks and related sediments. Faults which offset and segment the intrusive rocks and a sub-horizontal fracture cleavage are the two main structural elements in the syenite complex. The complex is roughly 5 by 2.5 kilometres in area.

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CAPSULE GEOLOGY

zone, best developed in the syenitic rocks. Calc-silicate alteration consisting of abundant garnet, diopside, epidote, albite and anhydrite is an unusual feature of the complex. Garnet replaces up to 50 per cent of the metavolcanic rocks and infills breccias near the northern end of the Central zone breccia pipe but is generally absent from the other deposits. However unusual this metasomatic overprint is, the distribution of sulphides, precious metal and magnetite is considered consistent with the expected zoning pattern for alkalic porphyry deposits.

The West Fork Glacier deposit lies beneath a glacier just over a kilometre south of the main Central zone deposit. Barr (CIM Bulletin July 1966) briefly describes the deposit: "The area initially attracted attention because of high copper contents in stream sediments in the West Fork drainage near the toe of the glacier. Selection of the first drill site on the glacier was influenced by the presence of a small magnetic high anomaly in the general area of interest. On the basis of limited information, the deposit is inferred to strike northeast and dip steeply. Mineralization includes chalcopyrite, bornite, pyrite and magnetite as disseminated and massive replacements in equigranular leucosyenite, syenite porphyries, xenolithic syenite porphyry and syenite breccia. Alteration products include chlorite, gypsum, carbonate and orthoclase."

Please refer to the Central zone deposit (104G 090) for further details of the Galore Creek deposits.

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EMPR AR 1956-14; 1957-74; 1961-78; 1962-7; 1963-8; 1964-15; *1965-19; 1966-25; 1967-29
EMPR ASS RPT 177, 367, 368, 371, 372, 373, 444, 445, 19397, 29558, 21900
EMPR FIELDWORK *1975, p. 79; 1988, pp. 269-283
EMPR OF 1989-8
EMPR BULL 92
EMPR GEM *1972-520; 1973-501; 1974-336
EMPR GEOLOGY 1976, p. 122
EMPR MAP 65
EMR MIN BULL MR 166
EMR MP CORPFILE (Kennecott Copper Corp.; Kennco Exp. Canada Ltd.; Hudson Bay Mining and Smelting Co. Ltd.; Stikine Copper Ltd.)
EMR MP RESFILE (Central Zone, Galore Creek)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44, p. 24
CIM BULL *July 1966, pp. 841-853; Nov. 1968, p. 1329
CIM SPECIAL VOL. *15, pp. 402-414; *46, pp. 630-644
CIM TRANS VOL LXIX, p. 251
CMH 1976, p. 302
N MINER May 3, 1973
Allen, D. (1966) UBC Masters Thesis

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/12 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 098**

NATIONAL MINERAL INVENTORY: 104G3 Cu12

NAME(S): **GALORE CREEK - SOUTH BUTTE**, SOUTH BUTTE, GALORE CREEK, STIKINE COPPER, GC, HAB, BUY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 05 51 N
LONGITUDE: 131 27 26 W
ELEVATION: 1520 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6330920
EASTING: 351138

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ALTERATION: K-Feldspar Biotite
COMMENTS: Skarn mineralization is reported but not described.
ALTERATION TYPE: Potassic Skarn
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Meta Volcanic
Syenite Porphyry
Volcanic Breccia
Tuff
Phonolite
Trachyte
Cataclastic Breccia
Sediment/Sedimentary
Basalt Dike

HOSTROCK COMMENTS: Mineralization occurs mainly in metavolcanics near syenite contacts.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP: Plutonic Rocks
GRADE: Hornfels
COMMENTS: Mineralization occurs in metavolcanics near contact with syenite.

CAPSULE GEOLOGY

Twelve alkalic porphyry copper-gold deposits are known to occur within the Galore Creek syenite complex. This complex comprises a series of Late Triassic to Early Jurassic orthoclase-porphyry syenitic bodies which have intruded coeval Upper Triassic Stuhini Group volcanic rocks and related sediments. Faults which offset and segment the intrusive rocks and a sub-horizontal fracture cleavage are the two main structural elements in the syenite complex. The complex is roughly 5 by 2.5 kilometres in area.

The deposits are hosted primarily by highly altered potassium-enriched volcanic rocks and pipe-like breccias adjacent to syenite dikes and stocks. Typically, the deposits are manto-shaped and have a north to northeast trend related to the syenite contacts and zones of structural weakness.

The syenite complex is made up of four intrusive phases that are most closely associated with the copper deposits. Six other phases are recognized but are peripheral to the Central zone deposit. The copper-bearing rocks near the syenite intrusion are extensively metasomatized, recrystallized and locally brecciated. These may include pyroclastic and intrusive breccia, trachyte, phonolite, lithic tuff, crystal tuff, pyroxene basalt, pyroxene andesite and minor sediments. These rocks have been converted to skarns and fenitic porphyroids so that original rock types are unclear. The term "hornfels" was frequently applied to these meta-volcanic rocks

CAPSULE GEOLOGY

in the early stages of exploration.

Alteration and mineralization are contemporaneous and spatially overlap. The hydrothermal system was extensive and the resultant alteration led to the formation of large gossans. Potassic alteration consisting of potassium feldspar, titanium biotite and magnetite have converted the syenites and volcanic rocks to pink, white and orange rocks composed mostly of orthoclase. Alteration of pyroxene, hornblende and biotite to assemblages of chlorite and calcite plus/minus albite and epidote characterizes the propylitic zone, best developed in the syenitic rocks. Calc-silicate alteration consisting of abundant garnet, diopside, epidote, albite and anhydrite is an unusual feature of the complex. Garnet replaces up to 50 per cent of the metavolcanic rocks and infills breccias near the northern end of the Central zone breccia pipe but is generally absent from the other deposits. However unusual this metasomatic overprint is, the distribution of sulphides, precious metal and magnetite is considered consistent with the expected zoning pattern for alkalic porphyry deposits.

"The South Butte deposit is only partly accessible, as it lies on the flanks and summit of a nunatak which rises precipitously for 396 metres from its base at the head of West Fork glacier to a moraine-covered summit at an elevation of 1460 metres. The nunatak is composed of sheared metavolcanic rocks intruded by north trending dykes of epidotized syenite porphyry. Late sericitized basalt dykes strike northwest across the area. Chalcopyrite and pyrite occur as irregular replacements and fracture fillings in skarn and, to a lesser extent in north trending shear zones" (Barr, CIM Bulletin July 1966).

Please refer to the Central Zone deposit (104G 090) for further details of the Galore Creek deposits.

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EMPR OF 1989-8
EMPR GEM *1972-520; 1973-501; 1974-336
EMPR GEOLOGY 1976, p. 122
EMPR MAP 65
EMR MIN BULL MR 166
EMR MP CORPFILE (Kennecott Copper Corp.; Kennco Exp. Canada Ltd.; Hudson Bay Mining and Smelting Co. Ltd.; Stikine Copper Ltd.)
EMR MP RESFILE (Central Zone, Galore Creek)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44, p. 24
CIM BULL *July 1966, pp. 841-853; Nov. 1968, p. 1329
CIM SPECIAL VOL. *15, pp. 402-414; *46, pp. 630-644
CIM TRANS VOL LXIX, p. 251
CMH 1976, p. 302
N MINER May 3, 1973
Allen, D. (1966) UBC Masters Thesis

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/12 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 099**

NATIONAL MINERAL INVENTORY: 104G3 Cu14

NAME(S): **GALORE CREEK - SOUTH 110**, SOUTH 110, GALORE CREEK, STIKINE COPPER, GC, HAB, BUY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 06 50 N
LONGITUDE: 131 25 28 W
ELEVATION: 1250 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6332673
EASTING: 353188

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Bornite Magnetite
ALTERATION: K-Feldspar Biotite Magnetite
ALTERATION TYPE: Potassic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Syenite Porphyry
Meta Volcanic

HOSTROCK COMMENTS: Mineralization occurs primarily within syenite intrusions.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine

CAPSULE GEOLOGY

Twelve alkalic porphyry copper-gold deposits are known to occur within the Galore Creek syenite complex. This complex comprises a series of Late Triassic to Early Jurassic orthoclase-porphyry syenitic bodies which have intruded coeval Upper Triassic Stuhini Group volcanic rocks and related sediments. Faults which offset and segment the intrusive rocks and a sub-horizontal fracture cleavage are the two main structural elements in the syenite complex. The complex is roughly 5 by 2.5 kilometres in area.

The deposits are hosted primarily by highly altered potassium-enriched volcanic rocks and pipe-like breccias adjacent to syenite dikes and stocks. Typically, the deposits are manto-shaped and have a north to northeast trend related to the syenite contacts and zones of structural weakness.

The syenite complex is made up of four intrusive phases that are most closely associated with the copper deposits. Six other phases are recognized but are peripheral to the Central zone deposit. The copper-bearing rocks near the syenite intrusion are extensively metasomatized, recrystallized and locally brecciated. These may include pyroclastic and intrusive breccia, trachyte, phonolite, lithic tuff, crystal tuff, pyroxene basalt, pyroxene andesite and minor sediments. These rocks have been converted to skarns and fenitic porphyroids so that original rock types are unclear. The term "hornfels" was frequently applied to these meta-volcanic rocks in the early stages of exploration.

Alteration and mineralization are contemporaneous and spatially overlap. The hydrothermal system was extensive and the resultant alteration led to the formation of large gossans. Potassic alteration consisting of potassium feldspar, titanium biotite and magnetite have converted the syenites and volcanic rocks to pink, white and orange rocks composed mostly of orthoclase. Alteration of pyroxene, hornblende and biotite to assemblages of chlorite and calcite plus/minus albite and epidote characterizes the propylitic zone, best developed in the syenitic rocks. Calc-silicate alteration

CAPSULE GEOLOGY

consisting of abundant garnet, diopside, epidote, albite and anhydrite is an unusual feature of the complex. Garnet replaces up to 50 per cent of the metavolcanic rocks and infills breccias near the northern end of the Central zone breccia pipe but is generally absent from the other deposits. However unusual this metasomatic overprint is, the distribution of sulphides, precious metal and magnetite is considered consistent with the expected zoning pattern for alkalic porphyry deposits.

The South 110 deposit is located along the strongly fractured contact of what are called the "Younger" syenite and the "Buckshot" syenite porphyry intrusions and their contact with metamorphosed Upper Triassic rock. Disseminated chalcopyrite and minor bornite are the principal copper minerals. An intimate relationship between chalcopyrite and magnetite is also reported.

Please refer to the Central Zone deposit (104G 090) for further details of the Galore Creek deposits.

BIBLIOGRAPHY

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EMPR BULL 92
EMPR FIELDWORK *1975, p. 79; 1988, pp. 269-283
EMPR OF 1989-8
EMPR GEM *1972-520; 1973-501; 1974-336
EMPR GEOLOGY 1976, p. 122
EMPR MAP 65
EMR MIN BULL MR 166
EMR MP CORPFILE (Kennecott Copper Corp.; Kennco Exp. Canada Ltd.; Hudson Bay Mining and Smelting Co. Ltd.; Stikine Copper Ltd.)
EMR MP RESFILE (Central Zone, Galore Creek)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44, p. 24
CIM BULL *July 1966, pp. 841-853; Nov. 1968, p. 1329
CIM SPECIAL VOL. *15, pp. 402-414; *46, pp. 630-644
CIM TRANS VOL LXIX, p. 251
CMH 1976, p. 302
N MINER May 3, 1973
Allen, D. (1966) UBC Masters Thesis

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/12 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 100**

NATIONAL MINERAL INVENTORY:

NAME(S): **CAM**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 03 43 N
LONGITUDE: 131 41 15 W
ELEVATION: 457 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6327490
EASTING: 337036

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Chalcocite Pyrite
COMMENTS: Copper minerals occur in a pyritic rusty zone.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Igneous-contact

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Undefined Group	Unnamed/Unknown Formation	
Jurassic-Cretaceous			Unnamed/Unknown Informal

LITHOLOGY: Quartz Monzonite
Granodiorite
Phyllitic Quartzite
Greywacke

HOSTROCK COMMENTS: Mineralization is primarily within intrusive rocks but is also found in quartzite.

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine

CAPSULE GEOLOGY

This occurrence is situated on the eastern flank of the Coast Plutonic Complex. The area is underlain by Permian and older phyllitic quartzite and greywacke and Juro-Cretaceous quartz monzonite and granodiorite. Narrow granodiorite dykes and minor east trending faults are observed in the metamorphic rocks. The fault zones contain abundant carbonitization.

A rusty zone occurs along the quartzite-granite contact mainly, but not entirely, within the intrusive. Sporadic chalcopyrite and chalcocite occur with up to 10 per cent pyrite within these rusty zones. The metamorphic rocks also contain disseminated fine pyrite and pyrrhotite, locally, outside the contact zone.

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EMPR ASS RPT *1673
EMPR AR 1968-288
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1418A

DATE CODED: 1988/04/27 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 101**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT EDZIZA**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G10E
BC MAP:
LATITUDE: 57 44 35 N
LONGITUDE: 130 33 51 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6401179
EASTING: 406887

COMMODITIES: Volcanic Glass

MINERALS
SIGNIFICANT: Obsidian
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stratiform Massive
CLASSIFICATION: Volcanogenic Syngenetic Industrial Min.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cenozoic			Edziza Spectrum Volcanic Comp.

LITHOLOGY: Basalt Flow
Dacite Flow
Rhyolite Flow
Pyroclastic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The region of the occurrence is underlain by Cenozoic lavas and pyroclastics of basaltic to rhyolitic composition. The Mount Edziza and Spectrum Range volcanic piles cover an area of nearly 1600 square kilometres. Many of the flows are reported to contain layers of obsidian up to 9 metres thick.

J.G. Souther (GSC Paper 71-44) best describes the specific geology of Mount Edziza as follows: "The basal, shield portion of Mt. Edziza is exposed in an escarpment along its western side and cross-sections of the entire pile may be seen in steep-walled radial valleys cut deeply into the eastern side. The lower part comprises a succession of very uniform, dark grey, fine-grained basaltic flows containing sparse phenocrysts of plagioclase, pyroxene and olivine. Individual columnar-jointed flows from 1.5 to 6 metres thick are separated by layers of loose reddish brown scoria and ash. The absence of interlayered colluvium indicates that these lower flows were extruded in rapid succession. They are overlain by a thick bed of unconsolidated, rhyolitic, air-fall pumice above which the section is extremely complex and variable. Basalt, rhyolite and dacite flows, domes, and pyroclastic deposits are interlayered with fluvial and glacial deposits. The acid phases occur as bulbous lava domes, thick stubby flows and both welded and unwelded ash-flow sheets. Basaltic phases, erupted during non-glacial periods, form relatively thin flows that surround and engulf the piles of acid ejecta. During the Pleistocene, subglacial eruptions of basalt formed thick piles of sideromelane tuff-breccia and pillow lava. Rocks within the central conduit have been intensely altered by late solfataric action to a bleached, white, carbonitized rock containing from 5 to 50 per cent finely disseminated pyrite."

BIBLIOGRAPHY

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GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/03/31 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 102**

NATIONAL MINERAL INVENTORY:

NAME(S): **SCUD RIVER LIMESTONE**, GALORE CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G03W 104G04E 104G05E
BC MAP:
LATITUDE: 57 09 59 N
LONGITUDE: 131 20 07 W
ELEVATION: Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: The area of the occurrence covers a few hundred square kilometres.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6338326
EASTING: 358787

COMMODITIES: Limestone

MINERALS
SIGNIFICANT: Calcite
ASSOCIATED: Chalcedony Silica
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: DATING METHOD: Fossil MATERIAL DATED: Various fossils

DEPOSIT
CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Evaporite Industrial Min.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Undefined Group	Unnamed/Unknown Formation	

DATING METHOD: Fossil
MATERIAL DATED: Various fossils

LITHOLOGY: Limestone
Chert
Shale

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

A belt of Permian limestone extends discontinuously from the headwaters of Sphaler Creek northwestward along the South Scud River to Ambition Mountain for 50 kilometres. The limestone is also exposed for 15 kilometres northwestward along the Scud River. The unit is estimated to be 800 to 1000 metres thick. The limestone has undergone extensive folding and faulting.

The lower 75 metres of the formation is comprised of dark grey, thin bedded limestone interbedded with pyritic argillite, which grades upward into 350 metres of pale grey to buff coloured, thin to medium bedded limestone intercalated with amorphous chert. This is followed by a hundred metres of tan to very light grey weathering bryozoan rich limestone that is overlain by at least 300 metres of massive to bedded, white to buff, bioclastic limestone with minor argillite and tuff. This purer limestone is contaminated with some siliceous layers and pods. The entire section is overlain by shales of Middle Triassic age.

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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/14 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 103**

NATIONAL MINERAL INVENTORY:

NAME(S): **BM 38**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G11E 104G11W
BC MAP:
LATITUDE: 57 43 50 N
LONGITUDE: 131 14 44 W
ELEVATION: 1650 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6400929
EASTING: 366286

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic			Nightout Pluton

LITHOLOGY: Granodiorite
Quartz Diorite
Felsite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine

CAPSULE GEOLOGY

Copper mineralization occurs in Middle to Late Triassic Nightout Pluton granodiorite batholith near its northern contact with Permian and older sediments. Younger quartz diorite outcrops are observed in the area. A pyritic felsite dyke up to 30 metres wide cuts all other rocks.

Chalcopyrite is disseminated in fractured granodiorite across a 15 centimetre width. The fractures have a strike of 10 degrees with a vertical dip.

Another copper showing within a few hundred metres occurs in a 60 centimetre wide shear in the granodiorite. The shear has a 215 degree strike and a vertical dip. The shear is bounded by irregular quartz-calcite veinlets mineralized with chalcopyrite.

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GSC MEM *246, pp. 57,74
GSC P 71-44
GSC MAP 9-1957; 11-1971; 309A; 1418A

DATE CODED: 1988/02/12 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 104**

NATIONAL MINERAL INVENTORY:

NAME(S): **ISKUT RIVER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G01W 104G02E 104G07E 104G08W
BC MAP:
LATITUDE: 57 03 21 N
LONGITUDE: 130 23 37 W
ELEVATION: Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The above coordinates are for a major band of the limestone. Several more bands occur from 57 degrees 0 to 16 minutes latitude and from 130 degrees 25 to 35 minutes longitude.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6324464
EASTING: 415471

COMMODITIES: Limestone

MINERALS
SIGNIFICANT: Calcite
ASSOCIATED: Silica
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: DATING METHOD: Fossil MATERIAL DATED: Various fossils

DEPOSIT
CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Evaporite Industrial Min.
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	

DATING METHOD: Fossil
MATERIAL DATED: Various fossils

LITHOLOGY: Limestone
Shale

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Iskut Trench

CAPSULE GEOLOGY

Narrow north trending units of Upper Triassic limestone occur to the west of the Iskut River and north and southeast of Hankin Peak. This unit, made up of discontinuous beds and lenses of limestone, is widespread in the Telegraph Creek and adjacent map areas. Souther (GSC Paper 71-44) describes this unit as a "thin-bedded, flaggy, fetid limestone with much interbedded shale and siliceous silt. Locally it is thick-bedded or massive." The unit may range from less than a metre to more than 100 metres in thickness. The massive facies is fossiliferous containing a reefoid fauna of mainly corals and bryozoa.

BIBLIOGRAPHY

EMPR IND MIN FILE (Limestone Occurrences in British Columbia by McCammon, J.W. 1973, p. 34 (in Ministry Library))
GSC MAP 9-1957; 11-1971; 1418A
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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/04/28 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 105**

NATIONAL MINERAL INVENTORY:

NAME(S): **STERLING**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04W
BC MAP:
LATITUDE: 57 00 56 N
LONGITUDE: 131 51 02 W
ELEVATION: 1066 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of anomalous rock sample site R10, on ridge between Mud Glacier and Sterling Creek, about 3.5 kilometres west of the Stikine River (Assessment Report 20892, Map 2).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6322730
EASTING: 326936

COMMODITIES: Copper Silver

MINERALS
SIGNIFICANT: Unknown
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Igneous-contact

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic			Stikine Assemblage
Eocene			Unnamed/Unknown Informal

LITHOLOGY: Plagioclase Porphyritic Volcanic Flow
Hornblende Porphyry Dike
Granite

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
TERRANE: Stikine Plutonic Rocks
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	2.2000	Grams per tonne
Copper	0.1200	Per cent

REFERENCE: Assessment Report 20892.

CAPSULE GEOLOGY

The Sterling showing occurs on a ridgecrest underlain by a pendant of Permian and older plagioclase porphyritic volcanic flows of the Stikine Assemblage within a stock of Eocene granite. Plagiogclase and minor hornblende porphyry dikes cut the above rocks and range from 30 to 120 centimetres in thickness. These generally strike 065 degres dipping 40 degrees to the southwest.

Mineralization and alteration is reported to be either related to contact zones or to a set of parallel fault zones striking northwest. Contacts between volcanics and intrusive rocks are heavily chloritic and well sheared with small quartz veins filling fractures.

Rock sample STE/90 R10 was collected from a contact zone and assayed 0.12 per cent copper and 2.2 grams per tonne silver (Assessment Report 20892).

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EMPR OF 1989-8
EMPR FIELDWORK 1988, pp. 269-284
EMPR GEOSCIENCE MAP 1993-2

DATE CODED: 1997/08/14
DATE REVISED: 1998/01/13

CODED BY: GJP
REVISED BY: LJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104G 106**

NATIONAL MINERAL INVENTORY:

NAME(S): **KLASTLINE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G15E
BC MAP:
LATITUDE: 57 57 10 N
LONGITUDE: 130 41 47 W
ELEVATION: 490 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: There is a major limestone body at this location but there is a possibility that another local limestone body on Klastline River was described in the literature.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6424713
EASTING: 399602

COMMODITIES: Limestone

MINERALS
SIGNIFICANT: Calcite
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: DATING METHOD: Fossil MATERIAL DATED: Various fossils

DEPOSIT
CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Evaporite Industrial Min.
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	

DATING METHOD: Fossil
MATERIAL DATED: Various fossils

LITHOLOGY: Limestone
Shale

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Iskut Trench

CAPSULE GEOLOGY

This Upper Triassic limestone occurrence on the Klastline River is made up of discontinuous beds and lenses of limestone and is widespread throughout the Telegraph Creek and adjacent map areas. Souther (GSC Paper 71-44) describes this unit as a thin-bedded, flaggy, fetid limestone with much interbedded shale and siliceous silt. Locally it is thick-bedded or massive." The unit may range from less than a metre to more than 100 metres in thickness. The massive facies is fossiliferous containing a reefoid fauna of mainly corals and bryozoa.

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GSC MAP 9-1957; 11-1971; 1418A
GSC P *71-44, p. 8

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1988/01/20 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 107** NATIONAL MINERAL INVENTORY: 104G1,2 Au1

NAME(S): **HANK**

STATUS: Developed Prospect MINING DIVISION: Liard
REGIONS: British Columbia
NTS MAP: 104G01W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 57 13 06 N NORTHING: 6342659
LONGITUDE: 130 28 44 W EASTING: 410692
ELEVATION: 1490 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 10 kilometres east-northeast of Hankin Peak and 15 kilometres west of the Stewart-Cassiar Highway.

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS
SIGNIFICANT: Sphalerite Galena Chalcopyrite Pyrite
ASSOCIATED: Carbonate Siderite Barite
ALTERATION: Sericite Carbonate Pyrite Silica
ALTERATION TYPE: Sericitic Carbonate Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Stockwork Massive
CLASSIFICATION: Epigenetic Hydrothermal Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au H04 Epithermal Au-Ag-Cu: high sulphidation

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Andesitic Agglomerate
Andesitic Tuff
Felsite
Diorite

HOSTROCK COMMENTS: Felsite intrusions are found adjacent to mineralized volcanics.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

INVENTORY

ORE ZONE: SOUTH REPORT ON: Y

CATEGORY: Indicated YEAR: 1987
QUANTITY: 226775 Tonnes

COMMODITY	GRADE	
Gold	4.4000	Grams per tonne

COMMENTS: Open pit material.
REFERENCE: Prospectus, Lac Minerals Ltd., July 7, 1987.

ORE ZONE: NORTH REPORT ON: Y

CATEGORY: Indicated YEAR: 1987
QUANTITY: 226775 Tonnes

COMMODITY	GRADE	
Gold	2.3000	Grams per tonne

COMMENTS: Open pit material.
REFERENCE: Prospectus, Lac Minerals Ltd., July 7, 1987.

CAPSULE GEOLOGY

This property is located above a tributary of Ball Creek, approximately 10 kilometres east-northeast of Hankin Peak and 15 kilometres west of the Stewart-Cassiar Highway.

The area of the occurrence is underlain primarily by Upper Triassic volcanics consisting of green andesitic agglomerates and tuffs. These commonly contain white plagioclase and black hornblende phenocrysts. Minor siltstone beds are noted at lower elevations. The pyroclastic bedding has a regional northeast strike with steep to moderate southeast dips. Tertiary-Cretaceous felsite bodies intrude these rocks and are found close to mineralized zones. The felsite is white to light grey and normally contains small cubes

CAPSULE GEOLOGY

of disseminated pyrite. Small stocks of Tertiary-Cretaceous hornblende diorite also intrude area rocks.

Two major zones of alteration parallel to the regional strike occur within the volcanics; an upper and lower "Altered Zone" (Assessment Report 13594). These zones are highly bleached and gossanous. They are characterized by pervasive sericite-carbonate alteration and weak silicification. Pyrite content is generally between 2 and 5 per cent, mainly as disseminations, but with higher concentrations along fractures.

Carbonate veins, up to 1.5 metres thick, and stockworks containing siderite with some barite occur in these altered zones. These veins are host to massive sphalerite, galena, chalcopyrite and pyrite but are generally barren. High gold and silver assays are derived from samples of these polymetallic veins and from wallrocks between barren veins. Trench sampling on the upper "Altered Zone", in an area with a relatively high density of carbonate veining, resulted in an average assay of 2.54 grams per tonne gold over 26 metres. Higher grades were obtained over narrower widths.

Indicated reserves (open pit material) in South zone are 226,775 tonnes grading 4.4 grams per tonne gold and indicated reserves (open pit material) in North zone are 226,775 tonnes grading 2.3 grams per tonne gold (Prospectus, Lac Minerals Ltd., July 7, 1987).

BIBLIOGRAPHY

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EMPR EXPL 1983-530; 1985-C382
EMPR INF CIRC 1993-13
EMPR OF 1994-1
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A
Prospectus, Lac Minerals Ltd., July 7, 1987
EMR MIN BULL MR 223 B.C. 327

DATE CODED: 1987/05/05 CODED BY: AFW FIELD CHECK: N
DATE REVISED: 1988/05/06 REVISED BY: GJP FIELD CHECK: Y

MINFILE NUMBER: **104G 108** NATIONAL MINERAL INVENTORY: 104G4 Au1

NAME(S): **PAYDIRT**

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 04 06 N
LONGITUDE: 131 31 26 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6327822
EASTING: 346980

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Gold Chalcopyrite Pyrite
ALTERATION: Silica Sericite Pyrite
ALTERATION TYPE: Silicific'n Sericitic Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation
DIMENSION: 100 x 70 x 25 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Northeast trending alteration zone dips north.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Lapilli Tuff
Crystal Lapilli Tuff
Ash Tuff
Diorite Dike
Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: PAYDIRT REPORT ON: Y

CATEGORY: Indicated YEAR: 1988
QUANTITY: 181420 Tonnes

COMMODITY	GRADE	
Gold	3.8000	Grams per tonne

COMMENTS: Drill indicated geological reserves.
REFERENCE: Consolidated Silver Standard Annual Report 1988.

CAPSULE GEOLOGY

The Galore Creek region is mainly underlain by Upper Triassic volcanics and sediments of the Stuhini Group. This area is flanked to the west by Tertiary-Jurassic quartz diorite to granodiorite of the Coast Plutonic Complex. Middle Triassic sediments with Permian sedimentary and metamorphic rocks are at the northern and eastern limit of the area with Permian limestone being the dominant rock. North striking faults define boundaries between Upper and Middle Triassic rocks and between Paleozoic and Triassic rocks. Strata is folded into a linked series of anticlines and synclines with west or northwest trending axes. Younger folds with north-northwest trending axes transect the earlier formed structure. Syenite (orthoclase porphyry) intrusions of Juro-Triassic age disrupt the stratigraphy and structural trends. These intrusions form a series of dykes, sheets and stocks. Eocene age intrusions of quartz monzonite have formed several stocks and are the youngest rocks in the area.

The Paydirt deposit, located several kilometres southwest of the main Galore Creek syenite body, is underlain by Stuhini Group volcanics. Coarse andesitic ash tuffs are exposed along a creek below the 860 metre elevation level. At 860 metres elevation a

CAPSULE GEOLOGY

diorite dyke marks a lithologic change above which the rocks are composed of altered lapilli, crystal lapilli and ash tuffs. This altered zone hosts the main gold-bearing zone and ceases at the 880 metre elevation level. Similar but unaltered rocks occur above this level. Thin unaltered feldspar porphyry dykes cut the gold zone.

The gold-bearing zone occurs in the lower part of the alteration zone and has a surficial strike length of 100 metres and a width of 25 metres. Drilling has confirmed a downdip extension of 70 metres. Alteration consists of silicification, pyritization and sericitization with gold occurring in areas of stronger silicification. Small amounts of very fine native gold can be seen in outcrop and drill core. The post-alteration diorite dyke generally marks the footwall of the gold-bearing and alteration zones. Gold mineralization found above the dyke is not associated with chalcopyrite, while gold found below the dyke is.

Drill indicated geological reserves are 181,420 tonnes grading at 3.8 grams per tonne gold (Consolidated Silver Standard Annual Report 1988).

BIBLIOGRAPHY

EMPR ASS RPT 5615, 6022, *9999, *13917, *14980, *15753, 15806, 21410
EMPR MAP 65 (1989)
EMPR AR 1963-8; 1964-15; *1965-38
EMPR GEM 1975-E183; 1976-E184
EMPR EXPL 1981-177; 1985-C383; 1986-C445; 1987-C380,C381
EMPR FIELDWORK 1975, p. 79; 1988, p. 281
EMPR OF 1989-8; 1992-1; 1992-3
GSC P *71-44, p. 27
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1418A
EMR MIN BULL MR 223 B.C. 331

DATE CODED: 1986/12/01 CODED BY: AFW FIELD CHECK: N
DATE REVISED: 1988/04/25 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 109**

NATIONAL MINERAL INVENTORY:

NAME(S): **HEL**, MT. HELVEKER, MOUNT HELVEKER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G11W
BC MAP:
LATITUDE: 57 38 48 N
LONGITUDE: 131 27 50 W
ELEVATION: 1725 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Occurrence location (Assessment Report 7708).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6392045
EASTING: 352949

COMMODITIES: Uranium

MINERALS
SIGNIFICANT: Saleeite Torbernite Pitchblende
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Epigenetic
TYPE: D05 Sandstone U D06 Volcanic-hosted U
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous	Sustut	Undefined Formation	

LITHOLOGY: Conglomerate
Sandstone
Coal
Arkose
Felsic Ash
Felsic Porphyritic Flow
Agglomerate

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Overlap Assemblage Stikine

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1982
SAMPLE TYPE: Bulk Sample

COMMODITY	GRADE	
Uranium	0.0843	Per cent

COMMENTS: Bulk sample over a 2-metre strike length and 20 centimetre thickness.
REFERENCE: Geological Survey of Canada Paper 82-1A, page 438.

CAPSULE GEOLOGY

Upper Cretaceous to Paleocene (or Eocene?) Sustut Group clastic s Hazelton Group and Upper Triassic Volcanics and are overlain by trachytic and rhyolitic flows and pyroclastic rocks of the Sloko Group. The Sustut sediments comprise about 300 metres of poorly consolidated green-grey, pebbly, feldspathic and quartzose arenites, subordinate pebble and cobble conglomerates, and minor coal seams.

Uranium occurs as saleeite and torbernite within the upper conglomerate unit, over several metres along strike in a zone up to 30 centimetres thick. Mineralization is also associated with inter-layered oxidized sandy layers and organic material. A trench sample assayed 0.397 per cent uranium (Assessment Report 7708). A bulk sample over a 2 metre strike length and 20 centimetre thickness assayed 0.0843 per cent uranium (Geological Survey of Canada Paper 82-1A).

The uranium was likely derived from overlying felsic volcanics transported by means of downward percolating groundwaters, and fixed by organically dominated material.

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EMPR ASS RPT *7708
EMPR EXPL 1979-284

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EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1
GSC MAP 11-1971
GSC OF 68
GSC P 71-44; *81-1A, p. 243; *82-1A, p. 438
Bates, D.V., Murray, J.W., and Raudsepp, V. (1980): Royal Commission of Inquiry, Health and Environmental Protection, Uranium Mining, Vol. 1, p. 128
Bell, R.T., 1985, Overview of Uranium in Volcanic Rocks of the Canadian Cordillera, in 1AEA Vol. ST1/PUB/690 - Uranium in Volcanic Rocks, p. 329
Falconbridge File

DATE CODED: 1987/08/20 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: 1988/07/19 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104G 110**

NATIONAL MINERAL INVENTORY: 104G2 Cu2

NAME(S): **BAM 10**, BAM

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104G02W
BC MAP:
LATITUDE: 57 10 48 N
LONGITUDE: 130 52 52 W
ELEVATION: Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located in the Mess Creek valley south of Artic Lake.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6338992
EASTING: 386287

COMMODITIES: Gold, Silver, Bismuth, Antimony, Barite

MINERALS

SIGNIFICANT: Pyrite, Gold, Barite
ASSOCIATED: Quartz, Barite
COMMENTS: Local small barite stringers.
ALTERATION: Limonite, Chlorite, Silica, Pyrite
ALTERATION TYPE: Oxidation, Chloritic, Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork
CLASSIFICATION: Hydrothermal, Porphyry, Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Triassic-Jurassic			Hickman Batholith

LITHOLOGY: Quartz Diorite
Granite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine, Overlap Assemblage

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1986
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	8.2000	Grams per tonne

COMMENTS: Gold value returned from a 18.9 metre chip sample.
REFERENCE: George Cross Newsletter #80, April 27, 1987.

CAPSULE GEOLOGY

The oldest rocks on the property are Permian volcanics and volcaniclastics which include massive greenstone, chloritic phyllite, chlorite schist and minor greywacke. Above this unit is a thick package of Permian dolomite and limestone with interbedded chert. Unconformably overlying the Permian section is a thick sequence of Lower Jurassic clastic sediments comprised of polymictic conglomerate, arkosic sandstone and argillites. These rocks are intruded by the Jurassic-Triassic Hickman Batholith which varies from quartz diorite to granite.

The quartz diorite to granite intrusion underlies a major portion of the southeast area of the Bam property and hosts gold bearing veins. The gold mineralization in the granitic rocks occurs as fine to coarse-grained pyrite within grey quartz veins. Native gold has been observed in polished thin sections. The quartz veins are discontinuous and tend to pinch out and disperse into the highly fractured granite. In 1986, resampling the discovery showing indicated values of 200.80 grams per tonne gold. In the same year samples from trenches contained values of 8.2 grams per tonne gold over 18.9 metres, and 25.0 grams per tonne gold over 3 metres. Anomalous gold is almost always associated with abundant pyrite and dark orange limonitic alteration. These samples are also anomalous in silver, bismuth, and antimony.

The granite is pale orange and hosts chloritized mafics. Adjacent to the quartz veining the granite is intensely silicified.

CAPSULE GEOLOGY

The granite is locally very heavy due to small barite stringers. The mineralized veins generally trend 140 to 150 degrees. Mineralization occurs mainly in dark grey quartz veins with yellow subhedral cubes and blebs of fine to medium-grained pyrite.

BIBLIOGRAPHY

EM BULL 104
EMPR AR 1964-18; 1966-31; 1967-30
EMPR ASS RPT 695, 1675, 4290, 11515, 12561, 14859, *15827
EMPR EXPL 1983-530,531; 1984-389,390
EMPR GEM 1972-519
EMR MP CORPFILE (The Shawnigan Mining and Smelting Company)
GSC MAP 9-1957; 11-1971; 1418A
GSC MEM 362
GSC P 71-44
CIM Spec. Vol. 15, pp. 402-414
GCNL #80, April 27, 1987

DATE CODED:	1987/11/04	CODED BY:	LLC	FIELD CHECK:	N
DATE REVISED:	1992/02/21	REVISED BY:	JD	FIELD CHECK:	Y

MINFILE NUMBER: **104G 111**

NATIONAL MINERAL INVENTORY:

NAME(S): **YEHINIKO EAST**, YETI

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G05W
BC MAP:
LATITUDE: 57 28 59 N
LONGITUDE: 131 18 42 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Located near the upper reaches of Yehiniko Creek's east fork.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6373517
EASTING: 361412

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Unknown
COMMENTS: Unspecified copper mineralization.
COMMENTS: Unspecified type of alteration minerals.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Middle Jurassic			Yehiniho Pluton
Triassic-Jurassic			Hickman Batholith

LITHOLOGY: Andesitic Flow
Lapilli Tuff
Volcanic Conglomerate
Siltstone
Hornblende Biotite Granite
Quartz Monzonite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine Plutonic Rocks

CAPSULE GEOLOGY

The Yehiniko East occurrence is located near the head of Yehiniko Lake approximately 28 kilometres east of the Stikine River.

The showing is located within Upper Triassic rocks of the Stuhini Group near the western margin of the Middle Jurassic Yehiniko pluton. The pluton is comprised of a tan to orange weathering, salmon pink, hornblende-biotite granite to quartz monzonite. The volcanic sequence consists mainly of massive to faintly feldspar and/or pyroxene porphyritic andesitic flows with lesser intercalated beds of siltstone, lapilli tuff and volcanic conglomerate. The beds generally strike northwest and dip moderately to the southeast. The package is not highly deformed although it is possible that north trending, vertical faults crosscut the area.

Souther (Geological Survey of Canada Paper 71-44) simply states that a large alteration zone occurs around the contact between the pluton and volcanic rocks and contains some copper mineralization.

Consolidated Gold Win Ventures Inc. explored the property in 1998.

BIBLIOGRAPHY

EMPR ASS RPT 21168, 21302, 24659, 24970
EMPR FIELDWORK 1988, pp. 251-267
EMPR OF 1989-7
GSC MAP 9-1957; 11-1971; 1418A
GSC MEM 246
GSC OF 1646
GSC P *71-44, p. 24
GCNL #25(Feb.5), 1999

DATE CODED: 1988/02/11 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1999/04/26 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104G 112**

NATIONAL MINERAL INVENTORY:

NAME(S): **YEHINIKO WEST**, YETI

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G11W
BC MAP:
LATITUDE: 57 33 36 N
LONGITUDE: 131 21 31 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Located near the upper reaches of Yehiniko Creek's west fork.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6382177
EASTING: 358895

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Unknown
COMMENTS: Unspecified copper mineralization.
COMMENTS: Unspecified type of alteration minerals.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Jurassic-Cretaceous			Unnamed/Unknown Informal

LITHOLOGY: Volcanic
Sediment/Sedimentary
Hornblende Diorite

HOSTROCK COMMENTS: Souther (GSC Map 11-1971) has mapped two Upper Triassic units in the occurrence area. One is a volcanic unit and the other a sedimen. unit.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Souther (GSC Paper 71-44, page 24) describes a large alteration zone containing copper mineralization on the upper parts of both forks of Yehiniko Creek. This is apparently related to a north-south trending fault zone.

The upper west fork of Yehiniko Creek is underlain mainly by Upper Triassic volcanics and sediments. These are intruded near the fault zone by Middle to Late Triassic hornblende diorite of the Nightout pluton.

Consolidated Gold Win Ventures Inc. explored the property in 1998.

BIBLIOGRAPHY

EMPR ASS RPT 21168, 21302, 24659, 24970
EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1
GSC MAP 9-1957; 11-1971; 1418A
GSC MEM 246
GSC P *71-44, p. 24
GCNL #25 (Feb.5), 1999

DATE CODED: 1988/02/11 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1990/01/01 REVISED BY: LLC FIELD CHECK: N

MINFILE NUMBER: **104G 113**

NATIONAL MINERAL INVENTORY: 104G10 Au1

NAME(S): **C 96**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G10W
BC MAP:
LATITUDE: 57 38 14 N
LONGITUDE: 130 58 06 W
ELEVATION: 790 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6390027
EASTING: 382489

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite
ASSOCIATED: Quartz Calcite Epidote
ALTERATION: Chlorite Epidote
ALTERATION TYPE: Chloritic Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Diorite
Andesite
Basaltic Augite Porphyry
Quartz Monzonite
Limestone
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This area of scattered mineralization is underlain by Upper Triassic basaltic augite porphyry and andesite that have been intruded by stocks of quartz monzonite of Tertiary-Cretaceous Age. The andesite is the dominant rock of the assemblage and may vary from tuffaceous to crystalline. It contains minor beds of chert and limestone and is frequently dioritized near the quartz monzonite contact.

At this occurrence mineralization is hosted by diorite. Quartz and quartz-calcite veins are associated with dominant north-east shears. These are found to contain traces of chalcopyrite, magnetite and pyrite. Chlorite and epidote are also associated with these shears.

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EMPR ASS RPT 3845, 3983, *3984, 4638
EMPR GEM 1971-58; 1972-534; 1973-507; 1974-339
GSC MEM 246
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1988/02/18 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/02/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 114**

NATIONAL MINERAL INVENTORY: 104G10 Cu1

NAME(S): **C 2**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G10W
BC MAP:
LATITUDE: 57 35 59 N
LONGITUDE: 130 57 47 W
ELEVATION: 1050 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6385845
EASTING: 382683

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite
ASSOCIATED: Quartz Calcite
ALTERATION: Chlorite Hematite
ALTERATION TYPE: Chloritic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Basaltic Augite Porphyry
Quartz Monzonite
Limestone
Chert
Diorite

HOSTROCK COMMENTS: Mineralization is hosted by the volcanics and the plutonics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This area of scattered mineralization is underlain by Upper Triassic basaltic augite porphyry and andesite that have been intruded by a stock of quartz monzonite of Tertiary-Cretaceous Age. The andesite is the dominant rock of the assemblage and may vary from tuffaceous to crystalline. It contains minor beds of chert and limestone and is frequently dioritized near the quartz monzonite contact.

At this occurrence mineralization is hosted by quartz and quartz-calcite veins which are associated with dominant north-east shears. These veins and shears are found in all the above main rock types and contain chalcopyrite, hematite, magnetite and pyrite. Chloritic alteration is commonly found with shearing.

BIBLIOGRAPHY

EMPR ASS RPT 3844, 3983, *3984, 4638
EMPR GEM 1971-58; 1972-534; 1973-507; 1974-339
GSC MEM 246
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1988/02/18 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/02/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 115**

NATIONAL MINERAL INVENTORY: 104G10 Cu1

NAME(S): **OUT 26**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G10W
BC MAP:
LATITUDE: 57 34 35 N
LONGITUDE: 130 55 12 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Scattered mineralization on and near Out 26 claim.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6383174
EASTING: 385182

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite
ASSOCIATED: Quartz Calcite
ALTERATION: Epidote Chlorite Calcite Hematite Malachite
ALTERATION TYPE: Propylitic Carbonate Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Andesite
Basaltic Augite Porphyry
Quartz Monzonite
Chert
Limestone
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This area of scattered mineralization is underlain by Upper Triassic basaltic augite porphyry and andesite that have been intruded by a stock of quartz monzonite of Tertiary-Cretaceous Age.

At this occurrence the assemblage consists almost entirely of andesite which varies from tuffaceous to crystalline in appearance. It contains minor beds of chert and limestone and is frequently dioritized. The andesite is strongly sheared, chloritic and somewhat calcareous.

Quartz and quartz-calcite veins are associated with dominant northeast shears in the andesite. These are found to contain traces of chalcopyrite, malachite, magnetite and hematite. The shears also contain epidote and chlorite.

BIBLIOGRAPHY

EMPR ASS RPT 3845, 3983, 3984, *4638
EMPR GEM 1971-58; 1972-534; 1973-507; 1974-339
GSC MEM 246
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1988/02/18 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/02/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 116**

NATIONAL MINERAL INVENTORY: 104G10 Cu1

NAME(S): **OUT 10**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G10W
BC MAP:
LATITUDE: 57 34 11 N
LONGITUDE: 130 56 50 W
ELEVATION: 940 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Scattered showings on and near the Out 10 claim.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6382478
EASTING: 383533

COMMODITIES: Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Chalcopyrite, Magnetite, Specularite, Galena, Sphalerite
ASSOCIATED: Pyrite, Quartz, Calcite
ALTERATION: Epidote, Chlorite, Calcite, Specularite
ALTERATION TYPE: Propylitic, Carbonate, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic, Hydrothermal, Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Basaltic Augite Porphyry
Quartz Monzonite
Limestone
Chert
Diorite

HOSTROCK COMMENTS: Mineralization is hosted by volcanics and plutonics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine, Plutonic Rocks
COMMENTS: Mineralization occurs in both Stikinia terrane rock and plutonic rock.

CAPSULE GEOLOGY

This area of scattered mineralization is underlain by Upper Triassic basaltic augite porphyry and andesite that have been intruded by a stock of quartz monzonite of Tertiary-Cretaceous Age. The andesite, varying from tuffaceous to crystalline, is the main rock type of this assemblage. It contains minor beds of chert and limestone and is frequently dioritized near the quartz monzonite. The andesite is strongly sheared, chloritic and somewhat calcareous. The shears also contain epidote and chlorite.

Quartz and quartz-calcite veining are associated with dominant northeast shears in all rock types. These are found to contain traces of chalcopyrite, magnetite, specularite and pyrite. Traces of galena and sphalerite are also found but appear to be associated only with the basaltic augite porphyry.

BIBLIOGRAPHY

EMPR ASS RPT 3845, 3983, 3984, *4638
EMPR GEM 1971-58; 1972-534; 1973-507; 1974-339
GSC MEM 246
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1988/02/18
DATE REVISED: 1988/02/18
CODED BY: GJP
REVISED BY: GJP
FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104G 117**

NATIONAL MINERAL INVENTORY: 104G10 Cu1

NAME(S): **IN 41**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G10W
BC MAP:
LATITUDE: 57 31 43 N
LONGITUDE: 130 56 12 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6377885
EASTING: 384034

COMMODITIES: Copper

MINERALS

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

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	
Cretaceous-Tertiary			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Basaltic Augite Porphyry
Quartz Monzonite
Limestone
Chert
Diorite

HOSTROCK COMMENTS: Mineralization is hosted by both volcanic and plutonic rock.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

This area of scattered mineralization is underlain by Upper Triassic basaltic augite porphyry and andesite that have been intruded by a stock of quartz monzonite of Tertiary-Cretaceous Age. The andesite is the dominant rock of the assemblage and may vary from tuffaceous to crystalline in composition and texture. It contains minor beds of chert and limestone and is frequently dioritized near the quartz monzonite.

Chalcopyrite, magnetite and pyrite occur in shears and shattered zones within andesite near a north trending fault. Some chloritic alteration is noted. Quartz monzonite also hosts some chalcopyrite and magnetite. Quartz veins carrying only pyrite are also present in the area of interest.

BIBLIOGRAPHY

EMPR ASS RPT *3845, 3983, 3984, 4638
EMPR GEM 1971-58; 1972-534; 1973-507; 1974-339
GSC MEM 246
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1988/02/18 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1988/02/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 118**

NATIONAL MINERAL INVENTORY:

NAME(S): **BB 57**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G07W
BC MAP:
LATITUDE: 57 29 10 N
LONGITUDE: 130 57 37 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located about 2 kilometres north of Skeeter Lake in the area of the BB 57 claim.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6373195
EASTING: 382484

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite Bornite Magnetite
ASSOCIATED: Quartz
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal Igneous-contact

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Cretaceous-Tertiary	Undefined Group	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Andesite
Basaltic Augite Porphyry
Quartz Monzonite
Diorite Dike

HOSTROCK COMMENTS: Mineralization occurs in quartz veins at contact of quartz monzonite and andesite.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The area of the occurrence is underlain by Upper Triassic tuffaceous to crystalline andesite and lesser basaltic augite porphyry. Pink quartz monzonite of Tertiary-Cretaceous Age form large stocks in the region and intrude these volcanics locally. Diorite dykes cut all other rock types. A major northeast trending fault zone and several younger east trending faults pass through the occurrence area.

Intensely sheared quartz monzonite is intermixed with altered andesite. Heavy quartz veining is associated with these strong shears and is indicative of strong faulting at the intrusive margin. Traces of hematite and chalcopyrite are found in the veins.

A drill hole in this area intersected basaltic augite porphyry with up to 2.5 per cent primary magnetite and a trace of pyrite. Trace amounts of bornite occur over a 6.1 metre interval.

BIBLIOGRAPHY

EMPR ASS RPT 2961, *3640, 4842, 9643, *10067
EMPR GEM 1970-49; 1971-49; 1972-527; 1973-39
EMPR EXPL 1975-80,194
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1988/02/24 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 119**

NATIONAL MINERAL INVENTORY:

NAME(S): **BB 38**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G07W
BC MAP:
LATITUDE: 57 27 00 N
LONGITUDE: 130 57 30 W
ELEVATION: 850 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located in BB 38 claim area near southern shore of Skeeter Lake.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6369173
EASTING: 382485

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Basaltic Augite Porphyry
Quartz Monzonite
Diorite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The area of the occurrence is underlain by Upper Triassic tuffaceous to crystalline andesite and lesser basaltic augite porphyry. Pink quartz monzonite of Tertiary-Cretaceous Age forms large stocks in the region and intrudes these volcanics locally. Diorite dykes cut all other rock types. A major northeast trending fault zone and several younger east trending faults pass near the area.

Shattered and sheared andesite host traces of magnetite, chalcopyrite and pyrite immediately south of Skeeter Lake and north of an east-west trending fault. An altered diorite dyke intrudes the sheared andesite and also contains magnetite and chalcopyrite. Diamond drilling in the area indicated little economic potential.

BIBLIOGRAPHY

EMPR ASS RPT 2961, *3640, 4842, 9643, *10067
EMPR GEM 1970-49; 1971-49; 1972-527; 1973-39
EMPR EXPL 1975-80,194
GSC P 71-44
GSC MEM 246
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1988/02/24 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 120**

NATIONAL MINERAL INVENTORY:

NAME(S): **DAGO**, SILVER RUN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G07E
BC MAP:
LATITUDE: 57 16 29 N
LONGITUDE: 130 43 12 W
ELEVATION: 1585 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6349277
EASTING: 396291

COMMODITIES: Copper, Silver, Lead, Zinc

MINERALS
SIGNIFICANT: Chalcopyrite, Galena, Sphalerite, Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Stockwork, Massive, Disseminated
CLASSIFICATION: Epigenetic, Hydrothermal, Porphyry, Igneous-contact

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Cretaceous-Tertiary	Undefined Group	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Syenite Porphyry
Siltstone
Greywacke
Calcareous Sediment/Sedimentary
Andesite
Felsite Dike

HOSTROCK COMMENTS: Mineralization occurs in plutonic, sedimentary and volcanic rock.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1980
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Silver	204.0000	Grams per tonne
Copper	7.6000	Per cent
Lead	1.0700	Per cent
Zinc	8.8000	Per cent

COMMENTS: This is a high grade sample.
REFERENCE: Assessment Report 8738.

CAPSULE GEOLOGY

The area of the occurrence is underlain primarily by siltstones, greywacke, minor calcareous rocks and some andesitic volcanics all of Upper Triassic Age. These are intruded by two sets of felsic dykes, one pyritized the other not. Small bodies of syenite porphyry are the latest intrusion cutting the felsite dykes as well as the Triassic rocks. The dykes and stocks are likely both of Tertiary-Cretaceous Age.

Sporadic sulphide mineralization is related to these syenite porphyry bodies. Pyrite and chalcopyrite, with some galena and minor sphalerite, occur in fractures and disseminations within the intrusive or in contact zones peripheral to it. Massive sulphides occur locally in the siltstones, volcanics, and the felsite dykes. The extent of the mineralization is controlled by widespread fracturing in the host rocks. Frequent wallrock alteration in these rocks suggest a hydrothermal origin.

One sample contained a high of 204.0 grams per tonne silver, 7.60 per cent copper, 8.80 per cent zinc and 1.07 per cent lead. Gold values were also anomalous.

BIBLIOGRAPHY

EMPR ASS RPT *8738
EMPR AR 1980-473
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1988/04/28 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 121**

NATIONAL MINERAL INVENTORY:

NAME(S): **TUFF**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G10W 104G13W
BC MAP:
LATITUDE: 57 45 05 N
LONGITUDE: 131 50 53 W
ELEVATION: 1220 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6404596
EASTING: 330519

COMMODITIES: Gold, Silver, Copper

MINERALS
SIGNIFICANT: Chalcopyrite, Pyrrhotite, Pyrite, Arsenopyrite
ASSOCIATED: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Podiform, Massive, Disseminated
CLASSIFICATION: Epigenetic, Igneous-contact

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Basalt
Andesite
Rhyolite
Chert
Limestone
Granodiorite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Taku Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1981

COMMODITY	GRADE	
Silver	25.0300	Grams per tonne
Gold	122.4000	Grams per tonne
Copper	0.4100	Per cent

REFERENCE: Assessment Report 10475.

CAPSULE GEOLOGY

This occurrence is underlain mainly by basalts and andesites of the Upper Triassic Stuhini Group. These are intercalated with black chert, grey ribbon chert and limestone. Immediately northeast of the area of interest is a large stock of granodiorite which has intruded the volcanics in Juro-Cretaceous time. Bedding exhibits an east trending strike with a variable but prominent steep (greater than 60 degrees) south dip. Several post mineralization diorite dykes occur with a general north-northwest strike. These are less than 20 metres in width.

The grey ribbon chert is well bedded with individual beds up to 15 centimetres wide. It contains minor pyrite and pyrrhotite as disseminations and fracture fillings. The grey limestone generally occurs as a less than 2 metre wide band within the basalt, but to the north of the occurrence it forms a bluff with a 40 metre thickness. It is barren of mineralization. The black chert may be as much as 90 metres wide but is commonly between 10 and 20 metres wide. One sample of it contained 2 per cent pyrrhotite and ran 3.6 grams per tonne gold, 3.8 grams per tonne silver and 0.40 per cent copper.

The predominant rocks are the volcanics which are mainly basalts and andesites with lesser rhyolite. The basalts are dark green, fine-grained and locally tuffaceous. Considerable carbonate occurs along fractures. These basalts grade to andesite which are of similar character. A gossanous zone containing up to 5 per cent

CAPSULE GEOLOGY

pyrite and pyrrhotite occurs in the area and exhibits a rhyolitic appearance.

Massive sulphide pods have been encountered in the volcanics over an area of about 1200 by 1200 metres. These pods average less than 10 centimetres in width and are from 1 to 20 metres long. They occur oblique to bedding and are associated with carbonate. They are composed of pyrite with lesser arsenopyrite, chalcopyrite, and pyrrhotite. One sulfide pod assayed 122.40 grams per tonne gold, 25.03 grams per tonne silver and 0.41 per cent copper. Fifteen rock samples contained values of greater than 3.43 grams per tonne gold, of which seven were greater than 27.43 grams per tonne gold. Copper averages 0.13 per cent within gold-bearing samples.

The operating company deemed this occurrence uneconomic due to size and distrubtion of these sulphide pods.

BIBLIOGRAPHY

EMPR ASS RPT 9200, *10475
GSC P 71-44
GSC MEM 246, p. 75
GSC MAP 9-1957; 11-1971; 309A; 1418A

DATE CODED: 1987/12/23 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 122**

NATIONAL MINERAL INVENTORY:

NAME(S): **GR**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G10E
BC MAP:
LATITUDE: 57 40 30 N
LONGITUDE: 130 32 25 W
ELEVATION: 1370 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6393571
EASTING: 408137

COMMODITIES: Gold, Silver, Lead, Zinc, Copper

MINERALS

SIGNIFICANT: Sphalerite, Galena, Chalcopyrite, Arsenopyrite, Pyrite
ASSOCIATED: Quartz
COMMENTS: Bleached zones are reported.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic, Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Basaltic Volcaniclastic
Andesitic Volcaniclastic
Diorite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Iskut Trench

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

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

COMMODITY	GRADE	
Silver	838.6400	Grams per tonne
Gold	5.1100	Grams per tonne
Lead	5.7200	Per cent
Zinc	12.6100	Per cent

COMMENTS: This sample was taken across 23.3 centimetres of quartz vein.
REFERENCE: Assessment Report 10117.

CAPSULE GEOLOGY

The region of the occurrence is largely underlain by late Tertiary and younger flows of the Mount Edziza eruptions. These rocks range from basalts to rhyolite in composition. A thick sequence of Upper Triassic sedimentary and volcanic rock underlie the Cenozoic volcanics. These sediments are up to 900 metres thick and consist of volcanic agglomerate, greywacke, grit and chert breccia interbedded with tuffaceous siltstones. The Triassic volcanics overlie the sediments and consist of about 1200 metres of green, purple and grey andesite and derived volcaniclastics. The volcanics are cut by diorite dykes and sills, and irregular subvolcanic intrusive bodies. Small diorite and granodiorite intrusive bodies of Juro-Cretaceous Age cut all of the Triassic rocks. The Upper Triassic rocks are warped into open folds with east-west axes. These are cut into blocks by north-south, east-west, northwest and northeast faults.

As described in Assessment Report 10117, this showing consists of two narrow quartz veins 10 metres apart occurrring in basaltic volcaniclastics of Upper Triassic Age. These veins strike from 10 to 20 degrees and dip 50 to 80 degrees west. The east vein is up to 35 centimetres wide and exposed along its length for 3 metres. The west vein is 20 to 30 centimetres wide and is exposed along a creek for some 40 metres. Both veins contain pyrite, sphalerite,

CAPSULE GEOLOGY

galena, arsenopyrite and a little chalcopyrite. The east vein assayed 4.05 grams per tonne gold, 33.26 grams per tonne silver and 4.78 per cent zinc across 35 centimetres. The west vein, sampled in three small trenches, had an average assay of 5.11 grams per tonne gold, 838.64 grams per tonne silver, 5.72 per cent lead and 12.61 per cent zinc over an average width of 23.3 centimetres.

Veinlets carrying pyrite and chalcopyrite occur in a bleached zone within andesitic volcaniclastics about 500 metres west-northwest of the above veins. Two showings, 25 metres apart, with a north trend were sampled. A sample with a combined width of 2 metres returned an assay of 6.21 grams per tonne gold, 54.17 grams per tonne silver, 2.12 per cent copper, 0.09 per cent lead and 0.17 per cent zinc.

BIBLIOGRAPHY

EMPR PF (Northcal Resources - Statement of Exploration)
EMPR ASS RPT *10117
EMPR EXPL 1981-208
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1988/03/24 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 123**

NATIONAL MINERAL INVENTORY:

NAME(S): **GLACIER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G03E
BC MAP:
LATITUDE: 57 14 49 N
LONGITUDE: 131 00 59 W
ELEVATION: 1680 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6346676
EASTING: 378332

COMMODITIES: Copper, Zinc, Silver

MINERALS

SIGNIFICANT: Chalcopyrite, Sphalerite, Arsenopyrite, Pyrite
ASSOCIATED: Quartz, Carbonate
ALTERATION: Carbonate, Mariposite
ALTERATION TYPE: Leaching, Quartz-Carb.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork
CLASSIFICATION: Hydrothermal
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION:
STRIKE/DIP: 090/75S
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Amygdaloidal Basalt
Andesite
Andesitic Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Zeolite

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	3.0000	Grams per tonne
Copper	0.0400	Per cent

COMMENTS: High grade sample; also assayed 2.6 per cent arsenic and 0.11 grams per tonne gold.
REFERENCE: Open File 1989-8.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Stuhini Group volcanic rocks. Mineralization is developed within a series of rusty weathering quartz-carbonate veins and veinlets cutting purple to grey andesites and amygdaloidal basalts. An east striking central vein with moderate to steep south dips (75 degrees) and average thickness of 30 centimetres, gives rise to numerous veinlets (1-5 centimetres wide) developed along fractures in the host rock. The veinlets extend, with decreasing abundance, up to 40 metres from the central vein. The veins also contain brecciated altered wallrock fragments commonly replaced by pyrite, arsenopyrite, chalcopyrite and mariposite. Sphalerite, arsenopyrite and chalcopyrite are found as streaks throughout the veins, commonly averaging 25 per cent of vein material. Alteration of the host rock occurs up to 4 metres from the main vein, coincident with disseminated pyrite (up to 10 per cent). Mariposite(?) is common within 1 metre of the main vein.

The quartz-carbonate veining extends at least 200 metres east until covered by permanent snow. Similar vein samples collected from talus 2 kilometres due north suggests such veining may also occur there. Non-mineralized quartz-carbonate veins have been found 5

CAPSULE GEOLOGY

kilometres to the west in andesites and may be related.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, p. 282
EMPR OF 1989-8
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1988/08/21 CODED BY: DR FIELD CHECK: Y
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 124**

NATIONAL MINERAL INVENTORY:

NAME(S): **RIDGE**, JW

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 08 49 N
LONGITUDE: 131 36 10 W
ELEVATION: 1300 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located near the top of a ridge that stretches from Saddle Mountain to Saddlehorn Mountain. Coordinates are for sample #245894 (Assessment Report 18114).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6336749
EASTING: 342533

COMMODITIES: Gold, Silver, Copper

MINERALS
SIGNIFICANT: Pyrite, Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Epigenetic

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Jurassic-Cretaceous	Stuhini	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Andesitic Flow
Andesitic Crystal Tuff
Syenite
Granodiorite

HOSTROCK COMMENTS: Syenite also hosts copper minerals and may be related to nearby granodiorite intrusions.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine, Plutonic Rocks
COMMENTS: Showings occur near boundary of Coast belt.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1988
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	100.9400	Grams per tonne
Gold	67.9000	Grams per tonne
Copper	6.7200	Per cent

REFERENCE: Assessment Report 18114.

CAPSULE GEOLOGY

The Ridge showings occur near the the boundary of the Intermontane and Coast tectonic belts. The area is underlain by rocks of the Upper Triassic Stuhini Group consisting of andesitic volcanics, microdiorite and sediments. Jurassic and/or Cretaceous granodiorite intrudes the country rock within 1 kilometre to the southwest.

A few hundred metres north of Saddlehorn Mountain ridge an outcropping of syenite hosts from 3 to 5 per cent pyrite-chalcopyrite. A 1 metre chip sample (#245894) of this material assayed greater than 1 per cent copper and 0.48 grams per tonne gold (Assessment Report 18114).

A quartz vein from 5 to 30 centimetres in width occurs about 500 metres southeast of this area at the 1150 metre elevation (sample #358182) and is underlain by andesitic crystal tuffs and andesitic flows. The vein is mineralized with pyrite and chalcopyrite and assayed 67.9 grams per tonne gold, 100.94 grams per tonne silver and 6.72 per cent copper (Assessment Report 18114).

BIBLIOGRAPHY

EMPR ASS RPT 501, 669, *18114
EMPR AR 1965-32,33
EMPR GEM 1976-E184
EMPR FIELDWORK 1975, p. 79
GSC P 71-44, p. 27
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1418A
V STOCKWATCH Jan.18, 1989

DATE CODED: 1989/02/05 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1989/09/15 REVISED BY: GO FIELD CHECK: N

MINFILE NUMBER: **104G 125**

NATIONAL MINERAL INVENTORY:

NAME(S): **SADDLE MTN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 08 37 N
LONGITUDE: 131 37 44 W
ELEVATION: 1280 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located 1 kilometre north of the summit of Saddle Mountain (Assessment Report 18114).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6336438
EASTING: 340939

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Jurassic-Cretaceous	Stuhini	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Andesitic Crystal Tuff
Agglomerate
Granodiorite
Andesitic Flow

HOSTROCK COMMENTS: Granodiorite outcrops within 200 metres of mineralized pyroclastic rocks.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1988

COMMODITY	GRADE	
Copper	1.0000	Per cent

COMMENTS: Sample contained greater than 1 per cent copper
REFERENCE: Assessment Report 18114.

CAPSULE GEOLOGY

The Saddle Mtn showing occurs near the boundary of the Intermontane and Coast tectonic belts. The area is underlain by rocks of the Upper Triassic Stuhini Group consisting of andesitic volcanics, microdiorite and sediments. Jurassic and/or Cretaceous granodiorite bodies are exposed within a few hundred metres of the occurrence.

Two samples were taken on and near old trench workings just over 1 kilometre north of the summit of Saddle Mountain. Grab sample #245568 taken from tuffaceous rock with chalcopyrite and hematite assayed 0.7 per cent copper and 0.035 grams per tonne gold. Grab sample #24973 taken from agglomeratic(?) rock contained greater than 1 per cent copper and 0.07 grams per tonne gold (Assessment Report 18114).

BIBLIOGRAPHY

EMPR ASS RPT 501, 669, *18114
EMPR AR 1965-32,33
EMPR GEM 1976-E184
EMPR FIELDWORK 1975, p. 79
GSC P 71-44, p. 27
GSC MEM 246

BIBLIOGRAPHY

GSC MAP 9-1957; 11-1971; 310A; 1418A
V STOCKWATCH Jan.18, 1989

DATE CODED: 1989/02/06 CODED BY: GJP FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 126**

NATIONAL MINERAL INVENTORY:

NAME(S): **JW 6**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 09 30 N
LONGITUDE: 131 36 33 W
ELEVATION: 550 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on a north flowing tributary of Jack Wilson Creek (Assessment Report 18114).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6338031
EASTING: 342195

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
ALTERATION: Chlorite
ALTERATION TYPE: Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Jurassic-Cretaceous	Stuhini	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Andesitic Flow
Andesitic Crystal Tuff
Granodiorite

HOSTROCK COMMENTS: Granodiorite underlies the area 500 metres west of the occurrence.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
COMMENTS: Near boundary of Coast belt

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1988

COMMODITY	GRADE	
Gold	3.7700	Grams per tonne

REFERENCE: Assessment Report 18114.

CAPSULE GEOLOGY

The JW showing occurs in an area underlain primarily by Upper Triassic Stuhini Group andesitic volcanics, microdiorite and sediments intruded by Jurassic and/or Cretaceous granodiorite. The occurrence is hosted by andesitic flows and/or crystal tuffs.

A grab sample (#245685) from a 20 centimetre quartz-chlorite-pyrite vein exposed in a north flowing tributary of Jack Wilson Creek assayed 3.77 grams per tonne gold (Assessment Report 18114).

BIBLIOGRAPHY

EMPR ASS RPT 501, 669, *18114
EMPR AR 1965-32,33
EMPR GEM 1976-E184
EMPR FIELDWORK 1975, p. 79
GSC P 71-44, p. 27
GSC MEM 246
GSC MAP 9-1957; 11-1971; 310A; 1418A
V STOCKWATCH Jan.18, 1989

DATE CODED: 1989/02/06
DATE REVISED: / /

CODED BY: GJP
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **104G 127**

NATIONAL MINERAL INVENTORY:

NAME(S): **BROWNIE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G06W
BC MAP:
LATITUDE: 57 29 58 N
LONGITUDE: 131 22 39 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located from field work (Open File 1989-7).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6375478
EASTING: 357530

COMMODITIES: Copper Lead Zinc Silver

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite
COMMENTS: Sulphide in quartz-iron carbonate vein.
ASSOCIATED: Quartz Pyrite
ALTERATION: Carbonate
COMMENTS: Distinctive orange iron carbonate alteration envelope around vein.
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
DIMENSION:
STRIKE/DIP: 020/65
TREND/PLUNGE:
COMMENTS: Vein is 6 centimetres wide.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Plagioclase Porphyritic Andesite
Volcanic Greywacke

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
COMMENTS: Near western margin of Stikinia.

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1989

COMMODITY	GRADE	
Silver	20.0000	Grams per tonne
Copper	0.0450	Per cent
Lead	0.5800	Per cent
Zinc	3.5000	Per cent

REFERENCE: Open File 1989-7.

CAPSULE GEOLOGY

The Brownie occurrence is located near the headwaters of a creek approximately 7 kilometres southwest of Yehiniko Lake and 23 kilometres east of the Stikine River.

The showing is hosted in dark green to grey, variably feldspar porphyritic andesitic flows which are overlain by green volcanic greywacke. Fossils identified as Upper Triassic were found just north of the showing (Geological Survey of Canada Paper 71-44) and provide a correlation of the volcano/stratigraphic sequence with the Upper Triassic Stuhini Group. Regional bedding strikes north to northwest and dips moderately west to southwest.

Mineralization consists of disseminated to blebs to semi-massive pyrite, sphalerite, galena and minor chalcopyrite hosted within a 15 centimetre wide quartz-iron carbonate vein. The vein strikes 020 degrees and dips 65 degrees to the southeast. A grab sample from the vein returned values of 0.45 grams per tonne gold, 20 grams per tonne silver, 0.045 per cent copper, 0.58 per cent lead, and 3.5 per cent per zinc (Open File 1989-7).

BIBLIOGRAPHY

EMPR OF 1989-7
GSC MEM 246
GSC P 71-44
EMPR FIELDWORK 1988, pp. 251-267
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1989/03/06 CODED BY: MHG FIELD CHECK: Y
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 128** NATIONAL MINERAL INVENTORY:

NAME(S): **FOSSIL VEIN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G11W
BC MAP:
LATITUDE: 57 35 01 N
LONGITUDE: 131 28 59 W
ELEVATION: 1580 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: At base of limestone lens (northwest side) near head of gully.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6385070
EASTING: 351548

COMMODITIES: Silver Copper

MINERALS
SIGNIFICANT: Chalcopyrite Malachite
COMMENTS: Chalcopyrite and malachite in quartz veinlet.
ASSOCIATED: Quartz
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
SHAPE: Tabular
DIMENSION: STRIKE/DIP: 049/90 TREND/PLUNGE:
COMMENTS: Discontinuous veinlet up to five centimetres thick.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite

HOSTROCK COMMENTS: Vein crosscuts chloritic metavolcanic rocks in an area in which sedimentary rocks predominate.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

A discontinuous veinlet up to 5 centimetres thick crosscuts chloritic metavolcanic rocks (andesite?) near the base of a large limestone lens within a predominantly sedimentary portion of the Upper Triassic Stuhini Group. The veinlet strikes to the north-east and dips steeply, and contains chlcopyrite and malachite in a gangue of quartz. A single grab sample yielded values of 58.0 parts per million silver (average) and 5.0 per cent copper (average).

BIBLIOGRAPHY

EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1 (Sample CGR89-166)

DATE CODED: 1990/02/26 CODED BY: CG FIELD CHECK: Y
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 129**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHUCKSTER**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G11W
BC MAP:
LATITUDE: 57 30 59 N
LONGITUDE: 131 26 42 W
ELEVATION: 1130 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Northwest of toe of Strata glacier.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6377507
EASTING: 353554

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Galena Pyrite Sphalerite
COMMENTS: Blebls of mineralization in quartz and carbonate gangue.
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
SHAPE: Tabular
DIMENSION:
STRIKE/DIP: 020/90
TREND/PLUNGE:
COMMENTS: Veinlets strike north-northeast and dip steeply.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Sandstone
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine

CAPSULE GEOLOGY

Veinlets crosscut green sandstone and lesser dark grey siltstone of the Upper Triassic Stuhini Group, northwest of the toe of the glacier at the head of Strata Creek. Approximately twenty discontinuous north-northeast striking, steeply-dipping veinlets from one to four centimetres in width occur across about five metres in outcrop. Veinlets contain blebby chalcopyrite, pyrite, galena, and sphalerite(?) in a gangue of quartz and/or carbonate. Centimetre-scale rusty alteration selvages are present but alteration mineralogy was not noted. Two grab samples were taken from the veinlets, the bets assay being 136,390 parts per billion gold, 19.0 parts per million silver, and 0.29 per cent copper.

BIBLIOGRAPHY

EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1 (Sample CGR89-307)

DATE CODED: 1990/02/26
CODED BY: CG
FIELD CHECK: Y
DATE REVISED: / /
REVISED BY:
FIELD CHECK:

MINFILE NUMBER: **104G 130** NATIONAL MINERAL INVENTORY:

NAME(S): **STEEP CREEK**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 37 23 N
LONGITUDE: 131 33 51 W
ELEVATION: 900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: In small creek flowing northwest form Mt. Kirk toward Stikine River valley.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6389640
EASTING: 346867

COMMODITIES: Gold Silver Copper

MINERALS
SIGNIFICANT: Pyrite Chalcopyrite
COMMENTS: Pyrite.
ASSOCIATED: Quartz Hematite
COMMENTS: Veinlet may contain hematite(?).
ALTERATION: Chlorite K-Feldspar
COMMENTS: Possibly potassium feldspar.
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
SHAPE: Tabular
DIMENSION: STRIKE/DIP: 044/80W TREND/PLUNGE:

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Volcanic Breccia

HOSTROCK COMMENTS: Poor exposure in creek-bed. Veinlet cross-cutting massive volcanic breccia.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Poorly exposed, centimetre-scale veinlet cross-cutting massive, dark grey or green volcanic breccia of the Upper Triassic Stuhini Group. The occurrence is actually in the creek, so outcrop of the sample locality is poor. A grab sample of the veinlet (maximum width less then 0.5 centimetres) and surrounding altered wallrock yielded 312 parts per billion gold, 12.0 parts per million silver, and 0.50 per cent copper. Veinlet mineralogy includes quartz, pyrite, chalcopyrite, and possibly hematitic staining. The immediate wallrock is chloritic and in part stained pink (potassic alteration?).

BIBLIOGRAPHY

EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1 (Sample CGR89-460)

DATE CODED: 1990/02/26 CODED BY: CG FIELD CHECK: Y
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 131**

NATIONAL MINERAL INVENTORY:

NAME(S): **DIKES**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 35 43 N
LONGITUDE: 131 30 24 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: On northwest side of northeast-trending ridge.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6386420
EASTING: 350185

COMMODITIES: Lead Zinc Copper Gold Silver

MINERALS

SIGNIFICANT: Galena Sphalerite
COMMENTS: These minerals were not noted in the field but were detected by assay.
ASSOCIATED: Carbonate
COMMENTS: Iron(?) carbonate.
MINERALIZATION AGE: Jurassic-Cretaceous

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Epigenetic Hydrothermal
SHAPE: Tabular
DIMENSION:
STRIKE/DIP: 007/90
TREND/PLUNGE:
COMMENTS: Five to 15 centimetre thick limonitic (iron) carbonate vein-breccia.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic	Hazelton	Undefined Formation	

LITHOLOGY: Hornfels Siltstone

HOSTROCK COMMENTS: Hornfelsed (possibly siliceous?) dark grey to black siltstone cut by abundant intermediate to mafic dykes.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Limonitic (iron-carbonate?) carbonate vein-breccia, 5 to 15 centimetres thick, cross-cutting hornfelsed(?) (possibly siliceous?) siltstone of the Lower to Middle Jurassic Hazelton Group. The vein-breccia appears to fill a vertical brittle shear-fracture which trends north-northeast. No sulphides were noted in the field, but an assayed grab sample yielded 0.58 per cent lead, 0.37 per cent zinc, and 210 parts per million copper, as well as 22 parts per billion gold, and 3.0 parts per million silver.

BIBLIOGRAPHY

EMPR FIELDWORK 1990, p. 141
EMPF OF 1990-1 (Sample CGR89-247)

DATE CODED: 1990/02/26
DATE REVISED: / /
CODED BY: CG
REVISED BY:
FIELD CHECK: Y
FIELD CHECK:

MINFILE NUMBER: **104G 132**

NATIONAL MINERAL INVENTORY:

NAME(S): **FORGOTTEN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 34 14 N
LONGITUDE: 131 31 15 W
ELEVATION: 1770 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Eight-hundred metres at 256 degrees from Strata Mountain in a cirque at the toe of an unnamed glacier.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6383700
EASTING: 349237

COMMODITIES: Silver Lead Zinc Gold

MINERALS
SIGNIFICANT: Pyrite Galena
ALTERATION: Carbonate Quartz
COMMENTS: Iron carbonate.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
SHAPE: Irregular
COMMENTS: Variable strike/dip.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Insular
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Zeolite Greenschist

CAPSULE GEOLOGY

Discontinuous pyrite-galena-carbonate-quartz veins, up to four centimetres thick, are hosted in Upper Triassic Stuhini Group volcanic breccia. Also irregular iron-carbonate-pyrite-quartz veins, up to five centimetres wide, occur in augite-bearing volcanic breccia. Narrow zones (less than 15 centimetres wide) of buff weathering, clay-altered wallrock extend beyond the veins.

The "Strata Mountain Pluton", a hornblende quartz monzodiorite body, believed to be Middle Jurassic age, intrudes the Stuhini Group immediately west of the veins.

BIBLIOGRAPHY

EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1 (Samples DBR89-382,384)

DATE CODED: 1990/10/05 CODED BY: DB FIELD CHECK: Y
DATE REVISED: / / REVISED BY: FIELD CHECK:

MINFILE NUMBER: **104G 133**

NATIONAL MINERAL INVENTORY:

NAME(S): **CAPTAIN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G12E
BC MAP:
LATITUDE: 57 35 29 N
LONGITUDE: 131 33 17 W
ELEVATION: 1800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: 8.60 kilometres at 112 degrees from the Stikine River-Dokdaon Creek confluence; 3.5 kilometres at 340 degrees from Strata Mtn.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6386095
EASTING: 347298

COMMODITIES: Copper Silver

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite Malachite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
SHAPE: Tabular
COMMENTS: Irregular.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	

LITHOLOGY: Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Zeolite Greenschist

CAPSULE GEOLOGY

Lower Jurassic(?) Hazelton Group andesite volcanic flows and tuff host narrow (less than one centimetre), discontinuous, malachite stained quartz veins with disseminated pyrite plus or minus chalcopyrite. The volcanic rocks are moderately east-dipping and unconformably overlain by flat-lying Upper Cretaceous-Paleocene(?) Sustut Group polymictic conglomerate. Host rocks display weak propylitic alteration with patches of epidote in a dark green chlorite-altered groundmass. A rusty weathering zone (over 50 metres by 50 metres) of highly fractured andesite with 1-290 disseminated pyrite contains rare, two to three centimetre wide quartz veins with lenses of coarse pyrite and patches of finer, dark grey pyrite.

BIBLIOGRAPHY

EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1 (Samples DBR89-273, 277-1, 277-2)

DATE CODED: 1990/10/30
DATE REVISED: / /
CODED BY: DB
REVISED BY:
FIELD CHECK: Y
FIELD CHECK:

MINFILE NUMBER: **104G 134** NATIONAL MINERAL INVENTORY:

NAME(S): **PLUM**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G11W
BC MAP:
LATITUDE: 57 32 00 N
LONGITUDE: 131 25 52 W
ELEVATION: 1740 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: 7.30 kilometres at 254 degrees from the south end of Yehiniko Lake.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6379362
EASTING: 354453

COMMODITIES: Copper Silver Lead Gold

MINERALS

SIGNIFICANT: Chalcopyrite Galena Pyrite
ASSOCIATED: Calcite
ALTERATION: Pyrophyllite
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: DATING METHOD: Lead/Lead MATERIAL DATED: Galena

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
SHAPE: Tabular
DIMENSION: STRIKE/DIP: 042/78S TREND/PLUNGE:
COMMENTS: Vein up to 25 centimetres wide, pinches and thickens.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite
Lapilli Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Zeolite
Greenschist

CAPSULE GEOLOGY

Isolated quartz-carbonate vein, less than 25 centimetres wide, hosted in green andesite of the Upper Triassic Stuhini Group. Malachite-stained vein contains chalcopyrite-galena and pyrite. Irregular, discontinuous vein that discordant to local bedding. Sample submitted for lead-isotopic analysis.

BIBLIOGRAPHY

EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1 (Sample DBR89-298)

DATE CODED: 1990/10/29 CODED BY: DB FIELD CHECK: Y
DATE REVISED: 1990/10/30 REVISED BY: DB FIELD CHECK: N

MINFILE NUMBER: **104G 135**

NATIONAL MINERAL INVENTORY:

NAME(S): **MUFFLE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G11W
BC MAP:
LATITUDE: 57 32 08 N
LONGITUDE: 131 27 06 W
ELEVATION: 1075 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Eight and one-half kilometres at 261 degrees from the southwest end of Yehiniko Lake.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6379654
EASTING: 353231

COMMODITIES: Copper, Silver, Gold

MINERALS
SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz, Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic, Hydrothermal
SHAPE: Tabular
DIMENSION:
STRIKE/DIP: 111/87S
TREND/PLUNGE:
COMMENTS: Discontinuous, zero to twenty centimetres thick.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Pennsylvanian	Stuhini	Undefined Formation	

LITHOLOGY: Andesite
Tuff
Volcaniclastic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Zeolite
Greenschist

CAPSULE GEOLOGY

Vein hosted in Upper Triassic Stuhini Group mauve, plagioclase-rich volcanic wacke. Subrounded volcanic and rare limestone fragments supported in a volcanic matrix. The discontinuous quartz-carbonate vein is zero to twenty centimetres thick and contains chalcopyrite, galena, pyrite, and malachite.

BIBLIOGRAPHY

EMPR FIELDWORK 1990, p. 141
EMPR OF 1990-1 (Sample DBR89-266)

DATE CODED: 1990/10/05
DATE REVISED: 1990/10/05
CODED BY: DB
REVISED BY: DB
FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **104G 136**

NATIONAL MINERAL INVENTORY:

NAME(S): **PLAYER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G11W
BC MAP:
LATITUDE: 57 32 18 N
LONGITUDE: 131 25 54 W
ELEVATION: 1705 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: 7.25 kilometres at 261 degrees from southwest end of Yehiniko Lake.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6379920
EASTING: 354439

COMMODITIES: Copper Silver Gold

MINERALS
SIGNIFICANT: Malachite Chalcocite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
SHAPE: Tabular
DIMENSION:
STRIKE/DIP: 077/84S
TREND/PLUNGE:
COMMENTS: Discontinuous, less than seven centimetres wide.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Zeolite Greenschist

CAPSULE GEOLOGY

A discontinuous, less than seven centimetre wide, malachite stained, sulphide-rich quartz vein is hosted in maroon crystal-lithic lapilli tuff of the Upper Triassic Stuhini Group. Buff aphanitic rhyolite unconformable overlies the maroon tuff, the rhyolite is believed to be Lower Jurassic.

The vein has no alteration envelop and only one vein has been located.

The vein is a fine-grained mixture of chalcocite, hematite, and malachite. The silver-bearing mineral constitute producing the geochemical high value is unknown.

BIBLIOGRAPHY

EMPR FELDWORK 1990, p. 141
EMPR OF 1990-1 (Sample DBR89-302)

DATE CODED: 1990/10/30
DATE REVISED: / /
CODED BY: DB
REVISED BY:
FIELD CHECK: Y
FIELD CHECK:

MINFILE NUMBER: **104G 137**

NATIONAL MINERAL INVENTORY:

NAME(S): **DUNDEE**, GLA

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G02W
BC MAP:
LATITUDE: 57 00 05 N
LONGITUDE: 130 51 56 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Area of best sulphide exposure there are at least 3 areas of mineralization on this ground, all quite different.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6319088
EASTING: 386684

COMMODITIES: Iron, Copper, Zinc, Gold

MINERALS
SIGNIFICANT: Magnetite, Pyrrhotite
ASSOCIATED: Pyrrhotite, Chalcopyrite, Sphalerite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Devonian

DEPOSIT
CHARACTER: Massive, Disseminated
CLASSIFICATION: Skarn
SHAPE: Irregular

HOST ROCK
DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian			Stikine Assemblage

LITHOLOGY: Feldspar Porphyritic Andesitic Dike
Granite
Carbonate

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Endoskarn.

BIBLIOGRAPHY

EMPR Paper 1991-1, Fieldwork 1990, pp. 246-253.

DATE CODED: 1991/02/07
CODED BY: IW
FIELD CHECK: Y
DATE REVISED: 1993/03/13
REVISED BY: JD
FIELD CHECK: Y

MINFILE NUMBER: **104G 138**

NATIONAL MINERAL INVENTORY:

NAME(S): **JAMESON**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G05E
BC MAP:
LATITUDE: 57 18 12 N
LONGITUDE: 131 36 58 W
ELEVATION: 150 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Located near the Scud River (Assessment Report 19791).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6354181
EASTING: 342395

COMMODITIES: Zinc Copper

MINERALS
SIGNIFICANT: Pyrrhotite Pyrite Sphalerite Chalcopyrite
ASSOCIATED: Quartz Calcite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic			Stikine Assemblage

LITHOLOGY: Sediment/Sedimentary
Volcanic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The area of the Jameson occurrence is underlain by sediments (argillites) and volcanics of the Devonian to Permian Stikine Assemblage. Quartz and/or calcite vein material contains pyrrhotite, pyrite, chalcopyrite and sphalerite. Grab samples of float assayed 0.05 grams per tonne gold, 1.4 grams per tonne silver, 0.0691 per cent copper, and 0.6830 per cent zinc (Assessment Report 19791).

BIBLIOGRAPHY

EMPR ASS RPT 19791

DATE CODED: 1991/04/29 CODED BY: VMK FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK: N

MINFILE NUMBER: **104G 139**

NATIONAL MINERAL INVENTORY:

NAME(S): **SNOW**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G05E
BC MAP:
LATITUDE: 57 20 32 N
LONGITUDE: 131 41 38 W
ELEVATION: 760 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Located 2.5 kilometres north of Scud River, and about 4 kilometres east of Stikine River (Assessment Report 20002).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6358691
EASTING: 337882

COMMODITIES: Copper Zinc Silver

MINERALS
SIGNIFICANT: Pyrite Pyrrhotite Sphalerite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic			Stikine Assemblage

LITHOLOGY: Limestone
Argillite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

Devonian to Permian Stikine Assemblage limestones host thin quartz veins containing pyrite, pyrrhotite and minor sphalerite. A sample of the vein material graded 0.32 per cent copper, 14.3 per cent zinc, 6.3 grams per tonne silver, 0.12 per cent cadmium, and 0.053 grams per tonne gold (Assessment Report 20002). Argillites contain disseminated pyrite veinlets but no assay results have been reported.

BIBLIOGRAPHY

EMPR ASS RPT 20002

DATE CODED: 1991/04/29 CODED BY: VMK FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK: N

MINFILE NUMBER: **104G 140**

NATIONAL MINERAL INVENTORY:

NAME(S): **OKSA GOLD 3**, VEIN ZONE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G05E
BC MAP:
LATITUDE: 57 23 45 N
LONGITUDE: 131 42 22 W
ELEVATION: 300 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Near the south bank of Oksa Creek, about 5 kilometres from its confluence with the Stikine River (Assessment Report 19576).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6364686
EASTING: 337384

COMMODITIES: Gold Silver Copper Zinc Lead

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

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
DIMENSION:
STRIKE/DIP: 015/60E
TREND/PLUNGE:

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Stikine Assemblage

LITHOLOGY: Volcanic Granite
Hornblende Porphyry

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

A mineralized quartz vein has a true width of 1.5 metres and is hosted within a dark green hornblende porphyry. Mineralization includes pyrite, chalcopyrite, sphalerite, galena and pyrrhotite concentrated within a massive sulphide core, 0.5 metres wide, as well as disseminated throughout the vein zone. Veining can be traced in float occurrences for 20 metres upslope at which point glacial debris covers the projected strike length. One sample assayed 21.91 grams per tonne gold (Assessment Report 19576).

BIBLIOGRAPHY

EMPR ASS PRT 19576
WWW http://www.infomine.com/

DATE CODED: 1991/04/29
DATE REVISED: / /
CODED BY: VMK
REVISED BY:
FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104G 141**

NATIONAL MINERAL INVENTORY:

NAME(S): **JD-1**, SCUD RIVER, CB1, CB2

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G05E
BC MAP:
LATITUDE: 57 16 57 N
LONGITUDE: 131 31 54 W
ELEVATION: 920 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: East of Scud River (Assessment Report 19516).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6351671
EASTING: 347394

COMMODITIES: Copper, Gold, Lead

MINERALS
SIGNIFICANT: Chalcopyrite, Pyrite, Pyrrhotite, Galena
ASSOCIATED: Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Massive
CLASSIFICATION: Hydrothermal, Epigenetic, Skarn

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic			Stikine Assemblage

LITHOLOGY: Greywacke
Argillite
Limestone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

CAPSULE GEOLOGY

The area is underlain by the Devonian to Permian Stikine Assemblage. A one-metre wide shear zone, 30-metres long, lies along the contact between greywacke and argillite. Mineralization occurs as blebby chalcopyrite and pyrite with minor galena in a 4-centimetre wide quartz vein in the centre of the shear. A sample assayed 8.16 grams per tonne gold (Assessment Report 19516).

Skarn float boulders, found at the toe of Rugose Glacier, assayed 14 grams per tonne gold (Assessment Report 19516). These boulders contain up to 80 per cent sulphides in a garnet-actinolite gangue. The source of the boulders was traced to a gossanous limestone cliff; the CB-1 and CB-2 claims were staked to cover the source area.

BIBLIOGRAPHY

EMPR ASS RPT 19516

DATE CODED: 1991/04/02
DATE REVISED: / /

CODED BY: VMK
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104G 142**

NATIONAL MINERAL INVENTORY:

NAME(S): **PL-1**, SCUD RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 13 03 N
LONGITUDE: 131 38 36 W
ELEVATION: 1370 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located north of the headwaters of Contact Creek (Assessment Report 19516).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6344694
EASTING: 340384

COMMODITIES: Copper Zinc Gold

MINERALS
SIGNIFICANT: Pyrite
COMMENTS: Mineralized quartz vein.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
DIMENSION: STRIKE/DIP: 020/30W TREND/PLUNGE:

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	2.8800	Grams per tonne

COMMENTS: Sample 447249.
REFERENCE: Assessment Report 19516.

CAPSULE GEOLOGY

A 12-centimetre wide quartz-sulphide vein, exposed for 20 metres, is hosted by Cretaceous to Tertiary Coast Plutonic Complex granodiorite. It contains up to 70 per cent blebby pyrite. A sample assayed 2.88 grams per tonne gold (Assessment Report 19516).

BIBLIOGRAPHY

EMPR ASS RPT 19516

DATE CODED: 1991/04/26 CODED BY: VMK FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK: N

MINFILE NUMBER: **104G 143**

NATIONAL MINERAL INVENTORY:

NAME(S): **SNOBALL**, SNO 1-3

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G01W 104G02E
BC MAP:
LATITUDE: 57 09 39 N
LONGITUDE: 130 29 27 W
ELEVATION: 1650 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Approximate centre of property (Personal Communication - D. Jakobsen).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6336275
EASTING: 409830

COMMODITIES: Gold, Silver, Copper, Lead, Zinc, Arsenic

MINERALS

SIGNIFICANT: Arsenopyrite, Pyrite, Sphalerite, Galena, Pyrrhotite, Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Podiform, Disseminated, Massive
CLASSIFICATION: Hydrothermal, Replacement
COMMENTS: Mineral occurrences are spread throughout a 0.8 by 1.5 kilometre area.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Middle Triassic			Unnamed/Unknown Informal

LITHOLOGY: Siltstone
Siliceous Hornfels
Argillite
Diorite
Hornblende Phyric Dike
Feldspar Phyric Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1991

COMMODITY	GRADE	
Gold	60.1000	Grams per tonne
Silver	214.5000	Grams per tonne
Arsenic	7.2000	Per cent
Copper	0.1200	Per cent
Lead	1.7000	Per cent
Zinc	1.5000	Per cent

COMMENTS: Average of the highest grade chip samples.
REFERENCE: Property File - Press Release, Gold Giant Minerals Inc., c. 1992.

CAPSULE GEOLOGY

The Snoball property is located 25 kilometres west of the Bob Quinn Lake camp on the Stewart-Cassiar highway. Mineralization was discovered in 1990 as a result of a follow-up program on the Regional Geochemical Survey results published by the B.C. Geological Survey Branch. Anomalous values in gold, antimony, mercury, silver and lead occur in the area.

The property is underlain by Upper Triassic Stuhini Formation tuffaceous to calcareous, thin-bedded siltstone (Logan et al, Geological Suvery Branch Open File 1992-5). These are underlain by Middle Triassic limy black fetid argillite, to the west. The area of interest is bounded by a northwest fault which sets Stuhini andesite against the sedimentary rocks. The siltstone sequence is intruded by a diorite stock immediately north of the mineralized area. Abundant

CAPSULE GEOLOGY

hornblende phyric dykes and less common feldspar phyric dykes are derived from the stock.

Mineral occurrences are spread throughout a 0.8 by 1.5 kilometre area and comprise two contrasting styles of gold mineralization. An inferred structure bisects the area of interest into northeast and southwest domains.

In the northeast domain, the siltstones are converted to a siliceous hornfels that contains disseminated pyrite and pyrrhotite. Replacement pods of massive pyrrhotite with minor chalcopyrite (up to 0.5 per cent copper) contain from 0.5 to 5 grams per tonne gold. In the southwest domain, quartz-sulphide veins, generally less than 1.5 metres wide, crosscut bedding at various angles in the host siltstone. Hornfels in the southwest domain is notably absent. Sulphide vein minerals include arsenopyrite, pyrite, sphalerite and galena. The widest vein assayed 13.7 grams per tonne gold, 70.1 grams per tonne silver, 4.9 percent arsenic, 1.14 percent lead, and 0.6599 percent zinc over 3 metres where it is exposed in a trench. Brecciation textures are prominent in the vein. The average of the fifteen highest grade grab samples of all veins is 60.1 grams per tonne gold, 214.5 grams per tonne silver, 7.2 per cent arsenic, 0.12 per cent copper, 1.7 per cent lead, and 1.5 per cent zinc. (Property File - Gold Giant Minerals C. 1992.)

BIBLIOGRAPHY

EMPR PF (Press Release, Gold Giant Minerals Inc., c. 1992)
EMPR ASS PRT 21019
EMPR OF 1992-5
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1992/09/08 CODED BY: DEJ FIELD CHECK: Y
DATE REVISED: 1992/09/10 REVISED BY: DEJ FIELD CHECK: Y

MINFILE NUMBER: **104G 144**

NATIONAL MINERAL INVENTORY:

NAME(S): **RDN**, GOZ, GOZ-RDN,
WEDGE, SOUTH BOUNDARY, MAIN GOSSAN,
JUNGLE, MARCASITE GOSSAN, SOUTH DOWNPOUR,
BOUNDARY, WATERFALL, BASELINE,
CLUB

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G02E 104G02W 104B15E
BC MAP:
LATITUDE: 57 00 14 N
LONGITUDE: 130 38 48 W
ELEVATION: 1700 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Several occurrences and anomalies occur on the property over a 13 kilometre strike length.

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6319024
EASTING: 399985

COMMODITIES: Gold Silver Zinc Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Galena
ASSOCIATED: Pyrite Arsenopyrite
ALTERATION: Quartz Malachite Azurite
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Lower Jurassic

DEPOSIT

CHARACTER: Vein Stockwork Stratabound
CLASSIFICATION: Replacement Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Felsic Tuff
Rhyolitic Flow
Rhyolite
Breccia
Argillite
Basalt

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP:
GRADE: Zeolite

INVENTORY

ORE ZONE: WEDGE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 2001
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	101.0000	Grams per tonne

REFERENCE: EM Exploration 2001, pages 65-71.

CAPSULE GEOLOGY

Gold enriched chalcopyrite, sphalerite, galena, pyrite, and arsenopyrite-bearing veins are hosted by maroon intermediate volcanic rocks comprising felsic tuffs and rhyolite flows, which are Mt. Dilworth and Eskay Creek facies equivalent, belonging to the Hazelton Group. These rocks are overlain by thinly bedded siltstone of Lower to Jurassic age. Mineralization consists of gold-enriched polymetallic quartz veins in silicified and pyritized rhyolite and felsic tuffs and subvolcanic porphyritic monzonite intrusions. The exploration target is precious metal enriched polymetallic massive sulphide deposit, similar to Eskay Creek.

The prospect is adjacent to the Forrest Kerr fault and is faulted against Paleozoic rocks of the Stikine assemblage.

The Au rich quartz sulphide veining and alteration are thought to be integral parts of a VMS hydrothermal system such as at Eskay Creek. The model is that at RDN the submarine hydrothermal system produced base and precious metal rich fluids which altered the

CAPSULE GEOLOGY

footwall felsics and deposited the veins, stockworks and silicified zones in structural traps. Where the fluids vented onto the sea floor they were precipitated as stratiform layers (EMPR Exploration 2001, pages 65-71).

Wedge zone is 11.6 grams per tonne gold over 4.4 metres. South Boundary zone is 23.9 grams per tonne gold over 11.6 metres. Main Gossan zone is 18.6 grams per tonne over 0.4 metres.

Pathfinder Resources Ltd. surveyed the area in 1996. A quartz-sulphide vein breccia in a northeast fault is traced for 130 metres, with grades of 3.1 grams per tonne gold, 0.49 per cent lead and 1.13 per cent zinc across a true width of 8.3 metres (Exploration in BC 1996, page 10).

Rimfire Minerals Corporation is earning interest in the property and drilled 9 holes, totalling 574 metres in 1999. Newmont Exploration of Canada Limited optioned the property in 2000 and conducted a program consisting of prospecting, mapping, soil sampling and geophysical surveys.

BIBLIOGRAPHY

EM EXPL 1996-B11; 1999-1-11; 2000-1-8; 2001-1-9,65-71
EM INF CIRC 2000-1, p. 14; 2001-1, p.10
EMPR ASS RPT *20769, 21366, 22003, 23734, 24057, 24719, 25336, 25813
EMPR FIELDWORK *1991, pp. 161-178
EMPR OF 1999-2; 1999-14
EMPR PF (Rimfire Minerals Corporation Website (Dec. 1999; Feb.2000): RDN Property; Awmack, H.J. (1999): The RDN 1-18 claims: An Eskay Creek Analogue)
N MINER Sept. 16, 1991, July 17, 2000; Aug.12, Dec.2, Dec.30, 2002
PR REL Rimfire Minerals Corporation, July 13, Aug.23, Oct.1, 1999; Aug.2, 2002
WWW http://www.rimfire.bc.ca; http://www.infomine.com/
Vancouver Stockwatch Aug.23, Sept.7,11,18, 1990

DATE CODED: 1992/02/21 CODED BY: JD FIELD CHECK: Y
DATE REVISED: 1998/09/14 REVISED BY: LDJ FIELD CHECK: N

MINFILE NUMBER: **104G 145**

NATIONAL MINERAL INVENTORY:

NAME(S): **LUCIFER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G02E
BC MAP:
LATITUDE: 57 05 55 N
LONGITUDE: 130 31 08 W
ELEVATION: 2000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6329387
EASTING: 407979

COMMODITIES: Copper, Gold

MINERALS
SIGNIFICANT: Chalcopyrite, Galena
ALTERATION TYPE: Quartz-Carb., Propylitic
MINERALIZATION AGE: Upper Triassic

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Porphyry, Epithermal
SHAPE: Irregular

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	

LITHOLOGY: Unknown

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Boundary Ranges
RELATIONSHIP: Syn-mineralization
GRADE: Zeolite, Greenschist

CAPSULE GEOLOGY

The property is underlain by sedimentary and volcanic rocks of the Upper Triassic Stuhini Group, which are intruded by K-feldspar porphyry dykes.

A large carbonate-pyrite-sericite-silica alteration zone contains anomalous gold, arsenic, barite, cadmium, copper, iron, manganese, molybdenum, lead and zinc. Alteration zones appear to be controlled by northeast trending, steeply dipping faults.

BIBLIOGRAPHY

EMPR ASS RPT *21091

DATE CODED: 1992/02/21
DATE REVISED: 1993/03/12
CODED BY: JD
REVISED BY: LD
FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104G 146**

NATIONAL MINERAL INVENTORY:

NAME(S): **BISKUT**, BIS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G02E
BC MAP:
LATITUDE: 57 06 59 N
LONGITUDE: 130 35 44 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6331472
EASTING: 403381

COMMODITIES: Gold, Silver, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Galena, Arsenopyrite
ALTERATION: Quartz, Sericite, Pyrite, Clay
ALTERATION TYPE: Silicific'n, Sericitic, Argillic
MINERALIZATION AGE: Upper Triassic

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Epithermal

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	

LITHOLOGY: Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

Upper Triassic volcanic and sedimentary rocks of the Stuhini Group host a quartz-sericite-pyrite-clay alteration zone, 300 metres by 50-100 metres wide. All original textures are obliterated by supergene leaching. Contains up to five per cent pyrite, minor galena and arsenopyrite.

BIBLIOGRAPHY

EMPR ASS RPT 19605
WWW http://www.infomine.com/

DATE CODED: 1992/02/21
CODED BY: JD
FIELD CHECK: Y
DATE REVISED: 1993/03/12
REVISED BY: LD
FIELD CHECK: N

MINFILE NUMBER: **104G 147**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAL**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G02E
BC MAP:
LATITUDE: 57 11 41 N
LONGITUDE: 130 35 56 W
ELEVATION: 1900 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6340195
EASTING: 403384

COMMODITIES: Copper, Zinc, Gold, Silver

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite, Sphalerite
ASSOCIATED: Pyrite
ALTERATION: Jarosite
ALTERATION TYPE: Silicific'n, Pyrite, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Epithermal
SHAPE: Irregular
MODIFIER: Fractured

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	

LITHOLOGY: Andesite
Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

Gold and silver mineralization occurs as silicified and pyritized shears in andesitic volcanics and thin-bedded sedimentary rocks of the Upper Triassic Stuhini Group. Gold and silver anomalies define a 200-metre zone below a sediment-hosted jarosite gossan. Known mineralization comprises discontinuous, disseminated pyrite, chalcopyrite and sphalerite, and is concentrated at the junction of fracture and shear sets.

BIBLIOGRAPHY

EM BULL 104
EMPR ASS RPT 18722, 20412

DATE CODED: 1992/02/21
CODED BY: JD
FIELD CHECK: N
DATE REVISED: 1994/01/11
REVISED BY: JD
FIELD CHECK: N

MINFILE NUMBER: **104G 148**

NATIONAL MINERAL INVENTORY:

NAME(S): **FOREMORE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G02W
BC MAP:
LATITUDE: 57 04 21 N
LONGITUDE: 130 57 53 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 6327171
EASTING: 380889

COMMODITIES: Zinc Lead Copper Silver

MINERALS
SIGNIFICANT: Sphalerite Galena
MINERALIZATION AGE: Devonian-Mississipp.
ISOTOPIC AGE: DATING METHOD: Fossil MATERIAL DATED: Limestone

DEPOSIT
CHARACTER: Stratabound
CLASSIFICATION: Volcanogenic

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Devonian	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Volcaniclastic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Greenschist

CAPSULE GEOLOGY

Laminated sphalerite and galena occur in felsic volcanic horizons within foliated package of graphitic schist, argillite, and intermediate to mafic volcanics of Devonian age. Mineralized boulders include pyrite, sphalerite, and chalcopyrite-rich varieties.

	Cu(%)	Pb(%)	Zn(%)	Ag(g/t)	Au(g/t)	Fe(%)
Chalcopyrite-rich	2.3	0.5	6.2	186	1.5	16
Sphalerite-rich	0.22	3.5	10.2	96	1.0	16
Pyrite-rich	trace	1.0	6.2	78	nil	23

The float boulders resemble Kuroko volcanogenic massive sulphide ore and similar Stikine assemblage rocks are potential exploration targets for deposits of the Kuroko type. Several thousand mineralized boulders have been found on the Foremore claims in outward plains at the eastern and northern lobes of the More Glacier. The distribution of the massive sulphide float suggests the source is beneath the main icesheet of the glacier.

In the north zone, felsic volcanic horizons host finely laminated and disseminated galena, sphalerite, and pyrite mineralization. These felsic volcanic rocks occur within a penchatively foliated sequence of graphitic schists, argillites and intermediate to mafic volanic rocks.

BIBLIOGRAPHY

EM BULL 104
EMPR ASS RPT 18105, 19379
EMPR OF 1999-2
EMPR PF (Foremore Project Summary, 2001)

DATE CODED: 1992/02/21 CODED BY: JD FIELD CHECK: Y
DATE REVISED: 1993/03/12 REVISED BY: LD FIELD CHECK: N

MINFILE NUMBER: **104G 149**

NATIONAL MINERAL INVENTORY:

NAME(S): **POKER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G13W
BC MAP:
LATITUDE: 57 48 34 N
LONGITUDE: 131 56 47 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Sample from area of drilling (DBR91-616).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6411306
EASTING: 324950

COMMODITIES: Copper Lead Zinc

MINERALS
SIGNIFICANT: Pyrrhotite Pyrite Chalcopyrite Sphalerite Galena
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Porphyry Mesothermal

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Unknown	Stuhini	Unnamed/Unknown Formation	

LITHOLOGY: Andesitic Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Zeolite
Greenschist

CAPSULE GEOLOGY

Quartz-sulphide boulder train has been traced to the Limpoke Glacier area where drilling has attempted to locate the source.

Pyroxene crystal lithic tuff and tuffaceous wacke are intruded by hornblende monzonite stock along the southern edge of the Limpoke Glacier. The contact zone is locally silicified and altered. However, the source of the mineralized boulder train at the toe of the glacier remains unknown.

Firesteel Resources Inc. sampled boulders in 2002 at the base of a scree slope upslope from the initial mineralized boulder discovery. Two samples returned assay values greater than 40 grams per tonne gold.

BIBLIOGRAPHY

EMPR ASS RPT 19247, 20724, 21532
EMPR FIELDWORK 1991, Paper 1992-1, pp. 179-195
EMPR OF 1992-2
PR REL Firesteel Resources Inc., Dec.12, 2002

DATE CODED: 1993/04/16
DATE REVISED: / /

CODED BY: DB
REVISED BY:

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **104G 150**

NATIONAL MINERAL INVENTORY:

NAME(S): **RUGGED MOUNTAIN**, CANYON 25

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G13E
BC MAP:
LATITUDE: 57 48 17 N
LONGITUDE: 131 35 49 W
ELEVATION: 1650 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of mineralized sample 31019, about 1.6 kilometres southeast of Rugged Mountain peak (Assessment Report 19072).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6409930
EASTING: 345685

COMMODITIES: Copper, Gold, Silver, Magnetite, Iron

MINERALS
SIGNIFICANT: Malachite, Magnetite, Pyrite
ASSOCIATED: Calcite, Magnetite, Biotite
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Hydrothermal, Porphyry

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Pyroxenite
Syenite
Siltstone
Pegmatitic Porphyritic Syenite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Taku Plateau
GRADE: Zeolite

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1989

COMMODITY	GRADE	
Silver	6.9000	Grams per tonne
Gold	0.7000	Grams per tonne
Copper	1.0000	Per cent

REFERENCE: Assessment Report 19072.

CAPSULE GEOLOGY

The area of the Rugged Mountain showing is underlain by sedimentary rocks, predominantly siltstone of the Upper Triassic Stuhini Group. These have been hornfelsed by a large Early Jurassic syenite intrusion. The hornfels is reported to carry 10 to 40 per cent disseminated pyrite and is responsible for a gossan near the peak of Rugged Mountain. A black medium-grained rock containing 40 to 50 per cent magnetite and a similar amount of biotite occurs at the contact between the syenite and the sediments. This unit is cut by numerous pink, porphyritic syenite dikes ranging from 1 centimetre to 2 metres wide and containing widespread malachite staining and rare chalcopyrite. These copper showings are spatially related to calcite stringers. The syenitic dikes are reported to be locally pegmatitic.

The massive magnetite/biotite unit carries widespread copper mineralization with associated gold. One sample assayed 1 per cent copper, 0.7 gram per tonne gold and 6.9 grams per tonne silver (Assessment Report 19072).

The black magnetite-bearing rock is clinopyroxenite. Pyroxenite is often present in the iron-rich border phase of these syenitic intrusions. The characteristics of this rock at this showing are similar to the nearby MH iron/magnetite deposit (see MINFILE 104G 026).

BIBLIOGRAPHY

EMPR OF 1992-2
EMPR FIELDWORK 1991, pp. 179-195; 1990, pp. 149-159
EMPR ASS RPT *19072, *20154
GSC P 71-44
GSC MAP 9-1957, 1418A
Neill, I. (1992): Geology, Petrography and Chemistry of the Rugged Mountain Alkaline Pluton, Northwestern British Columbia (104G/13) unpub. B.Sc. Thesis, UBC, 75 p.
Placer Dome File

DATE CODED: 1997/09/03 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1997/09/05 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 151**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAG**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G13W
BC MAP:
LATITUDE: 57 56 28 N
LONGITUDE: 131 57 56 W
ELEVATION: 1630 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: (DBR91-477).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6426005
EASTING: 324455

COMMODITIES: Iron

MINERALS
SIGNIFICANT: Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Podiform Discordant
CLASSIFICATION: Skarn
SHAPE: Tabular
DIMENSION: 30 x 6 Metres
STRIKE/DIP:
TREND/PLUNGE:

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Unknown	Stuhini	Unnamed/Unknown Formation	

LITHOLOGY: Andesitic Tuff
Limestone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

Massive magnetite (iron skarn) developed within an impure limestone horizon of the Stuhini Group. The magnetite body and limestone horizon are overlain by andesitic lapilli tuff. The magnetite body is at least 6 metres by 30 metres and weathers dark brown to black. The skarn is located on the northwest flank of a small, irregular altered granodiorite pluton believed to be coeval with the volcanic host rocks (Late Triassic).

BIBLIOGRAPHY

EMPR OF 1992-2
EMPR FIELDWORK 1991, Paper 1992-1, pp. 179-195

DATE CODED: 1993/04/14
DATE REVISED: / /
CODED BY: DB
REVISED BY:
FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **104G 152**

NATIONAL MINERAL INVENTORY:

NAME(S): **COMMANDER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G05W
BC MAP:
LATITUDE: 57 18 13 N
LONGITUDE: 131 54 28 W
ELEVATION: 150 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of anomalous rock sample R11, taken about 2.5 kilometres west of the mouth of Patmore Creek in the Stikine River (Assessment Report 20783, Map 2).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6354925
EASTING: 324831

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Pyrite Malachite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic			Unnamed/Unknown Informal
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Granodiorite
Hornblende Quartz Monzonite
Diorite

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Boundary Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1990

COMMODITY	GRADE	
Copper	0.1500	Per cent

REFERENCE: Assessment Report 20783.

CAPSULE GEOLOGY

The geological setting of the area is characterized by a Late Triassic to Early Jurassic pluton consisting primarily of hornblende quartz monzonite. In the area of the Commander occurrence, these rocks are intruded by a small mass (less than 1 square kilometre) of Early Jurassic diorite.

A sample of mineralized "granodiorite" was reported taken in the area of the Early Jurassic diorite stock. This sample, which contained 1 per cent pyrite and malachite stains, assayed 0.15 per cent copper (Assessment Report 20783). Granitic float found in the vicinity contained "strong" molybdenite and yielded greater than 0.1 per cent molybdenum upon analysis.

BIBLIOGRAPHY

EMPR ASS RPT *20783
EMPR OF 1989-7
EMPR FIELDWORK 1988, pp. 251-267
EMPR GEOSCIENCE MAP 1993-3

DATE CODED: 1997/08/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1998/01/13 REVISED BY: LJ FIELD CHECK: N

MINFILE NUMBER: **104G 153**

NATIONAL MINERAL INVENTORY:

NAME(S): **PORTAGE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G05E
BC MAP:
LATITUDE: 57 16 25 N
LONGITUDE: 131 41 20 W
ELEVATION: 1490 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Anomalous sample 93285, located about 8 kilometres east of the confluence of the Scud and Stikine rivers (Assessment Report 20704, Maps 4a and 5a).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6351045
EASTING: 337881

COMMODITIES: Gold, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Chalcopyrite, Galena, Sphalerite
ASSOCIATED: Quartz, Carbonate
ALTERATION: Malachite, Azurite
ALTERATION TYPE: Oxidation
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
Triassic-Jurassic			Coast Plutonic Complex
Upper Paleozoic			Stikine Assemblage

LITHOLOGY: Quartz Monzonite
Limestone
Meta Argillite
Meta Siltstone
Ash Tuff
Calcareous Siltstone
Andesite
Volcaniclastic
Meta Volcanic Rock

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks, Stikine

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	4.5300	Grams per tonne

COMMENTS: From a 5-centimetre chip sample.
REFERENCE: Assessment Report 20704.

CAPSULE GEOLOGY

The Portage showings are located near Border Peak, south of the Scud River and just east of the Stikine River. The area is underlain by the Pereleshin Pluton which is a Triassic to Jurassic body composed primarily of quartz monzonite. Andesitic plagioclase-hornblende dikes and narrow aplite dikes of inferred Tertiary age are abundant. The mafic dikes generally occur along steeply dipping, northwest trending faults. A roof pendant of the Carboniferous to Permian Stikine Assemblage is exposed in the occurrence area. These rocks consist of a sedimentary sequence, made up of mainly limestone, meta-argillite, meta-siltstone, ash tuff and calcareous siltstone, and a volcanic sequence made up of foliated meta-volcanics, andesitic flows, volcaniclastics and tuffs.

Quartz-carbonate veins, generally from 1 to 10 centimetres in width, occur along fractures within quartz monzonite. Several of these veins were observed to contain chalcopyrite, malachite,

CAPSULE GEOLOGY

azurite, sphalerite and galena. A high-grade sample (Sample 93285) taken from a 5.0 centimetre wide polymetallic quartz vein assayed 4.53 grams per tonne gold (Assessment Report 20704). Southwest of these showing, about 500 to 700 metres, several more gold-bearing polymetallic quartz veins were sampled.

BIBLIOGRAPHY

EMPR ASS RPT *20704
EMPR GEOSCIENCE MAP 1993-3
EMPR OF 1989-7
EMPR FIELDWORK 1988, pp. 251-267

DATE CODED: 1997/08/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1997/08/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 154**

NATIONAL MINERAL INVENTORY:

NAME(S): **SIX-GUN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G04E
BC MAP:
LATITUDE: 57 13 23 N
LONGITUDE: 131 41 27 W
ELEVATION: 990 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Anomalous sample 102919, located about 2.5 kilometres southeast of Mount Pereleshin peak, southeast of the confluence of the Scud and Stikine rivers (Assessment Report 20704, Maps 4b and 5b).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6345424
EASTING: 337542

COMMODITIES: Gold Copper

MINERALS
SIGNIFICANT: Malachite
ALTERATION: Carbonate Malachite Azurite
ALTERATION TYPE: Carbonate Oxidation
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Shear
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic			Coast Plutonic Complex
Upper Paleozoic			Stikine Assemblage

LITHOLOGY: Quartz Monzonite
Limestone
Meta Argillite
Meta Siltstone
Ash Tuff
Calcareous Siltstone
Andesite
Volcaniclastic
Meta Volcanic Rock

GEOLOGICAL SETTING
TECTONIC BELT: Coast Crystalline
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Plutonic Rocks Stikine

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	1.2400	Grams per tonne

REFERENCE: Assessment Report 20704.

CAPSULE GEOLOGY

The Six-Gun showing is located southeast of Mount Pereleshin. The area is underlain by the Pereleshin Pluton which is a Triassic to Jurassic body composed primarily of quartz monzonite. Andesitic plagioclase-hornblende dikes and narrow aplite dikes of inferred Tertiary age are abundant. The mafic dikes generally occur along steeply dipping, northwest trending faults. A roof pendant of the Carboniferous to Permian Stikine Assemblage is exposed in the occurrence area. These rocks consist of a sedimentary sequence, made up of mainly limestone, meta-argillite, meta-siltstone, ash tuff and calcareous siltstone, and a volcanic sequence made up of foliated meta-volcanics, andesitic flows, volcaniclastics and tuffs.

At 960 metres elevation and adjacent to the main creek in the drainage area, a poorly exposed 4 to 8-metre wide zone of sheared, carbonate-altered, rusty-orange "granodiorite" occurs adjacent to a small (30 metre wide) gabbroic dike/plug. The shear is on strike with a fault exposed on the other (south) side of the valley. Weak malachite mineralization was noted in the shear. No other mineralization was observed. A sample (102919) of this material

CAPSULE GEOLOGY

yielded 1.24 grams per tonne gold (Assessment Report 20704).

BIBLIOGRAPHY

EMPR ASS RPT *20704
EMPR GEOSCIENCE MAP 1993-2; 1993-3
EMPR OF 1989-7; 1989-8
EMPR FIELDWORK 1988, pp. 251-267; 269-284

DATE CODED: 1997/08/15 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1997/08/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 155**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHAKE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G13E
BC MAP:
LATITUDE: 57 48 56 N
LONGITUDE: 131 37 10 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Central area of mineralized outcrops adjacent to the west of Rugged Mountain peak (Assessment Report 20414).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6411187
EASTING: 344395

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Malachite Magnetite Pyrite
ASSOCIATED: Calcite
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Porphyry

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Mafic Volcaniclastic
Augite Porphyry Flow
Siltstone
Greywacke
Argillite
Limestone
Syenite
Orthoclase Porphyry Syenite Dike

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Taku Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1990

COMMODITY	GRADE	
Gold	0.4400	Grams per tonne

COMMENTS: From a 1-metre chip sample.
REFERENCE: Assessment Report 20414.

CAPSULE GEOLOGY

The Shake showing is underlain by volcanic and sedimentary rocks of the Upper Triassic Stuhini Group. These rocks have been intruded by a differentiated syenitic intrusion of Early Jurassic age. Volcanic members of the Stuhini Group consist of dark green, mafic volcaniclastics and minor augite porphyry flows. Overlying these are a mixed sedimentary package of laminated siltstones, greywacke, argillite and thin discontinuous limestone horizons. A series of pink orthoclase porphyry syenite dikes cut the Stuhini rocks. Calcite coatings on fractures with associated chalcopyrite mineralization occurs in proximity to the syenite dikes within the volcanic-sedimentary host.

The highest sample taken in 1990 was 0.44 grams per tonne gold over 1 metre (Assessment Report 20414). This sample was taken across a 5 to 20 centimetre wide vein which was reported to have yielded 14.47 grams per tonne gold from a grab sample taken the previous year (Assessment Report 19127).

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GSC P 71-44
GSC MAP 9-1957, 1418A

DATE CODED:	1997/09/03	CODED BY:	GJP	FIELD CHECK:	N
DATE REVISED:	1997/09/03	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104G 156**

NATIONAL MINERAL INVENTORY: 104G3 Cu12

NAME(S): **GALORE CREEK - MIDDLE CREEK**, MIDDLE CREEK, GALORE CREEK, STIKINE COPPER, GC, HAB, BUY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 08 13 N
LONGITUDE: 131 28 32 W
ELEVATION: 800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of ore zone (Galore Creek Porphyry Copper-Gold Deposits, Northwestern B.C., Figure 2, Canadian Institute of Mining, Metallurgy and Petroleum, Special Volume 46).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6335349
EASTING: 350187

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Garnet Biotite
ALTERATION: K-Feldspar Garnet Magnesite Biotite
COMMENTS: Skarn mineralization is reported but not described.
ALTERATION TYPE: Skarn Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Intermediate Tuffaceous Rock
Meta Volcanic
Syenite Porphyry
Volcanic Breccia
Tuff
Phonolite
Trachyte
Cataclastic Breccia
Sediment/Sedimentary
Basalt Dike

HOSTROCK COMMENTS: Mineralization is associated with biotite and garnet in an altered intermediate tuffaceous unit.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP: Plutonic Rocks
GRADE: Hornfels
COMMENTS: Mineralization occurs in metavolcanics near contact with syenite.

CAPSULE GEOLOGY

Twelve alkalic porphyry copper-gold deposits are known to occur within the Galore Creek syenite complex. This complex comprises a series of Late Triassic to Early Jurassic orthoclase-porphyry syenitic bodies which have intruded coeval Upper Triassic Stuhini Group volcanic rocks and related sediments. Faults which offset and segment the intrusive rocks and a sub-horizontal fracture cleavage are the two main structural elements in the syenite complex. The complex is roughly 5 by 2.5 kilometres in area.

The deposits are hosted primarily by highly altered potassium-enriched volcanic rocks and pipe-like breccias adjacent to syenite dikes and stocks. Typically, the deposits are manto-shaped and have a north to northeast trend related to the syenite contacts and zones of structural weakness.

The syenite complex is made up of four intrusive phases that are most closely associated with the copper deposits. Six other phases are recognized but are peripheral to the Central zone deposit. The copper-bearing rocks near the syenite intrusion are extensively metasomatized, recrystallized and locally brecciated. These may

CAPSULE GEOLOGY

include pyroclastic and intrusive breccia, trachyte, phonolite, lithic tuff, crystal tuff, pyroxene basalt, pyroxene andesite and minor sediments. These rocks have been converted to skarns and fenitic porphyroids so that original rock types are unclear. The term "hornfels" was frequently applied to these meta-volcanic rocks in the early stages of exploration.

Alteration and mineralization are contemporaneous and spatially overlap. The hydrothermal system was extensive and the resultant alteration led to the formation of large gossans. Potassic alteration consisting of potassium feldspar, titanium biotite and magnetite have converted the syenites and volcanic rocks to pink, white and orange rocks composed mostly of orthoclase. Alteration of pyroxene, hornblende and biotite to assemblages of chlorite and calcite plus/minus albite and epidote characterizes the propylitic zone, best developed in the syenitic rocks. Calc-silicate alteration consisting of abundant garnet, diopside, epidote, albite and anhydrite is an unusual feature of the complex. Garnet replaces up to 50 per cent of the metavolcanic rocks and infills breccias near the northern end of the Central zone breccia pipe but is generally absent from the other deposits. However unusual this metasomatic overprint is, the distribution of sulphides, precious metal and magnetite is considered consistent with the expected zoning pattern for alkalic porphyry deposits.

Copper-gold mineralization was discovered in 1991 at the previously unknown Middle Creek zone, located about 1 kilometre west of the Central zone (104G 090). Mineralization consists of finely desseminated bornite, chalcopyrite and magnetite, associated with pervasive fine-grained biotite and garnet in an altered, intermediate tuffaceous unit (CIM Special Volume 46).

Please refer to the Central zone occurrence (104G 090) for further details.

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EMPR GEM *1972-520; 1973-501; 1974-336
EMPR GEOLOGY 1976, p. 122
EMPR MAP 65
EMPR BULL *92
EMR MIN BULL MR 166
EMR MP CORPFILE (Kennecott Copper Corp.; Kennco Exp. Canada Ltd.; Hudson Bay Mining and Smelting Co. Ltd.; Stikine Copper Ltd.)
EMR MP RESFILE (Central Zone, Galore Creek)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44, p. 24
CIM BULL *July 1966, pp. 841-853; Nov. 1968, p. 1329
CIM SPECIAL VOL. *15, pp. 402-414; *46, pp. 630-644
CIM TRANS VOL LXIX, p. 251
CMH 1976, p. 302
N MINER May 3, 1973
Allen, D. (1966) UBC Masters Thesis

DATE CODED: 1998/05/14 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/05/14 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 157** NATIONAL MINERAL INVENTORY: 104G3 Cu12

NAME(S): **GALORE CREEK - NORTH RIM**, NORTH RIM, GALORE CREEK, STIKINE COPPER, GC, HAB, BUY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 09 05 N
LONGITUDE: 131 28 18 W
ELEVATION: 1066 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of ore zone (Assessment Report 19397).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6336948
EASTING: 350481

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
COMMENTS: Assays report copper but minerals not reported. Chalcopyrite is assumed.
ALTERATION: K-Feldspar Biotite
ALTERATION TYPE: Potassic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Intermediate Tuffaceous Rock
Meta Volcanic
Syenite Porphyry
Volcanic Breccia
Tuff
Phonolite
Trachyte
Cataclastic Breccia
Sediment/Sedimentary
Basalt Dike

HOSTROCK COMMENTS: Mineralization is associated with biotite and garnet in an altered intermediate tuffaceous unit.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Boundary Ranges
TERRANE: Stikine
METAMORPHIC TYPE: Contact RELATIONSHIP: Plutonic Rocks GRADE: Hornfels
COMMENTS: Mineralization occurs in metavolcanics near contact with syenite.

INVENTORY

ORE ZONE: TRENCH REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	9.2600	Grams per tonne
Copper	2.3700	Per cent

COMMENTS: This trench sample assayed 10.4 grams per tonne gold over 10.4 metres. The above best assay was a 7-metre section within.
REFERENCE: Assessment Report 19397.

CAPSULE GEOLOGY

Twelve alkalic porphyry copper-gold deposits are known to occur within the Galore Creek syenite complex. This complex comprises a series of Late Triassic to Early Jurassic orthoclase-porphyry syenitic bodies which have intruded coeval Upper Triassic Stuhini Group volcanic rocks and related sediments. Faults which offset and segment the intrusive rocks and a sub-horizontal fracture cleavage are the two main structural elements in the syenite complex. The

CAPSULE GEOLOGY

complex is roughly 5 by 2.5 kilometres in area.

The deposits are hosted primarily by highly altered potassium-enriched volcanic rocks and pipe-like breccias adjacent to syenite dikes and stocks. Typically, the deposits are manto-shaped and have a north to northeast trend related to the syenite contacts and zones of structural weakness.

The syenite complex is made up of four intrusive phases that are most closely associated with the copper deposits. Six other phases are recognized but are peripheral to the Central zone deposit. The copper-bearing rocks near the syenite intrusion are extensively metasomatized, recrystallized and locally brecciated. These may include pyroclastic and intrusive breccia, trachyte, phonolite, lithic tuff, crystal tuff, pyroxene basalt, pyroxene andesite and minor sediments. These rocks have been converted to skarns and fenitic porphyroids so that original rock types are unclear. The term "hornfels" was frequently applied to these meta-volcanic rocks in the early stages of exploration.

Alteration and mineralization are contemporaneous and spatially overlap. The hydrothermal system was extensive and the resultant alteration led to the formation of large gossans. Potassic alteration consisting of potassium feldspar, titanium biotite and magnetite have converted the syenites and volcanic rocks to pink, white and orange rocks composed mostly of orthoclase. Alteration of pyroxene, hornblende and biotite to assemblages of chlorite and calcite plus/minus albite and epidote characterizes the propylitic zone, best developed in the syenitic rocks. Calc-silicate alteration consisting of abundant garnet, diopside, epidote, albite and anhydrite is an unusual feature of the complex. Garnet replaces up to 50 per cent of the metavolcanic rocks and infills breccias near the northern end of the Central zone breccia pipe but is generally absent from the other deposits. However unusual this metasomatic overprint is, the distribution of sulphides, precious metal and magnetite is considered consistent with the expected zoning pattern for alkalic porphyry deposits.

Trenching in 1989 crossed the strike of mineralization on the North Rim zone. Sampling outlined a 10.4-metre section which averaged 5.59 grams per tonne gold (Assessment Report 19397, page 26). This included 7 metres at 9.26 grams per tonne gold and 2.37 per cent copper. Six diamond drill holes totalling 545.7 metres were drilled on the zone in 1990. A 27-metre drill section averaged 0.27 grams per tonne gold and 0.3 per cent copper (Assessment Report 20558, page 29).

Please refer to the Central Zone deposit (104G 090) for further details of the Galore Creek deposits.

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EMPR FIELDWORK *1975, p.79; 1988, pp. 269-283
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EMPR GEOLOGY 1976, p. 122
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EMPR BULL *92
EMR MIN BULL MR 166
EMR MP CORPFILE (Kennecott Copper Corp.; Kennco Exp. Canada Ltd.; Hudson Bay Mining and Smelting Co. Ltd.; Stikine Copper Ltd.)
EMR MP RESFILE (Central Zone, Galore Creek)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44, p. 24
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CIM SPECIAL VOL. *15, pp. 402-414; *46, pp. 630-644
CIM TRANS VOL LXIX, p. 251
CMH 1976, p. 302
N MINER May 3, 1973
Allen, D. (1966) UBC Masters Thesis

DATE CODED: 1998/05/14 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/05/14 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 158**

NATIONAL MINERAL INVENTORY: 104G3 Cu12

NAME(S): **STEEP CREEK**, GALORE CREEK, STIKINE COPPER, GC, HAB, BUY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G03W
BC MAP:
LATITUDE: 57 09 41 N
LONGITUDE: 131 27 47 W
ELEVATION: 1067 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of sample containing high gold value (Assessment Report 19397).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6338042
EASTING: 351042

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Unknown
COMMENTS: Scanty documentation. Mineralization other than gold not reported.
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Triassic-Jurassic	Stuhini	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Meta Volcanic
Syenite Porphyry
Syenite
Volcanic Breccia

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Contact
Plutonic Rocks RELATIONSHIP:
PHYSIOGRAPHIC AREA: Boundary Ranges
GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1989

COMMODITY	GRADE	
Gold	18.7700	Grams per tonne

COMMENTS: Reconnaissance sample taken in stream drainage.
REFERENCE: Assessment Report 19397.

CAPSULE GEOLOGY

A reconnaissance rock sample from a drainage channel near the northern limit of the Galore Creek syenite complex assayed 18.77 grams per tonne gold (Assessment Report 19397, page 25). Attempts to reproduce this value at the "Steep Creek" zone were unsuccessful and the gold distribution in the rocks was thought to be spotty.

The Galore Creek syenite complex comprises a series of Late Triassic to Early Jurassic orthoclase-porphyry syenitic bodies which have intruded coeval Upper Triassic Stuhini Group volcanic rocks and related sediments. Faults which offset and segment the intrusive rocks and a sub-horizontal fracture cleavage are the two main structural elements in the syenite complex. The complex is roughly 5 by 2.5 kilometres in area.

The complex is host to a number of alkalic porphyry copper-gold deposits. These are hosted primarily by highly altered potassium-enriched volcanic rocks and pipe-like breccias adjacent to syenite dikes and stocks. Please refer to the Central Zone deposit (104G 090) for further details of the Galore Creek deposits.

BIBLIOGRAPHY

EMPR AR 1956-14; 1957-74; 1961-78; 1962-7; 1963-8; 1964-15; *1965-19; 1966-25; 1967-29

BIBLIOGRAPHY

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EMPR OF 1989-8
EMPR GEM *1972-520; 1973-501; 1974-336
EMPR GEOLOGY 1976, p. 122
EMPR MAP 65
EMPR BULL *92
EMR MIN BULL MR 166
EMR MP CORPFILE (Kennecott Copper Corp.; Kennco Exp. Canada Ltd.; Hudson Bay Mining and Smelting Co. Ltd.; Stikine Copper Ltd.)
EMR MP RESFILE (Central Zone, Galore Creek)
GSC MAP 9-1957; 11-1971; 310A; 1418A
GSC MEM 246
GSC P 71-44, p. 24
CIM BULL *July 1966, pp. 841-853; Nov. 1968, p. 1329
CIM SPECIAL VOL. *15, pp. 402-414; *46, pp. 630-644
CIM TRANS VOL LXIX, p. 251
CMH 1976, p. 302
N MINER May 3, 1973
Allen, D. (1966) UBC Masters Thesis

DATE CODED: 1998/05/14 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/05/14 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 159**

NATIONAL MINERAL INVENTORY:

NAME(S): **A9**, A8

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G16E
BC MAP:
LATITUDE: 57 48 14 N
LONGITUDE: 130 10 09 W
ELEVATION: 2000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location is for the A9 sample, located about 11 kilometres west-southwest of the town of Iskut (Open File 1997-3). The A8 showing is about 700 metres northeast of the A9.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6407477
EASTING: 430516

COMMODITIES: Gold, Copper

MINERALS
SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: l01 Au-quartz veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Andesitic Breccia
Andesite
Wacke
Conglomerate
Lahar

HOSTROCK COMMENTS: Host lithology is not reported. Rocks listed are typical of the unit.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1996

COMMODITY	GRADE	
Gold	0.1100	Grams per tonne
Copper	2.0000	Per cent

REFERENCE: Open File 1997-3, Table 1 (Sample A8, Field Number RMA96-682).

CAPSULE GEOLOGY

The A9 and A8 showings are located on the northern part of the Klastline Plateau about 11 kilometres west-southwest of the town of Iskut. These two small copper showings were located by members of the B.C. Geological Survey Branch during a mapping program in 1996.

The showings occur in an area mapped as Unit lJavb (Open File 1997-3) of the Lower Jurassic Hazelton Group. This unit consists of andesitic volcanic breccias and conglomerates. These are described as grey-green and maroon, feldspar hornblende-porphyritic andesitic to dacitic debris flows and lahars; minor flows; with intervals of green and maroon epiclastic conglomerate and medium to coarse-grained crystal lithic wacke with angular, red mudstone fragments.

The A8 showing consists of a 0.5-metre wide gossan where 5 per cent disseminated chalcopyrite occurs in andesitic breccia/wacke. Malachite stains were also observed. A sample assayed 2 per cent copper and 0.11 gram per tonne gold (Open File 1997-3, Table 1 (Sample A8, Field Number RMA96-682)).

About 700 metres to the southwest is the A9 showing. Here, a single 1.5-centimetre wide vein with 0.5 centimetre clots of chalcopyrite occurs. A sample assayed 5.9 per cent copper (Open File

CAPSULE GEOLOGY

1997-3, Table 1 (Sample A9, Field Number RMA96-684)).

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EMPR OF 1992-1; 1992-3; 1996-4; *1997-3
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/03 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/03 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 160** NATIONAL MINERAL INVENTORY: 104G16 Cu1

NAME(S): **QC - VEIN ZONE**, VEIN, QC,
UPPER GORDON, GORDON'S, MAIN,
TOP, ANKERITE, OZ,
A3, A4

STATUS: Prospect MINING DIVISION: Liard
REGIONS: British Columbia
NTS MAP: 104G16W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 57 47 29 N NORTHING: 6406245
LONGITUDE: 130 18 56 W EASTING: 421790
ELEVATION: 1450 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The QC claim's Vein zone is located just north of Quash Creek, south of Coolridge Mountain, about 19 kilometres southwest of the town of Iskut (Assessment Report 22794, Figure 5).

COMMODITIES: Gold Zinc Copper Silver Lead

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Pyrite Arsenopyrite Sphalerite
ASSOCIATED: Quartz Carbonate Barite
ALTERATION: Ankerite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE:

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Andesitic Lapilli Tuff
Andesitic Tuff
Wacke
Siltstone
Conglomerate
Andesite
Granodiorite
Quartz Monzonite
Quartz Diorite
Plagioclase Porphyry Intrusive

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	19.9000	Grams per tonne

COMMENTS: From a 2.45-metre drill interval.
REFERENCE: Assessment Report 21903, page 17.

CAPSULE GEOLOGY

The QC property is located in the area of the Klastline Plateau about 19 kilometres southwest of the the town of Iskut. The QC - Vein zone was discovered in the late 1980s by Teck Exploration and was developed along with the QC claim's Porphry zone (104G 033) to the south. Please refer that occurrence for a detailed work history. Two small gold-bearing showings (A3 and A4) were located at or near this locale and sampled by members of the B.C. Geological Survey Branch during a mapping program in 1996 (Fieldwork 1996, page 283).

The QC - Vein zone occurs in an area underlain by both Upper Triassic Stuhini Group sediments and Lower Jurassic Hazelton Group

CAPSULE GEOLOGY

andesitic breccias and conglomerates (Open File 1997-3). An east-trending elongate intrusive body, varying from hornblende quartz diorite to monzodiorite and monzonite, intruded the showing area in the Early Jurassic. Property geology maps show the Vein zone to occur in lapilli tuff, tuff, wacke and siltstone (Assessment Report 21903, Map 9).

Vein type mineralization occurs throughout the area and is thought to postdate the porphyry mineralization (104G 033) on the QC property to the south. The best area of vein mineralization is the Vein zone on the QC 1 and 9 claims. The gold-bearing zones are comprised of quartz plus/minus pyrite plus/minus carbonate plus/minus arsenopyrite plus/minus sphalerite plus/minus chalcopyrite plus/minus barite veins which tend to be narrow (less than 1 metre wide) and discontinuous. Most of these veins occupy brittle fractures and are associated with carbonate alteration. Very few are associated with shear zones. Six vein systems comprise the Vein zone: Upper Gordon, Gordon's, Main, Top, Ankerite and Oz.

The most prospective of the veins is the Uppper Gordon. This showing comprises a number of mineralized veins that are exposed in a series of trenches along a strike of 75 metres. These veins may be mineralized with pyrite, sphalerite, and chalcopyrite. Arsenopyrite is common but minor. A drill hole on this zone intersected 19.9 grams per tonne gold across 2.45 metres (Assesment Report 21903, page 17).

The A3 showing is described as a 3-metre wide malachite/azurite stained gossanous zone hosting pyrite and chalcopyrite. A sample assayed 0.56 per cent copper, 0.74 per cent zinc, 15.2 grams per tonne silver and 1.7 grams per tonne gold (Open File 1997-3, Table 1 (Sample A3, Field Number RMA96-759)).

The A4 showing is a 1-metre wide intensely ankerite-altered zone hosted in a dark green plagioclase porphyry intrusion. A sample from this zone yielded 4.8 per cent zinc, 0.12 per cent lead, 0.03 per cent copper, 1.7 per cent barium, 16.7 grams per tonne silver and 2.0 grams per tonne gold (Open File 1997-3, Table 1 (Sample A4, Field Number RMA96-757)).

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EMPR GEM 1969-45; 1970-57
EMPR OF 1992-1; 1992-3; 1996-4; *1997-3
GSC MAP 9-1957; 11-1971; 1418A
GSC P 71-44, p. 25
EMR MP CORPFILE (Conwest Exploration Co. Ltd.)

DATE CODED: 1998/09/08 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/08 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 161**

NATIONAL MINERAL INVENTORY:

NAME(S): **QUASH**, QC, NORANDA QC,
QUASH CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G16E
BC MAP:
LATITUDE: 57 45 03 N
LONGITUDE: 130 11 45 W
ELEVATION: 1740 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of mineralized IP trench near the headwaters of Quash Creek (Assessment Report 21832, Map No. 1.2).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6401598
EASTING: 428827

COMMODITIES: Zinc, Lead, Gold, Silver, Copper

MINERALS
SIGNIFICANT: Pyrite, Galena, Sphalerite, Chalcopyrite
ASSOCIATED: Carbonate, Quartz, Ankerite
MINERALIZATION AGE:

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

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Lower Jurassic	Stuhini	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Siltstone
Argillite
Andesite
Rhyolite
Porphyritic Hornblende Diorite
Sandstone
Ash Tuff

HOSTROCK COMMENTS: Siltstone and volcanic rocks are mineralized.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1991
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	4.4000	Grams per tonne
Gold	2.3700	Grams per tonne
Copper	0.0630	Per cent

REFERENCE: Assessment Report 19444, page 4.

CAPSULE GEOLOGY

The Quash occurrence was staked as the Quash claims in 1988 by Noranda Exploration Company Ltd. A brief 1989 field program involved stream sediment sampling, rock sampling and prospecting. Noranda followed up in 1990 with a soil geochemistry program (collecting 1491 samples) and geophysics consisting of 39.25 kilometres of ground magnetics and 18.5 kilometres of VLF-EM. Ascot Resources Ltd. assumed the operation of the Quash claims in 1991 and conducted an induced polarizaion survey (IP) (6.9 kilometres), a ground magentics survey (6.9 kilometres) and a geochemical program consisting of 98 rock and 203 soil samples. Eighty metres of excavation were completed in two trenches that same year. No further assessment work has been filed to date (September 1998).

The Quash showing is underlain by volcanic and sedimentary rocks of the Upper Triassic Stuhini Group. These are described as felsic (rhyolitic) and andesitic volcanics, the latter consisting mainly of ash tuffs. The majority of the area is underlain by sediments with a minor volcanic fraction. The sediments consist of sandstone,

CAPSULE GEOLOGY

conglomerate, siltstone, argillite and limestone. Dike to sill to plug-like bodies of fine to medium-grained hornblende (plus/minus biotite) feldspar phyric diorite intruded the strata in the Early Jurassic. Felsic dikes intrude the strata as well.

The sediments are seen to be folded into a west-plunging, property-wide anticline with increasing minor folds to the north.

Two trenches were excavated in 1991 about 350 metres apart. Disseminated fine-grained pyrite, galena and sphalerite were reported in minor concentrations at both localities. Northwest trending galena and sphalerite mineralized carbonate stringers and veinlets were seen to croscut the siltstones and diorite dikes. Values up to 0.074 gram per tonne gold, 6 grams per tonne silver, 0.11 per cent lead and 0.59 per cent zinc were obtained from trench samples (Assessment Report 21832, page 12).

The most significant result from the 1989 program was a pyritic grab sample of altered volcanic rock that occurs in the vicinity of the above trenches. This sample assayed 2.37 grams per tonne gold, 4.4 grams per tonne silver, 0.06 per cent copper and 0.036 per cent arsenic (Assessment Report 19444, page 4). A quartz-ankerite breccia from this gossan yielded 1.8 per cent zinc but only a trace of gold. A chalcopyrite-bearing quartz stringer network in andesite yielded 0.5 per cent copper but insignificant gold.

BIBLIOGRAPHY

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EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC MAP 9-1957; 11-1971; 1418A
GSC P 71-44, p. 25
WWW http://www.infomine.com/
Falconbridge File

DATE CODED: 1998/09/08 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/08 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 162**

NATIONAL MINERAL INVENTORY:

NAME(S): **TUK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G16E
BC MAP:
LATITUDE: 57 48 57 N
LONGITUDE: 130 09 23 W
ELEVATION: 1700 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of mineralized samples on Tuk claim (Assessment Report 20687, Map 2).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6408793
EASTING: 431298

COMMODITIES: Gold Copper Silver Molybdenum

MINERALS
SIGNIFICANT: Chalcopyrite Malachite Azurite
ASSOCIATED: Quartz
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: l06 Cu±Ag quartz veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Hornblende Diorite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1986

COMMODITY	GRADE	
Silver	11.7000	Grams per tonne
Gold	5.8000	Grams per tonne
Copper	7.5000	Per cent

COMMENTS: Values may not all be from one sample.
REFERENCE: Assessment Report 20687, page 5.

CAPSULE GEOLOGY

The Tuk showing is located on the northern part of the Klastline Plateau about 10 kilometres west-southwest of the town of Iskut. The area was staked as the Tuk claim in 1989 and the showing was discovered in 1990. A few rocks, soils and silt samples were taken in 1990 with some follow-up in 1991. No further assessment work has been filed to date (September, 1998).

The region is mapped as Unit lJavb (Open File 1997-3) of the Lower Jurassic Hazelton Group. This unit consists of andesitic volcanic breccias and conglomerates. These are described as grey-green and maroon, feldspar hornblende-porphyritic andesitic to dacitic debris flows and lahars; minor flows; with intervals of green and maroon epiclastic conglomerate and medium to coarse-grained crystal lithic wacke with angular, red mudstone fragments.

The Tuk claim rocks are described as andesite flows cut by a medium- to fine-grained hornblende diorite plug or dike.

Calcite-quartz veining containing disseminated chalcopyrite, malachite, azurite and pyrite were located along a ridge top. The quartz veins are typically 2 centimetres wide but may be up to 20 centimetres wide and traceable over 100 metres. Most veining occurs in andesite flow rock near the diorite contact. Samples yielded up to 7.5 per cent copper, 5.8 grams per tonne gold, 11.7 grams per

CAPSULE GEOLOGY

tonne silver and anomalous molybdenum values (Assessment Report 20687, page 5).

BIBLIOGRAPHY

EMPR ASS RPT *20687, *21858
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED:	1998/09/03	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1998/09/03	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104G 163**

NATIONAL MINERAL INVENTORY:

NAME(S): **VIOLET EAST**, AXE, EAST VIOLET

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G16E
BC MAP:
LATITUDE: 57 45 25 N
LONGITUDE: 130 03 07 W
ELEVATION: 1371 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Violet East mineralization, 10 kilometres south-southwest of Iskut village (Assessment Report 21858, Map No. 23).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6402137
EASTING: 437401

COMMODITIES: Gold Copper

MINERALS
SIGNIFICANT: Chalcopyrite Malachite
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I06 Cu±Ag quartz veins I01 Au-quartz veins
DIMENSION: 500 x 300 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Conglomerate
Greywacke
Sandstone
Siltstone
Limestone

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	6.5000	Grams per tonne
Copper	0.6000	Per cent

COMMENTS: From a 0.7-metre chip sample.
REFERENCE: Assessment Report 21858, page 29.

CAPSULE GEOLOGY

The Violet East showing was first discovered in 1990 on the Axe property held by Ascot Resources Ltd. As of 1991, the Axe property consisted of some 59 claims totalling 932 units. Work reported done on the Axe claims in 1990 and 1991 (primarily rock, soil and silt sampling) was spread over a number of showings on these extensive holdings.

The showing area is underlain by sediments of the Lower Jurassic Hazelton Group described as conglomerate, greywacke, sandstone, siltstone and limestone.

A number of copper-gold mineralized shear zones occur in sediments over a 500 by 300 metre area. The shear zones trend north-northwest and host quartz veins that pinch and swell up to 0.5 metres in width. The veins, reported to be "fairly continuous", contain disseminated chalcopyrite and malachite. One 0.7-metre chip sample yielded 6.5 grams per tonne gold and 0.6 per cent copper (Assessment Report 21858, page 29).

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EMPR ASS RPT 19491, 19801, 19802, 20688, *20715, 21128, 21156, *21858
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297

BIBLIOGRAPHY

EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/18 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 164**

NATIONAL MINERAL INVENTORY:

NAME(S): **VIOLET**, AXE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G16E
BC MAP:
LATITUDE: 57 46 14 N
LONGITUDE: 130 06 50 W
ELEVATION: 1730 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Violet showing mineralization, 10 kilometres southwest of Iskut village (Assessment Report 21858, Map No. 23).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6403711
EASTING: 433740

COMMODITIES: Gold Copper

MINERALS
SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Barite
ALTERATION: Carbonate
ALTERATION TYPE: Carbonate
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I06 Cu±Ag quartz veins I01 Au-quartz veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	
Upper Triassic	Stuhini	Unnamed/Unknown Formation	

LITHOLOGY: Mafic Volcanic Rock
Volcaniclastic
Sediment/Sedimentary

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1991
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	5.7900	Grams per tonne
Copper	3.7600	Per cent

COMMENTS: From a 0.98-metre trench sample.
REFERENCE: Assessment Report 21895, page 27.

CAPSULE GEOLOGY

The Violet showing was first discovered in 1990 on the Axe property, held by Ascot Resources Ltd. As of 1991, the Axe property consisted of some 59 claims totalling 932 units. Work reported done on the Axe claims in 1990 and 1991 (primarily rock, soil and silt sampling) was spread over a number of showings on these extensive holdings.

The showing area is underlain by green and maroon mafic volcanics, volcaniclasitics and sediments. These rocks are similar to unit lJavb of the Lower Jurassic Hazelton Unit but contain a much higher component of interbedded wacke and may be transitional with the Upper Triassic Stuhini Group (unit uT-lJavb) (Open File 1997-3).

The showing occurs at the faulted contact between volcanic and sedimentary units and displays a gossanous alteration zone about 75 by 100 metres. Northeast dipping shear zones striking 300 to 310 degrees occur within the iron-carbonate alteration zone and contain discontinuous high grade chalcopyrite-quartz lenses. Trench samples yielded highs of 5.79 grams per tonne gold and 3.76 per cent copper over a 0.98-metre length. (Assessment Report 21858, page 27). A 1990 diamond drill hole failed to intersect mineralization.

Northwest trending quartz-barite-chalcopyrite zones were located a few hundred metres to the west of the main showings but without

CAPSULE GEOLOGY

associated gold.

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EMPR ASS RPT 19491, 19801, 19802, 20688, *20715, 21128, 21156, *21858
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174;
1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/18 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 165**

NATIONAL MINERAL INVENTORY:

NAME(S): **PETAL**, AXE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G16E
BC MAP:
LATITUDE: 57 46 19 N
LONGITUDE: 130 08 34 W
ELEVATION: 1980 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Petal showing mineralization, 12 kilometres southwest of Iskut village (Assessment Report 21858, Map No. 23).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6403894
EASTING: 432024

COMMODITIES: Gold Silver Copper

MINERALS
SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Barite
ALTERATION: Carbonate
ALTERATION TYPE: Carbonate
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I06 Cu±Ag quartz veins I01 Au-quartz veins

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	
Upper Triassic	Stuhini	Unnamed/Unknown Formation	

LITHOLOGY: Volcanic Conglomerate
Andesite
Mafic Volcanic Rock
Volcaniclastic
Sediment/Sedimentary

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1991

COMMODITY	GRADE	
Silver	9.6000	Grams per tonne
Gold	8.4000	Grams per tonne
Copper	3.7000	Per cent

COMMENTS: From a 0.6-metre chip sample.
REFERENCE: Assessment Report 21895, page 26.

CAPSULE GEOLOGY

The Petal showing was first discovered in 1990 on the Axe property, held by Ascot Resources Ltd. As of 1991, the Axe property consisted of some 59 claims totalling 932 units. Work reported done on the Axe claims in 1990 and 1991 (primarily rock, soil and silt sampling) was spread over a number of showings on these extensive holdings.

The showing area is underlain by green and maroon mafic volcanics, volcaniclasitics and sediments. These rocks are similar to unit lJavb of the Lower Jurassic Hazelton Unit but contain a much higher component of interbedded wacke and may be transitional with the Upper Triassic Stuhini Group (unit uT-lJavb) (Open File 1997-3).

At the Petal showing, volcaniclastic conglomerate overlies porphyritic andesitic flows. A 10 to 20 metre wide shear cuts the sediments near the andesite contact in northeast trending direction. This structure is characterized by intense iron-cabonate alteration over a width of more than 25 metres with a narrow (0.1 to 0.5 metre) quartz-chalcopyrite vein on the hangingwall contact. A few barite stringers also occur. Gold values are restricted to the

CAPSULE GEOLOGY

quartz-chalcopyrite vein which can be traced over a 150-metre strike length. A 0.6-metre chip sample yielded 8.4 grams per tonne gold, 9.6 grams per tonne silver and 3.7 per cent copper (Assessment Report 21858, page 26).

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EMPR ASS RPT 19491, 19801, 19802, 20688, *20715, 21128, 21156, *21858
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/18 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 166**

NATIONAL MINERAL INVENTORY:

NAME(S): **PASS GOSSAN**, AXE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G16E
BC MAP:
LATITUDE: 57 45 10 N
LONGITUDE: 130 10 01 W
ELEVATION: 1710 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Pass gossan showing, 14 kilometres southwest of Iskut village (Assessment Report 21858, Map No. 23).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6401785
EASTING: 430550

COMMODITIES: Lead Zinc Copper Gold

MINERALS
SIGNIFICANT: Pyrite Arsenopyrite Galena Sphalerite Chalcopyrite
ASSOCIATED: Carbonate
ALTERATION: Carbonate
ALTERATION TYPE: Carbonate
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein Shear
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: l05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Mafic Volcanic Rock
Sediment/Sedimentary
Diorite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks
PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	9.0000	Grams per tonne

REFERENCE: Assessment Report 21895, page 24.

CAPSULE GEOLOGY

The Pass Gossan showing was first discovered in 1991 on the Axe property, held by Ascot Resources Ltd. As of 1991, the Axe property consisted of some 59 claims totalling 932 units. Work reported done on the Axe claims in 1990 and 1991 (primarily rock, soil and silt sampling) was spread over a number of showings on these extensive holdings.

The area has recently been mapped on a regional scale as Upper Triassic Stuhini Group intruded by dykes, sills and plugs of Early Jurassic age (Open File 1997-3). A mineralized gossan is reported to occur along a mafic tuff and sedimentary unit in contact with an east-west trending diorite intrusion.

The gossan zone extends more than 1 kilometre along a north facing talus slope. Mineralization discovered in the talus consists of coarse galena, sphalerite and minor chalcopyrite hosted in carbonate veins. Prospecting along the overlying cliffs revealed similarly mineralized sporadic stringers and veins in iron-carbonate gossan zones. Most assays of the mineralized material indicated low associated gold values. However, one sample from a pyrite-arsenopyrite bearing shear zone did yield 9.0 grams per tonne gold (Assessment Report 21858, page 24).

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EMPR ASS RPT 19491, 19801, 19802, 20688, *20715, 21128, 21156, *21858

BIBLIOGRAPHY

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1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/18 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 167**

NATIONAL MINERAL INVENTORY:

NAME(S): **CENTRAL**, AXE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G09E
BC MAP:
LATITUDE: 57 44 34 N
LONGITUDE: 130 10 25 W
ELEVATION: 1645 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Central showing area, 15 kilometres southwest of Iskut village (Assessment Report 21858, Map No. 23).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6400679
EASTING: 430134

COMMODITIES: Zinc, Lead, Copper, Gold, Silver

MINERALS

SIGNIFICANT: Sphalerite, Chalcopyrite, Pyrite, Arsenopyrite, Galena
ALTERATION: Calcite, Sericite
ALTERATION TYPE: Carbonate, Sericitic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive, Stratabound, Disseminated
CLASSIFICATION: Volcanogenic
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Lower Jurassic	Stuhini	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Argillaceous Siltstone
Argillite
Latite
Mafic Volcanic Rock
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1991

COMMODITY	GRADE	
Silver	780.0000	Grams per tonne
Gold	2.5400	Grams per tonne
Copper	0.1000	Per cent
Lead	1.9000	Per cent
Zinc	1.6000	Per cent

COMMENTS: From a 1-metre chip sample.
REFERENCE: Assessment Report 21895, page 23.

CAPSULE GEOLOGY

The Central showing was first discovered in 1991 on the Axe property, held by Ascot Resources Ltd. As of 1991, the Axe property consisted of some 59 claims totalling 932 units. Work reported done on the Axe claims in 1990 and 1991 (primarily rock, soil and silt sampling) was spread over a number of showings on these extensive holdings.

The area has recently been mapped on a regional scale as Upper Triassic Stuhini Group intruded by dykes, sills and plugs of Early Jurassic age (Open File 1997-3).

Minor copper-lead-zinc sulphides associated with iron sulphides occurs intermittently along a 600 metre faulted contact between calcareous/sericite altered felsic volcanics (latite) and argillaceous silstone and mafic volcanic tuffs. A 1-metre rock chip sample assayed 2.54 grams per tonne gold 780 grams per tonne siver 0.1 per cent copper, 1.9 per cent lead and 1.6 per cent zinc (Assessment Report 21858, page 22).

Also occurring nearby is a zone consisting of 1 to 2 metres of

CAPSULE GEOLOGY

semi-massive banded, and 6 metres of disseminated, pyrite and arsenopyrite in argillite and tuff overlying the main felsic unit. This zone was trenched and sampled at one location and an 8.1 metre chip sample was found to yield 0.2 gram per tonne gold, 22.1 grams per tonne silver, 0.07 per cent copper, 0.06 lead and 0.43 per cent zinc (Assessment Report 21858, page 23).

Most of the felsic volcanics are altered and anomalous in base and precious metals values.

BIBLIOGRAPHY

EMPR ASS RPT 19491, 19801, 19802, 20688, *20715, 21128, 21156, *21858
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED:	1998/09/18	CODED BY:	GSB	FIELD CHECK:	N
DATE REVISED:	1998/09/18	REVISED BY:	GJP	FIELD CHECK:	N

MINFILE NUMBER: **104G 168**

NATIONAL MINERAL INVENTORY:

NAME(S): **GO/NO**, AXE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G09E
BC MAP:
LATITUDE: 57 44 16 N
LONGITUDE: 130 07 32 W
ELEVATION: 1525 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Go/No showing area, 14 kilometres southwest of Iskut village (Assessment Report 21858, Map No. 23).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6400073
EASTING: 432986

COMMODITIES: Gold Silver Copper Zinc Lead Arsenic

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Arsenopyrite Sphalerite Galena
COMMENTS: Although not reported, the high values in lead indicate the presence of galena.
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Mafic Volcanic Rock
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1991
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	17.1000	Grams per tonne
Gold	31.4000	Grams per tonne
Copper	0.1500	Per cent

REFERENCE: Assessment Report 21895, page 25.

CAPSULE GEOLOGY

The Go/No showing was first discovered in 1990 on the Axe property, held by Ascot Resources Ltd. As of 1991, the Axe property consisted of some 59 claims totalling 932 units. Work reported done on the Axe claims in 1990 and 1991 (primarily rock, soil and silt sampling) was spread over a number of showings on these extensive holdings.

The area has recently been mapped on a regional scale as Upper Triassic Stuhini Group intruded by dykes, sills and plugs of Early Jurassic age (Open File 1997-3).

The showing is hosted in sheared mafic volcanics near a northeast trending diorite dike. Mineralized tension-gash shears occur sporadically over a 1.3-kilometre length of the diorite contact but are oriented perpendicular to the trend of the dike. Narrow veins of quartz-carbonate host pyrite and chalcopyrite and occasionally arsenopyrite and sphalerite. Gold values appear to be related to arsenopyrite-pyrite content. A grab sample assayed 31.4 grams per tonne gold 17.1 grams per tonne silver and 0.15 per cent copper (Assessment Report 21858, page 25). Grab samples with up to 2.5 per cent lead, 28 per cent zinc and 19 per cent arsenic were collected.

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1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/18 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 169**

NATIONAL MINERAL INVENTORY:

NAME(S): **CURT**, AXE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G09E
BC MAP:
LATITUDE: 57 43 57 N
LONGITUDE: 130 04 39 W
ELEVATION: 1430 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The Curt showing area, 13 kilometres south-southwest of Iskut village (Assessment Report 21858, Map No. 23).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6399439
EASTING: 435837

COMMODITIES: Gold

MINERALS
SIGNIFICANT: Pyrite
ASSOCIATED: Calcite Quartz
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Disseminated Vein
CLASSIFICATION: Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Andesitic Tuff

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1991
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	6.0000	Grams per tonne

REFERENCE: Assessment Report 21895, page 26.

CAPSULE GEOLOGY

The Curt showing was first discovered in 1990 on the Axe property, held by Ascot Resources Ltd. As of 1991, the Axe property consisted of some 59 claims totalling 932 units. Work reported done on the Axe claims in 1990 and 1991 (primarily rock, soil and silt sampling) was spread over a number of showings on these extensive holdings.

The Curt showing occurs in an area that has recently been regionally mapped as being a possible transitional unit between Lower Jurassic Hazelton Group and Upper Triassic Stuhini Group (Open File 1997-3).

A gossanous zone occurs in silicified andesitic tuffs measuring 70 by 150 metres in area. Mineralization occurs as pyritic disseminations associated with minor stringers of secondary calcite or quartz. A grab sample taken in 1990 yielded 6 grams per tonne gold (Assessment Report 21858, page 26). Follow-up sampling the following year yielded only trace amounts of gold.

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EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/18
DATE REVISED: 1998/09/18
CODED BY: GSB
REVISED BY: GJP
FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104G 170**

NATIONAL MINERAL INVENTORY:

NAME(S): **SOUTH SEESTOR**, AXE, SEESTOR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G09E
BC MAP:
LATITUDE: 57 42 10 N
LONGITUDE: 130 08 19 W
ELEVATION: 1490 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The South Seestor showing area, 16 kilometres southwest of Iskut village (Assessment Report 21858, Map No. 23).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6396190
EASTING: 432143

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Mafic Volcanic Rock
Diorite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	1.6000	Grams per tonne
Copper	0.9000	Per cent

REFERENCE: Assessment Report 21156, page 11.

CAPSULE GEOLOGY

The South Seestor showing was first discovered in 1990 on the Axe property, held by Ascot Resources Ltd. As of 1991, the Axe property consisted of some 59 claims totalling 932 units. Work reported done on the Axe claims in 1990 and 1991 (primarily rock, soil and silt sampling) was spread over a number of showings on these extensive holdings.

The area has recently been mapped on a regional scale as Upper Triassic Stuhini Group intruded by dykes, sills and plugs of Early Jurassic age (Open File 1997-3).

A rock sample taken in gossanous mafic volcanics assayed 0.9 per cent copper and 1.6 grams per tonne gold (Assessment Report 21156, page 11). A mass of diorite is shown nearby on property maps.

About 1.5 kilometres to north at the Seestor locality, high grade chalcopyrite mineralization within talus boulders up to 1 metre across was found. The source of these boulders was not located.

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EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/18
DATE REVISED: 1998/09/18
CODED BY: GSB
REVISED BY: GJP
FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104G 171**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLOW-DOWN**, AXE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G09E
BC MAP:
LATITUDE: 57 40 55 N
LONGITUDE: 130 08 56 W
ELEVATION: 1150 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location is for the Blow-Down showing, 20 kilometres southwest of Iskut village (Assessment Report 21858, Map No. 2).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6393881
EASTING: 431491

COMMODITIES: Gold Copper

MINERALS
SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Disseminated Vein Shear
CLASSIFICATION: Hydrothermal Porphyry
TYPE: I06 Cu±Ag quartz veins
I01 Au-quartz veins
L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Lower Jurassic	Stuhini	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Siliceous Cherty Tuff
Granodiorite
Quartz Monzonite
Diorite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	1.7680	Grams per tonne

REFERENCE: Assessment Report 21858, page 18.

CAPSULE GEOLOGY

The Blow-Down showing was first discovered in 1990 on the Axe property, held by Ascot Resources Ltd. As of 1991, the Axe property consisted of some 59 claims totalling 932 units. Work reported done on the Axe claims in 1990 and 1991 (primarily rock, soil and silt sampling) was spread over a number of showings on these extensive holdings. Some induced polarization geophysical work was done on the showing in 1991.

The area has recently been mapped on a regional scale as Upper Triassic Stuhini Group intruded by dykes, sills and plutons of Early Jurassic age (Open File 1997-3). The Early Jurassic Groat stock is a faulted, northeast trending, coarse-grained porphyritic to fine-grained equigranular intrusion with granodiorite to quartz monzonite modal compositions. A Uranium-Lead age date of 205.1 plus/minus 8 Ma was determined by R.M. Friedman of the University of British Columbia (Fieldwork 1996, page 295).

An open 600 by 300 metre gold soil anomaly is located along a dioritic contact with siliceous cherty tuffs. Regional geology maps show this to be the northeast contact area of the Groat stock which extends several kilometres to the southwest. A number of gossanous sheared subcrops of cherty tuff occur and contain elevated gold values up to 0.8 gram per tonne gold (Assessment Report 21858). This sample was at least 0.5 metre in width. The best overall gold value was obtained from a grab sample of quartz vein containing pyrite and

CAPSULE GEOLOGY

chalcopyrite that yielded 1.78 grams per tonne gold (Assessment Report 21858, page 18).

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EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/18 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 172**

NATIONAL MINERAL INVENTORY:

NAME(S): **WOLF WEST**, AXE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G09E
BC MAP:
LATITUDE: 57 40 53 N
LONGITUDE: 130 11 48 W
ELEVATION: 1615 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location is for the West Wolf showing, 20 kilometres southwest of Iskut village (Assessment Report 21858, Map No. 2).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6393869
EASTING: 428641

COMMODITIES: Gold Copper Zinc

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite Sphalerite
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Shear Vein
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Andesite
Granodiorite
Quartz Monzonite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks
PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	1.9000	Grams per tonne

REFERENCE: Assessment Report 21858, page 19.

CAPSULE GEOLOGY

The West Wolf showing was first discovered in 1990 on the Axe property, held by Ascot Resources Ltd. As of 1991, the Axe property consisted of some 59 claims totalling 932 units. Work reported done on the Axe claims in 1990 and 1991 (primarily rock, soil and silt sampling) was spread over a number of showings on these extensive holdings.

The area has recently been mapped on a regional scale as Upper Triassic Stuhini Group intruded by dykes, sills and plutons of Early Jurassic age (Open File 1997-3). The Early Jurassic Groat stock is a faulted, northeast trending, coarse-grained porphyritic to fine-grained equigranular intrusion with granodiorite to quartz monzonite modal compositions. A Uranium-Lead age date of 205.1 plus/minus 8 Ma was determined by R.M. Friedman of the University of British Columbia (Fieldwork 1996, page 295).

The area of the West Wolf showing is underlain by andesitic volanic rock at the northwest contact of the Groat stock. Mineralization is generally confined to narrow shears and fractures weakly mineralized with pyrite, chalcopyrite and sphalerite. A weak gossan has developed in the area, trending to the southeast. High grade samples yielded up to 8.81 grams per tonne gold and 3.4 per cent copper; the best chip sample assayed 1.9 grams per tonne gold over 0.5 metre (Assessment Report 21858, page 19).

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BIBLIOGRAPHY

1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/18 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 173**

NATIONAL MINERAL INVENTORY:

NAME(S): **TREVOR PEAK**, FLIN, TOON, FERRO, FLON, AXE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G09E
BC MAP:
LATITUDE: 57 40 10 N
LONGITUDE: 130 10 47 W
ELEVATION: 1460 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6392522
EASTING: 429628

COMMENTS: The location is for the Flin showing, 22 kilometres southwest of Iskut village (Assessment Report 21858, Map No. 2). The Flon showing occurs about 200 metre west of the Flin, the Toon showing occurs about 100 metres southeast of the Flin and the Ferro about 150 metres to the northeast of the Flin. Collectively, these four showing make up the Trevor Peak occurrence.

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Chalcopyrite Arsenopyrite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Shear Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins I06 Cu±Ag quartz veins
L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Cherty Mafic Ash Tuff
Granodiorite
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine Plutonic Rocks

PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Gold	18.0000	Grams per tonne

COMMENTS: From a 2.25-metre chip sample across a quartz vein. The true width was approximately 1.5 metres.
REFERENCE: Assessment Report 21858, page 16.

CAPSULE GEOLOGY

The Trevor Peak showings, west of Kinaskan Lake, were located on the Axe claims of Ascot Resources Ltd which were staked in 1988. As of 1991, the Axe property consisted of some 59 claims totalling 932 units. Work reported done on the Axe claims in 1990 and 1991 (primarily rock, soil and silt sampling) was spread over a number of showings on these extensive holdings. The Trevor Peak occurrence area was extensively prospected, sampled and mapped in 1990 during which time several showings were discovered: the Flin, Flon, Toon and Ferro. An induced polarization survey was conducted over the occurrence in 1991.

The area has recently been mapped on a regional scale as being underlain by Upper Triassic Stuhini Group sediments intruded by dykes, sills and plutons of Early Jurassic age (Open File 1997-3). Property rocks are described as cherty mafic ash tuffs. Contact with the Early Jurassic Groat stock occurs to the immediate north and west of the showing area.

The Groat stock is a faulted, northeast trending, coarse-grained

CAPSULE GEOLOGY

porphyritic to fine-grained equigranular intrusion with granodiorite to quartz monzonite modal compositions. A Uranium-Lead age date of 205.1 plus/minus 8 Ma was determined by R.M. Friedman of the University of British Columbia (Fieldwork 1996, page 295).

The Flin, Flon, Toon and Ferro showings are gossanous shear structures which occur over an area of 500 by 600 metres within the cherty ash tuff unit. The structures are several metres in width, strike approximately north south and dip to the west. Mineralization consists of grey to white quartz veining with stringers and disseminations of pyrite, chalcopyrite and arsenopyrite. Assay results from the best showings include the following (Assessment Report 21858, page 16):

1) 17 grams per tonne gold and 1.9 per cent copper across 0.8 metre on the Toon showing. This zone is traceable for 170 metres.
2) 23.0 grams per tonne gold and 0.5 per cent copper across 0.5 metre on the Flin showing.
3) On the Ferro showing, a prominent quartz vein was sampled at two intervals 40 metres apart yielding 18.0 grams per tonne gold across a 1.5-metre true width and 11.8 grams per tonne gold across a 0.6-metre true width.

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EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/18 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 174**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEAUCHAMPS**, AXE, SENTRA CREEK, FIRE CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G09E
BC MAP:
LATITUDE: 57 38 54 N
LONGITUDE: 130 12 05 W
ELEVATION: 1430 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location is for the Sentra Creek showing, 25 kilometres southwest of Iskut village (Assessment Report 21128, Map No. 1). The Fire Creek mineralized area is located from 1 to 1.5 kilometres to the northeast.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6390194
EASTING: 428294

COMMODITIES: Gold, Silver, Copper, Lead, Zinc

MINERALS

SIGNIFICANT: Pyrite, Arsenopyrite, Sphalerite, Galena, Chalcopyrite
ASSOCIATED: Quartz, Calcite, Malachite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal, Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
I06 Cu±Ag quartz veins
I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Lower Jurassic	Stuhini	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Greywacke
Siltstone
Granodiorite
Quartz Monzonite
Conglomerate
Andesite
Andesitic Tuff
Agglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1990

COMMODITY	GRADE	
Gold	9.6000	Grams per tonne

REFERENCE: Assessment Report 21128, page 7.

CAPSULE GEOLOGY

The Beauchamp showings, west of Kinaskan Lake, were located on the Axe claims of Ascot Resources Ltd which were staked in 1988. As of 1991, the Axe property consisted of some 59 claims totalling 932 units. In 1990, a 13.7-kilometre induced polarization and ground magnetometer survey was conducted and 3 diamond-drill holes totalling 268 metres were drilled in the Fire Creek area. Further work was done by Ascot on numerous new showings on the Axe claims in 1991 but no work was apparently done on the Beauchamp in 1991 and no further work has been filed for assessment to date (September 1998).

Area rocks have recently been mapped on a regional scale as Upper Triassic Stuhini Group (Open File 1997-3). Property rocks consist of greywacke and siltstone with conglomerate, chert and cherty siltstone interbedded with andesitic flows, tuffs and agglomerates. The showings occur just south of the Groat stock, a northeast trending mass of Early Jurassic granodiorite to quartz monzonite.

CAPSULE GEOLOGY

The Fire Creek zone consists of 1 to 5-centimetre wide northeast striking quartz veinlets containing chalcopyrite and pyrite. Grab samples of vein material have yielded values of 9.6 grams per tonne gold over 5 centimetres from vuggy veins traceable for up to 20 metres (Assessment Report 21128, page 7). This zone was partially tested along strike by a drill hole. No significant results were obtained.

The Sentra Creek zone consists of scattered and randomly oriented quartz-calcite veins up to 1 metre wide and traceable along strike for up to 12 metres. The hostrocks are greywackes and siltstones. Sulphides in the veins include pyrite, chalcopyrite, arsenopyrite, galena, sphalerite and malachite. Grab samples of the best looking material yielded values up 1 gram per tonne gold, 0.4 per cent copper, 1 per cent lead, 1.2 per cent zinc and 99.1 grams per tonne silver (Assessment Report 21128, page 7).

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EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/18 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 175**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOND**, BEAUCHAMPS, AXE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G09E
BC MAP:
LATITUDE: 57 38 14 N
LONGITUDE: 130 10 22 W
ELEVATION: 1370 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location is for the Bond showing which is about 3 kilometres west of Kinasakan Lake on a north flowing stream that drains into Groat Creek (Assessment Report 21128, Map No. 1). This showing was part of the Beauchamps occurrence (see 104G 174), named by Ascot Resources for the company they optioned the claims from.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6388927
EASTING: 429980

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Chalcopyrite Copper Arsenopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Augite Andesite Flow
Greywacke
Siltstone
Granodiorite
Quartz Monzonite
Conglomerate
Andesite
Andesitic Tuff
Agglomerate

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1990

COMMODITY	GRADE	
Gold	0.2400	Grams per tonne
Copper	0.1000	Per cent

COMMENTS: Chip sampled over a 2 by 2 metre panel.
REFERENCE: Assessment Report 21128, page 8.

CAPSULE GEOLOGY

The Bond showing, west of Kinaskan Lake, was located on the Axe claims of Ascot Resources Ltd which were staked in 1988. As of 1991, the Axe property consisted of some 59 claims totalling 932 units. Further work was done by Ascot on numerous new showings on the Axe claims in 1991 but no work was apparently done on the Bond in 1991 and no further work has been filed for assessment to date (September, 1998).

Area rocks have recently been mapped on a regional scale as Upper Triassic Stuhini Group (Open File 1997-3). Property rocks consist of greywacke and siltstone with conglomerate, chert and cherty siltstone interbedded with andesitic flows, tuffs and agglomerates. The showings occur just south of the Early Jurassic granodiorite to quartz monzonite Groat stock.

Weak quartz veining up to 2 centimetres wide occurs over an area

CAPSULE GEOLOGY

of 6 by 8 metres within an augite andesite flow. Traces of native copper, chalcopyrite and arsenopyrite were noted in the veins. Initial grab samples of vein or sulphide-rich material within the area yielded a high of 0.67 per cent copper. Chip sampling over 2 by 2 metre panels yielded a high of 0.1 per cent copper and 0.24 gram per tonne gold (Assessment Report 21128, page 8).

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EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC P 71-44, p. 25
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/18 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/18 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 176**

NATIONAL MINERAL INVENTORY:

NAME(S): **HORN NORTH**, C2, AXE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G09W
BC MAP:
LATITUDE: 57 43 17 N
LONGITUDE: 130 18 03 W
ELEVATION: 1920 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location is for the C2 sample, located about 23 kilometres west-southwest of the town of Iskut (Open File 1997-3). The Horn North showing described in Assessment Report 21127 is nearby.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6398436
EASTING: 422515

COMMODITIES: Zinc, Lead, Silver, Copper

MINERALS
SIGNIFICANT: Sphalerite, Galena, Chalcopyrite
ASSOCIATED: Quartz, Barite
MINERALIZATION AGE:

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

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Andesitic Breccia
Andesitic Tuff
Andesite
Wacke
Conglomerate
Lahar

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1990

COMMODITY	GRADE	
Silver	71.0000	Grams per tonne
Lead	4.9000	Per cent
Zinc	16.1000	Per cent

REFERENCE: Assessment Report 21127, page 9.

CAPSULE GEOLOGY

The Horn North occurrence is located about 22 kilometres west-southwest of the town of Iskut.

The showings occur in an area mapped as Unit lJavb (Open File 1997-3) of the Lower Jurassic Hazelton Group. This unit consists of andesitic volcanic breccias and conglomerates. These are described as grey-green and maroon, feldspar hornblende-porphyritic andesitic to dacitic debris flows and lahars; minor flows; with intervals of green and maroon epiclastic conglomerate and medium to coarse-grained crystal lithic wacke with angular, red mudstone fragments.

The Axe claims were staked over a large area in the fall of 1988 and sold in part to Dryden Resources Corporation in 1989. Exploration by Dryden on its Horn North grid in 1990 turned up discontinuos, narrow quartz-calcite-barite veins exhibiting colloform, banded textures. These veins are host to sphalerite, galena and trace chalcopyrite and occur in maroon and green coloured andesitic tuffs. One grab sample yielded 4.9 per cent lead, 16.1 per cent zinc and 71 grams per tonne silver (Assessment Report 21127, page 9).

Sample C2 was collected from a gossan in purple andesite breccia that contained local concentrations of sulphide. This showing was

CAPSULE GEOLOGY

located in Horn North area by members of the B.C. Geological Survey Branch during a mapping program in 1995. A sample of the material assayed 8.4 grams per tonne silver, 0.06 per cent lead and 1.3 per cent zinc (Open File 1997-3).

BIBLIOGRAPHY

EMPR ASS RPT 19804, *21127, 22165
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; *1997-3
GSC P 71-44
GSC MAP 9-1957; 11-1971; 1418A

DATE CODED: 1998/09/03 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/03 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 177**

NATIONAL MINERAL INVENTORY:

NAME(S): **HORN EAST**, AXE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G09W
BC MAP:
LATITUDE: 57 42 53 N
LONGITUDE: 130 15 34 W
ELEVATION: 1675 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location is for the Horn East showing, located about 23 kilometres southwest of the town of Iskut (Assessment Report 21858).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6397647
EASTING: 424967

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: l01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Andesitic Breccia
Andesitic Tuff
Andesite
Diorite
Wacke
Conglomerate
Lahar

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
YEAR: 1991

COMMODITY	GRADE	
Gold	2.3000	Grams per tonne

COMMENTS: From a 1-metre chip sample.
REFERENCE: Assessment Report 21858, page 21.

CAPSULE GEOLOGY

The Horn East occurrence is located about 24 kilometres southwest of the town of Iskut.

The showings occur in an area mapped as Unit lJavb (Open File 1997-3) of the Lower Jurassic Hazelton Group. This unit consists of andesitic volcanic breccias and conglomerates. These are described as grey-green and maroon, feldspar hornblende-porphyritic andesitic to dacitic debris flows and lahars; minor flows; with intervals of green and maroon epiclastic conglomerate and medium to coarse-grained crystal lithic wacke with angular, red mudstone fragments.

The country rocks are intruded by east-northeast trending narrow Early Jurassic dikes and sills of dioritic composition.

The Horn East property was originally part of the SF (Horn)(104G 035) silver prospect to the west which was held and explored by Tenajon Silver in the 1980s. The Horn East area was aquired by Ascot Resources through staking of the Axe claims in 1989. Prior to the Ascot program a number of trenches were excavated and some widely spaced grid soil sampling completed. Grab samples as high as 25.71 grams per tonne gold were reported from earlier work (Assessment Report 21858, page 20). A new grid was established in 1990 and further rock sampling was done. In 1991, grid extensions and

CAPSULE GEOLOGY

detailed fill-in soil sampling was done. Follow-up trenching and sampling occurred.

The focus of exploration has been a gold soil geochemical anomaly which extends for about 1.1 kilometres averaging 75 to 100 metres in width. A narrower anomaly occurs to the the northeast. The area of interest is covered by soil and rubble with some outcroppings at both ends. The high assay previously reported came from a trench on this zone.

Gold mineralization is associated with structurally controlled sulphide (pyrite) bearing quartz-iron-carbonate veins that may be related to northeast trending diorite dikes. A 1-metre chip sample from one of these veins yielded 2.3 grams per tonne gold (Assessment Report 21858, page 21).

BIBLIOGRAPHY

EMPR ASS RPT 19801, 21156, *21858
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC MAP 9-1957; 11-1971; 1418A
GSC P 71-44
PR REL Royal County Minerals, Jan.17, 2003

DATE CODED: 1998/09/03 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/09/03 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104G 178**

NATIONAL MINERAL INVENTORY:

NAME(S): **TAHL**, ERTS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G13E
BC MAP:
LATITUDE: 57 58 53 N
LONGITUDE: 131 43 35 W
ELEVATION: 1460 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of sample, Assessment Report 19912.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6429891
EASTING: 338788

COMMODITIES: Copper, Silver, Gold

MINERALS

SIGNIFICANT: Pyrite, Pyrrhotite, Chalcopyrite
ALTERATION: Malachite, Calcite, Carbonate
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Upper Triassic			Unnamed/Unknown Informal

LITHOLOGY: Andesite, Rhyolite, Tuff, Breccia, Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Taku Plateau

CAPSULE GEOLOGY

Mineralization occurs within sediments and volcanics of the Upper Triassic Stuhini Group. Disseminated and fracture filled pyrite, pyrrhotite and chalcopyrite occur at the contact of diorite and andesite. A grab sample assayed 0.2 per cent copper (Assessment Report 19912). The area is held by Pathfinder Resources Ltd. as the Erts claims, in 1999.

BIBLIOGRAPHY

EMPR ASS RPT *19912
GSC MAP 11-1971
GSC P 71-44
GCNL #59(Mar.25), 1999
WWW http://www.infomine.com/index/properties/ERTS.html

DATE CODED: 1999/06/21
DATE REVISED: / /

CODED BY: LDJ
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104G 179**

NATIONAL MINERAL INVENTORY:

NAME(S): **FROSTY**, ROLL 2, RATTLE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104G13E
BC MAP:
LATITUDE: 57 54 49 N
LONGITUDE: 131 37 26 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Frosty showing (Assessment Report 21110).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6422109
EASTING: 344554

COMMODITIES: Copper, Silver, Gold

MINERALS

SIGNIFICANT: Pyrite, Chalcopyrite
ALTERATION: Malachite, Azurite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein, Disseminated
CLASSIFICATION: Epigenetic
TYPE: I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	

LITHOLOGY: Silica Clastic
Wacke
Siltstone
Augite Porphyry
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Taku Plateau

CAPSULE GEOLOGY

Mineralization occurs within sediments and volcanics of the Upper Triassic Stuhini Group. The most significant, the Frosty showing, consists of several east trending chloritic shear zones exposed for 200 metres along the banks of West Middle Creek. The shear zones vary in width from 0.3 to 1.5 metres and contain pyrite and chalcopyrite. A 30-centimetre sample assayed 1.54 grams per tonne gold, 9.6 grams per tonne silver and 1.79 per cent copper (Assessment Report 21110). Pass Lake Resources Ltd held the property as the Rattle and Roll claims in 1990 and 1991.

BIBLIOGRAPHY

EMPR ASS RPT 19870, *21110
GSC MAP 11-1971
GSC P 71-44

DATE CODED: 1999/06/21 CODED BY: LDJ FIELD CHECK: N
DATE REVISED: / / REVISED BY: FIELD CHECK: N

MINFILE NUMBER: **104H 001**
NATIONAL MINERAL INVENTORY: 104H13 Cu1

NAME(S): **MFJ**, EALUE LAKE, KLAPPAN, ROSE, ROK, ROSE OF KLAPPAN

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 47 46 N
LONGITUDE: 129 52 21 W
ELEVATION: 1675 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of drill holes (Assessment Report 6093 and 20689).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6406345
EASTING: 448135

COMMODITIES: Copper Gold

MINERALS
SIGNIFICANT: Chalcopyrite Chalcocite Bornite Pyrite
ASSOCIATED: Quartz Magnetite
ALTERATION: K-Feldspar Chlorite Epidote Montmorillonite Calcite Pyrite Silica
ALTERATION TYPE: Potassic Propylitic Silicific'n
MINERALIZATION AGE: Lower Jurassic
ISOTOPIC AGE: 198.5 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Whole Rock

DEPOSIT
CHARACTER: Stockwork Vein
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L03 Alkalic porphyry Cu-Au
SHAPE: Regular
MODIFIER: Fractured Faulted
DIMENSION: 200 x 200 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Age date for the Edon Pluton (Geological Survey of Canada Open File 1080).

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	
Lower Jurassic			Rose and Edon Plutons

ISOTOPIC AGE: 198.5
DATING METHOD: Potassium/Argon
MATERIAL DATED: Whole Rock

LITHOLOGY: Porphyritic Hornblende Quartz Monzonite
Syenite
Monzonite Dike
Feldspar Porphyritic Andesite Flow
Andesite Flow Breccia
Dacitic Flow Breccia
Lahar
Epiclastic Conglomerate
Crystal Lithic Wacke

HOSTROCK COMMENTS: Age date from GSC Open File 1080.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY
ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1982
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	0.0400	Grams per tonne
Copper	1.0700	Per cent

COMMENTS: Grades averaged over 15-metre intercept width.
REFERENCE: Assessment Report 17316.

CAPSULE GEOLOGY

The MFJ prospect lies within the ROK claim (previously known as the Rose of Klappan), approximately 7.5 kilometres southeast of the village of Iskut. The prospect is located in a broad, northwest

CAPSULE GEOLOGY

trending valley in the highly dissected terrain of the Tanzilla Plateau. The property lies within the Stikinia terrane of the Intermontane Belt.

The area was first prospected in 1929 when an adit and several trenches revealed copper mineralization on the adjoining Klappan Rose property (presently the HI claims, 104H 014). The property was extensively explored by geological, geochemical and geophysical means from 1960 to 1988. In 1987, Taiga Consultants Ltd. staked the Rok claims for Manchester Resources ltd. and then carried out detailed mapping, geochemical surveys and a ground magnetometer survey (Assessment Report 17316). The property was under option to Consolidated Carina Resources Ltd. in 1990 and they commissioned Keewatin Engineering Inc. to carry out an exploration program. This work consisted of 373.3 metres of diamond drilling in 3 holes, a 2.5-kilometre induced polarization survey as well as further rock, soil and silt sampling suveys (Assessment Report 20689). Keewatin's commission was extended to 1991 at which time they complete 5 diamond drill holes totalling 716 metres. They also conducted various geophysical (IP and MAG) and geochemical surveys (Assessment Report 21901).

A 3-year mapping (1994-1996) program headed by Chris Ash of the B.C. Geological Survey has led to an updated stratigraphic framework for parts of NTS mapsheets 104G/9 and 16 and 104H12 and 13, including the area of this occurrence. This new interpretation is published in Fieldwork 1994, Fieldwork 1995; Fieldwork 1996; and Open File 1997-3.

Unit lJavbe of the Lower Jurassic Hazelton Group underlies the MFJ area and consists of andesitic volcanic breccias and conglomerates. These are described as grey-green and maroon, feldspar hornblende-porphyritic andesitic to dacitic debris flows and lahars; minor flows; with intervals of green and maroon epiclastic conglomerate and medium to coarse-grained crystal lithic wacke with angular, red mudstone fragments. In this area, this unit is further defined as being epidote-chlorite-calcite altered.

These are intruded by porphyritic hornblende quartz monzonite of the Early Jurassic Edon and Rose plutons and related syenite stocks.

The MFJ prospect, which encompasses the East and North showings (Assessment Report 17316), is an alkaline copper-gold porphyry deposit with disseminated and fracture filling chalcopyrite, pyrite and magnetite in a quartz-vein stockwork. Intense potassic alteration (K-feldspar) and silification of the host monzonite (East) and syenite (North) stocks grade outward to a propylitic alteration assemblage (chlorite, epidote, montmorillinite and calcite) accompanied by 1 to 4 per cent pyrite. Potassic alteration, accompanied by intense brecciation, quartz veining and upwards of 10 percent sulphides including bornite and chalcocite (Assessment Report 17316), is noted enveloping monzonite dykes peripheral to the MFJ prospect. Mineralization at the MFJ prospect has been tested by several trenches and 9 drill holes in 1982. The best drill intercept, from the East showing, was 1.07 per cent copper and 0.04 grams per tonne gold over 15 metres (Assessment Report 17316). Diamond drilling and surface sampling were reported to confirm the presence of porphyry copper minealization. A high grade zone has been identified in 1990 drill core, assaying 4.25 per cent copper and 6.17 grams per tonne gold (Assessment Report 20689).

BIBLIOGRAPHY

EMPR AR 1929-116; 1931-52; 1932-61
EMPR ASS RPT 3128, 6093, 6511, 7375, 7517, *8481, *17316, *20689, *21901
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
EMPR BULL 1-1932
EMPR EXPL 1975-E187; 1976-E188; 1977-E229; 1979-285; 1980-479; 1982-386; 1988-C227
EMPR GEM 1971-42
EMPR PF (In 104H 014 - Report on Ealue Lake Property, Keystone Explorations Ltd., 1980)
GSC MAP 1957-9
GSC OF 1005, *1080, 2241

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/07/17 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104H 002**

NATIONAL MINERAL INVENTORY:

NAME(S): **WEST**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 47 23 N
LONGITUDE: 129 53 18 W
ELEVATION: 1765 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of showing (Assessment Report 17316).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6405646
EASTING: 447185

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Pyrite
ASSOCIATED: Quartz Calcite Magnetite
ALTERATION: Silica Chlorite Calcite K-Feldspar Epidote Pyrite
ALTERATION TYPE: Propylitic Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 400 x 10 Metres STRIKE/DIP: 060/90 TREND/PLUNGE:
COMMENTS: Zone hosting several mineralized quartz vein systems.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Fragmental Feldspar Porphyritic Andesite
Quartz Monzonite Dike

HOSTROCK COMMENTS: A tabular monzonite dyke, possibly related to the Early Jurassic Rose and Edon Plutons, intrudes andesitic volcanics.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Tanzilla Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1987

COMMODITY	GRADE	
Silver	15.6000	Grams per tonne
Gold	0.0400	Grams per tonne
Copper	1.9000	Per cent

COMMENTS: Grab sample from trench intersecting mineralization.
REFERENCE: Assessment Report 17316.

CAPSULE GEOLOGY

The West showing lies approximately 8.0 kilometres southeast of Iskut village and 1.2 kilometres southwest of alkaline porphyry copper-gold mineralization at the MFJ prospect (104H 001). The showing is located in the high rolling terrain of the Tanzilla Plateau.

Refer to the MFJ prospect (104H 001) for local work history, and updated regional and local geology.

The West showing comprises several mineralized quartz vein systems within a 400 by 10 metre zone along the faulted western margin of a monzonite dyke. The dyke, possibly related to the Early Jurassic Rose and Edon plutons (Geological Survey of Canada Open File 1080), intrudes Lower Jurassic fragmental feldspar porphyritic andesite of the Lower Jurassic Hazelton Group (Open File 1997-3). The monzonite dyke and surrounding volcanics have been intensely brecciated and healed by quartz with minor calcite. Potassic and

CAPSULE GEOLOGY

propylitic alteration comprising K-feldspar, chlorite, epidote and pyrite surround the vein systems. Mineralization consisting of fine grained disseminations and stringers of chalcopyrite, bornite and pyrite, with associated magnetite, occur within a fine network of grey-blue quartz veins.

Three hand dug trenches have tested the showing and a grab sample assayed 1.9 per cent copper, 15.6 grams per tonne silver and 0.04 grams per tonne gold (Assessment Report 17316).

BIBLIOGRAPHY

EMPR AR 1929-116; 1931-52; 1932-61
EMPR ASS RPT 3128, 6093, 6511, 7375, 7517, 8481, *17316
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
EMPR BULL 1-1932
EMPR EXPL 1975-E187; 1976-E188; 1977-E229; 1979-285; 1980-479; 1982-386; 1988-C227
EMPR GEM 1971-42
GSC MAP 1957-9
GSC OF 1005, *1080, 2241

DATE CODED: 1991/07/24 CODED BY: JLG FIELD CHECK: N
DATE REVISED: 1998/08/13 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 003**

NATIONAL MINERAL INVENTORY: 104H13 Cu2

NAME(S): **TSETOGAMUS CREEK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13E
BC MAP:
LATITUDE: 57 55 17 N
LONGITUDE: 129 44 13 W
ELEVATION: 1250 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Approximate location (Annual Report 1929, page 116).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6420196
EASTING: 456345

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Triassic	Tsaybahe	Undefined Formation	

LITHOLOGY: Augite Porphyritic Meta Andesite

HOSTROCK COMMENTS: Lower Volcanic Unit.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Tanzilla Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The showing lies in the Tsetogamus Creek drainage basin, about 17 kilometres northwest of Iskut village.

Locally, the highly dissected terrain of the Tanzilla Plateau is underlain by Intermontane Belt volcanic and sedimentary units of Upper Paleozoic to Lower Mesozoic age. Regional mapping by the Geological Survey of Canada (Open File 1080) indicates that the local geology comprises augite porphyritic meta-andesite belonging to the Lower Volcanic Unit of the Middle Triassic Tsaybahe Group.

Brief prospecting in 1929 identified chalcopyrite mineralization and the area was subsequently staked. The nature of the occurrence was not described.

BIBLIOGRAPHY

EMPR AR 1929-116
GSC MAP 1957-9
GSC OPEN FILE *1080, 2241

DATE CODED: 1985/07/24
DATE REVISED: 1991/07/31
CODED BY: GSB
REVISED BY: JLG
FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104H 004**

NATIONAL MINERAL INVENTORY:

NAME(S): **EDON**, STAIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 48 12 N
LONGITUDE: 129 55 38 W
ELEVATION: 1500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Stain Zone (Assessment Report 8481).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6407192
EASTING: 444893

COMMODITIES: Copper, Gold, Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrite, Molybdenite
ASSOCIATED: Quartz
ALTERATION: Silica, Sericite, Pyrite, Tourmaline, Chlorite, Epidote
ALTERATION TYPE: Silicific'n, Sericitic, Tourmalinz'n, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork, Vein
CLASSIFICATION: Porphyry, Hydrothermal
DIMENSION: 1500 x 1000 Metres
STRIKE/DIP:
TREND/PLUNGE:
COMMENTS: Stain Zone.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	
Lower Jurassic			Rose and Edon Plutons

ISOTOPIC AGE: 198.5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Whole Rock

LITHOLOGY: Quartz Monzonite
Fragmental Feldspar Porphyritic Andesite

HOSTROCK COMMENTS: The monzonite stock is possibly related to the Rose and Edon Plutons; age date from Geological Survey of Canada Open File 1080.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1977
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	0.2000	Grams per tonne
Copper	0.0500	Per cent
Molybdenum	0.0100	Per cent

COMMENTS: Average grade over 1 metre.
REFERENCE: Assessment Report 8481.

CAPSULE GEOLOGY

The Edon showing lies on the western flank of Ehahcezetle mountain above Eddontenajon Lake, approximately 5 kilometres southeast of the village of Iskut. The showing occurs in the dissected highlands of the Tanzilla Plateau.

Refer to the MFJ prospect (104H 001), located 3.5 kilometres to the east-southeast, for work history, and local and regional geology.

The Edon showing comprises a large (1 by 1.5 kilometre) pyritic "Stain Zone" containing several mineralized occurrences with visible chalcopyrite and molybdenite. The quartz monzonite stock, which intrudes unnamed Upper Triassic to Lower Jurassic fragmental feldspar porphyritic andesite, hosts the occurrences and has undergone intense quartz-sericite alteration and the introduction of tourmaline. The stock is possibly related to the Early Jurassic Rose and Edon Plutons. The Stain Zone lies within a well developed propylitic

CAPSULE GEOLOGY

alteration envelope marked by abundant chlorite, epidote and pyrite.
A single drill hole tested the mineralization at depth, and the best assay was 0.05 per cent copper, 0.2 grams per tonne gold and 0.01 per cent molybdenum (Assessment Report 8481).

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EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC MAP 1957-9
GSC OF 1005, 1080, 2241

DATE CODED: 1991/08/06 CODED BY: JLG FIELD CHECK: N
DATE REVISED: 1998/08/13 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 005**

NATIONAL MINERAL INVENTORY: 104H12 Cu1

NAME(S): **RED-CHRIS**, MAIN, EAST,
CHRIS, RED, SUS,
WINDY, MONEY, WINDY 1-12,
RED CHRIS, YELLOW CHRIS, GULLEY,
FAR WEST

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104H12W
BC MAP:
LATITUDE: 57 41 59 N
LONGITUDE: 129 48 19 W
ELEVATION: 1562 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Main zone, 2.5 kilometres northwest of Kluea Lake (Assessment Report 6872).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6395565
EASTING: 452004

COMMODITIES: Copper, Gold, Silver, Lead, Zinc, Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite, Bornite, Pyrite, Sphalerite, Galena, Molybdenite
ASSOCIATED: Quartz, Pyrite, Magnetite, Carbonate, Gypsum
ALTERATION: Quartz, Sericite, Kaolinite, Ankerite, Pyrite, Carbonate, K-Feldspar, Biotite
COMMENTS: Also magnetite, hematite, martite, magnesite and epidote.
ALTERATION TYPE: Sericitic, Potassic, Carbonate, Silicific'n
MINERALIZATION AGE: Lower Jurassic
ISOTOPIC AGE: 203.8 +/- 1.3 Ma DATING METHOD: Uranium/Lead MATERIAL DATED: zircon

DEPOSIT

CHARACTER: Vein, Stockwork, Disseminated
CLASSIFICATION: Porphyry, Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au
DIMENSION: 1700 x 750 x 475 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: The crystallization age of the Red Stock, 203.8 plus/minus 1.3 ma (Lower Jurassic), is considered a firm maximum age for mineralization.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Lower Jurassic			Unnamed/Unknown Informal

ISOTOPIC AGE: 203.80 +/- 1.3 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Hornblende Feldspar Porphyry
Hornblende Monzonite Porphyry
Volcanic Wacke
Siltstone
Augite Porphyritic Basalt
Flow Breccia
Pillow Breccia
Mudstone
Volcanic Sandstone

HOSTROCK COMMENTS: Age date from Fieldwork 1996, pages 291-297.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: RED-CHRIS REPORT ON: Y

CATEGORY: Indicated YEAR: 1998
QUANTITY: 224500000 Tonnes

COMMODITY	GRADE	
Gold	0.3300	Grams per tonne
Copper	0.4190	Per cent

COMMENTS: Selective gravity mining of higher grade core. These figures were part of pre-feasibility study done by American Bullion Minerals Ltd.
REFERENCE: American Bullion Minerals Ltd. News Release, July 7, 1998.

INVENTORY

ORE ZONE: TOTAL REPORT ON: Y

CATEGORY: Indicated YEAR: 1998
QUANTITY: 522700000 Tonnes

COMMODITY	GRADE	
Gold	0.2720	Grams per tonne
Copper	0.3520	Per cent

COMMENTS: Prefeasibility report by Giroux Consultants Ltd. An "inner core" was identified as 118.9 million tonnes, grading 0.584 per cent copper and 0.470 grams per tonne gold. Both calculations are at a cut off of 0.2 per cent copper.
REFERENCE: Information Circular 1999-1, page 7.

CAPSULE GEOLOGY

The Red-Chris porphyry copper-gold deposit lies approximately 11 kilometres east of Highway 37 and 82 kilometres south of Dease Lake, in the highly dissected and rolling terrain of the Tanzilla Plateau.

The area was initially explored by Conwest Exploration Company in 1956 resulting in the staking of the Windy claims which subsequently lapsed after limited work. Great Plains Development Company of Canada staked the Money and Chris claims in 1969/1970 and conducted various surveys followed by two diamond drill-holes in 1970 totalling 309 metres. One of the holes intersected 0.25 per cent copper over 73 metres. Eight diamond drill-holes totalling 922 metres followed further surveys in 1972, including ground magnetics and induced polarization surveys. In 1970, Silver Standard Mines Limited staked the Red and Sus claims adjacent to the Great Plains property. Ecstall Mining Limited optioned the Silver Standard claims in 1973 and drilled 14 percussion holes, half of them intersecting low grade copper mineralization. In 1974, Texasgulf Canada Ltd. (formerly Ecstall Mining) came to an agreement with Silver Standard and Great Plains which allowed them to acquire an option on a 60 per cent interest in the combined Red and Chris groups. Drilling by Texasgulf in 1973, 1974, 1975, 1976, 1978, 1980 is reported to have totaled 16,476 metres in 118 percussion and diamond drill-holes. Property-wide geological, geochemical and geophysical surveys were also conducted during this time. No exploration work was conducted from 1981 to 1994.

As a result of a series of complex corporate takeovers and reorganizations, the ownership of the property was divided amongst Falconbridge (60%), Norcen Energy Resources (20%) and Teck Corporation (20%) in 1994. Great Plains had become wholly owned and subsequently dissolved by Norcen in 1975. American Bullion Minerals Ltd. acquired an 80 per cent interest in the property in early 1994, with Teck retaining the remainder. American Bullion conducted 21,417 metres of diamond drilling in 58 holes in 1994 and a further 36,830 metres in 115 diamond drill-holes in 1995.

The deposit is hosted by the Red stock, an east-northeast elongated intrusive body of pervasively quartz-sericite-ankerite-pyrite (phyllic) altered, and faulted, subvolcanic, hornblende monzonite porphyry intrusion. The stock intrudes and alters Upper Triassic Stuhini Group massive volcanic wackes, siltstone and augite-porphyritic basalt in the southwestern area of the Todagin Plateau. The southern margin of the stock is faulted against Middle Jurassic sedimentary rocks of the Bowser Lake Group. Augite phyric basalts, locally designated "Dynamite Hill volcanics" on the Red-Chris property, underlie the area directly north of the Red stock. They consist chiefly of monolithic flow and pillow breccias. Sedimentary rocks comprise thick sections of medium-grained, massive felspathic volcanic wacke with occasional thinner intervals of bedded mudstone-fine volcanic sandstone. R.M. Friedman has reported a new uranium-lead zircon crystallization-age determination for the Red Stock of 203.8 plus/minus 1.3 ma (Fieldwork 1996, page 294).

The following deposit description is largely an edited excerpt of the 1994 article by C.H. Ash and P.K. Stinson titled "Geology of the Todagin Plateau and Kinaskan Lake Area Northwestern British Columbia (Fieldwork 1994). The reader is referred to that article for further details.

Chalcopyrite and localized concentrations of bornite are commonly associated with zones of quartz stockwork and sheeted quartz veining. The quartz stockwork forms a steeply dipping, high-grade core zone associated with intense and pervasive carbonatization that is surrounded by and gradational into barren to weakly mineralized, phyllic (quartz-sericite-ankerite-pyrite) altered host stock. Quartz stockwork zones dip steeply to the north and parallel the long axis of the Red stock.

Early drilling outlined two coalescing, east-northeast trending mineralized zones designated the Main and East zones which make up

CAPSULE GEOLOGY

the Red-Chris deposit. More recent drilling by American Bullion Minerals has successfully defined continuity of high grade copper-gold reserves along strike and to depth from previously outlined mineralization. The strike length of the Red-Chris deposit is on the order of 1.7 kilometres in length with width ranging from 250 to 700 metres. Drilling in the East zone intersected significant copper mineralization to a depth of 750 metres with no evidence of diminishing. The deposit becomes both wider and richer with depth.

Cross-sections through the East and Main zones indicate that most of the higher grade copper and gold is contained within quartz stockwork zones. Local intersections of laterally discontinuous intense quartz stockwork, with narrow zones of sheeted quartz material are flanked by moderate to strongly developed quartz stockwork which invades carbonate-sericite-pyrite altered plagioclase-hornblende porphyritic hostrocks.

Quartz stockwork consists of planar, grey quartz envelopes and vein-fill material characterized by sharp contacts with the host plagioclase hornblende porphyry. Veinlets are from 2 millimetres to 2 centimetres wide and form a randomly orientated network pattern with at least two generations of veining. Disseminated chalcopyrite, in addition to minor pyrite, hematite and bornite are commonly found as both disseminations and thin veinlets in both quartz veins and selvages of hostrock between the veins.

In the stockwork zones, the host intrusion is affected by intense and pervasive carbonate alteration associated with lesser fine-grained quartz, sericite and sulphides. Mafic minerals are intensely altered to a probable combination of chlorite, sericite and ankerite. Plagioclase phenocrysts are locally kaolinized, but are more often strongly sericitized. Although difficult to detect in fresh drill core, orange-brown weathering of exposed core emphasizes the presence of abundant fine-grained iron carbonate. Preliminary scanning electron microprobe investigation indicates that hostrock selvages are dominated by roughly equal abundances of ankerite and iron-rich magnesite. These two minerals occur as a fine-grained, anhedral granular intergrowth with lesser pyrite and sericite.

Several zones of sheeted quartz-sulphide material associated with zones of intense silica flooding and quartz stockwork occur in the East zone. The fabric defined by the sheeted zone strikes between 070 and 090 degrees. Discontinuity of sheeted zones in drill core is most likely a function of later faulting. Sheeted material consists of 2 to 4-millimetre alternating bands of light and dark grey microcrystalline quartz carrying chalcopyrite and pyrite, with minor bornite. Dark grey quartz bands contain skeletal hematite and remnants of hostrock that are intensely altered to sericite, hematite and clay. In drill core the upper transition from intensely developed quartz stockwork mineralization to sheeted material is gradational, whereas the lower contact is faulted. This is indicated by the abrupt truncation of sheeting and intense stockwork by carbonate breccia.

Hole 94-106 cut a significant intersection of bornite mineralization. Between 206 and 495 metres depth bornite comprises more than half of the copper bearing mineral and locally dominates. It occurs as disseminations and thin 1 to 3-millimetre, fracture-filling stringers with hematite within the altered stock and to a lesser degree in quartz veins where it is locally abundant.

Data demonstrates a correlation of high copper with elevated gold and silver. The data also demonstrate that the highest concentrations of these elements are present in quartz-rich samples, either sheeted or stockwork. Other base metal concentrations are typically low with zinc being weakly anomalous. These elements appear to show no correlation with copper and gold values. Iridium was the only platinum group element assayed for. Abundances are below the detection limit of 5 ppb in all samples.

Four main alteration types are evident at Red-Chris. The most prominent consists of phyllic (plus carbonate) with interfingering mottled phyllic alteration and extends over an area of 2 to 3 square kilometres. Potassic alteration is sporadic and limited in both extent and intensity. Propylitic assemblages are prevalent in the mafic volcanics to the north of the Main and East zones and has been identified locally in late phase dikes.

Phyllic alteration is generally pervasive and is the most widespread alteration type. Generally, the altered rock is pale grey and retains some primary texture. Weak phyllic (to weak argillic) alteration of the Red stock has altered plagioclase to sericite and kaolinite. Locally plagioclase has a bleached appearance and typically hornblende is intensely altered to completely destroyed. In places, the groundmass appears to be silicified. However, the orange-brown colour of weathered drill core suggests the presence of significant amounts of carbonate. Preliminary review of thin

CAPSULE GEOLOGY

sections and SEM investigations suggest that carbonate material is composed predominantly iron-magnesite and ankerite, with usually 10 to 20 per cent replacement of the hostrock. Vein pyrite exceeds disseminated pyrite for a total content of 5 to 10 per cent. Weak quartz-pyrite plus/minus chalcopyrite stringers are cut by late, white calcite veins. Mottled phyllic alteration partially destroys primary porphyritic texture. It is characterized by distinctive, 3 to 7-millimetre spherical and irregular pale grey patches of intense quartz-sericite alteration that comprise from 10 to 15 per cent of the rock. Typically fine-grained to blebby pyrite occurs near the centre of these patches. Altered groundmass is beige, probably indicating significant ankerite replacement. Pyrite veins are common and have well developed sericite-quartz envelopes. Total pyrite content varies from 5 to 10 per cent.

On the whole, areas of potassic alteration are minor, representing roughly 5 to 10 per cent of the total alteration zones. Potassic zones are generally only a few metres wide and are discontinuous, with gradational to sharp contacts with the phyllic-altered host and quartz stockwork. Although locally the porphyritic texture is preserved, it is often totally destroyed and replaced by fine-grained potassium feldspar, giving the rock a light orange-brown to salmon colour. The potassic alteration assemblage includes 2 to 7 per cent hematite after magnetite (martite) and finely disseminated magnetite and rare veins. Generally, 2 to 4 per cent disseminated pyrite occurs in a fine-grained to blebby texture, with few pyrite stringers. Narrow quartz stingers contain pyrite and chalcopyrite. Locally, hornblende is altered to fine-grained, felted brown biotite. Panteleyev (Exploration and Mining in B.C. 1975) commented on the fact that hematite and siderite impart a buff pink appearance to hand specimens that may be mistaken for potassium feldspar flooding.

Propylitic alteration, is poorly developed. It consists of 5 per cent disseminated epidote and 2 to 5 per cent finely disseminated pyrite and has only been identified in the augite porphyry (Dynamite Hill) volcanics immediately to the north of the main zones of stockwork mineralization. No epidote was noted in drill core during the 1994 drilling program.

A gypsum zone located west to south-west of the Main zone contains weak to strong gypsum veining but its extent is poorly defined. These veins appear to be late and cut mineralization (Schink, 1977). Drilling during the 1994 field season was concentrated within the East and Main zones with very little work done in this area.

Carbonate veins and alteration of groundmass minerals to ankerite and iron-rich magnesite are widespread throughout the Red stock. Surrounding volcanics and sediments are also locally intensely carbonatized. Generally the zones external to the stock are barren of sulphides, appear to be very late and may be unrelated to the main copper-gold mineralizing event, at least in part.

Prominent east-northeast-trending structures have controlled the orientation of the Red stock and the zone of mineralization. Faults active either before or during the mineralizing event are generally healed and associated with intense silicification. The fault orientation has been defined as striking 060 to 090 degrees and dipping approximately 75 degrees to the south. These are normal faults with dominantly dip-slip movement. Fault gouge zones produced by reactivation of earlier structures vary from several centimetres to 50 metres in width and are a prominent feature throughout the drill core. The gouge material contains rounded centimetre-sized fragments of altered and mineralized (pyrite-chalcopyrite) Red stock in a matrix of clay, quartz and carbonate. As emphasized by Newell and Peatfield (CIMM Special Volume 46), disruption of the mineralized zone by faulting is an important aspect of the deposit but difficult to characterize on sections due to uncertainity in correlating the many fault zones from drill hole to drill hole.

The Red-Chris has been characterized, genetically as a porphyry copper-gold deposit (Panteleyev (Geology, Exploration and Mining in B.C. 1972; Exploration and Mining in B.C. 1975); Schink, 1977) or alkaline porphyry deposit (McMillan, Paper 1991-4; Newell and Peatfield, CIMM Special Volume 46). Both Schink (1977) and Newell and Peatfield have emphasized the apparent ambiguity of features that are indicative of both alkalic and calcalkalic deposit types. The overall size and, in particular, the metal signature, with significant gold values associated with higher grade copper and a molybdenum deficiency are clearly indicative of alkaline porphyry deposits. The nature of the mineralization, however, as predominantly quartz stockwork zones associated with intense and pervasive carbonatization and phyllic alteration of the host intrusion is not. Classification of the Red Chris deposit as to the

CAPSULE GEOLOGY

type of porphyry remains problematical. Reference to the deposit as strictly a copper-gold porphyry with no attempt to further refine the porphyry type is preferable at this stage.

The intensive exploration by American Bullion Minerals in 1994 and 1995 expanded the resource inventory of the Red-Chris deposit and located two new zones of mineralization.

Drilling in 1994 amounted to 21,400 metres in 58 holes, bringing the total number of holes drilled to date to 129. Based on a cutoff grade of 0.4 per cent copper, the indicated resource at Red-Chris is estimated at 100 million tonnes grading 0.58 per cent copper and 0.46 gram per tonne gold (Northern Miner - May 8. 1995). Consultant Fluor Daniel Wright has estimated the open-pit resource at 157 million tonnes grading 0.48 per cent copper and 0.37 gram per tonne gold, based on a 0.3 per cent copper cutoff (Northern Miner - June 12, 1995). Also in 1994, induced polarization and ground magnetic geophysical survey were conducted to help outline mineralization and identify potential new targets.

During 1995 American Bullion Minerals Ltd. (80 per cent) and Teck Corporation (20 per cent) conducted the largest exploration program in the province totalling approximately 36,830 metres in 115 diamond-drill holes. Drilling traced mineralization over a strike length in excess of 3 kilometres, adding approximately 400 metres of strike length to the Red-Chris deposit. It has also resulted in the identifying of potential new reserves in the Gully and Far West zones, collectively referred to as the Yellow-Chris zone located within about 1 kilometre of the western limit of the Red-Chris deposit. Some support for part of this work was from the Explore B.C. Program. At the beginning of the year, Fluor Daniel Wright Ltd. calculated mining reserves, based on a cutoff grade of 0.3 per cent copper in an open pit 300 metres deep, at 157 million tonnes grading 0.48 per cent copper and 0.37 gram per tonne gold. Two near-surface, higher grade stockwork copper-gold zones containing 100 million tonnes grading 0.58 per cent copper and 0.46 gram per tonne gold are potential starter pits (Information Circular 1996-1, pages 14,15).

The Gully zone is an east-trending area of quartz stockwork copper-gold mineralization. Ash (Fieldwork 1995) reported that 36 holes had outlined two parallel, subvertical intervals of copper-gold mineralization to a depth of roughly 300 metres that were separated by an unmineralized interval of gypsum stockwork, probably along a later fault. Roughly two-thirds of the mineralization is hosted by altered Red stock. The remainder is contained within a contact zone of sheeted Red stock with screens of feldspathic wacke country rock.

On the Far West zone, which occupies the northern part of the Yellow-Chris zone, copper-gold mineralization has been intersected to a depth of 250 metres over a 700-metre length with widths varying from 150 to 250 metres. Mineralization is hosted by both the Red stock and volcanic sediments. Grades are from 0.2 to 0.4 per cent copper with corresponding gold values in the range of 0.2 to 0.4 per cent copper.

Metal and sulphide zoning occur. From east to west, zones vary as follows (note Cu:Au = per cent Cu:grams per tonne Au):

1. East zone - mainly bornite, intense silicic alteration; Cu:Au about 1:0.8.
2. Main zone - chalcopyrite greater than bornite, pyrite 1-3 per cent, Cu:Au about 1:1, occasional molybdenite specks.
3. Gully zone - bornite is uncommon, cu:pyrite is about 1:1, pyrite 3-4 per cent, Cu:Au about 1:2.
4. Far West zone - pyrite greater than chalcopyrite, pyrite 3-4 per cent, Cu:Au about 1:3, gypsum veins, occasional base metal sulphides in quartz-carbonate veins.

Sulphides in relative abundance order are pyrite, chalcopyrite, bornite, magnetite(hematite), sphalerite, galena and molybdenite. Potentially economic commodities are copper, gold and silver (averages 10 parts per million).

Deposits are apparently controlled by east-northeast faults and stepped down to the west and offset laterally along younger northerly faults. Thus, the western deposits represent progressively shallower parts of the hydrothermal system.

In April 1996, a prefeasibility report by Fluor Daniel Wright for American Bullion Minerals Ltd. identified a geological resource, defined by 244 drill holes totalling 71,000 metres, of 550,000,000 tonnes grading 0.323 per cent copper and 0.254 grams per tonne gold, defined by a 0.2 per cent copper cut-off (Information Circular 1998-1, page 19). The capital cost for a 90,000-tonne per day milling operation was estimated at $541 million; mine life was estimated at 16 years.

CAPSULE GEOLOGY

In June 1997, the company came under new management and formulated a new strategy which calls for a dozer push open-pit mining method resulting in a daily mill throughput of 30,000 tonnes over a 20 year mine life, allowing for selective mining of a higher grade core of the deposit, estimated to contain 210 million tonnes grading approximately 0.46 per cent copper and 0.38 grams per tonne gold (Information Circular 1998-1, page 19). This new plan would result in significant reductions in development cost, capital cost of mining equipment, and simplify the operation. The company intends to present this new strategy to the Northwest Mine Development Review Committee early in 1998 and plans an aggressive program in 1998. In April 1998, Giroux Consultants Ltd. estimated a new resource of 522.7 million tonnes grading 0.352 per cent copper and 0.272 grams per tonne gold at a cut-off grade of 0.2 per cent copper. Furthermore, a company review has identified an "inner core" of 118.9 million tonnes grading 0.584 per cent copper and 0.470 grams per tonne gold at the same cut-off (Information Circular 1999-1, page 7).

The results of a pre-feasibility study were announced in a News Release dated July 7, 1998. The total resource is calculated to be 224.5 million tonnes grading 0.419 per cent copper and 0.330 gram per tonne gold over the 20.5 years of mine life. The stripping ratio would be 1.4:1 and the mill throughput would be 30,000 tonnes per day. Copper/gold recovery is projected to be 88 per cent/63 per cent (American Bullion Minerals Ltd., News Release, July 7, 1998).

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N MINER Aug.7,21, 1975; May 8, June 12, July 3, 1995; May 4, 1998
PR REL American Bullion Minerals Ltd., June 11, Nov. 19, 1997; Mar.6, Apr.22, July 7, 1998; Dec.23, 2002; American Reserve Energy Corp., Jan.15, 2003
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DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/07/07 REVISED BY: GJP FIELD CHECK: Y

MINFILE NUMBER: **104H 006**

NATIONAL MINERAL INVENTORY:

NAME(S): **SOUTH**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 47 14 N
LONGITUDE: 129 51 07 W
ELEVATION: 1525 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of large gossan in southeast corner of Rok claim, 10 kilometres southeast of Iskut Village.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6405340
EASTING: 449345

COMMODITIES: Copper, Lead, Gold, Silver

MINERALS

SIGNIFICANT: Chalcopyrite, Bornite, Galena, Pyrite
ASSOCIATED: Pyrrhotite
ALTERATION: Limonite, Malachite, Azurite, Epidote, Chlorite, Calcite
ALTERATION TYPE: Pyrite, Propylitic, Oxidation
MINERALIZATION AGE: Middle Jurassic

DEPOSIT

CHARACTER: Stockwork, Vein
CLASSIFICATION: Porphyry, Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	
Lower Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Feldspar Aphyric Andesite, Andesite Flow, Syenite

HOSTROCK COMMENTS: Quart veining in fractured andesite adjacent to syenite intrusion.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
METAMORPHIC TYPE: Contact
RELATIONSHIP:
GRADE: Greenschist
COMMENTS: Regional lower greenschist metamorphism.

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Copper	0.6600	Per cent
Lead	1.3700	Per cent

COMMENTS: Highly fractured andesite, chalcopyrite, and galena in quartz vein.
REFERENCE: Assessment Report 20689.

CAPSULE GEOLOGY

The South showing lies on the southeast flank of Ehahcezetle Mountain above Ealue Lake, approximately 10 kilometres southeast of the village of Iskut. The physiographic terrane consists of dissected highlands belonging to the Tanzilla Plateau.

Refer to MFJ prospect (104H 001) for local work history and updated local geology.

The South showing comprises a large (2.0 by 2.0 kilometres) crescent shaped zone of weak pyritization in andesitic volcanics of the Lower Jurassic Hazelton Group intruded by an Early Jurassic syenite plug. Propylitic alteration (chlorite, epidote and calcite) developed along fractures and veins is common throughout the area. Mineralization consists of scattered occurrences of chalcopyrite, bornite, galena, pyrite and pyrrhotite in quartz veins, quartz vein stockworks and fracture fillings. Oxidation of the pyritic zone results in ubiquitous limonitic staining with malachite and azurite highlighting mineralization. Grab samples have reported upwards of 0.66 per cent copper and 1.7 per cent lead. A float sample collected in this region reported 4.0 grams per tonne gold, 11.1 grams per

CAPSULE GEOLOGY

tonne silver and 1.7 per cent copper. The centre of the South showing lies 2.0 kilometres southeast of the MFJ prospect.

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EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC MAP 1957-9
GSC OF 1005; 1080; 2241
Falconbridge File

DATE CODED: 1991/07/24 CODED BY: JLG FIELD CHECK: N
DATE REVISED: 1998/08/13 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 007** NATIONAL MINERAL INVENTORY: 104H14 Cu1

NAME(S): **PAY**, PAY 50, SISTER MARY, BOW 9, MOUNT SISTER MARY, MCBRIDE RIVER

STATUS: Prospect MINING DIVISION: Liard
REGIONS: British Columbia
NTS MAP: 104H14E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 57 58 34 N NORTHING: 6426074
LONGITUDE: 129 13 52 W EASTING: 486330
ELEVATION: 1035 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of anomalous copper zone (Property File - Bowser Resources Ltd., 1969)

COMMODITIES: Copper Silver Molybdenum

MINERALS
SIGNIFICANT: Chalcopyrite
COMMENTS: Trace molybdenum from assays.
ASSOCIATED: Pyrite Magnetite
ALTERATION: Sericite Chlorite
ALTERATION TYPE: Sericitic Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Porphyry Hydrothermal
SHAPE: Regular
MODIFIER: Fractured Folded
DIMENSION: 1400 x 450 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Copper soil anomaly.

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic			Hotailuh Batholith

LITHOLOGY: Biotite Hornblende Quartz Monzodiorite
Diorite
Granodiorite
Granite

HOSTROCK COMMENTS: The Hotailuh Batholith is Late Triassic to Late Jurassic in age.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Spatsizi Plateau
TERRANE: Stikine Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1970
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	6.8000	Grams per tonne
Copper	0.0500	Per cent

COMMENTS: Composite grab sample from the best mineralization in a 33 metre long trench on the Mount Sister Mary zone.
REFERENCE: Property File - Bowser Resources Ltd., 1970.

CAPSULE GEOLOGY

The Pay prospect lies on the western flank of Mount Sister Mary, approximately 1.6 kilometres west-southwest of the peak and 2.8 kilometres east-northeast of the junction between the Stikine and McBride Rivers. Rugged mountains to the north of the property and strongly dissected rolling highlands to the south marks the divide between the Cassiar Mountains and Spatsizi Plateau.

Copper mineralization in the McBride River area was first noted by Gabrielse during the course of mapping for the Geological Survey of Canada (Open File 1005). Extensive staking, geological mapping and trenching, with limited soil and rock sampling, has been conducted over the prospect and adjoining ground from 1969 to 1970.

The area lies within the Stikine arch, which is bounded to the south by the Bowser Basin. The general east-west orientation of

CAPSULE GEOLOGY

bedding, folds and faults found along the Stikine arch contrasts with the dominant northwest strike of lithological units within the Stikinia terrane. Recent mapping by the Geological Survey of Canada (Open File 2241) defines the underlying lithology as island arc related volcanics and sediments of Upper Triassic to Middle Jurassic age which were deposited in the Hazelton eugeosynclinal trough. Extensive plutonism from the Late Triassic to the Late Jurassic emplaced dioritic, monzodioritic, granodioritic and granitic phases of the Hotailuh Batholith. These units have been deformed by regional lower greenschist metamorphism and folding during the Lower Jurassic and open folding during the Upper Jurassic.

The Pay prospect comprises a large (1400 by 450 metres) copper soil anomaly enveloping three bedrock showings. Chalcopyrite occurs as disseminations and hairline fracture fillings with abundant associated pyrite and magnetite in biotite-hornblende quartz monzodiorite. The host rock is weakly sericitized and chloritized.

A composite grab sample, from the Mount Sister Mary zone, of the best mineralization in a 33 metre long bulldozer trench assayed 0.05 per cent copper, 6.8 grams per tonne silver and a trace of molybdenite (Property File - Bowser Resources Ltd., 1970).

BIBLIOGRAPHY

EMPR ASS RPT 3203
EMPR GEM 1969-47; 1971-43
EMPR PF (*Bowser Resources Ltd., Report on the McBride River Property, 1969; Bowser Resources Ltd., Qualifying Report on McBride River Property, 1970)
GSC OF 1005, *2241

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/08/19 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 008**

NATIONAL MINERAL INVENTORY:

NAME(S): **LYNNE**, LYNNE 1-16

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H16E
BC MAP:
LATITUDE: 57 52 52 N
LONGITUDE: 128 09 08 W
ELEVATION: 1375 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of claim block (Property File - Umex Corp. Ltd., 1974).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6415789
EASTING: 550277

COMMODITIES: Copper, Molybdenum

MINERALS
SIGNIFICANT: Pyrite, Molybdenite
COMMENTS: Copper sulphides.
ASSOCIATED: Quartz
ALTERATION: K-Feldspar, Epidote, Calcite
ALTERATION TYPE: Potassic, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Porphyry, Hydrothermal
SHAPE: Regular

HOST ROCK
DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Upper Triassic	Stuhini	Unnamed/Unknown Formation	
Triassic-Jurassic			Hotailuh Batholith

LITHOLOGY: Amphibolite
Argillite
Gneissic Diorite
Porphyritic Volcanic
Chloritic Schist
Chert
Monzodiorite
Granodiorite
Granite

HOSTROCK COMMENTS: Informally named Stikine Batholith probably related to the Late Triassic to Late Jurassic Hotailuh Batholith.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Spatsizi Plateau
TERRANE: Stikine
METAMORPHIC TYPE: Regional
Plutonic Rocks RELATIONSHIP: Pre-mineralization
GRADE: Amphibolite
COMMENTS: Paleozoic units are amphibolite grade; Mesozoic are lower greenschist.

CAPSULE GEOLOGY

The Lynne showing lies within the Lynne claims which are located 5.9 kilometres northeast of the Stikine River. The moderately dissected rolling terrain is typical of the Spatsizi Plateau.

The property was briefly explored from 1973 to 1974, during which time mapping, soil sampling, IP and ground magnetic surveys were conducted.

The property lies in the Stikine arch which is bounded to the south by the Bowser Basin. The general east-west trend of faulting and folding along the Stikine arch contrasts with the dominantly northwest trend found in the Stikinia terrane. Mapping by the Geological Survey of Canada defines the underlying lithology as "polydeformed Mississippian to Permian chloritic schist, chert and amphibolite and massive Upper Triassic Stuhini Group porphyritic volcanics" (Open File 1005; Paper 84-1). Extensive plutonism during the Late Triassic emplaced dioritic, monzodioritic, granodioritic and granitic phases of the informally named Stikine Batholith which is likely related to the Late Triassic to Late Jurassic Hotailuh Batholith. Paleozoic units are regionally metamorphosed to amphibolite grade and lower Mesozoic rocks to lower greenschist grade.

The Lynne showing comprises sparse molybdenite, copper sulphides (mineral type not stated) and pyrite in quartz veins hosted by a roof

CAPSULE GEOLOGY

pendant of amphibolite in gneissic diorite of the Stikine Batholith. K-Feldspar, epidote and calcite veins intrude amphibolite and argillite units marginal to the batholith. A second minor occurrence of copper mineralization, in quartz veins hosted by argillite, is located in the southwest corner of the property. Analysis of mineralized bedrock was not reported; overall the mineralization was described as minor and of non-economic potential.

BIBLIOGRAPHY

EMPR PF (*Umex Corporation Ltd., Report on the Lynne claims, 1974)
GSC MAP 1957-9
GSC OF *1005
GSC P 84-1, pp. 67-73

DATE CODED: 1991/08/22 CODED BY: JLG FIELD CHECK: N
DATE REVISED: 1991/08/22 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 009**

NATIONAL MINERAL INVENTORY: 104H14 Cu3

NAME(S): **JOY 87**, BOW 7, TWO CIRQUE, MCBRIDE RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H14E
BC MAP:
LATITUDE: 57 59 52 N
LONGITUDE: 129 10 07 W
ELEVATION: 1830 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of prospect area (Property File - Bowser Resources Ltd., 1969).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6428475
EASTING: 490033

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
ASSOCIATED: Magnetite Hematite Malachite Chrysocolla
ALTERATION: Epidote Silica Hematite Malachite Chrysocolla
ALTERATION TYPE: Epidote Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION: 300 x 100 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: North trending zone hosting mineralized fractures which individually trend northwest.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Porphyritic Andesite Flow
Porphyritic Andesite Breccia
Porphyritic Andesite Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Cassiar Mountains
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCHES
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1969
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	6.8000	Grams per tonne
Gold	0.1700	Grams per tonne
Copper	0.1500	Per cent

COMMENTS: Average assay from several fractures 1.2 to 1.5 metres wide.
REFERENCE: Property File - Bowser Resources Ltd., 1969.

CAPSULE GEOLOGY

The Joy 87 prospect area is located 3.8 kilometres east of McBride River and 3.6 kilometres northeast of Mount Sister Mary. The rugged mountainous terrain with peak elevations of 1900 to 2000 metres is characteristic of the southern Cassiar mountains.

Copper mineralization in the McBride River area was first noted by Gabrielse during the course of mapping for the Geological Survey of Canada (Open File 1005). Extensive staking, geological mapping, airborne magnetic surveying, hand trenching and minor lithogeochemical sampling has been conducted over the prospect and adjoining ground from 1969 to 1970.

The area lies within the Stikine arch which is bounded to the south by the Bowser Basin. The general east-west trend of bedding, folding and faulting found along the Stikine arch contrasts with the dominant northwest trend of lithological units within the Stikinia terrane. Recent mapping by the Geological Survey of Canada (Open

CAPSULE GEOLOGY

File 2241) defines the underlying lithology as island arc related volcanics and sediments of Upper Triassic to Middle Jurassic age which were deposited in the Hazelton eugeosynclinal trough. Extensive plutonism from the Late Triassic to the Late Jurassic emplaced dioritic, monzodioritic, granodioritic and granitic phases of the Hotailuh Batholith. These units have been deformed by regional lower greenschist metamorphism and folding during the Lower Jurassic and open folding during the Upper Jurassic.

The Joy 87 prospect comprises several narrow fractures in a 300 by 100 metre zone. The zone has a north trend, however individual fractures have a northwest orientation. Host rocks comprise unnamed Upper Triassic to Lower Jurassic porphyritic andesite flows, breccia and tuffs. Chalcopyrite with associated pyrite, pyrrhotite, magnetite and hematite occurs as fissure fillings accompanied by partial alteration of the host rock to epidote and quartz. Malachite and chrysocolla are common on weathered surfaces. Composite rock chip samples taken across 1.2 to 1.5 metre widths averaged 0.15 per cent copper, 0.17 grams per tonne gold and 6.8 grams per tonne silver and individual samples assayed up to 2.01 per cent copper and 1.36 grams per tonne gold (Property File - Bowser Resources Ltd., 1969).

BIBLIOGRAPHY

EMPR ASS RPT 3203
EMPR GEM 1969-47; 1971-43
EMPR PF (In 104H 007 - *Bowser Resources Ltd., Report on McBride River Project, 1969)
GSC OF 1005, *2241

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/08/19 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 010**
NATIONAL MINERAL INVENTORY: 104H14 Cu2

NAME(S): **JOY 84**, BOW 4, MCBRIDE RIVER

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104H14E
BC MAP:
LATITUDE: 57 59 56 N
LONGITUDE: 129 02 48 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Trenched zone (Property File - Bowser Resources Ltd., 1969).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6428587
EASTING: 497241

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcocite
ASSOCIATED: Epidote Zeolite Aragonite
ALTERATION: Epidote Zeolite Aragonite Malachite
ALTERATION TYPE: Zeolitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION: 75 Metres STRIKE/DIP: 340/ TREND/PLUNGE: /
COMMENTS: Mineralized fracture zone orientated north-northwest and measures 75 metres in width; length is unknown.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Massive Porphyritic Andesite
Amygdaloidal Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Spatsizi Plateau
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist
COMMENTS: Boundary zone between the Cassiar Mountains and the Spatsizi Plateau.

INVENTORY

ORE ZONE: TRENCHES REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1969
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Copper	0.2100	Per cent

COMMENTS: Rock chip sample from 0.6 by 3.0 metre panel.
REFERENCE: Property File - Bowser Resources Ltd., 1969.

CAPSULE GEOLOGY

The Joy 84 prospect area is located 9.75 kilometres east-northeast of Mount Sister Mary and 7.3 kilometres north of the Stikine River. Rugged mountains to the north of the property and deeply incised rolling highlands to the south marks the division between the Cassiar Mountains and Spatsizi Plateau.

Copper mineralization in the McBride River area was first noted by Gabrielse during the course of mapping for the Geological Survey of Canada (Open File 1005). Extensive staking, geological mapping, airborne magnetic surveying, bulldozer trenching and minor soil and lithogeochemical sampling has been conducted over the prospect and adjoining ground from 1969 to 1971.

The area lies within the Stikine arch which is bounded to the south by the Bowser Basin. The general east-west orientation of bedding, folding and faulting found along the Stikine arch contrasts with the dominant northwest trend of lithological units within the Stikinia terrane. Recent mapping by the Geological Survey of Canada (Open File 2241) defines the underlying lithology as island arc related volcanics and sediments of Upper Triassic to Middle Jurassic age, which were deposited in the Hazelton eugeosynclinal trough.

CAPSULE GEOLOGY

Extensive plutonism from the Late Triassic to the Late Jurassic emplaced dioritic, monzodioritic, granodioritic and granitic phases of the Hotailuh Batholith. These units have been deformed by regional lower greenschist metamorphism and folding during the Lower Jurassic and open folding during the Upper Jurassic.

The Joy 84 prospect comprises a 75-metre wide, north-northwest striking mineralized fracture zone hosted by unnamed Upper Triassic to Lower Jurassic massive porphyritic and amygdaloidal andesite. The length of the zone is unknown; however the Sec 5 showing (104H 028), 900 metres to the south-southeast, may lay on strike. Chalcocite, as fissure fillings, is accompanied by alteration masses of epidote, pinkish zeolite and aragonite. Malachite is common on weathered surfaces. Approximately 1.2 kilometres of bulldozer trenching (part of a larger 5.5 kilometre survey) tested the prospect. A rock chip sample from a 0.6 by 3.0 metre panel assayed 0.21 per cent copper (Property File - Bowser Resources Ltd., 1969).

BIBLIOGRAPHY

EMPR ASS RPT 3203
EMPR GEM 1969-47; 1971-43
EMPR PF (In 104H 007 - *Bowser Resources Ltd., Report on McBride River Project, 1969)
GSC OF 1005, *2241

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/08/20 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 011**

NATIONAL MINERAL INVENTORY:

NAME(S): **RAM**, RAM 1-10

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H12W
BC MAP:
LATITUDE: 57 38 20 N
LONGITUDE: 129 59 25 W
ELEVATION: 1700 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of claim block (Property File - Texas Gulf Inc., 1974).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6388939
EASTING: 440879

COMMODITIES: Molybdenum

MINERALS
SIGNIFICANT: Molybdenite
COMMENTS: Minor pyrite, few flakes of molybdenite.
ASSOCIATED: Pyrite
COMMENTS: Orange staining.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Triassic	Hazelton	Unnamed/Unknown Formation	
Jurassic-Cretaceous	Bowser Lake	Unnamed/Unknown Formation	

LITHOLOGY: Felsic Volcanic

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
Bowser Lake
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Ram property lies 9.5 kilometres south of Eddontenajon Lake and 13 kilometres south-southwest of the Red-Chris copper-gold porphyry deposit (104H 005).

Geological mapping and geochemical sampling, of soils and stream sediments, was conducted between 1974 and 1975 by Texas Gulf Inc on it's Ram claims.

The area is underlain by felsic volcanics and volcaniclastic rocks of the Lower Jurassic Hazelton Group. A broad region of orange staining (gossan?) developed predominantly in felsic rocks hosts minor pyrite and a few flakes of molybdenite.

BIBLIOGRAPHY

EMPR EXPL 1975-E185
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR GEM 1974-340
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
EMPR PF (*Texas Gulf Inc., Affidavit of Forfeiture, 1974 (with report and maps of Ram Group)
GSC MAP 1957-9
GSC OF 1005, 1080, 2241
Falconbridge File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/08/13 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 012**

NATIONAL MINERAL INVENTORY:

NAME(S): **COYOTE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 45 18 N
LONGITUDE: 129 54 15 W
ELEVATION: 1466 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of drill holes (Assessment Report 5739).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6401793
EASTING: 446192

COMMODITIES: Molybdenum, Copper

MINERALS
SIGNIFICANT: Pyrite, Pyrrhotite, Molybdenite, Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Silica, Sericite
ALTERATION TYPE: Sericitic, Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Stockwork, Disseminated
CLASSIFICATION: Porphyry, Hydrothermal
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	
Lower Jurassic			Rose and Edon Plutons

ISOTOPIC AGE: 198.5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Whole Rock

LITHOLOGY: Quartz Monzonite Dike
Monzodiorite
Porphyritic Andesite
Lithic Wacke

HOSTROCK COMMENTS: The dyke is possibly related to the Rose and Edon Plutons (Geological Survey of Canada Open File 1080).

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Tanzilla Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Coyote showing lies in the Coyote Creek drainage basin, approximately 1.2 kilometres west of Ealue Lake and 10.5 kilometres south-southeast of the village of Iskut.

The area was initially explored in 1975 by geological and geochemical means, followed by a limited (5 holes, 293 metres) percussion drilling program. The property has seen minimal exploration since that time.

The property is extensively covered by Quaternary surficial deposits; limited bedrock exposures suggest that the underlying geology consists of flows, tuffs and breccia of the Lower Jurassic Hazelton Group. At the Coyote showing, this sequence has been intruded by a monzodiorite body which was itself intruded by a quartz monzonite dyke, possibly related to the Early Jurassic Rose and Edon Intrusions (Geological Survey of Canada Open File 1080).

The Coyote showing comprises a mineralized quartz vein with minor sections of stockwork hosted by a quartz monzonite dyke. The host rock has undergone propylitic alteration with quartz-sericite alteration concentrated along the vein margins. Mineralization comprises locally abundant disseminated pyrite and pyrrhotite with rare disseminations of molybdenite and chalcopyrite. Analytical results from drill chips were not reported.

BIBLIOGRAPHY

EMPR GEM 1975-E186
EMPR ASS RPT *5739, *20689
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-

BIBLIOGRAPHY

174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; *1997-3
GSC MAP 1957-9
GSC OF 1005, 1080, 2241

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/08/13 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 013**

NATIONAL MINERAL INVENTORY:

NAME(S): **BONANZA**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H12E
BC MAP:
LATITUDE: 57 44 53 N
LONGITUDE: 129 39 11 W
ELEVATION: 1190 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Drill Holes 80-1 to 80-3 (Assessment Report 9132).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6400848
EASTING: 461128

COMMODITIES: Copper, Gold, Lead, Zinc, Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrite, Galena, Sphalerite
ASSOCIATED: Quartz, Carbonate
ALTERATION: Epidote, Chlorite, Pyrite, Sericite, Biotite, Carbonate, Magnetite, Hematite
COMMENTS: Also specularite.
ALTERATION TYPE: Propylitic, Sericitic, Biotite, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork, Disseminated
CLASSIFICATION: Porphyry, Hydrothermal
SHAPE: Regular
MODIFIER: Fractured

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Triassic Lower Jurassic	Tsaybahe	Unnamed/Unknown Formation	Unnamed/Unknown Informal

LITHOLOGY: Augite Trachyandesite
Porphyritic Basalt
Quartz Feldspar Porphyritic Dike
Feldspar Porphyry
Porphyritic Dacite
Volcaniclastic Wacke
Sandstone
Siltstone

HOSTROCK COMMENTS: Middle Triassic Tsaybahe Group, Lower Volcanic Unit is intruded by Early Jurassic dykes and a subvolcanic pluton.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
Bowser Lake
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist
COMMENTS: Regional lower greenschist metamorphism.

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1980
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	0.7900	Grams per tonne
Copper	0.2130	Per cent
Molybdenum	0.0132	Per cent

COMMENTS: Best grade over 3 metres. The average is 0.02 to 0.08 per cent copper, 0.04 to 0.16 grams/tonne gold, 0.001 to 0.002 per cent molybdenite.
REFERENCE: Assessment Report 9132.

CAPSULE GEOLOGY

The Bonanza showing is located approximately 4 kilometres south-southwest of the Klappan River and McEwan Creek junction. This showing is 10.5 kilometres east-northeast of the Red-Chris porphyry copper deposit (104H 005). The property lies in the high rolling terrain of the Tanzilla Plateau.

The property was staked in 1975 and explored by geological, geochemical and geophysical methods up to 1980.

The property lies within the Stikinia terrane of the

CAPSULE GEOLOGY

Intermontane Belt. The regional geology is dominated by the Stikine arch which is bounded to the south by the Bowser Basin. Exposed along the southern flank of the Stikine arch are Permian or older sediments, metasediments, metavolcanics and intrusions. Unconformably overlying the Paleozoic rocks are volcanic arc related extrusives and sediments ranging in age from Middle Triassic (Tsaybahe Group) to Middle Jurassic (unnamed units). The Bowser Lake Group, a megacycle succession of fine to coarse clastic sediments representing a prograding delta, was deposited in the Bowser Basin from the Middle Jurassic to Lower Cretaceous. Unconformably overlying the eastern margin of the Bowser Lake Group are medium to coarse grained clastic, nonmarine sediments of the Lower to Upper Cretaceous Sustut Group. The bulk of plutonic rocks in the region belong to the Hotailuh Batholith which ranges in age from Late Triassic to Late Jurassic and intrudes all units older than the Bowser Lake Group. The intrusions are predominantly hornblende monzodiorites, granodiorites and diorites but include rare quartz monzonite and syenite systems. The northwest trending folds and contraction faults found in the Bowser Basin contrast with the dominantly east-west faulting found along the southern flank of the Stikine arch. Rock units older than the Bowser Lake Group have undergone at least one phase of regional metamorphism.

Underlying the prospect area are lower greenschist metamorphosed augite trachyandesite, porphyritic basalt and dacite, with minor interbeds of volcaniclastic wacke, sandstone and siltstone, mapped by the Geological Survey of Canada (Open File 2241) as the Upper Volcanic Unit of the Middle Triassic Tsaybahe Group. Locally intruding the above units are quartz feldspar porphyritic dykes and a feldspar porphyritic sub-volcanic intrusive believed to be related to the mineralizing event. The showing lies near the axial trace of a north trending upright syncline.

Surrounding rocks are pervasively altered to a chlorite-carbonate-pyrite assemblage and locally to epidote-chlorite. Narrow sections of intense host rock alteration, to sericite-carbonate-pyrite with minor biotite, occur along a stockwork system of quartz-carbonate veinlets containing chalcopyrite-pyrite with minor galena-sphalerite and associated magnetite-hematite-specularite. Three diamond drill holes tested the mineralization and gave an average grade of 0.02 to 0.08 per cent copper, 0.04 to 0.16 grams per tonne gold and 0.001 to 0.002 per cent molybdenum. However, assays up to 0.213 per cent copper, 0.79 grams per tonne gold and 0.0132 per cent molybdenum were encountered over a 3 metre intersection (Assessment Report 9132).

BIBLIOGRAPHY

EMPR ASS RPT 6016, 6368, 7871, 8351, *9132
EMPR EXPL 1975-E187; 1976-E186; 1977-E228; 1979-284,285; 1980-478
GSC MAP 1957-9
GSC OF *2241

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/08/09 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 014**

NATIONAL MINERAL INVENTORY:

NAME(S): **HI**, HI 1-4, KLAPPAN ROSE, LOW, CHANCE, SHORE, CORE, SUN, WIT

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 47 06 N
LONGITUDE: 129 49 58 W
ELEVATION: 1235 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Adit (Assessment Report 3128).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6405078
EASTING: 450481

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
ASSOCIATED: Quartz Calcite Malachite Hematite Specularite
ALTERATION: Chlorite Epidote Sericite Clay Malachite Hematite Specularite
ALTERATION TYPE: Propylitic Argillic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION:
STRIKE/DIP: 160/65
TREND/PLUNGE:
COMMENTS: Attitude of shear zone.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	
Lower Jurassic			Rose and Edon Plutons

LITHOLOGY: Andesitic Tuff
Dacitic Tuff
Andesite
Rhyolite
Volcaniclastic
Agglomerate
Carbonate
Syenite Sill
Andesitic Volcanic Breccia
Andesitic Volcanic Conglomerate

HOSTROCK COMMENTS: Lower Jurassic syenite sill intrudes Lower Jurassic volcanics and sediments.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: ADIT
REPORT ON: N

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

COMMODITY	GRADE	
Copper	1.1700	Per cent

COMMENTS: Two metre chip sample from adit.
REFERENCE: Assessment Report 9556.

CAPSULE GEOLOGY

The Hi prospect (previously known as the Klappan Rose) lies on a precipitous cliff face approximately 1.5 kilometres north of Ealue Lake and 10 kilometres southeast of the village of Iskut. The prospect is located in the strongly dissected highlands of the Tanzilla Plateau.

The area was first explored in 1929 when an adit and several trenches exposed visible copper mineralization. The property was

CAPSULE GEOLOGY

extensively explored by geological, geochemical and geophysical means from 1970 to 1981. Kylite Ventures conducted a rock sampling program and a magnetometer survey in 1991.

A 3-year mapping (1994-1996) program headed by Chris Ash of the B.C. Geological Survey has led to an updated stratigraphic framework for parts of NTS mapsheets 104G/9 and 16 and 104H12 and 13, including the area of this occurrence. This new interpretation is published in Fieldwork 1994, Fieldwork 1995; Fieldwork 1996; and Open File 1997-3.

Unit lJavb of the Lower Jurassic Hazelton Group underlies much of the area to the northwest of Eaulue and consists of andesitic volcanic breccias and conglomerates (Open File 1997-3). These are described as grey-green and maroon, feldspar hornblende-porphyritic andesitic to dacitic debris flows and lahars; minor flows; with intervals of green and maroon epiclastic conglomerate and medium to coarse-grained crystal lithic wacke with angular, red mudstone fragments. In this area, this unit is further defined as being epidote-chlorite-calcite altered.

Property reports indicate that the Hi property is underlain by moderately dipping (strike 130 degrees, dip 40 +/- 20 degrees northeast) stratified units consisting dominantly of green, maroon and buff coloured volcanic flows, tuffs and agglomerates of andesitic to rhyolitic composition, with minor volcaniclastic and carbonate sedimentary units. The above units have been intruded by a 10 to 20 metre thick syenite sill which may be related to the monzonite stocks of the Early Jurassic Edon and Rose Plutons, mapped on the adjoining (2.5 kilometres to the west-northwest) MFJ prospect (104H 001).

Mineralized shears are developed in andesite to dacite tuffs and limestone above an intruding syenite sill. Shears strike 105 to 180 degrees and are steeply dipping. Selectively pervasive alteration comprising chlorite, epidote, calcite and silica previously described as "skarn" envelopes the shear zone. In the shears themselves, pervasive alteration of the host rock has left a quartz-sericite-clay matrix. Chalcopyrite, pyrite and pyrrhotite occur as disseminations and bedding replacement(?) in a quartz-calcite gangue with associated specularite, hematite and malachite. The prospect has been tested by three diamond drill holes and numerous trenches. The mineralization is generally copper rich and gold-silver poor, a two-metre chip sample from the adit assayed an average of 1.17 per cent copper (Assessment Report 9556).

BIBLIOGRAPHY

EMPR ASS RPT 3128, 5703, 6124, 6203, 7418, *9556, 21889
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR EXPL 1975-E188; 1976-E188; 1979-285; 1981-63
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
EMPR PF (Keystone Explorations Ltd., Report on the Ealue Lake Property, 1980)
GSC MAP 1957-9
GSC OF 1080
Falconbridge File

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/07/22 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 015**

NATIONAL MINERAL INVENTORY:

NAME(S): **KITTY**, FIFE, ZECH,
RAILWAY, MAIN TRENCH, ZETU

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 52 20 N
LONGITUDE: 129 56 15 W
ELEVATION: 1560 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6414870
EASTING: 444389

COMMENTS: Located on the Main trench area just southwest of the peak of Zechtoo Mountain (Assessment Report 21760, Map 1). It is likely that the Main Trench site was the location of the original workings of the Kitty and Fife claim, held in 1977 by Great Plains Development Company of Canada Ltd. The Fife 1 and 2 claims covered the area to the immediate southwest of Zechtoo Mountain peak and contained the Main Trench area. The Kitty 1 claim encompassed the area near the 104G boundary, a few kilometres west from the peak.

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Arsenopyrite
ASSOCIATED: Quartz Carbonate Ankerite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Hydrothermal Epigenetic
DIMENSION: 170 x 5 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Mississippian	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Lower Mississippian			Unnamed/Unknown Informal

LITHOLOGY: Phyllite
Meta Volcanic
Metasedimentary
Granodiorite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP:

PHYSIOGRAPHIC AREA: Tanzilla Plateau
GRADE: Greenschist
Amphibolite

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Copper	0.1700	Per cent

COMMENTS: From a 1.5-metre chip sample.
REFERENCE: Assessment Report 21760.

CAPSULE GEOLOGY

The Kitty showing is located 5 kilometres north-northeast of Iskut village.

Nine bulldozer trenches were excavated in an area 1 kilometre to the southwest of Zechtoo Mountain, apparently in the 1970s by Great Plains Development Company of Canady Ltd., but no record of this work is available. These trenches were relocated in 1990 by West Pride Industries and the area was restaked as the Zech claims and known as the Zetu property (see also 104H 033, Railway). The property was then optioned to Hyder Gold Inc. for follow-up work in 1991.

The occurrence is hosted by a Lower Mississippian metavolcanic and metasedimetary unit that is is typically phyllitic to schistose.

CAPSULE GEOLOGY

The zone of interest occurs within a kilometre to the south of a large Early Mississippian granodiorite to diorite pluton. Two mineralized systems were reported to have been exposed in the trenches.

The first system is composed of narrow, widely space quartz-carbonate (ankerite) veins and stringers. The hostrocks are described as phyllitic volcanics that may be tuffaceous. Veins display various orientations but are preferentially aligned with the foliation plane. The veins average 0.5 centimetres in width but may be up to 1.5 metres wide. These veins comprise an aggregate of 1 to 10 per cent of most exposures and occur in a zone with width of over 5 metres and strike length of least at 170 metres. These veins are weakly mineralized with trace to 1 per cent disseminated pyrite and trace amounts of disseminated chalcopyrite. Phyllitic grab samples assayed up to 3.6 per cent copper while one chip sample yielded 0.17 per cent copper over 1.5 metres (Assessment Report 21760). A sample of a highgrade pod of quartz-pyrite-chalcopyrite-malachite with 10 centimetre width assayed 8.98 per cent copper, 24.5 grams per tonne silver and 0.045 gram per tonne gold (Assessment Report 21416).

The second mineralized system is 50 metres to the southwest of the first. The style of mineralization is reported to be similar to the first except that arsenopyrite is present. The host rocks are slightly less foliated and the remnant volcanic textures more evident. A thick (approximately 1 metre) lenticular quartz vein with blebs of pyrite, arsenopyrite and chalcopyrite occurs in one of the trenches. One grab samples yielded 0.6 per cent copper and 1.61 grams per tonne gold (Assessment Report 21760).

BIBLIOGRAPHY

EMPR ASS RPT *21416, *21760
EMPR EXPL *1977-E229
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, pp. 283-290, 291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC MAP 1957-9
GSC OF 1005; 1080; 2241

DATE CODED: 1998/07/22 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1998/08/13 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104H 016**

NATIONAL MINERAL INVENTORY:

NAME(S): **RD**, RD 1

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 45 47 N
LONGITUDE: 129 57 06 W
ELEVATION: 945 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of RD 1 claim from 1977 claim map.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6402729
EASTING: 443378

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcocite
ASSOCIATED: Malachite K-Feldspar Epidote
ALTERATION: K-Feldspar Epidote Malachite
ALTERATION TYPE: Potassic Epidote Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Tabular
MODIFIER: Fractured

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Andesitic Volcanic Breccia
Andesitic Volcanic Conglomerate
Diorite

HOSTROCK COMMENTS: It is not clear from documentation if the host is volcanic, plutonic or both.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Tanzilla Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The RD showing is located approximately 8.5 kilometres south-southeast of the village of Iskut and 2.0 kilometres east of Eddontenajon Lake. The property lies in a broad valley within the strongly dissected terrain of the Tanzilla Plateau.

The region was first explored in 1929 when copper mineralization was discovered on the nearby Hi property (104H 014). The property was briefly explored in 1977 by geological, geochemical and geophysical means (Exploration in B.C. 1977, page 228).

The RD property is extensively covered by surficial deposits. The area is mapped as Lower Jurassic Hazelton group consisting, in this area, of mainly andesitic volcanic breccias and conglomerates (Open File 1997-3). Near the showing, a fine-grained diorite of unknown age intrudes the volcanics. K-Feldspar and epidote enriched veining is common. Mineralization comprises chalcocite and malachite found along fractures.

BIBLIOGRAPHY

EMPR EXPL *1977-E228
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC MAP 1957-9
GSC OF 1005, 1080, 2241

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1998/08/13 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 017**

NATIONAL MINERAL INVENTORY:

NAME(S): **NATION PEAK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H10W
BC MAP:
LATITUDE: 57 38 00 N
LONGITUDE: 128 53 35 W
ELEVATION: 1900 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Showing (Industrial Minerals File - J.W. McCammon, List of Barite Occurrences).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6387894
EASTING: 506386

COMMODITIES: Barite Lead

MINERALS
SIGNIFICANT: Barite Galena
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Industrial Min.
SHAPE: Tabular

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Andesite
Rhyodacite
Flow
Breccia
Tuff
Clastic Sediment/Sedimentary
Carbonate Sediment/Sedimentary

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Skeena Ranges
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Nation Peak showing is located within the Spatsizi Plateau Wilderness Provincial Park, approximately 2.5 kilometres southeast of Nation Peak and 6.5 kilometres southwest of Cold Fish Lake. The showing lies within the precipitous terrain of the Skeena Ranges.

The showing was briefly reported in J.W. McCammon's list of barite occurrences and evidently has not been explored (Industrial Mineral File - List of Barite occurrences).

The regional geology comprises Stikinia terrane Permian to Jurassic eugeosynclinal rocks and Upper Jurassic to Cretaceous clastic sediments deposited in the Bowser Basin. Middle Jurassic and older rocks have been intruded by granitic to dioritic bodies belonging predominantly to the Late Triassic to Late Jurassic Hotailuh Batholith. Within the Bowser Basin, regional scale faults and folds have a northwest trend in response to a northeast-southwest contraction.

Regional mapping by the Geological Survey of Canada (Open Files 1005, 1080) indicates that locally, Upper Triassic Stuhini Group and unnamed Upper Triassic to Lower Jurassic rocks form an inlier within the Bowser Basin. Units are described as andesitic to rhyodacitic flows, breccia and tuffs of aphyric to porphyritic texture and fine to coarse clastic and carbonate sediments.

Barite has been reported with galena in small veins.

BIBLIOGRAPHY

EMPR IND MIN FILE (*McCammon, J.W., List of Barite Occurrences (in Ministry Library))
GSC MAP 1957-9
GSC OF *1005, *1080, 2961

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/08/13 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 018**

NATIONAL MINERAL INVENTORY:

NAME(S): **KLASTINE PLATEAU**, KLAPPAN RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 50 30 N
LONGITUDE: 129 48 12 W
ELEVATION: 1554 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location centered on surface trace of limestone lens, west of the Klappan River (Geological Survey of Canada Map 9-1957).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6411366
EASTING: 452307

COMMODITIES: Limestone

MINERALS
SIGNIFICANT: Calcite
MINERALIZATION AGE: Carboniferous

DEPOSIT
CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
SHAPE: Tabular
DIMENSION: 3000 Metres STRIKE/DIP: 315/65E TREND/PLUNGE: /
COMMENTS: Attitude of bedding near centre of lens. Limestone outcrops for 3 kilometres.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Carboniferous	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
Phyllite
Phyllitic Greenstone
Chert

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Tanzilla Plateau
RELATIONSHIP: Post-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Klastine Plateau limestone occurrence outcrops for 3 kilometres on the Klastine Plateau, approximately 10.5 kilometres east of the Village of Iskut and 6.5 kilometres north of Ealue Lake. The Klastine Plateau, a sub-unit of the Tanzilla Plateau physiographic terrane, is marked by strongly incised creek basins.

Geological Survey of Canada mapping of the area (Open File 1080) indicates that the limestone lens comprises part of the unnamed Carboniferous and older basement exposed along the southern flank of the Stikine arch. The unit lies within a sequence of lower greenschist metamorphosed phyllites, phyllitic greenstones and ribbon cherts forming tight mesoscopic folds trending to the northwest. Bedding near the centre of the lens strikes 315 degrees and dips 65 degrees northeast.

BIBLIOGRAPHY

EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR IND MIN FILE (*McCammon, J.W. (1973): Limestone Occurrences in British Columbia, p. 34 (in Ministry Library))
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC MAP 1957-9; 1418A
GSC OF 1005, 1080

DATE CODED: 1985/07/24
DATE REVISED: 1991/08/13
CODED BY: GSB
REVISED BY: JLG
FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **104H 019**

NATIONAL MINERAL INVENTORY:

NAME(S): **STIKINE RIVER LIMESTONE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 59 33 N
LONGITUDE: 129 45 07 W
ELEVATION: 700 Metres
LOCATION ACCURACY: Within 5 KM
COMMENTS: Outcrops along the Stikine River (Geological Survey of Canada Open File 2241).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6428123
EASTING: 455544

COMMODITIES: Limestone

MINERALS
SIGNIFICANT: Calcite
MINERALIZATION AGE: Carboniferous

DEPOSIT
CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
SHAPE: Tabular
MODIFIER: Folded
DIMENSION: 1800 x 800 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Limestone lens trends northwest and has been deformed by 2 phases of folding.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Carboniferous	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
Phyllite
Phyllitic Greenstone
Chert

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Tanzilla Plateau
RELATIONSHIP: Post-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The Stikine River limestone occurrence outcrops along the Stikine River, approximately 6.75 kilometres northwest of the junction between the Stikine and Klappan Rivers and 6.5 kilometres northeast of Tsaybahe Mountain. The occurrence lies within the strongly dissected terrain of the Tanzilla Plateau.

Geological Survey of Canada mapping of the area (Open Files 1080, 2241) indicates that the limestone lens comprises part of the unnamed Carboniferous and older basement exposed along the southern flank of the Stikine arch. The limestone unit, measuring 1.8 kilometres by 800 metres, lies within a sequence of lower greenschist metamorphosed phyllites, phyllitic greenstones and ribbon cherts. The sequence, lying on the southwestern limb of the Tsenaglode Lake anticline, forms tight mesoscopic folds trending to the northwest. Units have been deformed by two phases of folding and two phases of regional metamorphism.

BIBLIOGRAPHY

EMPR IND MIN FILE (*McCammon, J.W. (1973): Limestone Occurrences in British Columbia, p. 34 (in Ministry Library))
GSC MAP 1957-9; 1418A
GSC OF 1005, *1080, *2241

DATE CODED: 1985/07/24 CODED BY: GSB FIELD CHECK: N
DATE REVISED: 1991/08/14 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 020** NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT KLAPPAN (HOBBIT-BROATCH)**, GROUNDHOG, HOBBIT-BROATCH, BROATCH, KLAPPAN, FORTUNE MINERALS

STATUS: Past Producer Open Pit MINING DIVISION: Liard
REGIONS: British Columbia
NTS MAP: 104H02W UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 57 14 13 N NORTHING: 6343789
LONGITUDE: 128 45 12 W EASTING: 514889
ELEVATION: 1350 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Coal seams exposed along Hobbit Creek (Coal Assessment Report 110).

COMMODITIES: Coal

MINERALS
SIGNIFICANT: Coal
ASSOCIATED: Pyrite
MINERALIZATION AGE: Lower Cretaceous
ISOTOPIC AGE: 136 +/- 12 Ma DATING METHOD: Fossil MATERIAL DATED: Fossils

DEPOSIT
CHARACTER: Stratiform Stratabound
CLASSIFICATION: Fossil Fuel Sedimentary
TYPE: A05 Anthracite
SHAPE: Tabular
MODIFIER: Folded Faulted
DIMENSION: STRIKE/DIP: TREND/PLUNGE: 130/20
COMMENTS: The northern Groundhog coalfield is intensely folded, fold axis trends 130 degrees and plunges 20. Folds are upright to overturned and verging to the northeast. Upwards of 12 seams, aggregate 25.2 metres.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Bowser Lake	Currier	

ISOTOPIC AGE: 136 +/- 12 Ma
DATING METHOD: Fossil
MATERIAL DATED: Fossils

LITHOLOGY: Sandstone
Siltstone
Claystone
Conglomerate
Coal
Anthracite

HOSTROCK COMMENTS: The Currier Formation (Middle Jurassic to Lower Cretaceous(?) Bowser Lake Group) is the main coal bearing unit in the Groundhog coalfield.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Skeena Ranges
TERRANE: Stikine Bowser Lake
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Anthracite

INVENTORY

ORE ZONE: HOBBIT-BROATCH REPORT ON: Y

CATEGORY: Combined YEAR: 1984
QUANTITY: 405700000 Tonnes

COMMODITY	GRADE
Coal	100.0000 Per cent

COMMENTS: Measured, indicated and inferred resources contained within 15 seams >0.5 metre in true thickness to a depth of 500 m below surface.
REFERENCE: Gulf Canada Resources Inc. Geological Report, January 1985.

CAPSULE GEOLOGY

The Mount Klappan (Hobbit-Broatch) deposit consists of multiple coal seams found along the Hobbit and Broatch creeks and also inferred to underlie the broad plain between Didene Creek and the Skeena River. The deposit forms part of the Groundhog coalfield, an oblong (30 by 80 kilometres) area extending southeast from the headwaters of the Klappan and Little Klappan rivers to Groundhog Mountain. The mountainous terrain containing broad valleys is characteristic of the Skeena Ranges.

CAPSULE GEOLOGY

Concentrated exploration began in 1903, with intense prospecting, surveying, trenching and drifting on various coal exposures within the southeast Groundhog coalfield. Activity peaked in 1912 and terminated in 1913. In 1948, Buckham and Latour (Geological Survey of Canada Bulletin 16) conducted a mapping and data collection program where they documented 192 occurrences. Interest in the potential of the northern Groundhog coalfield began in 1979 and continues to the present. Mapping, trenching, drilling and sampling programs have been conducted by various companies.

The Groundhog coalfield lies in the northern Bowser Basin. The basin, which is bounded to the north and south by the Stikine and Skeena arches, respectively, was open to the west during the Middle Jurassic. Uplift of the Coast Mountains during the Upper Jurassic created an inland basin from which the sea regressed. The Bowser Lake Group (and related formations) in the northern basin comprise marine to alluvial clastic sediments deposited from the Middle Jurassic to the Lower Cretaceous(?). MacLeod and Hills (1990) propose that sedimentation was continuous. Sediments were derived from the Cache Creek terrane lying north of the basin. Five formations have been defined which include the fully marine Middle to Upper Jurassic Ashman and coeval Mount Jackson formations, the alternating marine and fluvial Lower Cretaceous Currier Formation, the dominantly fluvial Lower Cretaceous McEvoy Formation and the fully fluvial to alluvial Lower Cretaceous Devil's Claw Formation. Formation contacts are conformable and gradational, distinction is based on the predominant rock type ranging from mostly shale in the upper Ashman to mostly conglomerate in the upper Devil's Claw.

Two phases of post-sedimentary deformation have complicated stratigraphic correlation within the coalfield. Phase 1 deformation resulting from a northeast-southwest compression produced a major synclinorium which encompasses the entire coalfield. The synclinorium trends 135 degrees and plunges 10 to 20 degrees. Numerous lesser upright to northeast verging overturned folds and thrust faults, with 1 to 10 kilometre strike lengths, are associated with the synclinorium. Phase 2 deformation resulted in open folds having a northeast orientation. Degree of deformation varies laterally and vertically and is most intense in the less competent coal-bearing sequences.

Three stratigraphic intervals of good coal development have been defined (Fieldwork 1989). The oldest and thickest seams (10-metre thick seams have been reported but are likely tectonically thickened) are found within the Currier Formation. Upwards of 25 individual seams have been documented which are generally of anthracite to meta-anthracite rank (MacLeod and Hills, 1990). A paleontological study (MacLeod and Hills, 1990) of fauna and flora fossil assemblages indicate an Upper Tithonian (148 Ma) to Upper Hauterivian (124 Ma) period of deposition for the Currier Formation. Pervasive marine influence suggests organic deposits accumulated in a subaqueous delta and lower delta plain. Coal seams in the McEvoy Formation are generally thinner (rarely exceeding 1 metre) and of sub-anthracite to anthracite rank. The greater proportion of siltstone, sandstone and conglomerate in the McEvoy Formation indicates a dominantly fluvial delta system wherein deposits accumulated in interchannel paralic marine or brackish water environments. Thin seams of high volatile bituminous coal have been encountered amongst the dominantly fluvial sandstone and conglomerate beds of the Lower to Upper Cretaceous Sustut Group which unconformably overlies the eastern margin of the Bowser Basin.

In the northern Groundhog coalfield the main coal-bearing unit is the middle member of the Klappan sequence which likely correlates with the more widely recognized Currier Formation. More than 12 seams with an aggregate thickness of 25.2 metres have been mapped over a 300 to 350 metre stratigraphic interval (Coal Assessment Report 110). Seams, labelled A to L in ascending order, vary in average thickness from 0.4 to 5.4 metres. Laterally, the cumulative average seam width increases from 2 metres in the southwest to 3 metres in the northeast. Interseam width also increase from 20 metres to 40 metres along this trend. The seams appear to be widespread and continuous.

At the Mount Klappan (Hobbit-Broatch) deposit, seams A through K are present. In Hobbit Creek, seams I to K are exposed at several locations due to folding. Samples collected from these seams (Coal Assessment Report 109) gave the following range of coal quality values:

	Range			Average
Fixed Carbon	41.40	-	83.10	67.20
Ash content	8.90	-	52.30	21.80
Volatile matter	6.10	-	16.40	11.30

CAPSULE GEOLOGY

Sulphur content	0.34	-	0.76	0.55
Calorific value	7,354.00	-	4,205.00	6,092.00

The above values are based on raw coal and are stated in per cent except for calorific value which is in calories per gram. Coal rank, based on the fixed carbon to ash content ratio, is generally semi-anthracite but varies from low volatile bituminous through to anthracite.

An open pit trial excavation in 1985 produced 140,000 tonnes of raw anthracite; 120,000 tonnes were washed to render a clean product of 80,000 tonnes (Mining in British Columbia 1981-1985, page 77).

Combined (measured, indicated and inferred) reserves contained within 15 seams greater than 0.5 metre in true thickness to a depth of 500 metres below surface are 405.7 million tonnes; total speculative resource using the same parameters are 613.3 million tonnes (Gulf Canada Resources Inc. Geological Report, January 1985).

Fortune Minerals Limited acquired the property in July 2002 and reported new resource figures based on the earlier work by Gulf Canada Properties Limited (PR REL Fortune Minerals Ltd., July 12, 2002). They report an indicated resource of 13.5 million tonnes, an inferred resource of 258.4 million tonnes and a speculative resource of 753.0 million tonnes.

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EMPR MINING *1981-1985, pp. 76,77; 1986-1987, p. 74; 1988, p. 74
EMPR OF 1992-1; 1992-3
EMPR P 1986-3, P. 31; 1986-5, pp. 20-25
EMPR PF (Koo, J. (undated): Coal Geology of the Mount Klappan Area)
GSC BULL *16
GSC P 88-1E, pp. 91-96; 89-1E, pp. 133-138
BCPG Vol. 31, No. 4, pp. 231-245
PR REL Fortune Minerals Limited, July 12, 2002; Forum Development Corp., Feb.5, Mar.5, 2003
WWW http://www.fortuneminerals.com
MacLeod S.E. and Hills, L.V. (1990): *Conformable Late Jurassic (Oxfordian) to Early Cretaceous Strata, Northern Bowser Basin, British Columbia: A Sedimentological and Paleontological Model: Canadian Journal of Earth Sciences, Vol. 27, pp. 988-998.

DATE CODED: 1986/04/10 CODED BY: EVFK FIELD CHECK: N
DATE REVISED: 1991/09/13 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 021** NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT KLAPPAN (LOST-FOX)**, GROUNDHOG, LOST FOX, KLAPPAN

STATUS: Developed Prospect MINING DIVISION: Liard
REGIONS: British Columbia
NTS MAP: 104H02W 104H07E UTM ZONE: 09 (NAD 83)
BC MAP:
LATITUDE: 57 14 37 N NORTHING: 6344508
LONGITUDE: 128 54 02 W EASTING: 506002
ELEVATION: 1810 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Diamond drill hole on Lost Ridge, approximately 3.6 kilometres south-southeast of Summit airstrip (Coal Assessment Report 110).

COMMODITIES: Coal

MINERALS
SIGNIFICANT: Coal
ASSOCIATED: Pyrite
MINERALIZATION AGE: Lower Cretaceous
ISOTOPIC AGE: 136 +/- 12 Ma DATING METHOD: Fossil MATERIAL DATED: Fossils

DEPOSIT
CHARACTER: Stratabound
CLASSIFICATION: Fossil Fuel Sedimentary
TYPE: A05 Anthracite A04 Bituminous coal
SHAPE: Tabular
MODIFIER: Folded Faulted
DIMENSION: 18 Metres STRIKE/DIP: TREND/PLUNGE: 135/20
COMMENTS: The northern Groundhog coalfield is intensely folded; fold axes trend 135 degrees and plunge 20 degrees, folds are upright to overturned and verging to the northeast. Aggregate thickness of 17.9 metres.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Bowser Lake	Currier	

ISOTOPIC AGE: 136 +/- 12 Ma
DATING METHOD: Fossil
MATERIAL DATED: Fossils

LITHOLOGY: Siltstone
Shale
Sandstone
Coal
Anthracite

HOSTROCK COMMENTS: The Currier Formation (Middle Jurassic to Lower Cretaceous(?) Bowser Lake Group) is the main coal unit. More than 25 seams known.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Skeena Ranges
TERRANE: Bowser Lake Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Semi-Anthracite
COMMENTS: Rank varies from low volatile bituminous to anthracite

INVENTORY
ORE ZONE: LOST-FOX REPORT ON: Y

CATEGORY: Combined YEAR: 1984
QUANTITY: 194100000 Tonnes

COMMODITY	GRADE	
Coal	100.0000	Per cent

COMMENTS: Measured, indicated and inferred resources. There is a further speculative resource of 794.9 million tonnes.
REFERENCE: Gulf Canada Resources Inc. Geological Report, January 1985.

CAPSULE GEOLOGY

The Mount Klappan (Lost-Fox) deposit consists of multiple seams exposed along Lost Ridge and Fox Creek and also inferred to underlie the gentle southeast facing slope between these two topographic features. The deposit forms part of the Groundhog coalfield, an oblong (30 by 80 kilometres) area extending southeastwards from the headwaters of the Klappan and Little Klappan rivers to Groundhog Mountain. The mountainous terrain, containing broad valleys, is

CAPSULE GEOLOGY

characteristic of the Skeena Ranges.

Refer to the Mount Klappan (Hobbit-Broatch) deposit (104H 020) for an overview of exploration history, regional geology and local geology of the northern Groundhog coalfield.

At the Mount Klappan (Lost-Fox) deposit, seams G and I through L are present. The aggregate thickness of the coal is 17.9 metres over a stratigraphic interval of 235 metres (Coal Assessment Report 110). Seams thicknesses vary from 1.5 to 5.2 metres and average 3.6 metres. Samples collected from Lost Ridge and Fox Creek (Coal Assessment Report 109) gave the following range of coal quality values:

	Lost Ridge			Fox Creek		
	Low	High	Average	Low	High	Average
Fixed carbon	42.70	88.40	73.50	55.00	74.20	65.90
Ash content	4.90	48.30	17.50	19.70	40.00	27.40
Volatile matter	5.90	14.70	9.10	5.00	8.50	6.60
Sulphur content	0.29	0.66	0.50	0.44	1.11	0.65
Calorific value	3,114.00	7,782.00	6,477.00	4,566.00	6,301.00	5,688.00

The above values are based on raw coal and are stated in per cent except for calorific values which are in calories per gram. Coal rank, based on the fixed carbon to ash content ratio, is generally semi-anthracite but varies from low volatile bituminous through to anthracite.

Combined (measured, indicated and inferred) resources in the Lost-Fox are 194.1 million tonnes; there is a further speculative resource of 794.9 million tonnes (Gulf Canada Resources Inc. Geological Report, January 1985).

Fortune Minerals Limited acquired the property in July 2002 and reported new resource figures based on the earlier work by Gulf Canada Properties Limited (PR REL Fortune Minerals Ltd. July 12, 2002).
They report a measured resource of 111.4 million tonnes, an indicated resource of 111.7 million tonnes, an inferred resource of 123.9 million tonnes and a speculative resource of 711.5 million tonnes.

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GSC BULL *16
GSC OF 2960
GSC P 79-1B, pp. 411-414; 88-1E, pp. 91-96; 89-1E, pp. 133-138
CSPG BULL Vol. 31, No. 4, pp. 231-245
PR REL Fortune Minerals Limited, July 12, 2002
WWW http://www.fortuneminerals.com/
MacLeod, S.E. and Hills, L.V. (1990): *Conformable Late Jurassic (Oxfordian) to Early Cretaceous Strata, Northern Bowser Basin, British Columbia: A Sedimentological and Paleontological Model; Canadian Journal of Earth Sciences, Vol. 27, pp. 988-998.

DATE CODED: 1986/04/23 CODED BY: EVFK FIELD CHECK: N
DATE REVISED: 1991/09/14 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 022** NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT KLAPPAN (SUMMIT)**, GROUNDHOG, SUMMIT, KLAPPAN

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 104H07W
BC MAP:
LATITUDE: 57 16 19 N
LONGITUDE: 128 55 43 W
ELEVATION: 1315 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Diamond drill hole 150 metres southwest of Summit airstrip (Coal Assessment Report 110).

MINING DIVISION: Omineca
Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6347660
EASTING: 504305

COMMODITIES: Coal

MINERALS
SIGNIFICANT: Coal
ASSOCIATED: Pyrite
MINERALIZATION AGE: Lower Cretaceous
ISOTOPIC AGE: 136 +/- 12 Ma DATING METHOD: Fossil MATERIAL DATED: Fossils

DEPOSIT
CHARACTER: Stratabound
CLASSIFICATION: Fossil Fuel Sedimentary
TYPE: A05 Anthracite A04 Bituminous coal
SHAPE: Tabular
MODIFIER: Folded Faulted
DIMENSION: STRIKE/DIP: TREND/PLUNGE: 135/20
COMMENTS: The northern Groundhog coalfield is intensely folded; fold axes trend 135 degrees and plunges 10 to 20 degrees; folds are upright to overturned and verging to the northeast. Aggregate thickness 7.9 metres.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Bowser Lake	Currier	

ISOTOPIC AGE: 136 +/- 12 Ma
DATING METHOD: Fossil
MATERIAL DATED: Fossils

LITHOLOGY: Siltstone
Shale
Sandstone
Coal
Anthracite

HOSTROCK COMMENTS: The Currier Formation (Middle Jurassic to Lower Cretaceous(?) Bowser Lake Group) is the main coal unit. Upwards of 25 coal seams known.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Skeena Ranges
TERRANE: Bowser Lake Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Semi-Anthracite
COMMENTS: Rank varies from low volatile bituminous to anthracite.

INVENTORY
ORE ZONE: SUMMIT REPORT ON: Y

CATEGORY: Inferred YEAR: 1984
QUANTITY: 41400000 Tonnes

COMMODITY	GRADE	
Coal	100.0000	Per cent

COMMENTS: Inferred resource. There is a further speculative resource of 1,860,100,000 tonnes.
REFERENCE: Gulf Canada Resources Inc. Geological Report, January 1985.

CAPSULE GEOLOGY

The Mount Klappan (Summit) deposit comprises multiple coal seams underlying the Summit airstrip area. The occurrence forms part of the Groundhog coalfield, an oblong (30 by 80 kilometres) area extending southeastwards from the headwaters of the Klappan and Little Klappan rivers to Groundhog Mountain. The mountainous terrain, containing broad valleys, is characteristic of the Skeena Ranges.

CAPSULE GEOLOGY

Refer to the Mount Klappan (Hobbit-Broatch) deposit (104H 020) for an overview of exploration history, regional geology and local geology of the northern Groundhog coalfield.

At the Mount Klappan (Summit) deposit, seams G, F and D are thought to be present. Seam widths vary from 1.3 to 3.9 metres and have an aggregate thickness of 7.9 metres (Coal Assessment Report 110). Coal quality is anticipated to be similar to the Mount Klappan (Hobbit-Broatch) and Mount Klappan (Lost-Fox) (104H 021) deposit areas which gave the following range of values (Coal Assessment Report 109):

	Low	High	Average
Fixed carbon	41.40	88.40	68.90
Ash content	4.90	52.30	22.20
Volatile matter	5.00	16.40	9.00
Sulphur content	0.29	1.11	0.57
Calorific value	3,114.00	7,782.00	6,086.00

The above values are based on raw coal and are stated in per cent except for calorific values which are in calories per gram. Rank as estimated by fixed carbon to volatile matter ratio indicates a range between low volatile bituminous and anthracite; however this method of coal rank determination may be misleading as samples were collected from near surface trenches.

Inferred resources in Summit are 41.4 million tonnes; there is a further speculative resource of 1,860,100,000 tonnes (Gulf Canada Resources Inc. Geological Report, January 1985).

Fortune Minerals Limited acquired the property in July 2002 and reported new resource figures based on the earlier work by Gulf Canada Properties Limited (PR REL Fortune Minerals Ltd., July 12, 2002). They report an inferred resource of 9.6 million tonnes and a speculative resource of 508.9 million tonnes.

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CSPG BULL Vol. 31, No. 4, Dec. 1983, pp. 231-245
PR REL Fortune Minerals Limited, July 12, 2002
WWW http://www.fortuneminerals.com
MacLeod, S.E. and Hills, L.V. (1990): *Conformable late Jurassic (Oxfordian) to Early Cretaceous Strata, Northern Bowser Basin, British Columbia: A Sedimentological and Paleontological Model; Canadian Journal of Earth Sciences, Vol. 27, pp. 988-998.

DATE CODED: 1986/04/23 CODED BY: EVFK FIELD CHECK: N
DATE REVISED: 1991/09/14 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 023**

NATIONAL MINERAL INVENTORY:

NAME(S): **TSAYBAHE MOUNTAIN**, STIKINE RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 59 25 N
LONGITUDE: 129 50 03 W
ELEVATION: 1593 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Limestone outcrops (Geological Survey of Canada Open File 1080).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6427932
EASTING: 450680

COMMODITIES: Limestone

MINERALS
SIGNIFICANT: Calcite
MINERALIZATION AGE: Carboniferous

DEPOSIT
CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
SHAPE: Tabular
MODIFIER: Folded
DIMENSION: 2500 x 1250 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Dimensions of limestone mass. The units have been deformed by 2 phases of folding.

HOST ROCK
DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
Phyllite
Phyllitic Greenstone
Chert

HOSTROCK COMMENTS: Carboniferous to Permian basement.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE: Greenschist
COMMENTS: Two phases of regional, lower greenschist metamorphism.

CAPSULE GEOLOGY

The Tsaybahe Mountain limestone showing outcrops on a northwest trending ridge of Tsaybahe Mountain, approximately 11 kilometres north-northwest of the junction between the Stikine and Klappan Rivers. The occurrence lies in the highly dissected terrain of the Tanzilla Plateau.

Geological Survey of Canada mapping of the area (Open Files 1005, 1080) indicates that the limestone mass comprises part of the unnamed Carboniferous to Permian basement exposed along the southern flank of the Stikine arch. The elongated limestone mass, measuring 2.5 kilometres by up to 1.25 kilometres, lies within a sequence of lower greenschist metamorphosed phyllites, phyllitic greenstones and ribbon cherts. The mass, cut by several faults, lies on the southwestern limb of the Tsenaglode Lake anticline and forms tight mesoscopic folds. Upwards of two phases of folding and two phases of regional metamorphism have deformed the units. The strike of the bedding and the trend of the fold axial surfaces varies from east-west to north-south.

A second outcrop of similar limestone, located 1.5 kilometres to the northwest, has an east-west strike length of 1.3 kilometres.

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EMPR IND MIN FILE (*McCammon, J.W. (1973): Limestone Occurrences in B.C., page 34 (in Ministry Library))
GSC MAP 1957-9; 1418A
GSC OF 1005, *1080, 2241

DATE CODED: 1989/08/25 CODED BY: PSF FIELD CHECK: N
DATE REVISED: 1991/08/14 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 024**

NATIONAL MINERAL INVENTORY:

NAME(S): **COYOTE 3**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 46 39 N
LONGITUDE: 129 53 57 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of showing (Assessment Report 20689).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6404294
EASTING: 446523

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Malachite Quartz
ALTERATION: Epidote Calcite Pyrite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
SHAPE: Tabular
MODIFIER: Fractured
COMMENTS: Dimensions and attitude unknown.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	

LITHOLOGY: Andesitic Volcanic Breccia
Andesitic Volcanic Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Tanzilla Plateau
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist
COMMENTS: Regional lower greenschist metamorphism.

INVENTORY

ORE ZONE: VEIN
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1990
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	6.5000	Grams per tonne
Gold	0.3000	Grams per tonne
Copper	1.2900	Per cent

COMMENTS: Geochemical analysis of quartz vein material.
REFERENCE: Assessment Report 20689.

CAPSULE GEOLOGY

The Coyote 3 showing lies approximately 8 kilometres southeast of the village of Iskut and 4.0 kilometres east of Eddontenajon Lake. The showing is located in the head waters of a narrow south flowing stream within the highly dissected terrain of the Tanzilla Plateau.

The area was first explored in 1929 when an adit was driven in copper mineralization on the nearby Klappan Rose property (104H 014) (presently referred to as the Hi claims). The immediate area of the showing was briefly explored by geological mapping and rock sampling in 1990.

The Coyote 3 is underlain by Lower Jurassic Hazeleton Group andesitic volcanic breccias and conglomerates (Open File 1997-3). The showing comprises a quartz vein of unspecified attitude containing 5 to 6 per cent chalcopyrite and pyrite with associated malachite (2 per cent). A grab sample of the quartz vein yielded 1.29 per cent copper, 6.5 grams per tonne silver and 0.3 grams per tonne gold (Assessment Report 20689).

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EMPR ASS RPT *20689

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EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC OF 1080; 2241
WWW http://www.infomine.com/

DATE CODED: 1991/07/31 CODED BY: JLG FIELD CHECK: N
DATE REVISED: 1991/07/31 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 025**

NATIONAL MINERAL INVENTORY:

NAME(S): **BROCK**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 104H14W
BC MAP:
LATITUDE: 57 49 08 N
LONGITUDE: 129 26 29 W
ELEVATION: 1570 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Trenches on southwest flank of Mount Brock (Assessment Report 8432).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6408632
EASTING: 473778

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Silica Clay Kaolinite Malachite
ALTERATION TYPE: Argillic Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Tabular
DIMENSION:
STRIKE/DIP: 330/90
TREND/PLUNGE:
COMMENTS: Attitude of local bedding.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			McEwan Creek Pluton
Lower Jurassic			Brock Volcanics

LITHOLOGY: Biotite Hornblende Leucocratic Granite
Plagioclase Porphyritic Andesite
Aphanitic Andesite
Basalt
Flow
Breccia
Tuff

HOSTROCK COMMENTS: McEwan Creek Pluton is Middle Jurassic to Tertiary in age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine Bowser Lake

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1979
SAMPLE TYPE: Rock

COMMODITY	GRADE	
Silver	5.8000	Grams per tonne
Gold	0.2700	Grams per tonne
Copper	1.5700	Per cent

COMMENTS: Highest values from grab samples.
REFERENCE: Assessment Report 8432.

CAPSULE GEOLOGY

The prospect lies on the southwestern flank of Mount Brock, approximately 1.9 kilometres southwest of the peak. The strongly dissected terrain is typical of the Tanzilla Plateau near its southern boundary with the Skeena ranges.

The property was briefly explored in 1977 and 1980, during which time geological mapping, trenching and minor lithogeochemical sampling was conducted.

The prospect occurs in the Stikinia terrane of the Intermontane Belt. Regional geology comprises Carboniferous to Jurassic volcanic arc related rocks, deposited in the Hazelton eugeosynclinal trough, and Upper Jurassic to Cretaceous clastic sediments (Bowser Lake and Sustut groups) deposited in the Bowser Basin. Middle Jurassic and older rocks have been intruded by granitic to dioritic bodies belonging predominantly to the Late Triassic to Late Jurassic

CAPSULE GEOLOGY

Hotailuh Batholith. Within the Bowser Basin, regional scale faults and folds have a northwest trend in response to a northeast-southwest contraction.

Mapping by the Geological Survey of Canada (Open File 2241) indicates that Lower Jurassic Brock Volcanics underlie the property. Units are described as interbedded maroon, grey or green, aphanitic to plagioclase porphyritic andesite and basalt which form flows, breccia and minor tuffs. At the showing, these units are intruded by the Middle Jurassic to Tertiary McEwan Creek Pluton of biotite-hornblende leucogranite composition. Local bedding strikes from 280 degrees to 010 degrees and dips from 24 degrees east to 65 degrees southwest with an average attitude of 330 degrees strike and subvertical dip.

Two shallow trenches totalling 6 metres have exposed two mineralized quartz veins within the intrusion. Surrounding host rocks (0.3 to 0.5 metre envelope) are silicified and partially replaced by kaolinite. Chalcopyrite and pyrite occur as disseminations and veinlets within the siliceous zones. Grab samples from the mineralized zones assayed upwards of 1.57 per cent copper, 5.8 grams per tonne silver and 0.27 grams per tonne gold (Assessment Report 8432). A gossanous zone in highly altered intrusive and volcanic rock containing pyrite and trace malachite has been noted along McEwan Creek, 1 kilometre south of the trenches.

BIBLIOGRAPHY

EMPR ASS RPT *8432
EMPR EXPL 1980-479
GSC MAP 1957-9
GSC OF 2241

DATE CODED: 1991/08/02 CODED BY: JLG FIELD CHECK: N
DATE REVISED: 1991/10/06 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 026**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELDORADO**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H12E
BC MAP:
LATITUDE: 57 44 50 N
LONGITUDE: 129 40 17 W
ELEVATION: 1200 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Drill Hole 80-4 (Assessment Report 9132).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6400766
EASTING: 460036

COMMODITIES: Copper, Gold, Lead, Zinc, Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrite, Galena, Sphalerite
ASSOCIATED: Quartz, Carbonate, Magnetite, Hematite, Specularite
ALTERATION: Epidote, Chlorite, Pyrite, Sericite, Biotite, Carbonate, Hematite
ALTERATION TYPE: Propylitic, Sericitic, Biotite, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein, Stockwork, Disseminated
CLASSIFICATION: Porphyry, Hydrothermal
SHAPE: Regular
MODIFIER: Fractured

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Triassic	Tsaybahe	Unnamed/Unknown Formation	

LITHOLOGY: Andesite
Andesite Breccia
Andesite Flow
Feldspar Porphyry Breccia
Feldspar Porphyry
Augite Trachyandesite
Porphyry Basalt

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist
COMMENTS: At least one phase of regional, lower greenschist metamorphism.

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1980
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Gold	0.4200	Grams per tonne
Copper	0.2290	Per cent
Molybdenum	0.0100	Per cent

COMMENTS: Best assays from various 3-metre intersections; averaging 0.02 to 0.0 per cent copper and 0.04 to 0.1 grams per tonne gold.
REFERENCE: Assessment Report 9132.

CAPSULE GEOLOGY

The Eldorado showing (Assessment Report 9132) is located approximately 4.4 kilometres south-southwest of the Klappan River McEwan Creek junction, 9.5 kilometres east-northeast of the Red-Chris copper-gold porphyry deposit (104H 005) and 1.1 kilometres west of the Bonanza prospect (104H 013).

Refer to the Bonanza prospect for work history and regional geology.

The area is underlain by lower greenschist metamorphosed augite trachyandesite, porphyritic basalt and dacite with minor interbeds of volcaniclastic wacke, sandstone and siltstone mapped by the Geological Survey of Canada (Open File 2241) as the Upper Volcanic Unit of the Middle Triassic Tsaybahe Group.

Outcrops are pervasively altered to a chlorite-carbonate-pyrite

CAPSULE GEOLOGY

assemblage and locally to epidote-chlorite. Narrow sections of intense host rock alteration to sericite-carbonate-pyrite with minor biotite occur along a stockwork system of quartz-carbonate veinlets containing chalcopyrite-pyrite with minor galena-sphalerite and associated magnetite-hematite-specularite. Drill hole 80-4, collared on weak copper mineralization, encountered pyritic (5 to 10 per cent disseminated) andesite breccia and flow near the surface. A barren augite trachyandesite-basalt porphyry occurs in the middle section and pyritic (1 to 8 per cent disseminated) feldspar porphyry breccia and feldspar porphyry occur at the base of the hole.

Samples of drill core assayed greater than 0.229 per cent copper, 0.42 grams per tonne gold and 0.01 per cent molybdenum in various 3 metre intersections (Assessment Report 9132). Assays ranged from 0.02 to 0.04 per cent copper, 0.04 to 0.1 grams per tonne gold and 0.001 to 0.002 per cent molybdenum (Assessment Report 9132).

BIBLIOGRAPHY

EMPR ASS RPT *9132
GSC MAP 1957-9
GSC OF *2241

DATE CODED: 1991/08/16 CODED BY: JLG FIELD CHECK: N
DATE REVISED: 1991/10/18 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 027**

NATIONAL MINERAL INVENTORY:

NAME(S): **PAY 4**, BOW 12, MCBRIDE RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H14E
BC MAP:
LATITUDE: 57 57 51 N
LONGITUDE: 129 13 24 W
ELEVATION: 1065 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Copper showing (Property File - Bowser Resources Ltd., 1969).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6424743
EASTING: 486786

COMMODITIES: Copper, Silver

MINERALS
SIGNIFICANT: Chalcopyrite
COMMENTS: Trace gold.
ASSOCIATED: Pyrite, Magnetite
ALTERATION: Sericite, Chlorite
ALTERATION TYPE: Sericitic, Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Vein, Disseminated
CLASSIFICATION: Porphyry, Hydrothermal
SHAPE: Regular
MODIFIER: Fractured

HOST ROCK
DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Triassic-Jurassic			Hotailuh Batholith

LITHOLOGY: Hornblende Diorite
Porphyritic Andesite Flow
Porphyritic Andesite Breccia
Porphyritic Andesite Tuff

HOSTROCK COMMENTS: The host Three Sisters Pluton is related to the Late Triassic to Late Jurassic Hotailuh Batholith.

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Spatsizi Plateau
TERRANE: Stikine
METAMORPHIC TYPE: Regional
Plutonic Rocks RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1969
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	6.8000	Grams per tonne
Copper	0.0100	Per cent

COMMENTS: Rock chip sample from trenched showing.
REFERENCE: Property File - Bowser Resources Ltd., 1969.

CAPSULE GEOLOGY

The Pay 4 showing lies on the southwestern flank of Mount Sister Mary, approximately 1.4 kilometres southwest of the peak and 3.0 kilometres east of the junction between the Stikine and McBride rivers. Rugged mountains to the north of the showing and strongly incised rolling highlands to the south marks the division between the Spatsizi Plateau and Cassiar Mountains.

Refer to the Pay prospect (104H 007) for work history and regional geology.

Similar to the Pay prospect (located 1.4 kilometres to the north), the Pay 4 showing comprises chalcopyrite as disseminations and hairline fractures with abundant pyrite and magnetite. However, the host pluton is a hornblende diorite marginal phase of the Three Sisters Pluton (subdivision of the Late Triassic to Late Jurassic Hotailuh Batholith). The host rock is weakly sericitized and chloritized. Peripheral porphyritic andesite flows, breccia and tuffs belonging to an unnamed Upper Triassic to Lower Jurassic

CAPSULE GEOLOGY

assemblage has been hornfelsed.
Bulldozer trenching (3600 metres) tested mineralization at the Pay and Pay 4 occurrences. A chip sample from the Pay 4 showing assayed 0.01 per cent copper, 6.8 grams per tonne silver and trace gold (Property File - Bowser Resources Ltd., 1969).

BIBLIOGRAPHY

EMPR ASS RPT 3203
EMPR GEM 1969-47; 1971-43
EMPR PF (In 104H 007 - *Bowser Resources Ltd., Report on the McBride River Project, 1969)
GSC MAP 1957-9
GSC OF 1005, *2241

DATE CODED: 1991/08/19 CODED BY: JLG FIELD CHECK: N
DATE REVISED: 1991/08/19 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 028**

NATIONAL MINERAL INVENTORY:

NAME(S): **SEC 5**, BOW 4, MCBRIDE RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H14E
BC MAP:
LATITUDE: 57 59 35 N
LONGITUDE: 129 02 15 W
ELEVATION: 1445 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Trenching (Property File - Bowser Resources Ltd., 1969)

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6427938
EASTING: 497783

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcocite
ASSOCIATED: Quartz
ALTERATION: Epidote Zeolite Malachite
ALTERATION TYPE: Zeolitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Tabular
MODIFIER: Faulted Fractured
DIMENSION: 40 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Mineralized fault zone is 40 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Amygdaloidal Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Spatsizi Plateau
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SHEAR
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1969
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Copper	0.0100	Per cent

COMMENTS: Across 2.1 metre shear zone.
REFERENCE: Property File - Bowser Resources Ltd., 1969.

CAPSULE GEOLOGY

The Sec 5 showing lies 10.2 kilometres east-northeast of Mount Sister Mary, 6.75 kilometres north of the Stikine River and 0.9 kilometres southwest of the Joy 84 prospect (104H 010). Rugged mountains to the north of the property and deeply incised rolling highlands to the south marks the boundary between the Cassiar Mountains and the Spatsizi Plateau.

Refer to the Joy 84 prospect for comments on history and regional geology.

The Sec 5 showing comprises a 40-metre wide northwest striking mineralized fractured and faulted zone in unnamed Upper Triassic to Lower Jurassic amygdaloidal andesite. The length of the zone is unknown. Chalcocite is associated with epidote masses cut by quartz stringers; in addition, the host rock has been brecciated and veined by pinkish zeolite. Malachite is common on weathered surfaces. Bulldozer trenching has tested the mineralized zone. A rock chip sample collected across a 2.1-metre shear assayed 0.01 per cent copper (Property File - Bowser Resources Ltd., 1969).

BIBLIOGRAPHY

EMPR ASS RPT 3203
EMPR GEM 1969-47; 1971-43
EMPR PF (In 104H 007 - *Bowser Resources Ltd., Report on McBride

BIBLIOGRAPHY

River Project, 1969)
GSC OF 1005, *2241

DATE CODED: 1991/08/20 CODED BY: JLG FIELD CHECK: N
DATE REVISED: 1991/08/20 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 029**

NATIONAL MINERAL INVENTORY:

NAME(S): **GD 41**, BOW 5, MCBRIDE RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H14E
BC MAP:
LATITUDE: 57 59 57 N
LONGITUDE: 129 03 46 W
ELEVATION: 1475 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing (Property File - Bowser Resources Ltd., 1969).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6428619
EASTING: 496289

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcocite Copper
ASSOCIATED: Epidote
ALTERATION: Epidote Zeolite Aragonite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal
SHAPE: Tabular
DIMENSION: 9 Metres STRIKE/DIP: 025/17E TREND/PLUNGE: /
COMMENTS: Mineralization in a concordant epidote-rich zone at the base of an andesite flow. Attitude of the stratigraphy at the showing.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Amygdaloidal Andesite Flow
Volcanic Breccia
Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Cassiar Mountains
TERRANE: Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist
COMMENTS: Boundary zone between the Cassiar Mountains and the Spatsizi Plateau.

INVENTORY

ORE ZONE: SHOWING REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1969
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Copper	0.2500	Per cent

COMMENTS: Chip sample taken across 0.5 metre zone.
REFERENCE: Property File - Bowser Resources Ltd., 1969.

CAPSULE GEOLOGY

The GD 41 showing is located approximately 8.9 kilometres east-northeast of Mount Sister Mary, 7.9 kilometres north of the Stikine River and 950 metres west of the Joy 84 prospect (104H 010). The property lies in rugged mountainous terrain immediately north of the boundary between the Cassiar Mountains and the Spatsizi Plateau.

Refer to the Joy 84 prospect for comments on work history and regional geology.

Underlying the showing area are unnamed Upper Triassic to Lower Jurassic andesite to rhyodacitic flows, breccia and tuff. At the showing the units strike 25 degrees and dip 17 degrees east. Mineralization consists of native copper and chalcocite in a concordant epidote-rich (lesser zeolite and aragonite) zone at the base of an amygdaloidal andesite flow overlying a volcanic breccia. The mineralized section of the amygdaloidal flow, 0.5 metre thick, is exposed for 9 metres. A chip sample taken across the zone assayed 0.25 per cent copper (Property File - Bowser Resources Ltd., 1969).

BIBLIOGRAPHY

EMPR ASS RPT 3203

BIBLIOGRAPHY

EMPR GEM 1969-47; 1971-43
EMPR PF (In 104H 007 - *Bowser Resources Ltd., Report on McBride River Project, 1969)
GSC OF 1005, *2241

DATE CODED: 1991/08/21 CODED BY: JLG FIELD CHECK: N
DATE REVISED: 1991/08/21 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 030**

NATIONAL MINERAL INVENTORY:

NAME(S): **GD 7**, BOW 5, MCBRIDE RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H14E
BC MAP:
LATITUDE: 57 59 57 N
LONGITUDE: 129 06 06 W
ELEVATION: 1770 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing (Property File - Bowser Resources Ltd., 1969)

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6428622
EASTING: 493990

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcocite Bornite Copper
MINERALIZATION AGE: Unknown

DEPOSIT
CHARACTER: Stratiform Disseminated
CLASSIFICATION: Hydrothermal
SHAPE: Tabular
DIMENSION:
STRIKE/DIP: 012/15E
TREND/PLUNGE: /
COMMENTS: Mineralization in amygdaloidal andesite at basal contact with volcanic breccia. Attitude of the stratigraphy at the showing.

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Amygdaloidal Andesite Flow
Volcanic Flow Breccia
Massive Andesite
Tuff
Shale

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Cassiar Mountains
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The GD 7 showing lies approximately 6.8 kilometres east-northeast of Mount Sister Mary, 7.0 kilometres north of the Stikine River and 3.25 kilometres west of similar mineralization at the Joy 84 prospect (104H 010). The showing is located in the rugged terrain of the Cassiar Mountains.

Refer to the Joy 84 prospect for comments on work history and regional geology.

The showing area is underlain by unnamed Upper Triassic to Lower Jurassic andesitic flows, breccia, tuff and shale. At the showing, the units strike 12 degrees and dip 15 degrees east. Chalcocite, bornite and native copper are hosted by amygdaloidal andesite along its basal contact with volcanic breccia. The mineralization is disseminated and occurs in the occasional amygdule. Alteration of the host was not described; however similar mineralization elsewhere in the area is generally accompanied by epidote-zeolite-aragonite masses. The showing was mapped in a cursory fashion without sampling. The overall mineralization is described as weak.

BIBLIOGRAPHY

EMPR ASS RPT 3203
EMPR GEM 1969-47; 1971-43
EMPR PF (In 104H 007 - *Bowser Resources Ltd., Report on McBride River Project, 1969)
GSC OF 1005, *2241

DATE CODED: 1991/08/21 CODED BY: JLG FIELD CHECK: N
DATE REVISED: 1991/08/21 REVISED BY: JLG FIELD CHECK: N

MINFILE NUMBER: **104H 031**

NATIONAL MINERAL INVENTORY:

NAME(S): **GIN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H12W
BC MAP:
LATITUDE: 57 40 57 N
LONGITUDE: 129 55 55 W
ELEVATION: 1525 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of claim block (Assessment Report 21204). Located approximately 6.5 kilometres southeast of Eddontenajon Lake and 8.5 kilometres west of Kluca Lake.

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6393745
EASTING: 444428

COMMODITIES: Copper, Gold, Silver, Lead, Zinc, Arsenic, Mercury, Antimony

MINERALS

SIGNIFICANT: Chalcopyrite, Pyrite, Arsenopyrite, Galena, Sphalerite
ASSOCIATED: Magnetite
ALTERATION: Chlorite, Calcite, Hematite, Actinolite, Limonite
ALTERATION TYPE: Propylitic, Skarn, Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
SHAPE: Tabular
MODIFIER: Fractured

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	
Upper Triassic	Stuhini	Undefined Formation	
Triassic-Jurassic			Unnamed/Unknown Informal

LITHOLOGY: Porphyritic Andesite Flow
Conglomerate
Siltstone
Calcareous Siltstone
Hornblende Diorite

HOSTROCK COMMENTS: The mineralized group is either the Hazelton or Stuhini Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Tanzilla Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1990

COMMODITY	GRADE	
Silver	45.1000	Grams per tonne
Arsenic	0.3000	Per cent
Gold	1.2400	Grams per tonne
Copper	0.0400	Per cent
Lead	0.3000	Per cent
Zinc	0.8000	Per cent

COMMENTS: Best assays from various grab and rock chip samples.
REFERENCE: Assessment Report 21204.

CAPSULE GEOLOGY

The centre of the Gin claims lies approximately 6.5 kilometres southeast of Eddontenajon Lake, 8.5 kilometres west of Kluea Lake and 8 kilometres west-southwest of the Red-Chris copper-gold porphyry deposit. Deeply incised creeks and high rolling plains characterize the area as part of the Tanzilla Plateau.

The general area was explored intermittently for porphyry copper mineralization during the 1970's. The Gin claims were staked in 1990 by Dryden Resource Corporation. Subsequent work in 1990 and 1991 included limited geological mapping, soil, silt and lithogeochemical sampling programs.

CAPSULE GEOLOGY

The area is underlain by rocks of both the Lower Jurassic Hazelton Group and Upper Triassic Stuhini Group. Property rocks are described as porphyrytic andesite flows interbedded with conglomerate (agglomerate?), siltstone and calcareous siltstone (Assessment Report 21204). Unconformably overlying these rocks to the southeast are fine to coarse clastics of the Upper Jurassic to Lower Creatceous Bowser Lake Group. Bedding generally strikes northeast with 35 to 80 degree southerly dips. Faulting was not noted on the property. An east trending Early Jurassic pyroxene diorite stock intrudes about 3 kilometres to the south. Widespread but erratic propylitic alteration (chlorite-calcite-hematite) and oxidation (limonite) has been noted on the property.

Widely scattered, narrow pyrite veins occur erractically throughout the property. Trace amounts of chalcopyrite, arsenopyrite with rare galena and sphalerite area associated with the pyrite. Analysis of various grab and rock chip samples have given grades upwards of 1.24 grams per tonne gold, 45.1 grams per tonne silver, 0.8 per cent zinc, 0.3 per cent lead, 0.3 per cent arsenic and elevated amounts of copper (0.03 per cent), antimony (0.015 per cent) and mercury (0.006 per cent) (Assessment Report 21204).

BIBLIOGRAPHY

EM EXPL 1999-19-31
EMPR ASS RPT *21204, 21957
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; *1997-3
GSC OF 1005; 2241

DATE CODED: 1991/08/29 CODED BY: JLG FIELD CHECK: N
DATE REVISED: 1998/07/22 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104H 032**

NATIONAL MINERAL INVENTORY:

NAME(S): **B18**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 47 11 N
LONGITUDE: 129 52 17 W
ELEVATION: 1850 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of sample B18 (Field Number RMA96-810)(Open File 1997-3, Table 1).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6405262
EASTING: 448187

COMMODITIES: Copper Gold Silver

MINERALS
SIGNIFICANT: Chalcopyrite
ALTERATION: Epidote Chlorite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Regular

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	

LITHOLOGY: Andesitic Breccia

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1994
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	56.5000	Grams per tonne
Gold	0.6800	Grams per tonne
Copper	3.2900	Per cent

REFERENCE: Open File 1997-3, Table 1 (Sample B18, Field ID No. RMA96-810).

CAPSULE GEOLOGY

The B18 showing lies on the southeast flank of Ehahcezetle Mountain above Ealue Lake, approximately 10 kilometres southeast of the village of Iskut. Area bedrock consists typically of andesitic volcanic breccias and conglomerates of the Lower Jurassic Hazelton Group.

A 0.3-metre wide stained fracture with 1 to 2 per cent chalcopyrite occurs in epidote-chlorite altered andesitic breccia. The showing was discovered and sampled by members of the B.C. Geological Survey Branch in 1996. A sample assayed 0.68 gram per tonne gold, 56.5 grams per tonne silver and 3.29 per cent copper (Open File 1997-3, Table 1 (Sample B18, Field Identification Number RMA96-810)).

Refer to the MFJ prospect (104H 001) for local history and more detailed geology.

BIBLIOGRAPHY

EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; *1997-3
GSC MAP 1957-9
GSC OF 1005, 1080, 2241

DATE CODED: 1998/08/10
DATE REVISED: 1998/08/10
CODED BY: GJP
REVISED BY: GJP
FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **104H 033**

NATIONAL MINERAL INVENTORY:

NAME(S): **RAILWAY**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 53 22 N
LONGITUDE: 129 47 41 W
ELEVATION: 1560 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on the Discovery zone, a few hundred metres northwest of Thatue Mountain peak (Assessment Report 21760, Map 2).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6416679
EASTING: 452881

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Bornite
ASSOCIATED: Quartz Carbonate
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Mississippian	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Lower Jurassic	Hazelton	Undefined Formation	
Lower Mississippian			Unnamed/Unknown Informal

LITHOLOGY: Phyllite
Tuff
Monzodiorite
Tuff Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Tanzilla Plateau
GRADE: Greenschist
Amphibolite

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1991
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Copper	1.0000	Per cent

REFERENCE: Assessment Report 21760.

CAPSULE GEOLOGY

The Railway occurrence consists of several small zones located near the summit of Thatue Mountain, about 13 kilometres east-northeast of Iskut village.

The area of Thatue Mountain is underlain primarily by Lower Mississippian phyllite to phyllitic greenstone. East of the summit, a northeast trending fault separates these phyllitic rocks from Lower Jurassic Hazelton Group rocks which may include tuffceous wacke, siltstone, shale, chert pebble conglomerate, sandstone and plagioclase porphyry flows, breccia and tuff. The Railway pluton is largely confined to several fault-bound slices north, west and south of Thatue Mountain. The pluton is described as a biotite-augite meta-monzodiorite (GSC Open File 1080).

The Discovery zone is located just west of the Thatue Mountain summit. Exposed in a hand trench is a 40-centimetre wide quartz-carbonate vein with up to 2 per cent chalcopyrite, and an adjacent 40-50 centimetre wide breccia zone with quartz, carbonate, pyrite and chalcopyrite. A selected grab sample assayed 1 per cent copper and 0.05 gram per tonne gold (Assessment Report 21760). Chip sample yielded much lower values.

The Porphyry zone consists of several outcrops of monzodiorite

CAPSULE GEOLOGY

and phyllite in a 20 square metre area, located about 1 kilometre east-southeast of Thatue Mountain peak. Trace to 2 per cent very fine pyrite and trace to 3 per cent chalcopyrite are associated with narrow quartz-carbonate veinlets and breccia matrix material.

The Breccia zone is within a few hundred metres southeast of the Porphyry zone. Weakly mineralized maroon tuff occurs in an area about 100 metres wide. It contains 1 to 2 per cent chalcopyrite with minor malachite and bornite in association with quartz-carbonate fracture and breccia fillings.

The "Altered Toodoggone Volcanic" zone occurs about 1.2 kilometres to the southwest of Breccia zone. It is reported to be a green and maroon tuff breccia with disseminated fine-grained chalcopyrite.

West Pride Industries first prospected the area in 1990. Hyder Gold Inc. optioned the property and did follow-up geochemical work in 1991.

BIBLIOGRAPHY

EMPR ASS RPT *21416, *21760
EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; 1997-3
GSC OF 1005; 1080; 2241

DATE CODED: 1998/07/22 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1998/07/23 REVISED BY: GJP FIELD CHECK: N

MINFILE NUMBER: **104H 034**

NATIONAL MINERAL INVENTORY:

NAME(S): **PLATEAU**, B16, B17

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 48 14 N
LONGITUDE: 129 50 10 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of samples B16 and B17 (Field Number CAS94-015)(Open File 1997-3, Table 1).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6407184
EASTING: 450309

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Chalcopyrite Pyrite
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Regular

HOST ROCK
DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	

LITHOLOGY: Lapilli Tuff Breccia
Feldspar Porphyritic Andesite Flow
Andesite Flow Breccia
Dacitic Flow Breccia
Lahar
Epiclastic Conglomerate
Crystal Lithic Wacke

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Tanzilla Plateau
Plutonic Rocks
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
YEAR: 1994

COMMODITY	GRADE	
Copper	2.0600	Per cent

REFERENCE: Fieldwork 1994, page 357.

CAPSULE GEOLOGY

The Plateau showing is found approximately 7.5 kilometres southeast of the village of Iskut. The mineralized outcrop is located on the east side of the Eddon plateau, roughly 3.5 kilometres due north of the centre of Ealue Lake. The occurrence lies within the Stikinia terrane of the Intermontane Belt.

The area was first prospected in 1929 when an adit and several trenches revealed copper mineralization on the nearby Klappan Rose property (presently the HI claims, 104H 014). A 3-year mapping (1994-1996) program headed by Chris Ash of the B.C. Geological Survey has led to an updated stratigraphic framework for parts of NTS mapsheets 104G/9 and 16 and 104H12 and 13, including the area of this occurrence. This new interpretation is published in Fieldwork 1994; Fieldwork 1995; Fieldwork 1996; and Open File 1997-3.

The 3 by 5 metre mineralized area is exposed in a near-vertical, northeast-facing rock face, 150 metres long by 6 to 8 metres high. Chalcopyrite mineralization is hosted in polymictic volcanic lapilli-tuff breccia. Volcanic breccia varies from matrix to clast supported with subangular to subrounded, 1 to 4-centimetre plagioclase-hornblende-porphyritic volcanic clasts in a poorly sorted plagiolclase-phyric tuffaceous matrix. Chalcopyrite and pyrite forms thin stringers and fine to locally coarse disseminations comprising from 10 to 15 per cent of the rock over widths of less than 0.5 metre

CAPSULE GEOLOGY

withing the broader rusty stain zone. A sample taken at the time this showing was discovered by the B.C. Geological Survey in 1994 assayed 2.06 per cent copper, 0.011 gram per tonne gold and 71 grams per tonne silver (Fieldwork 1994, page 357).

Unit lJavb of the Lower Jurassic Hazelton Group underlies the showing area and typically consists of andesitic volcanic breccias and conglomerates. These are described as grey-green and maroon, feldspar hornblende-porphyritic andesitic to dacitic debris flows and lahars; minor flows; with intervals of green and maroon epiclastic conglomerate and medium to coarse-grained crystal lithic wacke with angular, red mudstone fragments.

BIBLIOGRAPHY

EMPR FIELDWORK 1976, pp. 71-73; *1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; *1997-3
GSC MAP 1957-9
GSC OF 1005, 1080, 2241

DATE CODED: 1998/08/10 CODED BY: GJP FIELD CHECK: N
DATE REVISED: 1998/08/10 REVISED BY: GJP FIELD CHECK: Y

MINFILE NUMBER: **104H 035**

NATIONAL MINERAL INVENTORY:

NAME(S): **MABON**, B5

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 48 54 N
LONGITUDE: 129 56 26 W
ELEVATION: 1035 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of sample CAS94-193 (B5)(Open File 1997-3).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6408502
EASTING: 444119

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT:	Pyrite		
ALTERATION:	Silica	Sericite	Pyrite
ALTERATION TYPE:	Silicific'n		Sericitic
MINERALIZATION AGE:	Unknown		

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Unnamed/Unknown Formation	

LITHOLOGY: Quartz Sericite Pyrite Rock
Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1994
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	0.4200	Grams per tonne
Copper	0.3300	Per cent

REFERENCE: Open File 1997-3, Table 1 (Sample B5 (Field No. CAS94-193)).

CAPSULE GEOLOGY

The Mabon showing lies on the northwestern flank of Ehahcezetle Mountain, just south of Mabon Creek, approximately 3.5 kilometres southeast of the village of Iskut.

A sample of gossanous quartz-sericite-pyrite altered rock with 5-10 per cent fine disseminated pyrite was taken by members of the B.C. Geological Survey in 1994. The sample assayed 0.42 gram per tonne gold and 0.33 per cent copper (Open File 1997-3, Table 1 (Sample B5) (Field No. CAS94-193)). This alteration type is typically hosted by andesitic volcanic breccia of the Lower Jurassic Hazelton Group.

BIBLIOGRAPHY

EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; *1997-3
GSC MAP 1957-9
GSC OF 1005, 1080, 2241

DATE CODED: 1998/08/10
DATE REVISED: 1998/08/10
CODED BY: GJP
REVISED BY: GJP
FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **104H 036**

NATIONAL MINERAL INVENTORY:

NAME(S): **B31**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 48 18 N
LONGITUDE: 129 45 13 W
ELEVATION: 920 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of sample CAS94-015 (B31 and B32)(Open File 1997-3).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6407250
EASTING: 455213

COMMODITIES: Copper

MINERALS
SIGNIFICANT: Pyrite
COMMENTS: Pyrite is assumed.
MINERALIZATION AGE:

DEPOSIT
CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal

HOST ROCK
DOMINANT HOSTROCK: Plutonic

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

LITHOLOGY: Megacrystic Syenite
Andesite

GEOLOGICAL SETTING
TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1994
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Copper	0.3400	Per cent

REFERENCE: Open File 1997-3, Table 1 (Sample B32)(Field No. CAS94-015)).

CAPSULE GEOLOGY

The B31 showing is located about 2 kilometres to the northeast of Ealue Lake, approximately 14 kilometres east-southeast of the village of Iskut.

A sample of a 5 to 10 centimetre sulphide rich area in megacrystic syenite assayed 0.34 per cent copper (Open File 1997-3, Table 1 (Sample B32)(Field No. CAS94-015)). This sample was taken in 1994 during a regional mapping program by the B.C. Geological Survey. The syenite is likely related to the Early Jurassic alkali granite/felsite stocks that intrude Lower Jurassic Hazelton Group andesitic rocks several kilometres to the west.

BIBLIOGRAPHY

EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; *1997-3
GSC MAP 1957-9
GSC OF 1005, 1080, 2241

DATE CODED: 1998/08/10
DATE REVISED: 1998/08/10
CODED BY: GJP
REVISED BY: GJP
FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **104H 037**

NATIONAL MINERAL INVENTORY:

NAME(S): **D1**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 104H13W
BC MAP:
LATITUDE: 57 44 26 N
LONGITUDE: 129 56 47 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of sample TFR94-040 (D13)(Open File 1997-3, Table 1).

MINING DIVISION: Liard
UTM ZONE: 09 (NAD 83)
NORTHING: 6400220
EASTING: 443657

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Pyrite
COMMENTS: Pyrite is assumed.
ALTERATION: Chlorite Calcite
ALTERATION TYPE: Chloritic Carbonate
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Hazelton	Undefined Formation	

LITHOLOGY: Andesitic Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
PHYSIOGRAPHIC AREA: Tanzilla Plateau
TERRANE: Stikine
Plutonic Rocks
METAMORPHIC TYPE: Regional
RELATIONSHIP: Pre-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N

CATEGORY: Assay/analysis
YEAR: 1994
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Gold	0.4000	Grams per tonne
Copper	0.6800	Per cent

REFERENCE: Open File 1997-3, Table 1 (Sample D1)(Field No. TFR94-040)).

CAPSULE GEOLOGY

The D1 showing is located about 2 kilometres to the northeast of Ealue Lake, approximately 14 kilometres east-southeast of the village of Iskut. The area is underlain mainly by andesitic rock of the Lower Jurassic Hazelton Group.

A sample of chlorite-calcite altered andesitic breccia with malachite stains assayed 0.4 gram per tonne gold and 0.68 per cent copper (Open File 1997-3, Table 1 (Sample D1)(Field No. TFR94-040)). About 1 kilometre to the northeast, a sample from a 10-metre wide gossan zone containing 5 to 10 per cent pyrite assayed 0.29 per cent copper, 0.15 gram per tonne gold and 11.8 grams per tonne silver (Open File 1997-3, Table 1 (Sample D3)(Field No. TFR94-036)). These samples were taken in 1994 during a regional mapping program by the B.C. Geological Survey.

BIBLIOGRAPHY

EMPR FIELDWORK 1976, pp. 71-73; 1994, pp. 343-358; 1995, pp. 155-174; 1996, 283-290,291-297
EMPR OF 1992-1; 1992-3; 1996-4; *1997-3
GSC MAP 1957-9
GSC OF 1005, 1080, 2241

DATE CODED: 1998/08/10
CODED BY: GJP
FIELD CHECK: N
DATE REVISED: 1998/08/10
REVISED BY: GJP
FIELD CHECK: Y

MINFILE PRODUCTION REPORT

GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **104A 002** NAME: **GOAT** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1981		415	Silver	292,648	
			Gold	953	
			Zinc		10,103
1980	2,265	1,864	Silver	945,075	
			Gold	3,412	
			Copper		153
			Lead		3,278
			Zinc		32,397
1979	124	907	Silver	540,401	
			Gold	1,110	
			Lead		726
			Zinc		9,789
1975	1,770		Silver	15,925	
			Lead		67
			Zinc		352

SUMMARY TOTALS: 104A 002 NAME: **GOAT**

	Metric		Imperial	
Mined:	4,159	tonnes	4,585	tons
Milled:	3,186	tonnes	3,512	tons
Recovery:				
Silver:	1,794,049	grams	57,680	ounces
Gold:	5,475	grams	176	ounces
Copper:	153	kilograms	337	pounds
Lead:	4,071	kilograms	8,975	pounds
Zinc:	52,641	kilograms	116,054	pounds

Comments:

1981: 415 t (20 t conc. and 395 t ore) sent to Cominco; no mine prod.
1980: 1492 t (30 t conc. and 1462 t ore) to Cominco.
1979: 125 t conc. shipped (113 to Cominco; 12 to Asarco); 907 t milled.
1975: 1770 tonnes stockpiled.

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **104A 005** NAME: **MOONLIGHT** STATUS: Prospect

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1937	1		Silver	249	
			Gold	591	

SUMMARY TOTALS: 104A 005 NAME: **MOONLIGHT**

	Metric		Imperial	
Mined:	1	tonnes	1	tons
Milled:		tonnes		tons
Recovery:				
Silver:	249	grams	8	ounces
Gold:	591	grams	19	ounces

Comments:

1937: Tonnage is 31 kg, from pickups from several properties.

MINFILE NUMBER: **104A 010** NAME: **SPIDER 3 (L. 4174)** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1935	16		Silver	103,187	
			Gold	219	
			Lead		206
1927	1		Silver	9,611	
1925	6		Silver	81,241	
			Gold	93	
			Lead		566
			Zinc		857

SUMMARY TOTALS: 104A 010 NAME: **SPIDER 3 (L. 4174)**

	Metric		Imperial	
Mined:	23	tonnes	25	tons
Milled:		tonnes		tons
Recovery:				
Silver:	194,039	grams	6,238	ounces
Gold:	312	grams	10	ounces
Lead:	772	kilograms	1,702	pounds
Zinc:	857	kilograms	1,889	pounds

Comments:

1935: High grading 1933-35, MMAR 1936 p.B31. Lead from Mineral Policy.

MINFILE NUMBER: **104A 011** NAME: **MOUNTAIN BOY (L. 445)** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1940	3		Silver	23,948	
			Gold	7	
			Copper		61
			Lead		137
			Antimony		11
			Zinc		162
1938	9		Silver	74,959	
			Copper		160
1937	38		Silver	743,455	
			Copper		1,334
			Lead		1,525
1936	4		Silver	77,726	
			Copper		95
			Lead		125
1929	4		Silver	124,352	
			Copper		154
			Lead		61
			Zinc		80

SUMMARY TOTALS: 104A 011 NAME: **MOUNTAIN BOY (L. 445)**

	Metric		Imperial	
Mined:	58	tonnes	64	tons
Milled:		tonnes		tons
Recovery:				
Silver:	1,044,440	grams	33,579	ounces
Gold:	7	grams		ounces
Copper:	1,804	kilograms	3,977	pounds
Lead:	1,848	kilograms	4,074	pounds
Antimony:	11	kilograms	24	pounds
Zinc:	242	kilograms	534	pounds

Comments:
1940: Minister of Mines Annual Report 1940, p. A42.
1929: Zinc reported by Mathews, 1942.

MINFILE NUMBER: **104A 015** NAME: **KETCHUM (L. 1075)** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1937	17		Silver	94,367	
			Gold	31	
			Lead		5,722
1936	15		Silver	114,086	
			Gold	62	
			Lead		5,110
1915	17		Silver	107,399	
			Gold	31	
			Lead		7,291

SUMMARY TOTALS: 104A 015 NAME: **KETCHUM (L. 1075)**

	Metric		Imperial	
Mined:	49	tonnes	54	tons
Milled:		tonnes		tons
Recovery:				
Silver:	315,852	grams	10,155	ounces
Gold:	124	grams	4	ounces
Lead:	18,123	kilograms	39,954	pounds

Comments:

1915: Includes 9 tonnes mined but not shipped in 1914.

MINFILE NUMBER: **104A 016** NAME: **TERMINUS** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1949	16		Silver	90,448	
			Lead		3,463
			Zinc		2,633
1927	3		Silver	10,544	
			Lead		326
			Zinc		688
1925	5		Silver	51,320	
			Lead		155
			Zinc		1,715
1911	11		Silver	1	
			Lead		1
			Zinc		1

SUMMARY TOTALS: 104A 016 NAME: **TERMINUS**

	Metric		Imperial	
Mined:	35	tonnes	39	tons
Milled:		tonnes		tons
Recovery:				
Silver:	152,313	grams	4,897	ounces
Lead:	3,945	kilograms	8,697	pounds
Zinc:	5,037	kilograms	11,105	pounds

Comments:

1911: Amount recovered unknown, $200/ton.

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **104A 032** NAME: **BONANZA** STATUS: Prospect

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1936	1		Silver	1,337	
			Lead		32

SUMMARY TOTALS: 104A 032 NAME: **BONANZA**

	Metric		Imperial	
Mined:	1	tonnes	1	tons
Milled:		tonnes		tons
Recovery:				
Silver:	1,337	grams	43	ounces
Lead:	32	kilograms	71	pounds

Comments:
1936: From the Morning claim.

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **104A 033** NAME: **MONTROSE (L. 76)** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1941	19		Silver	948	
			Gold	1,257	
			Copper		289
			Lead		346
			Zinc		1,017
1940	31		Silver	1,190	
			Gold	2,537	
			Copper		248

SUMMARY TOTALS: 104A 033 NAME: **MONTROSE (L. 76)**

	Metric		Imperial	
Mined:	50	tonnes	55	tons
Milled:		tonnes		tons
Recovery:				
Silver:	2,138	grams	69	ounces
Gold:	3,794	grams	122	ounces
Copper:	537	kilograms	1,184	pounds
Lead:	346	kilograms	763	pounds
Zinc:	1,017	kilograms	2,242	pounds

Comments:
1941: Assessment Report 17465.
1940: Includes(?) 4.8 tonnes shipped in 1939 (Assess. Report 17465).

MINFILE NUMBER: **104A 037** NAME: **RED CLIFF (L. 75)** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1973		3,768	Silver	1	
			Gold	1	
			Copper		1
1941	10		Silver	754	
			Gold	89	
			Copper		923
			Zinc		109
1940	31		Silver	1,182	
			Gold	2,550	
			Copper		248
1912	1,133		Gold	2,426	
			Copper		40,099
1910	1		Silver	117	
			Gold	12	
			Copper		115

SUMMARY TOTALS: 104A 037 NAME: **RED CLIFF (L. 75)**

	Metric		Imperial	
Mined:	1,175	tonnes	1,295	tons
Milled:	3,768	tonnes	4,154	tons
Recovery:				
Silver:	2,054	grams	66	ounces
Gold:	5,078	grams	163	ounces
Copper:	41,386	kilograms	91,240	pounds
Zinc:	109	kilograms	240	pounds

Comments:

1973: From mine and old dumps, unknown quantity recovered EMPR GEM 1973.
1941: Assessment Report 17465.
1912: 2030 tonnes placed on ore dumps.
1910: Also 200 tonnes stockpiled (Assessment Report 17465).

MINFILE NUMBER: **104A 048** NAME: **ST. ELMO** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1947	14		Silver	57,354	
			Lead		2,374
			Zinc		3,101

SUMMARY TOTALS: 104A 048 NAME: **ST. ELMO**

	Metric		Imperial	
Mined:	14	tonnes	15	tons
Milled:		tonnes		tons
Recovery:				
Silver:	57,354	grams	1,844	ounces
Lead:	2,374	kilograms	5,234	pounds
Zinc:	3,101	kilograms	6,837	pounds

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **104A 054** NAME: **TYEE (L. 4467)** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1936	8		Silver	4,479	
			Gold	124	

SUMMARY TOTALS: 104A 054 NAME: **TYEE (L. 4467)**

	Metric		Imperial	
Mined:	8	tonnes	9	tons
Milled:		tonnes		tons
Recovery:				
Silver:	4,479	grams	144	ounces
Gold:	124	grams	4	ounces

Comments:
1936: A "few" tonnes in 1918.

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **104A 057** NAME: **GOLDIE** STATUS: Prospect

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1925	2		Silver	2,550	
			Lead		294
			Zinc		122

SUMMARY TOTALS: 104A 057 NAME: **GOLDIE**

	Metric		Imperial	
Mined:	2	tonnes	2	tons
Milled:		tonnes		tons
Recovery:				
Silver:	2,550	grams	82	ounces
Lead:	294	kilograms	648	pounds
Zinc:	122	kilograms	269	pounds

MINFILE NUMBER: **104A 066** NAME: **GREY COPPER (L. 4187)** STATUS: Prospect

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1916	1		Silver	11,235	
			Gold	1	
			Lead		185

SUMMARY TOTALS: 104A 066 NAME: **GREY COPPER (L. 4187)**

	Metric		Imperial	
Mined:	1	tonnes	1	tons
Milled:		tonnes		tons
Recovery:				
Silver:	11,235	grams	361	ounces
Gold:	1	grams		ounces
Lead:	185	kilograms	408	pounds

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MINFILE NUMBER: **104A 067** NAME: **MAIN REEF** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1925	6		Silver	7,042	
			Gold	112	
			Lead		2,477
			Zinc		902
1909	3		Silver	2,468	
			Gold	9	
			Lead		828

SUMMARY TOTALS: 104A 067 NAME: **MAIN REEF**

	Metric		Imperial	
Mined:	9	tonnes	10	tons
Milled:		tonnes		tons
Recovery:				
Silver:	9,510	grams	306	ounces
Gold:	121	grams	4	ounces
Lead:	3,305	kilograms	7,286	pounds
Zinc:	902	kilograms	1,989	pounds

Comments:

1909: Minister of Mines Annual Report 1909, p. 65.

MINFILE NUMBER: **104A 069** NAME: **ROOSEVELT 1 (L. 896)** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1973	5,000		Silver	1	
			Gold	1	
			Lead		1
			Zinc		1
1915	13		Silver	46,749	
			Gold	120	
			Lead		4,590
			Zinc		1,080
1900	10		Silver	1	
			Gold	1	
			Lead		1
			Zinc		1

SUMMARY TOTALS: 104A 069 NAME: **ROOSEVELT 1 (L. 896)**

	Metric		Imperial	
Mined:	5,023	tonnes	5,537	tons
Milled:		tonnes		tons
Recovery:				
Silver:	46,751	grams	1,503	ounces
Gold:	122	grams	4	ounces
Lead:	4,592	kilograms	10,124	pounds
Zinc:	1,082	kilograms	2,385	pounds

Comments:

1973: About 5000 tonnes, amount recovered unknown.
1915: Assessment Report 8095.
1900: Amount recovered unkown.

MINFILE NUMBER: **104A 075** NAME: **VIEW FRACTION** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1975	136		Silver	150,781	
			Gold	6,322	
			Copper		1,020
			Lead		6,919
			Zinc		6,493
1974	21		Silver	26,500	
			Gold	1,151	
			Copper		31
			Lead		332
			Zinc		580

SUMMARY TOTALS: 104A 075 NAME: **VIEW FRACTION**

	Metric		Imperial	
Mined:	157	tonnes	173	tons
Milled:		tonnes		tons
Recovery:				
Silver:	177,281	grams	5,700	ounces
Gold:	7,473	grams	240	ounces
Copper:	1,051	kilograms	2,317	pounds
Lead:	7,251	kilograms	15,986	pounds
Zinc:	7,073	kilograms	15,593	pounds

Comments:

1975: Various locations; may not be from the View Fr. claim.
1974: May be from MC showing (104A 045).

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MINFILE NUMBER: **104A 117** NAME: **VIRGINIA K. 5 (L. 5821)** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1935	15		Silver	48,956	
			Copper		57
			Lead		1,765

SUMMARY TOTALS: 104A 117 NAME: **VIRGINIA K. 5 (L. 5821)**

	Metric		Imperial	
Mined:	15	tonnes	17	tons
Milled:		tonnes		tons
Recovery:				
Silver:	48,956	grams	1,574	ounces
Copper:	57	kilograms	126	pounds
Lead:	1,765	kilograms	3,891	pounds

Comments:

1935: Location of production is uncertain; assumed to be from adit 2.

MINFILE NUMBER: **104A 143** NAME: **MORGAN 6 (L. 5862)** STATUS: Prospect

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1929	2		Silver	7,246	
			Gold	1	
			Lead		432
			Zinc		602

SUMMARY TOTALS: 104A 143 NAME: **MORGAN 6 (L. 5862)**

	Metric		Imperial	
Mined:	2	tonnes	2	tons
Milled:		tonnes		tons
Recovery:				
Silver:	7,246	grams	233	ounces
Gold:	1	grams		ounces
Lead:	432	kilograms	952	pounds
Zinc:	602	kilograms	1,327	pounds

MINFILE NUMBER: **104B 008** NAME: **ESKAY CREEK** STATUS: Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
2002	230,424	230,424	Silver	552,491,000	
			Gold	11,157,377	
2001	208,652	208,652	Silver	480,673,000	
			Gold	9,977,497	
2000	192,323	192,323	Silver	458,403,000	
			Gold	10,362,652	
1999	175,086	175,086	Silver	408,855,000	
			Gold	9,610,507	
1998	162,000	162,000	Silver	364,638,530	
			Gold	8,770,200	
1997	110,161	110,161	Silver	368,498,000	
			Gold	7,591,065	
1996	102,395	102,395	Silver	369,263,056	
			Gold	6,793,111	
1995	100,243	97,706	Silver	327,754,000	
			Gold	6,418,078	
1979	9	9	Silver	25,490	
			Gold	1,263	
			Lead		412
			Zinc		1,008
1971	2	2	Silver	7,435	
			Gold	9	
			Lead		29
			Zinc		43

SUMMARY TOTALS: 104B 008 NAME: **ESKAY CREEK**

	Metric		Imperial	
Mined:	1,281,295	tonnes	1,412,386	tons
Milled:	1,278,758	tonnes	1,409,589	tons
Recovery:				
Silver:	3,330,608,511	grams	107,081,395	ounces
Gold:	70,681,759	grams	2,272,468	ounces
Lead:	441	kilograms	972	pounds
Zinc:	1,051	kilograms	2,317	pounds

Comments:

2002: 2003 Estimates: 11290562 gold, 515509000 silver from 254 011 tons.
2001: Production up to June 30; Homestake Mining Company Ann. Rpt. 2000.
1979: 8.75 tonnes of hand-cobbed ore from trenches from the 22 zone.
1971: 1.5-tonne sample of high-grade ore from trenches from the 22 zone.

MINFILE NUMBER: **104B 021** NAME: **GRANDUC** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1984	352,630	352,630	Silver	3,944,057	
			Gold	55,771	
			Copper		5,602,592
1983	1,031,805	1,031,805	Silver	7,950,859	
			Gold	133,273	
			Copper		11,925,042
1982	500,335	500,335	Silver	3,606,800	
			Gold	52,627	
			Copper		5,380,913
1981	613,936	613,936	Silver	4,850,000	
			Gold	75,283	
			Copper		7,626,025
1978	722,782	741,648	Silver	9,056,914	
			Gold	160,460	
			Copper		14,780,100
1977	1,252,362	1,252,362	Silver	8,631,953	
			Gold	130,011	
			Copper		13,262,755
1976	1,315,905	1,315,905	Silver	10,373,566	
			Gold	154,800	
			Copper		15,569,210
1975	1,499,585	1,499,585	Silver	9,604,482	
			Gold	162,606	
			Copper		16,222,977
1974	2,457,307	2,457,307	Silver	19,216,895	
			Gold	315,198	
			Copper		29,055,142
1973	2,538,242	2,538,242	Silver	20,259,654	
			Gold	342,257	
			Copper		31,548,799
1972	1,881,151	1,895,884	Silver	13,570,114	
			Gold	229,820	
			Copper		21,702,538
1971	1,359,730	1,359,730	Silver	12,983,667	
			Gold	187,955	
			Copper		17,467,617

SUMMARY TOTALS: 104B 021 NAME: **GRANDUC**

	Metric		Imperial	
Mined:	15,525,770	tonnes	17,114,232	tons
Milled:	15,559,369	tonnes	17,151,268	tons
Recovery:				
Silver:	124,048,961	grams	3,988,261	ounces
Gold:	2,000,061	grams	64,303	ounces
Copper:	190,143,710	kilograms	419,195,006	pounds

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MINFILE NUMBER: **104B 030** NAME: **OUTLAND SILVER BAR** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1929	1		Silver	902	
			Copper		7
			Lead		131
1927	1		Silver	280	
			Lead		76
1926	2		Silver	2,146	
			Copper		6
			Lead		300

SUMMARY TOTALS: 104B 030 NAME: **OUTLAND SILVER BAR**

	Metric		Imperial	
Mined:	4	tonnes	4	tons
Milled:		tonnes		tons
Recovery:				
Silver:	3,328	grams	107	ounces
Copper:	13	kilograms	29	pounds
Lead:	507	kilograms	1,118	pounds

MINFILE NUMBER: **104B 031** NAME: **INDIAN** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1953	3,406	3,406	Silver	488,130	
			Gold	12,566	
			Lead		178,029
			Zinc		223,174
1952	9,397	9,397	Silver	1,031,749	
			Gold	26,438	
			Lead		375,091
			Zinc		469,546
1947	40		Silver	7,838	
			Gold	93	
			Lead		3,886
			Zinc		9,576
1925	27		Silver	12,317	
			Gold	31	
			Lead		8,573
			Zinc		5,035

SUMMARY TOTALS: 104B 031 NAME: **INDIAN**

	Metric		Imperial	
Mined:	12,870	tonnes	14,187	tons
Milled:	12,803	tonnes	14,113	tons
Recovery:				
Silver:	1,540,034	grams	49,513	ounces
Gold:	39,128	grams	1,258	ounces
Lead:	565,579	kilograms	1,246,888	pounds
Zinc:	707,331	kilograms	1,559,397	pounds

MINFILE NUMBER: **104B 033** NAME: **EAST GOLD** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1965	2		Silver	8,522	
			Lead		278
			Zinc		471
1954	2		Silver	3,670	
			Gold	1,866	
			Copper		3
			Lead		564
1953	3		Silver	4,012	
			Gold	1,151	
1952	1		Silver	1,586	
			Gold	1,089	
1950	17		Silver	52,129	
			Gold	24,602	
			Copper		27
			Lead		738
			Zinc		151
1949	6		Silver	28,708	
			Gold	2,986	
			Lead		774
			Zinc		407

SUMMARY TOTALS: 104B 033 NAME: **EAST GOLD**

	Metric		Imperial	
Mined:	31	tonnes	34	tons
Milled:		tonnes		tons
Recovery:				
Silver:	98,627	grams	3,171	ounces
Gold:	31,694	grams	1,019	ounces
Copper:	30	kilograms	66	pounds
Lead:	2,354	kilograms	5,190	pounds
Zinc:	1,029	kilograms	2,269	pounds

Comments:

1949: Includes 1939-45: 14 shipments total 14.74 t (Ann.Rpt.1946,p.A72).

MINFILE NUMBER: **104B 034** NAME: **SCOTTIE GOLD** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1984	43,685	43,685	Silver	507,049	
			Gold	863,930	
1983	60,861	60,861	Silver	531,928	
			Gold	980,742	
1982	49,072	49,072	Silver	546,667	
			Gold	1,048,840	
1981	6,646	6,646	Silver	39,501	
			Gold	90,542	

SUMMARY TOTALS: 104B 034 NAME: **SCOTTIE GOLD**

	Metric		Imperial	
Mined:	160,264	tonnes	176,661	tons
Milled:	160,264	tonnes	176,661	tons
Recovery:				
Silver:	1,625,145	grams	52,250	ounces
Gold:	2,984,054	grams	95,939	ounces

MINFILE NUMBER: **104B 035** NAME: **TROY** STATUS: Showing

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1979		33	Silver	16,588	
			Gold	505	
			Lead		870
			Zinc		1,004
1978		22	Silver	5,038	
			Gold	370	
			Lead		420
			Zinc		641

SUMMARY TOTALS: 104B 035 NAME: **TROY**

	Metric		Imperial	
Mined:		tonnes		tons
Milled:	55	tonnes	61	tons
Recovery:				
Silver:	21,626	grams	695	ounces
Gold:	875	grams	28	ounces
Lead:	1,290	kilograms	2,844	pounds
Zinc:	1,645	kilograms	3,627	pounds

Comments:

1979: Crude ore.
1978: Crude ore.

MINFILE NUMBER: **104B 042** NAME: **SILVER HILL** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1925	36	1	Silver	9,669	
			Lead		42

SUMMARY TOTALS: 104B 042 NAME: **SILVER HILL**

	Metric		Imperial	
Mined:	36	tonnes	40	tons
Milled:	1	tonnes	1	tons
Recovery:				
Silver:	9,669	grams	311	ounces
Lead:	42	kilograms	93	pounds

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MINFILE NUMBER: **104B 043** NAME: **SILVER TIP** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1951	15	15	Silver	34,149	
			Gold	171	
			Lead		1,848
			Zinc		2,427
1949	8	8	Silver	23,760	
			Gold	137	
			Lead		1,393
			Zinc		1,963

SUMMARY TOTALS: 104B 043 NAME: **SILVER TIP**

	Metric		Imperial	
Mined:	23	tonnes	25	tons
Milled:	23	tonnes	25	tons
Recovery:				
Silver:	57,909	grams	1,862	ounces
Gold:	308	grams	10	ounces
Lead:	3,241	kilograms	7,145	pounds
Zinc:	4,390	kilograms	9,678	pounds

Comments:
1951: Extracted from Annual Report 1951
1949: Extracted from Annual Report 1950

MINFILE NUMBER: **104B 045** NAME: **DAGO HILL** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1950	8		Silver	30,823	
			Gold	187	
			Copper		11
			Lead		36
1934	5		Silver	22,954	
			Gold	467	
			Copper		5
			Lead		27

SUMMARY TOTALS: 104B 045 NAME: **DAGO HILL**

	Metric		Imperial	
Mined:	13	tonnes	14	tons
Milled:		tonnes		tons
Recovery:				
Silver:	53,777	grams	1,729	ounces
Gold:	654	grams	21	ounces
Copper:	16	kilograms	35	pounds
Lead:	63	kilograms	139	pounds

MINFILE NUMBER: **104B 046** NAME: **BIG MISSOURI** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1942	56,930	56,930	Silver	148,361	
			Gold	103,386	
1941	172,760	172,760	Silver	473,916	
			Gold	380,670	
1940	192,424	192,424	Silver	313,954	
			Gold	400,638	
1939	183,542	183,542	Silver	374,698	
			Gold	496,497	
1938	140,057	140,057	Silver	289,631	
			Gold	390,032	
1931	23,223	23,223	Silver	17,355	
			Gold	44,291	
			Lead		1,230
			Zinc		1,778
1927	5	5	Silver	20,497	
			Gold	404	

SUMMARY TOTALS: 104B 046 NAME: **BIG MISSOURI**

	Metric		Imperial	
Mined:	768,941	tonnes	847,612	tons
Milled:	768,941	tonnes	847,612	tons
Recovery:				
Silver:	1,638,412	grams	52,676	ounces
Gold:	1,815,918	grams	58,383	ounces
Lead:	1,230	kilograms	2,712	pounds
Zinc:	1,778	kilograms	3,920	pounds

Comments:

1927: Estimated tonnes.

MINFILE NUMBER: **104B 054** NAME: **PREMIER** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1996	47,290	47,290	Silver	1,401,366	
			Gold	115,518	
1995	176,689	179,493	Silver	5,315,000	
			Gold	523,391	
1994	151,435	164,175	Silver	5,349,644	
			Gold	536,563	
1993	159,521	159,521	Silver	4,371,379	
			Gold	656,906	
1992	358,608	391,073	Silver	8,820,579	
			Gold	1,163,457	
1991	356,680	526,868	Silver	12,226,268	
			Gold	1,142,891	
1990	638,738	735,598	Silver	18,523,936	
			Gold	1,480,671	
1989	511,180	382,132	Silver	5,573,211	
			Gold	460,389	
1979	69	105	Silver	13,122	
			Gold	2,242	
			Copper		445
			Lead		9,937
			Zinc		8,146
1978	187	245	Silver	312,212	
			Gold	9,144	
			Copper		98
			Lead		17,915
			Zinc		15,035
1977		42	Silver	38,091	
			Gold	1,490	
			Copper		262
			Lead		7,629
			Zinc		6,091
1976	73	73	Silver	62,984	
			Gold	2,115	
			Lead		1,903
			Zinc		2,541
1968	4	4	Silver	22,643	
			Gold	1,586	
			Lead		47
			Zinc		78
1967	6,073	6,073	Silver	2,578,376	
			Gold	111,629	
			Lead		21,507
			Zinc		27,725
1966	7,907	12,872	Silver	5,141,855	
			Gold	255,013	
			Lead		39,490
			Zinc		54,926
1965	7,084	2,119	Silver	463,901	
			Gold	20,808	
			Lead		3,176
			Zinc		5,997
1964	2,460	2,460	Silver	1,214,199	
			Gold	69,371	
1963	87	87	Silver	292,679	
			Gold	19,719	
			Lead		2,717
			Zinc		3,974
1962	422	422	Silver	1,625,878	
			Gold	102,391	
			Lead		13,292
			Zinc		19,703
1961	852	852	Silver	3,509,974	
			Gold	201,268	
			Lead		25,398
			Zinc		26,230
1960	1,163	1,163	Silver	6,331,638	
			Gold	234,765	
			Copper		7,375
			Lead		53,671
			Zinc		91,316

MINFILE NUMBER: **104B 054** NAME: **PREMIER** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1959	56	56	Silver	523,432	
			Gold	20,217	
			Lead		2,897
			Zinc		4,886
1958	100	100	Silver	32,098	
			Gold	7,776	
			Lead		3,862
			Zinc		4,495
1957	205	205	Silver	82,858	
			Gold	11,104	
			Cadmium		1,885
			Copper		921
			Lead		51,097
			Zinc		45,687
1956	5,062	5,062	Silver	156,168	
			Gold	2,768	
			Lead		179,426
			Zinc		169,395
1953	27,093	27,093	Silver	1,591,229	
			Gold	122,204	
			Cadmium		21,552
			Copper		29,901
			Lead		595,251
			Zinc		772,251
1952	59,604	59,604	Silver	3,108,558	
			Gold	208,048	
			Cadmium		29,604
			Lead		1,000,672
			Zinc		1,477,321
1951	49,045	49,045	Silver	3,211,696	
			Gold	177,598	
			Cadmium		11,337
			Lead		1,028,212
			Zinc		1,682,682
1950	69,097	69,097	Silver	4,160,151	
			Gold	505,299	
			Cadmium		15,716
			Copper		58,179
			Lead		1,435,237
			Zinc		1,481,708
1948	37,521	37,521	Silver	1,880,083	
			Gold	266,117	
			Cadmium		548
			Copper		13,407
			Lead		742,302
			Zinc		51,440
1947	53,835	53,835	Silver	2,155,531	
			Gold	380,452	
			Copper		52,282
			Lead		1,032,403
1946	31,573	31,573	Silver	1,208,134	
			Gold	253,894	
			Copper		312
			Lead		31,251
			Zinc		560,556
1945	59,693	59,693	Silver	26,532	
			Gold	4,498	
			Copper		664
			Lead		12,237
1944	62,138	62,138	Silver	3,589,286	
			Gold	475,534	
			Copper		44,839
			Lead		925,046
1943	84,370	84,370	Silver	10,651,191	
			Gold	689,149	
			Copper		77,613
			Lead		1,000,455
1942	127,520	127,520	Silver	15,343,701	
			Gold	1,129,039	
			Copper		65,048
			Lead		958,228
1941	154,678	154,678	Silver	16,866,255	

MINFILE NUMBER: **104B 054** NAME: **PREMIER** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1941	154,678	154,678	Gold	1,214,386	
			Copper		122,574
			Lead		1,694,545
1940	155,585	155,585	Silver	20,053,317	
			Gold	1,156,036	
			Copper		71,618
			Lead		925,023
1939	153,462	153,462	Silver	29,385,430	
			Gold	1,257,090	
			Copper		59,811
			Lead		791,205
1938	167,471	167,471	Silver	26,158,276	
			Gold	1,401,905	
			Copper		54,545
			Lead		707,450
1937	182,530	182,530	Silver	29,908,303	
			Gold	1,485,044	
			Copper		71,288
			Lead		793,892
1936	174,580	174,580	Silver	32,952,416	
			Gold	1,342,592	
			Copper		65,222
			Lead		625,541
1935	135,779	135,779	Silver	20,121,091	
			Gold	999,029	
			Copper		42,801
			Lead		399,895
1934	140,334	140,334	Silver	20,435,884	
			Gold	1,193,453	
			Copper		61,724
			Lead		484,262
			Zinc		95,152
1933	168,210	159,459	Silver	32,821,441	
			Gold	1,538,634	
			Copper		81,546
			Lead		647,535
			Zinc		73,911
1932	201,138	138,434	Silver	49,557,996	
			Gold	2,364,139	
			Copper		129,436
			Lead		916,817
			Zinc		419,392
1931	219,825	154,002	Silver	49,384,006	
			Gold	2,466,530	
			Copper		115,182
			Lead		823,411
			Zinc		419,823
1930	232,996	137,833	Silver	83,246,962	
			Gold	2,706,925	
			Copper		149,068
			Lead		994,460
			Zinc		440,617
1929	242,192	149,814	Silver	71,687,003	
			Gold	3,005,670	
			Copper		115,508
			Lead		1,224,605
1928	250,210	147,065	Silver	77,543,325	
			Gold	4,052,534	
			Copper		143,770
			Lead		1,657,381
1927	221,508	133,841	Silver	102,366,691	
			Gold	3,642,099	
			Copper		172,149
			Lead		1,595,730
1926	209,547	110,814	Silver	95,616,905	
			Gold	3,801,658	
			Copper		45,513
			Lead		911,884
1925	152,912	50,534	Silver	77,382,833	
			Gold	3,684,088	
			Lead		395,064
1924	144,254	56,213	Silver	93,787,426	

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MINFILE NUMBER: **104B 054** NAME: **PREMIER** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1924	144,254	56,213	Gold	4,332,275	
			Lead		2,050
1923	132,144	52,431	Silver	85,425,976	
			Gold	3,648,164	
			Lead		28,209
1922	88,828	29,342	Silver	132,541,329	
			Gold	3,842,060	
1921	14,753	12,020	Silver	48,923,899	
			Gold	1,530,796	
1920	725	725	Silver	2,400,529	
			Gold	71,008	
1919	443	443	Silver	3,367,988	
			Gold	99,810	
1918	24	24	Silver	70,542	
			Gold	5,661	

SUMMARY TOTALS: 104B 054 NAME: **PREMIER**

	Metric		Imperial	
Mined:	6,637,562	tonnes	7,316,660	tons
Milled:	5,876,992	tonnes	6,478,275	tons
Recovery:				
Silver:	1,332,915,406	grams	42,854,163	ounces
Gold:	62,206,610	grams	1,999,986	ounces
Cadmium:	80,642	kilograms	177,785	pounds
Copper:	1,853,101	kilograms	4,085,387	pounds
Lead:	24,814,217	kilograms	54,705,969	pounds
Zinc:	7,961,078	kilograms	17,551,168	pounds

Comments:

1996: Closed June 1996.
1995: See Westmin 1995 Annual Report.
1979: Crude ore-69 tonnes; clean-up and lead concentrates-36 tonnes.
1978: Crude ore-187 tonnes; clean-up and lead concentrates-58 tonnes.
1977: Clean-up.
1976: Crude ore shipped.
1961: Crude ore, reclaimed tailings.
1957: Concentrates.

MINFILE NUMBER: **104B 073** NAME: **RIVERSIDE** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1950		3,174	Silver	435,356	
			Gold	12,204	
			Copper		5,443
			Lead		135,173
			Tungsten		898
			Zinc		5,443
1949		1,905	Silver	119,980	
			Gold	5,176	
			Copper		3,493
			Lead		43,999
			Zinc		1,724
1948		3,632	Silver	866,941	
			Gold	25,230	
			Copper		12,700
			Lead		287,582
			Zinc		953
1947		4,593	Silver	763,896	
			Gold	23,893	
			Copper		10,886
			Lead		231,336
1946		1,650	Silver	239,823	
			Gold	240	
			Copper		1,814
			Lead		104,328
			Tungsten		3,765
1944		1	Tungsten		8,854
1942		1,253	Silver	28,452	
			Gold	788	
			Lead		13,154
			Tungsten		3,375
1941		3,055	Tungsten		11,975
1927		5,895	Silver	521,399	
			Gold	14,380	
			Lead		208,743

SUMMARY TOTALS: 104B 073 NAME: **RIVERSIDE**

	Metric		Imperial	
Mined:		tonnes		tons
Milled:	25,158	tonnes	27,732	tons
Recovery:				
Silver:	2,975,847	grams	95,676	ounces
Gold:	81,911	grams	2,633	ounces
Copper:	34,336	kilograms	75,698	pounds
Lead:	1,024,315	kilograms	2,258,227	pounds
Tungsten:	28,867	kilograms	63,641	pounds
Zinc:	8,120	kilograms	17,902	pounds

Comments:

1950: From USGS BULL 1024-F.
1949: From USGS BULL 1024-F. Small quantities tungsten produced.
1948: From USGS BULL 1024-F. Small quantities tungsten produced.
1947: From USGS BULL 1024-F. Small quantities tungsten produced.
1946: From USGS BULL 1024-F. In 1945 Ore Milled=1179 t,grade unreported.
1944: From USGS BULL 1024-F. Actual ore milled unknown.
1942: From USGS BULL 1024-F.
1941: From USGS BULL 1024-F.
1927: From USGS BULL 1024-F. In 1925, Ore Milled=95 t, grade unreported.

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MINFILE NUMBER: **104B 090** NAME: **WOODBINE** STATUS: Developed Prospect

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1929	5		Silver	2,488	
			Gold	249	
			Lead		132

SUMMARY TOTALS: 104B 090 NAME: **WOODBINE**

	Metric		Imperial	
Mined:	5	tonnes	6	tons
Milled:		tonnes		tons
Recovery:				
Silver:	2,488	grams	80	ounces
Gold:	249	grams	8	ounces
Lead:	132	kilograms	291	pounds

MINFILE NUMBER: **104B 107** NAME: **JOHNNY MOUNTAIN** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1993	21,850	21,850	Silver	407,000	
			Gold	217,700	
1990	74,936	86,865	Silver	1,334,263	
			Gold	906,754	
			Copper		347,633
1989	85,944	94,282	Silver	2,485,451	
			Gold	1,544,083	
			Copper		643,386
1988	13,628	24,250	Silver	122,100	
			Gold	146,856	
			Copper		17,090

SUMMARY TOTALS: 104B 107 NAME: **JOHNNY MOUNTAIN**

	Metric		Imperial	
Mined:	196,358	tonnes	216,448	tons
Milled:	227,247	tonnes	250,497	tons
Recovery:				
Silver:	4,348,814	grams	139,817	ounces
Gold:	2,815,393	grams	90,517	ounces
Copper:	1,008,109	kilograms	2,222,499	pounds

Comments:

1993: Custom ore.

MINFILE NUMBER: **104B 150** NAME: **SILVER BUTTE** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1993	2,647	2,647	Gold	7,961	
1991	102,539	105,744	Silver	2,542,238	
			Gold	843,780	

SUMMARY TOTALS: 104B 150 NAME: **SILVER BUTTE**

	Metric		Imperial	
Mined:	105,186	tonnes	115,948	tons
Milled:	108,391	tonnes	119,481	tons
Recovery:				
Silver:	2,542,238	grams	81,735	ounces
Gold:	851,741	grams	27,384	ounces

Comments:

1993: Underground development (George Cross News Letter No.5, 1994).
1991: Ore shipped to the Premier mill.

MINFILE NUMBER: **104B 250** NAME: **SNIP** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1999	64,694	64,694	Gold	1,349,600	
1998	145,311	145,311	Silver	1,319,000	
			Gold	3,171,815	
1997	144,000	144,000	Silver	2,044,000	
			Gold	3,597,000	
			Copper		146,091
1996	154,369	154,369	Silver	1,615,831	
			Gold	3,664,876	
			Copper		103,185
1995	158,780	169,525	Silver	1,699,000	
			Gold	3,917,421	
1994	161,653	172,163	Silver	1,085,387	
			Gold	4,157,228	
1993	159,176	170,930	Silver	1,714,000	
			Gold	4,838,201	
1992	156,559	164,700	Silver	1,624,000	
			Gold	4,648,261	
1991	123,100	122,648	Silver	1,081,872	
			Gold	2,749,299	

SUMMARY TOTALS: 104B 250 NAME: **SNIP**

	Metric		Imperial	
Mined:	1,267,642	tonnes	1,397,336	tons
Milled:	1,308,340	tonnes	1,442,198	tons
Recovery:				
Silver:	12,183,090	grams	391,695	ounces
Gold:	32,093,701	grams	1,031,835	ounces
Copper:	249,276	kilograms	549,559	pounds

Comments:

1999: Six months ending June 30, 1999. Production suspended.
1997: Silver and copper estimated.
1995: Dore and concentrate (GCNL No.43, 1996).
1991: Opened end of January 1991.

MINFILE NUMBER: **104H 020** NAME: **MOUNT KLAPPAN (HOBBIT-BROATCH)** STATUS: Past Producer

Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1985	140,000	120,000	Coal		80,000,000
1981	75,070	75,070	Coal		75,070,000

SUMMARY TOTALS: 104H 020 NAME: **MOUNT KLAPPAN (HOBBIT-BROATCH)**

	Metric		Imperial	
Mined:	215,070	tonnes	237,074	tons
Milled:	195,070	tonnes	215,028	tons

Recovery:

Coal:	155,070,000	kilograms	341,870,734	pounds

Comments:

1985: Anthracite.
1981: Metallurgical coal.