

MINFILE NUMBER: **092L 001**

NATIONAL MINERAL INVENTORY: 092L5 Cu4

NAME(S): **HEART**, COL, POWER

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Alberni
Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 16 24 N
LONGITUDE: 127 31 36 W
ELEVATION: 488 Metres

NORTHING: 5570060
EASTING: 604988

LOCATION ACCURACY: Within 1 KM

COMMENTS: Centre of the Col claims (Property File 092L 237, General Property
Compilation, Brinex, 1974), between the headwaters of Power River
and Colonial Creek, is 15 kilometres east of the head of Klaskish
Inlet and 8 kilometres southwest of the head of Neuroutsos Inlet.

COMMODITIES: Copper Iron

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Porphyry Hydrothermal Epigenetic Industrial Min.
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Lower Jurassic

GROUP

Bonanza

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

ISOTOPIC AGE: 200 Ma

DATING METHOD: Fossil

MATERIAL DATED: Mollusks

Jurassic

ISOTOPIC AGE: 154 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Island Plutonic Suite

LITHOLOGY: Pyroclastic Rock
Andesite
Granodiorite
Diorite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite from Island Copper
stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Greenschist

CAPSULE GEOLOGY

The Heart occurrence is located in the Insular Belt of the
Cordillera. The region is underlain mainly by volcanics and crystal-
line rocks and minor sediments.

Overlying an assemblage of Paleozoic Sicker Group sediments and
Upper Triassic basalts and minor carbonate and clastic sediments of
the Vancouver Group is the Lower Jurassic Bonanza Group of andesitic
to rhyodacitic lava, tuff and breccia. Bonanza volcanism is coeval
with, or genetically related to, Jurassic Island Plutonic Suite
granodiorite that has invaded all older rocks, and in this area
occurs as small isolated stocks.

Pyrite and chalcopyrite veinlets and shears occur within Bonanza
Group pyroclastics and andesite which are intruded by a small body of
granodiorite to diorite. Magnetite bearing veins are also present.

BIBLIOGRAPHY

EMPR AR 1968-99
EMPR ASS RPT 12913
EMPR EXPL 1969-206; *1974-211; *1976-127; 1984-241
EMPR PF (Claim Map, 1:50,000 1968(?); 092L 230-Les: Report on
Exploration in Mahatta River Area, Brinco, 1974)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 2
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/12

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 002**

NATIONAL MINERAL INVENTORY: 092L5 Fe3

NAME(S): **POWER**, LIT 16-23, LIT 30-33,
LITTLE LAKE

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E 092L03W 092L04E 092L06W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 15 24 N
LONGITUDE: 127 30 58 W
ELEVATION: 228 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5568222
EASTING: 605777

LOCATION ACCURACY: Within 500M

COMMENTS: Location of "A" zone (Minister of Mines, Annual Report 196, page 98) is 200 metres east of Power River, 8 kilometres north-northwest of the head of Power Lake.

COMMODITIES: Iron Magnetite

MINERALS

SIGNIFICANT: Magnetite
ALTERATION: Epidote Pyroxene
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Massive Disseminated
CLASSIFICATION: Skarn Replacement Igneous-contact Industrial Min.
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 152 x 46 x 18 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Dimensions of "A" zone are 152 by 46 by 18 metres. Zones A, B and C are east trending zones.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 181 +/- 8			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite K-Ar			

LITHOLOGY: Basalt
Andesite Dike
Gabbroic Dike
Diorite Dike

HOSTROCK COMMENTS: Bonanza mullocks from Quatsino Sound; phlogopite from the Merry Widow mine (092L 044) (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
Plutonic Rocks
PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The Power River Valley is underlain by layered dark green basalts, rhyolite, andesite, breccia and minor limy sediments thought to be correlative with the Lower Jurassic Bonanza Group. The area has been extensively faulted and intruded by dykes and sills of andesite, diorite and gabbro, related to the Early to Middle Jurassic Island Plutonic Suite.

Magnetite showings, notably the "A", "C", and "B" zones, are found as lenses along or near faults or shear zones in the basalt east of the Power River. The lenses host either massive magnetite or contain scattered grains of magnetite with epidote, pyroxene and sparsely disseminated sulphides. Contacts of magnetite lenses with basalt are sharp and the basalt is unaltered. Small cross-faults offset several of the magnetite deposits.

The A, C and B zones lie in a nearly straight east-west line running slightly south of east from the river.

The A zone is shaped like a narrow canoe with an average width of 18 metres, depth of 46 metres and slope length of 152 metres. It lies between 130 and 205 metres elevation. The C zone lies between 244 and 335 feet elevation and consists of magnetite, dyke rocks and basalt in

CAPSULE GEOLOGY

an irregular pattern. The B zone consists of two small bodies of magnetite, 12 and 6 metres across, at 701 metres elevation on the ridge (Minister of Mines Annual Report 1962).

BIBLIOGRAPHY

EMPR AR 1961-100; *1962-98
EMPR PF (Eastwood, P. & Adamson, R.S. (1962): Rio Tinto, Zone A & D
Geology)
EMR MP CORPFILE (Rio Tinto Canadian Exploration Ltd.)
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1913; 1920A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/16

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 003**

NATIONAL MINERAL INVENTORY: 092L3 Fe2

NAME(S): **LITTLE LAKE**, LIT 1-56

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 14 23 N
LONGITUDE: 127 28 04 W
ELEVATION: 914 Metres

NORTHING: 5566408
EASTING: 609261

LOCATION ACCURACY: Within 500M

COMMENTS: Little Lake 3, 4, 5, 6 claim post west of Contact Lake, 4.2 kilometres north of head of Power Lake (Assessment Report 5375).

COMMODITIES: Iron Magnetite Copper

MINERALS

SIGNIFICANT: Magnetite Pyrite Pyrrhotite

COMMENTS: Magnetite with veinlets and disseminations of cupriferous pyrite and pyrrhotite.

ALTERATION: Hedenbergite Chlorite Epidote Quartz Pyrite

ALTERATION TYPE: Propylitic Skarn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Stratabound Massive
CLASSIFICATION: Skarn Replacement Igneous-contact Industrial Min.

TYPE: K03 Fe skarn

SHAPE: Tabular

MODIFIER: Faulted

DIMENSION: 3200 x 0060 Metres

STRIKE/DIP: 315/90

TREND/PLUNGE:

COMMENTS: Bedding strikes northwest.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE Lower Jurassic GROUP Bonanza

FORMATION Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

ISOTOPIC AGE: 220 Ma

DATING METHOD: Fossil

MATERIAL DATED: Mollusks

Jurassic

Island Plutonic Suite

ISOTOPIC AGE: 148 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Phlogopite

LITHOLOGY: Basalt
Rhyolite
Andesite
Andesite Breccia
Agglomerate
Argillite
Diorite
Quartz Diorite
Quartz Porphyry

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; intrusive phlogopite from Zeballos intrusion.

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Hornfels

INVENTORY

ORE ZONE: CONTACT LAKE

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 2846000 Tonnes

YEAR: 1974

COMMODITY	GRADE	
Copper	0.0270	Per cent
Iron	47.8200	Per cent

COMMENTS: Possible consolidated tonnage of 10 lenses of 100,000 to 600,000 tonnes each. Also contains 1.113 per cent sulphur.

REFERENCE: Assessment Report 5375, page 22.

CAPSULE GEOLOGY

The occurrence is underlain by vertically dipping, northwest striking medium to thickly bedded basalt, rhyolite, andesite, andesite breccia, agglomerate and argillite of the Lower Jurassic Bonanza Group. The Bonanza Group rocks have been intruded by an 0.8 kilometre wide apophysis of diorite to quartz diorite stock located 1.6 kilometres to the southeast. The diorite is in turn intruded by diabase and quartz-porphyry dykes, possibly related to the quartz-monzonite porphyry stock at the head of Ououkinsh Inlet. These intrusives are part of the Early to Middle Jurassic Island Plutonic Suite.

The occurrence is a contact metasomatic magnetite-pyrite deposit where the sulphides have replaced volcanic flows and related pyroclastic and sedimentary rocks of the Bonanza Group.

Magnetite mineralization is localized in fault zones and adjacent fractured or permeable beds, and limited by flat-lying or east dipping diorite dykes. Propylitic, chlorite and skarn alteration are common.

Sampling of 28 trenches on the South Grid area gave an unweighted average of 47.82 per cent total iron, 1.113 per cent sulphur and 0.027 per cent copper over an average width of 3.6 metres (Assessment Report 5375, page 16).

BIBLIOGRAPHY

- EMPR AR 1961-100; 1962-98
EMPR ASS RPT 379, 5375, 6831
EMPR EXPL 1978-C181
EMPR GEM 1974-210
EMPR PF (Rio Tinto 1961; Geology Map A and D Zones; Texada Mining 1974, 1975, Various Maps (copies of Assessment Report 5375); Reserve calculations, North and South areas, 1975)
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8; 79-30
GSC SUM RPT 1913; 1920A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/07

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 004**

NATIONAL MINERAL INVENTORY: 092L2 Fe5

NAME(S): **CORDOVA, SIWASH**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 02 54 N
LONGITUDE: 126 49 15 W
ELEVATION: 685 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5546279
EASTING: 656011

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location, from Minister of Mines Annual Report 1962, Figure 8, is between Blacksand Creek and Lime Creek, 1.2 kilometres northwest of Zeballos River and 6.5 kilometres north of Zeballos.

COMMODITIES: Iron Magnetite

MINERALS

SIGNIFICANT: Magnetite
ALTERATION: Pyroxene
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Massive
CLASSIFICATION: Skarn Industrial Min.
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
Upper Triassic	Vancouver	Quatsino	
Upper Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks
ISOTOPIC AGE: 225 Ma
DATING METHOD: Fossil
MATERIAL DATED: Juvavite ammonites
ISOTOPIC AGE: 148 +/- 8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Phlogopite

LITHOLOGY: Pyroxenitic Tuff
Limestone
Quartz Diorite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Quatsino ammonites from Alice Lake; phlogopite for Zeballos intrusion (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

CAPSULE GEOLOGY

The Cordova magnetite occurrence lies within a belt dotted with ten or more similar occurrences that extend from Zeballos River for about 8.0 kilometres in a northwest direction, at or near the conformable contact between Upper Triassic Quatsino Formation crystalline limestone of the Vancouver Group and overlying, highly altered and folded volcanic and sedimentary rocks of the Upper Triassic Vancouver Group Parson Bay Formation and Lower Jurassic Bonanza Group. These rocks lie on the northeast flank of the north-west elongated Zeballos phase of the Late Jurassic Island Plutonic Suite.

The Cordova occurrence lies 0.6 kilometres east of the Ford-Zeballos Iron Mine (092L 028) and consists of small lenses of massive magnetite in highly pyroxenized tuffs of the Bonanza Group, 60 metres from the contact with Quatsino limestone and near a small quartz-diorite intrusion. The lenses have vertical long axes and range in size from 0.5 kilograms to several tonnes.

BIBLIOGRAPHY

EMPR AR *1962-100; 1963-101; 1964-153; 1965-230; 1968-102

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 8
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM 1969-215
EMR MP CORPFILE (Zeballos Iron Mines Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 60
GSC OF 9; 170; 463
GSC P 38-5; 69-1A; 70-1A; 71-36; 72-44; 74-8; 79-30
GSC SUM RPT 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/04

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Plutonic Suite have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

In the Zeballos gold camp, generally narrow (10 to 30 centimetres) quartz-calcite veins, trending north or east (Fieldwork 1983, page 230) cut all rock types. Vein mineralogy includes pyrite, sphalerite, galena, chalcopyrite and locally arsenopyrite.

Recorded production for the camp totals 9465 kilograms gold and 4119 kilograms silver, from 652,000 tonnes of ore mined (Fieldwork 1982, page 291). Most of the production came from the Spud Valley and Privateer deposits.

The Golden Gate vein, striking 340 to 350 degrees and dipping 70 degrees east follows a shear zone in massive Bonanza andesite, cut by numerous fine-grained dykes of gabbro, presumably associated with nearby Jurassic Island Plutonic Suite and the Eocene Catface stock.

The shear zone is only a few centimetres wider than the vein, which is lenticular and ranges in width from 2.5 to 20 centimetres. Vein mineralogy includes pyrite, pyrrhotite and chalcopyrite in quartz gangue. Usually, sulphides make up a few per cent of vein material but locally, this can go as high as 75 per cent.

Gold mineralogy is not known. The vein has been traced over 168 metres. Lammers (1939) mentions the "Campbell Vein" 6 metres north-east of the shaft. This vein strikes 260 degrees with a 78 degree north dip. A 0.9 metre channel sample returned 25.4 grams per tonne and vein minerals are pyrrhotite, pyrite, sphalerite, chalcopyrite and galena in crushed, leached talcose gouge, quartz and calcite.

A shipment of high grade sorted ore in 1940 produced 373 grams of gold, 156 grams of silver, with 44 kilograms of copper and 39 kilograms of lead. In 1983, diamond drilling encountered a 9.8 metre intercept of 9.6 grams per tonne gold (Diamond-drill hole #5) and a 1.5 metre section assaying 135.7 grams per tonne gold and 44.2 grams per tonne silver (George Cross Newsletter #191, #192, 1983; Northern Miner Oct.6, 1983).

BIBLIOGRAPHY

- EM EXPL 2001-23-31
- EMPR AR 1938-F48; 1940-27; 1945-116
- EMPR ASS RPT 5079, 12863
- EMPR BULL 20, p. V; *27, p. 52
- EMPR EXPL 1983-331
- EMPR FIELDWORK 1982, p. 290; 1983, p. 219
- EMPR GEM 1974-171
- EMPR PF (Lammers, W.A.(1939): Report); Stevenson, J.S., (1938):
Lode Gold Deposits of the Zeballos Area
- GSC EC GEOL 1-1974
- GSC MAP 4-1974; 255A; 1028A; 1552A
- GSC MEM 204; 272, p. 65
- GSC OF 9; 170; 463
- GSC P 38-5; *40-12, p. 8; 69-1A; 70-1A; 72-44; 74-8; 79-30
- GSC SUM RPT 1929A; 1932A
- CIM Trans. Vol. 42, 1939, pp. 225-237; 72, pp. 116-125; 1948,
pp. 78-85
- GCNL #164, #185, #187, #191, #192, 1983
- N MINER Apr., 1938, pp. 39-45; Oct.6, 1983
- Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/17

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 006**

NATIONAL MINERAL INVENTORY: 092L2 Au19

NAME(S): **TAGORE**, ELDORADO, NAYDA,
GOLDEN WORM

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:
LATITUDE: 50 00 19 N
LONGITUDE: 126 50 53 W
ELEVATION: 60 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Shaft located on west bank of Zeballos River, 2.4 kilometres north of Zeballos.

Underground
MINING DIVISION: Alberni
UTM ZONE: 09 (NAD 83)
NORTHING: 5541436
EASTING: 654200

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Sphalerite Chalcopyrite Galena
Gold
COMMENTS: Gold, silver mineralogy not known.
ASSOCIATED: Quartz Calcite
ALTERATION: Epidote Chlorite Diopside Garnet Albite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
DIMENSION: 0015 Metres STRIKE/DIP: 045/
COMMENTS: Vein width to 38 centimetres, striking northeast, dipping near vertical. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			
Eocene			Catface Intrusions
ISOTOPIC AGE: 38 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Tuff
Limestone
Quartz Gabbroic Dike
Pegmatite
Diorite Dike
Lamprophyre Dike

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; phlogopite from Zeballos intrusion; biotite from South Zeballos stock (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
 SAMPLE TYPE: Grab

YEAR: 1924

COMMODITY	GRADE	
Silver	411.5000	Grams per tonne
Gold	438.9000	Grams per tonne
Copper	0.5000	Per cent
Zinc	12.8000	Per cent

COMMENTS: Selected sample of vein material.
 REFERENCE: Minister of Mines Annual Report 1924, page 223.

CAPSULE GEOLOGY

The Tagore occurrence lies in the Zeballos gold camp, an area underlain by a Lower Jurassic Bonanza Group Island arc sequence of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Plutonic Suite have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

Recorded production for the camp totals 9465 kilograms gold and 4119 kilograms silver, from 652,000 tonnes of ore mined (Fieldwork 1982, page 291). Most production came from the Spud Valley and Privateer deposits.

The Tagore occurrence consists of a locally anastomosing quartz (plus or minus calcite) vein containing variable amounts of pyrrhotite, sphalerite, chalcopyrite, galena, pyrite, free gold and an unidentified grey mineral. The vein, up to 38 centimetres wide but locally represented only by a barren, tight fissure trends southeast and dips vertically. It has been traced for 15 metres, and is hosted in Bonanza Group fine-grained green banded tuff with minor interbedded crystalline limestone striking 080 degrees and dipping 80 degrees north. Prior to the introduction of mineralization the volcanic assemblage was altered to garnet, epidote and chlorite, while limy beds were altered to garnet, diopside, quartz, calcite, albite and apatite, plus or minus sphalerite.

Several dykes and irregular bodies ranging from quartz gabbro with abundant magnetite to light grey micropegmatite are reported to occur (Bulletin 27, page 51). Lamprophyre dykes are also present. Where the veins cut through a 2.0 metre limestone band the fissure continues but the veining is absent. Similarly, where the vein cuts a 2.0 metre wide northeast trending diorite dyke, no mineralization is present.

In 1929, 1.8 tonnes of high grade ore were shipped of which 1371 grams of gold were recovered. From 1930 to 1939, 14 tonnes of ore was shipped from which 1245 grams of gold, 2022 grams of silver with 23 kilograms of copper and 20 kilograms of lead were recovered.

BIBLIOGRAPHY

EMPR AR 1924-223; 1925-269; 1929-376; 1930-441; 1932-26,205; 1933-252; 1938-F47; 1939-41; 1940-72; 1946-179; 1947-181
 EMPR ASS RPT 12863
 EMPR BULL 20-V, p. 16; *27, p. 50
 EMPR ENG INSP #61651
 EMPR EXPL 1983-331
 EMPR FIELDWORK 1982, p. 290; 1983, p. 219
 EMPR PF (092L 005 - Golden Gate; 092E 023 - Answer; Claim Map 1939, 1:3600, Tagore MC)
 EMR MP CORPFILE (Conquest Mines Ltd.)
 Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area
 GSC EC GEOL 1-1947
 GSC MAP 4-1974; 255A; 1028A; 1552A
 GSC MEM 204, p. 17; 272, pp. 47,65
 GSC OF 9; 170; 463
 GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
 GSC SUM RPT 1929A; 1932A11, p. 37
 CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
 N MINER Apr. 1938, pp. 39-45
 Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

MINFILE NUMBER: **092L 007**

NATIONAL MINERAL INVENTORY:

NAME(S): **PROSPERITY (L.1801)**, ELSA NO. 3, FEN 5

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 00 39 N
LONGITUDE: 126 49 40 W
ELEVATION: 305 Metres

NORTHING: 5542096
EASTING: 655635

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Prosperity adit on Hidden Valley Creek is 1.2 kilometres east of Zeballos River, 3.3 kilometres northeast of Zeballos.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal Epigenetic
DIMENSION: STRIKE/DIP: 090/40N TREND/PLUNGE:
COMMENTS: Shear zone strikes east.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvavite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			
Eocene			Catface Intrusions
ISOTOPIC AGE: 38 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Felsite Dike
Andesite
Andesitic Tuff
Limestone

HOSTROCK COMMENTS: Quatsino ammonites-Alice Lake; Bonanza mollusks-Quatsino Sound; phlogopite-Zeballos intrusion; biotite-South Zeballos (GSC P 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: PHYSIOGRAPHIC AREA: Vancouver Island Ranges
COMMENTS: Greenstone is silicified and carbonate altered. GRADE: Amphibolite

CAPSULE GEOLOGY

The occurrence lies in the Zeballos gold camp, an area underlain by a Lower Jurassic Bonanza Group Island arc sequence of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Plutonic Suite have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

Several narrow shear zones in andesitic tuffs occur on the Prosperity claims. Several open cuts were dug in the rusty, sheared

CAPSULE GEOLOGY

rock but no mineralized quartz veins or sulphides were reported. The Prosperity adit was driven from the east bank of Hidden Valley Creek and was an attempt to intersect rusty vein shears which strike east and dip 40 degrees north, higher up the hillside to the northeast. A vertical fault was intersected in the adit but no mineralization was encountered. Rocks within the adit consist of northwest striking lava and a 4.5 metre bed of limestone which strikes northwest and dips vertically.

About 200 metres down Hidden Valley from this adit, traces of pyrrhotite and chalcopyrite were reported to be associated with a felsite dyke (Assessment Report 5079). The dyke strikes northwest and is thought to follow the contact between Lower Jurassic Bonanza Group andesites and crystalline limestone of the Upper Triassic Vancouver Group, Quatsino Formation.

BIBLIOGRAPHY

- EMPR ASS RPT 4819, 5079
EMPR BULL 20-V, p. 16; *27, p. 53
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR GEM 1974-171
EMPR PF (Claim Map 1:3600, 1940; Adit Plan 1:480, 1946;
Geology, 1:1200; Can Superior, 1974)
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 64
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/23

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

ORE ZONE: PRIVATEER

REPORT ON: Y

CATEGORY: Combined
QUANTITY: 122470 Tonnes
COMMODITY: _____

YEAR: 1988

Gold _____ GRADE _____
17.0000 Grams per tonne

COMMENTS: Indicated and inferred reserves situated both on the Privateer and Prident (092L 009) properties.

REFERENCE: Canadian Mines Handbook 1988-89, page 333.

CAPSULE GEOLOGY

The Privateer mine lies in the Zeballos gold camp, an area underlain by an island arc sequence of basaltic to rhyolitic volcanic rocks of the Lower Jurassic Bonanza Group. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Early-Middle Jurassic plutons of the Zeballos intrusion phase of the Island Plutonic Suite have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Tertiary Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

Recorded production for the camp totals 9465 kilograms of gold and 4119 kilograms of silver from 652,000 tonnes of ore mined (Fieldwork 1982, page 291). Most production came from the Spud Valley deposits (092L 211 and 092L 013) and the Privateer.

The Privateer mine, with variable production recorded between 1934 and 1975, consists of 3 roughly parallel main veins from which ore was produced, and more than 12 lesser, subsidiary veins. All veins follow shear zones. The veins are located in drag-folded andesitic tuff that is locally diopside-altered, and hosts calc-silicate skarn, consisting of a diopside-wollastonite-garnet-plagioclase-quartz-biotite assemblage interbanded with thin layers of fragmental volcanics. All rocks belong to the Bonanza Group. Intruding these rocks is a lenticular quartz diorite stock of the Tertiary Catface Intrusions which is related to the main quartz diorite intrusion of similar composition lying several hundred metres to the east. The quartz diorite is cut by granodiorite dykes up to 0.6 metre wide. Diabase dykes to 6 metres wide cut the layered rocks but not the quartz diorite. Porphyritic dacite dykes, up to 3 metres wide, cut all other rock types, but occur mostly east of the quartz diorite lens.

The three veins from which most of the production was recorded contain alternating bands of quartz and sulphides. Locally comb textures and quartz-lined vugs up to 30 centimetres are present. Where sulphides are absent, variably altered wallrock inclusions are common. Coarse ankerite is often present. The productive parts of the veins contain abundant sulphides, including, in order of abundance, pyrite, sphalerite and galena, chalcopyrite, arsenopyrite and pyrrhotite. Late calcite veinlets, overprinting the main veins, are often present.

The No. 1 vein strikes between 066 and 083 degrees, dipping 65 to 90 degrees north. The vein has been developed over a horizontal distance of 442 metres and a depth of 305 metres. Widths range from hairline to 1.2 metres, averaging 28 centimetres. Where in quartz diorite, the vein commonly passes into a sheeted zone along strike, with the vein following one or more of the joints.

The No. 2 vein lies 80 metres north of the No. 1 vein and is more or less parallel at a strike of 083 degrees and 86 degree southward dip. Development has traced the 5 to 35-centimetre wide vein for a strike length of 207 metres and a downdip depth of 256 metres.

Both the No. 1 and 2 veins appear to pinch out to very narrow widths at their on-strike extremities, and both veins have associated narrow gash veins up to 9 metres long and striking 057 to 067 degrees.

The No. 3 vein strikes 067 degrees and branches from No. 2 vein. It has been traced underground for 70 metres. It is 5 to 10 centimetres wide and, like the No. 1 vein, has a sheeted style where in quartz diorite.

The Privateer occurrence includes a number of nearby additional veins: the No. 4 and 5 veins are located 14 metres and 120 metres north of the No. 3 vein, respectively. The No. 4 vein, actually a zone of closely-spaced quartz stringers in quartz diorite, is poorly developed. The vein strikes northeast and dips vertically. The 090 degree striking No. 5 vein consists of narrow quartz stringers containing coarse carbonate but no sulphides.

An additional 11 veins were intersected in the "600 Crosscut"

CAPSULE GEOLOGY

that leads to the Prident mine (092L 009). These veins, named A to L, are usually less than 5 centimetres wide, steeply dipping and strike northeast. The veins occur at irregular intervals over a distance of 365 metres and are weakly mineralized with combinations of calcite, pyrite, sphalerite or arsenopyrite.

Indicated and inferred reserves situated both on the Privateer and Prident (092L 009) properties total 122,470 tonnes grading 17 grams per tonne gold (Canadian Mines Handbook 1988-89, page 333).

New Privateer Mines Ltd. reopened the mine in 1983 and rehabilitated the workings. It processed about 2000 tonnes before closing in 1991.

Newmex Minerals Inc. (formerly Kilo Gold Mines Ltd.) reopened the 1100-level portal and mined a 200-tonne sample in 1998. Of this ore, 16.3 tonnes was milled (Roberts mill near Greenwood), producing a 703 gram bar. A 900-tonne bulk sample in planned for 1999.

Jacques Houle, Regional Geologist visited the area in May 2000; he reports that the Zeballos Iron mine waste pit stockpile contains about 243,000 tonnes of 5 per cent magnetite, 5 per cent garnetite and 5 per cent limestone.

BIBLIOGRAPHY

- EM EXPL 1998-52; 1999-25-32; 2001-23-31
EMPR AR 1934-A28; 1936-A37; 1937-41; 1938-F68; 1939-A40,87; 1940-71;
1941-69; 1942-65; 1943-66; 1945-116; 1946-178; 1947-180; 1948-157;
1952-210; 1961-100; 1964-154; 1967-74; 1975-A92
EMPR BC METAL MM00094
EMPR BULL 20 Part V, pp. 16-20; *27, pp. 58-71; 101, p. 141
EMPR ENG INSP Fiche No. 61327-61338,61891
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR INDEX 3-209
EMPR MAP 65 (1989)
EMPR OF 1992-1
EMPR P 1991-4, p. 188
EMPR PF (Various plans of underground workings, profiles, sections
and claim maps, 1939-1946; Newmex Minerals Inc. Website (Apr.
1999): Zeballos Project, 1 p.)
EMR MP CORPFILE (New Privateer Mine Ltd.)
GSC EC GEOL 1
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204, p. 13; 272, pp. 47,61
GSC OF 9; 170; 463
GSC P 38-5; *40-12, p. 10; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929 Part A; 1932 Part AII, pp. 29-50
CANMET IR *792 (1938), pp. 120-134
CIM Transactions Volume 42 (1939), pp. 225-237; (1948), pp. 78-85;
72, pp. 116-125
CMH 1988-1989, p. 333
GCNL #26,#96, 1972; Jun.25, 1974; #151, 1980; #163, 1981; #6,#112,
1982; #233,#251, 1983; #38,#118, 1984; #239, 1985; #38,#45,#224,
1986; #168, 1987; #108,#246, 1988; #21(Jan.30),#141(Jul.23), 1991;
#33(Feb.17), 1992
IPDM Feb., 1986
N MINER Apr. 1938; Jul.5, 1979; Mar.26, 1981; Mar.10,17,Dec.8, 1986
PERS COMM J. Houle, May 2000
PR REL Newmex Minerals Inc., Apr.19, 1999
WWW <http://www.newmex-minerals.com>
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of
British Columbia, Vol. 1: Vancouver Island, pp. 177-178
Prospector Sept., 1979; May/June., 1986
Stevenson, J.S. (1938): Lode Gold Deposits of the Zeballos Area
Times Colonist, The New Islander, Feb. 8, 1998, pp. 6-7
EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/13

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 009**

NATIONAL MINERAL INVENTORY: 092L2 Au2

NAME(S): **PRIDENT**, GOLDEN PEAK 4 (L.1032), PRIVATEER

STATUS: Past Producer

Underground

MINING DIVISION: Alberni

REGIONS: British Columbia, Vancouver Island

NTS MAP: 092L02W

BC MAP:

LATITUDE: 50 01 34 N

LONGITUDE: 126 48 25 W

ELEVATION: 454 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit in far west corner of Lot 1032 is 430 metres east of Spud Creek, 1.1 kilometres southeast of Zeballos River, 5.5 kilometres northeast of Zeballos. See also Privateer (092L 008).

UTM ZONE: 09 (NAD 83)

NORTHING: 5543838

EASTING: 657078

COMMODITIES: Gold

Silver

Zinc

Lead

Copper

MINERALS

SIGNIFICANT: Gold Pyrite Arsenopyrite Sphalerite Galena

COMMENTS: Quartz vein carry free gold, lenses of sulphides. Copper, silver mineralogy not known.

ASSOCIATED: Quartz Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Mesothermal Epithermal Epigenetic

TYPE: I01 Au-quartz veins

106 Cu±Ag quartz veins

SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Eocene

ISOTOPIC AGE: 38 +/- 14 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Catface Intrusions

LITHOLOGY: Quartz Diorite

Feldspar Porphyry Dike

HOSTROCK COMMENTS: Age date from Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: PRIDENT

REPORT ON: Y

CATEGORY: Indicated

YEAR: 1988

QUANTITY: 122470 Tonnes

COMMODITY

GRADE

Gold

17.0000 Grams per tonne

COMMENTS: Indicated and inferred reserves situated both on the Prident and Privateer (092L 008) properties.

REFERENCE: Canadian Mines Handbook 1988-89, page 333.

CAPSULE GEOLOGY

The Prident mine lies in the Zeballos gold camp, an area underlain by a Lower Jurassic Bonanza Group Island arc sequence of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Intrusions have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

The three principal Prident veins are hosted by the Zeballos pluton, a quartz diorite stock related to the Eocene Catface Intrusions. The quartz diorite stock is cut by several feldspar porphyry dykes. A large inclusion of granitized volcanic rock, possibly of the Bonanza Group was encountered on the 400 level of the

CAPSULE GEOLOGY

mine for a distance of 60 metres. The three veins, dipping vertically and striking 040, 072 and 100 degrees respectively, follow shear zones and range up to 15 centimetres in thickness, although wider sections are present. Quartz gangue is ribboned with fine-grained pyrite and arsenopyrite. Locally, sphalerite, galena and calcite are present.

Three narrow short veins (3W, 4WA and 4W) were encountered and drifted on at the 400 and 750 levels.

Mine production of 43 tonnes in 1939 averaged 128.7 grams per tonne gold, 55.7 grams per tonne silver, 0.07 per cent copper and 0.7 per cent lead. Subsequent production is widespread with the Privateer mine (092L 008) with which the Prident Mines was connected at the 600 level. Current reserve calculations are similarly included with the Privateer mine. Indicated and inferred reserves situated both on the Prident and Privateer properties total 122,470 tonnes grading 17 grams per tonne gold (Canadian Mines Handbook 1988-89, page 333).

BIBLIOGRAPHY

- EM EXPL 2001-23-31
EMPR AR 1939-A40,87; 1940-71; 1941-69; 1942-65; 1943-66; 1947-180;
1948-157; 1949-218
EMPR BC METAL MM00093
EMPR BULL 20-V, p. 18; *27, pp. 71-76
EMPR ENG INSP #61327-#61338,#61891
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR INDEX 3-209
EMPR PF (Various Plans and Profiles)
EMR MP CORPFILE (New Privateer Mine Ltd.; Prident Gold Mines Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 61
GSC OF 9; 170; 463
GSC P 38-5; 40-12, p. 14; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932AII, pp. 29-50
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
CANMET IR *1939, Report 805, pp. 86-96 (No. 768)
CMH 1988-89, p. 333
N MINER Apr. 1938, pp. 39-45; Jan.26, 1939
WWW <http://www.newmex-minerals.com>; <http://www.infomine.com/>
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/14

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

narrower. Diagonal gash veins, commonly filled with comb quartz, are common.

The Number One (Donaldson) vein, which with Number Two accounted for most of the mine's production, follows in part a 1.8 metre wide feldspar porphyry dyke. The veins contain moderate amounts of pyrite, galena, sphalerite, arsenopyrite and free gold in quartz gangue. Sulphide banding is common. The Numbers 3, 4, and 5 veins, located 60 metres west of the Donaldson Vein, are much narrower, averaging less than 3 centimetres.

Production between 1935 and 1942 totalled 1283 tonnes averaging 171.7 grams per tonne gold, 71.7 grams per tonne silver (Bulletin 27, page 77). Production between 1935 to 1957, includes 220,987 grams of gold, 92,531 grams of silver, 17,144 kilograms of lead with 1563 kilograms of copper and 30 kilograms of zinc.

BIBLIOGRAPHY

- EM EXPL 2001-23-31
EMPR AR 1935-F38,39; 1936-A37; 1937-A40; 1938-A38,F68; 1939-A41,42, 87; 1940-27,72; 1941-A27,69; 1942-A28,65; 1952-40,210; 1957-43,68
EMPR BC METAL MM00115
EMPR BULL 20-V, p. 18; *27, pp. 15,77-79
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR INDEX 3-218; 4-126
EMPR P 1991-4, p. 188
EMPR PF (Claim map 1:3600; Sections and Assay Pland #1 Vein, 1:480; Sketches, #1 and #2 Vein, 1:480, 1944; Zeballos Area Geology; Geology Spud Creek, 1:3600; Report on White Star Group, B.T. O'Grady, 1939; Starr, C.C. (1940): Report on the Gold Peak Group, (approximately 3 pages); Sketch showing veins, opencuts and assays, Scale 1"=300', 1940))
EMR MP CORPFILE (Trans Ore Mines Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM *204, pp. 14,15; *272, pp. 48,61
GSC OF 9; 170; 463
GSC P 38-5; 40-12, pp. 12-14; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, p. 178
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area Times Colonist, The New Islander, Feb. 8, 1998, pp. 6-7

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/14

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 011**

NATIONAL MINERAL INVENTORY: 092L2 Au13

NAME(S): **GOLDEN PEAK (L.1035), ZEBALLOS PACIFIC, BLUE STAR (L.1034),
BROWN BOMBER, BLOOM FRACTION (L.1038), GOLDEN PEAK 2-3 (L.1036-37)**

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

Underground

MINING DIVISION: Alberni

LATITUDE: 50 01 12 N
LONGITUDE: 126 48 15 W
ELEVATION: 430 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5543165
EASTING: 657297

LOCATION ACCURACY: Within 500M

COMMENTS: Adit on Number 3 vein, on border of Lots 1037 and 1038 (Bulletin 27, Figure 2).

COMMODITIES: Gold Silver

MINERALS

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

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 0162 Metres STRIKE/DIP: 032/90
COMMENTS: Vertical veins strike 032 degrees; #1 and #3 veins are 162 metres long.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

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

ISOTOPIC AGE: 38 +/- 14 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Diorite

HOSTROCK COMMENTS: Age date biotite from Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1938
SAMPLE TYPE:	Grab		
COMMODITY	GRADE		
Silver	85.7000	Grams per tonne	
Gold	202.3000	Grams per tonne	

COMMENTS: #2 sample.

REFERENCE: Minister of Mines Annual Report 1938, page F50.

CAPSULE GEOLOGY

The Golden Peak occurrence lies in the Zeballos gold camp, an area underlain by a Lower Jurassic Bonanza Group Island arc sequence of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Intrusions have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

The Golden Peak occurrence consists of five veins on which adits were driven prior to 1942. The Brown Bomber vein and Green Star skarn occurrences, lying 470 metres southeast and 650 metres southwest of

CAPSULE GEOLOGY

the Number 3 vein respectively, were previously included with the Golden Peak (Geological Survey of Canada Paper 40-12, pages 16,17; Bulletin 27, page 80) but are now described separately (see also 092L 313 and 092L 312).

The two parallel veins of the Golden Peak occur over a distance of 235 metres. The veins strike 032 to 035 degrees, dip 80 to 90 degrees south and consist of lensy discontinuous quartz seams which range to 20 centimetres wide and to 30 metres long in shear zones that, although often void of vein material are persistent over as much as 162 metres (#1,3 veins). Locally, veins can be sheeted over a width of 1.2 metres. Tangential gash veins striking 070 degrees are present in #3 vein.

The veins, hosted in Zeballos (Catface) quartz diorite, contain pyrite, arsenopyrite, galena and sphalerite in a quartz (plus or minus calcite) gangue. The highest of six samples from #3 vein assayed 202.3 grams per tonne gold, 85.7 grams per tonne silver over 2.5 to 5 centimetres (Sample #2, Minister of Mines Annual Report 1938, page F50). A sample from a heavy sulphide section of #1 vein, taken over a length of 30 centimetres and a width of 5 centimetres assayed 493.8 grams per tonne gold, 171.5 grams per tonne silver (Minister of Mines Annual Report 1938, page F50), but much lower values are more common.

Banevolt (Geological Survey of Canada Paper 40-12, page 16) reports that 362 tonnes of ore was mined from 224 metres of underground development by 1940, but no data results are available. Recorded production consists of three tonnes mined in 1934 with 93 grams of gold and 746 grams of silver recovered.

BIBLIOGRAPHY

- EMPR AR 1938-F49; 1937-A42; *1938-F49; 1940-72; 1941-70
EMPR BULL 20-V, p. 18; *27, pp. 80-83
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (Claim Survey, Lot 1032, 1:3600; Golden Peak Group, 1940, 1:3600; Plan of Zeballos Gold Peak Workings, 1:960; Report on #1,2,3,4 Veins, Col. Leckie, 1937; Plan of Workings, 1:1440, 1938; Mineral Claims, Zeballos River, 1:24000; Prospectus, Zeballos Gold Peak Ltd.)
EMR MP CORPFILE (Zeballos Gold Peak Mines Ltd.; Zeballos (Pacific) Gold Mines Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 62
GSC OF 9; 170; 463
GSC P 38-5; 40-12, pp. 15-17; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
WWW <http://www.newmex-minerals.com>
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area Times Colonist, The New Islander, Feb. 8, 1998, pp. 6-7

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/15

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

sequence of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Intrusions have intruded all older rocks. The Eocene South Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

The Mount Zeballos vein and the nearby parallel Farris vein are in narrow but well defined shear zones striking 044 degrees and dipping 90 to 70 degrees east. The veins occur in an assemblage of interbedded Lower Jurassic Bonanza Group tuffs and flows with a few crosscutting narrow greenstone dykes and conformable hornblendite dykes.

Stevenson, in Bulletin 27, separates the tuffs into a feldspar-rich crystal tuff as recognized at the 2250 portal, and feldspar-poor and dacite tuffs, into which the 1900 portal was driven.

Flows are of hornblende-andesite composition and include minor tuff and fine breccia. The breccia ranges from 0.3 to 3.6 metres in width and exhibits strong apple green epidote alteration. Strongest alteration occurs in a zone of large elliptical masses, up to 30 centimetres, of white dacite fragmental lava set in a matrix of fragmental green andesite. Parallel quartz-eyes occur in the dacite. Dacite and feldspar tuffs to the north are altered to lime-silicate rocks. They lie in closer proximity to the quartz diorite South Zeballos stock, which at its closest point lies 2.0 kilometres east of the veins.

Bedded rocks strike northwest and dip southwest at about 45 degrees. The veins occupy shear zones enveloped by bleached host rock. Alteration minerals are sericite, carbonate and coarse pyrite. The Mount Zeballos Vein is locally dichotomous where the main shear zone parallels a second break, 0.3 to 1.2 metres away. A few cross-faults displace the vein by up to 60 centimetres. Vein material consists of ribbon quartz, 5 to 30 centimetres wide but averaging about 6 centimetres. Where the vein is narrow, no ribboning is present, and vein material is brecciated where a change in strike occurs. Coarse calcite or ankerite occur locally in vein centres and is more abundant in the upper levels. Secondary grey cloudy quartz and coarse cubic pyrite are evidence of alteration within the veins. Later generations of quartz veins and calcite veinlets overprint the main vein. Defining the quartz ribbons are fine aggregates of arsenopyrite and pyrite.

Towards the southwest and in the stope faces the vein appears to pinch to near zero but the structure persists. A 2.5 to 10 centimetre wide zone of gouge, calcite and lesser amounts of quartz occurring to the southwest (Lot 1757, J claim) apparently on strike with the Mount Zeballos Vein, may represent the continuation of the structure.

The parallel Farris Vein lies 150 metres southeast of the Mount Zeballos Vein. It is 1.0 to 7.5 centimetres wide and contains discontinuous 1.0 centimetre wide ribbons of quartz. For much of its length the shear zone consists of a less than 2.5 centimetre wide rusty gouge seam with no quartz. Wallrock for up to 0.6 metres distance is sheared and fractured.

The "J Vein", 0.6 kilometres southwest of and on strike with the Farris Vein, may represent its continuation. This vein strikes 058 degrees and dips vertically, and has been traced by surface stripping and underground workings for 145 metres. The 5.0 to 25.0 centimetre wide vein contains quartz, pyrite and arsenopyrite and is hosted in green andesite tuff cut by two north striking feldspar porphyry dykes.

The average grade for mined ore was 12.67 grams per tonne gold, 6.02 grams per tonne silver, with minor values in copper, lead and zinc. Between 1939 and 1944, the Mount Zeballos Mine produced 946,589 grams of gold, 444,399 grams of silver with 2408 kilograms of copper and 12,726 kilograms of lead.

BIBLIOGRAPHY

- EM EXPL 2002-29-40
- EMPR AR 1938-F56; 1939-40,42,87; 1940-27,71,72; 1941-26,69; 1942-20, 23,28,65; 1943-37; 1944-33,41
- EMPR BC METAL MM00090
- EMPR BULL 20-V, pp. 16-19; *27, pp. 15,83-89
- EMPR ENG INSP #61063-61074
- EMPR FIELDWORK 1982, p. 290; 1983, p. 219
- EMPR INDEX 3-206
- EMPR PF (Various Maps and Assays Plans, 1938-1946)
- EMR MP CORPFILE (Mount Zeballos Gold Mines Ltd.)
- GSC EC GEOL 1-1947

BIBLIOGRAPHY

GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, pp. 48,62
GSC OF 9; 170; 463
GSC P 38-5; 40-12, p. 17; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
GCNL #118(June 18), 1992
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area
Times Colonist, The New Islander, Feb. 8, 1998, pp. 6-7

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/02

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 013**

NATIONAL MINERAL INVENTORY: 092L2 Au10

NAME(S): **ROPER**, SPUD VALLEY (ROPER)

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

Underground

MINING DIVISION: Alberni

LATITUDE: 50 00 54 N
LONGITUDE: 126 47 41 W
ELEVATION: 550 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5542629
EASTING: 657990

LOCATION ACCURACY: Within 500M

COMMENTS: Roper No. 4 adit on Gold Valley Creek, 3 kilometres southeast of Zeballos River and 5.5 kilometres northeast of Zeballos. Production is included with Gold Field (092L 211).

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite Sphalerite Galena Chalcopyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Chlorite Clay
ALTERATION TYPE: Chloritic Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 60 Metres STRIKE/DIP: 060/85N TREND/PLUNGE:
COMMENTS: Shear zone hosting vein.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE Lower Jurassic Tertiary GROUP Bonanza FORMATION Undefined Formation IGNEOUS/METAMORPHIC/OTHER Catface Intrusions

ISOTOPIC AGE: 38 +/- 14 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Diorite
Andesite
Tuff

HOSTROCK COMMENTS: Age date from Geological Survey of Canada Paper 74-8.

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks

INVENTORY

ORE ZONE: SPUD VALLEY REPORT ON: Y
CATEGORY: Combined YEAR: 1988
QUANTITY: 220429 Tonnes
COMMODITY Gold GRADE 10.7000 Grams per tonne
COMMENTS: Proven/probable/possible reserves in 4 veins (combined with the Gold Field deposit, 092L 211).
REFERENCE: McAdam Resources Inc. Annual Report 1988.

CAPSULE GEOLOGY

The Roper occurrence lies in the Zeballos gold camp, an area underlain by an island arc sequence of Lower Jurassic Bonanza Group basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Early-Middle Jurassic plutons of the Zeballos intrusion phase of the Island Plutonic Suite have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Tertiary Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a

CAPSULE GEOLOGY

northwest axis.

Recorded production for the camp totals 9465 kilograms of gold and 4119 kilograms of silver from 652,000 tonnes of ore mined (Fieldwork 1982, page 291). Most production came from the Spud Valley deposits (092L 211 and 092L 013) and the Privateer mine (092L 008).

The Roper vein, located 200 metres southeast of the Gold Field occurrence (092L 211) is hosted in quartz diorite of the Zeballos stock near its western contact with Bonanza Group andesites and tuffs. The vein is associated with a shear zone striking 060 degrees and dipping 85 degrees north. The zone is up to 60 centimetres wide. The quartz vein, up to 30 centimetres wide but usually about 5 centimetres wide, contains ribbons of fine-grained pyrite, arsenopyrite, sphalerite, galena and chalcopyrite. Locally calcite replaces quartz. Zones of chloritic and argillic alteration, up to 1 metre wide, envelopes the shear zone; chlorite replaces mafic minerals and clay minerals replace feldspar.

Production for the Roper vein is included with that for the Gold Field mine (092L 211). The combined occurrences are known as Spud Valley.

Proven/probable/possible reserves in 4 veins (combined with the Gold Field deposit, 092L 211) total 220,429 tonnes grading 10.7 grams per tonne gold. In view of an unsuccessful 1989 mill test, the reserve figure of 49,890 tonnes in old workings, grading 4.6 grams per tonne gold, reported in 1942 near the end of the mine life may be more credible (McAdam Resources Inc. Annual Report 1988).

BIBLIOGRAPHY

- EMPR AR 1935-F38; 1939-41,42,87,88; 1940-27,72; 1941-27,70; 1942-28, 65; 1943-37; 1946-179,296; 1947-180,230; 1951-40
EMPR BC METAL MM00103
EMPR BULL 20 Part V, pp. 16-20; *27, pp. 15,90-94,102
EMPR ENG INSP Fiche No. 61592-61596
EMPR EXPL 1987-A77
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR INDEX 3-214
EMPR MAP 65 (1989)
EMPR P 1991-4, p. 188
EMPR PF (see Gold Field - 092L 211; Various maps and plans)
EMR MIN BULL MR 223 (1989) B.C. 172
EMR MP CORPFILE (Spud Valley Gold Mines Ltd.; Valley Explorations Ltd.; Glencair Resources Ltd.; McAdam Resources Ltd.; Tashota-Nipigon Mines Ltd.)
GSC EC GEOL 1
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204, p. 16; 272, pp. 48,62,63
GSC OF 9; 170; 463
GSC P 38-5; 40-12, pp. 18-20; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929 Part A; 1932 Part A
CIM Transactions Volume 42 (1939), pp. 225-237; (1948), pp. 78-85; 72, pp. 116-125
GCNL #104, 1983; #45,#84,#234, 1988
N MINER Apr. 1938; Jul.4,Sept.16, 1985; Jan.13,26,Jul.21,Sept.22, Dec.1, 1986; Jan.5,Feb.16, 1987; Feb.20,May 8, 1989
NW PROSP Dec., 1987/Jan., 1988; Oct./Nov., 1988; Mar./Apr., 1989
WWW http://www.infomine.com/index/properties/SPUD_VALLEY.html
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, p. 178
Stevenson, J.S. (1938): Lode Gold Deposits of the Zeballos Area
Times Colonist, The New Islander, Feb. 8, 1998, pp. 6-7

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/15

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 014**

NATIONAL MINERAL INVENTORY: 092L2 Au14

NAME(S): **BRITANNIA M**, M, M1 (L.1065),
M2 (L.1066), M4 (L.1068), M6 FR. (L.1069)

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:
LATITUDE: 50 00 44 N
LONGITUDE: 126 47 45 W
ELEVATION: 620 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of #3 adit on Lot 1069 is 3.7 kilometres south of the mouth of Gold Valley Creek, 5.5 kilometres northeast of Zeballos.

MINING DIVISION: Alberni
UTM ZONE: 09 (NAD 83)
NORTHING: 5542317
EASTING: 657919

COMMODITIES: Gold Silver Arsenic

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite
ASSOCIATED: Quartz Calcite
ALTERATION: Graphite
ALTERATION TYPE: Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal Epigenetic Igneous-contact
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 85 Metres STRIKE/DIP: 065/80N TREND/PLUNGE:
COMMENTS: Vein in #3 adit is 85 metres long, strikes east-northeast.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u> Lower Jurassic	<u>GROUP</u> Bonanza	<u>FORMATION</u> Undefined Formation	<u>IGNEOUS/METAMORPHIC/OTHER</u>
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			Catface Intrusions
Eocene			
ISOTOPIC AGE: 38 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Quartz Diorite
Andesite

HOSTROCK COMMENTS: Mollusks from Quatsino Sound; biotite from Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks
PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Chip
COMMODITY
Silver 9.7000 Grams per tonne
Arsenic 0.7900 Per cent
Gold 47.3200 Grams per tonne
REFERENCE: Assessment Report 12077, Figure 5.

CAPSULE GEOLOGY

The Britannia M occurrence lies in the Zeballos gold camp, an area underlain by a Lower Jurassic Bonanza Group Island arc sequence of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Intrusions have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface

CAPSULE GEOLOGY

Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

The eight quartz veins of the Britannia M occurrence lie in Eocene quartz diorite or along the contact with Lower Jurassic Bonanza andesite (#4 adit, Figure 25, Bulletin 27). Four of the veins were developed by adits in the 1930's.

All of the veins strike east and dip vertically. They are comprised of ribbons of quartz averaging 2.5 centimetres in width and are mineralized with fine-grained pyrite with minor calcite and arsenopyrite.

The work of Assessment Report 12077 sampled two veins termed the Free Gold Vein and the Cliff Vein - both veins are 7 centimetres wide and contain quartz, pyrite and graphite. The report suggests two veining stages. Unspecified alteration is reported to be associated with the Cliff Vein.

Assay results returned maximum values of 47.32 grams per tonne gold, 9.7 grams per tonne silver and 0.79 per cent arsenic (Assessment Report 12077, Figure 5).

BIBLIOGRAPHY

- EMPR ASS RPT *12077
EMPR BULL 20-V, p. 18; *27, p. 94
EMPR EXPL 1983-330
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 63
GSC OF 9; 170; 463
GSC P 38-5; 40-12, p. 20; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/06

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

1982, page 291). Most production came from the Spud Valley (092L 013, 092L 211) and Privateer (092L 008) deposits.

The occurrence, in which about eight veins are recognized, lies at the centre of the Eocene Zeballos quartz diorite stock covering an area of about 460 metres. A vertical 1.2 metre wide andesite dyke, striking 050 degrees, is the only other rock type present. The veins range from 1.0 to several centimetres in width. Assays range from less than 3 grams per tonne gold to 494 grams per tonne gold in the Number 4 vein (Bulletin 27, page 100). The veins are steeply dipping, striking between 045 and 074 degrees, generally occupying narrow shear zones. Mineralization consists of pyrite with lesser amounts of arsenopyrite, galena, sphalerite and locally chalcopyrite in a quartz gangue.

The Main Vein (or Number 4 Vein), which strikes 045 degrees and dips 80 degrees south has been traced horizontally over 219 metres and vertically for 98 metres. It was developed by the 1200, 1300 and 1400 level drifts and associated sublevels, raises and winzes. The vein was stoped from the surface to the 1400 level. Bulletin 27, page 98 reports 1938 to 1941 production of 6779 tonnes of ore from the Main Vein, containing 143 kilograms gold, 44 kilograms silver, 470 kilograms copper and 2982 kilograms lead.

On the 1200 level the vein follows a shear zone 5 to 45 centimetres wide. Vein material consists of quartz and pyrite, with minor arsenopyrite, sphalerite, galena and chalcopyrite. The vein ranges up to 12.5 centimetres wide but in places the shear is occupied by only sheared rock and gouge. Several diagonal veins are present, dipping vertically and striking east, suggesting that the northwest or hangingwall of the vein moved northeast and down. Also at the 1200 level, several quartz stringers parallel to the main vein are found in crosscuts. They are 5 to less than 0.5 centimetres wide. Narrow zones of bleaching envelope all veins.

A sample over 10 centimetres of high grade material on the 1200 level assayed 145.4 grams per tonne gold and 51.4 grams per tonne silver (Bulletin 27, page 98). Geological Survey of Canada Paper 40-12 (page 24) reports an average grade of 145.6 grams per tonne gold over an average width of 18 centimetres along a strike length of 55 metres, or a diluted 28.98 grams per tonne gold over a mining width of 76 centimetres.

BIBLIOGRAPHY

- EMPR AR 1938-A38,F57-60; 1939-40; 1940-27; 1941-A27,70
EMPR BC METAL MM00086
EMPR BULL 20-V, p. 18; *27, pp. 15,97-101
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR INDEX 3-191
EMPR P 1991-4, p. 188
EMPR PF (Starr, C.C. (1940): Notes of Preliminary Examination of the C.D. Mine, 4 p.; Assay Plan, CD Mine, 1:240; Plan, 1:1200, No. 4 vein, 1945; Plan, 1:180, No. 4 adit working; Longitudinal Section, No. 4 Vein, 1:240, 1941; Longitudinal Assay Section, Highgrade shoot, #14-1 Stope, 1:120, 1941; Sketches, Main Adit, 1945; Report on CD Mining Company, Ltd., 1941, P.E. Hopkins; Rey Oro Longitudinal Section, 1:240, C.C. Starr, Aug. 1940; Index Map, Rey Oro and Rimy (no scale or date); Trail Map to Rey Oro and Central Zeballos, 1:4800)
EMR MP CORPFILE (Rey Oro Mining Co. Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204, p. 16; 272, pp. 48,63
GSC OF 9; 170; 463
GSC P 38-5; *40-12, p. 22; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, p. 180
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area Times Colonist, The New Islander, Feb. 8, 1998, pp. 6-7

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/08

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 016**

NATIONAL MINERAL INVENTORY: 092L2 Au18

NAME(S): **RIMY 1-8**, RIMY 3 (L.1765), RIMY 2 (L.1769),
BELL (L.1901), BELL 1 (L.1902), MAN-O-WAR

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

Underground

MINING DIVISION: Alberni

LATITUDE: 50 01 27 N
LONGITUDE: 126 47 15 W
ELEVATION: 762 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5543663
EASTING: 658477

LOCATION ACCURACY: Within 500M

COMMENTS: Location of #4 adit on Lot 1765 is 650 metres east of Gold Valley
Creek, 6.5 kilometres northeast of Zeballos (Bulletin 27, Figure
2).

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite Galena Sphalerite

COMMENTS: Gold, silver mineralogy not known.

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal Epigenetic
TYPE: I06 Cu±Ag quartz veins

SHAPE: Tabular

DIMENSION: 0115 Metres STRIKE/DIP: 096/80S

TREND/PLUNGE:

COMMENTS: Main vein strikes 096 degrees, dips 80 degrees south.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

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

ISOTOPIC AGE: 38 +/- 14 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Diorite
Andesite Dike
Feldspar Porphyry Dike

HOSTROCK COMMENTS: Age date on Zeballos Pluton (Geological Survey of Canada Paper
74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1938

SAMPLE TYPE: Bulk Sample

COMMODITY

GRADE

Silver

92.0400

Grams per tonne

Gold

79.4100

Grams per tonne

COMMENTS: Development ore - 17.2 tonnes shipped prior to 1938.

REFERENCE: Bulletin 27, page 101.

CAPSULE GEOLOGY

The Rimy occurrence lies in the Zeballos gold camp, an area underlain by Lower Jurassic Bonanza Group basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Upper Triassic Vancouver Group, Quatsino Formation. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Intrusions have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to the areas gold-quartz veins.

The three Rimy veins, two of which were explored by adits while the third received little work, lie wholly in Eocene quartz diorite that is intruded by a few northeast trending feldspar porphyry and andesite dykes. The Main Vein, developed by 3 and 4 adits and surface

CAPSULE GEOLOGY

cuts for over 115 metres, strikes 096 degrees and dips 80 degrees south, is 2.5 to 7.5 centimetres wide and follows a shear zone up to 25 centimetres wide. The strongly oxidized vein consists of quartz with streaks of pyrite and arsenopyrite, and lesser sphalerite and galena. Sampling over 53 metres of the adit assayed 80.24 grams per tonne gold over an average width of 13 centimetres (Property File - 1:240 Tunnel Plan and Assays). The vein usually lies near the shear footwall. On the hangingwall, brecciated rock is accompanied by black (graphitic?) gouge. Several northeast striking comb-quartz sulphide veins diverge from the Main vein, suggesting westward movement of the north block.

The second vein, 98 metres southwest of the Main vein at an elevation of 652 metres, was explored by the #2 adit. The vein strikes east and is 1.0 to 5.0 centimetres wide, accompanied by 5 centimetres of gouge and breccia. The third vein, as indicated on Figure 2, Bulletin 27, lies 280 metres south of the Main Vein. It strikes east-northeast. Prior to 1938, 17.2 tonnes of development ore had been shipped and yielded 1369 grams gold and 1586 grams silver (Bulletin 27, page 101).

BIBLIOGRAPHY

- EMPR AR 1938-F60
EMPR ASS RPT 7012
EMPR BULL 20-V, p. 18; *27, pp. 15,101
EMPR EXPL 1979-188
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (1937 Assay Plan, 1:120; Assay Plan, 3 and 4 Tunnel, 1:240; CC Starr, Rimy Mine; key Map, 1:12000; Claim Map 1:3600; Longitudinal Section 1:600, 1940; Ange Gold, Sketch Map of Rimy Adits, J.S. Stevens, 1953; Starr, C.C. (1940): Report of Examination of the Rimy Mine, 5 p.; Tunnel Plan and Assays (1"=20'), Claim Map (1"=300') and Longitudinal Section (1"=50'), 1940)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204, p. 16; 272, pp. 48,63
GSC OF 9; 170; 463
GSC P 38-5; *40-12, p. 28; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932AII
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/07

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

wide, are reported (Geological Survey of Canada Paper 40-12, page 26). The workings explored an east striking zone of shearing and cross-fracturing that ranges from a width of 15 metres in the west, where it consists of north to east striking fractures, to a width of 1.5 metres in the east where east striking fractures predominate. Quartz-sulphide and quartz-calcite stringers cut the shear zone diagonally in an east-northeast direction. The veins range in widths from less than 1.0 centimetre to 7.5 centimetres, and in length from 0.5 to 10 metres. The quartz, usually crystalline and vuggy, is along the vein walls with sulphides towards the centre. Principal sulphides are pyrite with local arsenopyrite, sphalerite and galena.

The quartz stringers, averaging to 0.6 metres apart, are gash veins occupying short straight tension breaks along which there has been little apparent displacement.

Alteration of wallrock is strongest along the east-northeast striking quartz veins. The quartz diorite has been bleached up to 5 centimetres away. No alteration is present at north and west striking gouge seams where quartz and white mica make up the white clay filling.

The veins have yielded assays as high as 3566 grams per tonne gold (Bulletin 27, page 104) but production of 13,600 tonnes of sorted ore in 1942 averaged 9.26 grams per tonne gold (Bulletin 27, page 102).

BIBLIOGRAPHY

- EMPR AR 1941-70; 1942-65; 1946-179; 1947-180,230
EMPR BULL 20-V, p. 18; *27, pp. 40,102
EMPR ENG INSP #61592-61596
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (Plan, 1:360, 2 and 3 Adit, 1942; Plan, Cross-section and Longitudinal Section of Works, No Scale, date given)
EMR MP CORPFILE (Spud Valley Gold Mines Ltd.; Valley Explorations Ltd.; Big Star Gold Mines Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 64
GSC OF 9; 170; 463
GSC P 38-5; *40-12, pp. 26-28; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932AII
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): *Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/07

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 018**

NATIONAL MINERAL INVENTORY: 092L2 Cu5

NAME(S): **EXTENSION 10 (L.1712)**, CENTRAL ZEBALLOS SKARN, SOUTH SKARN

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 02 04 N
LONGITUDE: 126 46 57 W
ELEVATION: 700 Metres

NORTHING: 5544816
EASTING: 658801

LOCATION ACCURACY: Within 500M

COMMENTS: Location of skarn mineralization in centre of Lot 1712 is located 1.5 kilometres south of the Nomash-Zeballos River confluence.

COMMODITIES: Copper Gold Silver Magnetite

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Pyrrhotite

COMMENTS: Silver, gold mineralogy not known.

ALTERATION: Diopside Garnet

ALTERATION TYPE: Skarn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Epigenetic Industrial Min.

SHAPE: Tabular

DIMENSION: 0300 x 0087 x 0006 Metres STRIKE/DIP: 090/75N

TREND/PLUNGE:

COMMENTS: Strike and dip are of limestone-hosting skarn.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER

Upper Triassic Vancouver

Quatsino

ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarite ammonites

Eocene

ISOTOPIC AGE: 38 +/- 14 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Catface Intrusions

LITHOLOGY: Limestone
Garnet Diopside Skarn
Granodiorite

HOSTROCK COMMENTS: Ammonites from Alice Lake; Catface biotite from Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1983

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

268.2000

Grams per tonne

Gold

1.3000

Grams per tonne

Copper

11.2700

Per cent

COMMENTS: Average of samples CZ 102-83 and CZ 103-83.

REFERENCE: Assessment Report 12077, page 10, Figure 4.

CAPSULE GEOLOGY

The Extension 10 (Lot 1712) copper skarn occurrence lies about 200 metres south of the Central Zeballos Gold mine (092L 212) in what appears to be a roof pendant of Upper Triassic Quatsino Formation (Vancouver Group) limestone that is conformably overlain by Lower Jurassic Bonanza Group volcanic rocks.

The limestone lies at the northeast flank contact with Eocene Zeballos pluton (Catface Intrusions) granodiorite. Skarn-altered rock consists of massive diopside replacement. At its maximum it is 6 metres wide and is traceable along an eastward strike for 300

CAPSULE GEOLOGY

metres. The zone dips 75 degrees north. Magnetite, pyrrhotite and chalcopyrite mineralization occur in addition to the garnet and diopside in the altered limestone.

Bancroft (Geological Survey of Canada Paper 40-12, page 30) reports assays across a 1.5 metre width of 7.25 per cent copper and 1.7 grams per tonne gold. Samples CZ 102-83 and CZ 103-83 in Assessment Report 12077 (page 10) averaged 1.3 grams per tonne gold, 268.2 grams per tonne silver and 11.27 per cent copper. Diamond drilling by an earlier operation extended the mineralized skarn to a depth of 87 metres, where a 2.0 metre section assayed 3.5 grams per tonne gold, 102.9 grams per tonne silver and 3.1 per cent copper (Assessment Report 12077).

BIBLIOGRAPHY

- EMPR AR 1938-F45
EMPR ASS RPT 7012, 12077
EMPR BULL 20-V; *27, pp. 18,112
EMPR EXPL 1979-188; 1983-330
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (Starr, C.C. (1939): Report on the Central Zeballos Gold Mines Ltd., 9 p.; Central Zeballos Gold Mines, Claims and Surface Geology (1"=300'), 1939; Starr, C.C. (1947): Report on the Central Zeballos Mine, 6 p.; Central Zeballos Mine, Section on East-West Plane (1"=100'), 1947; Central Zeballos Gold Mines, Claim sketch (1"=600'), 1947, (in 092L 212))
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272
GSC OF 9; 170; 463
GSC P 38-5; 40-12, p. 30; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45; 1939, p. 37
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/09

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 019**

NATIONAL MINERAL INVENTORY: 092L2 Au9

NAME(S): **GOLDEN HORN**, HOMEWARD, H & J (L.1792-1797,1996-1998)

STATUS: Past Producer

Underground

MINING DIVISION: Alberni

REGIONS: British Columbia, Vancouver Island

NTS MAP: 092L02W

BC MAP:

LATITUDE: 50 00 59 N

LONGITUDE: 126 45 45 W

ELEVATION: 610 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adits on Lot 1795 is 300 metres north of Curley Creek, 1.2 kilometres west of Nomash River, 8.0 kilometres northeast of Zeballos (from Bulletin 27).

UTM ZONE: 09 (NAD 83)

NORTHING: 5542852

EASTING: 660294

COMMODITIES: Gold

Silver

Lead

Copper

Arsenic

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Arsenopyrite Sphalerite Galena

Gold

ASSOCIATED: Quartz Calcite

ALTERATION TYPE: Leaching

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Mesothermal Epithermal

Epigenetic

Industrial Min.

TYPE: I06 Cu±Ag quartz veins

SHAPE: Tabular

MODIFIER: Sheared

Faulted

DIMENSION: 1100 x 0610

Metres

STRIKE/DIP: 090/85N

TREND/PLUNGE:

COMMENTS: Dimensions and attitude given are Number One vein. Vein width is 25 centimetres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Eocene

ISOTOPIC AGE: 38 +/- 14 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Catface Intrusions

LITHOLOGY: Quartz Diorite

Andesite

HOSTROCK COMMENTS: Age date on South Zeballos pluton (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1938

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

3.4000

Grams per tonne

Arsenic

3.5000

Per cent

Gold

17.0000

Grams per tonne

COMMENTS: High grade cut, quartz 2.5 to 7.5 centimetres wide.

REFERENCE: Minister of Mines Annual Report 1938, page F53.

CAPSULE GEOLOGY

The Golden Horn occurrence lies in the Zeballos gold camp, an area underlain by Lower Jurassic Bonanza Group basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Upper Triassic Vancouver Group, Quatsino Formation. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Intrusions have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to gold-quartz veining in the area.

The Golden Horn occurrence lies entirely within the Eocene Zeballos Stock of quartz diorite composition. A few northwest

CAPSULE GEOLOGY

striking andesite dykes are present.

Five veins are recognized: the Number One vein, on which all development and production have taken place; the Number 2, 3 and 4 veins, located 200 metres west of the Number One are west striking, vertically dipping, quartz lenses following narrow shear zones, and the Forrest vein, striking 090 degrees along the south boundary of Lot 1795, averages 7.5 centimetres in width and hosts values in gold (Bulletin 27, page 113).

The Number One vein has been traced over a horizontal distance of 1100 metres and a vertical distance of 610 metres. The vein traces a 090 degree striking, 85 degree north dipping shear zone averaging 25 centimetres in width. The vein itself ranges from 1.0 to 30 centimetres, averaging 7.5 centimetres.

The shear zone contains fragments of bleached quartz-diorite country rock. Vein material consists of quartz, calcite, pyrite, chalcopyrite, arsenopyrite, sphalerite, galena and free gold. Post-vein faulting has remobilized sulphides into pasty masses and smears.

During 1941 and 1942, 3313 tonnes were mined by stoping, of this amount 1270 tonnes were milled with millheads running 19.88 grams per tonne gold (Bulletin 27, page 114). Recorded production between 1941 and 1942 includes 46,374 grams of gold, 108,705 grams of silver with 347 kilograms of lead and 318 kilograms of copper.

BIBLIOGRAPHY

- EMPR AR 1938-F52,53; 1940-72; 1941-27,70; 1942-28,65
EMPR BULL 20-V, pp. 17,18; *27, pp. 13,15,113,114
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMR MP CORPFILE (Homeward Mines Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, pp. 48,64
GSC OF 9; 170; 463
GSC P 38-5; 40-12, p. 35; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area Times Colonist, The New Islander, Feb. 8, 1998, pp. 6-7

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/26

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 020**

NATIONAL MINERAL INVENTORY: 092L2 Au28

NAME(S): **KING MIDAS NO. 1 VEIN**, MARKS, EHATSET,
BIG BEN (L.1676), YAUCO

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

Underground

MINING DIVISION: Alberni

LATITUDE: 50 03 34 N
LONGITUDE: 126 47 34 W
ELEVATION: 183 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5547574
EASTING: 657983

LOCATION ACCURACY: Within 500M

COMMENTS: The adit, on the west bank of Zeballos River, is located 1.3 kilo-
metre north of Nomash River Fork, 9.5 kilometres north of Zeballos
and 140 metres south of Fault Creek (Bulletin 27, Figure 2).

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Galena Gold
COMMENTS: Gold associated with sphalerite; silver mineralogy not known.
ASSOCIATED: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
DIMENSION: 0080 Metres STRIKE/DIP: 354/90 TREND/PLUNGE:
COMMENTS: Vein strike is 354 degrees, dip vertical or steeply east.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Eocene			Catface Intrusions
ISOTOPIC AGE: 38 +/- 14 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite			

LITHOLOGY: Siliceous Andesite
Limestone
Porphyry Dike

HOSTROCK COMMENTS: Karmutsen ammonites-Hisnit Island; Quatsino ammonites-Alice Lake;
Catface biotite-Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Hornfels

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1932
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 28.1100 Grams per tonne
Gold 97.3800 Grams per tonne
COMMENTS: Sample consisting of 50 per cent quartz.
REFERENCE: Geological Survey of Canada Summary Report 1932, A11, pages 39-42.

CAPSULE GEOLOGY

The King Midas No. 1 vein occurrence lies in the Zeballos gold camp, an area underlain by Lower Jurassic Bonanza Group basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks

CAPSULE GEOLOGY

are limestones and limy clastics of the Quatsino and Parson Bay formations, and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Intrusions have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to gold-quartz veining in the area. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

The King Midas No. 1 vein, 140 metres south of Fault Creek, 3.0 metres above the Zeballos River level, lies near the faulted contact between Quatsino limestone on the east bank of Zeballos River and Karmutsen andesites on the west. Feldspar porphyry dykes, possibly related to the South Zeballos Pluton phase of the Eocene Catface Intrusions, cut volcanics and sediments.

The Number 1 vein is hosted by silicified andesite and has been traced for 80 metres. It strikes 354 degrees and dips vertically, and consists of lenses of quartz following a somewhat wider shear zone. Locally, the vein splays into several parallel stringers 30 to 40 centimetres apart, with andesite host rock flooded with thin quartz veinlets and impregnated with sulphides.

A sample collected by Gunning (Geological Survey of Canada Summary Report 1932, Part A, II, pages 39-42) carrying about 50 per cent quartz, sphalerite, arsenopyrite, pyrite and some chalcopyrite, galena and pyrrotite, assayed 97.38 grams per tonne gold, and 28.11 grams per tonne silver. The gold was found to be associated with sphalerite and chalcopyrite and is also present as free gold. In 1940, one tonne of high grade ore produced 156 grams of gold, 31 grams of silver and 10 kilograms of copper.

A parallel vein was located 244 metres up Fault Creek (Bulletin 27, page 116); no details are available.

BIBLIOGRAPHY

- EMPR AR 1929-376; 1932-205; 1933-253; 1934-F6; 1938-F53,F56; 1940-27; 1954-65
EMPR BULL 20-V, p. 16; *27, p. 115
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (Starr, C.C. (1938): Report on the King Midas Mine, 10 p; North Half of Claims Showing Locations of Veins and Contacts, 1938; Sketch of King Midas Workings on North Fork of Zeballos River, 1938; Letter from Charles Starr to King Midas Mining Co. Ltd., 1938; Stevenson, J.S. (1938): Lode Gold Deposits of the Zeballos Area)
EMR MP CORPFILE (King Midas Mining Co. Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204, p. 17; 272, pp. 47,59
GSC OF 9; 170; 463
GSC P 38-5; *40-12, pp. 30-32; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; *1932AII, pp. 38-42
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
GCNL #146, 1983; #5, 1984
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/27

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 021**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH FORK**, BIG ONION

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 04 23 N
LONGITUDE: 126 48 06 W
ELEVATION: 230 Metres

NORTHING: 5549068
EASTING: 657302

LOCATION ACCURACY: Within 500M

COMMENTS: Location of main adit (Bulletin 27, Figure 2) is 1.4 kilometre north of 092L 217 (King Midas Trail vein), on west bank of Zeballos River, 10.5 kilometres north of Zeballos.

COMMODITIES: Gold Silver Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Arsenopyrite Sphalerite Pyrrhotite

COMMENTS: Gold, silver mineralogy not known.

ASSOCIATED: Quartz

ALTERATION: Quartz Epidote Calcite

ALTERATION TYPE: Epidote

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Mesothermal Epithermal Epigenetic

TYPE: I06 Cu±Ag quartz veins

SHAPE: Tabular

DIMENSION:

STRIKE/DIP: 010/90

TREND/PLUNGE:

COMMENTS: Vein strikes 010 degrees with a near vertical dip.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Amygdaloidal Andesite

HOSTROCK COMMENTS: Ammonites from Hisnit Island.

GEOLOGICAL SETTING

TECTONIC BELT: Insular

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

TERRANE: Wrangell

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Amphibolite

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1950

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

17.1400

Grams per tonne

Gold

217.4000

Grams per tonne

COMMENTS: Sample over 10 centimetres.

REFERENCE: Bulletin 27, page 117.

CAPSULE GEOLOGY

The North Fork occurrence is located north of the Zeballos gold camp, an area underlain by Lower Jurassic Bonanza Group basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Intrusions have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to gold-quartz veining in the area. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

The North Fork occurrence consists of a 2.5 to 14 centimetre lensy quartz vein that follows a 010 degree striking, vertically

CAPSULE GEOLOGY

dipping 15 to 25 centimetres wide shear zone, hosted in green amygdaloidal andesite of the Karmutsen Formation. Amygdules are 0.3 to 2 centimetres and are filled with quartz, epidote and calcite. The quartz vein hosts abundant arsenopyrite and sphalerite with minor chalcopyrite and pyrrhotite. The vein has been traced over 100 metres and is thought to be an extension of the King Midas Trial vein (092L 217). A sample taken over 10 centimetres, 4 metres from the face of the Main adit assayed 217.4 grams per tonne gold, 17.1 grams per tonne silver (Bulletin 27, page 117).

BIBLIOGRAPHY

- EMPR BULL 20-V; *27, p. 117
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 59
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/26

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 022**

NATIONAL MINERAL INVENTORY: 092L2 Au22

NAME(S): **BODEN**, BODIN

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 02 10 N
LONGITUDE: 126 50 40 W
ELEVATION: 335 Metres

NORTHING: 5544872
EASTING: 654360

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location of lower workings as shown in Bulletin 27, Figure 2, is 1.0 kilometre northwest of Zeballos River, 6.0 kilometres north of Zeballos.

COMMODITIES: Gold Zinc

MINERALS

SIGNIFICANT: Sphalerite Pyrite Pyrrhotite
COMMENTS: Gold in pyrite?
ASSOCIATED: Quartz Calcite
ALTERATION: Calcite Quartz
ALTERATION TYPE: Silicific'n Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Epithermal Mesothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 0122 Metres STRIKE/DIP: 090/90 TREND/PLUNGE:
COMMENTS: Deposit dimension given in vertical distance of number one showings.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			
Eocene			Catface Intrusions
ISOTOPIC AGE: 38 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Greenstone
Granodiorite
Diabase

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; phlogopite-Zeballos Intrusion; biotite-South Zeballos Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite
COMMENTS: Greenstone is silicified and carbonate-altered.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1937
SAMPLE TYPE: Grab
COMMODITY: Gold GRADE: 3.4000 Grams per tonne
REFERENCE: Bulletin 27, page 120.

CAPSULE GEOLOGY

The Boden occurrence lies in the Zeballos gold camp, an area underlain by Lower Jurassic Bonanza Group basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are lime-

CAPSULE GEOLOGY

stones and limy clastics of the Upper Triassic Vancouver Group, Quatsino Formation. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Plutonic Suite have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to gold-quartz veining in the area. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a north-west axis.

The Boden occurrence consists of several showings, extending from and elevation of 335 metres to the northwest along a fork in Maguinna Creek, and up to 640 metres elevation over a summit.

The location given by Stevenson (1938, Index Map) places the occurrence at a considerable distance from that given in his 1950 description (Bulletin 27, page 119), the more recent location is adhered to.

The Number One showing, at elevation 335 metres, consists of a 15 to 60 centimetre wide west striking, near vertical shear zone comprised of crushed rock, gouge and coarse calcite lenses. Disseminated fine-grained pyrite, arsenopyrite and sphalerite are present. A sample assayed 3.4 grams per tonne gold (Bulletin 27, page 120). The shear zone here lies in Bonanza Group greenstone, 6 metres from a Jurassic(?) granodiorite contact.

At an elevation of 457 metres and traceable to 579 metres, the same shear zone lies in a contact phase of greenstone. Locally, pyrrhotite patches are present in siliceous layers up to 15 centimetres in width.

The Number Two showing lies to the northwest at an elevation of 640 metres, over a 700 metre divide. The zone is in silicified and carbonate altered greenstone near an 080 degree striking 2.5 metre diabase dyke. It consists of a 1.2 metre wide west striking shear that has been traced over 46 metres. The shear contains lenses of white calcite and 1 to 5 centimetre wide quartz ribs, with traces of pyrite and sphalerite. Assays returned only traces of gold (Bulletin 27, page 120).

BIBLIOGRAPHY

- EMPR BULL 20-V, p. 16; *27, p. 119
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 60
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/14

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 023**

NATIONAL MINERAL INVENTORY: 092L2 Au31

NAME(S): **MAQUINNA (L.1881,1883-1884)**, GREEN LIGHT, KODIAK,
JACK OF SPADES

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:
LATITUDE: 50 02 11 N
LONGITUDE: 126 49 55 W
ELEVATION: 274 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of upper adit (Bulletin 27, Figure 2) in 0.5 kilometre north of Zeballos River, 6.0 kilometre north of Zeballos.

MINING DIVISION: Alberni
UTM ZONE: 09 (NAD 83)
NORTHING: 5544928
EASTING: 655254

COMMODITIES: Gold Lead Zinc

MINERALS

SIGNIFICANT: Arsenopyrite Sphalerite Galena Chalcopyrite Pyrite
Pyrrhotite
COMMENTS: Gold mineralogy not known.
ASSOCIATED: Calcite Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 0670 Metres STRIKE/DIP: 076/90 TREND/PLUNGE:
COMMENTS: Vein strikes 076 degrees, dips near vertically. Vein width is 2 to 76 centimetres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Andesite

HOSTROCK COMMENTS: Mollusks from Quatsino Sound; phlogopite from Zeballos intrusion (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks
PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The Maquinna occurrence lies in the Zeballos gold camp, an area underlain by Lower Jurassic Bonanza Group basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Upper Triassic Vancouver Group, Quatsino Formation. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Plutonic Suite have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to gold-quartz veining in the area.

The Maquinna vein strikes 076 degrees, dips near vertically and has been traced over 670 metres in andesite of the Lower Jurassic Bonanza Group. The vein, 2.5 to 76 centimetres wide, follows a shear zone that contains crushed quartz and gouge, with variable amounts of pyrite, pyrrhotite, arsenopyrite and sphalerite, chalcopyrite and galena. Locally, the vein is ribboned and ranges up to 100 centimetres in width. Values to 21.3 grams per tonne gold have been obtained (Clothier, G.A., 1939, page 4) but assays along the vein are generally less than 7.0 grams per tonne gold (Bulletin 27, page 122).

The occurrence lies 220 metres north of Blackbird (092L 130).

BIBLIOGRAPHY

EMPR AR 1933-253; 1938-F60
EMPR ASS RPT 3056, 3057, 7761
EMPR BULL 20-V, p. 16; *27, p. 120
EMPR EXPL 1971-316; 1979-189
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (Reports by G.A. Clothier, 1938, Maquinna Group; 1938 Claim
map - 1:3600; 1939, West Zeballos Gold Mine; C adit plan - 1:480)
EMR MP CORPFILE (West Zeballos Gold Mines Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204, p. 17; 272, p. 61
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A, p. 45
CIM Trans. Vol. 72, p. 116
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/13

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 024**

NATIONAL MINERAL INVENTORY: 092L2 Au 6

NAME(S): **OMEGA**, TORRES ZEBALLOS

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 02 34 N
LONGITUDE: 126 50 17 W
ELEVATION: 597 Metres

NORTHING: 5545626
EASTING: 654796

LOCATION ACCURACY: Within 500M

COMMENTS: Main vein is located on Granite Creek, 2.0 kilometres northwest of Zeballos River, 6.0 kilometres north of Zeballos.

COMMODITIES: Gold Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrrhotite Pyrite

ASSOCIATED: Quartz Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Mesothermal Epithermal Epigenetic
TYPE: I06 Cu±Ag quartz veins

SHAPE: Tabular

MODIFIER: Sheared

DIMENSION:

STRIKE/DIP: 052/80S

TREND/PLUNGE:

COMMENTS: Strike of shear zone is 052 degrees, dipping 80 degrees south.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER

Lower Jurassic Bonanza

Undefined Formation

ISOTOPIC AGE: 200 Ma

DATING METHOD: Fossil

MATERIAL DATED: Mollusks

Jurassic

Island Plutonic Suite

ISOTOPIC AGE: 148 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Phlogopite

Eocene

Catface Intrusions

ISOTOPIC AGE: 38 +/- 14 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Diorite
Andesite
Limestone

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; phlogopite-Zeballos intrusion; biotite-South Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

CAPSULE GEOLOGY

The Omega occurrence lies in the Zeballos gold camp, an area underlain by Lower Jurassic Bonanza Group basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Upper Triassic Vancouver Group, Quatsino Formation. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Plutonic Suite have invaded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to gold-quartz veining in the area. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a north-west axis.

The Omega occurrence comprises a 052 degree striking, 80 degree south dipping shear-vein at the Jurassic diorite-Bonanza andesite contact. The shear zone is 10 to 30 centimetres wide and contains crushed rock, gouge and occasional lenses of quartz and calcite which range up to 0.3 by 1 metre in size. The quartz lenses carry small amounts of pyrite, fine-grained arsenopyrite, chalcopyrite, galena and sphalerite.

CAPSULE GEOLOGY

Gold values are reported to occur in small pyrrhotite-chalcopyrite lenses in limestone elsewhere on the property (Bulletin 27, page 123).

BIBLIOGRAPHY

EMPR BULL 20-V, p. 16; *27, p. 123
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (Claim Map 1:3600)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 60
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/14

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 025**

NATIONAL MINERAL INVENTORY: 092L2 Au7

NAME(S): **PEERLESS**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 02 34 N
LONGITUDE: 126 50 50 W
ELEVATION: 597 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5545607
EASTING: 654140

LOCATION ACCURACY: Within 500M

COMMENTS: Location of workings in the west fork of Pandora Creek (Bulletin 27, page 123), about 1.7 kilometres northwest of Zeballos River, 6.0 kilometres north of Zeballos.

COMMODITIES: Gold Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite
COMMENTS: Gold association not known.
ASSOCIATED: Quartz Calcite
ALTERATION: Feldspar
ALTERATION TYPE: Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal Hydrothermal
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
DIMENSION:
COMMENTS: Vein width is 5.0 centimetres. STRIKE/DIP: 065/90 TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			
Eocene			Catface Intrusions
ISOTOPIC AGE: 38 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Feldspar Porphyry Dike
Feldspathic Andesite
Granodiorite

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; phlogopite-Zeballos intrusion; biotite-South Zeballos stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite
COMMENTS: Greenstone silicified, carbonate-altered.

CAPSULE GEOLOGY

The Peerless occurrence lies in the Zeballos gold camp, an area underlain by Lower Jurassic Bonanza Group basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Upper Triassic Vancouver Group, Quatsino Formation. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Plutonic Suite have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to gold-quartz veining in the area.

The Peerless occurrence is comprised of a 5.0 centimetre wide quartz-calcite vein which hosts chalcopyrite and sphalerite. The vein follows the contact of a feldspar-porphyry dyke which strikes 065 degrees and dips vertically. The dyke and mineralized quartz vein crosscut feldspathized Bonanza Group andesite adjacent to the

CAPSULE GEOLOGY

contact between the Lower Jurassic Bonanza Group volcanics and the Late Jurassic Zeballos intrusive phase of the Island Plutonic Suite.

BIBLIOGRAPHY

EMPR BULL 20-V, p. 16; *27, p. 123
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 60
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/24

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 026**

NATIONAL MINERAL INVENTORY: 092L2 Au7

NAME(S): **PANDORA**, RODGER, PATTY

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 02 24 N
LONGITUDE: 126 49 30 W
ELEVATION: 274 Metres

NORTHING: 5545344
EASTING: 655740

LOCATION ACCURACY: Within 500M

COMMENTS: Location of surface trenches, from Bulletin 27, Figure 2, is 1.0 kilometre northwest of Zeballos River, 6.5 kilometres north of Zeballos.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Breccia Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: STRIKE/DIP: 058/90
COMMENTS: Shear zone strikes 058 degrees, dips vertically.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE:	148 +/- 8 Ma		
DATING METHOD:	Potassium/Argon		
MATERIAL DATED:	Phlogopite		

LITHOLOGY: Granodiorite

HOSTROCK COMMENTS: Phlogopite from Zeballos intrusion (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The Pandora occurrence lies in the Zeballos gold camp, an area underlain by Lower Jurassic Bonanza Group basaltic to rhyolitic volcanic rocks. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Plutonic Suite have intruded the volcanic rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to gold-quartz veining in the area.

The Pandora occurrence is comprised of a 10 centimetre wide zone of gouge within a 0.1 to 2.0 metre wide shear zone in white granodiorite of the Late Jurassic Island Plutonic Suite. The shear zone strikes 058 degrees and dips vertically. The gouge contains fragments of quartz which range up to 2.5 centimetres in length and contain small amounts of pyrite. Gold content is unknown.

A shear zone which was reported to host mineralized quartz was well exposed by open cuts and stripping in 1939 but, is now covered by debris.

BIBLIOGRAPHY

EMPR AR 1947-181
EMPR BULL 20-V, p. 16; *27, p. 124
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 61
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 54
REPORT: RGEN0100

BIBLIOGRAPHY

CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/14

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 56
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 60
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/14

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 028**

NATIONAL MINERAL INVENTORY: 092L2 Fe1

NAME(S): **FORD, F.L.** (L.1999,L.2000), EXTENSION NO. 1-4(L.2008-2011),
FE (L.2007), FL

STATUS: Past Producer Open Pit Underground
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 02 54 N
LONGITUDE: 126 50 05 W
ELEVATION: 792 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5546251
EASTING: 655017

LOCATION ACCURACY: Within 500M

COMMENTS: The centre of the ore body is in Blacksand Creek, 1.5 kilometres north
of Zeballos River, 6.5 kilometres north of Zeballos.

COMMODITIES: Iron Magnetite

MINERALS

SIGNIFICANT: Magnetite Pyrite
ALTERATION: Pyroxene Epidote Garnet Pyrite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Industrial Min.
TYPE: K03 Fe skarn
SHAPE: Tabular
DIMENSION: 400 x 21 Metres STRIKE/DIP: 360/45W
COMMENTS: Ore body strikes north-northwest to northeast, dipping 45 degrees
west.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil			
Jurassic	Mollusks		Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Phlogopite			
LITHOLOGY: Limestone Tuff Diorite Granodiorite Andesite Dike Feldspar Porphyry Dike			

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; Quatsino ammonites-Alice Lake;
phlogopite-Zeballos intrusion (Geological Survey of Canada Paper 74-8)

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

The Ford occurrence is underlain by a roof pendant of the Upper Triassic Vancouver Group, Quatsino Formation limestone. This is overlain by Lower Jurassic Bonanza Group tuffs. The roof pendant is surrounded to the north, south and west by granodiorite and hornblende diorite of the Zeballos stock of the Early to Middle Jurassic Island Plutonic Suite.

The limestone and tuff are extensively recrystallized. Andesite dykes, considered to be intrusive phases of Bonanza volcanics, cut the tuffs and are most frequent at the southwest end of the occurrence. Feldspar porphyry dykes cut limestone and tuff.

The roof pendant is a recumbent overturned anticline that plunges southwest and opens to the southeast, exposing the limestone. Beds dip moderately to the northwest at surface but steeper at depth

CAPSULE GEOLOGY

and are projected to overturn below the drilled depth.

A major northwest striking vertical fault, with a right lateral displacement of 31 to 61 metres, cuts the main orebody in half. A second parallel fault, 150 metres to the south, is post-ore and has little offset.

Mineralization consists of a 21-metre thick tabular body of massive magnetite that strikes northeast and dips northwest. At the northeast end, it pinches out along the limestone-tuff contact. At the southwest end, 400 metres away, the magnetite fingers out in a migmatitic zone where the tuff is intruded by the Zeballos stock.

The magnetite follows the limestone-tuff contact down dip, but crosses the stratigraphy where the contact becomes vertical at depth. A thin layer of pyrite is present locally at the magnetite-limestone contact. Pyroxene-epidote skarn, with only minor garnet, occurs as an irregular 31 metre thick layer, 3 metres above the magnetite, forming generally sharp contacts. A second skarn band lies 61 metres above the first.

It has been suggested that magnetite replacement was partially controlled by fracturing (Minister of Mines Annual Report 1962, pages 100-103).

Most of the magnetite is pure, massive and fine-grained; but it commonly occurs as octahedral grains up to 1.3 centimetres across.

During 1962 and 1963 the deposit was mined by open pit methods. From 1963 to the end of production in 1969, underground methods were used. Between 1962 and 1969 the deposit produced 1,282,233,396 kilograms of iron concentrate from 1,681,283 tonnes mined.

BIBLIOGRAPHY

- EMPR AR 1936-F38; 1938-F41-65; 1951-197; 1952-231; 1960-103; 1961-101; *1962-A46,A51,100-103; 1963-101; 1964-A52,A57,153-154; 1965-A52,A57,230,232; 1966-A48,A49,72-73; 1967-A50,A52,73; 1968-A50,A52,102; 1969-A52,A53
EMPR ASS RPT 14457
EMPR BULL *27, pp. 125-128; 101, pp. 57, 171, Appendix 6
EMPR ENG INSP #202282-292306
EMPR GEM 1969-215
EMPR INDEX 4-126
EMPR OF *1988-28, pp. 31-37
EMPR PF (Preliminary Report, FL Iron property, Zeballos, Apr. 1940; J.S. Stevenson, Pace & Compass Survey, 1940; Drill plans DDH #1,2 1941; Underhill & Underhill; FL & Extension Group Claim Map, 1945; FL, FL 2,3 & 4 Plane table Survey, 1946; Geology Map, FL, FL 2,3 & 4, 1946; A.J. Anderson, Ford Iron property, 1948; C.M. Campbell for Ford Iron property, Grade and Tonnage Estimates (not dated); Hill, Stark & Assoc.: Report on the Ford Iron Deposit, Zeballos, B.C., 1960)
EMR MP CORPFILE (International Iron Mines; Zeballos Iron Mines; Empire Ventures, Ltd.; Falconbridge Nickel Mines Ltd.)
GSC BULL 172, p. 74
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 66
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 71-36; 72-44; 74-8; 79-30
GSC SUM RPT 1921, pp. 12-22; 1929A; 1932AII, pp. 29-50
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, p. 179

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/04

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 029**

NATIONAL MINERAL INVENTORY:

NAME(S): **BARNACLE** EXTENSION 1,3 (L.2008), EXTENSION 3 (L.2010)

MINING DIVISION: Alberni

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 03 19 N
LONGITUDE: 126 49 50 W
ELEVATION: 817 Metres

NORTHING: 5547031
EASTING: 655293

LOCATION ACCURACY: Within 500M

COMMENTS: Location of #2 adit on Lot 2010 (from Page 129 and Figure 2, Bulletin 27) is 2.5 kilometres northwest of Zeballos River, 8.0 kilometres north of Zeballos.

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Pyrite Gold Chalcopyrite Pyrrhotite
ASSOCIATED: Quartz
ALTERATION: Limonite Garnet
ALTERATION TYPE: Oxidation Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Mesothermal Epithermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 0060 Metres STRIKE/DIP: 360/90 TREND/PLUNGE:
COMMENTS: Number 1 adit vein was traced for 60 metres along north strike.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Andesite
Diorite
Limestone

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; Quatsino ammonites-Alice Lake; phlogopite-Zeballos intrusion (Geological Survey of Canada 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1950
SAMPLE TYPE: Bulk Sample
COMMODITY: Gold GRADE: 107.3000 Grams per tonne
COMMENTS: Value of high grade shipment of 1.4 tonnes.
REFERENCE: Bulletin 27, page 129.

CAPSULE GEOLOGY

The Barnacle (Extension 1, 3) occurrence lies north of the Zeballos gold camp, in an area underlain by Lower Jurassic Bonanza Group rhyolitic volcanic rocks and Upper Triassic Vancouver Group, Quatsino Formation limestone. Dioritic to granodioritic Jurassic

CAPSULE GEOLOGY

plutons of the Zeballos intrusion phase of the Island Plutonic Suite have intruded the older rocks.

The occurrence consists of three different vein-shears located over an area of 50 metres, and explored by the Number 1, 2 and 3 adits. The shear zones are within a contact area of mixed Bonanza Group andesites and diorite of the Island Plutonic Suite, which is about 100 metres from the contact of andesite with Quatsino Formation limestone.

The Number 1 adit on Lot 2008 (Extension 1) consists of a lenticular quartz-vein that occupies a 1.2 metre wide north striking, 65 degree west dipping shear zone. The vein is up to 15 centimetres wide and has been traced on surface for 60 metres. The adit extends for 13 metres along its strike.

The Number 2 or Main adit on Lot 2010 (Extension 3) traces a 5.0 to 10 centimetre wide quartz-vein in a 60 centimetre shear zone lying in andesite that contains patches of diorite and brown garnet. The quartz is vuggy and contains earthy limonite, chalcopyrite, pyrrhotite and visible gold. The vein dips vertically and strikes north.

The Number 3 adit, also on Lot 2010, follows a 2.5 to 20 centimetre wide lenticular quartz vein that measures about 30 centimetres in width. The vein material is strongly oxidized, strikes north and dips 85 degrees west. The host rock is andesite with garnet patches. A high grade shipment of 1.4 tonnes of ore averaging 107.3 grams per tonne is reported to have been back-packed down the mountain (Bulletin 27, page 129).

BIBLIOGRAPHY

- EMPR AR 1945-116
EMPR BULL 20-V, p. 16; *27, p. 129
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (092L 028 - FL)
EMR MP CORPFILE (Anyox Metals Ltd.; Zeballos River Mines Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 60
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
N MINER Apr. 1938, pp. 39-45
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
Carson, D.J.T., 1968, Metallogenic study of Vancouver Island with emphasis on the relationship of plutonic rocks to mineral deposits, Ph.D. thesis, Carleton University, Ottawa. \
Stevenson, J.S., 1938, Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/15

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 030**

NATIONAL MINERAL INVENTORY: 092L2 Au5

NAME(S): **LUCKY STRIKE**, FREE GOLD, VANCOUVER GIRL

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 03 39 N
LONGITUDE: 126 50 45 W
ELEVATION: 1189 Metres

NORTHING: 5547617
EASTING: 654182

LOCATION ACCURACY: Within 500M

COMMENTS: Location is the Freegold vein 100 metres east of 1231 peak between west branch of Lime Creek and Kaouk River, 3.5 kilometres northwest of Zeballos River, 8.5 kilometres north of Zeballos.

COMMODITIES: Gold Copper

MINERALS

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

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Epigenetic Epithermal
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 0300 Metres STRIKE/DIP: 043/90 TREND/PLUNGE:
COMMENTS: A 043 degree striking vein has been explored over 300 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Granodiorite
Siliceous Diorite
Diorite Granodiorite Breccia
Mafic Dike
Limestone
Feldspar Porphyry Dike

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake; phlogopite from Zeballos intrusion (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks
PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1938
SAMPLE TYPE: Grab
COMMODITY: Gold GRADE: 7.8000 Grams per tonne
COMMENTS: Average of 3 samples over 20 centimetres.
REFERENCE: Property File - Jobin, F. 1938 page 1.

CAPSULE GEOLOGY

The Lucky Strike occurrence lies north of the Zeballos gold camp, in an area underlain by Lower Jurassic Bonanza Group basaltic to rhyolitic volcanic rocks and Upper Triassic Vancouver Group Quatsino Formation limestone. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Plutonic Suite have intruded all older rocks.

CAPSULE GEOLOGY

The Lucky Strike occurrence consists of two shear veins hosted by Late Jurassic granodiorite near the contact with Quatsino limestone:

- 1) The Vancouver Girl shear, also referred to as Lucky Strike shear, strikes 030 degrees and dips 80 degrees south. The average width is 25 centimetres. The zone consists of locally silicified sheared diorite. Minerals include pyrite, chalcopyrite and free gold and three samples over 20 centimetres each averaged 7.8 grams per tonne gold (Property File - Jobin, F., 1938, page 1). Bulletin 27, page 131, states that the zone follows a 60 centimetre wide feldspar porphyry dyke that traces a zone of diorite-granodiorite breccia on a 047 degree strike and an average width of less than 15 centimetres.
- 2) The Free Gold or Lucky Strike Vein is located 400 metres north of the Vancouver Girl and has been explored over 300 metres of its 043 degree strike. The vein is vertical and follows in places the wall of a mafic dyke. Width ranges from 4 to 15 centimetres. Vein material consists of locally oxidized quartz-pyrite-free gold. Assays between 2.7 and 113.8 grams per tonne gold are reported (Property File - Jobin, F., 1938, page 2).

BIBLIOGRAPHY

- EMPR BULL 20-V, p. 16; *27, p. 131
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (Jobin, F., 1938, Report on the Lucky Strike Group for Pioneer Gold Mines)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 59
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., 1968, Metallogenic study of Vancouver Island with emphasis on the relationship of plutonic rocks to mineral deposits, Ph.D. thesis, Carleton University, Ottawa.
Stevenson, J.S., 1938, Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/14

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 031**

NATIONAL MINERAL INVENTORY: 092L2 Fe2

NAME(S): **CHURCHILL MAGNETITE** CHURCHILL EXTENSION, ZEB 9-11

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 04 17 N
LONGITUDE: 126 49 56 W
ELEVATION: 1112 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5548819
EASTING: 655122

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the main Churchill mineralized zone on Churchill 3 and 4 claim boundary is 10.0 kilometres north of Zeballos, at the headwaters of Lime Creek.

COMMODITIES: Iron Magnetite

MINERALS

SIGNIFICANT: Magnetite Pyrite Pyrrhotite
ALTERATION: Garnet Epidote Limonite
ALTERATION TYPE: Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Igneous-contact Skarn Industrial Min.
TYPE: K03 Fe skarn
SHAPE: Tabular
DIMENSION: 0076 x 0076 x 0016 Metres STRIKE/DIP:
COMMENTS: Dimensions of largest ore body are 76 by 76 by 16 metres.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Skarn
Diorite
Granodiorite Dike
Diabase Dike
Felsic Dike

HOSTROCK COMMENTS: Ammonites from Alice Lake; phlogopite from Zeballos intrusion (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

INVENTORY

ORE ZONE: CHURCHILL MAIN REPORT ON: Y
CATEGORY: Measured YEAR: 1966
QUANTITY: 726000 Tonnes
COMMODITY: Iron GRADE: 38.0000 Per cent

COMMENTS: Iron grade estimated at 35 to 40 per cent.
REFERENCE: Property File - Saukko, R.N., Hiller-Churchill Properties, 1967.

CAPSULE GEOLOGY

The Churchill magnetite occurrence lies within a belt dotted with about 9 similar occurrences that extend from the Zeballos River for about 8 kilometres in a northwest direction. The mineralization lies along the contact between diorite of the Early to Middle Jurassic Island Plutonic Suite and Upper Triassic Vancouver Group Quatsino Formation limestone. The limestone strikes 330 degrees and dips 45 degrees north,, and is cut by diabase dykes

CAPSULE GEOLOGY

ranging up to 10 metres in width. Granodiorite dykes up to 30 metres wide occur in the main diorite intrusions and have locally fractured or brecciated the host rock. Several narrow felsic dykes cut both diorite and granodiorite. Faulting includes the north-northwest trending Hiller fault and a set of north to northeast trending faults. Massive magnetite mineralization, with disseminated pyrite and pyrrhotite, and patchy limonite, occurs as irregular lens shaped bodies at the northeast trending contact, replacing limestone. Small lenses of unaltered limestone remain within the magnetite. The main magnetite body measures 76 by 76 by 16 metres. A small patch of garnet-epidote skarn is present at the southwest corner of this body.

Much smaller streaks and pods of magnetite occur over an area of 200 metres from the main occurrence.

Reserves of 726,000 tonnes are quoted (Property File - Saukko, 1967 p. 7); assays on purest material returned values of 67.34 per cent iron, 0.053 per cent sulphur and 0.026 per cent phosphorus (Geological Survey of Canada Memoir 272, page 69), but Saukko estimates the average grade at 35 to 40 per cent (Property File - Saukko, 1967).

In 1999, Doublestar Resources Ltd. plans to acquire the property from Falconbridge Limited.

BIBLIOGRAPHY

- EM EXPL 1999-25-32
EMPR AR 1945-116; 1951-197; 1962-100; 1965-232; 1966-73
EMPR ASS RPT 433, 14457
EMPR BULL *27, p. 131
EMPR EXPL 1985-C230; 1986-C275
EMPR PF (*Saukko, R.N., 1967, Hiller-Churchill Properties; McDougall, J.J., 1964, *Report on Churchill Magnetite Deposit, Zeballos, B.C.; McDougall, J.J., 1964, General Location of Iron Ore Deposits, Zeballos; Falconbridge, not dated; Map of the Churchill Mineral Claims Geology and Topography, not dated; Location Plan of the Magnetite Deposits on the Churchill Mineral Claim 2, 1943; Assay Plan, not dated; Geology Map, Churchill Deposit not dated; Portion of Claim Map, not dated; Doublestar Resources Ltd., Annual Report, December 1999)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 272, p. 68
GSC OF 9; 170; 463
GSC P 38-5; 69-1A; 70-1A; 71-36; 72-44; 74-3; 79-30
GSC SUM RPT 1929A; 1932A, p. 48
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/07

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 032**

NATIONAL MINERAL INVENTORY: 092L2 Fe6

NAME(S): **CAVALIER 4 (L.1967)**, WREN 2, ZEB 12

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 03 39 N
LONGITUDE: 126 49 17 W
ELEVATION: 660 Metres

NORTHING: 5547668
EASTING: 655931

LOCATION ACCURACY: Within 500M

COMMENTS: Open cuts located in the north central portion of Lot 1967 (from Figure 2, Bulletin 27).

COMMODITIES: Iron Magnetite

MINERALS

SIGNIFICANT: Magnetite Pyrrhotite
ALTERATION: Garnet
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Industrial Min.
SHAPE: Tabular
DIMENSION: 0002 Metres STRIKE/DIP: 315/60W TREND/PLUNGE:
COMMENTS: Strike of ore lens is northwest, dip is 60 degrees southwest.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvavite ammonites			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Skarn
Diorite

HOSTROCK COMMENTS: Ammonites from Alice Lake; phlogopite from Zeballos intrusion (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

CAPSULE GEOLOGY

The Cavalier magnetite occurrence lies within a belt dotted with about 9 similar occurrences that extend from the Zeballos River for about 8 kilometres in a northwest direction.

The Cavalier occurrence consists of several small lenses of massive magnetite with considerable pyrrhotite. The mineralization lies along the contact between diorite of the Jurassic Island Plutonic Suite Zeballos stock and Upper Triassic Vancouver Group Quatsino Formation limestone. The occurrence is similar to the Churchill (092L 031), which is located 1.5 kilometres to the north. Several open cuts have exposed mineralization measuring to 0.5 by 2.0 metres, striking northwest and dipping 60 degrees southwest. A float sample assayed 35.67 per cent iron (Property File - 1:3600 Geology Map, not dated).

BIBLIOGRAPHY

EMPR ASS RPT 13665, 14457
EMPR BULL *27, p. 134
EMPR PF (Geology Map, not dated, see 092L 031)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272
GSC OF 9; 170; 463

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 66
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 38-5; 69-1A; 70-1A; 71-36; 72-44; 74-8; 79-30
GSC SUM RPT 1929A

Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/11

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 033**

NATIONAL MINERAL INVENTORY: 092L3 Au1

NAME(S): **PATMORE, FIL MIL, FIL,
CATCHALOT, AMAI, ECLIPSE,
DL, ADAM, MACHTA GOLD,
AU 1-10, UOI 1-4, TV,
ADARN, STONE NIPPLE**

MINING DIVISION: Alberni

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03E 092L04E

UTM ZONE: 09 (NAD 83)

BC MAP:
LATITUDE: 50 00 34 N
LONGITUDE: 127 06 16 W
ELEVATION: 440 Metres

NORTHING: 5541402
EASTING: 635818

LOCATION ACCURACY: Within 500M

COMMENTS: Location of lower (Number one) adit is at elevation 440 metres, 1.2 kilometres south of Amai Inlet, 2.5 kilometres west of the mouth of Amai Creek.

COMMODITIES: Gold Zinc Copper

MINERALS

SIGNIFICANT:	Telluride	Sphalerite	Chalcopyrite	Gold	Pyrite
ASSOCIATED:	Quartz				
ALTERATION:	Epidote	Chlorite	Limonite	Malachite	
ALTERATION TYPE:	Propylitic		Oxidation		
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 0300 x 0150 x 0001 Metres STRIKE/DIP: 065/90 TREND/PLUNGE:
COMMENTS: Strike of fault-dyke system is 065 degrees.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Lamprophyre Dike
Felsic Dike
Hornblende Granodiorite
Tonalite
Quartz Porphyry Granodiorite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; intrusive phlogopite from Zeballos intrusion (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Drill Core
COMMODITY: Gold GRADE: 51.0200 Grams per tonne
COMMENTS: Assay composite over 3.58 metres. 50,000 tonnes of measured geological assayed 51.44 grams per tonne gold (George Cross Newsletter 118,1985).
REFERENCE: Assessment Report 15079, Figure 6.

CAPSULE GEOLOGY

The region of the Patmore prospect is underlain by flows and

CAPSULE GEOLOGY

pyroclastics of the Lower Jurassic Bonanza Group which are intruded by granitic rocks of the Late Jurassic Island Plutonic Suite.

The contacts between the intrusive phases are mostly transitional. Contacts with the volcanics can be sharp fault contacts or transitional zones, up to 130 metres wide. Post-intrusive aplite and lamprophyre dykes cut both granitic and volcanic rocks.

Faults, shear zones, veins and dykes follow three main orientations: 010 to 025 degrees and 150 to 170 degrees, both steeply dipping to the east, and a 90 to 135 degree set, with shallow southerly dips. Chloritic alteration on fault and shear planes is common.

The Patmore occurrence lies in a creek that occupies a major 025 degree trending fault zone. The occurrence is underlain by medium-grained equigranular hornblende granodiorite, locally grading to tonalite. Near the Number 3 adit, a quartz-eye porphyritic phase is in sharp contact with the main granodiorite. In the creek area, felsic dykes trending 025 degrees are aphanitic and range from dacitic to rhyolitic composition. Mafic dykes trend 025 to 065 degrees, are comprised of andesitic to lamprophyric composition, and range from grey-green to dark green in color.

The mineralization is contained in two dyke-fault structures that have been traced over 300 metres horizontally and 150 metres vertically. Mineralization consists of pyrite with limonite and gold tellurides (tetradymite, sylvanite) and minor sphalerite, chalcocopyrite and malachite.

A mafic dyke and the fault's footwall are explored in adits 1, 2 and 3, while a felsic dyke and the hangingwall are exposed in a parallel drift in the Number 1 adit.

The felsic dyke in the Number 1 adit is, in part, strongly fractured and silicified. Within the dyke there are several steep 0.3 to 1.5 metre wide, en echelon gold-quartz-pyrite-limonite veins. The mean value of 4 assays was 4.6 grams per tonne gold over 1.5 metres (Assessment Report 14369, page 19). No significant gold values are reported from the pinching and swelling fault gouge zone associated with the mafic dyke in the parallel drift of the same adit.

The Number 2 adit, located 90 metres south of Number 1 adit, follows a steep east dipping one metre wide mafic dyke in unaltered granodiorite. The fault gouge zone in the hangingwall and within the dyke contains pinching and swelling comb-structure quartz-pyrite-gold-limonite and ranges from 5 to 50 centimetres in width. Gold values are restricted to the narrow quartz-pyrite zones. The mean of 10 samples at the face of the adit was 17.3 grams per tonne gold over 1.0 metre (Assessment Report 14369, page 19).

At the Number 3 adit, 140 metres south of the first, the same fault-dyke system is explored. Here, it is narrow and strongly anastomosing, ranging in width from 2 to 30 centimetres, with local quartz-pyrite-gold mineralization. Strongly fractured granodiorite hosting the structure is unmineralized. Eight face samples averaged 3.4 grams per tonne gold over a 1.0 metre width (Assessment Report 14369, page 19).

In 1986, diamond drilling intersected the structure below the levels of the adits. Samples assayed up to 51.02 grams per tonne gold over 3.58 metres (Assessment Report 15079, Figure 6). Other intercepts were much lower over very narrow widths.

BIBLIOGRAPHY

- EMPR AR 1946-177; 1947-180; 1955-78
EMPR ASS RPT 7062, *14369, 14744, *15079, 15153, 15903
EMPR EXPL 1978-E181; 1986-C152,C217; 1987-C220
EMPR GEM 1974-209
EMPR PF (Patmore, W.H., 1945, Report on Patmore Gold Mine, Kyuquot Sound, British Columbia)
EMR MP CORPFILE (New Jericho Dev. Corp. Ltd.; Lim Mines Ltd.; Cal-Denver Resources Ltd.)
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8, p 59
GSC SUM RPT 1913; 1920A
GCNL #238, 1982; #67,#118, 1985
NAGMIN July 19, 1985
Carson, D.J.T., 1968, Metallogenic study of Vancouver Island with emphasis on the relationship of plutonic rocks to mineral deposits, Ph.D. thesis, Carleton University, Ottawa.

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/26

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 034**

NATIONAL MINERAL INVENTORY: 092L7 Fe1

NAME(S): **IRON CROWN (L.126)**, NIMPKISH IRON, RHODA (L.919)

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:
LATITUDE: 50 15 29 N
LONGITUDE: 126 51 36 W
ELEVATION: 120 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Lot 126 is 200 metres west of Klaanch (Nimpkish) River,
8 kilometres south of Nimpkish Lake.

Open Pit

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

NORTHING: 5569514
EASTING: 652539

COMMODITIES: Iron Magnetite Copper Zinc Gold

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite Sphalerite Pyrite
ASSOCIATED: Calcite Pyrite Pyrrhotite Laumontite
ALTERATION: Sericite Calcite Actinolite Epidote Pyrite
Pyrrhotite
ALTERATION TYPE: Sericitic Propylitic Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Industrial Min.
TYPE: K03 Fe skarn
SHAPE: Tabular
DIMENSION: 116 x 18 Metres
COMMENTS: Ridge showing STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 4 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Amygdaloidal Andesite
Quartz Monzonite
Diorite
Feldspar Porphyry Dike
Aplite Dike
Felsic Dike

HOSTROCK COMMENTS: Age dates from Geological Survey of Canada Paper 74-8.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

CAPSULE GEOLOGY

In the area of the Iron Crown occurrence, north striking carbonates and calcareous sediments of the Quatsino and Parson Bay formations overlie Karmutsen Formation tholeiitic basalts, all of the Upper Triassic Vancouver Group. Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff, breccia and minor sediments are coeval with, or genetically related to, granodiorite of the Nimpkish batholith of the Early-Middle Island Plutonic Suite. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area.

The occurrence is at the contact between coarsely crystalline Quatsino Formation limestone and fine-grained massive amygdaloidal andesite exhibiting sericite, calcite and actinolite alteration with amygdules filled with epidote, calcite or actinolite. Pyrite and

CAPSULE GEOLOGY

pyrrhotite are disseminated through the andesite. Laumontite and calcite veins are present.

Leucocratic quartz monzonite and diorite intrude the volcanics and limestone. Contacts with the volcanics are diffuse, and recrystallized andesite cannot readily be distinguished from intrusive rocks. Feldspar porphyry dykes, an aplite dyke and a felsite dyke are also recognized. The magnetite contact with the limestone is sharp. The andesite is diffuse and evidenced by skarn. The magnetite is relatively pure, but contains up to 50 per cent calcite lenses with chalcopyrite, pyrite and sphalerite. Calcite and sulphides are considered to be post-ore (Geological Survey of Canada Bulletin 172, page 73).

A 55 metre long, 8 to 9 metre wide magnetite exposure occurs along the Nimpkish River. Some 200 metres west of the river, several outcrops of magnetite occur along a ridge and are estimated to represent a lens at least 116 metres long and 18 metres wide. A third magnetite body, indicated by magnetometer surveys only, measures 146 by 18 metres and lies between the river and ridge deposits. These 3 occurrences are believed to represent the 3 fault-separated orebodies of Sangster (Geological Survey of Canada Bulletin 172, page 73). The faults are marked by breccia zones up to 1.5 metres wide, gouge, chlorite, hematite-coated slip surfaces and slickensided magnetite ore and country rock.

Ore samples taken in 1942 assayed 59.6 to 63.9 per cent iron, averaging 62.1 per cent iron (Cameron, 1942). Phosphorous and sulphur contents are reported to be very low. Between 1959 and 1963, 2,175,683 tonnes of ore were mined.

Indicated (probable) reserves at Iron Crown are 1,632,924 tonnes grading 3.5 grams per tonne gold, 46.2 per cent iron and 1.33 per cent sulphur (Minister of Mines Annual Report 1956). The reserve figures are pre-production; the deposit is mined out.

BIBLIOGRAPHY

- EMPR AR 1902-236; 1916-300; 1955-76; 1956-133; 1959-133; 1960-101;
1961-93; 1962-96; 1963-99
EMPR MAP 65 (1989)
EMPR OF 1992-1; 1992-9
EMPR PF (Cameron, D.W. (1942): Report on Klaanch River Iron Deposits;
Mineralogy of the Iron Crown Report by Gail Bloomer, Wash.
Statell.; Airborne Magnetometer Survey, Nimpkish River Area,
1:15,840, 1957)
EMR MP CORPFILE (Nimpkish Iron Mines Ltd.)
GSC ANN RPT 1886
GSC BULL 47; *172; 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM *272, p. 75
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC OF 9; 170; 463
GSC SUM RPT *1929 Part A, p. 131; 1931 Part A
CJES 18, p. 1; 20, p. 1, 1983
Alsen, J.B. (1975): A Magnetite Skarn Deposit near Bonanza Lake,
Unpub. B.Sc. Thesis, University of British Columbia
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/25

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

flow (Minister of Mines Annual Report 1960, page 98). Both Quatsino and Karmutsen limestones have been replaced by garnet-epidote-magnetite-calcite-chalcopyrite-bornite mineralization. The lower ore horizon, below the diorite sill is referred to as the Old Sport Horizon. The upper horizon of lesser continuity is called the Hanging Wall Horizon. The Old Sport Horizon has been developed south to the Benson Lake mine (092L 091), a distance of more than 3 kilometres.

Magnetite, chalcopyrite and local bornite, constitute the main ore minerals. Pyrite is widely distributed; pyrrhotite occurs locally. Minor gold and silver are associated with chalcopyrite. The chalcopyrite occurs as veinlets (plus or minus quartz) and disseminated grains in sill-like lenses, skarn and magnetite. Ore shoots are discontinuous, and their control is not evident.

Production between 1962 and 1973 totalled 2,621,131 tonnes, yielding 11,731,152 grams of silver, 3,868,842 grams of gold, 41,193,033 kilograms of copper and 506,148,445 kilograms of iron.

In 1914, samples averaged 4.58 per cent copper, 37.18 per cent iron, 17.49 grams per tonne silver and 1.47 grams per tonne gold (Norrie, 1914). From 1962 to 1973, production averaged 1.55 per cent copper and 27.14 per cent iron. Production from 1964 to 1970 averaged 4.41 grams per tonne silver and 1.45 grams per tonne gold.

A grab sample assayed 8.65 per cent copper, 38.6 grams per tonne silver and 0.03 per cent cobalt (EMPR Bulletin 101, page 177, Appendix 4B).

BIBLIOGRAPHY

- EMPR AR 1911-192; 1912-196; 1913-282; 1914-376; 1915-288; 1916-340; 1917-255; 1918-267,474; 1919-203; 1920-202,353; 1921-214,237; 1923-251; 1924-225-229; 1925-273; 1926-305; 1927-347; 1928-375; 1929-378; 1930-296; 1931-169; 1956-117; *1960-100; *1961-97-100; *1962-A47,A51,97-98; 1963-A47,A51,100-101; 1964-A53,A57,153; 1965-A53,A57,230; *1966-A48,A50,66-68; 1967-A50,A53,71; 1968-A50,A53,98-99; 1969-A52,A54; 1970-A51,A53; 1971-A51,A53; 1972-A51,A53; 1973-A51,A53
EMPR ASS RPT 80, 1760, 2304
EMPR BC METAL MM00178
EMPR BULL 101, pp. 14, 57, 80, 89, 172, 177, Appendix 4B, 6
EMPR ENG INSP #60288,#60289; #61404-61404
EMPR FIELDWORK 1987, p. 270
EMPR GEM 1969-207,208; 1970-273; 1971-319; 1972-289; 1973-24
EMPR INDEX 4-124
EMPR MAP 65 (1989)
EMPR MIN BULL MR 223 (1989) B.C. 175
EMPR OF 1991-8; 1992-1; 1992-9
EMPR P *1989-3, pp. 56-58, 109; 1991-4, p. 227
EMPR PF (Norrie, W.G. (1914): Report on the Property of Quatsino Copper Co. Ltd.; Lund, J.C. (1962): Geology and Mineralogy of the 5500 level ore zones, Coast Copper Mines; B.Sc. Thesis, University of British Columbia claim map 1969, 1:6000, Cominco; Geology, R-N Zones, 1972, 1:2400, Cominco-Coast Copper Mines; Generalized Geological Sections, 1:1200, Coast Copper-Benson Lake Mines; Clancy, W., et al: Report on the Property of Quatsino Copper Co. Ltd., 1914)
GSC BULL 172, p. 80
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918 Part B; *1929 Part A, p. 113
W MINER *March 1962, pp. 29-34
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, p. 187
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/30

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 036**

NATIONAL MINERAL INVENTORY: 092L7 Cu1

NAME(S): **NIMPKISH COPPER, KINMAN HAZEL 4,
PETER, COPPER CONTACT, NINA 1-4,
OLD TIMER 1-4, ALPHA**

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:
LATITUDE: 50 19 55 N
LONGITUDE: 126 50 56 W
ELEVATION: 640 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of the Kinman adit on the far east side of Hazel 4 claim (Assessment Report 831) is on Kinman Creek, 6.5 kilometres from its mouth of the south end of Nimpkish Lake.

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5577752
EASTING: 653093

COMMODITIES: Copper Gold Zinc Molybdenum Cadmium
 Magnetite Iron

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Magnetite Molybdenite Bornite
 Greenockite Covellite
COMMENTS: Gold mineralogy not known.
ASSOCIATED: Magnetite Pyrrhotite Pyrite Garnet Epidote
 Calcite Quartz
ALTERATION: Garnet Epidote Calcite Actinolite Chlorite
 Sericite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Industrial Min.
SHAPE: Tabular
DIMENSION: 0008 x 0004 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Chalcopyrite lens in creek is 8 metres wide, 3.6 metres thick.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvavite ammonites			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Garnet Epidote Skarn
Granodiorite
Lamprophyre Dike

HOSTROCK COMMENTS: Ammonites from Alice Lake; biotite from Nimpkish batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

The area is underlain by north striking Upper Triassic Vancouver Group, Karmutsen Formation tholeiitic basalts and overlying carbonates of the Quatsino Formation. Late Jurassic granodiorite of the Nimpkish batholith (which is part of the Jurassic Island Plutonic Suite) intrudes the Vancouver Group rocks. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area.

The Nimpkish Copper occurrence is one of several skarn-limestone replacement deposits over a distance of 1.0 kilometre along the Nimpkish batholith western contact. Several lamprophyre dykes are present. Mineralization consists of a 7 to 8 metre wide lens of massive chalcopyrite exposed in Copper Creek (the southeast continuation of Kinman Creek). The chalcopyrite body attains

CAPSULE GEOLOGY

thicknesses of about 3.6 metres. Samples assayed between 4.8 and 13.03 grams per tonne gold, 81.6 to 104.6 grams per tonne silver, 11.46 to 13.75 per cent copper and 0.30 to 0.60 per cent zinc (Geological Survey of Canada Memoir 272, page 72).

Twenty metres to the west lies a lens of massive chalcopyrite and calcite. Copper values assayed 0.18 to 0.67 per cent with trace to 0.1 per cent zinc. Gold and silver are present only in trace amounts (Geological Survey of Canada Memoir 272).

The sulphide mineralization is accompanied variably and locally by magnetite, marcasite, covellite, bornite, molybdenite, greenockite and skarn minerals such as garnet, epidote, actinolite, calcite, quartz, chlorite and sericite.

The occurrence lies 500 metres east of East Hazel (092L 206) and several small showings occur in between the two.

Doublestar Resources Ltd. held the property in 1998.

BIBLIOGRAPHY

- EMPR AR 1928-379; *1929-381; *1930-299; 1965-230; 1966-68
EMPR ASS RPT 456, *831, 832
EMPR GEM 1970-273
EMPR PF (Sketch of Kinman claims, 1:18000; Nimpkish Copper Group Geology, 1:3600, 1929, H.C. Gunning; Nimpkish Lake Area, 1:63360; Section B, Kinman to Larson Showing, 1:63360; Sketch Plan Showing various properties, New Nimpkish Lake, 1929, A. Lakes, 1:8000)
EMR MP CORPFILE (Reako Explor. Ltd.; Panther Mines Ltd.; Imperial Metals Corp.; Mar-Gold Resources Ltd.)
GSC ANN RPT 1886
GSC BULL 47; 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM *272-72
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT *1929A; *1931A, p. 26
CJES 18, p. 1; 20, p. 1, 1983
GCNL #105 (June 2), 1998
Alsen, J.B.: A Magnetite Skarn Deposit near Bonanza Lake, 1975, unpubl. B.Sc. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/28

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 037**

NATIONAL MINERAL INVENTORY: 092L7 Cu2

NAME(S): **SMITH COPPER**, SMITH, ZIP,
JAF, ANDY, JOE,
BONANZA, VERNON, STOREY CREEK

MINING DIVISION: Nanaimo

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W

UTM ZONE: 09 (NAD 83)

BC MAP:
LATITUDE: 50 21 46 N
LONGITUDE: 126 54 43 W

NORTHING: 5581052
EASTING: 648510

ELEVATION: 640 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit (Geological Survey of Canada Map 1029A), 1.6 kilometres east of Nimpkish Lake.

COMMODITIES: Magnetite Iron Copper Zinc Lead
 Silver

MINERALS

SIGNIFICANT: Pyrrhotite Magnetite Chalcopyrite Sphalerite
ASSOCIATED: Pyrite
ALTERATION: Garnet Epidote Diopside Actinolite Chlorite
 Calcite

ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: 151 +/- 14 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Industrial Min.
SHAPE: Irregular
DIMENSION: 0006 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarte ammonites			
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Skarn
Quartz Diorite
Andesite Flow
Basalt Flow

HOSTROCK COMMENTS: Juvarte ammonites-Alice Lake; gymnotropite ammonites-Hisnit Island; biotite K-Ar date-Nimpkish batholith (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Contact Plutonic Rocks RELATIONSHIP: Syn-mineralization GRADE: Hornfels

INVENTORY

ORE ZONE: ADIT REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1988
SAMPLE TYPE: Chip	
COMMODITY	GRADE
Silver	12.0000 Grams per tonne
Copper	1.6000 Per cent
Zinc	0.1450 Per cent

COMMENTS: Chip sample over 1.0 metre.
REFERENCE: Property File - Awmack, 1988.

CAPSULE GEOLOGY

The area is underlain by volcanics and sediments of the Middle to Upper Triassic Vancouver Group (Karmutsen, Quatsino and Parson Bay formations) and by volcanics of the Lower Jurassic Bonanza Group. These rocks have been intruded by the Jurassic Island Plutonic Suite which are cogenetic with the Bonanza Group.

Locally, Karmutsen andesitic and basaltic flows are overlain by Quatsino limestone, in turn overlain by Bonanza argillites, tuffs and quartzites. These are intruded by medium-grained quartz diorite to granodiorite. The volcanic and sedimentary rocks are cut by numerous dykes varying in composition from diabase and andesite to feldspar porphyries.

The original Smith occurrence consists of mainly massive pyrrhotite and magnetite with lesser pyrite, chalcopyrite and sphalerite irregularly distributed in skarn. The skarns consist of garnet, epidote, diopside, actinolite and chlorite. Calcite may also be present. The skarns occur as isolated bodies in limestone and the underlying volcanics at or close to the contact with quartz diorite. They are best developed at two embayments in the quartz diorite south-east of Storey Creek.

A 5.5 metre long adit has been excavated in a 6.3 metre wide vertical skarn zone trending 351 degrees along the Quatsino/quartz diorite contact. A 1.0 metre chip sample contained 1.60 per cent copper, 0.145 per cent zinc and 12.0 grams per tonne silver. Similar skarn located 600 metres to the north along the Karmutsen/quartz diorite contact contained 0.163 per cent copper and 1.650 grams per tonne gold (Awmack, 1988).

Several other occurrences are in the immediate area (refer to 092L 208-Smith Copper Main zone).

Doublestar Resources Ltd. staked the property in 1998.

BIBLIOGRAPHY

- EMPR AR 1921-348; 1929-382; 1930-299; 1931-172
EMPR ASS RPT *417, 765, 972, 2854, 3009, 3401, 3749, 4352, 7277, *10337, 11147
EMPR EXPL 1979-190; 1982-228
EMPR GEM 1971-319; 1972-291; 1973-259
EMPR OF 1988-28, p. 153
EMPR PF (*Awmack, (1988): 1988 Summary Report on the Nimpkish Project in Prospectus for Hercules Ventures Inc., July 12, 1988)
EMR MP RESFILE (Zip) Res
GSC ANN RPT 1886
GSC BULL 172; 242
GSC MAP *4-1974; 255A; *1029A; 1552A
GSC MEM *272, p. 73
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT 1929A, p. 130; *1931A, p. 30
CJES 18, p. 1; 20, p. 1 (Jan. 1983)
GCNL #159, #180, #200, #211, #219, #231, 1981; #2, #124, #167, #172, #178, #202, 1982; #3, #40, 1983; #57, #101, #121, 1985; #229, 1988; #1, #8, 1989
MINING REVIEW MAG Jul./Aug., 1983
N MINER Oct.29, Dec.10, 1981; Jun.20, 1985
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/11

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 038**

NATIONAL MINERAL INVENTORY: 092L2 Au3

NAME(S): **VAN ISLE (L.1744)**

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

Underground

MINING DIVISION: Alberni

LATITUDE: 50 01 19 N
LONGITUDE: 126 49 53 W
ELEVATION: 183 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5543324
EASTING: 655341

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit of the "1800" level is 0.5 kilometre east of Zeballos River. See also Privateer (092L 008).

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Pyrrhotite Arsenopyrite

ASSOCIATED: Quartz Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Mesothermal Epithermal Epigenetic
TYPE: I06 Cu±Ag quartz veins

SHAPE: Tabular

MODIFIER: Sheared

DIMENSION: 580 x 122 Metres STRIKE/DIP: 032/80N

TREND/PLUNGE:

COMMENTS: Vein width is less than 30 centimetres. Strike of #1 vein is 032 degrees, dip is 80 degrees north.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Andesite Tuff
Volcanic Breccia
Porphyry Dike

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; phlogopite-Zeballos intrusion; biotite-South Zeballos stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

COMMENTS: Greenstone is silicified and carbonate-altered.

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

INVENTORY

ORE ZONE: WORKINGS

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1981

SAMPLE TYPE: Chip

COMMODITY

GRADE

Gold

10.0000

Grams per tonne

COMMENTS: Maximum value of 24 samples in 2000 level workings.

REFERENCE: Property File (Van Isle Mine, 2000 level, 1982, C.R. Harris).

CAPSULE GEOLOGY

The Van Isle occurrence lies in the Zeballos gold camp. Production in 1940 came mostly from the "1800" level stope, where a narrow quartz-vein, striking 043 to 050 degrees and dipping 75 degrees west is hosted by steeply east dipping, northwest striking Lower Jurassic Bonanza Group andesite tuff and minor volcanic breccia. This vein, traced underground and on surface for 580 metres horizontally and 122 metres vertically, runs sub-parallel to a 032 degree striking vein that dips 80 degrees north. The second vein was encountered on the lower, 2000 level only, where it was traced for 49 metres.

Both veins range in width from up to 0.9 metre but average widths are less than 0.3 metre. The veins and the shear zones they follow are anastomosing over 1.2 metres. The shear zones are

CAPSULE GEOLOGY

generally only a few centimetres wider than the veins. Vein quartz is generally massive but is sometimes ribboned with fine-grained pyrite, galena and sphalerite. Locally, massive pyrrhotite, arsenopyrite and calcite are present. In 1981, sampling of the 2000 level workings returned values that were strongly variable. Maximum values were 10.0 grams per tonne gold over 10 to 15 centimetres (Sample #2766) and 8.9 grams per tonne gold over 15 centimetres (Sample #2765) (Harrison, 1982). Bulletin 27, Figure 2 indicates 2 additional veins along Van Isle Creek, 460 metres upstream from the 2000 level portal, but no information is given.

BIBLIOGRAPHY

EM EXPL 2001-23-31
EMPR AR *1935-F40; 1936-A37; *1938-F61-64
EMPR BC METAL MM00113
EMPR BULL 20-V, p. 16; *27, pp. 15,53-57
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR INDEX 3-217
EMPR PF (Harris, C.R. (1982): Van Isle Mine, 2000 level)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204, p. 16; 272, p. 61
GSC OF 9; 170; 463
GSC P 38-5; 40-12, p. 9; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
N MINER Apr. 1938, pp. 39-45
Stevenson, J.S. (1938): *Lode Gold Deposits of the Zeballos Area
Times Colonist, The New Islander, Feb. 8, 1998, pp. 6-7

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/17

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 039**

NATIONAL MINERAL INVENTORY: 092L2 Au10

NAME(S): **GOLDSRING (L.1940)**, GOLD SPRING, KNUTSEN,
GOLD STREAK, GOLD BANNER

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 03 44 N
LONGITUDE: 126 48 15 W
ELEVATION: 460 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5547858
EASTING: 657159

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit at elevation of 469 metres, in centre of Lot 1940
is 0.75 kilometre west of Zeballos River, 9.5 kilometres north of
Zeballos.

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS

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

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
DIMENSION: 0073 x 0067 Metres STRIKE/DIP: 355/90
COMMENTS: Dimensions and attitude of Eastern vein of Bulletin 27; vein width
is to 20 centimetres.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
	ISOTOPIC AGE: 230 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Gymnotropite ammonites		
Eocene			Catface Intrusions
	ISOTOPIC AGE: 38 +/- 14 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Phlogopite		
Upper Jurassic			Island Plutonic Suite
	ISOTOPIC AGE: 148 +/- 8 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		

LITHOLOGY: Porphyritic Andesitic Flow
Amygdaloidal Andesitic Flow
Feldspar Porphyry Dike

HOSTROCK COMMENTS: Ammonites-Hisnit Island; biotite and phlogopite-Zeballos area
(Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks
PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1950
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 3.4000 Grams per tonne
Gold 13.7200 Grams per tonne
COMMENTS: Highest of 3 samples across vein.
REFERENCE: Bulletin 27, page 119.

CAPSULE GEOLOGY

The Goldspring occurrence is comprised of three veins which are hosted by porphyritic to amygdaloidal andesitic flows of the Upper Triassic Vancouver Group, Karmutsen Formation. The Zeballos intrusion of the Late Jurassic Island Plutonic Suite lies 2.5 kilometres to the west. The Eocene South Zeballos pluton of the Catface Intrusions lies

CAPSULE GEOLOGY

2.5 kilometres to the south.

The first vein lies in Fault Creek and is described by Stevenson (Bulletin 27, page 33). It has been traced for 8 metres along a 303 degree strike. The vein dips 46 degrees north, is 10 centimetres wide and occurs in sheared andesite on the hangingwall side of a major fault near a feldspar porphyry dyke. The quartz vein hosts pyrite, pyrrhotite and chalcopyrite.

The second vein (the "Eastern Vein" of Bulletin 27) has been explored by two adits from the 469 and 536 metre levels. The vein strikes 355 degrees and dips 90 to 55 degrees east and is 2.5 to 20 centimetres wide. It follows a 13 to 30 centimetre wide rusty shear zone, and hosts pyrite, occasional patches of chalcopyrite and minor amounts of sphalerite and galena in quartz gangue. In the lower adit the vein is hosted by andesite for 18 metres, then follows a quartz porphyry dyke for 26 metres before following another shear zone to the face of the adit.

The same vein in the upper adit is 2.5 to 7.5 centimetres wide within a 2.5 to 20 centimetre wide shear zone. A sample of "heavy pyrite taken from the vein" in the creek bed 4.5 metres above the lower adit portal assayed 52.81 grams per tonne gold and 17.15 grams per tonne silver. Three samples taken across 20 centimetres of the vein assayed trace to 13.72 grams per tonne gold and 3.4 grams per tonne silver (Bulletin 27, page 119).

The Third vein (the "Western vein" of Bulletin 27, page 119) as examined in trenches at an elevation of 442 metres and 46 metres above Fault Creek consists of a 2.5 to 7.5 centimetre wide quartz stringer. The vein occasionally splits into several stringers along a 030 degree strike. The shear zone containing the vein dips 70 degrees east and is 2.5 to 13 centimetres wide. Three samples from the vein assayed from trace to 10.29 grams per tonne gold (Bulletin 27, page 119).

BIBLIOGRAPHY

- EMPR AR *1938-F65
EMPR BULL 20-V, p. 16; *27, pp. 118,119
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (Starr, C.C. (1938): Report on the Gold Spring Group of Claims, 4 p.; Workings, Plan, C.C. Starr, 1940; Starr, C.C. (1940): Report of Examination of the Gold Streak Group, 4 p.; Stevenson, J.S. (1938): Lode Gold Deposits of the Zeballos Area)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 59
GSC OF 9; 170; 463
GSC P 38-5; 40-12, p. 32; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932AII
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/02

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 040**

NATIONAL MINERAL INVENTORY: 092L6 Fe7

NAME(S): **SHAMROCK (L.1492)**

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 22 24 N
LONGITUDE: 127 15 21 W
ELEVATION: 838 Metres

NORTHING: 5581595
EASTING: 624025

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of ore zone on Lot 1492 is located 1.5 kilometre west of Benson River, 2.0 kilometres southwest of Benson Lake.

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite Pyrite
ALTERATION: Garnet
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Stockwork Breccia
CLASSIFICATION: Skarn Igneous-contact Replacement Industrial Min.
TYPE: K03 Fe skarn
SHAPE: Tabular
DIMENSION: 0366 x 0030 Metres STRIKE/DIP: 315/20W TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 178 +/- 8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Skarn
Tuff
Volcanic Rock
Diorite

HOSTROCK COMMENTS: Ammonites-Alice Lake; Mollusks-Quatsino Sound; Phlogopite-Empire Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Hornfels

INVENTORY

ORE ZONE: SHAMROCK REPORT ON: Y
CATEGORY: Unclassified
QUANTITY: 180000 Tonnes YEAR: 1961
COMMODITY: Iron GRADE: 26.0000 Per cent
REFERENCE: Property File - J. Lamb, 1961.

CAPSULE GEOLOGY

At the Shamrock occurrence a narrow rim of skarned, northwest striking, west dipping Lower Jurassic Bonanza Group volcanics lie between Upper Triassic Vancouver Group, Quatsino Formation limestone and diorite of the Early to Middle Jurassic Island Plutonic Suite. Scattered outcrops of massive to disseminated magnetite occur at the limestone-volcanic contact over an area of 366 by 30 metres on the north side of the diorite stock. The magnetite is up to 0.9

CAPSULE GEOLOGY

metre thick and dips 20 degrees west. Locally it is finely laminated, and pyrite content is sometimes high. The massive magnetite occurs lower in the section, with disseminated magnetite occurring higher up.

In 1960 and 1961, diamond drilling identified magnetite stockworks and breccia-skarn styles of mineralization.

Diamond-drill hole 13 intersected 16 metres of 51 per cent iron. Unclassified reserves were estimated at 180,000 tonnes grading 26 per cent iron (Property File - J. Lamb, 1961, page 9).

Jefferey (Minister of Mines Annual Report 1960, page 99) suggests that attitudes of the intrusive, the fold structures and bedding in the layered rocks, controlled the position and attitude of the mineralization.

BIBLIOGRAPHY

- EMPR AR 1912-196; 1913-282; 1914-376; 1918-474; *1960-99; 1961-97
EMPR BULL 101, p.172
EMPR MAP Preliminary Geological Map Alice Lake-Benson Lake Area, Jeffery, W.G. (1962)
EMPR PF (Lamb, J., (1961): Report in 092L 044-Merry Widow; Geological Map, J. Lamb, in 092L 041-Black Jack)
GSC BULL *172, p. 66
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/29

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 041**

NATIONAL MINERAL INVENTORY: 092L6 Fe8

NAME(S): **BLACKJACK (L.1498)**

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E 092L06W
BC MAP:
LATITUDE: 50 22 09 N
LONGITUDE: 127 15 06 W
ELEVATION: 853 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of centre of ore zone on Lot 1498 lies 1.3 kilometres west of Benson River, 2.0 kilometres southwest of Benson Lake.

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5581139
EASTING: 624332

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Stockwork
CLASSIFICATION: Skarn Replacement Igneous-contact Industrial Min.
DIMENSION: 0240 x 0053 Metres STRIKE/DIP: 315/30N TREND/PLUNGE:
COMMENTS: Dimension of dip needle anomaly is 240 by 53 metres, striking northwest and dipping 30 degrees west.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 178 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			
LITHOLOGY: Volcanic Rock			
Tuff			
Limestone			
Diorite			

HOSTROCK COMMENTS: Ammonites-Alice Lake; Mollusks-Quatsino Sound; Phlogopite-Empire Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PLUTONIC ROCKS RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Hornfels

CAPSULE GEOLOGY

At the main Blackjack occurrence, a narrow rim of Lower Jurassic Bonanza Group volcanic rocks lies between Upper Triassic Vancouver Group Quatsino Formation limestone and diorite of the Early to Middle Jurassic Island Plutonic Suite. Magnetite is exposed over a width of 15 metres, the lower part being massive blue-black magnetite, grading upward into banded magnetite and limestone that strike northwest and dip 30 degrees west. At its southern limit magnetite mineralization terminates against silicified volcanic rocks.

Two smaller exposures of magnetite lie 100 metres east and 180 metres west of the main showing, respectively.

Lamb (1961) reports a dip needle survey anomaly measuring 240 by 53 metres encompassing the above occurrences. He recognizes two styles of mineralization; 1) massive layers of magnetite replacing limestone and 2) stringers and pods of magnetite in volcanic rocks that separate diorite from limestone.

Jefferey (Minister of Mines Annual Report 1960, page 99) suggests that the emplacement of magnetite was structurally controlled.

BIBLIOGRAPHY

EMPR AR 1913-282; 1914-376; 1918-474; *1960-99
EMPR BULL 101, p.173
EMPR MAP 1962
EMPR PF (Geological Map, Lamb, J. (1960) in 092L 040-Shamrock;
Lamb, J. (1961): Untitled report in 092L 040-Merry Widow)
GSC BULL *172, p. 66
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918 Part B; 1929 Part A
Carson, D.J.T. (1968): Metallogenic study of Vancouver Island with
emphasis on the relationship of plutonic rocks to Mineral deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern B.C., Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/28

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 042**

NATIONAL MINERAL INVENTORY: 092L6 Fe9

NAME(S): **AJAX (L.1502)**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 21 54 N
LONGITUDE: 127 14 48 W
ELEVATION: 686 Metres

NORTHING: 5580684
EASTING: 624699

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralization at centre of Lot 1502 is 1.0 kilometre west of Benson River, 2.0 kilometres south of Benson Lake, 1.0 kilometre north of Empire (Merry Widow) Mine.

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
ALTERATION: Garnet Chlorite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Igneous-contact Replacement Industrial Min.
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 0015 x 0012 x 0006 Metres STRIKE/DIP:
COMMENTS: Lower zone exposed for 12 metres by 15 metres, is 6 metres thick. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 178 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Skarn
Greenstone
Breccia
Diorite
Gabbro

HOSTROCK COMMENTS: Ammonites-Alice Lake; mollusks-Quatsino Sound; phlogopite-Empire Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
Plutonic Rocks
RELATIONSHIP:
GRADE: Amphibolite

CAPSULE GEOLOGY

The Ajax occurrence, consisting of an Upper and Lower zone, lies 150 metres east of the gabbro-diorite "Coast Copper Stock" of the Upper Jurassic Island Plutonic Suite. Mineralization occurs near the contact between Upper Triassic Vancouver Group, Quatsino Formation limestone and Lower Jurassic Bonanza Group fragmental andesite. A greenstone dyke or sill lies immediately east of the occurrence. Several faults localize the magnetite mineralization. Lamb (1961) recognized two ore zones. The Upper Zone outcrops over an area of 30 by 25 metres, in which narrow bands of disseminated magnetite replace skarned volcanics, with interlacing small, often vuggy, magnetite veinlets. The Lower Zone, exposed over an area of 12 by 15 metres, contains a 6 metre wide, 30 degree northwest dipping band of massive magnetite replacing limestone near a northeast striking fault contact with greenstone.

CAPSULE GEOLOGY

Lamb (1961) reports a dip needle survey which outlined an anomalous area of 120 by 90 metres. Sangster (Geological Survey of Canada Bulletin 172, page 66) also reports a breccia of altered volcanic rocks in a matrix of garnet skarn, and fragments of skarn in turn surrounded by massive magnetite. He also reports vuggy clusters of chlorite in massive magnetite.

BIBLIOGRAPHY

EMPR AR 1960-90; 1961-97
EMPR MAP Preliminary Geological Map, Alice Lake-Benson Lake Area
Jeffery, W.G., (1962)
EMPR PF (Lamb, J. (1961): Untitled report in 092L 044-Merry Widow)
GSC BULL *172, p. 66
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918 Part B; 1929 Part A
Carson, D.J.T. (1968): Metallogenic study of Vancouver Island with emphasis on the relationship of plutonic rocks to Mineral deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern B.C., Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/28

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 043**

NATIONAL MINERAL INVENTORY: 092L6 Fe10

NAME(S): **SUMMIT (L.1554)**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 21 49 N
LONGITUDE: 127 14 51 W
ELEVATION: 731 Metres

NORTHING: 5580528
EASTING: 624643

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralization is centre of Lot 1554 (Minister of Mines Annual Report 1960, Figure 9) is 1 kilometre west of Benson River, 2.5 kilometres south of Benson Lake.

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Igneous-contact Replacement Industrial Min.
DIMENSION: 0009 x 0006 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Dimensions of exposed mineralization is 6 metres by 9 metres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 178 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			
LITHOLOGY: Greenstone			
Limestone			
Agglomerate			
Tuff			
Lava			
Diorite			
Gabbro			

HOSTROCK COMMENTS: Ammonites from Alice Lake; mollusks from Quatsino Sound; phlogopite from Empire Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

CAPSULE GEOLOGY

The Summit occurrence lies within greenstone near a contact between Lower Jurassic Bonanza Group volcanics, Upper Triassic Vancouver Group Quatsino Formation limestone and diorite of the Upper Jurassic Island Plutonic Suite. A 9 by 6 metre outcrop of massive magnetite, surrounded by scattered magnetite float, occurs within altered greenstone. Diamond drilling in 1958, to a depth of 30 metres, encountered fragmented greenstone related to a fault zone. Core recovery was less than 10 per cent. No mineralization was reported.

Other skarn-type magnetite occurrences are reported in this area.

BIBLIOGRAPHY

EMPR AR 1921-348; 1960-94
EMPR MAP Preliminary Geological Map, Alice Lake-Benson Lake Area, Jeffery, W.G., (1962)

BIBLIOGRAPHY

EMPR PF (*Lamb, J. (1959): Untitled report, p. 10 in 092L 044-Merry
Widow)
GSC BULL 172
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918 Part B; 1929 Part A
Carson, D.J.T. (1968): Metallogenic study of Vancouver Island with
emphasis on the relationship of plutonic rocks to Mineral deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern B.C., Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/28

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 044**

NATIONAL MINERAL INVENTORY: 092L6 Fe1

NAME(S): **MERRY WIDOW 5 (L.1533.L.1543)**, EMPIRE, SIDEHILL FRACTION,
QUATSINO COPPER, RAVEN COPPER, KINGFISHER

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W 092L06E
BC MAP:

Open Pit

MINING DIVISION: Nanaimo

LATITUDE: 50 21 19 N
LONGITUDE: 127 15 13 W
ELEVATION: 762 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5579591
EASTING: 624230

LOCATION ACCURACY: Within 500M

COMMENTS: Location of open pit, on far west side of Lot 1533 (Minister of Mines Annual Report 1960, Figure 9), is 1.5 kilometres west of Benson River, 3.0 kilometres south of Benson Lake. See also Kingfisher (092L 045).

COMMODITIES: Magnetite Iron Copper Gold Zinc
Cobalt Limestone Arsenic Silver

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite Sphalerite Arsenopyrite Pyrrhotite
Pyrite Marcasite Cobaltite Erythrite Cuprite
Bornite Gold

COMMENTS: Cuprite occurs as chalcotrichite.

ASSOCIATED: Calcite Quartz Pyroxene

COMMENTS: Calcite, quartz lenses.

ALTERATION: Epidote Garnet Actinolite Diopside Chlorite

ALTERATION TYPE: Skarn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Vein
CLASSIFICATION: Skarn Igneous-contact Replacement Industrial Min.
TYPE: K03 Fe skarn I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Tabular

DIMENSION: 150 x 100 x 50 Metres STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Mineralization strikes north along intrusive contact. Deposit dimensions are approximate.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Vancouver Quatsino

ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarite ammonites

Lower Jurassic Bonanza

Undefined Formation

ISOTOPIC AGE: 200 Ma

DATING METHOD: Fossil

MATERIAL DATED: Mollusks

Jurassic

Island Plutonic Suite

ISOTOPIC AGE: 178 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Phlogopite

LITHOLOGY: Limestone
Garnet Epidote Actinolite Skarn
Diorite
Gabbro
Tuff
Pyroclastic
Greenstone
Mafic Dike
Andesite
Granodiorite

HOSTROCK COMMENTS: Ammonites from Alice Lake; mollusks from Quatsino Sound; phlogopite from Empire Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Hornfels
Amphibolite

CAPSULE GEOLOGY

The Merry Widow deposit occurs as 3 stacked lenses containing massive magnetite within Lower Jurassic Bonanza Group volcanoclastics and underlying Upper Triassic Vancouver Group, Quatsino Formation limestone. The occurrence lies several hundred metres east of the diorite to gabbro Coast Copper or Benson Lake stock of the Early to Middle Jurassic Island Plutonic Suite.

The sediments and volcanics are north to northwest striking and west dipping. The intrusion has locally modified attitudes. The north striking intrusive contact dips 90 to 70 degrees eastward; but in the vicinity of the open pit it dips only 55 degrees east. Contact metamorphism of limestone is limited to recrystallization, with destruction of bedding features. The volcanic rocks (clastics, pyroclastics and flows) are hornfelsed with local lenses of garnet-epidote-actinolite-diopside-chlorite skarn. Intrusive greenstone sills, dykes and masses, and crosscutting dykes of andesite, alaskite, diabase and granodiorite are present. Northeast trending faults, dipping south, predominate.

The upper lens of the main deposit occurs as two distinct ore zones, separated laterally by about 30 metres of unmineralized skarn. The upper lens measures 104 metres in diameter, is 17 metres thick and dips 30 degrees east. Limestone abruptly terminates the mineralization down dip.

The middle lens is separated from the upper by 12 metres of barren, skarned volcanic rock through which passes a flat-lying thrust fault. The middle lens is 85 metres wide and 9 metres thick.

The lowermost lens lies along the gabbro contact and separated from it by a thin skarn rind. It has been explored for 165 metres down dip, where the lens thins considerably from a 12-metre maximum width near its upper limit (Property File - J.C. Lund, 1966).

Magnetite mineralization in the lenses is massive, with sharp contacts where enclosed by limestone. Contacts with volcanic and intrusive rocks are less distinct, with disseminated magnetite occurring at some distance away from the massive lenses, giving a gradational change in magnetite distribution. Bedding structures can in places be traced into magnetite. Ore locally passes outward into stringers along bedding planes or follows dykes and sills in limestone. Botryoidal structures are present, suggesting emplacement at low pressure and temperature by "gel metasomatism" (Open File 1988-28, page 44).

Small amounts of arsenopyrite with pyrrhotite, sphalerite, marcasite, cuprite, chalcopyrite and calcite are reported. A north striking fault south of the open pit hosts small amounts of iron and copper sulphides and cobaltite with cobalt bloom (erythrite). Minor pyrite, chalcopyrite and pyrrhotite accompanied by quartz are present. Jefferey (Minister of Mines Annual Report 1960, page 97) believes this latter mineralization to be later than the magnetite, and that the orebody is the result of successive mineralizing periods of silicates (skarn), oxides, sulphides and carbonate emplacement. Commercial ore has developed where the intrusive contact has locally the lowest dip, and where the bulge in the intrusion has caused a change in the strike of the layered rocks. In addition, northeast striking faults are believed to localize mineralization (Minister of Mines Annual Report 1960, page 97).

The limestone in the vicinity of the magnetite bodies is white to grey in colour and calcium high calcium in composition. Three limestone samples collected by Taywin Resources Ltd. in 1990, while exploring for precious metal bearing skarn zones, analyzed as follows in per cent (Industrial Mineral File - J.M. Huber Corp., 1990):

CaO	53.67	54.57	52.89
MgO	1.81	0.10	2.32
SiO ₂	0.45	0.14	0.02
Acid Insol.	-	2.22	0.60
Al ₂ O ₃	0.06	-	-
Fe ₂ O ₃	0.06	-	-
MnO	0.02	-	-
K ₂ O	0.01	-	-
Na ₂ O	0.01	-	-
P ₂ O ₅	0.01	-	-
TiO ₂	0.11	-	-
Brightness:			
Green Filter	-	91.8	93.8
Blue Filter	-	92.2	93.6
Amber Filter	-	89.0	91.1

An article in the George Cross Newsletter No. 80 (1989) indicates the presence of gold and silver values. Dixon (1989) reports the presence of tellurobismuthite. Gold is found in pyrrhotite-pyrite-rich veins and pockets that postdate the magnetite. A sulphide-rich sample assayed up to 17 per cent copper,

CAPSULE GEOLOGY

2.9 per cent zinc, 0.2 per cent arsenic, 0.16 per cent cobalt, 200 grams per tonne silver and 32 grams per tonne gold (EMPR Bulletin 101, Appendix 4A).

Production between 1957 and 1967, was from both surface and underground, and included ore from the Kingfisher (092L 045) and Raven (092L 046). From 3,371,015 tonnes of ore mined, 1,676,060,554 kilograms of iron concentrate was shipped. Annual reports detail yearly ore produced. Iron content was about 58 per cent.

BIBLIOGRAPHY

- EMPR AR 1913-282; 1916-341; 1918-475; 1919-371; 1924-225; 1928-375; 1929-379; 1930-296; *1952-228-231; 1956-117; 1957-A44,A48,68; 1958-A43,A48,57; 1959-A46,A50,132-133; *1960-A51,A56,90-100; *1961-A46,95-97; 1962-A47,A51,96-97; 1963-A47,A51,100; 1964-A53, A57,152; 1965-229; 1966-A48,A50,66; 1967-A50,A53,70-71
- EMPR ASS RPT 1760, 2306
- EMPR BC METAL MM00240
- EMPR BULL 101, pp. 13, 57, 80, 83, 173, Appendix 4A, 6
- EMPR EXPL 1992-51; 2002-29-40
- EMPR FIELDWORK 1987, pp. 270,271; 1990, pp. 85-88
- EMPR INDEX 4-121
- EMPR MAP Preliminary Geological Map Alice Lake-Benson Lake Area, Jeffery, W.G., 1962
- EMPR OF *1988-28; *1991-8; 1992-18, pp. 30-31
- EMPR P *1989-3, pp. 56-58, 109; 1991-4, p. 228
- EMPR PF (Claims of the Quastino Copper Gold Company Ltd.; Diamond drill sections, cross-section; Kingfisher and Merry Widow orebodies, Pit outlines, Mannix Co.; J. Lamb: Untitled reports, 1959, 1961; W.G. Jefferey & G.E.P. Eastwood: Field Report, (1961): Magnetite Occurrences in Benson Lake Area; J.C. Lund, (1966): Structural Geology of Empire Mine, M.Sc. Thesis, University of British Columbia; J.M. Huber Corp. (1990): Calcium carbonate division - laboratory data systems; private analytical report for Taywin Resources Ltd., 2 pages)
- EMR MIN BULL 181 (1978) B.C. 121; 223 (1989) B.C. 175
- EMR MP CORPFILE (Quatsino Copper-Gold Mines, Ltd.; Empire Development Co. Ltd.)
- GSC BULL 172, p. 63
- GSC MAP 4-1974; 255A; 1552A
- GSC OF 9; 170; 463
- GSC P 69-1A; 70-1A; 72-44; 74-8
- GSC SUM RPT 1918 Part B, p. 35; 1929 Part A, p. 126
- ECON GEOL Vol. 59, pp. 1298-1305; Vol. 60, pp. 124-148; Vol. 79, pp. 869-882
- GCNL #80, 1989; #58(Mar.23), #95 (May 15),#135(July 15), 1992
- N MINER Apr.27, 1992
- WWW http://www.infomine.com/index/properties/MERRY_WIDOW.html
- Carson, D.J.T. (1968): Metallogenic study of Vancouver Island with emphasis on the relationship of plutonic rocks to Mineral deposits, Ph.D. Thesis, Carleton University, Ottawa
- Dixon, K. (1989): A Mineralogical Study of the Merry Widow Property, Vancouver Island; unpublished paper, The University of British Columbia
- Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, p. 187
- Placer Dome File
- Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern B.C., Ph.D. Thesis, University of British Columbia
- Wittur, G.E. (1961): Geology of the Magnetite Deposits of Empire Development Co. Ltd., Vancouver Island, British Columbia, unpub. B.Sc. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/27

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 045**

NATIONAL MINERAL INVENTORY: 092L6 Fe1

NAME(S): **KINGFISHER (L.1532)**, EMPIRE, MERRY WIDOW 5

STATUS: Past Producer Open Pit

MINING DIVISION: Nanaimo

REGIONS: British Columbia, Vancouver Island

UTM ZONE: 09 (NAD 83)

NTS MAP: 092L06E

BC MAP:

LATITUDE: 50 21 26 N

NORTHING: 5579815

LONGITUDE: 127 14 58 W

EASTING: 624522

ELEVATION: 700 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Kingfisher "central" open pit in the south central portion of Lot 1532 (Minister of Mines Annual Report 1960, Figure 9) is 1.4 kilometres west of Benson River, 3 kilometres south of Benson Lake. Production is included with Merry Widow 5 (092L 044).

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite Pyrrhotite
ASSOCIATED: Calcite Pyroxene Phlogopite
COMMENTS: Calcite healing of breccia.
ALTERATION: Garnet
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia Stratabound Massive
CLASSIFICATION: Skarn Igneous-contact Replacement Industrial Min.
TYPE: K03 Fe skarn
SHAPE: Cylindrical
MODIFIER: Faulted
DIMENSION: 70 x 60 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Diameter of Kingfisher central open pit is 60 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvavite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 178 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			
LITHOLOGY: Limestone			
Limestone Breccia			
Clastic Rock			
Volcaniclastic			
Flow			
Skarn			
Mafic Dike			
Diorite			
Gabbro			
Monzonite			

HOSTROCK COMMENTS: Ammonites from Alice Lake; mollusks from Quatsino Sound; phlogopite from Empire Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PLUTONIC BELT: Plutonic Rocks
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

The Kingfisher deposit lies on the east flank of the Coast Copper-Benson Lake stock, a phased intrusion of diorite, gabbro and monzonite composition, of the Early to Middle Jurassic Island Plutonic Suite. The Kingfisher is similar in its setting to the Merry Widow deposit (092L 044), located 300 metres to the west. Production from the Kingfisher open pit and underground workings from

CAPSULE GEOLOGY

1957 to 1967 is included with the Merry Widow.

The Kingfisher deposit lies entirely within northwest striking, southwest dipping limestone of the Upper Triassic Vancouver Group, Quatsino Formation. Lower Jurassic Bonanza Group clastics, volcanoclastics and flows overlie the limestone to the west.

The deposit consists of 2 steeply plunging circular pipes of massive colloform magnetite, 30 to 50 metres wide. The pipes are 70 metres apart at surface and join at a depth of 70 metres. The mineralization is localized in breccia at the intersection of a steeply dipping normal fault and a gently dipping thrust fault. Post-ore movement has brecciated the magnetite, which was subsequently healed by white crystalline calcite. Skarn development is absent except near greenstone dykes and sills, where garnet may be present. Sulphide minerals are rare. Layering and folding in massive magnetite corresponds with bedding and structures in surrounding limestone. Botryoidal texture in the magnetite is interpreted as "emplacement occurring at low pressure and temperature by gel metasomatism" (Open File 1988-28, page 44).

BIBLIOGRAPHY

- EMPR AR 1913-282; 1916-341; 1918-475; 1919-371; 1924-225; 1928-375;
1929-379; 1930-296; 1952-228-231; 1956-117; 1957-A44,A48,68;
1958-A43,A48,57; 1959-A46,A50,132-133; *1960-A51,A56,90-100;
1961-95-97; 1962-A47,A51,96-97; 1963-A47,A51,100; 1964-A53,A57,
152; 1965-229; 1966-A48,A50,66; 1967-A50,A53,70-71
EMPR ASS RPT 1760, 2306
EMPR BC METAL MM00240
EMPR BULL 101, pp. 57, 173, Appendix 4A, 6
EMPR FIELDWORK 1987, p. 270
EMPR INDEX 4-121
EMPR MAP Preliminary Geological Map Alice Lake-Benson Lake Area,
Jeffery, W.G., 1962
EMPR OF 1991-8
EMPR P 1989-3, pp. 56-58, 109
EMPR PF (Various reports and maps; see 092L 044-Merry Widow)
EMR MP CORPFILE (Quatsino Copper-Gold Mines Ltd.; Empire Development
Co. Ltd.)
GSC BULL 172, p. 63
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918 Part B, p. 35; 1929 Part A, p. 125
ECON GEOL Vol. 59, pp. 1298-1305; Vol. 60, pp. 824-826
WWW http://www.infomine.com/index/properties/MERRY_WIDOW.html
Carson, D.J.T. (1968): Metallogenic study of Vancouver Island with
emphasis on the relationship of plutonic rocks to Mineral deposits,
Ph.D. Thesis, Carleton University, Ottawa
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of
British Columbia, Vol. 1: Vancouver Island, p. 187
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern B.C., Ph.D. Thesis, University of British Columbia
Wittur, G.E., (1961): Geology of the Magnetite Deposits of Empire
Development Co. Ltd., Vancouver Island, British Columbia, unpub.,
B.Sc. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/27

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

underlain by Upper Triassic Vancouver Group, Quatsino Formation limestone and Lower Jurassic Bonanza Group tuffs and agglomerate. North of the fault, greenstone, microdiorite and breccia are related to the diorite stock.

Skarn and magnetite are located within 30 metres of the fault. Skarn minerals include garnet, epidote, actinolite, diopside and chlorite. Magnetite occurs as disseminations, veinlets or lenses in the skarn.

Massive pyrrhotite, with lesser chalcopyrite and pyrite are cut by later calcite-sphalerite veins at the east side of the orebody. Gold and silver values are associated with the sulphides.

The Raven deposit was mined in 1959. Production was included with the Merry Widow and Kingfisher (092L 044, 092L 045), and no separate production figures are available.

The Raven pit is now covered by waste material derived from the Merry Widow open pit.

BIBLIOGRAPHY

- EMPR AR 1913-282; 1916-341; 1918-475; 1919-371; 1928-375; 1929-379;
1930-296; *1952-228-231; 1956-117; 1957-68; 1959-132; *1960-90-100;
1961-95; 1962-96; 1963-100; 1964-152; 1965-229; 1966-66; 1967-
70
- EMPR ASS RPT 1760, 2306
EMPR BULL 101, p. 174
EMPR MAP Preliminary Geological Map, Alice Lake-Benson Lake Area,
Jeffery, W.G. (1962)
EMPR OF 1991-8
EMPR P 1989-3, pp. 56-58, 109
EMPR PF (Various maps and reports, see 092L 044-Merry Widow)
EMR MP CORPFILE (Quatsino Copper Gold Mines Ltd.; Empire Development
Co. Ltd.)
GSC BULL *172, p. 63
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918 Part B, p. 35; 1929 Part A, p. 125
WWW http://www.infomine.com/index/properties/MERRY_WIDOW.html
Carson, D.J.T. (1968): Metallogenic study of Vancouver Island with
emphasis on the relationship of plutonic rocks to Mineral deposits,
Ph.D. Thesis, Carleton University, Ottawa
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of
British Columbia, Vol. 1: Vancouver Island, p. 187
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern B.C., Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/23

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 047**

NATIONAL MINERAL INVENTORY: 092L6 Fe4

NAME(S): **WHISKEY JACK (L.1529)**, MERRY WIDOW 1

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5580060
EASTING: 624456

LATITUDE: 50 21 34 N
LONGITUDE: 127 15 01 W
ELEVATION: 731 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization is west centre of Lot 1529 is 1.0 kilometre west of Benson River, 2.8 kilometres south of Benson Lake.

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
ALTERATION: Garnet Epidote Actinolite Chlorite Diopside
Pyroxene
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Igneous-contact Replacement Industrial Min.
SHAPE: Tabular
DIMENSION: 90 x 45 Metres STRIKE/DIP: 045/90 TREND/PLUNGE:
COMMENTS: Mineralization over 90 metres strikes 045 degrees, dips steeply to the south.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 178 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Skarn
Tuff
Greenstone
Diorite

HOSTROCK COMMENTS: Ammonites from Alice Lake; phlogopite from Empire Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

CAPSULE GEOLOGY

The occurrence consists of small scattered outcroppings of magnetite skarn in a residual pod of limestone of the Upper Triassic Vancouver Group, Quatsino Formation. The limestone is completely surrounded by greenstone, thought to be related to the Benson Lake diorite stock of the Jurassic Island Plutonic Suite which is exposed 40 metres to the west.

Skarn mineralogy consists of diopside, garnet, epidote, actinolite and chlorite. Diamond drilling has indicated a mineralized zone that measures 90 by 45 metres. The zone strikes northeast and dips steeply to the southeast.

BIBLIOGRAPHY

EMPR AR 1918-475; *1960-90
EMPR BULL 101, p. 174
EMPR MAP Preliminary Geological Map, Alice Lake-Benson Lake Area, Jeffery, W.G., (1962)
EMPR PF (Lamb, J., (1959): Untitled Report, in 092L 044-Empire)
EMR MP CORPFILE (Empire Development Co. Ltd.)

BIBLIOGRAPHY

GSC BULL 172
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of
British Columbia, Vol. 1: Vancouver Island, p. 187
Placer Dome File
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/22

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 048**

NATIONAL MINERAL INVENTORY: 092L6 Fe5

NAME(S): **RAMBLER (L.1537)**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 21 29 N
LONGITUDE: 127 14 39 W
ELEVATION: 580 Metres

NORTHING: 5579916
EASTING: 624895

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization in centre of Lot 1537 (Minister of Mines Annual Report 1960, Figure 9) is 1.0 kilometre west of Benson River, 3.0 kilometres south of Benson Lake.

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
ALTERATION: Garnet Epidote Actinolite Chlorite Diopside
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Igneous-contact Replacement Industrial Min.
DIMENSION: 0009 x 0002 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Vancouver Quatsino

ISOTOPIC AGE: 225 Ma
DATING METHOD: Fossil
MATERIAL DATED: Juvarite ammonites

Jurassic Island Plutonic Suite

ISOTOPIC AGE: 178 +/- 8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Phlogopite

LITHOLOGY: Limestone
Skarn
Greenstone
Diorite

HOSTROCK COMMENTS: Ammonites from Alice Lake; phlogopite from Empire Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

The Rambler occurrence lies 50 metres north of a northeast trending fault in Upper Triassic Vancouver Group, Quatsino Formation limestone. The Benson Lake diorite stock of the Jurassic Island Plutonic Suite lies 580 metres to the west. Lenses or sills of intrusive greenstone, thought to be related to the stock, occurs within 100 metres. The occurrence consists of a high grade magnetite skarn zone that measures 9 by 1.8 metres. Skarn mineralogy is not reported, but at the nearby Raven occurrence (092L 046) consists of diopside, garnet, epidote, actinolite and chlorite.

BIBLIOGRAPHY

EMPR AR 1922-355; *1960-94
EMPR MAP Preliminary Geological Map, Alice Lake-Benson Lake Area, Jeffery, W.G. (1962)
EMPR PF (Report by Lamb, J., (1961): In Empire-092L 044)
GSC BULL 172
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
EMR MP CORPFILE (Quatsino Copper-Gold Mines Ltd.)
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 99
REPORT: RGEN0100

BIBLIOGRAPHY

emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/22

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 049**

NATIONAL MINERAL INVENTORY: 092L6 Fe2

NAME(S): **KEYSTONE (L.1534)**, MERRY WIDOW 6

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 21 14 N
LONGITUDE: 127 14 36 W
ELEVATION: 600 Metres

NORTHING: 5579454
EASTING: 624965

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization in the centre of Lot 1534 is 1.0 kilo-
metre west of Benson River, 3.5 kilometres south of Benson Lake.

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
ALTERATION: Garnet Epidote Actinolite Chlorite Diopside
Pyroxene
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Igneous-contact Replacement Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 178 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Skarn
Diorite
Greenstone

HOSTROCK COMMENTS: Ammonites from Alice Lake; phlogopite from Empire Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PLUTONIC BELT: Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

CAPSULE GEOLOGY

The Keystone magnetite occurrence lies on a west trending fault in Upper Triassic Vancouver Group, Quatsino Formation limestone. The Benson Lake diorite stock of the Jurassic Island Plutonic Suite lies 650 metres west. Intrusive greenstone, thought to be related to the diorite, lies 50 metres east of the occurrence. The occurrence consists of scattered magnetite-skarn exposures. No skarn mineralogy is specified, but at the nearby Raven occurrence (092L 046), garnet, epidote, actinolite, diopside and chlorite are present.

BIBLIOGRAPHY

EMPR AR 1912-196; 1913-282; 1916-341; 1919-371; 1924-225; 1926-306;
1928-375; *1960-94
EMPR BULL 101, p. 174
EMPR MAP Preliminary Geological Map, Alice Lake-Benson Lake Area,
Jeffery, W.G., (1962)
EMPR PF (Lamb, J. 1959: Various reports in 092L 044-Empire)
EMR MP CORPFILE (Quatsino Copper-Gold Mines Ltd.)
GSC BULL 172
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918 Part B; 1929 Part A
GCNL #80, 1989

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 101
REPORT: RGEN0100

BIBLIOGRAPHY

- Carson, D.J.T. (1968): Metallogenic study of Vancouver Island with emphasis on the relationship of plutonic rocks to Mineral deposits, Ph.D. Thesis, Carleton University, Ottawa
- Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, p. 189
Placer Dome File
- Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern B.C., Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/22

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 050**

NATIONAL MINERAL INVENTORY: 092L6 Fe3

NAME(S): **MARTEN**, MERRY WIDOW 5 (L.1533)

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 21 09 N
LONGITUDE: 127 15 05 W
ELEVATION: 762 Metres

NORTHING: 5579286
EASTING: 624396

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralization in the southwest corner of Lot 1533, located 1.6 kilometres west of Benson River, 3.5 kilometres south of Benson Lake (Minister of Mines Annual Report 1960, page 94).

COMMODITIES: Copper Gold Silver Arsenic

MINERALS

SIGNIFICANT: Sulphide
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Mesothermal Replacement Skarn Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
Upper Triassic	Vancouver	Quatsino	

LITHOLOGY: Marble
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: SHOWING REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1992
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Copper	0.7300 Per cent
Arsenic	16.2000 Per cent
Silver	13.0000 Grams per tonne
Gold	2.0000 Grams per tonne

REFERENCE: Geological Survey Branch - Ray and Webster unpublished data, 1992.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group, Quatsino Formation limestones which are overlain by Lower Jurassic Bonanza Group volcanics comprised mainly of andesitic to rhyodacitic flows, tuffs and breccias. Granodiorite of the Late Jurassic Island Plutonic Suite intrude the older volcanic and sedimentary sequences.

The Marten occurrence consists of irregular pods of massive sulphides between 0.3 and 2 metres in thickness; it probably represents a manto with minor skarn alteration. The occurrence is hosted at the contact between Quatsino marble and an overlying greenstone. The latter may represent Bonanza tuffs. Two mineralized grab samples assayed up to 0.73 per cent copper, 16.2 per cent arsenic, 792 parts per million zinc, 360 parts per million cobalt, 13 grams per tonne silver and 2 grams per tonne gold (Geological Survey Branch - Ray and Webster unpublished data, 1992).

BIBLIOGRAPHY

EMPR AR 1912-196; 1913-282; 1916-341; 1919-371; 1924-225; 1926-306; 1928-375; *1960-94
EMPR MAP Preliminary Geological Map, Alice Lake-Benson Lake Area
Jeffery, W.G., (1962)
EMPR PF (Report by J. Lamb, 1959)
EMR MP CORPFILE (Quatsino Copper-Gold Mines Ltd.)

BIBLIOGRAPHY

- GSC BULL 172, Fig. 3
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918B; 1929A, p. 111
GCNL #80, 1989
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Placer Dome File
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1992/11/13

CODED BY: GSB
REVISED BY: GR

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092L 051**

NATIONAL MINERAL INVENTORY: 092L6 Fe8

NAME(S): **SNOWLINE (L.1535)**, BLUEBIRD (L.1539)

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 21 11 N
LONGITUDE: 127 15 16 W
ELEVATION: 853 Metres

NORTHING: 5579343
EASTING: 624177

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization in the far northwest corner of Lot 1535,
1.5 kilometres west of Benson River, 7.5 kilometres south of Benson
Lake (Minister of Mines Annual Report 1960).

COMMODITIES: Magnetite

MINERALS

SIGNIFICANT: Magnetite
ALTERATION: Garnet Pyroxene
COMMENTS: Rare garnet and pyroxene alteration.
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Replacement Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	

ISOTOPIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks

Jurassic

ISOTOPIC AGE: 178 +/- 8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Phlogopite

Island Plutonic Suite

LITHOLOGY: Tuff
Agglomerate
Lava
Sediment/Sedimentary
Skarn
Dioritic Dike

HOSTROCK COMMENTS: Mollusks from Quatsino Sound; phlogopite from the Empire mine
(092L 044) (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE:

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics comprised of andesitic to rhyodacitic lava, tuff and breccia. Granodiorite of the Late Jurassic Island Plutonic Suite intrude the Bonanza Group volcanics.

The Snowline magnetite skarn occurrence consists of scattered massive magnetite lenses which occur along the contact between Bonanza Group tuffs, agglomerates, lavas and sedimentary rocks, and an intrusive dioritic dyke related to the Island Plutonic Suite. Garnet and pyroxene alteration is rare. The magnetite mineralization lies about 200 metres east of the main Benson River stock.

BIBLIOGRAPHY

EMPR AR 1912-196; 1919-371; *1960-90
EMPR MAP Preliminary Geological Map, Alice Lake-Benson Lake Area,
Jeffery, W.G. (1962)
EMR MP CORPFILE (Quatsino Copper-Gold Mines Ltd.)
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918B; *1929A, p. 111

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 105
REPORT: RGEN0100

BIBLIOGRAPHY

Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/22

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 052**

NATIONAL MINERAL INVENTORY: 092L5 Cu1

NAME(S): **YREKA**, YREKA MINE, NEW COMSTOCK (L.90),
SUPERIOR (L.106), CLYDE, MOUNTAIN KING,
EDISON, BARNEY, BLUE GROUSE,
KING EDWARD, ELVA, MOUNTAIN QUEEN,
QUATSINO CHIEF, READY CASH FRACTION (L.109), ASA THOR

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:
LATITUDE: 50 27 24 N
LONGITUDE: 127 34 08 W
ELEVATION: 686 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: No. 6 adit at the centre of the orebody on the west part of Lot 109,
1.3 kilometres west of Neroutsos Inlet and 8.0 kilometres north of
Teeta Creek.

Underground
MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5590385
EASTING: 601587

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Pyrrhotite Chalcopyrite
ASSOCIATED: Pyrite Magnetite Specularite
ALTERATION: Epidote Garnet
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn
SHAPE: Tabular
DIMENSION: 60 x 49 x 15 Metres
COMMENTS: A zone
STRIKE/DIP:
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
Upper Triassic	Vancouver	Parson Bay	
Jurassic			Island Plutonic Suite

LITHOLOGY: Limy Tuff
Garnet Epidote Skarn
Limestone
Agglomerate
Andesite Flow
Andesite Tuff
Basaltic Dike
Diabase Dike
Feldspar Porphyry Dike
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE:

CAPSULE GEOLOGY

At the Yreka occurrence, northwest striking, moderately west dipping calcareous sediments of the Parson Bay Formation overlie Karmutsen Formation tholeiitic basalts, both of the Upper Triassic Vancouver Group. These are overlain by Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff and breccia, which are coeval with, or genetically related to Early-Middle Jurassic Island Plutonic Suite granodiorite occurring as small isolated plutons.

The Yreka mine and the Clyde showing 400 metres south on Lot 90 (New Comstock claim) lie in skarn-altered limy tuffs. The tuffs, with agglomerates, lenses of limestone and a 30-metre thick limestone unit form a 300-metre thick assemblage overlying andesitic lava and underlying andesitic flows and tuffs. These rocks have been folded about a northwest plunging and trending axis. The beds on the southwest limb dip 35 to 55 degrees west. Basalt, diabase and feldspar porphyry dykes have intruded all rocks. A small diorite stock lies nearby on Mount Comstock.

CAPSULE GEOLOGY

Several northeast trending, ore-localizing faults are indicated, including a major 045 degree striking, 70 degree south dipping shear zone on the New Comstock claim. Lesser steeply dipping 330 degree striking faults contain mineralization.

Epidote-garnet skarn is confined to three stratigraphic horizons and contains most of the mineralization. The skarn is in altered tuff. Limestone beds have been recrystallized but are otherwise unaltered. Mineralization includes pyrrhotite, chalcopyrite and sparse pyrite. Magnetite and specular hematite are locally present.

Mining between 1965 and 1967 included the 15 by 49 by 60 metre A zone, grading 3.0 per cent copper (Energy, Mines and Resources Canada Corpfile - Uke Resources Ltd.).

BIBLIOGRAPHY

- EM EXPL 1998-47-55; 1999-25-32
EMPR AR 1900-924; 1901-1100- 1902-234; 1903-194,198-200,256; 1904-245,
301,302; 1905-213; 1906-183,200; 1916-337-339; 1917-254,292; 1919-
203; 1928-376; *1953-167; 1954-164; 1955-76; 1956-117; 1964-154;
1965-228; 1966-65; 1967-70
EMPR ASS RPT 3164, 3165, 4425, 7981
EMPR EXPL 1980-270
EMPR GEM 1970-272; 1971-317; 1972-288; 1973-258
EMPR MAP 65 (1989)
EMPR OF 1992-1
EMPR PF (Geological plan, 1:600 (1953); Mines plan, Yreka showings,
1:3600; Noranda Expl. assay and geological plans, 1:600 (1953);
Noranda Expl. Report, R.P. Jordan (1953); Yreka mine, 1900 level,
1:120 (1955); Various sections, 1:600 (1955))
EMR MIN BULL MR 223 B.C. 174
EMR MP CORPFILE (Yreka Mines Ltd.; Minoca Mines Ltd.; Secondo Mines
Ltd.; Green Eagle Mines Ltd.; Uke Resources Ltd.)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918 Part B, p. 35; 1929 Part A, p. 124
GCNL #163, 1972; #14,#32,#78,#80,#116,#120, 1980; #177, 1981;
#151, 1983
IPDM Aug./Sept., 1983
N MINER Feb.4, 1965
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia
Wilson, P.R. (1955): Yreka Property, unpubl. M.Sc. Thesis, University
of British Columbia
EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/21

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 053**

NATIONAL MINERAL INVENTORY: 092L5 Au2

NAME(S): **PAYSTREAK**, ROYAL, MOON 7,
STAR 1

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo

LATITUDE: 50 23 51 N
LONGITUDE: 127 30 16 W
ELEVATION: 50 Metres

UTM ZONE: 09 (NAD 83)

LOCATION ACCURACY: Within 500M

NORTHING: 5583897
EASTING: 606294

COMMENTS: Shaft location (from Geological Survey of Canada Summary Report 1929,
page 133 and Minister of Mines Annual Report 1903, page 200) is 0.7
kilometres south of the mouth of Teeta Creek off Neroutsos Inlet.

COMMODITIES: Copper Zinc Gold Silver

MINERALS

SIGNIFICANT: Pyrrhotite Sphalerite Pyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Chlorite
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epithermal
TYPE: I06 Cu±Ag quartz veins
DIMENSION:
COMMENTS: Vertical vein strikes 280 degrees.

STRIKE/DIP: 280/90

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks

ISOTOPIC AGE: 154 +/- 6 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Siliceous Andesite Flow
Granodiorite

HOSTROCK COMMENTS: Mollusks from Quatsino Sound. Biotite from Island Copper stock
(Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1903
SAMPLE TYPE: Grab
COMMODITY GRADE

Silver	34.2900	Grams per tonne
Gold	0.3400	Grams per tonne
Copper	10.9000	Per cent

REFERENCE: Minister of Mines Annual Report 1903, page 200.

CAPSULE GEOLOGY

The Paystreak occurrence is located in the Insular Belt of the Cordillera. The region is underlain mainly by volcanics and crystalline rocks and minor sediments. Overlying an assemblage of Paleozoic Sicker Group sediments and Upper Triassic basalts and minor carbonate and clastic sediments of the Vancouver Group is the Lower Jurassic Bonanza Group of andesitic to rhyodacitic lava, tuff and breccia. Bonanza volcanism is coeval with, or genetically related to Jurassic Island Plutonic Suite granodiorite that has invaded all older rocks and in this area occurs

CAPSULE GEOLOGY

as small isolated stocks.

The Geological Survey of Canada 1929 Summary Report (page 133) locates the occurrence within silicified andesite flows of the Bonanza (?) Group that strike north and dip 45 degrees west. A granodiorite stock occurs nearby at 092L 054 - Quatsino King. At the dump of an old flooded shaft, pyrrhotite, black sphalerite, pyrite and minor chalcopryrite occur. Just below this, in a small creek, massive pyrrhotite is present. Stripping exposed pyrrhotite, sphalerite and pyrite over a width of up to 1.2 metres.

The 1903 Minister of Mines Annual Report (page 200) describes the mineralization as a 280 degree striking, vertically dipping quartz vein, 20 to 25 centimetres wide in a porphyry host rock. A sample assayed 0.34 grams per tonne gold, 34.29 grams per tonne silver and 10.9 per cent copper.

The 1903 Annual Report location coincides with the Moon 7-Star 1 claim locations of Assessment Report 5997.

BIBLIOGRAPHY

- EMPR AR 1903-195,*200,255; 1904-245; 1905-213; 1906-200; 1968-99
EMPR ASS RPT 5567, 5997, 8629, 9451, 12773, 16552
EMPR EXPL 1975-114; 1976-128; 1980-270; 1984-241; 1987-220
EMPR GEM 1969-206
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P *69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; *1929A, p. 133
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/19

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 054**

NATIONAL MINERAL INVENTORY: 092L5 Au1

NAME(S): **QUATSINO KING (L.676)**, TEETA GOLD, PARAMOUNT,
HILLSIDE, ALEXANDER (L.679), EROS,
ALDYTH I, WHITE QUARTZ, GOLDEN KING,
TEETA CREEK

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:
LATITUDE: 50 23 09 N
LONGITUDE: 127 30 21 W
ELEVATION: 320 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5582598
EASTING: 606221

COMMENTS: Location of mineralization on the boundary of Lots 676 and 679
(from Assessment Report 16552) is 2 kilometres south of the mouth
of Teeta Creek on Neroutsos Inlet.

COMMODITIES: Copper Gold Silver Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Pyrite
COMMENTS: Gold, silver mineralogy not known.
ASSOCIATED: Quartz Calcite
ALTERATION: Limonite Malachite
ALTERATION TYPE: Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Layered
CLASSIFICATION: Replacement Igneous-contact
TYPE: I06 Cu±Ag quartz veins
DIMENSION: 0130 x 0060 x 0006 Metres STRIKE/DIP: 325/60N TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Siliceous Agglomerate
Quartz Diorite
Limestone
Porphyritic Andesite
Tuff
Porphyritic Andesite Dike

HOSTROCK COMMENTS: Mollusks from Quatsino Sound. Biotite from Island Copper stock
(Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks PHYSIOGRAPHIC AREA: Vancouver Island Ranges
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels

INVENTORY

ORE ZONE: ADIT REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1940
SAMPLE TYPE: Channel	
COMMODITY	GRADE
Silver	13.7200 Grams per tonne
Gold	2.7400 Grams per tonne
Copper	1.5000 Per cent

COMMENTS: Composite sample, main adit.
REFERENCE: Property File (Report on Quatsino King Group, page 7 (no author)).

CAPSULE GEOLOGY

The Quatsino King occurrence is located in the Insular Belt of the Cordillera. The region is underlain mainly by volcanics and

CAPSULE GEOLOGY

crystalline rocks and minor sediments.

Overlying an assemblage of Paleozoic Sicker Group sediments and Upper Triassic basalts and minor carbonate and clastic sediments of the Vancouver Group is the Lower Jurassic Bonanza Group of andesitic to rhyodacitic lava, tuff and breccia. Bonanza volcanism is coeval with, or genetically related to Jurassic Island Plutonic Suite granodiorite that has invaded all older rocks and in this area occurs as small isolated stocks.

At the occurrence, Lower Jurassic Bonanza Group porphyritic andesite and tuff contain an extensive body of highly siliceous agglomerate made up of quartz and feldspar (?) that is strongly iron stained. Pyrite, chalcopyrite and some sphalerite occur with quartz and calcite veins from 5 to 60 centimetres wide over a 5 to 6 metre wide area near a quartz diorite body. Dykes of porphyritic andesite are present in the Bonanza rocks but not in the intrusives. The silicified agglomerate is believed to be replaced limestone (Dawson, Geological Survey of Canada Summary Report 1918).

A composite sample from the main workings (the #3 Adit), taken along several metre-long vertical channels, assayed 2.74 grams per tonne gold, 13.72 grams per tonne silver and 1.5 per cent copper (Property File - Report on Quatsino King group, page 7).

The 1904 Minister of Mines Annual Report and the Property File report include the "White Quartz" occurrence with the Quatsino King. This occurrence was previously listed as 092L 092.

BIBLIOGRAPHY

- EMPR AR 1904-245; 1906-200; 1911-192; 1912-196; 1913-283;
1914-377,514; 1916-364; 1917-255; 1918-267; 1931-170; 1968-99
EMPR ASS RPT 5567, 5997, 8629, 9451, 12773, 16552
EMPR EXPL 1975-114; 1976-128; 1980-270; 1984-241; 1987-220
EMPR GEM 1969-206
EMPR PF (Report on the Quatsino King Group; Assay Plan of Workings,
Teeta River Property, 1940, 1:120)
EMR CORPFILE (Fury Explorations)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT *1918B, p. 36; *1929A, p. 133
GCNL #56, 1976; #174, 1984
N MINER Apr.8, 1976
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/18

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 055**

NATIONAL MINERAL INVENTORY: 092L6 Zn1

NAME(S): **ALICE LAKE, CLANCY, OCLANCY, IRON KNOB (L.184)**

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

MINING DIVISION: Nanaimo

LATITUDE: 50 26 34 N
LONGITUDE: 127 25 26 W
ELEVATION: 300 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5589050
EASTING: 611912

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit on O'Clancy claim (Assessment Report 10865) is 1.5 kilometre west of Alice Lake, 2.0 kilometres north of Victoria Lake.

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite Tetrahedrite Pyrite
Arsenopyrite

COMMENTS: Gold mineralogy not known.

ASSOCIATED: Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Disseminated
CLASSIFICATION: Replacement Hydrothermal Epigenetic

TYPE: J01 Polymetallic manto Ag-Pb-Zn

SHAPE: Tabular

DIMENSION: STRIKE/DIP: 315/20

TREND/PLUNGE:

COMMENTS: Local bedding strikes northwest and dips gently south.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER

Upper Triassic Vancouver

Quatsino

ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarite ammonites

Jurassic

Island Plutonic Suite

ISOTOPIC AGE: 154 +/- 6 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Limestone
Granodiorite
Felsite Dike
Diorite Dike

HOSTROCK COMMENTS: Ammonites from Alice Lake; biotite from Island Copper Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1982

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Silver	143.3000	Grams per tonne
Gold	13.6000	Grams per tonne
Lead	7.8700	Per cent
Zinc	7.5400	Per cent

COMMENTS: Average of 8 samples over 4.9 metres.

REFERENCE: Northwest Prospector March/April, 1982.

CAPSULE GEOLOGY

The area is underlain by the Upper Triassic Vancouver Group, Quatsino Formation limestones which have been intruded by granodiorite related to the Late to Middle Jurassic Island Plutonic Suite.

The Clancy occurrence is considered to be a limestone

CAPSULE GEOLOGY

replacement-type deposit (Gunning, Geological Survey of Canada Summary Report 1929), although in Assessment Report 10865 it is referred to as a fissure-filling.

Mineralization is located in white to grey limestone, which is cut by unmineralized dykes comprised of felsite to diorite that are related to a Jurassic intrusive stock exposed 1.0 kilometre south. The limestone is northwest striking and gently folded, with low angle east and west dips.

The bedded limestone replacement mineralization ranges from 5 centimetres to 1.2 metres wide. Mineralization consists of complete replacement to disseminations of sphalerite (plus or minus chalcopyrite), galena (plus or minus tetrahedrite), pyrite and arsenopyrite. A sample taken in 1929 assayed 13.7 grams per tonne gold, 342.9 grams per tonne silver, 12.0 per cent lead and 8.0 per cent zinc (Geological Survey of Canada Summary Report 1929A, page 137). Underground diamond drilling in 1982 averaged, over a 4.9 metre interval, 13.6 grams per tonne gold, 143.3 grams per tonne silver, 7.87 per cent lead and 7.54 per cent zinc (Northwest Prospector 1982).

BIBLIOGRAPHY

- EMPR AR 1924-228; 1925-273; 1929-377
EMPR ASS RPT 502, 1885, *10865
EMPR EXPL 1982-227
EMPR GEM 1969-207
EMPR MAP 255A; 1962; 4-1974; 1552A
EMR MP CORPFILE (Alice Lake Mines Ltd.)
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; *1929A, pp. 135-138
CANMET RPT 438, Publ. 736, pp. 53-58
GCNL #29, 1979; #32, 1982; #183, 1987; #197, 1988
N MINER Apr.29, 1982
NW PROSPECTOR Mar/Apr., 1982
V STOCKWATCH Jun.23, 1987
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Lorimer, M.K.: Engineering Report on the Alm Group, Aug.24, 1980 in Alice Lake Mines Statement of Material Facts, 1981

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/21

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 056**

NATIONAL MINERAL INVENTORY: 092L6 Cu2

NAME(S): **JUNE (L.180)**, HELEN (L.181)

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 26 07 N
LONGITUDE: 127 24 41 W
ELEVATION: 225 Metres

NORTHING: 5588235
EASTING: 612817

LOCATION ACCURACY: Within 500M

COMMENTS: Location is centre of Lot 180, 1.0 kilometre north of Victoria Lake, 1.3 kilometres southwest of Alice Lake.

COMMODITIES: Iron Copper Gold Silver Sulphur
 Zinc Lead Magnetite

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite Sphalerite Galena Bornite
 Arsenopyrite Pyrrhotite

COMMENTS: Massive replacement veins, dissemination of minerals.

ASSOCIATED: Quartz

ALTERATION: Malachite Epidote Garnet Chlorite Actinolite
 Tremolite

ALTERATION TYPE: Oxidation Skarn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Vein Disseminated
CLASSIFICATION: Skarn Porphyry Epigenetic Industrial Min.
SHAPE: Tabular
DIMENSION: 0600 Metres STRIKE/DIP: 315/20S TREND/PLUNGE:
COMMENTS: Local bedding strikes northwest, dips gently south.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Vancouver Quatsino

ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarite ammonites

Upper Triassic Vancouver Parson Bay

ISOTOPIC AGE: 215 Ma

DATING METHOD: Fossil

MATERIAL DATED: Mollusks

Jurassic Island Plutonic Suite

ISOTOPIC AGE: 154 +/- 6 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Andesitic Flow
 Fine Grained Tuff
 Skarn
 Hornblende Diorite
 Hornblende Diorite Dike
 Granodiorite
 Feldspar Porphyry
 Aplite
 Limestone

HOSTROCK COMMENTS: Ammonites from Alice Lake; mollusks from Beaver Cove; biotite from Island Copper Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

INVENTORY

ORE ZONE: TRENCH

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1916

COMMODITY	GRADE	
Iron	59.4000	Per cent
Sulphur	14.0000	Per cent

REFERENCE: Minister of Mines Annual Report 1916, page K342.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group rocks comprised mainly of Quatsino Formation limestone and overlying volcanics and sediments of the Parson Bay Formation (Geological Survey of Canada Map 4-1974). The Vancouver Group rocks are intruded by granodiorite of the Late Jurassic Island Plutonic Suite.

At the June occurrence, Upper Triassic Quatsino limestone is interbedded with andesite flows and fine-grained tuffs of the Parson Bay Formation. The bedded rocks strike northwest and dip to the southwest at low angles. These rocks are in contact with an early intrusive phase consisting of dykes, sills and stocks of dark green hornblende diorite, and later phase felsic intrusive rocks, consisting of fine-grained granodiorite to light grey or white feldspar porphyry and aplite. The intrusive rocks are related to the Late Jurassic Island Plutonic Suite.

Limestone and volcanics near the intrusive contact have been epidote-chlorite-garnet-tremolite and actinolite altered. Mineralization consists of magnetite replacing hornblende diorite dykes and irregular replacement lenses, and small masses and disseminations of magnetite in granodiorite. Veins of quartz, magnetite, chalcopyrite and bornite are present. A skarn zone comprised of a 10 metre long, 15 to 45 centimetre thick sub-horizontal band of magnetite-garnet-pyrite-pyrrhotite was intersected in the main drift.

Mineralization on surface has been traced for 600 metres along the northwest striking contact. Unspecified mineralization is reported to the southeast on the Helen claim, Lot 181 (Assessment Report 502). Mineralization on Olga claim (Lot 183) and Minerva Fraction (Lot 171) are approximately on strike with the June occurrence.

A grab sample "from a trench near the June #2 post" assayed gold and silver trace, 59.4 per cent iron and 14.0 per cent sulphur (Minister of Mines Annual Report 1916, page K342).

A 45 tonne shipment of ore in 1907 assayed 5.95 per cent copper, 4.14 grams per tonne gold and 86.47 grams per tonne silver (Minister of Mines Annual Report 1907, page L151).

BIBLIOGRAPHY

- EMPR AR 1902-234; 1903-194,201,257; 1904-245,301; 1905-213;
1906-183,200,201; 1907-151; *1916-341-343; 1929-378; 1930-296;
1931-170; 1963-127; 1969-207
EMPR ASS RPT 502, 1885
EMPR EXPL 1982-227
EMPR MAP 1962
EMPR OF *1988-28, p. 63
EMR MP CORPFILE (Cominco Ltd.)
GSC EC GEOL *3, Vol.1, 1926, p. 239
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918B; *1929A, p. 120
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/20

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 058**

NATIONAL MINERAL INVENTORY: 092L6 Cu5

NAME(S): **RANIER**, BIG CHIEF, ELK,
RAINY, COSTA, RAINIER

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W 092L06E
BC MAP:

MINING DIVISION: Nanaimo

LATITUDE: 50 19 49 N
LONGITUDE: 127 15 26 W
ELEVATION: 594 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5576806
EASTING: 624039

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on Ranier Creek (Geological Survey of Canada Map 255A) is 2.5 kilometres west of Elk River (Benson River), 7.0 kilometres east of Victoria Lake.

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Pyrite Pyrrhotite
COMMENTS: Chalcopyrite, sphalerite, pyrite in calcite veins. Chalcopyrite, pyrite, pyrrhotite in replacement lenses.

ASSOCIATED: Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Vein Breccia
CLASSIFICATION: Replacement Epigenetic Hydrothermal

SHAPE: Tabular

MODIFIER: Sheared

DIMENSION: STRIKE/DIP: 255/

TREND/PLUNGE:

COMMENTS: Shear zone strikes 225 degrees and is 3.6 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 178 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Argillite
Diorite
Granodiorite
Granodiorite Dike

HOSTROCK COMMENTS: Ammonites from Alice Lake; mollusks from Beaver Cove; phlogopite from Empire Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

COMMENTS: Limestone recrystallized.

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group rocks consisting of Quatsino Formation limestones and overlying carbonate-clastic sediments of the Parson Bay Formation. The Vancouver Group rocks are intruded by granodiorite of the Late Jurassic Island Plutonic Suite.

The Ranier occurrence lies within in a southwest trending fault in Rainier Creek, 0.5 kilometres east of diorite and granodiorite of the Jurassic Island Plutonic Suite. The fault separates grey and crystalline limestone of the Quatsino Formation to the north from argillites, impure limestone, quartzites, and some volcanic rocks, all of the Parson Bay Formation, to the south of the creek. Numerous granodiorite dykes cut the sediments. At an elevation of

CAPSULE GEOLOGY

495 metres on the south side of Rainier Creek, a 3.6 metres wide shear zone in argillite, striking 050 degrees and dipping 45 degrees south, contains calcite veins to 20 centimetres wide. The veins host country rock fragments and irregular clusters of pyrite, sphalerite and chalcopyrite.

West of this, on the northside of Rainier Creek, irregular lenses of pyrrhotite, pyrite and chalcopyrite replace altered crystalline limestone. This mineralization is 1.2 metres wide and strikes 325 degrees, dipping west at a low angle.

BIBLIOGRAPHY

EMPR ASS RPT 1760, 2306
EMPR GEM 1969-208; 1970-273
EMPR MAP Preliminary Geological Map, Alice Lake-Benson Lake Area
Jeffery W.G., (1962)
EMR MP CORPFILE (Quatsino Copper-Gold Mines Ltd.)
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; *1929A, p. 134
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/22

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 059**

NATIONAL MINERAL INVENTORY: 092L6 Cu6

NAME(S): **BLUE OX**, TROUT

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 19 29 N
LONGITUDE: 127 13 59 W
ELEVATION: 150 Metres

NORTHING: 5576229
EASTING: 625773

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on Blue Ox Creek (Geological Survey of Canada Map 255A), is 0.5 kilometre west of Benson (Elk) River, 6.5 kilometres south of Benson Lake.

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Pyrite

ASSOCIATED: Calcite Quartz

COMMENTS: Quartz-calcite veins and lenses.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic

SHAPE: Tabular

MODIFIER: Faulted Sheared

DIMENSION: 0730 Metres STRIKE/DIP: 360/90

TREND/PLUNGE:

COMMENTS: North striking shear zone has been traced over 730 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 178 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Argillite
 Calcareous Argillite
 Quartzite

HOSTROCK COMMENTS: Mollusks from Quatsino Sound; hallobia mollusks from Beaver Cove; phlogopite from Empire Mine (Geological Survey of Canada, Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area is underlain by the Upper Triassic Vancouver Group, Parson Bay Formation clastic sediments which are in fault contact with overlying Lower Jurassic Bonanza Group volcanics. The Vancouver and Bonanza Group rocks are intruded by granodiorite of the Late Jurassic Island Plutonic Suite (Geological Survey of Canada Map 4-1974).

The Blue Ox occurrence is located within a shear zone which separates argillites, calcareous argillites and quartzites of the Parson Bay Formation from Bonanza Group rocks. Several mafic and felsic dykes related to the Island Plutonic Suite cut the sheared rocks. The north trending shear zone contains veins and lenses of quartz and carbonate which host small masses of chalcopyrite, sphalerite and pyrite. The mineralization has been exposed by trenching over 730 metres. The fault parallels Blue Ox Creek and brings Parson Bay sediments in contact with Bonanza andesite. This fault offsets the mineralized shear zone by 7 metres.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 121
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 1760, 2306
EMPR GEM 1969-208; 1970-273
EMPR MAP Preliminary Geological Map, Alice Lake- Benson Lake Area,
Jeffery W.G. (1962)
EMR MP CORPFILE (Quatsino Copper-Gold Mines Ltd.)
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; *1929A, p. 134
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/22

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 060**

NATIONAL MINERAL INVENTORY: 092L12 Cu13

NAME(S): **COPPER KING**, F.G.P.

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 30 29 N
LONGITUDE: 127 34 54 W
ELEVATION: 5 Metres

NORTHING: 5596082
EASTING: 600571

LOCATION ACCURACY: Within 500M

COMMENTS: Old workings (Assessment Report 8060; Geological Survey of Canada Map 255A).

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Malachite Azurite
ASSOCIATED: Pyrite
ALTERATION: Silica Malachite Azurite
ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Replacement
DIMENSION: 0100 x 0010 Metres STRIKE/DIP: 290/75N TREND/PLUNGE:
COMMENTS: Silicified fracture zone strikes 280 to 300 degrees, dips 70 to 80 degrees north (Assessment Report 8060).

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Limestone
Andesite Flow
Andesite Tuff

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake. Bonanza mollusks from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
YEAR: 1980
CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 1.7000 Grams per tonne
Copper 0.5500 Per cent
COMMENTS: A 12 metre chip sample.
REFERENCE: Assessment Report 8060.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Quatsino Formation limestone in contact to the southwest with Lower Jurassic Bonanza Group volcanics.
Locally, disseminated chalcopyrite and pyrite occur in silicified fracture zones in limestone 140 metres northeast of a contact with andesite flows and tuffs. Malachite and azurite are present in outcrop. Drilling shows the fracture zone strikes 300 degrees and dips 70 to 80 degrees north, while at surface the zone strikes 280 degrees and dips 60 degrees south (Assessment Report 8060). The zone is up to 10 metres wide and has been traced on surface for 100 metres. A 12

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
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CAPSULE GEOLOGY

metre chip sample collected in 1980 assayed 0.55 per cent copper and 1.7 grams per tonne silver (Assessment Report 8060).
A 9 metre shaft and several open cuts are present.

BIBLIOGRAPHY

EMPR AR 1922-233; 1968-97
EMPR ASS RPT 3165, 8060
EMPR PRELIM. MAP (Alice Lake-Benson Lake area, 1962)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; *255A; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1929A, p. 132
CJES 18, p. 1; 20, p. 1, Jan., 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/28

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 061**

NATIONAL MINERAL INVENTORY: 092L12 Cu1

NAME(S): **CALEDONIA (L.1294)**, CASCADE (L.1295)

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

Underground

MINING DIVISION: Nanaimo

LATITUDE: 50 38 39 N
LONGITUDE: 127 36 17 W
ELEVATION: 213 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5611185
EASTING: 598651

LOCATION ACCURACY: Within 500M

COMMENTS: Caledonia claim (Lot 1294) (Minister of Mines Annual Report 1926).

COMMODITIES: Zinc Silver Copper Lead Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Magnetite
ASSOCIATED: Epidote Garnet Actinolite
ALTERATION: Epidote Garnet Actinolite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K02 Pb-Zn skarn
DIMENSION: 100 x 5 Metres
COMMENTS: Ore zone

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 159 +/- 5 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Skarn
Volcanic
Granodiorite

HOSTROCK COMMENTS: Age dates from Geological Survey of Canada Paper 74-8.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

GRADE:

INVENTORY

ORE ZONE: CALEDONIA

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 68000 Tonnes

YEAR: 1972

COMMODITY	GRADE	
Silver	704.2000	Grams per tonne
Gold	0.3400	Grams per tonne
Copper	6.1000	Per cent
Lead	0.6000	Per cent
Zinc	7.4500	Per cent

COMMENTS: Possible reserves outlined by underground work to 1929, on a zone 3 to 5 metres wide and 100 metres long.

REFERENCE: SMF July 5, 1972-North Island Mines Ltd., D.C. Malcolm, Apr.24, 1972.

CAPSULE GEOLOGY

The Caledonia occurrence area is underlain by Upper Triassic Karmutsen Formation volcanics and Quatsino Formation limestone (both formations of the Vancouver Group) and Lower Jurassic Bonanza Group

CAPSULE GEOLOGY

volcanics, intruded by bodies of the Early-Middle Jurassic Island Plutonic Suite.

Locally, epidote-garnet-actinolite skarn containing chalcopyrite occurs at a contact between Quatsino limestone, Karmutsen volcanics and granodiorite. Some of the mineralization extends into the granodiorite in sericitized fractures. The limestone strikes 315 degrees, dipping 25 degrees to the south.

East of the workings, garnet, epidote, magnetite and minor chalcopyrite are present in a replacement zone in limestone at a granodiorite contact. A narrow wedge-shaped body of mineralization extends about 12 metres into the granodiorite.

North of Quatse Lake, bornite replaces siliceous and tuffaceous beds in the upper part of the Karmutsen Formation.

In 1929, 0.9 tonnes of ore was shipped from the property, grading 514.2 grams per tonne silver and 7.3 per cent copper (Malcolm, 1969).

A chip sample collected across 1.8 metres in 1926 assayed trace gold, 418.2 grams per tonne silver, 2.0 per cent copper, 0.8 per cent lead and 10.0 per cent zinc (Minister of Mines Annual Report 1926).

Underground development outlined possible reserves of 68,000 tonnes grading 704.2 grams per tonne silver, 6.1 per cent copper, 7.45 per cent zinc, 0.6 per cent lead and 0.34 gram per tonne gold in a 3 to 5 metre wide zone over a strike length of 100 metres (George Cross News Letter #221, 1981; Statement of Material Facts July 5, 1972 - North Island Mines Ltd., D.C. Malcolm, April 24, 1972). Later work has expanded the surface mineralized zone for a strike length of 600 metres over a 300 metre width (George Cross News Letter #221, 1981).

BIBLIOGRAPHY

- EMPR AR 1920-202; 1923-253; *1926-322; 1927-352,484; 1928-379;
1929-380,504; 1930-297; 1968-84,88
EMPR ASS RPT 9853
EMPR GEM 1970-254,265
EMPR MAP 65 (1989)
EMPR OF 1992-1; 1992-6
EMPR PF (Malcolm, D.C. (1969): Report on North Island Mines Ltd.,
(1970): Report on North Island Mines Ltd., North Island Mines
Progress Report, North Island Mines Summary Report)
EMR MIN BULL MR 223 B.C. 178
EMR MP CORPFILE (North Island Mines Ltd.; McCullough Utah Resources
Ltd.; Caledonia Resources)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 255A; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1929 Part A, p. 122
CJES 18, p. 1; 20, p. 1
GCNL #95,#99, 1968; Aug.16, 1972; *#221, 1981; #120, 1982
N MINER Mar.4, 1982
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia
EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/22

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 062**

NATIONAL MINERAL INVENTORY: 092L11 Cu9

NAME(S): **YANKEE GIRL**, BAY 29, BAY 77,
ISLAND COPPER, RED ISLAND

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:
LATITUDE: 50 35 34 N
LONGITUDE: 127 27 21 W
ELEVATION: 5 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on south shore of Red Island (Assessment Report 710).

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5605680
EASTING: 609297

COMMODITIES: Iron Copper

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite
ASSOCIATED: Pyrite Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: 154 +/- 6 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry Industrial Min.
TYPE: L04 Porphyry Cu ± Mo ± Au
DIMENSION: STRIKE/DIP: 150/80W TREND/PLUNGE:
COMMENTS: Two fracture/shear directions - 150/80W and 050/80N (Assessment Report 710,731).

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
Upper Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks
ISOTOPIC AGE: 154 +/- 6 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Andesite
Granodiorite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite K-Ar date from Rupert Inlet stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels
COMMENTS: Silicification may be due to contact metamorphism from granodiorite.

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics and sediments, intruded by rocks of the Late Jurassic Island Plutonic Suite.

Locally, sheared and intensely shattered andesite on Red Island is mineralized with pyrite, chalcopyrite and magnetite as disseminations and fracture coatings. Silicification accompanies the mineralization with the development of numerous cryptocrystalline quartz stringers. Two fracture/shear directions are indicated at 150/80W and 050/80N (Assessment Reports 710,731).

Where well-sheared and silicified, copper values may average one per cent across 9 metres, iron content of the altered andesite might average fifteen per cent (Assessment Report 710).

Similar mineralization is located 4 kilometres to the northwest, on the Old Bay 4 claim (Assessment Report 710; Property File - 092L 136-Bay 4). An adit and shaft were developed prior to 1929 (Geological Survey of Canada Summary Report 1929A, page 134). The occurrence is located near to the Island Copper deposit (refer to 092L 158-Island Copper).

BIBLIOGRAPHY

EMPR AR 1966-65; 1967-68; 1968-84,88
EMPR ASS RPT *710, *731, 9305
EMPR GEM 1969-88; 1970-254,267
EMPR PF (092L 136-Bay 4; 092L 158-Island Copper)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 255A; 1552A
GSC MEM 23
GSC OF 9; 170; 463; 722
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1929A, p. 134
CIM Spec. Vol. *46, pp. 214-238
CJES 18, p. 1; 20, p. 1, Jan. 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/15

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 063**

NATIONAL MINERAL INVENTORY: 092L12 Cu4

NAME(S): **RUPERT (DEM)**

MINING DIVISION: Nanaimo

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 34 11 N
LONGITUDE: 127 31 06 W
ELEVATION: 10 Metres

NORTHING: 5603026
EASTING: 604924

LOCATION ACCURACY: Within 500M

COMMENTS: Adit, Dem. #30 claim (Assessment Report 1717, 2133).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcocite Bornite
ASSOCIATED: Quartz Calcite
ALTERATION: Quartz Calcite
ALTERATION TYPE: Silicific'n Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal
TYPE: D03 Volcanic redbed Cu

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			

LITHOLOGY: Amygdaloidal Andesite
Amygdaloidal Basalt
Limestone

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island. Quatsino ammonites from Alice Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1968
SAMPLE TYPE: Chip
COMMODITY: Copper GRADE: 0.8000 Per cent
COMMENTS: 1.5 metre chip sample.
REFERENCE: Assessment Report 1717.

CAPSULE GEOLOGY

The area is underlain by amygdaloidal basalts and andesites of the Upper Triassic Karmutsen Formation in contact to the west with Quatsino Formation limestone. Chalcocite and bornite occur in quartz-calcite stringers within andesite. A 1.5 metre chip sample near an adit portal assayed 0.8 per cent copper while a grab sample assayed 5.5 per cent copper (Assessment Report 1717). In 1908, 6 tonnes grading 8 per cent copper were shipped (Geological Survey of Canada Summary Report 1929A, page 142).

BIBLIOGRAPHY

EM EXPL 2000-25-32
EMPR AR 1910-153; 1968-84; 1969-205
EMPR ASS RPT *1717, 2133

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 129
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM 1970-Fig.29
EMR MP CORPFILE (Pathfinder Resources Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 255A; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1929A, p. 142
CJES 18, p. 1; 20, p. 1, Jan., 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/24

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 064**

NATIONAL MINERAL INVENTORY: 092L2 Cu2

NAME(S): **WOSS LAKE NO.4**, WOST HOPE 1, RIVIERA,
~~COPPER DUKE, COPPER DOME 1-3~~

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02E
BC MAP:
LATITUDE: 50 07 19 N
LONGITUDE: 126 33 35 W
ELEVATION: 487 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of mineralization on Wosthope No. 1 claim in Assessment Report 4586, on Torback Creek, 2.0 kilometres east of the centre of Woss Lake.

MINING DIVISION: Alberni
UTM ZONE: 09 (NAD 83)
NORTHING: 5555041
EASTING: 674435

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Epidote
ALTERATION TYPE: Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION: 0002 Metres STRIKE/DIP: 126/35S TREND/PLUNGE:
COMMENTS: Attitude of mineralized zone is 126 degrees.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Amygdaloidal Basalt
Porphyritic Basalt
Fine Grained Basalt
Porphyritic Monzonite
Granodiorite

HOSTROCK COMMENTS: Karmutsen ammonites-Hisnit Island; Bonanza mollusks-Quatsino Sound; phlogopite-Zeballos intrusion (Geological Survey of Canada Paper 74-8)

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

CAPSULE GEOLOGY

The region of the Woss Lake occurrence is underlain by a thick sequence of north trending, gently west dipping tholeiitic basalts of the Upper Triassic Vancouver Group, Karmutsen Formation which are in fault contact with andesitic to dacitic basalts and minor sediments of the Lower Jurassic Bonanza Group. Granodiorite of the Late Jurassic Island Plutonic Suite has intruded the older rocks. The presence of a 60 to 90 metre limestone unit interbedded with basalts suggests that the rocks at the occurrence are part of the Bonanza Group. At the occurrence, amygdaloidal, porphyritic and fine-grained basalts are intruded by a complex of reddish porphyritic monzonite dykes related to a granodiorite batholith one kilometre northeast.

CAPSULE GEOLOGY

The contact zone between the basalts and the granodiorite dips southwest at 26 degrees.

The occurrence, described as the showing Number 1 in Assessment Report 663, consists of lenses of chalcopyrite and pyrite filling fractures and voids in epidote-altered brecciated basalt. The mineralized fractures dip about 35 degrees south. Northwest striking monzonite dykes with strong associated epidote alteration are present.

BIBLIOGRAPHY

EMPR AR 1965-233; 1973-255; 1986-C275

EMPR ASS RPT 663, 4568, 14413

GSC EC GEOL 1-1947

GSC MAP 4-1974; 255A; 1028A; 1552A

GSC MEM 272

GSC OF 9; 170; 463

GSC P 38-5; 69-1A; 70-1A; 72-44; 74-8; 79-30

GSC SUM RPT 1929A

Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/02

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 065**

NATIONAL MINERAL INVENTORY: 092L2 Cu2

NAME(S): **WOSS LAKE NO.2**, WOST HOPE NO.2, RIVIERA,
~~COPPER DUKE~~, ~~COPPER DOME~~

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 07 04 N
LONGITUDE: 126 33 32 W
ELEVATION: 670 Metres

NORTHING: 5554579
EASTING: 674510

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on Wost Hope 2 claim (Assessment Report 4568), on Torback Creek 2.0 kilometres east of the centre of Woss Lake.

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
COMMENTS: Gold, silver mineralogy not known.
ASSOCIATED: Quartz
ALTERATION: Epidote
ALTERATION TYPE: Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION: 0012 x 0004 Metres STRIKE/DIP: 305/90 TREND/PLUNGE:
COMMENTS: Vertical mineralized zone strikes 305 degrees.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma DATING METHOD: Fossil			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Phlogopite			

LITHOLOGY: Amygdaloidal Basalt
Porphyritic Basalt
Fine Grained Basalt
Porphyritic Monzonite
Granodiorite

HOSTROCK COMMENTS: Karmutsen ammonites-Hisnit Island; Bonanza mollusks-Quatsino Sound; phlogopite-Zeballos intrusion (Geological Survey of Canada Paper 74-8)

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1973
SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	85.7000	Grams per tonne
Gold	1.0000	Grams per tonne
Copper	16.6000	Per cent

COMMENTS: Massive chalcopyrite vein.
REFERENCE: Assessment Report 4586, page 6.

CAPSULE GEOLOGY

The region of the Woss Lake occurrence is underlain by a thick sequence of north trending, gently west dipping tholeiitic basalts of the Upper Triassic Vancouver Group, Karmutsen Formation which is in fault contact with andesitic to dacitic basalts and minor sediments of the Lower Jurassic Bonanza Group. Granodiorite of the Late Jurassic Island Plutonic Suite has intruded the older rocks.

The presence of a 60 to 90 metre limestone unit interbedded with basalts suggests that the rocks at the occurrence are part of the Bonanza Group.

At the occurrence, amygdaloidal, porphyritic and fine-grained basalts are intruded by a complex of reddish porphyritic monzonite dykes related to a granodiorite batholith one kilometre to the north-east. The contact between the basalts and the granodiorite dips southwest at 26 degrees.

Mineralization at the No. 2 occurrence of Assessment Report 663, consists of scattered pods of chalcopyrite in quartz lenses in epidotized basalts over a vertical, 305 degree striking zone 3.7 metres wide and 12 metres long.

The occurrence location is poorly defined but is believed to coincide with those of the Wosthope Number 2 claim of Assessment Report 4568, where a 15 centimetre wide massive chalcopyrite vein assayed 16.6 per cent copper, 1.0 grams per tonne gold and 85.7 grams per tonne silver (Assessment Report 4568, page 6).

BIBLIOGRAPHY

- EMPR AR 1965-233; 1973-255; 1986-C275
EMPR ASS RPT 663, 4568, 14413
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-5; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/02

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 066**

NATIONAL MINERAL INVENTORY: 092L2 Cu2

NAME(S): **WOSS LAKE NO.1**, WOST HOPE 1-EAST, RIVIERA

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02E
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 07 31 N
LONGITUDE: 126 33 11 W
ELEVATION: 502 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5555427
EASTING: 674900

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location is of limestone-intrusive contact, 0.4 kilometres east of 092L 064, on Torback Creek, 2.5 kilometres east of the centre of Woss Lake.

COMMODITIES: Iron Magnetite

MINERALS

SIGNIFICANT: Magnetite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Skarn Industrial Min.
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
	ISOTOPIC AGE: 230 Ma		
	DATING METHOD: Fossil		
Lower Jurassic	MATERIAL DATED: Gymnotropite ammonites	Undefined Formation	
	Bonanza		
	ISOTOPIC AGE: 200 Ma		
	DATING METHOD: Fossil		
Upper Jurassic	MATERIAL DATED: Mollusks		Island Plutonic Suite
	ISOTOPIC AGE: 148 +/- 8 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Phlogopite		

LITHOLOGY: Limestone
Amygdaloidal Basalt
Porphyritic Basalt
Fine Grained Basalt
Porphyritic Monzonite
Granodiorite

HOSTROCK COMMENTS: Karmutsen ammonites-Hisnit Island; Bonanza mollusks-Quatsino Sound; phlogopite-Zeballos intrusion (Geological Survey of Canada Paper 74-8)

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

CAPSULE GEOLOGY

The region of the Woss Lake occurrences is underlain by a thick sequence of north trending, gently west dipping tholeiitic basalts of the Upper Triassic Vancouver Group, Karmutsen Formation which is in fault contact with andesitic to dacitic basalts and minor sediments of the Lower Jurassic Bonanza Group. Granodiorite of the Late Jurassic Island Plutonic Suite has intruded the older rocks.

The presence of a 60 to 90 metre limestone unit interbedded with basalts suggests that the rocks at the occurrence are part of the Bonanza Group.

At the occurrence, amygdaloidal, porphyritic and fine-grained basalts are intruded by a complex of reddish porphyritic monzonite dykes related to a granodiorite batholith one kilometre to the north-east. The contact between the basalts and the granodiorite dips southwest at 26 degrees.

The occurrence is showing Number 3 of Assessment Report 663 (page 6) and consists of massive magnetite with minor disseminated pyrite, replacing limestone at an intrusive contact.

Dip needle readings suggest the zone of mineralization extends over 15 by 15 metres.

CAPSULE GEOLOGY

The location of the mineralization is vague. Assessment Report 4568 reports a limestone contact 0.4 kilometres east of the quarry at 092L 064 (Woss Lake 4).

BIBLIOGRAPHY

EMPR AR 1965-233; 1973-255; 1986-C275
EMPR ASS RPT 663, 4568, 14413
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-5; 69-1A; 70-1A; 71-36; 72-44; 74-8; 79-30
GSC SUM RPT 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/03

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 067**

NATIONAL MINERAL INVENTORY:

NAME(S): **SUQUASH**, PACIFIC COAST, SUKWASH

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11E
BC MAP:

Underground

MINING DIVISION: Nanaimo

LATITUDE: 50 37 59 N
LONGITUDE: 127 15 06 W
ELEVATION: Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5610479
EASTING: 623641

LOCATION ACCURACY: Within 1 KM

COMMENTS: Suquash area extends north and south of Suquash and includes the Kliksiwi area to the southeast.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded

Faulted

COMMENTS: The basin is bounded to the southwest by a major northwest-southeast trending normal fault which is downthrown 244 to 305 metres to the northeast.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Cretaceous
Upper Cretaceous

GROUP

Nanaimo
Undefined Group

FORMATION

Northumberland
Decourcy

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sandstone
Shale
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Overlap Assemblage
METAMORPHIC TYPE: Regional
COMMENTS: High volatile bituminous "C".

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

RELATIONSHIP: Post-mineralization

GRADE: HVol Bituminous

CAPSULE GEOLOGY

At least 3 coal zones are present in the Suquash area. The zones may be up to 3 to 4 metres thick, with clean coal thicknesses rarely greater than 1 metre. Numerous thin (less than 1 metre), non-persistent coal bands are present in addition to the coal zones. The thicker coal zones contain considerable quantities of mudstone bands. All the seams pinch and thin to the northwest, while thickening especially in the lower zones occurs to the southeast. The number of thin coal bands also increases to the southeast.

The No. 3 coal zone has most potential, with the best intersection being 3.31 metres of which 1.61 metres is clean coal. Shale and rock bands and partings are common and up to 0.5 metres thick. The coal is high volatile bituminous "C" and contains on average 5.98 per cent moisture, 45.34 per cent ash, 23.31 per cent volatile matter, 25.38 per cent fixed carbon and 2.21 per cent sulphur with a calorific content of 5969 BTU per pound - as received basis with shale partings included. The coal is interbedded with predominantly sandstone and shale.

Mining took place primarily in the early 1900's (Pacific Coast Coal Mines Ltd.) at the Suquash mine. Dr. W.F. Tolmie recognized this area as the first Coal found on Vancouver Island in 1835. Dawson (1886) reports 9,000 to 11,000 tonnes of coal produced by the Hudson's Bay Company from 1849 to 1853. To the west and south of the mine the coal seam mined thins to less than 1 metre. Mineable thicknesses of coal at this horizon are expected under the sea to the south and east or northeast of the old mine. Pacific Coast Coal Mines Limited mined the area from 1908 to 1914. Brief work was done from 1920 to 1922. Suquash Collieries Limited conducted operations in 1952.

The area with most potential is northeast of Misty Lake and

CAPSULE GEOLOGY

south-southeast of Single Tree Point, and to the east and southeast under the sea (1980).

The structure of the Basin appears to be a broad northeast trending, gently northeast pitching syncline. Dips are low, generally less than 10 degrees. A number of minor folds occur with axes parallel to the main fold. The basin is confined to the southwest by a major northwest trending normal fault which is downthrown to the northeast (displacement 244 metres to 305 metres). The basin is also cut by a series of north and northeast trending faults.

BIBLIOGRAPHY

EMPR AR 1909-243-244; 1910-211-213; 1911-235,256-257; 1912-276-277;
1913-355; 1914-450,453; 1915-397; 1916-464; 1917-396; 1920-265,
304-305; 1921-309; 1922-306,317; 1924-313; *1952-A309-A310;
1953-A245
EMPR COAL ASS RPT *92, 210, 211, 212, 213, *215, *216
EMPR P 1986-3, p. 30
GSC ANN RPT Vol. II, 1886, pp. 61-70B
GSC MAP 4-1974; 1552A
GSC MEM *69, pp. 1,112-124
GSC P 70-53; *74-8, p. 72
GSC SUM RPT 1911, pp. 105-107

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/16

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 068**

NATIONAL MINERAL INVENTORY: 092L2 Fe3

NAME(S): **ARTLISH 3-6**, OLS 7-8, HILLER 2,
ZEB 7

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 05 13 N
LONGITUDE: 126 50 46 W
ELEVATION: 1158 Metres

UTM ZONE: 09 (NAD 83)

LOCATION ACCURACY: Within 500M

NORTHING: 5550519
EASTING: 654078

COMMENTS: Location is the magnetite mineralization of the "Middle Zone" at the Artlish 3-4, Ols 7-8 claim post (Assessment Report 433, Figure 4), 2.5 kilometres west of Zeballos River at Artlish River headwaters, 11.5 kilometres north of Zeballos.

COMMODITIES: Magnetite Iron Copper

MINERALS

SIGNIFICANT: Magnetite Pyrrhotite

COMMENTS: Copper mineralogy not known; sulphur in pyrrhotite.

ALTERATION: Amphibole

ALTERATION TYPE: Skarn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Igneous-contact Skarn Industrial Min.

TYPE: K03 Fe skarn

SHAPE: Tabular

MODIFIER: Faulted

DIMENSION: 0730 x 0021 Metres

STRIKE/DIP: 305/40W

TREND/PLUNGE:

COMMENTS: Dimension of "Middle Zone".

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
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Lower Jurassic	Bonanza	Undefined Formation	
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ISOTOPIC AGE: 200 Ma

DATING METHOD: Fossil

MATERIAL DATED: Mollusks

Upper Triassic	Vancouver	Quatsino	
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ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarite ammonites

Upper Jurassic			Island Plutonic Suite
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ISOTOPIC AGE: 148 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Phlogopite

LITHOLOGY: Amphibolite Skarn
Feldspathic Tuff
Limestone
Mudstone
Argillite
Andesite
Diorite Dike
Aplite Dike
Basic Dike

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; Quatsino ammonites-Alice Lake; phlogopite-Zeballos Intrusion (Geological Survey of Canada Paper 74-8)

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

INVENTORY

ORE ZONE: ARTLISH

REPORT ON: Y

CATEGORY:	Inferred	YEAR:	1962
QUANTITY:	635000 Tonnes		
COMMODITY		GRADE	
Copper		0.0800	Per cent
Iron		44.1000	Per cent

COMMENTS: Possible ore. Also contains 3.16 per cent sulphur.
 REFERENCE: Property File - Sauko, 1965.

CAPSULE GEOLOGY

The Artlish magnetite occurrence lies within a belt dotted with 9 similar occurrences that extend from Zeballos River for about 8.0 kilometres in a northwest direction, at or near the conformable contact between Upper Triassic Vancouver Group, Quatsino Formation crystalline limestone and overlying, highly altered and folded volcanic and sedimentary rocks of the Upper Triassic Vancouver Group, Parson Bay Formation and Lower Jurassic Bonanza Group. These rocks lie on the northeast flank of the north-west elongated Zeballos phase of the Late Jurassic Island Plutonic Suite.

The Artlish occurrence is near the Quatsino limestone contact, in a 30 to 50 degree west dipping, 305 degree striking sequence that includes mudstone, argillite, feldspathic tuff, andesite and andesite porphyry of the Lower Jurassic Bonanza Group. Limy beds have been altered to garnet bands 0.3 to 2.0 metres thick.

The Zeballos intrusion granodiorite lies 1.0 kilometre to the west. Diorite, aplite-alaskite and mafic dykes cut all other rocks. The Hiller Creek fault (also called Lime Creek fault) extends from the Churchill occurrence (092L 031) to the Artlish occurrence, striking northwest and dipping 60 degrees east. Structural repetition of units as a result of faulting is suggested (Saukko, 1965).

The occurrence contains three distinct zones, each consisting of apparently discontinuous pods of massive magnetite replacing volcanic rocks:

- 1) The Footwall zone lies 30 metres west of the limestone contact. The strike length is 152 metres, widths are up to 15 metres and a grade estimate is 25 to 30 per cent iron (Assessment Report 433, page 13). The mineralization dips 32 degrees west. Amphibolite skarn is associated with the zone.
- 2) The Middle zone lies 40 metres southwest of the Footwall zone and consists of a 730 metre long, 35 to 55 degree west dipping band of massive magnetite pods replacing chloritized andesite. Mineralized widths range from 15 to 27 metres.
- 3) The Hangingwall zone lies in part, on the Hiller 6 and 16 claims and may be a fault-repeated section of the footwall zone. It is located 500 metres southwest of the Middle zone. The strike length is 143 metres, and the width ranges from 15 to 30 metres. The zone is an extension of the Hiller 5 and 6 zones (Saukko, 1965).

Saukko (1965) reports a possible tonnage for the combined Artlish deposits of 635,000 tonnes grading 44.1 per cent iron, 0.08 per cent copper and 3.16 per cent sulphur, the latter tied up in disseminated pyrrhotite.

In 1999, Doublestar Resources Ltd. plans to acquire the property from Falconbridge Limited.

BIBLIOGRAPHY

EM EXPL 1999-25-32
 EMPR AR 1962-103,133; 1965-232; 1966-73
 EMPR ASS RPT *433, 14457
 EMPR EXPL 1985-C230; 1986-C275
 EMPR PF (*Saukko, R.N., (1965): Hiller Churchill Deposits, Zeballos Area, Vancouver Island, in Hiller - 092L 127)
 GSC EC GEOL 1-1947
 GSC MAP 4-1974; 255A; 1028A; 1552A
 GSC MEM 204; 272
 GSC OF 9; 170; 463
 GSC P 38-5; 69-1A; 70-1A; 71-36; 72-44; 74-8; 79-30
 GSC SUM RPT 1929A; 1932AII, p. 29
 Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
 Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
 DATE REVISED: 1989/02/06

CODED BY: GSB
 REVISED BY: LLD

FIELD CHECK: N
 FIELD CHECK: N

CAPSULE GEOLOGY

Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by Late Jurassic Island Plutonic Suite.

Locally, Quatsino limestone, estimated to be 150 metres thick (Geological Survey of Canada Summary Report 1931A), is silicified and altered to skarn in the vicinity of a felsite dyke. Skarn minerals consist of epidote, garnet, diopside and actinolite. Magnetite-pyrite-pyrrhotite with minor chalcopyrite and sphalerite is exposed in the portal of a 34 metre long adit. The adit was driven in a south direction to intersect an east trending zone of galena-sphalerite mineralization in silicified limestone. Two shafts on either side of the zone have also been excavated. The east shaft is reported to be 10 metres deep. The west shaft is reported to be 12 metres deep, encountering a 9 metre long cave-in at the bottom (Minister of Mines Annual Report 1931; Geological Survey of Canada Summary Report 1931A). The mineralization is irregular in outline and is exposed by pits and open cuts over an area of 80 by 3 metres. A 2 metre chip sample of mainly galena mineralization on the east wall of the east shaft assayed 3743.4 grams per tonne silver, 38.1 per cent lead and 10.6 per cent zinc (Assessment Report 16347). Other samples from the same area assayed 0.69 grams per tonne gold, 1206.7 grams per tonne silver, 41.0 per cent lead and 25.7 per cent zinc across 1.8 metres (Minister of Mines Annual Report 1936) and 0.07 grams per tonne gold, 1065.4 grams per tonne silver, 39.4 per cent lead, 12.12 per cent zinc and 0.01 per cent copper across 1.0 metre (Property File - 1989 Prospectus, Hisway Resources; Assessment Report 17393).

BIBLIOGRAPHY

- EMPR AR 1930-297; *1931-171; 1932-207; *1936-F47; 1965-227; 1966-64; 1968-95
EMPR ASS RPT 30, *870, 2205, 3609, 3954, 7566, 9507, *16347, *17393, 17445
EMPR EXPL 1979-191; 1980-275; 1987-C224
EMPR GEM 1970-254,263; 1972-306; 1973-261
EMPR PF (Lunberg, H., (1948): Geophysical Report on the HPH Group of Claims for the Western Mining & Development Syndicate, Refer to 092L 241 - HPH2; Christopher, P.A., (1988): Report on the HPH Property, in Prospectus for Hisway Resources Corp., Jan. 11, 1989)
EMR MP CORPFILE (Giant Explorations Limited; Giant Mascot Mines Limited; QPX Minerals Inc.)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1931A, p. 36
CJES 18, p. 1; 20, p. 1, Jan., 1983
GCNL #69, 1989
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/18

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 070**

NATIONAL MINERAL INVENTORY: 092L12 Cu23

NAME(S): **JR**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 42 44 N
LONGITUDE: 127 35 05 W
ELEVATION: 235 Metres

NORTHING: 5618779
EASTING: 599921

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of claims (Assessment Report 1666).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 159 +/- 5 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Andesite
Granodiorite

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island. Biotite K-Ar from southwest Nahwitti Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular	PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell	RELATIONSHIP: Plutonic Rocks
METAMORPHIC TYPE: Regional	GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by andesites of the Upper Triassic Karmutsen Formation, Vancouver Group. Granodiorite of the Late Jurassic Island Plutonic Suite lies to the east. Widespread pyrite and lesser chalcopyrite are found in faults and fractures (Assessment Report 1666).

BIBLIOGRAPHY

EMPR AR *1968-84,280
EMPR ASS RPT *1666
EMPR GEM 1970-254
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A, *4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/03

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 071**

NATIONAL MINERAL INVENTORY: 092L10 Cu1

NAME(S): **PRINCESS**, MANSON ISLAND MINE, HAW

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L10E
BC MAP:

Underground

MINING DIVISION: Nanaimo

LATITUDE: 50 33 24 N
LONGITUDE: 126 43 06 W
ELEVATION: 1 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5603012
EASTING: 661616

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit on Haw 2 claim is at sea level on the southeast side of Hanson Island in Johnstone Strait.

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Copper Bornite

COMMENTS: Minor native copper and bornite.

ASSOCIATED: Pyrite

ALTERATION: Quartz Pyrite Epidote Calcite Chlorite

Zeolite

COMMENTS: Alteration in fractures.

ALTERATION TYPE: Propylitic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive Stockwork

CLASSIFICATION: Hydrothermal Volcanogenic Epigenetic

SHAPE: Tabular

MODIFIER: Sheared

DIMENSION: 0152 x 0001 Metres STRIKE/DIP: 038/

TREND/PLUNGE:

COMMENTS: Ore zone strikes northeast. Strike of adit is 038 degrees.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Middle Triassic

GROUP

Vancouver

FORMATION

Karmutsen

IGNEOUS/METAMORPHIC/OTHER

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

LITHOLOGY: Andesitic Lava

Basaltic Lava

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP:

GRADE: Amphibolite

INVENTORY

ORE ZONE: DUMP

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1983

SAMPLE TYPE: Grab

COMMODITY

Silver

GRADE

21.5000

Grams per tonne

Copper

10.0000

Per cent

COMMENTS: Grab sample from adit dump.

REFERENCE: Assessment Report 12639, page 4.

CAPSULE GEOLOGY

Manson Island lies at the eastern margin of the Insular tectonic belt near its contact with the Coast Crystalline Belt.

The occurrence is underlain by massive andesitic and basaltic lavas of the Upper Triassic Vancouver Group, Karmutsen Formation. The volcanics have undergone regional epidote alteration.

Mineralization consists of chalcopyrite, with minor bornite, native copper and pyrite, occurring in association with a quartz-filled shear zone. In one section massive chalcopyrite occurs over a width of 30 centimetres. Mineralization also occurs as fracture fillings, amygdaloidal coatings and disseminations.

Fractures show epidote, quartz, calcite, chlorite and zeolite

CAPSULE GEOLOGY

alteration.

Limited 1983 grab sampling from the adit ore dump returned values between 7.3 and 41.2 per cent copper, 6.5 to 23.0 grams per tonne silver, and very low lead, zinc and gold values (Assessment Report 12639, page 4).

The Princess group of three mineral claims was located about 1900 by Raper, Law, and Hamilton. By 1916 a shaft was sunk at the beach, a 150-metre north-south adit was driven along a fracture plane, and at 38 metres elevation, a 49-metre shaft was sunk which connected to the adit. Ore was shipped in 1916, but no production figures are available. In 1971 Croydon Mines Limited held the Haw 1 to 3 claims and carried out a geochemical soil survey. In May 1973 the Company became Aalenian Resources Limited.

BIBLIOGRAPHY

EMPR AR *1916-343-344
EMPR ASS RPT 3358, 12639
EMPR EXPL 1983-334; 1984-C234
EMPR GEM 1971-320
GSC MAP 4-1974, 1552A
GSC MEM 23, pp. 129-130
GSC P 74-8, p. 60

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/16

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 072**

NATIONAL MINERAL INVENTORY: 092L3 Tlc2

NAME(S): **MORRIS (L.988)**, DEERTRAIL (L.989), TOO EASY,
KASHU, SNOWSTORM, KYOQUOT SOUND,
KYU, EASY TWO, MONTEITH

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:
LATITUDE: 50 08 05 N
LONGITUDE: 127 17 55 W
ELEVATION: 60 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location is the centre of Lot 988 at the headland between Easy Inlet and Kashutl Inlet, Kyoquot Sound. See also At Monteith (092L 117), Sockeye (092L 246), Sic (092L 276) and Monteith Bay (092L 343).

Open Pit

MINING DIVISION: Alberni
UTM ZONE: 09 (NAD 83)
NORTHING: 5554996
EASTING: 621589

COMMODITIES: Pyrophyllite Alunite Silica

MINERALS

SIGNIFICANT: Pyrophyllite Alunite Pyrite Silica
ASSOCIATED: Quartz Sericite Pyrite
ALTERATION TYPE: Sericitic Alunitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: H09 Hydrothermal alteration clays-Al-Si
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: Metres STRIKE/DIP: 270/30S TREND/PLUNGE:
COMMENTS: West striking, gently south dipping regional bedding.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks
ISOTOPIC AGE: 148 +/- 8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Phlogopite

LITHOLOGY: Dacitic Flow
Andesitic Flow
Quartz Diorite Porphyry

HOSTROCK COMMENTS: Mollusks from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell

INVENTORY

ORE ZONE: MORRIS REPORT ON: Y
CATEGORY: Unclassified YEAR: 1913
QUANTITY: 363000 Tonnes
COMMODITY: Pyrophyllite GRADE: 71.0000 Per cent
COMMENTS: Grade estimate from CANMET Report 803, page 131.
REFERENCE: Geological Survey of Canada Summary Report 1913, page 123.

CAPSULE GEOLOGY

The rocks hosting the Morris occurrence are west striking dacitic to andesitic fragmental flows of the Lower Jurassic Bonanza Group. Quartz diorite porphyry and andesitic dykes of the Early to Middle Jurassic Island Plutonic Suite intrude the volcanics. Pronounced quartz-sericite, quartz-alunite or quartz-pyrophyllite alteration occur along the contact zones. Pyrophyllite is prominent on Lots 988 (Morris) and 989 (Deertrail), occurring as compact dense masses ranging from cream, white, pink or light grey to dark bluish

CAPSULE GEOLOGY

grey when pyrite is present. Minor limonite imparts a yellow to reddish brown stain on weathered surfaces.

In thin section pyrophyllite flakes are about 0.01 millimetre in diameter and are readily crushed to a smooth fine powder. On the Deertrail showing, the ore is white to grey and contains 71 per cent pyrophyllite and 20 per cent quartz. An analysis of the showing returned 71.88 per cent silica, 23.56 per cent aluminum, 0.14 per cent ferric oxide, 0.36 per cent soda, 0.43 per cent potash, 3.24 per cent H₂O greater than 105 degrees Celsius (CANMET Report 803, pages 53 to 135).

Small shipments of both pyrophyllite and alunite have been made from the area. Pyrophyllite was extracted (probably mostly from the neighbouring Monteith occurrence, 092L 117), between 1910 and 1914. Several hundred tonnes of ore was mixed with shale and used as a refractory for sewer pipe and fire-proofing material. It was also used as a polishing powder, soap and cleanser.

A report on samples taken from a stockpile in Victoria stated that "it burns steel-hard at Cone 1, and shows good refractiveness", and "is unsuited to replace foliated talc" (Geological Survey of Canada Memoir 24, page 148).

The deposit was examined during World War II as a possible source of paper filler, and testing determined it to be a "highly satisfactory ingredient of whiteware batches for both slip-cast and clay process tiles, electrical insulators and tableware (Minister of Mines Annual Report 1947, page 223).

In 1913, Clapp estimated 363,000 tonnes of pyrophyllite ore occurred in the 1.2 hectares on the Deertrail and Morris claims (Geological Survey of Canada Summary Report 1913, page 123).

Drilling in 1983 encountered mostly brecciated volcanics with strongly silicified zones of alunite and pyrophyllite with varying proportions of quartz and abundant pyrite (Assessment Report 11374).

Several hundred tonnes of ore were produced in 1937 (Open File 1988-19, page 7) but exact production figures are not available.

See also At Monteith (092L 117), Sockeye (092L 246), Sic (092L 276) and Monteith Bay (092L 343).

BIBLIOGRAPHY

- EMPR AR 1914-377; 1920-198; 1947-223
EMPR ASS RPT 4539, 8279, *11374, *12681
EMPR EXPL 1980-269; 1983-332; 1984-240
EMPR GEM 1973-256,552
EMPR OF *1988-19, pp. 7,87-89
GSC ANN RPT 1886
GSC BULL 30, p. 38
GSC MAP 4-1974; 255A; 1552A
GSC MEM 24, p. 148
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1913, p. 109; 1920A
CANMET RPT 803, p. 131
GCNL #96, 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/31

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 073**

NATIONAL MINERAL INVENTORY: 092L7 Cu3

NAME(S): **LARSON 2**, NOOMAS, KLA-ANCHE

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 23 59 N
LONGITUDE: 126 53 36 W
ELEVATION: 700 Metres

NORTHING: 5585196
EASTING: 649717

LOCATION ACCURACY: Within 1 KM

COMMENTS: Centre of Larson, Noomas claim groups (Minister of Mines Annual Report 1929, page 382).

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Bornite Galena
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn Replacement

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	

ISOTOPIC AGE: 225 Ma
DATING METHOD: Fossil
MATERIAL DATED: Juvarite ammonites

Jurassic			Island Plutonic Suite
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ISOTOPIC AGE: 151 +/- 14 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Limestone
Skarn
Granodiorite

HOSTROCK COMMENTS: Juvarites ammonites from Alice Lake; biotite K-Ar date from Nimpkish Batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

CAPSULE GEOLOGY

The area is underlain by volcanics and sediments of the Upper Triassic Vancouver Group (Karmutsen, Quatsino, Parson Bay formations) and by volcanics of the Lower Jurassic Bonanza Group. These rocks have been intruded by the Jurassic Island Plutonic Suite, which are cogenetic with the Bonanza Group.

Showings on the old Larson 2 group, reported to contain bornite and galena, are located along the contact between Upper Jurassic granodiorite on the east and Quatsino limestone on the west. Mineralization is probably skarn related.

BIBLIOGRAPHY

EMPR AR *1929-382
GSC ANN RPT 1886
GSC BULL 172; 242
GSC MAP *4-1974; 1029A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT 1929A; *1931A, p. 33A
CJES 18, p. 1; 20, p. 1 (Jan. 1983)
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 148
REPORT: RGEN0100

BIBLIOGRAPHY

British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/31

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 074**

NATIONAL MINERAL INVENTORY: 092L12 Zn2

NAME(S): **SOUTH SHORE**, NORMAN CONTACT CREEK

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5617152
EASTING: 580879

LATITUDE: 50 42 02 N
LONGITUDE: 127 51 17 W
ELEVATION: 290 Metres

LOCATION ACCURACY: Within 500M
COMMENTS: Location of showings, Assessment Report 9507.

COMMODITIES: Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite
ASSOCIATED: Pyrite Pyrrhotite
COMMENTS: Pyrite, pyrrhotite in volcanics and sediments south of showings.
ALTERATION: Garnet Epidote
ALTERATION TYPE: Skarn Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Skarn
SHAPE: Irregular
DIMENSION: 0025 x 0008 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: 25 metre by 8 metre pod at intersection of two zones, 80 to 90 metres length (Assessment Report 9507).

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarites ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 145 +/- 5 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Skarn
Granodiorite
Andesite
Cherty Sediment/Sedimentary

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake. Bonanza mollusks from Quatsino Sound. Biotite K-Ar from Hepler Creek (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
Plutonic Rocks
RELATIONSHIP: Syn-mineralization
GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1966
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 15.1000 Grams per tonne
Copper 0.3600 Per cent
Lead 0.1000 Per cent
Zinc 8.8300 Per cent

COMMENTS: Reported as chip sample but no sample length given.
REFERENCE: Assessment Report 870.

CAPSULE GEOLOGY

The area is underlain by northwest trending belts of Upper

CAPSULE GEOLOGY

Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by Late Jurassic Island Plutonic Suite.

Locally, garnet-epidote skarn is in Quatsino limestone near granodiorite intrusives. A sill-like body is in contact with limestone in the locale of the mineralization. Mineralization consists of disseminated sphalerite and galena in two zones 80 to 90 metres long. Where the zones intersect, a mineralized pod 25 by 8 metres is present. Chalcopyrite is in two stringers about 5 metres long and 0.6 to 1.5 metres wide. Sampling in 1966 returned a high assay of 9.56 per cent zinc, 3.45 per cent copper, 0.10 per cent lead and 75.4 grams per tonne silver across 2.4 metres. A more representative assay is from a chip sample of unknown width which returned 8.83 per cent zinc, 0.36 per cent copper, 0.10 per cent lead and 15.1 grams per tonne silver (Assessment Report 870). A drilling program consisting of five holes failed to indicate much continuity of mineralization. Assays are unreported (Assessment Report 870).

Pyrite and pyrrhotite are present in Bonanza Group silicified andesites and cherty (?) sediments south of the showings.

BIBLIOGRAPHY

- EMPR AR *1936-F52; 1965-227; 1966-63; 1967-284; 1968-95
EMPR ASS RPT *870, 2205, 3055, 3069, 3954, 4180, 4472, 7652, *9507, 12652
EMPR EXPL 1979-192; 1981-53
EMPR GEM 1970-254,263; 1971-323; 1973-261
EMR MP CORPFILE (Giant Explorations Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A; *4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983
GCNL #95, 1980
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/12

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 075**

NATIONAL MINERAL INVENTORY: 092L12 Fe6

NAME(S): **SUN**, ST. CLAIRE, MEADE CK.

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 24 N
LONGITUDE: 127 48 59 W
ELEVATION: 350 Metres

NORTHING: 5616021
EASTING: 583605

LOCATION ACCURACY: Within 500M
COMMENTS: Assessment Report 870.

COMMODITIES: Magnetite Iron Copper Zinc Lead

MINERALS

SIGNIFICANT: Magnetite Pyrite Pyrrhotite Chalcopyrite Sphalerite
Galena Arsenopyrite
ALTERATION: Garnet Epidote
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 159 +/- 5 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			
LITHOLOGY: Limestone			
Skarn			
Andesite			
Monzonite			
Mylonite			

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

CAPSULE GEOLOGY

The area is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by Late Jurassic Island Plutonic Suite.

Locally, along Meade Creek, a 6 metre wide band of Quatsino limestone in Karmutsen (?) andesite has lenses of magnetite-pyrite-pyrrhotite up to 3 metres thick developed along both contacts and within mylonite zones. The lenses are generally less than 6 metres long, associated with minor amounts of chalcopyrite, sphalerite, galena and arsenopyrite. Garnet epidote skarn is also present along Meade Creek. Monzonite of the Island Plutonic Suite is found to the south.

BIBLIOGRAPHY

EMPR ASS RPT 870, 2205, 4472, 7566, 8069, 12852, 17393, 17445
EMPR EXPL 1979-191; 1980-275; 1984-247
EMPR GEM 1970-254; 1973-261; 1974-219
EMPR PF (Christopher, P.A., (1988): Report in Prospectus for Hisway Resources Corp., Jan.11, 1989, refer to HPH1 - 092L 069)
GSC ANN RPT 1886

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 152
REPORT: RGEN0100

BIBLIOGRAPHY

GSC BULL 242
GSC MAP 1552A; *4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1931A, p. 38
CJES 18, p. 1; 20, p. 1, Jan., 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/23

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 075**

MINFILE NUMBER: **092L 076**

NATIONAL MINERAL INVENTORY: 092L12 Zn1

NAME(S): **DORLON**, UCAN, RAIN

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 21 N
LONGITUDE: 127 45 27 W
ELEVATION: 305 Metres

NORTHING: 5615996
EASTING: 587766

LOCATION ACCURACY: Within 500M

COMMENTS: Sphalerite stringers containing gold (Assessment Report 870).

COMMODITIES:	Gold	Zinc	Silver	Copper	Lead
	Cadmium	Magnetite	Iron		

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Galena Pyrite Pyrrhotite
Magnetite

COMMENTS: Sphalerite stringers carry gold. Magnetite-chalcopyrite in skarn (Assessment Report 870, 4180).

ALTERATION: Epidote Chlorite Garnet Diopside Actinolite

ALTERATION TYPE: Silicific'n Skarn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive
CLASSIFICATION: Skarn Replacement Industrial Min.
SHAPE: Tabular
DIMENSION: 0006 x 0001 Metres STRIKE/DIP: 360/90
COMMENTS: Several stringers, 6 metres long, attitude is approximate (Assessment Report 870).

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Anarchist/Kobau	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 159 +/- 5 Ma DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Felsite Dike
Argillite
Andesite
Monzonite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite K-Ar from southwest Nahwitti Lake.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Nawwhitti Lowland
Plutonic Rocks
RELATIONSHIP: Syn-mineralization
GRADE: Hornfels

INVENTORY

ORE ZONE: SHAFT

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1988

COMMODITY	GRADE	
Silver	12.9000	Grams per tonne
Gold	9.4600	Grams per tonne
Zinc	26.4000	Per cent

COMMENTS: Chip sample across 2.0 metres.
REFERENCE: Magrum, 1988.

CAPSULE GEOLOGY

The area is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by Late Jurassic Island Plutonic Suite.

Locally, stringers of black sphalerite containing rare specks of galena and carrying gold values are present in silicified limestone of the Quatsino Formation. Andesites and argillites of the Bonanza Group are found to the south. A body of monzonite is in contact with both the Quatsino and Bonanza rocks.

The sphalerite stringers are up to 0.5 metres wide and 6.0 metres long, striking to the north and dipping vertically. A 1.5 metre wide felsite dyke striking northwest and dipping vertically is exposed adjacent to the stringers. A 0.61 metre wide chip sample collected in 1966 assayed 19.2 grams per tonne gold, 24.0 grams per tonne silver, 28.35 per cent zinc and trace lead (Assessment Report 870).

The Nose and Shaft showings are located 70 metres south and 150 metres southeast, respectively, of the original Dorlon showing. The Nose showing consists of a 0.25 to 0.75 metre wide flat-lying zone of massive sphalerite thickened at the apex of a small fold in limestone. Epidote-chlorite alteration is associated with the mineralization. A chip sample across 2.0 metres assayed 4.18 grams per tonne gold and 17.37 per cent zinc (Magrum, 1988).

The Shaft showing consists of massive sphalerite localized within a silicified breccia zone in limestone close to a contact with a siliceous (felsite?) intrusive. A chip sample across 2.0 metres assayed 9.46 grams per tonne gold, 12.9 grams per tonne silver and 26.4 per cent zinc (Magrum, 1988).

Pyrite, pyrrhotite, chalcopyrite and greenockite have also been reported from the showings.

Silver-lead-zinc mineralization in silicified limestone is present 150 metres southwest of the Dorlon showing. In other areas, magnetite-chalcopyrite is associated with garnet-diopside-actinolite skarn.

BIBLIOGRAPHY

- EMPR AR 1930-298; 1936-F52; 1966-64
EMPR ASS RPT *870, 2205, 2796, 3954, *4180, 8944, 17393, 17445
EMPR GEM 1970-254,263; 1972-306; 1973-261
EMPR PF (Magrum, M., (1988): *Summary Report and Proposed Exploration Program, Dorlon Project in Prospectus, Silver Drake Resources, Jul.12, 1988; Christopher, P.A., (1988): Report on the HPH Property in Prospectus, Hisway Resources Corp., Jan.11, 1989, refer to HPH1 - 092L 069)
EMR MP CORPFILE (Giant Explorations Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A; *4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1931A, p. 38
CJES 18, p. 1; 20, p. 1, Jan., 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/27

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 077**

NATIONAL MINERAL INVENTORY: 092L12 Cu20

NAME(S): **NORTH SHORE**, LAKE, RAVEN

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5618219
EASTING: 579921

LATITUDE: 50 42 37 N
LONGITUDE: 127 52 05 W
ELEVATION: 230 Metres

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of showings, Assessment Rept 1610.

COMMODITIES: Zinc Lead Silver Copper Magnetite

MINERALS

SIGNIFICANT: Sphalerite Galena Chalcopyrite Magnetite
ASSOCIATED: Pyrite
ALTERATION: Epidote Garnet Diopside Malachite
COMMENTS: Epidote is found in volcanics as well as in skarn.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Skarn Replacement Industrial Min.
SHAPE: Irregular
DIMENSION: 0060 x 0003 Metres STRIKE/DIP: 045/ TREND/PLUNGE:
COMMENTS: Skarn zone trending to northeast.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
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Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE:	225 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Juvarite ammonites		
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE:	230 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Gymnotropite ammonites		
Jurassic			Island Plutonic Suite
ISOTOPIC AGE:	169 +/- 6 Ma		
DATING METHOD:	Potassium/Argon		
MATERIAL DATED:	Biotite		

LITHOLOGY: Limestone
Skarn
Monzonite
Felsic Dike
Andesite
Basalt

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake. Karmutsen ammonites from Hisnit Island. Biotite K-Ar from Nahwitti Lake (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1968
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 186.5000 Grams per tonne
Copper 0.0700 Per cent
Lead 3.2600 Per cent
Zinc 6.4100 Per cent
COMMENTS: Chip sample across 0.46 metres. Trace amounts of gold reported.
REFERENCE: Assessment Report 1610.

CAPSULE GEOLOGY

The area is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen

CAPSULE GEOLOGY

and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by Jurassic Island Plutonic Suite.

Locally, Quatsino limestone and Karmutsen volcanics are in contact with monzonite and felsic dykes of the Island Plutonic Suite. A 3 metre wide skarn zone, associated with a felsic dyke, has been traced for 60 metres to the northeast. The skarn consists of epidote, garnet and diopside, mineralized with magnetite and chalcopyrite. A 1.8 metre chip sample collected in 1968 contained 1.63 per cent copper, 12.3 grams per tonne silver and trace amounts of gold (Assessment Report 1610). Similar mineralization (Raven Zone) is located 600 metres to the east.

Approximately 75 metres south of the skarn a vein occurs in silicified limestone. Sphalerite, galena and minor chalcopyrite, as disseminations and lenses, are exposed in two places separated by 60 metres. A 0.5 metre chip sample over the easternmost exposure assayed 6.46 per cent zinc, 3.26 per cent lead, 0.07 per cent copper, 186.5 grams per tonne silver and trace gold (Assessment Report 1610). At the westernmost exposure, a sample of a 0.1 metre wide stringer of galena assayed 9.18 per cent zinc, 53.24 per cent lead, 0.04 per cent copper, 4457.8 grams per tonne silver and trace gold (Assessment Report 1610).

Small amounts of chalcopyrite and malachite are disseminated in the limestone. Disseminated pyrite and rare chalcopyrite are present in the volcanics.

Related mineralization is located 1250 metres to the east (refer to Jean (North Shore) - 092L 098).

BIBLIOGRAPHY

- EMPR AR *1936-F51; 1966-65; 1968-94
EMPR ASS RPT 870, *1610, 5951
EMPR EXPL 1976-E129; 1978-E182
EMPR GEM 1970-254; 1971-323
EMPR PF (Prospectus, QPX Minerals Inc., May 26, 1988, p. 23)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A; 4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/16

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 078**

NATIONAL MINERAL INVENTORY: 092L12 Cu19

NAME(S): **HEP**, CYPRESS

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 38 N
LONGITUDE: 127 53 33 W
ELEVATION: 490 Metres

NORTHING: 5616370
EASTING: 578222

LOCATION ACCURACY: Within 500M

COMMENTS: Trenches on HEP1 claim (Jones, 1988 and Assessment Report 684).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Molybdenite
ASSOCIATED: Pyrite Magnetite
ALTERATION: Quartz Pyrophyllite Pyrite Zeolite Chlorite
Epidote Kaolinite

ALTERATION TYPE: Propylitic Zeolitic Silicific'n Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic Bonanza Undefined Formation

ISOTOPIC AGE: 200 Ma

DATING METHOD: Fossil

MATERIAL DATED: Fossils: mollusks

Upper Jurassic

ISOTOPIC AGE: 145 +/- 5 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Island Plutonic Suite

LITHOLOGY: Andesite
Andesite Flow
Andesite Tuff
Felsic Tuff
Quartz Monzonite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound. Biotite K-Ar date from Hepler Creek (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP: Syn-mineralization

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

GRADE: Greenschist
Hornfels

INVENTORY

ORE ZONE: HEP

REPORT ON: Y

CATEGORY: Inferred

YEAR: 1988

QUANTITY: 45350 Tonnes

COMMODITY

GRADE

Copper

0.8000

Per cent

COMMENTS: Reserves classified as 'about'.

REFERENCE: Moraga Resources Prospectus, July 26, 1988, page 10.

CAPSULE GEOLOGY

The area is underlain by northwest trending Lower Jurassic Bonanza Group volcanics and sediments and Upper Triassic Karmutsen Formation volcanics and Quatsino Formation limestone, all of which have been intruded by stocks of the Late Jurassic Island Plutonic Suite.

Locally, andesite flows and tuffs and felsic tuff of the Bonanza Group are intruded by quartz monzonite. The volcanics have been largely propylitized and some units have undergone argillization and silicification. A chlorite-epidote-zeolite assemblage is well developed in the propylitized volcanics. Chloritization is

CAPSULE GEOLOGY

pervasive but weak and is controlled by fracturing. Epidote is present as specks and veinlets. Zeolites, generally in veinlets, are controlled by jointing and shearing and are abundant near volcanic-intrusive contacts. Silicification is minor and is related to small, elongated intrusive bodies.rophyllite is present in a small outcrop of breccia.

Pyrite is found in all the rocks along fractures and as fine disseminations. Disseminated chalcopyrite and lesser bornite accompany pyrite in the volcanics. Molybdenite generally occurs along fractures in andesite. Magnetite can be present in association with the sulphides.

The 1988 Prospectus for Moraga Resources states the HEP zone, consisting of copper-molybdenum mineralization located at the intersection of two shear zones, is estimated to contain approximately 45,350 tonnes grading 0.80 per cent copper (Jones, 1988).

BIBLIOGRAPHY

- EMPR AR 1966-69; 1967-68; 1968-95
EMPR ASS RPT *684, 870, 1621, 2190, *3400
EMPR EXPL 1977-174
EMPR GEM 1969-202; 1970-254,262; 1971-323
EMPR PF (Jones, M., (1988): *Expo Property Summary Report in Prospectus for Moraga Resources, Jul.26, 1988 (refer to 092L 240 - Expo); Miscellaneous Maps)
EMR MIN BULL MR 223 B.C. 179
EMR MP CORPFILE (Acheron Mines Ltd.; Moraga Resources Ltd.)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A; 4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983
GCNL #225, 1988
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/10

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 079**

NATIONAL MINERAL INVENTORY:

NAME(S): **ABAN**, ANAN, LAURY

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 42 45 N
LONGITUDE: 127 54 36 W
ELEVATION: 335 Metres

NORTHING: 5618421
EASTING: 576956

LOCATION ACCURACY: Within 500M

COMMENTS: Aban showing, Assessment Report 870.

COMMODITIES: Zinc Lead Silver

MINERALS

SIGNIFICANT: Sphalerite Galena
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvartite ammonites			

LITHOLOGY: Limestone
Skarn

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

Plutonic Rocks PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP: Syn-mineralization GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N	
CATEGORY: Assay/analysis	YEAR: 1966	
SAMPLE TYPE: Chip		
<u>COMMODITY</u>	<u>GRADE</u>	
Silver	2.0600	Grams per tonne
Lead	0.9700	Per cent
Zinc	1.8100	Per cent

COMMENTS: Chip sample across 2.4 metres, location unknown.
REFERENCE: Assessment Report 870.

CAPSULE GEOLOGY

The area is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino Formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by Jurassic Island Intrusions.

Locally skarn, probably in Quatsino limestone, is mineralized with sphalerite and galena.

A chip sample across 2.4 metres assayed 1.81 per cent zinc, 0.97 per cent lead and 2.06 grams per tonne silver (Assessment Report 870).

The mineralization is reported to be similar to the South Shore showings (refer to 092L 074 - South Shore, Norman; 092L 244 - South Shore, Ras 4; 092L 245 - South Shore, HSW3).

BIBLIOGRAPHY

EMPR AR 1936-F52
EMPR ASS RPT *870, 12539, 12867
EMPR GEM 1970-254
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A; 4-1974

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 160
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/10

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 081**

NATIONAL MINERAL INVENTORY: 092L2 Au25

NAME(S): **IXL (L.1054)**, B-2 FR.

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 01 24 N
LONGITUDE: 126 48 11 W
ELEVATION: 610 Metres

NORTHING: 5543537
EASTING: 657366

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Lot 1054, (Bulletin 27, Figure 2), is 0.5 kilometre east of Spud Creek, 5.6 kilometres northeast of Zeballos.

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Arsenopyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Mesothermal Epithermal

TYPE: I06 Cu±Ag quartz veins

SHAPE: Tabular

DIMENSION:

STRIKE/DIP: 040/72S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Eocene

Catface Intrusions

ISOTOPIC AGE: 38 +/- 14 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Quartz Diorite

HOSTROCK COMMENTS: Age date from Geological Survey of Canada Paper 74-8.

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: MAIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1945

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

816.1000

Grams per tonne

Gold

2953.4000

Grams per tonne

Lead

2.2000

Per cent

Zinc

0.3000

Per cent

COMMENTS: Sample #718E, highest of 10 samples.

REFERENCE: Bulletin 27, page 80.

CAPSULE GEOLOGY

The IXL occurrence in the Zeballos gold camp is underlain by quartz diorite of the Eocene Catface Intrusions. The principal showing consists of a 040 degree striking 72 degree south dipping, 1 to 10 centimetre wide quartz vein, that follows a 2.5 to 90 centimetre wide shear zone. Vein minerals consist of pyrite and fine-grained arsenopyrite with minor galena in a quartz gangue. Narrow shear zones spaced at 15 centimetres parallel the vein to a distance of approximately 1 metre. Approximately 22 tonnes of development ore were stockpiled between 1945 and 1949 while driving a 36 metre adit. Sampling returned values ranging from 2 to 2953 grams per tonne gold, nil to 816 grams per tonne silver and to 2.2 per cent lead (Bulletin 27, page 80).

BIBLIOGRAPHY

EMPR AR 1946-179; 1947-181
EMPR BULL 20-V; *27, p. 79
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMR MP CORPFILE (Britannia Mining & Smelting Co. Ltd.)

BIBLIOGRAPHY

GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 62
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/08

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 082**

NATIONAL MINERAL INVENTORY: 092L2 Au15

NAME(S): **BRITANNIA B-5**, GOLD CREEK, BRITANNIA B,
W FRACTION (L.1749), B (L.1057-1060), WET FRACTION,
SCAFE

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:
LATITUDE: 50 02 05 N
LONGITUDE: 126 48 07 W
ELEVATION: 365 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit on End Vein, Lot 1058, is 0.6 kilometres south of
Zeballos River, 7 kilometres northeast of Zeballos.

MINING DIVISION: Alberni
UTM ZONE: 09 (NAD 83)
NORTHING: 5544806
EASTING: 657408

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS

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

DEPOSIT

CHARACTER: Vein Concordant
CLASSIFICATION: Mesothermal Epithermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
DIMENSION: STRIKE/DIP: 060/90 TREND/PLUNGE:
COMMENTS: Veins strike northeast to east, dip steeply.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Eocene			Catface Intrusions
ISOTOPIC AGE: 38 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Quartz Diorite
Volcanic Rock
Felsic Dike
Mafic Dike

HOSTROCK COMMENTS: Mollusks from Quatsino Sound. Catface biotite from Zeballos
(Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 2.0500 Grams per tonne
Gold 11.8300 Grams per tonne
Copper 1.0800 Per cent
COMMENTS: Sample number BB010-83 over 2 to 4 centimetres.
REFERENCE: Assessment Report 12077, Figure 4.

CAPSULE GEOLOGY

The "Brittania B" occurrence lies in the Zeballos gold camp in Eocene Catface Intrusions quartz diorite near the contact with Lower Jurassic Bonanza Group volcanic rocks.
The "Britannia B" occurrence consists of approximately 6 north-east to east striking, steeply dipping quartz veins spread out over a distance of 500 metres, near the mouth of Gold Valley Creek. The "Calcite Vein", "Impact Vein", "End Vein" and several unnamed veins,

CAPSULE GEOLOGY

are located in quartz diorite or a mixed assemblage of Bonanza volcanics and quartz diorite. These altered contact rocks have been intruded by post-vein felsic and mafic dykes. The "End Vein", on Lot 1058, is traceable for over 400 metres and was explored in the 1930's by a 12 metre adit. It consists of a 22 centimetre wide quartz-pyrite-galena vein enveloped in a zone of "white alteration gouge" (Assessment Report 12077, page 8). Samples assayed 0.82 grams per tonne gold and low values in copper, arsenic, lead, zinc and molybdenum (Sample #BB006-83, Assessment Report 12077, Figure 4).

The highest gold assay from a 2 to 4 centimetre wide quartz-pyrite vein (Sample BB010-83) in the southeast corner of Lot 1060, returned 11.83 grams per tonne gold, 20.5 grams per tonne silver, and 1.08 per cent copper (Figure 4, Assessment Report 12077).

Bancroft reports thirteen veins in the area of the Britannia B occurrence. No locations are specified so they have not been correlated with this occurrence (Geological Survey of Canada Paper 40-12, page 22).

BIBLIOGRAPHY

- EMPR ASS RPT *12077
EMPR BULL 20-V; *27, p. 97
EMPR EXPL 1983-330
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272
GSC OF 9; 170; 463
GSC P 38-5; *40-12, p. 21; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr., 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/06

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 083**

NATIONAL MINERAL INVENTORY: 092L2 Au20

NAME(S): **MONITOR**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 01 02 N
LONGITUDE: 126 44 40 W
ELEVATION: 460 Metres

NORTHING: 5542983
EASTING: 661584

LOCATION ACCURACY: Within 500M

COMMENTS: Monitor adit is located 0.4 kilometres west of Nomash River, 2.5 kilometres northeast of Mount Lukwa (from Bulletin 27).

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
COMMENTS: Copper sulphide assumed to be chalcopyrite.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Replacement Massive Epigenetic
CLASSIFICATION: Hydrothermal
SHAPE: Tabular
DIMENSION:
COMMENTS: Shear zone strikes 280 to 295 degrees. STRIKE/DIP: 285/90 TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	

ISOTOPIC AGE: 225 Ma
DATING METHOD: Fossil
MATERIAL DATED: Juvarite ammonites

LITHOLOGY: Granodiorite
Limestone

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

The occurrence consists of several quartz veins in granodiorite, and massive copper sulphide replacement in limestone of the Upper Triassic Vancouver Group, Quatsino Formation near an intrusive contact.

No information is available on the replacement mineralization, reported in Geological Survey of Canada Paper 40-12, page 34.

Several short adits were driven on the 280 to 295 degree striking, steeply dipping quartz-pyrite-gold veins. The veins are up to 5 centimetres wide and follow shear zones that are up to 15 centimetres wide.

BIBLIOGRAPHY

EMPR BULL 20-V, p. 18; *27, pp. 114,115
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 64
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 167
REPORT: RGEN0100

BIBLIOGRAPHY

Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/26

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 084**

NATIONAL MINERAL INVENTORY: 092L2 Au26

NAME(S): **IXL FRACTION (L.1694)**, LM, PM,
LOT 1748,1750

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 01 05 N
LONGITUDE: 126 47 11 W
ELEVATION: 560 Metres

UTM ZONE: 09 (NAD 83)

LOCATION ACCURACY: Within 500M

NORTHING: 5542986
EASTING: 658577

COMMENTS: Location of adit at centre of Lot 1694 is 3 kilometres south of the mouth of Gold Valley Creek, 6 kilometres northeast of Zeballos.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal
SHAPE: Tabular

DIMENSION:
COMMENTS: Fault zone strikes 050 degrees.

STRIKE/DIP: 050/

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Eocene

ISOTOPIC AGE: 38 +/- 14 Ma

DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

Catface Intrusions

LITHOLOGY: Quartz Diorite
Gouge

HOSTROCK COMMENTS: Age date from Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The IXL Fraction occurrence lies in the Zeballos gold camp. The IXL Fraction adit was driven in 1938 on a 050 degree striking, 30 centimetre wide fault gouge zone in quartz diorite of the Eocene Catface Intrusions. The structure, thought to be on strike with the Goldfields Vein (092L 211), located 0.8 kilometres to the southwest, cuts across two sets of joints, striking 250 degrees and 330 degrees, respectively. The type of mineralization is not reported.

BIBLIOGRAPHY

EMPR BULL 20-V; *27, p. 79
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (Goldfields - 092L 211)
EMR CORPFILE (Haida Gold Mines Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272
GSC OF 9; 170; 463
GSC P 38-5; *40-12, p. 26; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45
Stevenson, J.S.: Lode Gold Deposits of the Zeballos Area, 1938

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/07

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 085**

NATIONAL MINERAL INVENTORY: 092L5 Fe2

NAME(S): **IRON QUEEN**, IRON BUNKER, IRON KING,
HIGH GILL, KIM, GKS,
FECU, CUFE

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:
LATITUDE: 50 25 19 N
LONGITUDE: 127 38 21 W
ELEVATION: 260 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Location of magnetite occurrence, as estimated from Figure 43,
Geological Survey of Canada Economic Geology #3, Vol.1,
is 8.0 kilometres up Klootchlimmis Creek from Buchholz Channel,
Quatsino Sound.

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5586431
EASTING: 596669

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
COMMENTS: No alteration minerals are specified.
ALTERATION TYPE: Skarn Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Replacement Industrial Min.
SHAPE: Tabular
DIMENSION: 0012 x 0006 Metres STRIKE/DIP: 315/90 TREND/PLUNGE:
COMMENTS: Dimensions and attitude of west showing are given.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Andesite
Andesite Tuff
Monzonite

HOSTROCK COMMENTS: Mollusks from Quatsino Sound; biotite from Island Copper Stock
(Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1924
SAMPLE TYPE: Rock
COMMODITY _____ GRADE _____
Magnetite 90.0000 Per cent
COMMENTS: Magnetite content estimated.
REFERENCE: Geological Survey of Canada Economic Geology #3, Vol.1, page 238.

CAPSULE GEOLOGY

The Iron Queen occurrence is located in the Insular Belt of the Cordillera. The region is underlain mainly by volcanics and crystalline rocks and minor sediments.

Overlying an assemblage of Paleozoic Sicker Group sediments and Upper Triassic basalts and minor carbonate and clastic sediments of the Vancouver Group is the Lower Jurassic Bonanza Group of andesitic to rhyodacitic lava, tuff and breccia. Bonanza volcanism is coeval with, or genetically related to Jurassic Island Plutonic Suite

CAPSULE GEOLOGY

granodiorite that has invaded all older rocks, and in this area occurs as small isolated stocks.

The occurrence consists of two showings 100 metres apart. Limited exposure suggests 2 distinct replacement bands of magnetite mineralization, striking northwest and dipping steeply west, at the contact of monzonite with Bonanza Group andesite and andesitic tuff, and possibly altered limestone. The magnetite is massive, grading an estimated 80 to 90 per cent, to 50 per cent where mixed as stringers and small lenses with volcanic rocks (Geological Survey of Canada Economic Geology Series 3, Vol. 1, page 238). Minor skarn minerals and calcite are present, and pyrite is disseminated throughout.

At the eastern occurrence, the magnetite is 2.9 metres wide (including a 0.8 metre unmineralized andesite band) and occurs at an andesite-monzonite contact. The massive magnetite contains unreplaced rock fragments and is rusty weathering. The mineralization 100 metres to the west has been exposed over 6 by 12 metres in silicified fine-grained andesite or andesitic tuff, striking northwest and dipping west.

BIBLIOGRAPHY

- EMPR ASS RPT 2731
EMPR GEM 1970-272
EMPR PF (*Leighton, D.G., (1974): Report on Exploration in Mahatta River Area, Brinco in 092L 230 - Les)
GSC ANN RPT 1886
GSC BULL 172; 242
GSC EC GEOL Series 3, Vol.1, p. 236
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918B
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/05

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 086**

NATIONAL MINERAL INVENTORY: 092L5 Fe1

NAME(S): **BLUE BIRD - INGERSOL**, DP, MAGGIE,
ANNA, MYSTIC, STELLA,
OLGA

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:
LATITUDE: 50 28 34 N
LONGITUDE: 127 39 56 W
ELEVATION: 150 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Blue Bird claim, 1.6 kilometres south of the mouth of Klootchlimmis
(Ingersol) Creek, on Quatsino Sound (Minister of Mines Annual Report
1903).

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5592420
EASTING: 594686

COMMODITIES: Iron Gold Magnetite Copper

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite Pyrite
COMMENTS: Gold mineralogy not known.
COMMENTS: Skarn minerals not known.
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Replacement Industrial Min.
TYPE: K04 Au skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Limestone
Skarn
Volcanic Rock

HOSTROCK COMMENTS: Mollusks from Quatsino Sound (Geological Survey of Canada Paper
74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1903
SAMPLE TYPE: Rock
COMMODITY GRADE
Gold 13.7000 Grams per tonne
Iron 58.0000 Per cent
COMMENTS: Sample of magnetite mineralization on the adjoining Blue Bird
and Ingersol claims.
REFERENCE: Minister of Mines Annual Report 1903, page 194.

CAPSULE GEOLOGY

On the Bluebird claim, a 12-metre wide limestone band, interbedded with Lower Jurassic Bonanza Group volcanic rocks, is replaced by massive magnetite skarn carrying chalcopyrite, pyrite and values in gold. Similar mineralization occurs on the adjacent Ingersol claim.

A sample taken from an unspecified location on the adjoining Bluebird and Ingersol claims assayed 58.0 per cent iron and 13.7 grams per tonne gold (Minister of Mines Annual Report 1903, page 194).

BIBLIOGRAPHY

EMPR AR *1903-194; 1906-199; 1968-97

BIBLIOGRAPHY

EMPR PF (in 092L 230 - Les: Brinco Report on Exploration in
Mahatta River Area, 1974)
GSC ANN RPT 1886
GSC BULL 172; 242
GSC EC GEOL *Series 3, Vol. 1, p. 238
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
Carson, D.J.T., (1968): Unpubl. Report, Ph.D. Thesis, Carleton
University
Sangster, D.F., (1964): Unpubl. Report, Ph.D. Thesis, University
of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/05

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 087**

NATIONAL MINERAL INVENTORY: 092L12 Fe1

NAME(S): **QUATSINO IRON ORE**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 37 05 N
LONGITUDE: 127 42 03 W
ELEVATION: 45 Metres

NORTHING: 5608158
EASTING: 591907

LOCATION ACCURACY: Within 500M
COMMENTS: Base of knoll, H&W 1 claim.

COMMODITIES: Iron

MINERALS

SIGNIFICANT: Laumontite Pyrite
ASSOCIATED: Pyrite
ALTERATION: Laumontite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unconsolidated Disseminated
CLASSIFICATION: Residual Industrial Min.
TYPE: B07 Bog Fe, Mn, U, Cu, Au
SHAPE: Tabular
COMMENTS: Parallel to surface slope.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Recent			Unnamed/Unknown Informal

LITHOLOGY: Limonite Clay
Pyritic Dacite

HOSTROCK COMMENTS: Seasonal erosion and oxidation of Bonanza Group rocks form recent sediments; Bonanza mollusks from Quatsino Sound (GSC P 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
Overlap Assemblage
RELATIONSHIP: Pre-mineralization
Syn-mineralization
GRADE: Zeolite

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics and Cretaceous Longarm Formation sediments.
On the H&W1 claim there is a knoll of dacitic rocks of the Bonanza Group. In places the dacites are pyritized. The pyrite has oxidized to limonite, which forms a bog iron deposit in swampy ground at the base of the knoll. The dacite has been estimated to contain 1,550,000 tonnes grading 91.91 per cent SiO₂ (refer to 092L 269 - H&W).
In 1907, 1360 tonnes of iron ore was shipped from workings measuring 90 by 60 by 0.6 metres. The percentage of iron recovered is unknown (Minister of Mines Annual Report 1907, page 149).

BIBLIOGRAPHY

EM EXPL 2002-29-40
EMPR AR 1903-202; *1907-149; 1916-295
EMPR ASS RPT 6142
EMPR GEM 1970-254
GSC ANN RPT 1886
GSC BULL 242
GSC EC GEOL *Series 3, Vol. 1, 1926, p. 242
GSC MAP 1552A; 4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CANMET RPT *47, 1909, p. 17; 217, 1917, p. 13

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
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BIBLIOGRAPHY

CJES 18, p. 1; 20, p. 1, Jan., 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/27

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 088**

NATIONAL MINERAL INVENTORY: 092L12 Fe2

NAME(S): **PRINCE'S**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 37 29 N
LONGITUDE: 127 45 18 W
ELEVATION: 200 Metres

NORTHING: 5608834
EASTING: 588063

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of old Crown Grants (Property File).

COMMODITIES: Iron

MINERALS

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

DEPOSIT

CHARACTER: Unconsolidated Massive
CLASSIFICATION: Residual Industrial Min.
TYPE: B07 Bog Fe, Mn, U, Cu, Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Lower Jurassic

GROUP

Bonanza

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

ISOTOPIC AGE: 200 Ma

DATING METHOD: Fossil

MATERIAL DATED: Mollusks

Recent

Unnamed/Unknown Informal

LITHOLOGY: Limonite Clay
Volcanic Rock

HOSTROCK COMMENTS: Erosion and oxidation of bedrock to form Recent sediments (Canmet Rpt. 47, 1909, p.17). Bonanza mollusks from Quatsino Sound (GSC P 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

Overlap Assemblage

RELATIONSHIP: Pre-mineralization

GRADE: Zeolite

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1909

SAMPLE TYPE: Grab

COMMODITY

Iron

GRADE

54.4600 Per cent

COMMENTS: Sample also contains 0.15 per cent sulphur, 0.038 per cent phosphorus and 2.32 per cent insoluble matter.

REFERENCE: Canmet Report 47, 1909, page 18.

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics and Cretaceous Longarm Formation sediments.

Locally, oxidation of pyrite in Bonanza volcanics leads to the formation of limonite. On hillsides and hilltops the limonite is fairly pure. In depressions the limonite is present as bog iron, mixed with transported rock and peat.

Thicknesses from a few centimetres to two metres were noted, although in one place a thickness of 5.5 metres was obtained by drilling (Canmet Report 47, 1909, page 18). The greatest thicknesses are present in the vicinity of two creeks on the old Eagle and Sunrise claims, part of the Prince's group.

A sample collected from an open cut contained 54.46 per cent iron, 0.15 per cent sulphur, 0.038 per cent phosphorus and 2.32 per cent insoluble matter (Canmet Report 47, 1909, page 18; see Sunrise - 092L 089).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

EMPR AR 1902-206; 1903-195,202; 1905-212; 1906-201; 1907-149;
1910-249; 1916-map following, p. 281,295; 1927-346
EMPR ASS RPT 11132, 12302, 13389
EMPR EXPL 1984-244; 2002-29-40
EMPR GEM 1970-254
GSC ANN RPT 1886
GSC BULL 242
GSC EC GEOL *Series 3, Vol. 1, 1926, p. 243
GSC MAP 1552A; 4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CANMET RPT *47, 1909, p. 18; 217, 1917, p. 14
CJES 18, p. 1; 20, p. 1, Jan., 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/27

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 089**

NATIONAL MINERAL INVENTORY: 092L12 Fe7

NAME(S): **SUNRISE (L.271)**, EAGLE

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E 092L12W
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5608781
EASTING: 588633

LATITUDE: 50 37 27 N
LONGITUDE: 127 44 49 W
ELEVATION: 150 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of old Sunrise Crown Grant Lot 271 (Property File - Claim Map; Minister of Mines Annual Report 1910, page 249).

COMMODITIES: Iron

MINERALS

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

DEPOSIT

CHARACTER: Unconsolidated Massive
CLASSIFICATION: Residual Industrial Min.
TYPE: B07 Bog Fe, Mn, U, Cu, Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Recent			Unnamed/Unknown Informal

LITHOLOGY: Limonite Clay

HOSTROCK COMMENTS: Erosion & oxidation of bedrock to form Recent sediments (Canmet Rpt. 147, 1909, p.17). Bonanza mollusks from Quatsino Sound (GSC P 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
Overlap Assemblage
RELATIONSHIP: Pre-mineralization
GRADE: Zeolite

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1909
SAMPLE TYPE: Grab
COMMODITY GRADE
Iron 56.9700 Per cent
COMMENTS: Sample also contains 0.447 per cent sulphur, 0.038 per cent phosphorus and 1.40 per cent insoluble matter.
REFERENCE: Canmet Report 47, 1909, page 18.

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics and Cretaceous Longarm Formation sediments.

Locally, oxidation of pyrite (probably in Bonanza volcanics) leads to the formation of limonite as bog iron. Relatively pure limonite is found on hillsides and hilltops. In depressions, the limonite is present as bog iron, mixed with transported rock and peat.

Two samples collected from two different open cuts contained 54.46 per cent iron, 0.15 per cent sulphur, 0.038 per cent phosphorous and 2.32 per cent insoluble matter and 56.97 per cent iron, 0.44 per cent sulphur, 0.038 per cent phosphorous and 1.40 per cent insoluble matter (Canmet Report 47, 1909, page 18).

The Sunrise and Eagle claims were part of a group of thirty-six claims (refer to 092L 088 - Prince's).

BIBLIOGRAPHY

EM EXPL 2002-29-40

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

EMPR AR 1902-206; 1903-195,202; 1905-212; 1906-201; 1907-149; *1910-
249; 1916-(map following)-281,295
EMPR GEM 1970-254
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A; 4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CANMET RPT *47, 1909, p. 18; 217, 1917, p. 14
CJES 18, p. 1; 20, p. 1, Jan., 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/27

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 091**

NATIONAL MINERAL INVENTORY: 092L6 Cu3

NAME(S): **BENSON LAKE (L.1555,L.1557)**, INDEPENDENT 1-3, DASNER,
COAST COPPER

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E
BC MAP:

Underground

MINING DIVISION: Nanaimo

LATITUDE: 50 21 24 N
LONGITUDE: 127 13 56 W
ELEVATION: 210 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5579782
EASTING: 625748

LOCATION ACCURACY: Within 500M

COMMENTS: #2 decline, at centre of Lots 1555, 1557 located 300 metres west of
Benson River, 3 kilometres south of Benson Lake (from Canadian
Institute of Mining and Metallurgy, 1971). See also Old Sport
(092L 035).

COMMODITIES: Copper Magnetite Iron Gold Silver

MINERALS

SIGNIFICANT:	Chalcopyrite	Bornite	Magnetite	Pyrite	Pyrrhotite
	Arsenopyrite				
ASSOCIATED:	Calcite	Quartz	Garnet	Epidote	Actinolite
	Diopside	Chlorite	Pyroxene		
ALTERATION:	Garnet	Epidote	Actinolite	Diopside	Chlorite
ALTERATION TYPE:	Skarn				
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Skarn Stratabound Replacement Massive Industrial Min.
TYPE: K01 Cu skarn
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 2500 x 30 Metres STRIKE/DIP: 315/37
COMMENTS: Width of ore horizon is 0.5 to 30 metres, striking northwest.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 178 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Andesite
Skarn
Gabbro
Diorite
Mafic Dike

HOSTROCK COMMENTS: Quatsino and Karmutsen ammonites from Alice Lake and Hisnit Island, respectively. Phlogopite from Empire Mine (GSC P 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

INVENTORY

ORE ZONE: INDEPENDENCE

REPORT ON: Y

CATEGORY:	Combined	YEAR:	1990
QUANTITY:	272154 Tonnes		
COMMODITY		GRADE	
Gold		1.0000	Grams per tonne
Copper		1.6000	Per cent
Iron		30.0000	Per cent

COMMENTS: Measured and indicated reserves based on 1990 work; may be included with Merry Widow (092L 044), but may be related to this property.

REFERENCE: N.C. Carter, personal communication, 1991.

CAPSULE GEOLOGY

The Independent occurrences and Benson Lake mine are a continuation of the "Old Sport Horizon" (Geological Survey of Canada Bulletin 172, page 80) and underground workings are connected with the Old Sport mine (092L 035).

The mineralization occurs along the conformable contact between Upper Triassic Vancouver Group rocks comprised of Karmutsen Formation andesite and overlying Quatsino Formation limestone. These rocks strike northwest and dip 37 degrees west where they are in contact with the gabbro-diorite "Coast Copper Stock" of Jurassic Island Plutonic Suite. Mafic dykes have intruded the volcanics and sediments.

The mineralized horizon has been traced for over 2.5 kilometres to the Old Sport mine and ranges from 0.6 to 30 metres in width. The horizon is comprised mainly of garnet, epidote, calcite and magnetite with minor diopside, actinolite and chlorite. Some quartz veins are present, mostly in the footwall. Chalcopyrite and bornite, and locally pyrrhotite and pyrite with arsenopyrite, form lenses, veins, tabular bodies, and disseminations in the silicates and magnetite. Gold and silver are associated with chalcopyrite. Average grade of ore mined during 1968 and 1969 was 0.98 gram per tonne gold, 7.59 grams per tonne silver and 1.92 per cent copper. See 092L 035 for further geological details.

Measured and indicated reserves are 272,154 tonnes grading 1.0 gram per tonne gold, 1.6 per cent copper and 30.0 per cent iron. The reserves are based on 1990 work and may have been included with the Merry Widow deposit (092L 044), but may be related to this property (N.C. Carter, personal communication, 1991).

BIBLIOGRAPHY

- EMPR AR 1921-348; 1922-355; 1924-368; 1928-375; 1959-132;
1961-97-100; 1968-A53; 1969-A52,A54,208; 1970-273
EMPR ASS RPT 1760, 2306
EMPR BC METAL MM00166
EMPR BULL 101, pp. 57, 177, Appendix 6
EMPR MAP 1962
EMPR MIN BULL MR 223 (1989) B.C. 175
EMPR OF 1991-8
EMPR P 1989-3, p. 109; 1991-8
EMPR PF (Plan of Claims - 1:9000; Diamond-drill Holes - 1:2400;
Benson Lake Mine Geology, CCP Zone, 1:2400, Cominco, 1972; Various
Mine Plans and Sketches, unlabelled, undated)
EMR MP CORPFILE (Coast Copper Company Ltd.; Quatsino Copper Gold
Mines Ltd.; MC File 167-C3-2-43; Benson Lake Mine; Empire Mine)
GSC BULL 172, p. 80
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918B, pp. 33-35; 1929A, p. 126
CANMET RPT 61-27
CIM Wilkins, J.D., The Benson Lake Mine, Operating Practice, Apr.,
1971
CMH 1966-67, p. 76; 1972-73, p. 71
GCNL #64, 1972
W MINER VOL. 35, #3, p. 29, The Benson Lake Project, Mar., 1962; Coast
Copper Opens New Mine, Jan., 1971
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of
British Columbia, Vol. 1: Vancouver Island, p. 187
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia
Statement of Material Facts, VSE, Quatsino Copper-Gold, September 22,

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

1975

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/30

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 092**

NATIONAL MINERAL INVENTORY:

NAME(S): **VULCAN (L.132)**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 16 16 N
LONGITUDE: 126 52 51 W
ELEVATION: 150 Metres

NORTHING: 5570923
EASTING: 651012

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Lot 132 is located 1.5 kilometres west of Nimpkish River
6.0 kilometres southeast of Nimpkish Lake.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal

DIMENSION: 0001 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Exposed mineralization is 1.2 to 1.5 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Upper Triassic

Vancouver

Karmutsen

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

Upper Triassic

Gymnotropite ammonites

Quatsino

Vancouver

ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarite ammonites

LITHOLOGY: Limestone

Amygdaloidal Andesite

HOSTROCK COMMENTS:

Karmutsen ammonites from Hisnit Island; Quatsino ammonites from Alice Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1952

SAMPLE TYPE: Grab

COMMODITY

GRADE

Copper

0.4500

Per cent

REFERENCE: Geological Survey of Canada Paper 272, page 76.

CAPSULE GEOLOGY

The area of the Vulcan occurrence has north striking carbonates and calcareous sediments of the Quatsino and Parson Bay Formations overlying Karmutsen Formation tholeiitic basalts, all of the Upper Triassic Vancouver Group.

Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff, breccia and minor sediments are coeval with, or genetically related to, granodiorite of the Nimpkish batholith of the Island Intrusions. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area.

The occurrence lies 2 kilometres northwest along strike of the Iron Crown mine (092L 034), at the contact between recrystallized Quatsino Formation limestone and amygdaloidal Karmutsen andesite.

The occurrence is described as "a small outcrop of quartz and pyrite, 1.2 to 1.5 metres wide containing a little chalcopyrite and magnetite". A sample of the richer pyrite material assayed 0.45 per cent copper and trace silver and gold (Geological Survey of Canada Memoir 272, page 76).

BIBLIOGRAPHY

GSC ANN RPT 1886
GSC BULL 47; 172; 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM *272, p. 76
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT 1929A; 1931A
CJES 18, p. 1; 20, p. 1 (Jan. 1983)
Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake,
unpubl. B.Sc. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1989/04/25
DATE REVISED: 1989/04/25

CODED BY: WV
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 093**

NATIONAL MINERAL INVENTORY:

NAME(S): **QUATSINO SOUND**, QUATSINO

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 30 41 N
LONGITUDE: 127 50 33 W
ELEVATION: Metres

NORTHING: 5596132
EASTING: 582070

LOCATION ACCURACY: Within 1 KM

COMMENTS: The latitude and longitude indicate the location of Kaprino Harbour.
The coal bearing strata extend to the east and west to Winter Harbour.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: Dips are generally between 5 to 60 degrees north.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous	Nanaimo	Undefined Formation	

LITHOLOGY: Shale
Sandstone
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

CAPSULE GEOLOGY

Approximately 1097 metres of the Cretaceous Nanaimo Group sequence are present in the Huknish Lagoon, northeast of Winter Harbour on Forward Inlet and the surrounding areas. Coal is present interbedded with shale and sandstone. At Huknish Lagoon one band of coal 0.3 metre thick is interbedded with shale and shale/coal bands. In an adjacent area 0.9 metre of shale and coal were encountered. The coal bearing horizon extends laterally to the Koprino Harbour area.

The beds at Winter Harbour dip 5 degrees to 60 degrees north but locally folds and faults produce varying dip directions and angles. Dips are generally 10 degrees to 20 degrees north in the Koprino area.

The West Vancouver Island Commercial Company operated in the area in the late 1800's.

BIBLIOGRAPHY

EMPR AR 1899-828; 1898-1165
EMPR COAL ASS RPT 203, 204, 205, 207, 208
GSC MAP 4-1974; 1552A
GSC MEM 69
GSC P 70-53; 74-8

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/16

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 094**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIDEWATER**, CLAMBAY, G

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L10E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 33 04 N
LONGITUDE: 126 32 17 W
ELEVATION: 1 Metres

NORTHING: 5602803
EASTING: 674405

LOCATION ACCURACY: Within 500M

COMMENTS: Located on small unnamed bay off Baronet passage, north side of west Cracroft Island.

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Pyrite
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Andesite
Tuff

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1984

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	2.0600	Grams per tonne
Copper	1.0300	Per cent

COMMENTS: Selected sample - Number 68021.
REFERENCE: Assessment Report 14230, page 8.

CAPSULE GEOLOGY

The occurrence is on Cracroft Island near the boundary of the Coast Crystalline Belt and the Insular Belt.

The west side of the island is underlain by andesite and tuff of the Upper Triassic Vancouver Group, Karmutsen Formation which have undergone regional greenschist facies metamorphism.

The Clam Bay occurrence on the Tidewater claim (formerly the G claim), consists of disseminated chalcopyrite, bornite and pyrite in tuff and andesite. Malachite and azurite are also present.

Selected samples assayed 0.82 to 2.13 per cent copper and associated silver values range between 1.85 to 3.09 grams per tonne silver (Assessment Report 14230, Figure 2A).

BIBLIOGRAPHY

EMPR ASS RPT 2695, *14230
EMPR EXPL 1985-C233
EMPR GEM 1969-190; 1970-228
GSC MAP 4-1974; 1552A
GSC MEM 23-129

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

GSC P 74-8

DATE CODED: 1988/11/28
DATE REVISED: 1989/05/30

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 095**

NATIONAL MINERAL INVENTORY:

NAME(S): **KOSKEEMO**, COAL HARBOUR, PEARSON,
NUKNIMISH

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:
LATITUDE: 50 36 13 N
LONGITUDE: 127 35 06 W
ELEVATION: Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

Underground

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

NORTHING: 5606702
EASTING: 600132

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: A04 Bituminous coal
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: The strata generally dips 10 to 30 degrees south however a "slight synclinal flexure" trending east is located across the northern part of Coal Harbour.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cretaceous	Nanaimo	Undefined Formation	

LITHOLOGY: Sandstone
Shale
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

CAPSULE GEOLOGY

The first of two coal bearing zones is located 61 metres to 91 metres below the uppermost conglomerates of the Cretaceous Nanaimo Group. The zone outcrops west of Coal Harbour and consists of 0.6 metres of coal. In adjacent areas the seam is split into three parts, with two lower approximately 15 centimetre coal bands and an upper 2.5 centimetres of coal separated by thick bands of mudstones. One hundred twenty-two metres to 152 metres lower, is the second coal bearing zone which contains approximately 1.1 metres of coal of "inferior" quality. A few tons of coal have been extracted from this seam approximately 2 kilometres west of the Nuknimish River mouth. The seam where observed west of Coal Harbour is of good quality and 0.6 metre to 0.9 metre in thickness. The coal is interbedded with sandstone, shale and conglomerate.

The strata generally dips approximately 10 degrees to 30 degrees south however a slight synclinal feature trending east is located across the northern part of Coal Harbour. A major fault occurs at the east entrance of the harbour and beds adjacent to the fault are disturbed and dip steeply north.

At Wogsta Creek 50 tons of coal were removed from a seam 1.5 metres thick. The coal contains 49.2 per cent fixed carbon, 23.6 per cent volatile matter, 2.70 per cent water, and 24.6 per cent ash. Drilling in the area revealed a seam at 8.5 metres which is 1.5 metres thick and thins laterally to approximately 0.9 metres.

This area includes the coal seam at Pearsons' upper camp and Nuknimish, both west of Coal Harbour.

BIBLIOGRAPHY

EMPR AR 1874-32-34
EMPR COAL ASS RPT 206, 209
GSC MAP 4-1974; 1552A
GSC MEM *69

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

GSC P 70-53; 74-8

DATE CODED: 1985/07/24
DATE REVISED: 1986/05/22

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 096**

NATIONAL MINERAL INVENTORY:

NAME(S): **WALDER**, TIDEWATER, G

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L10E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 33 09 N
LONGITUDE: 126 33 45 W
ELEVATION: 10 Metres

NORTHING: 5602900
EASTING: 672668

LOCATION ACCURACY: Within 500M

COMMENTS: Located on Walder Island in Baronet Passage, Johnstone Strait.

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite
ALTERATION: Carbonate
COMMENTS: Abundant carbonate veining reported in Assessment Report 14230.
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	

ISOTOPIC AGE: 230 Ma
DATING METHOD: Fossil
MATERIAL DATED: Gymnotropite ammonites

LITHOLOGY: Andesite

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1984

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

13.7200

Grams per tonne

Copper

1.7400

Per cent

COMMENTS: Selected sample.

REFERENCE: Assessment Report 14230, Figure 2A.

CAPSULE GEOLOGY

The occurrence is on Walder Island between Cracroft and Harble-down Islands, on the boundary between the Insular Belt and the Coast Crystalline Belt.

Walder Island and the adjacent islands are underlain by andesites and related rocks of the Upper Triassic Vancouver Group, Karmutsen Formation. The andesites have undergone regional greenschist facies metamorphism.

The occurrence consists of disseminated chalcopyrite in altered andesite. Abundant carbonate veining is evident.

A single sample collected assayed 1.74 per cent copper and 13.72 grams per tonne silver (Assessment Report 14230, Figure 2A).

BIBLIOGRAPHY

EMPR ASS RPT *14230
EMPR EXPL 1985-C233
GSC MAP 4-1974; 1552A
GSC P 74-8

DATE CODED: 1988/11/28
DATE REVISED: / /

CODED BY: WV
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 097**

NATIONAL MINERAL INVENTORY: 092L7 Fe2

NAME(S): **MAGNET**, EXCEL - EXCELSIOR, NIMP

MINING DIVISION: Nanaimo

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 24 29 N
LONGITUDE: 126 57 42 W
ELEVATION: 90 Metres

NORTHING: 5585987
EASTING: 644836

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Magnet claims (Assessment Report 94).

COMMODITIES: Magnetite Iron Copper

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite Pyrite Pyrrhotite
ASSOCIATED: Epidote Grossularite
ALTERATION: Epidote Diopside Grossularite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Massive Vein
CLASSIFICATION: Skarn Replacement Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
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Upper Triassic	Vancouver	Quatsino	
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ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarites ammonites

Upper Triassic	Vancouver	Karmutsen	
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ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

Jurassic			Island Plutonic Suite
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ISOTOPIC AGE: 151 +/- 14 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Limestone
Volcanic Rock
Diopside Grossularite Epidote Skarn
Granodiorite

HOSTROCK COMMENTS: Juvarite ammonites from Alice Lake. Gymnotropites ammonites from Hisnit Island. Biotite K-Ar date from Nimpkish batholith (GSC P 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP: Syn-mineralization GRADE: Hornfels

CAPSULE GEOLOGY

The area is underlain by volcanics and sediments of the Upper Triassic Vancouver Group (Karmutsen, Quatsino and Parson Bay formations) and by volcanics of the Lower Jurassic Bonanza Group. These rocks have been intruded by granodiorite of the Jurassic Island Plutonic Suite.

Locally, Karmutsen volcanics are overlain by a flat-lying remnant of Quatsino limestone. To the southeast these rocks are intruded by granodiorite. Along or near the contact with the granodiorite and near the limestone-volcanic contact, massive magnetite bodies are associated with diopside-grossularite-epidote skarns. Veins and disseminations of pyrite, pyrrhotite and chalcopyrite occur in the magnetite bodies and the skarns.

BIBLIOGRAPHY

EMPR ASS RPT *93, *94, *4447, 4789, 10986, 12348
EMPR EXPL 1982-228; 1983-334
EMPR GEM 1973-259
GSC ANN RPT 1886
GSC BULL 172; 242
GSC MAP 1029A; *4-1974

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT 1929A; *1931A, p. 32
CJES 18, p. 1; 20, p. 1, Jan., 1983
GCNL #12, 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/10

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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REPORT: RGEN0100

BIBLIOGRAPHY

GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A; 4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/17

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 099**

NATIONAL MINERAL INVENTORY: 092L12 Cu2

NAME(S): **BAY 21**, ISLAND COPPER, A

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:
LATITUDE: 50 36 39 N
LONGITUDE: 127 30 42 W
ELEVATION: 45 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5607607
EASTING: 605305

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Pyrite
ALTERATION: Silica Epidote Chlorite Carbonate
ALTERATION TYPE: Silicific'n Propylitic
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: 154 +/- 6 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au
DIMENSION: STRIKE/DIP: 300/60N TREND/PLUNGE:
COMMENTS: Stringers trending 060 to 335 degrees in zone trending 300/60N.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Andesite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite K-Ar date from Rupert Inlet stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Contact Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1965
SAMPLE TYPE: Channel
COMMODITY GRADE
Silver 34.3000 Grams per tonne
Gold 0.3400 Grams per tonne
Copper 4.1700 Per cent
COMMENTS: Channel sample over 1.4 metres.
REFERENCE: Assessment Report 710.

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics and sediments, intruded by rocks of the Late Jurassic Island Plutonic Suite.

Locally, on the old Bay 21 claim (now part of M 34, Lot 2145), copper mineralization has been exposed in two trenches. Andesite displaying heavy propylitic alteration is laced with chalcopyrite and pyrite in stringers up to 2.5 metres wide. The stringers trend 060 to 335 degrees in a zone trending 300 degrees and dipping 60 degrees north. The footwall, associated with a parallel fault, is intensely bleached and silicified with considerable disseminated pyrite and rare specks of chalcopyrite.

CAPSULE GEOLOGY

A channel sample from each trench across the exposed part of the mineralized zone gave the following results: 4.17 per cent copper, 34.3 grams per tonne silver and 0.34 grams per tonne gold over 1.4 metres and 3.37 per cent copper, 41.1 grams per tonne silver and 0.34 grams per tonne gold over 1.2 metres (Assessment Report 710).

The occurrence is near the Island Copper deposit (refer to 092L 158-Island Copper for details).

BIBLIOGRAPHY

- EMPR AR 1966-65; 1967-68; 1968-84,88
EMPR ASS RPT *710, 5265, 9305
EMPR GEM 1969-88; 1970-254,267
EMPR PF (092L 158-Island Copper)
EMR NMI (092L12 Cu21)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CIM Spec. Vol. *46, pp. 214-238
CJES 18, p. 1; 20, p. 1, Jan. 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/08

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

were obtained (Assessment Report 14618, sample #50, Figure 3 and page 4).

BIBLIOGRAPHY

EMPR AR 1946-178
EMPR ASS RPT *14618, 15562, 17134
EMPR EXPL 1986-C278; 1987-C220
GSC ANN RPT 1886
GSC MAP 4-1974; 247; 1436; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1913, 1920A; 1929A

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/24

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 101**

NATIONAL MINERAL INVENTORY: 092L3 Au3

NAME(S): **ECLIPSE**, DL 1-12, NARROW GUT,
REMARKABLE, STONE NIPPLES, CONNOISSEUR,
LAIRD, NOBS

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03E 092E14E
BC MAP:
LATITUDE: 50 00 09 N
LONGITUDE: 127 05 26 W
ELEVATION: 500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location is the "Eclipse" showing, (Assessment Report 15153),
2.3 kilometres south of Amai Inlet, 1.5 kilometres southeast of
092L 033 (Patmore).

MINING DIVISION: Alberni
UTM ZONE: 09 (NAD 83)
NORTHING: 5540656
EASTING: 636833

COMMODITIES: Gold

MINERALS

SIGNIFICANT:	Telluride	Gold	Pyrite		
ASSOCIATED:	Pyrite	Quartz			
ALTERATION:	Quartz	Chlorite	Epidote	Pyrite	Biotite
ALTERATION TYPE:	Silicific'n		Propylitic		
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION:
COMMENTS: Attitude of vein-shear is south, dip is vertical.

STRIKE/DIP: 180/90 TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Granodiorite
Felsic Dike
Lamprophyre Dike

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; intrusive phlogopite-Zeballos intrusion (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Chip
COMMODITY: Gold GRADE: 1035.8700 Grams per tonne

COMMENTS: Highest assay over 2 by 20 centimetres.
REFERENCE: Assessment Report 15153, page 8, Sample #2003.

CAPSULE GEOLOGY

The region of the Eclipse occurrence is underlain by flows and pyroclastics of the Lower Jurassic Bonanza Group, intruded by granitic rocks of the Jurassic Island Plutonic Suite.

The volcanic rocks consist of massive to porphyritic, andesitic to basaltic flows that exhibit strong epidote alteration, occurring as veinlets and patches. Grey coloured aphanitic to porphyritic feldspar dacite flows and tuffs overlie the mafic rocks, and are in

CAPSULE GEOLOGY

turn overlain by a cyclical sequence of subaerial pyroclastic felsic tuff and flows.

Medium to coarse-grained hornblende granodiorite, tonalite and minor quartz-diorite have intruded the volcanics. The contacts between the intrusive phases are mostly transitional. Contacts with the volcanics can be sharp, interpreted as fault contacts, or transitional zones, up to 130 metres wide. Post intrusive aplite and lamprophyre dykes cut both granitic and volcanic rocks.

At the Eclipse occurrence, north to northeast trending dykes and coincident fault and fracture zones cut the granodiorite rocks, and are accompanied by silicification and an alteration assemblage that includes chlorite, epidote, pyrite and biotite.

Bleaching of wallrock is common. Native gold-telluride-pyrite mineralization occurs with biotite, chlorite and quartz in a narrow central zone of intense shearing, flanked by a zone of fracturing that is up to several metres wide and locally contains some native gold in chlorite-epidote filled fractures and slip surfaces.

Values to 1035.87 grams per tonne and 270.89 grams per tonne gold (sample Number 2003 over 2 by 20 centimetres and sample Number 3003 over 4 by 100 centimetres respectively; Assessment Report 15153, page 8) have been obtained, but trenching suggests that the mineralized zone on surface is limited.

The "Laird zone" located 65 metres east of the Eclipse zone, has a similar geological setting. The maximum value obtained was 0.508 grams per tonne gold over 3 centimetres (Assessment Report 15153, page 10).

The Assessment Report refers to other occurrences on the property (DL-8, Amai Creek, Breccia and Road showings - Assessment Report 14744, Figure 6), but no details or assays are given.

The occurrence is adjacent to 092L 033 (Patmore) and exploration work has at times been done in conjunction with work on that occurrence.

BIBLIOGRAPHY

- EMPR AR 1941-42; 1946-178; 1947-180; 1955-78
EMPR ASS RPT 7062, 14369, 14744, 15079, *15153, 15903
EMPR EXPL 1978-E181; 1980-268; 1986-C152,C217; 1987-C220
EMPR GEM 1974-209
EMR MP CORPFILE (New Jericho Dev. Corp. Ltd.; Lim Mines Ltd; Cal-Denver Resources Ltd.)
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1913; 1920A
GCNL #18,#67, 1985
NAGMIN Jul.19, 1985
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/26

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 102**

NATIONAL MINERAL INVENTORY: 092L6 Fe11

NAME(S): **SNOWBIRD (L.1586-1588)**, OWL (L.1585), NEW HANDY ANDY,
HEMLOCK 2

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

MINING DIVISION: Nanaimo

LATITUDE: 50 22 57 N
LONGITUDE: 127 16 41 W
ELEVATION: 457 Metres

UTM ZONE: 09 (NAD 83)

LOCATION ACCURACY: Within 500M

NORTHING: 5582577
EASTING: 622421

COMMENTS: Location of common post for Lots 1585 to 1588 is 1.5 kilometres south
of Kathleen Lake, 2 kilometres southwest of the mouth of Craft Creek.

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Replacement Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
	ISOTOPIC AGE: 225 Ma		
	DATING METHOD: Fossil		
Lower Jurassic	MATERIAL DATED: Juvarite ammonites	Undefined Formation	
	Bonanza		
	ISOTOPIC AGE: 200 Ma		
	DATING METHOD: Fossil		
Jurassic	MATERIAL DATED: Mollusks		Island Plutonic Suite
	ISOTOPIC AGE: 178 +/- 8 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Phlogopite		

LITHOLOGY: Greenstone
Limestone
Skarn
Diorite
Gabbro

HOSTROCK COMMENTS: Ammonites from Alice Lake; mollusks from Quatsino Sound; phlogopite
from Empire Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

CAPSULE GEOLOGY

The area is underlain by a small wedge of northwest striking Lower Jurassic Bonanza Group greenstone which overlies Upper Triassic Vancouver Group, Quatsino Formation limestone. Both the Vancouver and Bonanza Group rocks have been intruded by diorite and gabbro of the "Coast Copper" stock of the Jurassic Island Plutonic Suite. Massive magnetite mineralization occurs on Lot 1104 (Hemlock #2) and Lot 1588 (Snowbird #2) in skarn altered rocks.

BIBLIOGRAPHY

EMPR AR 1921-348; 1960-90; 1961-97
EMPR ASS RPT 385
EMPR MAP Preliminary Geological Map, Alice Lake-Benson Lake Area, Jeffery, W.G., (1962)
EMPR PF (Lamb, J., (1959): Report in Merry Widow - 092L 044)
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8; 79-30
GSC SUM RPT 1918A; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/28

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 103**

NATIONAL MINERAL INVENTORY: 092L6 Au2

NAME(S): **RED ROCK**, PAYSTREAK, BOY 1,
MOON 2, ROYAL

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo

LATITUDE: 50 24 00 N
LONGITUDE: 127 30 21 W
ELEVATION: 30 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5584173
EASTING: 606189

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization from 1903 Minister of Mines Annual Report,
near mouth of Teeta River, 400 metres from Neroutsos Inlet.

COMMODITIES: Gold Silver Copper Zinc

MINERALS

SIGNIFICANT: Pyrrhotite Sphalerite
COMMENTS: Traces of gold, silver, copper. Mineralogy not known.

ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Unknown

SHAPE: Tabular

DIMENSION: 0003 Metres

STRIKE/DIP: 315/45W

TREND/PLUNGE:

COMMENTS: Sediments strike northwest, dip 30 to 45 degrees west.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Amygdaloidal Andesite
Calcareous Clastic Rock
Diorite
Diabase
Felsic Rock

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Island; Parson Bay mollusks from
Beaver Cove; biotite from Island Copper stock.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The Red Rock occurrence is located in the Insular Belt of the Cordillera. The region is underlain mainly by volcanics and crystalline rocks and minor sediments.

Overlying an assemblage of Paleozoic Sicker Group sediments and Upper Triassic basalts and minor carbonate and clastic sediments of the Vancouver Group is the Lower Jurassic Bonanza Group of andesitic to rhyodacitic lava, tuff and breccia. Bonanza volcanism is coeval with, or genetically related to Jurassic Island Plutonic Suite granodiorite that has invaded all older rocks, and in this area occurs as small isolated stocks.

Northwest striking, 45 degrees west dipping calcareous clastic rocks of the Vancouver Group, Parson Bay Formation, are conformably overlain by Bonanza Group amygdaloidal andesite, in part silicified. A diorite stock lies 1 kilometre to the south of the Red Rock occurrence. Part of the Paystreak claim group, is described in the Minister of Mines 1903 Annual Report as a 3 metre massive pyrrhotite band hosted in diabase and felsic rocks. Assays returned traces of

CAPSULE GEOLOGY

gold, silver and copper. The 1904 Annual Report reports "fair values" in gold, copper and zinc.

The location given in the 1903 Minister of Mines Annual Report places the occurrence on the Moon 2, Boy 1 claims of Assessment Report 5997. The description given in Geological Survey of Canada Summary Report 1929 (page 133, Paystreak) may refer to the same occurrence.

BIBLIOGRAPHY

EMPR AR *1903-200; 1904-245; 1906-200; 1968-99
EMPR ASS RPT 5567, 5997, 8629, 9451, 12773, 16552
EMPR EXPL 1975-E114; 1976-E128; 1980-270; 1984-241; 1987-220
EMPR GEM 1969-206
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; 1929A, p. 133
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/19

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 104**

NATIONAL MINERAL INVENTORY: 092L5 Cu2

NAME(S): **EDISON (L.244)**, SUPERIOR (L.106), GOLDEN ERA (L.104),
YREKA

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo

LATITUDE: 50 27 34 N
LONGITUDE: 127 34 19 W
ELEVATION: 610 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5590690
EASTING: 601364

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization is on the border of Lots 104 and 106, 0.5 kilometres north of the Yreka Mine, 1.2 kilometres west of Neroutsos Inlet.

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite
COMMENTS: Silver mineralogy not known.
ASSOCIATED: Garnet Epidote
ALTERATION: Pyrrhotite Epidote Garnet
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Skarn
SHAPE: Tabular
DIMENSION: 0001 Metres
COMMENTS: Number 3 showing is 1.37 metres wide.

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Garnet Epidote Skarn
Limy Tuff
Granodiorite
Mafic Dike
Felsic Dike

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Parson Bay mollusks from Beaver Cove; biotite from Island Copper stock.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY

YEAR: 1972

COMMODITY	GRADE	
Silver	126.9000	Grams per tonne
Copper	7.7500	Per cent

COMMENTS: Chip sample over 1.37 metres. One of 3 showings.
REFERENCE: Map, Uke Resources.

CAPSULE GEOLOGY

The Edison occurrence is located in the Insular Belt of the Cordillera. The region is underlain mainly by volcanics and crystalline rocks and minor sediments.

At the occurrence, northwest striking, moderately west dipping calcareous sediments of the Parson Bay Formation overlie Karmutsen Formation tholeiitic basalts, both of the Upper Triassic Vancouver Group. Overlying Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff and breccia are coeval with, or genetically related to, Island Plutonic Suite granodiorite, that in this area occurs as small isolated plutons.

The occurrence lies 0.5 kilometres north of the Yreka mine (092L 052) and like it, contains lenses of chalcopyrite-pyrrhotite associated with garnet-epidote altered limestone and limy tuff, intruded by mafic and felsic dykes.

The map in Property File (Tuscarora - 092L 236) gives the following assay results:

Number 2 showing: 4.20 per cent copper, 74.1 grams per tonne
silver over 0.76 metres;
Number 3 showing: 7.75 per cent copper, 126.9 grams per tonne
silver over 1.37 metres;
Number 8 showing: 8.52 per cent copper, 124.1 grams per tonne
silver over 1.22 metres.

The Number 3 showing is believed to represent the original Edison occurrence, the Number 2 and 8 showings lie 200 and 90 metres west, respectively.

Sphalerite and galena in skarn beds 10 to 15 centimetres thick, striking 285 degrees and dipping 70 degrees north are reported interbedded with barren greenish fine-grained limestone in Edison Creek. This style of mineralization is unique for the chalcopyrite-pyrrhotite Yreka Camp.

BIBLIOGRAPHY

- EMPR AR 1902-234; 1903-195,199,257; 1904-245; 1906-200,255;
*1953-167
EMPR ASS RPT 3164, 3165, 4425, 7981
EMPR EXPL 1980-270
EMPR GEM 1971-317; 1972-288; 1973-258
EMPR PF (Map, Uke Resources, approximate scale 1:6394, in Tuscarora -
092L 236; Various Maps in Yreka - 092L 052)
EMR CORPFILE (Iso Exploration Ltd.)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B, p. 35; *1929A, p. 124
GCNL #177, 1981
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/20

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 105**

NATIONAL MINERAL INVENTORY: 092L5 Cu17

NAME(S): **CLIMAX**, UNCLE SAM

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 27 19 N
LONGITUDE: 127 34 46 W
ELEVATION: 900 Metres

NORTHING: 5590217
EASTING: 600840

LOCATION ACCURACY: Within 1 KM

COMMENTS: The Minister of Mines Annual Report of 1906 (page 200) gives the location as adjoining the Yreka claims (092L 052) to the north, higher on Comstock Mountain. This would place the occurrence 2 kilometres west of Neroutsos Inlet.

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite
COMMENTS: Gold, silver mineralogy not known.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
DIMENSION: 1 Metres
COMMENTS: "Lead" is 1.2 metres wide.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	

ISOTOPIIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks

LITHOLOGY: Andesite Flow
Andesite Tuff

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Parson Bay mollusks from Beaver Cove; biotite from Island Copper stock.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks
PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area where the occurrence is located (from Minister of Mines Annual Reports) is underlain by Lower Jurassic Bonanza Group andesite flows and tuffs.

After the 1902 and 1906 descriptions in Minister of Mines Annual Reports, the occurrence is "lost". It may have been renamed or incorporated with others (Edison - 092L 104 and Yreka - 092L 052).

BIBLIOGRAPHY

EMPR AR 1902-234; *1906-200; *1953-167
EMPR ASS RPT 3164, 3165, 4425, 7981
EMPR EXPL 1970-272; 1971-317; 1972-288; 1973-258; 1980-270
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/21

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 106**

NATIONAL MINERAL INVENTORY: 092L5 Cu3

NAME(S): **ROSSLAND**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 24 59 N
LONGITUDE: 127 32 46 W
ELEVATION: 600 Metres

NORTHING: 5585938
EASTING: 603291

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location from National Mineral Inventory Number 92L5 Cu3,
2.4 kilometres west of Neroutsis Inlet on Goquaw Creek.

COMMODITIES: Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Andesite
Rhyodacite
Tuff
Breccia
Lava

HOSTROCK COMMENTS: Mollusks from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff and breccia. Galena and chalcopyrite mineralization are reported, explored by a 1.2 metre tunnel and 4 open cuts (Minister of Mines Annual Report 1906, page 200).

BIBLIOGRAPHY

EMPR AR 1906-200
GSC MAP 4-1974; 1552A
GSC P 74-8

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/17

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 107**

NATIONAL MINERAL INVENTORY: 092L3 Fe1

NAME(S): **CALEDONIA (KAS)**, WATERLOO, KAS,
ALFONS

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 12 53 N
LONGITUDE: 127 20 06 W
ELEVATION: 375 Metres

NORTHING: 5563831
EASTING: 618790

LOCATION ACCURACY: Within 500M

COMMENTS: Location of old trenches and Alfons 1-3 claim post is 2.8 kilometres northwest of the mouth of Kashutl River at the head of Kashutl Inlet.

COMMODITIES: Iron Copper Manganese

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite Hematite Bornite
ALTERATION: Epidote Garnet Quartz Azurite Malachite
ALTERATION TYPE: Epidote Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Epigenetic Industrial Min.
SHAPE: Bladed
MODIFIER: Faulted
DIMENSION: 0050 x 0003 Metres STRIKE/DIP: 090/10N TREND/PLUNGE:
COMMENTS: Attitude of local stratigraphy is west.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 220 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Andesite
Diorite

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; biotite-K-Ar from Nimpkish Batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1920
SAMPLE TYPE: Grab
COMMODITY: Copper GRADE PERCENT
Copper 2.7000 Per cent

COMMENTS: Average of 3 samples.
REFERENCE: Minister of Mines Annual Report 1920, page N202.

CAPSULE GEOLOGY

The area of the Caledonia occurrence is underlain by Lower Jurassic Bonanza Group volcanics which are intruded by granodiorite of the Late Jurassic Island Plutonic Suite.

At the occurrence, west striking, 5 to 15 degrees north dipping andesite is interbedded with two limestone beds, separated by 50 metres of barren, epidote-altered andesite. Diorite of the Island Plutonic Suite outcrops 500 metres to the west as well as 400 metres east. Minor faulting, with offsets to 6 metres, is present. Mineralization occurs in the limestone units. The lower unit which is 1.5 metres thick, contains magnetite with traces of chalcopyrite.

CAPSULE GEOLOGY

The upper limestone unit is 3 metres thick and has been traced for 50 metres along its length. Mineralization consists of chalcopyrite, magnetite and hematite in a gangue of garnet, epidote, quartz and calcite. Traces of bornite, malachite and azurite are reported. Copper assays from 3 open cuts returned values between 0.5 and 4.0 per cent (Minister of Mines Annual Report 1920, page N202).

BIBLIOGRAPHY

EMPR AR *1920-N202; 1925-274
EMPR ASS RPT 419, 1926
EMPR GEM 1969-215
EMPR PF (Geological map, Kashutl Area, 1974, Brinex/Semco, 1:12000;
Map showing Kashutl Stock and Surrounding Area, 1:50000)
GSC ANN RPT 1886
GSC EC GEOL SERIES 3-247
GSC MAP 4-1974; 247, 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1913; 1920A, pp. 12,21; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/16

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 108**

NATIONAL MINERAL INVENTORY: 092L10 Grp1

NAME(S): **HARBLEDOWN ISLAND GRAPHITE**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L10E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 33 17 N
LONGITUDE: 126 37 35 W
ELEVATION: 1 Metres

NORTHING: 5603000
EASTING: 668135

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located on Harbledown Island at mouth of Knight Inlet. Exact location not known, but taken to be that of general area of Parson Bay Formation rocks.

COMMODITIES: Graphite

MINERALS

SIGNIFICANT: Graphite
COMMENTS: Graphitic schistose rocks.

MINERALIZATION AGE: Unknown

ISOTOPIC AGE: 215 Ma

DATING METHOD: Fossil

MATERIAL DATED: Halobia mollusks

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Syngenetic Industrial Min.
TYPE: P03 Microcrystalline graphite
SHAPE: Tabular
COMMENTS: Age of mineralization is that of Parson Bay Formation.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE:	215 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Halobia mollusks		

LITHOLOGY: Graphitic Schistose Rock

HOSTROCK COMMENTS: Mollusks from Beaver Cove area (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SHAFT

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY: Graphite
GRADE: 0.5000 Per cent

COMMENTS: Sample from shaft.

REFERENCE: Minister of Mines Annual Report 1919, page 213.

CAPSULE GEOLOGY

The showing was discovered before 1919 by the Fyfe brothers; the sunk a shallow shaft on the beach. Harbledown Island lies at the eastern margin of the Insular belt near its contact with the Coast Crystalline Belt.

The northern part of the Island is underlain by Jurassic granodiorite of the Coast Plutonic Complex which intrudes Upper Triassic Vancouver Group rocks comprised of Karmutsen Formation volcanics, and calcareous clastics of the Parson Bay Formation.

The occurrence is reported to be in graphitic schistose rock of the Parson Bay Formation.

BIBLIOGRAPHY

EMPR AR *1919-213
GSC MAP 4-1974; 1552A

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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ENERGY AND MINERALS DIVISION

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BIBLIOGRAPHY

GSC P 74-8

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/13

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

Early to Middle Jurassic Island Plutonic Suite intrudes the limestone from the southeast.

On the Doro claim, 1 kilometre north of Bonanza Lake, the strata strike north and dip 25 degrees east. Further north, bedding strikes northwest and dips moderately southwest. A west trending fault just north of the Doro claim likely separates the northern and southern portions of the deposit into two fault blocks that have rotated with respect to each other.

The deposit is comprised of an upper medium to dark grey limestone member and a lower light grey to white limestone member. The upper member is occasionally contaminated with chert nodules and minor tremolite. The lower member is fine to coarse grained and stylolitic. Thin beds and lenses of dark grey pyritic chert accompany this limestone near the south end of the deposit. The chert nodules and pyritic chert lenses become more numerous near the basalt contact and the monzonite stock. Numerous sills and dykes of aplite, diorite and amphibolite have intruded the limestone on the Doro claim. Four samples of powdered limestone from a series of percussion holes drilled in the lower member on the Doro claim averaged 53.5 per cent CaO, 0.38 per cent MgO, 2.05 per cent insolubles, 0.58 per cent R2O3, and 86.5 per cent brightness (Assessment Report 10193, p. 4). Two chip samples, taken in succession along 305 metres of road cut just east of the north end of Bonanza Lake, averaged 55.08 per cent CaO, 0.11 per cent MgO, 1.02 per cent insolubles, 0.33 per cent R2O3, 0.055 per cent Fe2O3, 0.008 per cent MnO, 0.02 per cent P2O5 and 43.55 per cent ignition loss (Annual Report 1968, p. 318, Samples 30 and 31). The Doro claim is estimated to contain 27 million tonnes of limestone in a 457 metre by 366 metre block (Assessment Report 10193, p. 1)

The deposit on the Doro claim was initially quarried for dimension stone sometime before 1982, but no production figures are available. The International Marble and Stone Company drilled the deposit in 1982 and drove a 65-metre long adit on the Doro claim during a search for white limestone. Development work was discontinued after encountering grey limestone extensively contaminated by dykes. Some mapping and diamond drilling was carried out by Industrial Fillers Ltd. over the rest of the deposit in 1988.

BIBLIOGRAPHY

EMPR AR *1968-312,317,318
EMPR ASS RPT *10193, *17760
EMPR EXPL 1985-A48
EMPR FIELDWORK *1985, pp. 239,240
EMPR OF 1991-20; 1992-18, pp. 31, 32-33
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC OF 7; 170; 463, Sheet 2
GSC P 70-1A; 72-44; 74-8

DATE CODED: 1989/07/24
DATE REVISED: 1989/07/24

CODED BY: PSF
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 216
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 4-1974; 1552A
GSC P 74-8, p. 61

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/16

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 111**

NATIONAL MINERAL INVENTORY: 092L11 Cu4

NAME(S): **MARBLE CREEK**, KAR, BRAM

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 31 55 N
LONGITUDE: 127 27 16 W
ELEVATION: 40 Metres

NORTHING: 5598918
EASTING: 609536

LOCATION ACCURACY: Within 500M

COMMENTS: South bank of Marble River (Assessment Report 9317).

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Malachite
ASSOCIATED: Quartz
ALTERATION: Malachite Quartz
ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	

ISOTOPIC AGE: 230 Ma
DATING METHOD: Fossil
MATERIAL DATED: Gymnotropite ammonites

LITHOLOGY: Amygdaloidal Basalt

HOSTROCK COMMENTS: Ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: MAIN SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY

YEAR: 1979

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	10.9700	Grams per tonne
Gold	0.1700	Grams per tonne
Copper	5.0900	Per cent

COMMENTS: Chip sample across 9.1 metres.

REFERENCE: Assessment Report 9317.

CAPSULE GEOLOGY

The region is underlain by northwest trending volcanics and sediments of the Upper Triassic Vancouver Group (Karmutsen and Quatsino formations) and the Lower Jurassic Bonanza Group.

On the south shore of Marble River, chalcopyrite and bornite are present as disseminations and in quartz veinlets within amygdaloidal basalt of the Karmutsen Formation. A chip sample across 9.1 metres assayed 5.09 per cent copper, 10.97 grams per tonne silver and 0.17 grams per tonne gold (Assessment Report 9317). Mineralization is also reported from north of the river.

BIBLIOGRAPHY

EMPR AR 1902-234; 1930-295; 1967-69; 1968-98
EMPR ASS RPT *9317
EMPR EXPL 1980-272
EMPR MAP 1962
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A; 4-1974
GSC MEM 23
GSC OF 9; 170; 463; 722

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983
GCNL #22, 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/30

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 112**

NATIONAL MINERAL INVENTORY: 092L6 Cu2

NAME(S): **MINERVA FR. (L.171,183)**, OLGA

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 26 19 N
LONGITUDE: 127 25 06 W
ELEVATION: 305 Metres

NORTHING: 5588595
EASTING: 612316

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on the boundary of Lots 171 and 183 is 1 kilometre west of Alice Lake, 1.5 kilometres north of Marble River.

COMMODITIES: Zinc Copper Iron Magnetite

MINERALS

SIGNIFICANT: Sphalerite Magnetite Pyrite Pyrrhotite Chalcopyrite
ALTERATION: Epidote Garnet Chlorite Actinolite Tremolite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Industrial Min.
SHAPE: Tabular
DIMENSION: 0020 x 0003 x 0001 Metres STRIKE/DIP: 090/60S TREND/PLUNGE:
COMMENTS: Attitude of mineralization is 090 degrees, dip ranges from 45 degrees north to 68 degrees south.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Skarn
Garnetite
Andesitic Flow
Fine Grained Tuff
Hornblende Diorite
Hornblende Diorite Dike
Granodiorite
Feldspar Porphyry
Aplite

HOSTROCK COMMENTS: Mollusks from Alice Lake. Biotite from Island Copper Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1963
SAMPLE TYPE: Chip	
COMMODITY	GRADE
Copper	0.2000 Per cent
Zinc	11.0000 Per cent
COMMENTS: Sample over 1.37 metres.	
REFERENCE: Assessment Report 502, Figure C.	

CAPSULE GEOLOGY

At the occurrence, Upper Triassic Vancouver Group Quatsino Formation limestone is interbedded with andesite flows and fine-grained tuffs, striking west and dipping 45 degrees north. These

CAPSULE GEOLOGY

rocks are in contact with an early intrusive phase consisting of dykes, sills and stocks of dark green hornblende diorite, and a later phase of more felsic rocks consisting of fine-grained granodiorite to light grey to white feldspar porphyry and aplite. The intrusive rocks belong to the Jurassic Island Plutonic Suite.

Limestone and volcanics near the intrusive contact have been epidote-chlorite-garnet-tremolite-actinolite altered. Mineralization consists of a 0.6 to 1.2 metre wide zone of massive sphalerite, magnetite, pyrite and pyrrhotite in crushed country rock and garnetite, exposed by trenching over a strike length of 20 metres and a depth of 3 metres. The zone strikes 090 degrees and dips 45 degrees north to 68 degrees south.

An assay of 11.0 per cent zinc and 0.2 per cent copper over 1.37 metres is reported (Assessment Report 502, Figure C; Minister of Mines Annual Report 1916).

BIBLIOGRAPHY

- EMPR AR 1906-200; *1916-343; 1963-127
EMPR ASS RPT 502, 1885
EMPR GEM 1969-207
EMPR MAP 1962
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1918B; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/21

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 113**

NATIONAL MINERAL INVENTORY: 092L11 Cu7

NAME(S): **FRANCES**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 37 59 N
LONGITUDE: 127 27 06 W
ELEVATION: 180 Metres

NORTHING: 5610165
EASTING: 609498

LOCATION ACCURACY: Within 500M

COMMENTS: Approximate centre of Frances claims (Assessment Report 8284).

COMMODITIES: Copper Zinc Iron

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Pyrite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn Replacement Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Limestone
Granodiorite
Volcanic Rock

HOSTROCK COMMENTS: Ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

CAPSULE GEOLOGY

The region is underlain by northwest trending Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen, Quatsino Formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by granodiorite stocks of Jurassic Island Intrusions.

In the area of the old Frances claims, chalcopyrite, sphalerite and pyrite occur in skarn zones at the footwall and hangingwall contacts of a limestone band in Karmutsen volcanics. For detailed descriptions of similar showings refer to 092L 159, Little Joe; 092L 315, Cranberry; 092L 316, West; 092L 317, Swamp; 092L 318, Branch.

BIBLIOGRAPHY

EMPR AR 1959-132; 1968-84
EMPR ASS RPT *8284, 9853, 13009, 13716
EMPR EXPL 1978-E182; 1979-190; 1983-335
EMPR GEM 1970-254
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A; 4-1974
GSC MEM 23
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/28

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 114**

NATIONAL MINERAL INVENTORY: 092L6 Fe12

NAME(S): **EAGLE (L.1154)**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 20 34 N
LONGITUDE: 127 15 31 W
ELEVATION: 579 Metres

NORTHING: 5578193
EASTING: 623907

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization (from National Mineral Inventory Card Number 092L Fe12) is 3 kilometres west of Benson River, 4.5 kilometres south of Benson Lake.

COMMODITIES: Copper Cobalt

MINERALS

SIGNIFICANT: Chalcopyrite Cobaltite
COMMENTS: Style of mineralization not known.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Quatsino	
	ISOTOPIC AGE: 225 Ma		
	DATING METHOD: Fossil		
Lower Jurassic	MATERIAL DATED: Juvavite ammonites	Undefined Formation	
	Bonanza		
	ISOTOPIC AGE: 200 Ma		
	DATING METHOD: Fossil		
Jurassic	MATERIAL DATED: Mollusks		Island Plutonic Suite
	ISOTOPIC AGE: 178 +/- 8 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Phlogopite		
	LITHOLOGY: Limestone		
	Tuff		
	Diorite		

HOSTROCK COMMENTS: Ammonites from Alice Lake. Mollusks from Quatsino Sound. Phlogopite from Empire Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The property is underlain by Upper Triassic Vancouver Group Quatsino Formation limestone and Lower Jurassic Bonanza Group tuff which is intruded by a diorite stock of the Jurassic Island Plutonic Suite.

Weak chalcopyrite-cobaltite mineralization is disseminated along the limestone-tuff contact. The tuff wedges out downward between limestone and diorite.

BIBLIOGRAPHY

EMPR AR 1924-225; 1926-306
EMPR MAP 1962
EMR MP CORPFILE (Quatsino Copper-Gold Mines Ltd.)
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/23

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 114**

MINFILE NUMBER: **092L 115**

NATIONAL MINERAL INVENTORY: 092L6 Cu4

NAME(S): **DRY HILL (L.1548)**, YOUNG SPORT 4 (L.1556)

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 21 14 N
LONGITUDE: 127 14 06 W
ELEVATION: 278 Metres

NORTHING: 5579468
EASTING: 625558

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on Lot 1548 (from Property File - 092L 091) is 0.5 kilometres west of Benson River, 3 kilometres south of Benson Lake.

COMMODITIES: Cobalt Copper

MINERALS

SIGNIFICANT: Cobaltite Chalcopyrite Pyrite
ALTERATION: Erythrite Garnet Epidote Serpentine Quartz
 Pyrite Graphite

ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown Skarn Sericitic

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Replacement

SHAPE: Tabular
MODIFIER: Sheared

DIMENSION: 0002 Metres STRIKE/DIP: 315/45N

TREND/PLUNGE:

COMMENTS: Mineralization is 2.4 metres wide in shear zone striking northwest, dipping 45 degrees north.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 178 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Skarn
Tuff
Agglomerate
Diorite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Quatsino ammonites from Alice Lake; phlogopite from Benson Lake (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

CAPSULE GEOLOGY

The occurrence lies in faulted Upper Triassic Vancouver Group Quatsino Formation limestone near its eastern contact with Lower Jurassic Bonanza Group tuffs and agglomerates, 2 kilometres east of the Jurassic Island Plutonic Suite Coast Copper stock. The fault zone strikes 315 degrees and dips 45 degrees northeast. About 1.5 metres from the fault, in the hangingwall, cobaltite and chalcopyrite occur with garnet alteration. Cobaltite is oxidized to erythrite. Skarn alteration minerals include epidote and serpentine. Silicification, pyrite and graphite are present.

BIBLIOGRAPHY

EMPR AR 1922-355; 1928-375; 1929-379; 1960-90

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 224
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR MAP Preliminary Geological Map, Alice Lake-Benson Lake Area,
Jeffery W.G., (1962)
EMPR PF (various maps in 092L 091, Independent)
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; *1929A, p. 126
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/23

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 116**

NATIONAL MINERAL INVENTORY: 092L1 Cu1

NAME(S): **LUCKY JIM**, D1, D6,
S & L, S & L 2, MARIO,
LUCKY JOHN, MARJORIE

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L01E
BC MAP:
LATITUDE: 50 11 46 N
LONGITUDE: 126 07 13 W
ELEVATION: 457 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of the drill hole from Assessment Report 13589 is on the southside of Adam River, 2 kilometres southwest of the confluence of Compton Creek.

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5564405
EASTING: 705525

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite Arsenopyrite
ASSOCIATED: Calcite Hornblende
COMMENTS: Calcite-hornblende breccia.
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia Disseminated
CLASSIFICATION: Igneous-contact Skarn Industrial Min.
TYPE: K04 Au skarn
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 230 Ma
DATING METHOD: Fossil
MATERIAL DATED: Gymnotropite ammonites
ISOTOPIC AGE: 155 +/- 6 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Limestone
Basalt
Breccia
Skarn
Granodiorite

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island. Intrusive biotite from Adam River (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1918
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 61.7200 Grams per tonne
Gold 30.8600 Grams per tonne
Copper 5.3500 Per cent
COMMENTS: Sample details not known.
REFERENCE: Minister of Mines, Annual Report 1918, page 270.

CAPSULE GEOLOGY

The Lucky Jim occurrence is underlain by Upper Triassic Vancouver Group, Karmutsen Formation basalts with minor interbedded limestone which is intruded by Jurassic Island Plutonic Suite. At the contact, a hornblende-calcite breccia contains unspecified skarn minerals and disseminated pyrrhotite, arsenopyrite, chalcopyrite and pyrite. An assay gave results of 30.86 grams per tonne gold, 61.72 grams per

CAPSULE GEOLOGY

tonne silver and 5.35 per cent copper (Minister of Mines, Annual Report 1916, page 270).

Specogna (Assessment Report 13589) observed no limestone on the property and only intrusive dykes (of presumed Island Plutonic Suite association).

BIBLIOGRAPHY

EMPR AR *1918-270; 1926-323; 1928-378; 1929-383

EMPR ASS RPT *13589

EMPR BULL 1-136

EMPR EXPL 1985-C230

EMR MP CORPFILE (Cominco Annual Report 1927)

GSC MAP 4-1974; 1552A

GSC P 74-8

Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/05

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 117**

NATIONAL MINERAL INVENTORY: 092L3 T1c1

NAME(S): **AT MONTEITH (L.826)**, MONTEITH, KYOQUOT SOUND,
TOO EASY, KASHU, KYU,
EASY TWO, EASY THREE

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:
LATITUDE: 50 07 34 N
LONGITUDE: 127 17 06 W
ELEVATION: 5 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Lot 826 is located 200 metres south of Monteith Bay,
Kashutl Inlet, Kyoquot Sound. See also Morris (092L 072, Sockeye
(092L 246), Sic (092L 276) and Monteith Bay (092L 343).

Open Pit

MINING DIVISION: Alberni
UTM ZONE: 09 (NAD 83)
NORTHING: 5554061
EASTING: 622584

COMMODITIES: Pyrophyllite Alunite Silica

MINERALS

SIGNIFICANT: Pyrophyllite Nepheline Alunite Silica
ASSOCIATED: Quartz Sericite Pyrite
ALTERATION TYPE: Sericitic Alunitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: H09 Hydrothermal alteration clays-Al-Si
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: Metres STRIKE/DIP: 270/30S TREND/PLUNGE:
COMMENTS: West striking, gently south dipping regional bedding.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 178 +/- 10 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Dacitic Flow
Andesitic Flow
Quartz Diorite Porphyry Dike
Andesitic Dike

HOSTROCK COMMENTS: Mollusks from Quatsino Sound; biotite from the Merry Widow (092L 044) mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell

INVENTORY

ORE ZONE: MONTEITH REPORT ON: Y
CATEGORY: Unclassified YEAR: 1913
QUANTITY: 90000 Tonnes
COMMODITY: Pyrophyllite GRADE: 42.0000 Per cent
COMMENTS: Grade estimate from CANMET Report 803, page 131.
REFERENCE: Geological Survey of Canada Summary Report 1913, page 123.

CAPSULE GEOLOGY

The rocks hosting the Monteith occurrence are west striking, dacitic to andesitic fragmental flows of the Lower Jurassic Bonanza Group, 3 kilometres south of a Early to Middle Jurassic Island Plutonic Suite granodiorite batholith. Quartz-diorite porphyry and andesitic dykes intrude the volcanics, with pronounced quartz-sericite, quartz-alunite or quartz-pyrophyllite alteration along the contact zones. The pyrophyllite ore is compact and dense, and ranges

CAPSULE GEOLOGY

from cream, white, pink or light grey to bluish grey when pyrite is present. Minor limonite imparts a yellow to reddish brown stain on weathered surfaces. In thin section pyrophyllite flakes are about 0.01 millimetre in diameter and are readily crushed to a fine smooth powder.

On the Monteith occurrence, the ore contains 42 per cent pyrophyllite and 50 per cent quartz. A chemical analysis returned 81.94 per cent silica, 15.29 per cent aluminum, 0.11 per cent ferric oxide, 0.40 per cent soda, 0.50 per cent potash and 2.40 per cent H₂O greater than 105 degrees Celcius (CANMET Report 803, pages 53-135).

Small shipments of pyrophyllite and alunite have been made from the area. Pyrophyllite was mined from a 2 by 2 by 4.5 metre adit at the head of Easy Inlet. Several hundred tonnes of quartz-phyllite was extracted between 1910 and 1914. The ore was mixed with shale and used as a refractory for sewer pipe and fire proofing material. It was also used as polishing powder, soap and cleanser. Several hundred tonnes of ore were also produced in 1937 (Open File 1988-19, page 7).

A report on samples taken from a stockpile in Victoria stated that "it burns steel-hard at Cone 1 and shows good refractiveness" and "is unsuited to replace foliated talc" (Geological Survey of Canada Memoir 24, page 148). The deposit was examined during World War II as a possible source of paper filler, and testing determined it to be a "highly satisfactory ingredient" of whiteware batches for both slip-cast and clay process tiles, electrical insulators and tableware (Minister of Mines Annual Report 1947, page 223).

In 1913, Clapp estimated 90,000 tonnes of pyrophyllite ore were contained in the 0.4 hectares on the Monteith claim (Geological Survey of Canada Summary Report 1913, page 123).

Drilling in 1983 encountered mostly brecciated volcanics with strongly silicified zones of alunite and pyrophyllite with varying proportions of quartz and abundant pyrite (Assessment Report 11374).

See also Morris (092L 072), Sockeye (092L 246), Sic (092L 276) and Monteith Bay (092L 343).

BIBLIOGRAPHY

- EMPR AR 1914-377; 1920-198; 1947-223
- EMPR ASS RPT *4539, 8279, 11374, 12681
- EMPR EXPL 1980-269; 1983-332; 1984-240
- EMPR GEM 1973-256,552
- EMPR OF *1988-19, p. 87
- GSC ANN RPT 1886
- GSC BULL 30, p. 38
- GSC MAP 4-1974; 255A; 1552A
- GSC MEM 24, p. 148
- GSC OF 9; 170; 463
- GSC P 69-1A; 70-1A; 72-44; 74-8
- GSC SUM RPT 1913, p. 109; 1920A
- CANMET RPT 803, p. 131
- GCNL #96, 1983
- Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
- Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/31

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 118**

NATIONAL MINERAL INVENTORY: 092L7 Cu1

NAME(S): **HAZEL 7 (NIMPKISH COPPER)**, CYPRESS 3, HAZEL ZINC,
BIG ZINC, KINMAN, NIMPKISH COPPER

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 19 52 N
LONGITUDE: 126 51 39 W
ELEVATION: 823 Metres

NORTHING: 5577634
EASTING: 652246

LOCATION ACCURACY: Within 500M

COMMENTS: Location of diamond-drill hole #1 in Assessment Report 831 is 5.5 kilometres east of the mouth of Kinman Creek at the south end of Nimpkish Lake.

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite
ASSOCIATED: Garnet Epidote Calcite Pyrite
ALTERATION: Garnet Epidote Calcite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn
SHAPE: Tabular
DIMENSION: 0023 x 0011 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Vancouver Quatsino

ISOTOPIC AGE: 225 Ma
DATING METHOD: Fossil
MATERIAL DATED: Juvarte ammonites

Island Plutonic Suite

Jurassic
ISOTOPIC AGE: 151 +/- 14 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Limestone
Garnet Epidote Skarn
Granodiorite
Feldspar Porphyry

HOSTROCK COMMENTS: Ammonites from Alice Lake; biotite from Nimpkish batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1952
SAMPLE TYPE: Chip
COMMODITY GRADE
Copper 0.8300 Per cent

COMMENTS: 0.83 per cent copper over 1.2 metres.
REFERENCE: Geological Survey of Canada Memoir 272, page 73.

CAPSULE GEOLOGY

The area of the Hazel 7 occurrence has north striking Upper Triassic Vancouver Group carbonates of the Quatsino Formation overlying Karmutsen Formation tholeiitic basalts. Lower Jurassic Bonanza Group volcanics are coeval with, or genetically related to, granodiorite of the Nimpkish batholith of the Jurassic Island Plutonic Suite.

Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area. Mineralization occurs at the contact between granodiorite and

CAPSULE GEOLOGY

Quatsino Formation limestone. Here, an intrusive sill, 30 metres wide, projects about 100 metres into the sediments from the main intrusion.

The mineralization measuring 23 metres by 11 metres, cuts across bedding that strikes 080 degrees and dips 50 degrees north. The gently north dipping lens is estimated to contain 2700 tonnes (Assessment Report 831, page 11). Mineralization consists of massive chalcopyrite and sphalerite with minor pyrite in a gangue of garnet, epidote and local calcite replacing limestone.

One trench encountered "altered feldspar porphyry and altered granodiorite" (Geological Survey of Canada Memoir 272, page 73). No details are given.

Diamond drilling at the occurrence encountered mineralization up to 1.77 per cent copper over 38 centimetres and 0.83 per cent copper over 1.2 metres (Geological Survey of Canada Op. Cit.).

The Minister of Mines Annual Report for 1929 gives an estimate of 20 per cent copper over 4.5 metres in an unspecified trench (Minister of Mines Annual Report 1929, page C381). Several nearby occurrences have similar geological settings, including the East Hazel (092L 206) and Kinman-Nimpkish Copper (092L 036).

Doublestar Resources Ltd. held the property in 1998.

BIBLIOGRAPHY

- EMPR AR 1928-379; 1929-381; 1930-299; 1965-230; 1966-68,248
EMPR ASS RPT 456, *831, 832
EMPR GEM 1970-273
EMPR PF (Various maps in 092L 036 - Nimpkish Copper)
EMR MP CORPFILE (Reako Explorations Ltd.; Panther Mines Ltd.; Imperial Metals Corp.; Mar Gold Resources Ltd.)
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM *272, p. 72
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT 1929A, pp. 128-129, Fig.6; 1931A
CJES 18, p. 1; 20, p. 1, 1983
CIM BULL Oct. 30, 1930, p. 1270
GCNL #105(June 2), 1998
Alsen, J.B.: "A Magnetite Skarn Deposit near Bonanza Lake", 1975, Unpublished B.Sc. Thesis, University of British Columbia, Vancouver, British Columbia
Carson, D.J.T.: "Metallogenic Study of Vancouver Island with emphasis on the relationships of Mineral Deposits to the Plutonic Rocks", 1968, unpublished Ph.D. Thesis, Carleton University
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/27

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 119**

NATIONAL MINERAL INVENTORY: 092L7 Cu1

NAME(S): **ALPHA 4 (NIMPKISH COPPER)**, ALPHA ZINC, KINMAN

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 20 04 N
LONGITUDE: 126 50 06 W
ELEVATION: 1021 Metres

NORTHING: 5578058
EASTING: 654073

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on Alpha 4 claim (Assessment Report 831) is located 850 metres northeast of 092L 036-Nimkish Copper, 6.0 kilometres due east of the mouth of Kinman Creek on Nimkish Lake.

COMMODITIES: Zinc Copper

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite
ASSOCIATED: Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Magmatic
DIMENSION: 0009 x 0004 Metres STRIKE/DIP: 045/ TREND/PLUNGE:
COMMENTS: Mineralization lies along 045 degree trending dyke.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 151 +/- 14 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Granodiorite
Mafic Porphyry Dike

HOSTROCK COMMENTS: Age date from Nimkish batholith biotite (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks
PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1931
SAMPLE TYPE: Grab
COMMODITY GRADE
Copper 0.3800 Per cent
Zinc 9.6000 Per cent

COMMENTS: Best of 4 samples.

REFERENCE: Geological Survey of Canada Summary Report 1931A, page 27.

CAPSULE GEOLOGY

North striking Upper Triassic Vancouver Group carbonates of the Quatsino Formation overlie Karmutsen Formation tholeiitic basalts. Lower Jurassic Bonanza Group volcanics are coeval with, or genetically related to granodiorite of the Nimkish batholith of the Jurassic Island Plutonic Suite. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area.

The Alpha 4 occurrence consists of a 9 by 3.6 metre long massive pyrrhotite lens lying along a northeast trending steep mafic porphyry dyke in granodiorite, 60 metres from its contact with Quatsino limestone. The lens contains pyrrhotite, considerable zinc and minor copper.

Four samples assayed from 4.3 to 9.6 per cent zinc and up to 0.38 per cent copper, with only a trace of silver and gold (Geological Survey of Canada Summary Report 1931A, page 27).

BIBLIOGRAPHY

EMPR AR 1928-379; 1929-381; 1930-299; 1965-230; 1966-68

BIBLIOGRAPHY

EMPR ASS RPT 456, *831, 832, 3749
EMPR GEM 1970-273
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 72-44; *74-8
GSC SUM RPT *1929A; 1931A, p. 27
CJES 18, p. 1; 20, p. 1 (1983)
Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake,
unpubl. B.Sc. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/26

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 120**

NATIONAL MINERAL INVENTORY: 092L7 Cu1

NAME(S): **ALPHA 5 (NIMPKISH COPPER)**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 19 54 N
LONGITUDE: 126 50 04 W
ELEVATION: 975 Metres

NORTHING: 5577750
EASTING: 654122

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization, from Assessment Report 831, in north corner of Alpha 5 claim, is 1.0 kilometre east of the Kinman adit (092L 036), 6.5 kilometres east of the south end of Nimpkish Lake.

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Magmatic Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 151 +/- 14 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Granodiorite

HOSTROCK COMMENTS: Age date from Nimpkish batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

North striking Upper Triassic Vancouver Group carbonates of the Quatsino Formation overlie Karmutsen Formation tholeiitic basalts. Lower Jurassic Bonanza Group volcanics are coeval with, or genetically related to granodiorite of the Nimpkish batholith of the Jurassic Island Plutonic Suite. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area.

Assessment Report 831 describes the Alpha 5 occurrence as a small outcropping of massive magnetite with little or no sulphides, lying within granodiorite. A 1965 dipneedle survey outlined 3 small anomalies in the vicinity, suggesting additional similar mineralization.

BIBLIOGRAPHY

- EMPR AR 1928-379; 1929-381; 1930-299; 1965-230; 1966-68
- EMPR ASS RPT 456, *831, 832, 3749
- EMPR GEM 1970-273
- GSC ANN RPT 1886
- GSC BULL 47; 242
- GSC MAP 4-1974; 255A; 1029A; 1552A
- GSC MEM 272
- GSC OF 9; 170; 463
- GSC P 38-2; 38-3; 71-36; 72-44; *74-8
- GSC SUM RPT 1929A; 1931A
- CJES 18, p. 1, Jan. 1983
- Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake, unpubl. B.Sc. Thesis, University of British Columbia
- Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
- Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

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REPORT: RGEN0100

BIBLIOGRAPHY

British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/27

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 121**

NATIONAL MINERAL INVENTORY: 092L7 Fe5

NAME(S): **WOLF**, STOREY, JAFI

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 22 09 N
LONGITUDE: 126 53 31 W
ELEVATION: 823 Metres

NORTHING: 5581802
EASTING: 649912

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Storey claims (Assessment Report 417) is located on Storey Creek 4.0 kilometres east of Nimpkish Lake.

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Industrial Min.
DIMENSION: 0007 x 0001 Metres
COMMENTS: Lens measures 1.5 by 7 metres.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
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Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE:	230 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Gymnotropite ammonites		

Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE:	225 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Juvarite ammonites		

Jurassic			Island Plutonic Suite
ISOTOPIC AGE:	151 +/- 14 Ma		
DATING METHOD:	Potassium/Argon		
MATERIAL DATED:	Biotite		

LITHOLOGY: Limestone
Greenstone
Granodiorite
Felsic Dike

HOSTROCK COMMENTS: Karmutsen and Quatsino ammonites-Hisnit Island and Alice Lake respectively; biotite-Nimpkish batholith (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

CAPSULE GEOLOGY

North striking carbonates and calcareous sediments of the Quatsino and Parson Bay formations overlie Karmutsen Formation tholeiitic basalts, all of the Upper Triassic Vancouver Group. Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff, breccia and minor sediments are coeval with, or genetically related to, granodiorite of the Nimpkish batholith of the Jurassic Island Plutonic Suite. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area.

At the Wolf occurrence, massive lenses of magnetite, up to 1.5 by 7 metres, occur along a Quatsino limestone-Karmutsen greenstone contact, 450 metres from the granodiorite intrusion. Felsic dykes are common. Mineralization appears to have been localized by 85 and 330 degree faults on an anticlinal axis.

Doublestar Resources Ltd. held the property in 1998.

BIBLIOGRAPHY

EMPR AR 1929-382
EMPR ASS RPT *417
GSC ANN RPT 1886

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 236
REPORT: RGEN0100

BIBLIOGRAPHY

GSC BULL 172; 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT 1929A; 1931A
CJES 18, p. 1; 20, p. 1, 1983
Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake,
unpubl. B.Sc. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/24

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 122**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAGNET (L.129)**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 15 49 N
LONGITUDE: 126 52 23 W
ELEVATION: 180 Metres

NORTHING: 5570105
EASTING: 651590

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Lot 129 is 1.0 kilometre west of Nimpkish River, 7.0 kilometres south of Nimpkish Lake.

COMMODITIES: Magnetite Iron Copper Zinc

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Igneous-contact Industrial Min.
SHAPE: Tabular
DIMENSION: 0007 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Mineralization is exposed for a width of 3 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Amygdaloidal Andesite
Quartz Monzonite
Diorite
Feldspar Porphyry Dike
Aplite Dike
Felsic Dike

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island; Quatsino ammonites from Alice Lake; biotite from Nimpkish batholith (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

North striking carbonates and calcareous sediments of the Quatsino and Parson Bay Formations overlie Karmutsen Formation tholeiitic basalts, all of the Upper Triassic Vancouver Group. Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff, breccia and minor sediments are coeval with, or genetically related to granodiorite of the Nimpkish batholith of the Jurassic Island Plutonic Suite. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area.

The Magnet occurrence lies on strike with the Iron Crown occurrence (092L 034), 1.2 kilometres to the south. Massive magnetite contains more pyrite than adjacent occurrences. The massive mineralization is 7 metres wide.

No details are available. It is assumed that geological details are similar to 092L 034-Iron Crown.

BIBLIOGRAPHY

EMPR AR 1902-236; 1916-300; 1955-76; 1956-133; 1958-72; 1959-133;
1960-101; 1961-93; 1962-96; 1963-99
EMR MP CORPFILE (Nimpkish Iron Mines Ltd.)
GSC ANN RPT 1886
GSC BULL 47; *172; 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM *272, p. 75
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT *1929A, p. 131; 1931A
CJES 18, p. 1; 20, p. 1, 1983
Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake,
unpubl. B.Sc. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern British Columbia, Ph.D. Thesis University of British
Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/25

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 123**

NATIONAL MINERAL INVENTORY: 092L7 Fe1

NAME(S): **KLAANCH (L.128)**, NIMPKISH IRON

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 15 44 N
LONGITUDE: 126 52 06 W
ELEVATION: 120 Metres

NORTHING: 5569960
EASTING: 651931

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Lot 128 is located 0.5 kilometres west of Klaanch (Nimpkish) River, 7.5 kilometres south of Nimpkish Lake, 0.8 kilometres northwest of 092L 034 (Iron Crown).

COMMODITIES: Magnetite Iron Copper Zinc

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite Sphalerite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Igneous-contact Industrial Min.
SHAPE: Tabular
DIMENSION: 0003 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Amygdaloidal Andesite
Quartz Monzonite
Diorite
Feldspar Porphyry Dike
Aplite Dike
Felsic Dike

HOSTROCK COMMENTS: Karmutsen ammonites-Hisnit Island; Quatsino ammonites-Alice Lake; biotite-Nimpkish batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

North striking carbonates and calcareous sediments of the Quatsino and Parson Bay Formations overlie Karmutsen Formation tholeiitic basalts, all of the Upper Triassic Vancouver Group. Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff, breccia and minor sediments are coeval with, or genetically related to granodiorite of the Nimpkish batholith of the Jurassic Island Plutonic Suite. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area.

The Klaanch occurrence lies on strike with the Iron Crown occurrence (092L 034), 0.6 kilometres to the south. Massive magnetite contains irregular small quantities of pyrite and chalcopyrite and disseminations in volcanic rocks. The massive mineralization is up to 3 metres wide.

No details are available. It is assumed that geological details are similar to 092L 034-Iron Crown.

BIBLIOGRAPHY

EMPR AR 1902-236; 1916-300; 1955-76; 1956-133; 1959-133; 1960-101;
1961-93; 1962-96; 1963-99
EMR MP CORPFILE (Nimpkish Iron Mines Ltd.)
GSC ANN RPT 1886
GSC BULL 47; *172; 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM *272, p. 75
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT *1929A, p. 131; 1931A
CJES 18, p. 1; 20, p. 1, 1983
Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake,
unpubl. B.Sc. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern British Columbia, Ph.D. Thesis, University of British
Columbia
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/25

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

the mineral chalcantinite, occur in the shear zone. Disseminated chalcopyrite is also present over a width of 0.5 metres. Thin stringers of chalcocite are reported.

A sample of sorted ore from the dump at the adit assayed 0.5 per cent copper, trace silver and trace gold (Minister of Mines Annual Report 1926, page 313).

In 1901 the property consisted of the Welcome Home mineral claim. A prospect hole and a 12-metre shaft was sunk on the claim. In about 1916 Cracroft Copper Mines Limited acquired the property from the Fife Brothers of Port Neville. An adit was driven at that time. In May 1926, H.E. Rines restaked the claim, but no work was done.

BIBLIOGRAPHY

EMPR AR 1901-1116; 1917-450; *1926-313
GSC MAP 4-1974; 1552A
GSC MEM 23, p. 129
GSC P 74-8, p. 62

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/13

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 125**

NATIONAL MINERAL INVENTORY: 092L10 Cu3

NAME(S): **LONE STAR**, LUCKY STRIKE, G

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L10E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 33 14 N
LONGITUDE: 126 30 35 W
ELEVATION: 30 Metres

NORTHING: 5603179
EASTING: 676401

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location given in Geological Survey of Canada Memoir 23 as lying at the east entrance of Baronet Passage. Minister of Mines Annual Report 1901 gives the location as lying 0.5 kilometre east of Copper Queen (092L 126).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Copper Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite Ammonites			

LITHOLOGY: Amygdaloidal Andesite

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The property is located between sea level and 61 metres elevation on the north side of West Cracroft Island and south side of Harbledown Island. The Baronet Passage lies between the two islands. The occurrence is near the boundary of the Coast Crystalline Belt and the Insular Belt.

The west side of the island is underlain by andesite of the Upper Triassic Vancouver Group, Karmutsen Formation Group, which has undergone regional greenschist facies metamorphism. The occurrence consists of bornite and chalcopyrite as disseminations and in shear zones within the volcanics. Bornite, native copper and pyrite are found in amygdules in the andesite.

In 1901, Bucknell and Johnson held the Lone Star and Copper Queen (092L 126) mineral claims. Two prospect holes were sunk 6 metres on the Lone Star, and a 3.5-metre prospect hole was sunk on the Copper Queen, which was 400 metres west of the Lone Star claim. In 1969, M.E. and W. Gilbertson held the property as the Lucky Strike, Lucky Strike 15 to 17 and G 1 to 17 claims. Work carried out by Rio Tinto Canadian Exploration Limited included mapping the surface workings, cleaning and blasting 10 old and new trenches and taking 200 soil and silt samples.

In 1970 surface geological mapping on Lucky Strike and G 1 to 4 and 17, and an induced polarization survey on G 1 to 4 were conducted.

BIBLIOGRAPHY

EMPR AR *1901-1115-1116
EMPR ASS RPT 2695
EMPR GEM 1969-190; 1970-228
GSC MAP 4-1974; 1552A
GSC MEM 23, p. 129

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 244
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 74-8, p. 62

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/20

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 126**

NATIONAL MINERAL INVENTORY: 092L10 Cu3

NAME(S): **TIDEWATER (MAIN)**, COPPER QUEEN, G,
LUCKY STRIKE

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L10E
BC MAP:
LATITUDE: 50 32 59 N
LONGITUDE: 126 33 05 W
ELEVATION: 10 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on small bay off Baronet Passage, Johnstone Strait, north-shore of Cracroft Island (Assessment Report 14230).

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5602617
EASTING: 673466

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Cuprite
COMMENTS: Massive chalcopyrite, disseminated bornite, cuprite. Gold, silver mineralogy not known.
ASSOCIATED: Pyrite Magnetite
COMMENTS: Disseminated pyrite, magnetite.
ALTERATION: Malachite Azurite Carbonate
COMMENTS: Copper oxidation; carbonate masses, veinlets and stringers.
ALTERATION TYPE: Oxidation 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	Vancouver	Karmutsen	

ISOTOPIC AGE: 230 Ma
DATING METHOD: Fossil
MATERIAL DATED: Gymnotropite ammonites

LITHOLOGY: Andesite
Volcanic Breccia

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island.

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1984
SAMPLE TYPE:	Grab		
COMMODITY	GRADE		
Silver	112.8100	Grams per tonne	
Gold	2.6100	Grams per tonne	
Copper	9.3000	Per cent	

COMMENTS: Sample Angus #1 from trench.
REFERENCE: Assessment Report 14230, Figures 2A,2B.

CAPSULE GEOLOGY

The occurrence is on Cracroft Island near the boundary of the Coast Crystalline Belt and the Insular Belt. Volcanic rocks in the area have undergone regional greenschist facies alteration. The Tidewater-Copper Queen occurrence consists of massive chalcopyrite, and disseminated pyrite, cuprite and bornite in andesite and volcanic breccia of the Upper Triassic Vancouver Group, Karmutsen Formation. Malachite and azurite are present. Carbonate alteration is evident as lenses, veinlets and stringers of calcite. Selected samples returned values in copper ranging from 4.11 to 9.3 per cent. Associated silver values are between 2.4 and 112.81 grams per tonne and gold ranges from up to 2.61 grams per tonne (Assessment Report 14230, page 8).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 246
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR *1901-1116
EMPR ASS RPT 2965, *14230
EMPR EXPL 1985-C233
EMPR GEM 1969-190; 1970-228
GSC MAP 4-1974; 1552A
GSC MEM 23, p. 129
GSC P 74-8

DATE CODED: 1985/07/24
DATE REVISED: 1988/11/28

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 127**

NATIONAL MINERAL INVENTORY: 092L2 Fe3

NAME(S): **HILLER 4-5**, HILLER, HILLER 11-14

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 05 39 N
LONGITUDE: 126 51 54 W
ELEVATION: 1067 Metres

NORTHING: 5551284
EASTING: 652704

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of the Hiller 4 zone, at the Hiller 11, 12, 13 and 14 common claim post (Property File - Saukko, 1967).

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
ALTERATION: Garnet Epidote Actinolite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Industrial Min.
TYPE: K03 Fe skarn
SHAPE: Tabular
DIMENSION: 240 Metres STRIKE/DIP: 315/90 TREND/PLUNGE:
COMMENTS: Mineralized zone strikes northwest and dips steeply.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Andesite
Andesite Tuff
Limestone
Skarn
Diorite
Granodiorite

HOSTROCK COMMENTS: Phlogopite from the Zeballos intrusion; mollusks from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PLUTONIC ROCKS RELATIONSHIP: Plutonic Rocks
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE:

INVENTORY

ORE ZONE: HILLER 4 REPORT ON: Y
CATEGORY: Indicated YEAR: 1966
QUANTITY: 3357000 Tonnes
COMMODITY: Iron GRADE: 35.9000 Per cent
COMMENTS: Drill indicated reserves.
REFERENCE: Property File - Saukko, 1967.

CAPSULE GEOLOGY

The Hiller 4-5 occurrence, located 12 kilometres north of Zeballos, lies 1.5 kilometres north of the Artlish occurrence (092L 068) and has a similar geological setting. The area is underlain by Lower Jurassic Bonanza Group andesite, andesite tuff and minor interbedded limestone. Diorite and granodiorite of the Early to Middle Jurassic Island Plutonic Suite lie immediately south of the occurrence. Major faults are also evident in the area.

CAPSULE GEOLOGY

Mineralization consists of erratically distributed pods of magnetite-garnet-epidote-actinolite skarn in the Bonanza Group rocks. The zone containing the mineralization is steeply dipping (90 degrees), strikes northwest (315 degrees) and has been traced for 240 metres.

Diamond drilling has indicated reserves of 3,357,000 tonnes grading 35.9 per cent iron, 0.66 per cent sulphur and less than 0.02 per cent copper (Property File - Saukko, 1967). The zone encompasses the Hiller 5 area of Saukko (1967).

In 1999, Doublestar Resources Ltd. plans to acquire the property from Falconbridge Limited.

BIBLIOGRAPHY

- EMPR AR 1945-116; 1951-197; 1962-100; 1965-232; 1966-73
EMPR ASS RPT *433, 14457
EMPR BULL *27, p. 131
EMPR EXPL 1985-C230; 1986-C275
EMPR MAP 65 (1989)
EMPR OF 1992-1; 1992-9
EMPR PF (Diamond Drill Sections, Assays and Geology, Falconbridge, 1966; *Saukko, R.N. (1967): Hiller-Churchill Properties, 1966; Doublestar Resources Ltd., Annual Report, December 1999)
GSC EC GEOL 1, 1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 272, p. 68
GSC OF 9; 170; 463
GSC P 38-5; 69-1A; 70-1A; 71-36; 72-44; 74-3; 79-30
GSC SUM RPT 1929 Part A; 1932 Part A, p. 48
GCNL #8(Jan.12),#34(Feb.17),#43(Mar.2), 1989
NW PROSP March/April 1989
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/08

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 128**

NATIONAL MINERAL INVENTORY: 092L2 Fe4

NAME(S): **RIDGE (L.2011)**, EXTENSION 4

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 02 54 N
LONGITUDE: 126 50 45 W
ELEVATION: 793 Metres

NORTHING: 5546228
EASTING: 654222

LOCATION ACCURACY: Within 500M

COMMENTS: Located 450 metres east of Ford - Zeballos Iron Mines (092L 028); east of Black Sands Creek, 1.2 kilometres northwest of Zeballos River, 7.5 kilometres north of Zeballos (Ministry of Mines Annual Report 1962, Figure 8).

COMMODITIES: Iron Magnetite

MINERALS

SIGNIFICANT: Magnetite
ALTERATION: Pyroxene
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Industrial Min.
TYPE: K03 Fe skarn
SHAPE: Tabular
DIMENSION: 0091 x 0015 Metres

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Feldspar Porphyry Dike
Skarn
Diorite
Tuff

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; Quatsino ammonites-Alice Lake; phlogopite-Zeballos intrusion (Geological Survey of Canada Paper 74-8)

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: RIDGE

REPORT ON: Y

CATEGORY: Indicated YEAR: 1950
QUANTITY: 45359 Tonnes
COMMODITY: Iron GRADE: 68.8400 Per cent

COMMENTS: Four samples range from 67.72 to 68.84 per cent iron. Tonnage estimate is drill indicated.

REFERENCE: Minister of Mines Annual Report 1962, page 103.

CAPSULE GEOLOGY

The Ridge occurrence lies within complexly folded Upper Triassic Vancouver Group, Quatsino Formation limestone near its contact with Lower Jurassic Bonanza Group tuffs. These rocks are intruded by

CAPSULE GEOLOGY

diorite of the Early to Middle Jurassic Island Intrusions.

Magnetite mineralization occupies the south flank of an anticlinal structure. The magnetite is crystalline to massive and free of visible sulphide or skarn minerals. A few limestone inclusions and two 1.2 metre wide feldspar porphyry dykes are present. Nearby tuffs are pyroxene altered.

The magnetite body measures 91 by 15 metres. Drilling has indicated limited depth extension. Minister of Mines Annual Report 1962, page 103, estimates 45,359 tonnes are present.

Assays of 4 samples of magnetite gave 67.72 to 68.84 per cent iron, 0.002 to 0.004 per cent titanium oxide, 0.003 to 0.02 per cent sulphur, 0.006 to 0.014 per cent phosphorus, 2.12 to 3.08 per cent silica and 0.039 to 0.052 per cent manganese (Bulletin 27, page 128).

Bedding around the occurrence is obscure, but the limestone appears to dip 50 degrees south beneath the tuffs.

BIBLIOGRAPHY

- EMPR AR 1936-F38; 1938-F41-65; 1960-103; *1962-100; 1963-101;
1964-153; 1965-230; 1968-102
EMPR BULL 27, pp. 125-128; 101, p. 179
EMPR GEM 1969-215
EMPR OF *1988-28, p. 31
EMR MP CORPFILE (Zeballos Iron Mines Ltd.)
GSC BULL 172, p. 74
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 272, p. 68; 204
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 71-36; 72-44; 74-3; 79-30
GSC SUM RPT 1921A, pp. 12-22; 1929A; 1932AII, pp. 29-50
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of
British Columbia, Vol. 1: Vancouver Island, p. 179
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/04

CODED BY: GSB
REVISED BY: VVV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 129**

NATIONAL MINERAL INVENTORY: 092L2 Fe4

NAME(S): **BARNACLE (L.2011)**, EXTENSION 4

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 03 04 N
LONGITUDE: 126 49 50 W
ELEVATION: 762 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5546568
EASTING: 655306

LOCATION ACCURACY: Within 500M

COMMENTS: Adit on Lot 2011, near Lot 2007 boundary, is located 2.0 kilometres northwest of Zeballos River, 8.0 kilometres north of Zeballos (Bulletin 27, Figure 2).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold Sulphide
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I06 Cu±Ag quartz veins

SHAPE: Tabular
MODIFIER: Sheared

DIMENSION: 0079 Metres

STRIKE/DIP: 023/90

TREND/PLUNGE:

COMMENTS: Vein strike is 023 degrees, dip 90 degrees.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvavite ammonites			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Andesite
Limestone
Hornblende Diorite
Andesite Dike

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; Quatsino ammonites-Alice Lake.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The Barnacle occurrence lies 3 to 5 kilometres north of the Zeballos gold camp where narrow polymetallic quartz-calcite veins host gold and silver within or near diorite of the Eocene Catface Intrusions. The Barnacle occurrence lies 100 metres north of a hornblende diorite stock of the Late Jurassic Island Plutonic Suite.

The stock intrudes Upper Triassic Vancouver Group, Quatsino Formation limestone and Lower Jurassic Bonanza Group andesite.

A 15 centimetre wide quartz-sulphide vein follows a 023 striking vertically dipping andesite dyke that cuts the limestone.

At the portal, located 488 metres south of Barnacle (092L 029), the vein is 40 centimetres wide, but it pinches to less than 5 centimetres in the adit. The vein contains specks of visible gold. Exact sulphide mineralogy is not reported.

BIBLIOGRAPHY

EMPR AR 1945-116
EMPR BULL 20-V, p. 16; *27, p. 128

BIBLIOGRAPHY

EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (092L 028-FL)
EMR MP CORPFILE (Anyox Metals Ltd.; Zeballos River Mines Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 60
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/15

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 130**

NATIONAL MINERAL INVENTORY: 092L2 Au31

NAME(S): **BLACKBIRD**, BLUEBIRD, JACK OF SPADES,
R & R, MAQUINNA 4 (L.1884), KODIAK,
AG

MINING DIVISION: Alberni

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W

UTM ZONE: 09 (NAD 83)

BC MAP:
LATITUDE: 50 02 05 N
LONGITUDE: 126 49 57 W
ELEVATION: 150 Metres

NORTHING: 5544742
EASTING: 655220

LOCATION ACCURACY: Within 500M

COMMENTS: Location of surface workings is 300 metres north of Zeballos River,
6.0 kilometres north of Zeballos (Bulletin 27, Figure 2).

COMMODITIES: Magnetite Iron Copper

MINERALS

SIGNIFICANT:	Magnetite	Chalcopyrite	Pyrrhotite	Pyrite	
ASSOCIATED:	Actinolite	Epidote	Diopside	Wollastonite	
ALTERATION:	Garnet	Actinolite	Epidote	Diopside	Wollastonite
ALTERATION TYPE:	Skarn				
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Industrial Min.
SHAPE: Tabular
DIMENSION: 0025 x 0010 Metres STRIKE/DIP: 290/75N TREND/PLUNGE:
COMMENTS: Attitude of local stratigraphy is 290 degrees, dipping 75 degrees
north.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Skarn
Diorite
Dacite
Garnetite
Tuff

HOSTROCK COMMENTS: Ammonites from Alice Lake; mollusks from Quatsino Sound; phlogopite
from Zeballos intrusion (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

CAPSULE GEOLOGY

The area of the Blackbird occurrence is underlain by a lens of silicified limestone, 600 metres long and 100 metres wide, striking west and dipping 75 degrees north. The limestone is part of the Upper Triassic Vancouver Group, Quatsino Formation and is surrounded by pyroclastic andesite, tuffs and volcanic breccia of the Lower Jurassic Bonanza Group. These rocks are intruded by hornblende diorite (Zeballos phase) of the Late Jurassic Island Plutonic Suite. The occurrence, which has been explored over about 25 metres, by several open cuts and a short adit comprises a 10 metre wide band of interbedded dacite, limestone and garnetite which contains scattered clusters of magnetite and chalcopyrite with minor pyrite and pyrrhotite. This band lies between crystalline limestone to the

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RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

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CAPSULE GEOLOGY

south and green hornfelsed and skarn altered tuff to the north. Epidote, wollastonite, diopside and actinolite are also present. The National Mineral Inventory (092L2 Au31) combines the occurrence with the Maquinna gold vein occurrence (092L 023), located 250 metres north.

BIBLIOGRAPHY

EMPR AR 1933-253
EMPR ASS RPT 3056, 3057, 7761
EMPR BULL *27, p. 122
EMPR EXPL 1971-316; 1979-189
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-5; 69-1A; 70-1A; 71-36; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932AII, p. 45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/11

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 131**

NATIONAL MINERAL INVENTORY: 092L12 Cu17

NAME(S): **BOWERMAN**, EXPO, DICTATOR

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 38 52 N
LONGITUDE: 127 42 17 W
ELEVATION: 213 Metres

NORTHING: 5611458
EASTING: 591574

LOCATION ACCURACY: Within 5 KM

COMMENTS: By trail, 8 kilometres northwest of the mouth of Six Mile (Wanokana?)
Creek, which is 6 miles from the head of the west arm of Quatsino
Sound (Holberg Inlet) (Minister of Mines Annual Report 1922, page
232).

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

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

DEPOSIT

CHARACTER: Breccia Disseminated
CLASSIFICATION: Replacement
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER

Lower Jurassic Bonanza

Undefined Formation

ISOTOPIC AGE: 200 Ma

DATING METHOD: Fossil

MATERIAL DATED: Mollusks

Upper Jurassic

Island Plutonic Suite

ISOTOPIC AGE: 159 +/- 5 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Tuffaceous Breccia
Lapilli Tuff
Tuff
Granodiorite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound. Biotite K-Ar from southwest
Nahwitti Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

TERRANE: Wrangell

Plutonic Rocks

METAMORPHIC TYPE: Contact

RELATIONSHIP: Syn-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1922

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

27.4000

Grams per tonne

Lead

1.7000

Per cent

Zinc

10.0000

Per cent

COMMENTS: Nil copper and trace gold also reported.

REFERENCE: Minister of Mines Annual Report 1922, page 232.

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group tuff
breccia, lapilli tuff and tuff, intruded by granodiorite of the
Late Jurassic Island Plutonic Suite (Minister of Mines Annual Report
1970, page 254; Geological Survey of Canada Paper 74-8).

Locally, a mineralized zone about 60 metres wide, made up of
breccia, quartz and calcite is erratically mineralized with pyrite,
sphalerite and galena. A grab sample contained 27.4 grams per tonne
silver, 1.7 per cent lead, 10.0 per cent zinc, nil copper and trace
gold (Minister of Mines Annual Report 1922, page 232). By 1922, an
upper adit 6.4 metres long, a lower adit 13.4 metres long and several

CAPSULE GEOLOGY

open cuts had been excavated.

The description of breccia, quartz and calcite is similar to the breccia found in several areas on the Expo property (refer to 092L 240 - Expo) but silver-lead-zinc mineralization suggests replacement mineralization in calcareous rocks.

BIBLIOGRAPHY

EMPR AR 1918-268; 1919-205; *1922-232; 1968-84
EMPR GEM *1970-254
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/15

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 132**

NATIONAL MINERAL INVENTORY: 092L7 Fe3

NAME(S): **MAC, PETER 3**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 20 39 N
LONGITUDE: 126 51 32 W
ELEVATION: Metres

NORTHING: 5579090
EASTING: 652342

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralization on boundary of Mac 1 and 3 claims (Assessment Report 249) is located 5.5 kilometres east of the mouth of Kinman Creek on Nimpkish Lake.

COMMODITIES: Magnetite

MINERALS

SIGNIFICANT: Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Hydrothermal Igneous-contact Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Granodiorite

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake; Karmutsen ammonites from Hisnit Island; biotite from Nimpkish batholith.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

North striking carbonates and calcareous sediments of the Quatsino and Parson Bay formations overlie Karmutsen Formation tholeiitic basalts, all of the Upper Triassic Vancouver Group. Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff, breccia and minor sediments are coeval with, or genetically related to, granodiorite of the Nimpkish batholith of the Jurassic Island Plutonic Suite. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area.

At the Mac occurrence, a few small magnetite seams, up to 1.25 centimetres wide, occur in barren limestone near a granodiorite contact.

BIBLIOGRAPHY

EMPR AR 1958-72
EMPR ASS RPT *249
GSC ANN RPT 1886
GSC BULL 47; 172; 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT 1929A; 1931A
CJES 18, p. 1; 20, p. 1, 1983

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 258
REPORT: RGEN0100

BIBLIOGRAPHY

- Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake, unpubl. B.Sc. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/26

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 133**

NATIONAL MINERAL INVENTORY: 092L7 Fe5

NAME(S): **MARTHA 4**, BONANZA, JAF 1,
ZIP, E

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:
LATITUDE: 50 22 29 N
LONGITUDE: 126 54 48 W
ELEVATION: 564 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of Martha 4 claim (Assessment Report 417).

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5582377
EASTING: 648374

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
ALTERATION: Garnet Epidote
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Industrial Min.
DIMENSION: 0024 x 0011 Metres
COMMENTS: Mineralized lens strikes 080 degrees. STRIKE/DIP: 080/ TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite mollusks			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Granodiorite
Felsic Dike

HOSTROCK COMMENTS: Karmutsen and Quatsino mollusks from Hisnit Island and Alice Lake respectively; biotite from Nimpkish batholith (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

CAPSULE GEOLOGY

North striking carbonates and calcareous sediments of the Quatsino and Parson Bay formations overlie Karmutsen Formation tholeiitic basalts, all of the Upper Triassic Vancouver Group. Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff, breccia and minor sediments are coeval with, or genetically related to, granodiorite of the Nimpkish batholith of the Jurassic Island Plutonic Suite. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area.

At the Martha occurrence, a massive magnetite lens measuring 11 by 24 metres, strikes 080 degrees along the limestone-granodiorite contact. Small pods of magnetite occur along 080 degree striking felsite dykes cutting limestone.

Small pods and veins of magnetite, to 0.45 metres wide and 3.0 metres long, are associated with felsite dykes in granodiorite on the Martha 5 claim (Assessment Report 417). Garnet, epidote and ferro-magnesian minerals are reported in small patches (Assessment Report 417, page 3).

BIBLIOGRAPHY

EMPR AR 1929-382
EMPR ASS RPT *417, 765, 3009, 3401
EMPR GEM 1971-319
GSC ANN RPT 1886
GSC BULL 172; 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT 1929A; 1931A
CJES 18, p. 1; 20, p. 1, 1983
Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake,
unpubl. B.Sc. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern British Columbia, Ph.D. Thesis, University of British
Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/24

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 134**

NATIONAL MINERAL INVENTORY: 092L7 Cu4

NAME(S): **BOB 21**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 19 11 N
LONGITUDE: 126 45 45 W
ELEVATION: 533 Metres

NORTHING: 5576574
EASTING: 659282

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralization at the common boundary of Bob 21,22 claims on the Bonanza Mine (092L 164) property (Assessment Report 4898); is located 1.3 kilometres south of Bonanza Lake, 2.0 kilometres northeast of Steele Lake, 850 metres north of the Bonanza Mine.

COMMODITIES: Copper Magnetite

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Pyrite
ASSOCIATED: Garnet Epidote Calcite
ALTERATION: Garnet Epidote
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Industrial Min.
SHAPE: Tabular
DIMENSION: 0060 Metres

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Garnet Skarn
Hornblende Quartz Diorite
Mafic Dike
Felsic Dike
Pillow Lava
Pillow Basalt
Breccia
Tuff

HOSTROCK COMMENTS: Ammonites from Hisnit Island; biotite from Nimpkish batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

CAPSULE GEOLOGY

The Bob 21 occurrence corresponds with "Area F" in Assessment Report 4898, where massive magnetite, pyrite and chalcopyrite occur in garnet-epidote-calcite skarn at the contact between limestone and massive basalt over a distance of 60 metres.

The limestone is a thin layer or lens within a sequence of pillow lavas, basalt, breccia and minor tuff of the Upper Triassic Vancouver Group, Karmutsen Formation. Hornblende-quartz-diorite of the Late Jurassic Nimpkish batholith lies about 2.0 kilometres to the west. The Nimpkish batholith is part of the Jurassic Island Plutonic Suite.

BIBLIOGRAPHY

EMPR AR 1967-71; 1968-100
EMPR ASS RPT 953, 3698, *4350, 4351, 4353, *4898, 5394, 5868,

BIBLIOGRAPHY

6267, 6769
EMPR BULL 172; 242
EMPR GEM 1970-274; 1972-290; 1973-258; *1976-E128; 1977-E173
EMR MP CORPFILE (Imperial Oil Ltd.)
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 72-44; *74-8
GSC SUM RPT 1929A; 1931A
CJES 18, p. 1; 20, p. 1, 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University
Falconbridge File
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern British Columbia, Ph.D. Thesis, University of British
Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/03

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 135**

NATIONAL MINERAL INVENTORY: 092L12 Cu5

NAME(S): **BAY 56, SUNSET, ISLAND COPPER,
NORTHWEST**

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:
LATITUDE: 50 37 52 N
LONGITUDE: 127 31 18 W
ELEVATION: 90 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Common boundary of Bay 56, 59 claims (Assessment Report 738).

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5609847
EASTING: 604552

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Pyrite
ASSOCIATED: Pyrite
ALTERATION: Epidote Chlorite Carbonate
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: 154 +/- 6 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Andesite Tuff
Felsite Tuff

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite K-Ar date from Rupert Inlet stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact Regional
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics and sediments, intruded by rocks of the Jurassic Island Plutonic Suite.
Locally, at the common boundary between the Bay 56 and 59 claims, disseminated pyrite and a small amount of chalcopyrite is present in felsite and andesite tuffs. Molybdenite is also present as a thin coating along fractures. Propylitic alteration is common. For detailed description of geology and mineralization found in the area, refer to 092L 158 (Island Copper).

BIBLIOGRAPHY

EMPR AR 1966-65; 1967-68; 1968-84,88
EMPR ASS RPT 710, *738, 9305, 11366, 12271, 13346, 13536, 14084, 14169, 14777, 16152, 16687, 17580, 17581
EMPR EXPL 1983-336; 1985-C234; 1987-C222
EMPR GEM 1969-204; 1970-254
GSC BULL 242
GSC MAP *4-1974
GSC OF 9; 170; 463; 722
CJES 18, page 1; 20, page 1 (January 1983)
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 264
REPORT: RGEN0100

BIBLIOGRAPHY

Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/07

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 136**

NATIONAL MINERAL INVENTORY: 092L12 Fe4

NAME(S): **BAY 4**, ISLAND COPPER, BAY LAKE

MINING DIVISION: Nanaimo

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 36 48 N
LONGITUDE: 127 30 30 W
ELEVATION: 60 Metres

NORTHING: 5607889
EASTING: 605535

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on old Bay 4 claim.

COMMODITIES: Iron Copper Gold Titanium

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite Pyrite
ASSOCIATED: Pyrite
ALTERATION: Silica Epidote Chlorite Carbonate
ALTERATION TYPE: Silicific'n Propylitic
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: 154 +/- 6 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry Industrial Min.
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 220 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Siliceous Andesite
Intrusive Rock

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite K-Ar date from Rupert Inlet stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Contact Regional RELATIONSHIP: Syn-mineralization GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1965
SAMPLE TYPE: Channel

<u>COMMODITY</u>	<u>GRADE</u>	
Gold	0.3400	Grams per tonne
Copper	0.2000	Per cent
Iron	12.5500	Per cent
Titanium	0.3500	Per cent

COMMENTS: Channel sample over 0.9 metre, also has trace silver.
REFERENCE: Assessment Report 710.

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics and sediments, intruded by rocks of the Jurassic Island Plutonic Suite. Locally, on the old Bay 4 claim (now part of M 34, Lot 2145), magnetite and sparsely disseminated pyrite and chalcopyrite are present in silicified andesite. A 0.9 metre channel sample across a trench assayed 0.20 per cent copper, 12.55 per cent iron, 0.35 per cent titanium, 0.34 grams per tonne gold and trace silver (Assessment Report 710). Propylitic alteration is common and is more extensive where the rocks have been fractured and sheared. The occurrence is located near to the Island Copper deposit - (refer to 092L 158-Island Copper for details).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 266
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1966-65; 1967-68; 1968-84,88
EMPR ASS RPT *710, 9305
EMPR GEM 1969-88; 1970-254,267
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CIM Spec. Vol. *46, pp. 214-238
CJES 18, p. 1; 20, p. 1, Jan. 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/08

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 137**

NATIONAL MINERAL INVENTORY: 092L11 Mn1

NAME(S): **BAY 49**, ISLAND COPPER, G

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 37 04 N
LONGITUDE: 127 29 16 W
ELEVATION: 95 Metres

NORTHING: 5608413
EASTING: 606979

LOCATION ACCURACY: Within 500M

COMMENTS: Surface trenches on old Bay 49, now M 34, L 2145.

COMMODITIES: Manganese Rhodonite Barite Lead Silver
Zinc Gemstones

MINERALS

SIGNIFICANT: Pyrolusite Rhodonite Barite
COMMENTS: Lead-silver values indicate probable galena-sphalerite also.

ASSOCIATED: Carbonate

ALTERATION: Carbonate

ALTERATION TYPE: Carbonate

MINERALIZATION AGE: Unknown

ISOTOPIC AGE: 154 +/- 6 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Replacement Industrial Min.
TYPE: Q02 Rhodonite

DIMENSION: Metres

STRIKE/DIP: 290/60S

TREND/PLUNGE:

COMMENTS: Attitude of bedding (Assessment Report 710).

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Calcareous Andesite Tuff
Argillite
Limestone
Limestone Breccia

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite K-Ar date from Rupert Inlet stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

RELATIONSHIP: Syn-mineralization

GRADE: Hornfels

COMMENTS: Replacement-type mineralization probably due to Jurassic intrusions.

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics and sediments, intruded by rocks of the Jurassic Island Plutonic Suite.

Locally, surface trenches have been dug in an area underlain by calcareous andesitic tuff, argillite, limestone and limestone breccia of the Bonanza Group. Bedding strikes 290 degrees and dips 60 degrees south. Pyrolusite, rhodonite and barite are present. Samples of float are reported to contain 1 to 3 per cent lead and 34.28 grams per tonne silver. This is probably replacement-type lead-zinc-silver mineralization.

BIBLIOGRAPHY

EMPR AR 1966-65; 1967-68; 1968-84,88
EMPR ASS RPT *710, 9305
EMPR GEM 1969-88; 1970-254,267
GSC ANN RPT 1886
GSC BULL 242

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 268
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP *4-1974
GSC MEM 23
GSC OF 9; 170; 463; 722
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
CIM Spec. Vol. *46, pp. 214-238
CJES 18, p. 1; 20, p. 1, Jan. 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/14

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 138**

NATIONAL MINERAL INVENTORY: 092L11 Tlc1

NAME(S): **ISLAND COPPER PYROPHYLLITE** BAY 74,90

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W 092L12E
BC MAP:
LATITUDE: 50 35 59 N
LONGITUDE: 127 28 21 W
ELEVATION: 75 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: West end of float train (Assessment Report 710) through to Island Copper pit.

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5606428
EASTING: 608101

COMMODITIES: Pyrophyllite Alunite

MINERALS

SIGNIFICANT: Pyrophyllite Kaolin
ASSOCIATED: Dumortierite Quartz
ALTERATION: Pyrophyllite Kaolinite Dumortierite Quartz
ALTERATION TYPE: Argillic Silicific'n
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: 154 +/- 6 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: H09 Hydrothermal alteration clays-Al-Si
DIMENSION: 1500 Metres STRIKE/DIP: 105/ TREND/PLUNGE:
COMMENTS: Float train traced for 1500 metres at 105 degrees (Assessment Report 710).

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
	ISOTOPIC AGE: 200 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Mollusks		
Jurassic			Island Plutonic Suite
	ISOTOPIC AGE: 154 +/- 6 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		

LITHOLOGY: Brecciated Andesitic Lapilli Tuff
Brecciated Basaltic Lapilli Tuff
Tuffaceous Breccia
Quartz Feldspar Porphyry Dike

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite K-Ar date from Rupert Inlet stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics and sediments intruded by rocks of the Early to Middle Jurassic Island Plutonic Suite.

Locally, brecciated hydrothermally altered andesitic to basaltic lapilli tuff and tuff breccia of the Bonanza Group are cut by a northwest trending quartz-feldspar porphyry dyke swarm.

At the western edge of the Island Copper deposit (refer to 092L 158), the dyke is overlain by an intensely altered breccia zone up to 150 metres wide and 1000 metres long. The zone is massive greyish-tan pyrophyllite, quartz and kaolin, speckled with bright blue dumortierite. The zone appears brecciated and has a coarse, gritty texture. The alteration is due to siliceous differentiates of the quartz feldspar porphyry system permeating brecciated rocks. The brecciation and alteration are inferred to be synchronous with the brecciation and emplacement of the dyke (Exploration 1970, page 254).

A chip sample across a 15 metre exposure on the east end of the zone was analysed by the Ministry of Energy, Mines and Petroleum Resources in 1968, yielding the following values:

CAPSULE GEOLOGY

SiO₂ 83.18%
Al₂O₃ 13.36%
H₂O > 105 Celsius 2.78%

Spectrographic analysis indicates the presence of iron, titanium and 0.5 per cent boron (Open File 1988, page 93).

BIBLIOGRAPHY

EMPR AR 1966-65; 1967-68; 1968-84,88
EMPR ASS RPT *710, 731, 9305
EMPR GEM 1969-88; 1970-254,267
EMPR OF *1988-19, p. 93
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974
GSC MEM 23
GSC OF 9; 170; 463; 722
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
CIM Spec. Vol. *46, pp. 214-238
CJES 18, p. 1; 20, p. 1, Jan. 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/15

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 139**

NATIONAL MINERAL INVENTORY: 092L11 Fe1

NAME(S): **BAY 29, ISLAND COPPER**

MINING DIVISION: Nanaimo

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 35 46 N
LONGITUDE: 127 27 21 W
ELEVATION: 5 Metres

NORTHING: 5606051
EASTING: 609289

LOCATION ACCURACY: Within 500M

COMMENTS: North shore of Rupert Inlet, Bay 29 claim. Showing was previously placed to north on Bay 35 claim.

COMMODITIES: Iron Copper

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite
ASSOCIATED: Pyrite Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: 154 +/- 6 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry Industrial Min.
TYPE: L04 Porphyry Cu ± Mo ± Au
DIMENSION: STRIKE/DIP: 045/90W TREND/PLUNGE:
COMMENTS: Attitude of fracture/shear (Assessment Report 731).

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Andesite
Granodiorite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite K-Ar date from Rupert Inlet stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels
COMMENTS: Silicification maybe due to contact metamorphism from granodiorite.

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics and sediments, intruded by granodiorite of the Jurassic Island Plutonic Suite.

Locally, pyrite, chalcopyrite and magnetite occur as disseminations and fracture coatings in sheared and intensely fractured andesite. The fracture/shears trend 045 degrees, dipping vertically. Cryptocrystalline quartz stringers are present. A granodiorite stock is located 2.2 kilometres to the east.

The occurrence is located near to the Island Copper deposit (refer to 092L 158-Island Copper for details).

BIBLIOGRAPHY

EMPR AR 1966-65; 1967-68; 1968-84,88
EMPR ASS RPT *710, *731, 9305
EMPR GEM 1969-88; 1970-254,267
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974
GSC MEM 23
GSC OF 9; 170; 463; 722

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 272
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
CIM Spec. Vol. *46, pp. 214-238
CJES 18, p. 1; 20, p. 1, Jan. 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/03/14
DATE REVISED: / /

CODED BY: NJH
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 140**

NATIONAL MINERAL INVENTORY: 092L12 Cu3

NAME(S): **DEB**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 27 N
LONGITUDE: 127 31 53 W
ELEVATION: 150 Metres

NORTHING: 5616474
EASTING: 603733

LOCATION ACCURACY: Within 5 KM

COMMENTS: Centre of Deb claims (Minister of Mines Annual Report 1968, Figure 14).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite
ALTERATION: Quartz Epidote Silicific'n
ALTERATION TYPE: Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Andesite

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-4).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group, Karmutsen Formation andesites. Mineralization consists of chalcopyrite and pyrite in quartz fracture fillings in epidotized volcanics (Minister of Mines Annual Report 1968, page 92).

BIBLIOGRAPHY

EMPR AR 1968-Fig.14,91
EMPR ASS RPT 1671, 2104
EMPR GEM 1969-203; 1970-254
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/03

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 141**

NATIONAL MINERAL INVENTORY: 092L11 Cu11

NAME(S): **WALT**, LON, CUB

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 32 17 N
LONGITUDE: 127 13 06 W
ELEVATION: 185 Metres

NORTHING: 5599973
EASTING: 626252

LOCATION ACCURACY: Within 500M

COMMENTS: Main showing (Assessment Report 2240).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Chalcocite Malachite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal
TYPE: D03 Volcanic redbed Cu

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Middle Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Amygdaloidal Andesite
Gabbro

HOSTROCK COMMENTS: Gymnotropite ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular	PLUTONIC ROCKS RELATIONSHIP:	PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell		
METAMORPHIC TYPE: Contact		GRADE: Greenschist

CAPSULE GEOLOGY

The region is largely underlain by Upper Triassic volcanic rocks of the Vancouver Group, Karmutsen Formation. Several kilometres west Tertiary volcanics are present. Relatively small bodies of Jurassic Island Intrusions have intruded these rocks.

Locally, disseminations and amygdules of chalcopyrite, pyrite, bornite and chalcocite are present in Karmutsen andesites. Gabbro (?) or coarse-grained volcanics (?), of possibly Tertiary age, show malachite staining.

BIBLIOGRAPHY

EMPR AR *1968-98
EMPR ASS RPT 1815, *2240
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/30

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 142**

NATIONAL MINERAL INVENTORY: 092L11 Cu9

NAME(S): **HAW 26**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 42 57 N
LONGITUDE: 127 42 50 W
ELEVATION: 335 Metres

NORTHING: 5619014
EASTING: 590795

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on Haw 26 claim (Assessment Report 1736).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal
SHAPE: Bladed
MODIFIER: Sheared
DIMENSION: STRIKE/DIP: 090/
COMMENTS: Mineralization in east striking fault zone (Assessment Report 1736).

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			

LITHOLOGY: Andesite
Limestone

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake. Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The area geology consists of Upper Triassic Karmutsen Formation andesites and minor limestone of the Vancouver Group in contact to the southwest with Upper Triassic Quatsino Formation limestone, also of the Vancouver Group.

Pyrite and minor chalcopyrite are present in an east striking fault zone in Karmutsen volcanics.

BIBLIOGRAPHY

EMPR AR 1968-84
EMPR ASS RPT *1736, 2815
EMPR GEM 1970-254,263
EMR MP CORPFILE (Gladiator Resources Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1929A, p. 143
CJES 18, p. 1; 20, p. 1, Jan., 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/01

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 143**

NATIONAL MINERAL INVENTORY: 092L12 Cu9

NAME(S): **HAW 44**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 42 44 N
LONGITUDE: 127 46 05 W
ELEVATION: 457 Metres

NORTHING: 5618547
EASTING: 586977

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on Haw 44 claim, Assessment Report 2815.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
	ISOTOPIC AGE: 230 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Gymnotropite ammonites		
Upper Triassic	Vancouver	Quatsino	
	ISOTOPIC AGE: 225 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Juvarite ammonites		

LITHOLOGY: Andesite
Limestone

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake. Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The area geology consists of Upper Triassic Karmutsen Formation andesites and minor limestone of Vancouver Group in contact to the southwest with Upper Triassic Quatsino Formation limestone, also of the Vancouver Group.

Chalcopyrite and minor bornite are present as disseminations and fracture fillings in sheared andesite.

BIBLIOGRAPHY

EMPR ASS RPT 1736, *2815
EMPR GEM 1970-254,263
EMR MP CORPFILE (Gladiator Resources Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1929A, p. 143
CJES 18, p. 1; 20, p. 1, Jan., 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/31

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 144**

NATIONAL MINERAL INVENTORY: 092L5 Cu5

NAME(S): **SINKER**, KLASKINO, RUF 7-10,
SWIVEL, KI

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05W 092L05E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 18 57 N
LONGITUDE: 127 45 11 W
ELEVATION: 200 Metres

NORTHING: 5574491
EASTING: 588777

LOCATION ACCURACY: Within 500M

COMMENTS: Approximate location of "upper drill site" of Assessment Report 961 is 0.5 kilometres north of Klaskino Inlet, 7.0 kilometres east of the Inlet entrance.

COMMODITIES: Copper Nickel Cobalt Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Molybdenite
COMMENTS: Nickel, cobalt mineralogy not given.
ALTERATION: Actinolite Chlorite Quartz
ALTERATION TYPE: Skarn Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Porphyry Skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Parson Bay	
Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 215 Ma
DATING METHOD: Fossil
MATERIAL DATED: Halobia mollusks

ISOTOPIC AGE: 154 +/- 6 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Sediment/Sedimentary
Microdiorite Dike
Felsic Dike
Skarn

HOSTROCK COMMENTS: Mollusks from Beaver Cove; biotite from Island Copper stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area lies within the Insular Belt of the Cordillera and is underlain mainly by volcanics and crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage of sediments of the Paleozoic Sicker Group and basalts and minor carbonate and clastic sediments of the Upper Triassic Vancouver Group. The Bonanza volcanics are coeval with, or genetically related to granodiorite stocks of the Jurassic Island Plutonic Suite. These intrude all rocks.

The Sinker occurrence consists of disseminated chalcopyrite and fracture fillings of chalcopyrite with pyrrhotite in skarn-altered sediments of the Parson Bay Formation (Vancouver Group). These are intruded by microdiorite and felsite dykes. The reports in Property File (092L 237-Ruf 41) refer to the mineralization as the "Central and West zones".

BIBLIOGRAPHY

EMPR AR 1903-195; 1967-70
EMPR ASS RPT 961, 2407, *4730, 11226
EMPR EXPL 1982-226,227
EMPR GEM 1973-257; 1974-212
EMPR PF (Reports in 092L 237-Ruf 41)
GSC ANN RPT 1886

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 278
REPORT: RGEN0100

BIBLIOGRAPHY

GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
Carson, D.J.T., (1968), Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern British Columbia, Ph.D. Thesis, University of British
Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/10

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 145**

NATIONAL MINERAL INVENTORY:

NAME(S): **CONTACT**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 02 59 N
LONGITUDE: 126 48 25 W
ELEVATION: 305 Metres

NORTHING: 5546463
EASTING: 657001

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralized zone, east-central portion of Contact 1 claim is 8 kilometres north of Zeballos, 1.0 kilometre north of Zeballos River (Assessment Report 418).

COMMODITIES: Magnetite Iron Copper

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite
ALTERATION: Garnet
ALTERATION TYPE: Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Industrial Min.
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 0001 Metres STRIKE/DIP: 310/20W
COMMENTS: Attitude of shear zone localizing mineralization is 310 degrees.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarte ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Skarn
Diorite
Massive Andesite
Amygdaloidal Andesite
Hornblende Diorite Dike
Aplite Dike

HOSTROCK COMMENTS: Ammonites from Alice Lake; Mollusks from Quatsino Sound phlogopite from Zeballos intrusion (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

The Contact occurrence, consisting of a 1 metre wide patchy magnetite band with minor associated chalcopyrite, is contained within a 2 to 3 metre wide garnet skarn at a limestone-porphyrific andesite contact. The mineralization follows a 310 degree striking, 20 degree southwest dipping shear zone.

The area of the occurrence is underlain by Lower Jurassic Bonanza Group massive and amygdaloidal andesite and agglomeratic andesite in contact with Upper Triassic Quatsino Formation limestone of the Vancouver Group.

The hornblende diorite Zeballos phase of the Jurassic Island Plutonic Suite lies 2 kilometres west. Hornblende diorite dykes and aphanitic light coloured aplite dykes occur in the area of the claims.

CAPSULE GEOLOGY

The Eocene quartz diorite South Zeballos pluton lies 2 kilometres to the south but mineralization is not believed to be related to it.

BIBLIOGRAPHY

EMPR AR 1962-133
EMPR ASS RPT *418
EMPR BULL 27
GSC EC GEOL 1
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272
GSC OF 9; 170; 463
GSC P 38-5; 69-1A; 70-1A; 71-36; 72-44; 74-3; 79-30
GSC SUM RPT 1929A, Part A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1988/02/11

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

BIBLIOGRAPHY

247; 1950-217; 1951-214; 1952-249; 1953-185; 1954-176; 1955-90;
1956-149; 1957-77
EMPR EXPL *1985-B24
EMPR IND MIN FILE (Building Stone in BC (in Ministry Library))
EMPR INF CIRC *1988-6, pp. 18,19,29; 1994-15; 1996-1, p. 20
EMPR OF 1991-20; 1992-1; 1992-9
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 255A; 1552A; 4-1974
GSC MEM 23
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929 Part A
CANMET RPT 452, Vol.5, pp. 186,192; 846, pp. 167-172
CJES 18, p. 1; 20, p. 1, (Jan. 1983)
Victoria Times Colonist, June 22, 1997, p. C8

DATE CODED: 1985/07/24
DATE REVISED: 1991/03/08

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092L 147**

NATIONAL MINERAL INVENTORY: 092L2 Au33

NAME(S): **KING**, RUGGED, BLACK KNIGHT

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 02 39 N
LONGITUDE: 126 45 08 W
ELEVATION: 396 Metres

NORTHING: 5545962
EASTING: 660937

LOCATION ACCURACY: Within 1 KM

COMMENTS: The mineralized area, from Geological Survey of Canada Summary Report 1932, Part A II, page 43, is located 2 kilometres east of the mouth of Nomash River, 10 kilometres northeast of Zeballos.

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite Magnetite
COMMENTS: Gold, silver mineralogy not known.
ASSOCIATED: Quartz Calcite Garnet Epidote
ALTERATION: Garnet Epidote
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Replacement Epigenetic
SHAPE: Tabular
DIMENSION: 0006 Metres STRIKE/DIP: 305/55S
COMMENTS: Sediments strike 305 degrees, and dip southwest at 55 degrees.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropic ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Eocene			Catface Intrusions
ISOTOPIC AGE: 38 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Calcareous Tuff
Basaltic Flow
Amygdaloidal Flow
Tuff
Breccia
Andesitic Flow
Porphyritic Granodiorite Dike

HOSTROCK COMMENTS: Karmutsen ammonites-Hisnit Island; Quatsino ammonites-Alice Lake; Catface biotite-South Zeballos pluton (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
Plutonic Rocks
RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1932
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 31.5000 Grams per tonne
Gold 2.7000 Grams per tonne
Copper 5.1400 Per cent

REFERENCE: Geological Survey of Canada Summary Report 1932, Part A II, page 44.

CAPSULE GEOLOGY

The King occurrence consists of heavy irregular patches and fracture zones containing chalcopyrite, pyrite, magnetite, pyrrhotite, garnet, epidote, quartz and calcite. Lenses may be to 1.5 metres wide, zones of fracturing to 6.0 metres wide. The mineralization occurs at the contact between impure grey limestone and green calcareous tuff that is interbedded with andesitic, basaltic, and amygdaloidal flows and breccia of the Upper Triassic Vancouver Group, Karmutsen Formation. Limestone of the Upper Triassic Vancouver Group Quatsino Formation conformably overlies the Karmutsen Formation 60 metres stratigraphically above the occurrence. The rocks have a general strike of 305 degrees and dip 55 degrees southwest; several northeast trending porphyritic granodiorite dykes are present. The Eocene South Zeballos pluton of the Catface Intrusions lies several kilometres west. A sample collected by Gunning (Geological Survey of Canada Summary Report 1932, Part A II, page 44) assayed 5.14 per cent copper, 2.7 grams per tonne gold and 31.5 grams per tonne silver.

An assessment report describes an occurrence in a similar geological environment, but at an elevation of 762 metres (Assessment Report 868, page 8). It is assumed that the Assessment Report refers to the same occurrence.

BIBLIOGRAPHY

- EMPR AR 1967-283
EMPR ASS RPT 868
EMPR BULL 20, Part V, pp. 16,27
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
GSC EC GEOL 1
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; *1932, Part A II, p. 43
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S. (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/20

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 148**

NATIONAL MINERAL INVENTORY: 092L2 Au34

NAME(S): **NOOTKA**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02E
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 02 24 N
LONGITUDE: 126 44 50 W
ELEVATION: 426 Metres

NORTHING: 5545509
EASTING: 661309

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located 600 metres south of 092L 147 (King), 2.5 kilometres south-east of the mouth of Nomash River, 10 kilometres northeast of Zeballos (Geological Survey of Canada Summary Report 1932, Part A II, page 44).

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Pyrite Pyrrhotite

ASSOCIATED: Garnet Epidote Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive
CLASSIFICATION: Replacement Hydrothermal

SHAPE: Tabular

MODIFIER: Sheared

DIMENSION:

STRIKE/DIP: 040/80E

TREND/PLUNGE:

COMMENTS: Shear zone strikes 040 degrees, and dips 80 degrees east.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Vancouver

FORMATION

Karmutsen

IGNEOUS/METAMORPHIC/OTHER

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

Eocene

ISOTOPIC AGE: 38 +/- 14 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Catface Intrusions

LITHOLOGY: Mafic Volcanic Rock

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island; Catface biotite from South Zeballos pluton (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1932

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

124.8000

Grams per tonne

Gold

13.9000

Grams per tonne

Copper

17.0700

Per cent

COMMENTS: Selected sample.

REFERENCE: Geological Survey of Canada Summary Report 1932, Part A II, page 44.

CAPSULE GEOLOGY

Geological Survey of Canada Summary Report 1932, Part A II describes the occurrence as a pronounced shear zone, striking 040 degrees and dipping 80 degrees southeast in altered green mafic volcanic rocks of the Upper Triassic Vancouver Group, Karmutsen Formation. The Eocene Zeballos granodiorite stock of the Catface Intrusions lies 2 kilometres west. Associated with the shear zone is a 1 metre vuggy quartz lens mineralized with chalcopyrite and pyrrhotite. Extending for 0.6 metres from the quartz lens along the shear zone is an area seamed with quartz veins, epidote and garnet, but little sulphides. A sample of oxidized material from the richest

CAPSULE GEOLOGY

part of the vein assayed 17.07 per cent copper, 13.7 grams per tonne gold and 124.8 grams per tonne silver.

Some 20 metres to the southwest the shear zone is a 15 to 45 centimetre quartz-chalcopyrite-pyrrhotite band, while the same zone, with some low grade copper mineralization occurs 60 metres to the northeast.

BIBLIOGRAPHY

- EMPR AR 1967-283
EMPR BULL 20, Part V, pp. 16,27
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
GSC EC GEOL 1
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; *1932, Part A II, p. 44
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S. (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/20

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 149**

NATIONAL MINERAL INVENTORY: 092L2 Au32

NAME(S): **MAJOR, ZEBALLOS DOME, ZEBELLA BELLE,
EVERGREEN, ROYAL FLUSH**

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02E
BC MAP:

Underground

MINING DIVISION: Alberni

LATITUDE: 50 01 59 N
LONGITUDE: 126 44 30 W
ELEVATION: 488 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5544749
EASTING: 661730

LOCATION ACCURACY: Within 500M

COMMENTS: Lower vein location from Geological Survey of Canada Summary Report 1932, Part A II, page 44, 9.5 kilometres northeast of Zeballos, east of Nomash River. The Zeballos Dome Group consists of the Zebella Belle 3-24, Evergreen 1-3 and Royal Flush 1-4 (Starr, 1938).

COMMODITIES: Copper

Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite Bornite

COMMENTS: Gold mineralogy not known.

ASSOCIATED: Quartz

ALTERATION: Garnet Epidote Chlorite Serpentine

COMMENTS: Garnet, epidote at volcanic-limestone contact; chlorite, serpentine on vein borders.

ALTERATION TYPE: Skarn

Serpentin'zn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Massive
CLASSIFICATION: Replacement Epithermal

TYPE: I06 Cu±Ag quartz veins

K01 Cu skarn

SHAPE: Tabular

MODIFIER: Sheared

DIMENSION: 0150 Metres

STRIKE/DIP: 350/

TREND/PLUNGE:

COMMENTS: Strike of lower vein is 350 degrees; width is 1.5 metres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER

Upper Triassic Vancouver

Karmutsen

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropic ammonites

Upper Triassic Vancouver

Quatsino

ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarite ammonites

Eocene

Catface Intrusions

ISOTOPIC AGE: 38 +/- 14 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Feldspar Porphyry Dike
Limestone
Greenstone

HOSTROCK COMMENTS: Karmutsen ammonites-Hisnit Island; Quatsino ammonites-Alice Lake; Catface biotite-South Zeballos pluton (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

TERRANE: Wrangell

Plutonic Rocks

METAMORPHIC TYPE: Contact

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1940

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold

16.0000

Grams per tonne

COMMENTS: Reported as 18 dollars per tonne on selected samples.

REFERENCE: Geological Survey of Canada Paper 40-12, page 36.

CAPSULE GEOLOGY

The occurrence lies 3 kilometres east of the Zeballos pluton of the Eocene Catface Intrusions, near the contact between Karmutsen Formation greenstone and overlying Quatsino Formation limestone, both of the Upper Triassic Vancouver Group.

At the occurrence, 2 veins are present. The upper vein at elevation 685 metres has been traced for 90 metres along its 025 degree strike.

The vein is less than 30 centimetres wide and carries chalcopryrite, bornite and pyrite in quartz with fragments of volcanic rocks. The lower vein at elevation 488 metres has been traced for 150 metres and was explored by trenches and a 7.5 metre adit. It is contained within a 6 to 12 metre wide feldspar porphyry dyke striking 350 degrees and is up to 1.5 metres wide. Locally pyrite and chalcopryrite are present in the quartz vein. A selected sample assayed 18 dollars per tonne (16.00 grams per tonne) (GSC Paper 40-12, page 36). At the adit, the vein is 60 centimetres wide with 23 to 36 centimetre chloritic gouge borders. The feldspar porphyry dyke is strongly fractured and contains numerous smaller quartz veins. Production in 1939, of 1 tonne containing 93.0 grams of gold, was from selected material.

Additional mineralization is reported in Geological Survey of Canada Paper 40-12 (page 36) along the limestone-greenstone contact where a 1.5 metre wide garnet-epidote-magnetite-pyrite zone carries small amounts of chalcopryrite. Below the contact the mafic volcanics are sheared and altered to serpentine-chlorite schist along a narrow zone striking 342 degrees and dipping 60 degrees east. Along this shear zone, over a width of 24 metres, pyrite, quartz(stringers?) and chalcopryrite are sparingly present.

BIBLIOGRAPHY

- EMPR AR 1933-253
- EMPR BULL 20, Part V, pp. 16,27
- EMPR FIELDWORK 1982, p. 290; 1983, p. 219
- EMPR PF (*Starr, C.C. (1938): Report on the Zeballos Dome Property, 5 p.; Sketch of veins and workings, Zebella Belle Group, 1938; Stevenson, J.S. (1938): Lode Gold Deposits of the Zeballos Area)
- GSC EC GEOL 1
- GSC MAP 4-1974; 255A; 1028A; 1552A
- GSC MEM 204; 272
- GSC OF 9; 170; 463
- GSC P 38-5; *40-12, p. 36; 69-1A; 70-1A; 72-44; 74-8; 79-30
- GSC SUM RPT 1929, Part A; 1932, Part A
- Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/20

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 150**

NATIONAL MINERAL INVENTORY: 092L12 Sia1

NAME(S): **HOLBERG, BETTY, RAINBOW,**
APPLE BAY, H & W 8

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:
LATITUDE: 50 36 43 N
LONGITUDE: 127 41 01 W
ELEVATION: Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Quarry on H&W 8 claim (Assessment Report 8151).

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5607500
EASTING: 593137

COMMODITIES: Silica

MINERALS

SIGNIFICANT: Silica
ASSOCIATED: Pyrite
ALTERATION: Silica Kaolinite Pyrite
ALTERATION TYPE: Silicific'n Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: R12 Volcanic glass - perlite
DIMENSION: STRIKE/DIP: 045/20S TREND/PLUNGE:
COMMENTS: Possible remnant bedding at west end of quarry (Assessment Report 8151).

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Lower Cretaceous	Queen Charlotte	Longarm	
ISOTOPIC AGE: 122 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Various fauna			

LITHOLOGY: Rhyolite
Rhyolite Lapilli Tuff
Rhyolite Breccia
Rhyolite Flow

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound. Longarm fauna from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Overlap Assemblage
METAMORPHIC TYPE: Regional RELATIONSHIP: Post-mineralization GRADE: Zeolite

INVENTORY

ORE ZONE: H&W 8 REPORT ON: Y
CATEGORY: Inferred YEAR: 1979
QUANTITY: 2000000 Tonnes
COMMODITY: Silica GRADE: 43.6800 Per cent
COMMENTS: Estimated grade given was 93.45 per cent SiO₂; conversion to Si using the factor 2.1393.
REFERENCE: Assessment Report 8151.

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanic rocks and Cretaceous Longarm Formation (Queen Charlotte Group) sediments.

On the H&W 8 claim there is a silica rich knoll in rhyolitic volcanics. Fragments up to 2.5 centimetres in diameter have been noted. The rocks are white to very light grey, hard and intensely fractured. Abundant pyrite occurs in irregular dark grey vesicular masses within the rhyolitic rocks on the west side of a small quarry.

CAPSULE GEOLOGY

This pyritic zone trends 330 degrees and dips 30 to 45 degrees southwest. Possible remnant bedding at the northwest end of the quarry strikes 045 degrees and dips at 20 degrees southwest.

Alteration consists chiefly of silicification with some kaolinization and the pyritization. The secondary silica is partly chalcedony and partly microcrystalline quartz.

No contacts of the rhyolite zone have been observed. Its west end has been inferred to terminate against an east-northeast fault, while the north contact is poorly defined by several scattered outcrops. To the south is Holberg Inlet. The zone is open to the east.

In 1965, 4500 tonnes of rhyolite were shipped to Vancouver by Lafarge Cement of North America Ltd. Based on surface sampling and the inferred boundaries of the rhyolitic rocks, reserves have been estimated to be 2,000,000 tonnes grading 93.45 per cent SiO₂ (Assessment Report 8151).

To the west, silica-rich dacite is estimated to contain 15,500,00 tonnes grading 91.97 per cent SiO₂ (H&W deposit, 092L 269).

BIBLIOGRAPHY

- EM EXPL 2000-25-32; 2001-23-31; 2002-29-40
EMPR AR 1965-276; 1968-84,330
EMPR ASS RPT 6142, 6544, *8151
EMPR GEM 1970-254
EMPR OF 1987-15
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A; 4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, p. 192

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/26

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 151**

NATIONAL MINERAL INVENTORY: 092L05 Lst1

NAME(S): **JEUNE LANDING (L 1582)**, NEROUTSOS INLET, LYONS ISLET,
SOUTHEAST ARM-QUATSINO SOUND

STATUS: Past Producer Open Pit
REGIONS: British Columbia, Vancouver Island

MINING DIVISION: Nanaimo

NTS MAP: 092L05E 092L06W 092L11W 092L12E

UTM ZONE: 09 (NAD 83)

BC MAP:
LATITUDE: 50 27 32 N

NORTHING: 5590700
EASTING: 605013

LONGITUDE: 127 31 14 W

ELEVATION: 10 Metres

LOCATION ACCURACY: Within 5 KM

COMMENTS: Quarry on Lot 1582, 2 kilometres north of Jeune Landing on the east side of Neroutsos Inlet (Located from quarry shown on Lyons Islet on NTS Map 92L05E).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite

ASSOCIATED: Dolomite

MINERALIZATION AGE: Upper Triassic

ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Various fossils

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.

SHAPE: Tabular

MODIFIER: Faulted

DIMENSION: 9999 x 8000 Metres

STRIKE/DIP: 153/40W

TREND/PLUNGE:

COMMENTS: Deposit is 15,000 by 8,000 metres in size. Attitude of limestone just north of the quarry on Lot 1582.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Upper Triassic

GROUP: Vancouver

FORMATION: Quatsino

IGNEOUS/METAMORPHIC/OTHER:

DATING METHOD: Fossil

MATERIAL DATED: Various fossils

LITHOLOGY: Limestone
Basaltic Flow
Argillite
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Insular

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

TERRANE: Wrangell

COMMENTS: Deposited on a shallow marine platform of ocean rift volcanics.

INVENTORY

ORE ZONE: ROADCUT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1968

SAMPLE TYPE: Chip

COMMODITY

GRADE

Limestone

54.1200

Per cent

COMMENTS: Highest assay taken from 76 metre roadcut, 1.28 kilometres south of Jeune Landing. Grade is for calcium oxide.

REFERENCE: Minister of Mines Annual Report 1968, page 318, Sample 10.

CAPSULE GEOLOGY

A broad band of limestone of the Upper Triassic Quatsino Formation extends from Rupert Inlet south-southeast for 15 kilometres along the east side of Neroutsos Inlet (southeast arm of Quatsino Sound). This band forms the northern segment of a limestone belt that continues southeast for 120 kilometres to Tlupana Inlet. The band narrows to the southeast from a maximum width of 8 kilometres at Rupert Inlet to 5 kilometres in the vicinity of Jeune Landing. The width of the band is likely due to the repetition of beds by northwest trending faults. A northeast trending strike slip fault offsets the band from the main limestone belt to the southeast.

Underlying basaltic flows of the Upper Triassic Karmutsen Formation (Vancouver Group) outcrop along the east side of the band. A narrow southeast trending wedge of argillite and black limestone of

CAPSULE GEOLOGY

the Upper Triassic Parsons Bay Formation (Vancouver Group) is infaulted along the centre of the band in its southern half. Bedding generally strikes north-northwest and dips 20 to 40 degrees southwest. Just north of a quarry on Lot 1582, the limestone strikes 153 degrees and dips 40 degrees southwest.

Exposures in the vicinity of Marble River, along Rupert Inlet, reveal light grey limestone that often displays a brecciated texture. appearance. Thin chert beds are locally present. The limestone here is reported to be magnesian in places. Further south, near Jeune Landing, the band is generally composed of fine grained, light to dark grey limestone with a few black beds. White to dove grey high calcium limestone containing beds of pure dolomite occur in this vicinity. A sample across a 2.4-metre thick dolomite bed assayed 19.00 per cent MgO (CANMET Report 811, p. 138, Sample 3). Five chip samples taken along various road cuts in the vicinity of Jeune Landing over lengths of between 36.6 and 195 metres displayed the following percentage range of values (Minister of Mines Annual Report 1968 page 318, Samples 7,8,10,11,12);

CaO:	53.08 - 54.12
MgO:	0.79 - 1.89
Insolubles:	0.59 - 1.25
R2O3:	0.18 - 0.33
Fe2O3:	0.04 - 0.17
MnO:	0.005 - 0.016
P2O5:	0.01
Sulphur:	<0.01 - 0.02
Ig. Loss:	43.55 - 43.87

The limestone has been quarried at two locations on the east side of Neroutsos Inlet for the Port Alice pulp mill to the south. A quarry on Lot 1581, 0.9 kilometre northwest of Jeune Landing, was in operation between 1919 and 1925. A second quarry was opened up in 1925 on Lot 1582, 2.5 kilometres northwest of Jeune Landing. This quarry was operated continuously up to 1960. Between 1919 and 1960 313,111 tonnes of limestone were quarried.

BIBLIOGRAPHY

- EMPR AR 1947-217; 1954-183; 1955-92; 1956-154; 1957-88; 1958-97;
1959-176; 1960-147; *1968-312-314,318
EMPR OF 1992-18, p. 30
EMPR PF (Report on Limestone Deposits of the Pacific
Northwest, p. 1 (in 092L 279 File))
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918 Part B; 1929 Part A, pp. 103,109,110
CANMET RPT *811, Part 5, pp. 137,138
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Lockie, D.A. (1957): A Petrographic Analysis of Some Limestones of
Southwestern British Columbia, University of British Columbia
unpub. Thesis, pp. 21,24,25
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/07/22

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 152**

NATIONAL MINERAL INVENTORY: 092L10 Lst1

NAME(S): **HARBLEDOWN ISLAND LIMESTONE**

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L10E
BC MAP:
LATITUDE: 50 33 54 N
LONGITUDE: 126 30 59 W
ELEVATION: 60 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location is the centre of Leases 1594 and 1966 on the southeast corner of Harbledown Island, between Knight Inlet and Johnstone Strait.

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5604398
EASTING: 675888

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
MINERALIZATION AGE: Upper Triassic
ISOTOPIC AGE: 215 Ma
DATING METHOD: Fossil
MATERIAL DATED: Halobia mollusks

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: R09 Limestone
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 1600 x 213 Metres
COMMENTS: General strike of local stratigraphy.

Massive
Syngenetic
Industrial Min.
STRIKE/DIP: 050/85N
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u> Upper Triassic	<u>GROUP</u> Vancouver	<u>FORMATION</u> Parson Bay	<u>IGNEOUS/METAMORPHIC/OTHER</u>
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			

LITHOLOGY: Limestone
Volcanic Rock
Argillite
Granodiorite Dike

HOSTROCK COMMENTS: Parson Bay mollusks from Beaver Cove (GSC Paper 74, p. 8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY: Limestone
GRADE: 53.0800 Per cent
COMMENTS: Average across 137 metres. Grade given for calcium oxide.
REFERENCE: Minister of Mines Annual Report 1954, page A184, Samples 1-3.

CAPSULE GEOLOGY

A band of limestone of the Upper Triassic Parsons Bay Formation (Vancouver Group) extends for at least 1.6 kilometres west from the shore on the southeast corner of Harbledown Island. On the north side the band is overlain and partially interbedded with argillite and minor volcanics. To the south the limestone is underlain and partially interbedded with basaltic flows of the Upper Triassic Karmutsen Formation (Vancouver Group). Bedding strikes 050 to 090 degrees and dips 20 to 90 degrees northwest. The limestone bed averages 213 metres in thickness. Dikes varying from 0.3 to 0.6 metres in width commonly intrude the limestone.

The deposit is comprised of friable, medium grained, sugary textured, dark bluish grey limestone that displays a streaked appearance. Occasional narrow bands, veinlets and lenses of white calcite are present. Scattered pyrite grains are also evident. Three chip samples of equal length taken in succession across a total width of 137 metres perpendicular to the strike of the band averaged

CAPSULE GEOLOGY

53.08 per cent CaO, 0.087 per cent MgO, 5.0 per cent insolubles, 0.11 per cent Fe₂O₃, 0.27 per cent MnO, 0.045 per cent P₂O₅ and 0.018 per cent sulphur (Minister of Mines Annual Report 1954, p. 184, Samples 1 to 3).

In 1954, Lease 1594 was held by R.H. Chestnut and Lease 1966 was held by J.T. Protheroe. In 1958 Chestnut leased his claim to the Granby Consolidated Mining, Smelting and Power Company Limited. The Company diamond drilled 17 holes totaling 94 metres. In 1975 the Company became Granby Mining Corporation.

BIBLIOGRAPHY

EMPR AR *1954-183,184; 1958-97
EMPR GEM 1970-255
EMPR OF 1992-18, pp. 42-43
EMPR PF (?McCammon, J.W. 1954; Report by Chestnut, R.H. 1954)
GSC MAP 4-1974; 1552A
GSC MEM 23
GSC P 74-8
CANMET RPT 452, pp. 155,156; *811, pp. 165,166,175

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/13

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 153**

NATIONAL MINERAL INVENTORY: 092L12 Cu22

NAME(S): **RAM**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 42 27 N
LONGITUDE: 127 36 29 W
ELEVATION: 280 Metres

NORTHING: 5618223
EASTING: 598283

LOCATION ACCURACY: Within 1 KM

COMMENTS: Numerous showings along road and to the south (Assessment Report 1706).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Pyrite Quartz
ALTERATION: Carbonate Epidote Chlorite Malachite
ALTERATION TYPE: Chloritic Epidote Carbonate Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Volcanogenic

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Andesite
Limestone

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by andesite and minor limestone of the Upper Triassic Vancouver Group, Karmutsen Formation. Quartz, carbonate, epidote and chlorite are found in fractures and amygdules. Disseminated chalcopyrite, pyrite and rare bornite are also in fractures and amygdules. Malachite is also present (Assessment Report 1706).

BIBLIOGRAPHY

EMPR AR 1968-84,92
EMPR ASS RPT 1706
EMPR GEM 1970-254
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A; 4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/03

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 154**

NATIONAL MINERAL INVENTORY: 092L2 Au4

NAME(S): **CHURCHILL**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 04 14 N
LONGITUDE: 126 49 41 W
ELEVATION: 1120 Metres

NORTHING: 5548735
EASTING: 655422

LOCATION ACCURACY: Within 500M

COMMENTS: Number One vein (from Geological Survey of Canada Memoir 272, Figure 2) is located on the ridge between Lime Creek and Fault Creek, 3.5 kilometres north of Zeballos River, 9.5 kilometres north of Zeballos.

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite
COMMENTS: Silver and gold mineralogy not known.
ASSOCIATED: Quartz
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Epithermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Sheared Faulted
DIMENSION: 0060 Metres STRIKE/DIP: 310/90 TREND/PLUNGE:
COMMENTS: Dimensions and attitude given are of the Number One vein.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarte ammonites			

LITHOLOGY: Limestone
Andesite Dike

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1976
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 96.0000 Grams per tonne
Gold 24.0000 Grams per tonne
Copper 0.7400 Per cent
Lead 3.9300 Per cent
Zinc 3.7200 Per cent
COMMENTS: Sample over 1.2 metres.
REFERENCE: National Mineral Inventory 092L2 Au4.

CAPSULE GEOLOGY

The Churchill occurrence consists of two quartz-sulphide veins hosted by Upper Triassic Vancouver Group, Quatsino Formation limestone. The veins are on the southwest flank of an anticlinal structure that has its axis striking along the southeast trending ridge between Lime Creek and Fault Creek. Both veins lie at the south boundary of Churchill No. 3 claim of Figure 2, Geological Survey of Canada Memoir 272, and are located 120 metres southeast of the Churchill magnetite-skarn occurrence (092L 031).

The Number One vein strikes 310 degrees and has a vertical dip.

CAPSULE GEOLOGY

It has been exposed intermittently for 60 metres. Small displacement step-faults are present at its southern end where the vein is 1.2 to 1.6 metres wide. In the north the vein bifurcates into two 20 centimetre veins separated by 0.3 to 0.6 metres of limestone.

The Number One vein contains a mixture of rusty comb quartz, limonite, secondary lead minerals and a little primary galena, sphalerite and pyrite. A sample over 1.2 metres assayed 24.0 grams per tonne gold, 96.0 grams per tonne silver, 0.74 per cent copper, 3.93 per cent lead and 3.72 per cent zinc (National Mineral Inventory 092L2 Au4; not referenced).

The Number Two vein is located 120 metres east of the first and strikes 035 degrees with an 80 degree southeast dip. It has been exposed over 30 metres strike length, and consists of 0.6 to 1.8 metres of highly sheared and oxidized gouge, comb quartz and sulphides. At the north end, sulphides (mostly chalcopyrite and sphalerite) are much stronger than in the south. This vein appears to occupy a persistent narrow fault zone along the northwest side of an andesite dyke that cuts the limestone. Post mineralization movement is evident.

A sample across 0.3 metres of fault gouge assayed 18.2 grams per tonne gold, 19.2 grams per tonne silver, 0.56 per cent copper, 0.05 per cent lead and 0.04 per cent zinc (National Mineral Inventory 092L2 Au4, not referenced).

A third vein, about which little is known, is indicated on a map from Property File 092L 031 (Churchill; 1:3600 undated Geology Map. It is located 260 metres south of, and apparently on strike with the Number One vein. This vein appears to be hosted in Quatsino Formation limestone; assay values indicated on the map are 1.37 and 2.7 grams per tonne gold.

BIBLIOGRAPHY

- EMPR BULL 20, Part V, pp. 16,*27,134
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (092L 031, Churchill)
GSC EC GEOL 1
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272, p. 59
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929, Part A; 1932, Part A II, p. 29
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
N MINER Apr. 1938, pp. 39-45
Stevenson, J.S. (1938): Lode Gold Deposits of the Zeballos Area
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/16

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 155**

NATIONAL MINERAL INVENTORY: 092L2 Cu1

NAME(S): **UEBELL**, FERN HILL (L.1063), CEDAR HILL,
TRYGG FRACTION, GARBO (L.1030), GARBO NO. 2 (L.1861),
PRIVATEER, NEW PRIVATEER

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W

MINING DIVISION: Alberni

BC MAP:
LATITUDE: 50 01 54 N
LONGITUDE: 126 48 45 W
ELEVATION: 305 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5544444
EASTING: 656662

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on the far west side of Lot 1063 (Bulletin 27, Figure 2), 0.7 kilometres east of the mouth of Spud Creek, 6 kilometres northeast of Zeballos.

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated

CLASSIFICATION: Skarn

TYPE: L04 Porphyry Cu ± Mo ± Au K01 Cu skarn

SHAPE: Tabular

DIMENSION: 120 x 57 Metres STRIKE/DIP: 315/90

TREND/PLUNGE:

COMMENTS: Mineralized zone strikes northwest, is 120 metres long and 53 to 61 metres deep.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER

Lower Jurassic Bonanza

Undefined Formation

ISOTOPIC AGE: 200 Ma

DATING METHOD: Fossil

MATERIAL DATED: Mollusks

Eocene

Catface Intrusions

ISOTOPIC AGE: 38 +/- 14 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: K-Ar from biotite

LITHOLOGY: Quartz Diorite Breccia
Quartz Diorite Dike
Quartz Diorite
Andesite
Andesite Tuff
Volcanic Rock
Calc-silicate

HOSTROCK COMMENTS: Mollusks from Quatsino Sound. Biotite from Zeballos stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

INVENTORY

ORE ZONE: B

REPORT ON: Y

CATEGORY: Indicated

YEAR: 1961

QUANTITY: 58054 Tonnes

COMMODITY

GRADE

Copper

2.0200 Per cent

COMMENTS: Drill indicated.

REFERENCE: Northern Miner - March 29, 1962.

INVENTORY

ORE ZONE: A REPORT ON: Y
CATEGORY: Indicated YEAR: 1961
QUANTITY: 87988 Tonnes
COMMODITY: Copper GRADE: 1.9800 Per cent
COMMENTS: Drill indicated.
REFERENCE: Northern Miner - March 29, 1962.

CAPSULE GEOLOGY

The Fern Hill occurrence lies within Lower Jurassic Bonanza Group volcanic rocks and sediments overlying Quatsino Formation limestone and Karmutsen Formation tholeiitic basalts both of the Upper Triassic Vancouver Group. These have been intruded by Jurassic Island Intrusions granodiorite and Eocene Catface Intrusions quartz diorite.

At the occurrence, quartz diorite breccia consisting of fragments of Bonanza Group volcanic rocks and quartz diorite are cemented together with quartz diorite. A north striking, vertically dipping calc-silicate band of the Bonanza Group forms the western intrusive contact near the area of mineralization.

Mineralization consists of chalcopyrite, pyrite and pyrrhotite concentrated in quartz-diorite breccia within 8 metres from a 8 to 15 metre wide barren quartz diorite dyke. The mineralization persists over a zone 120 metres long and 53 to 61 metres deep, as indicated by drilling.

The mineralized area, separated into the A zone and the B zone, contains drill-indicated reserves of 87,988 tonnes of 1.98 per cent copper and 58,054 tonnes of 2.02 per cent copper respectively (Northern Miner - March 29, 1962).

An 8-metre adit was drifted on a 10-centimetre quartz vein in quartz diorite, 120 metres southeast of the copper mineralization. The vein contains blebs of chalcopyrite.

In 1971, New Privateer Mines Ltd. drilled 5 holes, totalling 293 metres in an area about 120 metres south of the copper mineralization. A 2-metre intersection assayed 1.8 per cent copper and 13.7 grams per tonne silver (Siega, 1972).

BIBLIOGRAPHY

EM EXPL 2001-23-31
EMPR AR 1961-100; 1964-154; 1967-74
EMPR ASS RPT *309
EMPR BULL 20, Part V; p. *27
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (*Siega, L.J. (1972): Geological Report Zeballos Area, New Privateer Mines Ltd.)
EMR CORPFILE (New Privateer Mine Ltd.; New Privateer Mines, 1973 Prospectus, L.J. Siega, Addendum to Geology Report)
EMR MIN BULL MR 223 B.C. 173
GSC EC GEOL 1
GSC MAP 4-1974; 255A; 1028A, 1552A
GSC MEM 204; 272
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929, Part A; 1932, Part A II
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr. 1938, pp. 39-45; Mar. 29, 1962
WWW <http://www.infomine.com/>
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S. (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/03

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 156**

NATIONAL MINERAL INVENTORY: 092L2 Cu1

NAME(S): **SCORPIO (L.1703)**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 01 57 N
LONGITUDE: 126 49 10 W
ELEVATION: 100 Metres

NORTHING: 5544522
EASTING: 656162

LOCATION ACCURACY: Within 500M

COMMENTS: Location of southeast corner of Lot 1703 (from Bulletin 27, Figure 2) on Zeballos River, 6.5 kilometres north of Zeballos.

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Pyrrhotite Chalcopyrite Molybdenite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Skarn Replacement
SHAPE: Tabular
DIMENSION: 0006 x 0001 Metres STRIKE/DIP: 360/90 TREND/PLUNGE:
COMMENTS: Host tuffs strike north, largest occurrence is 6 by 1.2 metres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	

ISOTOPIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks

Eocene

Catface Intrusions

ISOTOPIC AGE: 38 +/-14 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: K-Ar from biotite

LITHOLOGY: Altered Feldspar Tuff
Altered Dacite Tuff
Calc-silicate Rock
Quartz Diorite
Felsic Dike
Mafic Dike

HOSTROCK COMMENTS: Mollusks from Quatsino Sound. Biotite from Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

CAPSULE GEOLOGY

The Scorpio occurrence lies in a band of vertical, north striking calc-silicate altered feldspar and dacite tuffs of the Lower Jurassic Bonanza Group, on the northwest flank of the Eocene South Zeballos stock quartz diorite phase of the Catface Intrusions.

The occurrence consists of sulphide replacements with masses of pyrrhotite carrying a little chalcopyrite and molybdenite.

Felsic and mafic dykes occur in the vicinity and some mineralization is associated with these in several scattered showings. The largest occurrence measures 6 by 1.2 metres.

BIBLIOGRAPHY

EMPR AR 1967-74; 1964-154
EMPR BULL 20, Part V, p. *27
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (Fern Hill, 092L 155; Privateer, 092L 008)
GSC EC GEOL 1
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272
GSC OF 9; 170; 463
GSC P 38-5; *40-12, p. 20; 69-1A; 70-1A; 72-44; 74-8; 79-30

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 301
REPORT: RGEN0100

BIBLIOGRAPHY

GSC SUM RPT 1929, Part A; 1932, Part A II
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S. (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/03

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 157**

NATIONAL MINERAL INVENTORY: 092L2 Cu7

NAME(S): **CLIMAX (L.1874)**, SONNY, BLACK KNIGHT

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 02 19 N
LONGITUDE: 126 46 25 W
ELEVATION: 427 Metres

NORTHING: 5545298
EASTING: 659424

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Lot 1874 is 0.5 kilometres west of Nomash River, 8.5 kilometres northeast of Zeballos.

COMMODITIES: Copper Antimony

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Allemontite
ASSOCIATED: Quartz Pyrite
ALTERATION: Garnet
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Hydrothermal Skarn Epigenetic
DIMENSION: STRIKE/DIP: 350/76W TREND/PLUNGE:
COMMENTS: Occurrence consists of skarn and vein. Ten centimetre wide vein strikes 350 degrees and dips 76 degrees west.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Eocene			Catface Intrusions
ISOTOPIC AGE: 38 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			
LITHOLOGY: Limestone Granodiorite Skarn			

HOSTROCK COMMENTS: Fossils from Alice Lake, biotite from South Zeballos pluton (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PLUTONIC ROCKS RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

CAPSULE GEOLOGY

The Climax occurrence lies on the east side of the Eocene South Zeballos granodiorite pluton of the Catface Intrusions, at the contact with Upper Triassic Quatsino Formation (Vancouver Group) limestones.

Lenses of chalcopyrite and garnet and a 10 centimetre vein striking 350 degrees and dipping 76 degrees west are present. The vein is reported to carry allemontite (antimony-arsenide).

Diamond drilling intersected chalcopyrite, bornite, and pyrite (Minister of Mines Annual Report 1966, page 74).

BIBLIOGRAPHY

EMPR AR 1966-74
EMPR ASS RPT 12864
EMPR BULL 20, Part V, pp. 16,27
EMPR EXPL 1983-331
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
GSC MAP 4-1974; 255A; 1028A; 1552A
GSC MEM 204; 272
GSC OF 9; 170; 463
GSC P 38-5; *40-12, p. 35; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929, Part A; 1932 Part A II

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 303
REPORT: RGEN0100

BIBLIOGRAPHY

Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S. (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/26

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 158**

NATIONAL MINERAL INVENTORY: 092L11 Cu1

NAME(S): **ISLAND COPPER**, BAY, P

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

Underground

MINING DIVISION: Nanaimo

LATITUDE: 50 35 59 N
LONGITUDE: 127 28 30 W
ELEVATION: 76 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5606424
EASTING: 607924

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of open pit.

COMMODITIES: Copper Molybdenum Silver Gold Zinc
 Lead Rhenium

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Molybdenite Bornite Sphalerite

ASSOCIATED: Quartz Carbonate
ALTERATION: Biotite Magnetite Chlorite Epidote Sericite

COMMENTS: Also dolomite, hematite and leucoxene.

ALTERATION TYPE: Biotite Propylitic Sericitic Argillic Carbonate
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: 154 +/- 6 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Stockwork Vein Disseminated
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Tabular
DIMENSION: 1700 x 300 x 120 Metres STRIKE/DIP: 290/60N TREND/PLUNGE:
COMMENTS: Hanging wall zone. Age date from Geology, Exploration and Mining in British Columbia 1972.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER

Lower Jurassic Bonanza Undefined Formation

ISOTOPIC AGE: 200 Ma

DATING METHOD: Fossil

MATERIAL DATED: Mollusks

Jurassic

Island Plutonic Suite

ISOTOPIC AGE: 154 +/- 6 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Andesitic Basaltic Brecciated Tuff
Andesitic Basaltic Lapilli Tuff
Andesitic Basaltic Tuff Breccia
Andesite
Basalt
Quartz Feldspar Porphyry Dike

HOSTROCK COMMENTS: Age dates from Geological Survey of Canada Paper 74-8.

GEOLOGICAL SETTING

TECTONIC BELT: Insular

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: ISLAND COPPER

REPORT ON: Y

CATEGORY: Proven YEAR: 1995

QUANTITY: 23400000 Tonnes

COMMODITY	GRADE	
Silver	1.2000	Grams per tonne
Gold	0.1600	Grams per tonne
Copper	0.3300	Per cent
Molybdenum	0.0200	Per cent

COMMENTS: Reserves estimated by the company at January 1, 1995. About 16.5 tonnes of this may have been mined until closure in 1995. The remainder will be left in the south wall of the pit.

REFERENCE: Information Circular 1996-1, page 6.

CAPSULE GEOLOGY

The region is underlain by northwest trending belts of Upper Triassic volcanic rocks and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanic rocks and sediments. These rocks have been intruded by stocks of the Early-Middle Jurassic Island Plutonic Suite.

The Island Copper deposit lies within moderately south dipping brecciated tuff, lapilli and tuff breccia of andesitic and basaltic composition, which comprise the lower part of the Bonanza Group pyroclastic sequence. These volcanic rocks are cut by a digitating quartz feldspar porphyry dyke trending 290 degrees and dipping 60 degrees north.

Breccias with volcanic and intrusive fragments cap the dyke and occur along its margins. Brecciation is less intense a short distance outward from the porphyry and within about 60 metres the dislocated breccia gives way to systems of intense fracturing (crackle breccia). On its northwest end the dyke is capped by pyrophyllite breccia (110 metres wide and traceable for 1100 metres along strike); to the southeast the dyke plunges under Bonanza rocks. Where it is least altered, the dyke exhibits a granodiorite composition.

The host rocks have been subjected to contact thermal metamorphism and hydrothermal alteration. The metamorphic aureole can be subdivided into an inner zone 100 metres wide adjacent to the dyke and characterized by biotite and magnetite; an intermediate transitional chlorite zone (180 metres wide); and an outer epidote zone 350 metres wide. The ore is associated with the biotite zone and the inner part of the chlorite zone.

The hydrothermal alteration affects small volumes of rock (fractures, quartz-carbonate veinlets) and is closely related to fracturing and brecciation. This alteration resulted in assemblages termed the chlorite-sericite, sericite, pyrophyllite (pyrophyllite, dumortierite, kaolin) and "Yellow Dog" (rusty orange dolomite) types. In the volcanic rocks there is an inner pyrophyllite zone, a central sericite zone, and an outer chlorite-sericite zone. In the quartz-feldspar porphyry, there is an inner sericite zone and an outer chlorite-sericite zone. The pyrophyllite breccia has a mineral assemblage characteristic of the pyrophyllite-type alteration. Marginal breccias have mineral assemblages of sericite and pyrophyllite types. "Yellow Dog" alteration is confined to "Yellow Dog" breccias, characterized by rusty brown fracture-fillings of ferroan dolomite.

The orebody is divided into the hanging wall and footwall ore zones. The hanging wall zone is a roughly tabular body 60 to 180 metre wide and approximately 1700 metres long, continuing to a depth of 300 metres below surface (Cargill, 1976). This zone strikes 290 degrees and dips 60 degrees north. The footwall ore zone is not as well defined as the hanging wall zone. A small amount of ore occurs within the dyke, however, most quartz feldspar porphyry is unmineralized.

Although pyrite is the most abundant sulphide, chalcopyrite and molybdenite are the only sulphides recovered. Sphalerite and galena occur erratically in carbonate veinlets within and peripheral to the ore zone. Bornite has been observed in the ore zone in negligible quantities. Oxide minerals include magnetite, hematite and leucoxene.

Chalcopyrite occurs in dry fractures on slip surfaces and locally as disseminations. It also occurs in minor amounts in quartz veins with molybdenite, in carbonate veins with sphalerite, and in veins with pyrite. Gold and silver are recovered from the chalcopyrite concentrate.

Molybdenite occurs principally on slip surfaces and less abundantly in quartz veins and hairline fractures with chalcopyrite. Molybdenum concentrates contain between 1800 and 2400 parts per million rhenium (calculated to 100 per cent MoS₂).

Based upon potassium-argon dating of the nearby Rupert Inlet stock and geological relationships between the stock, the porphyry dyke and the Island Copper orebody, mineralization probably occurred about 154 million years ago (Geology, Exploration and Mining in British Columbia 1972, page 297).

During its operating life from 1971 to 1995 inclusive, the Mine produced about 1227 million kilograms of copper, 35,268 kilograms of gold, 294,106 kilograms of silver (probably 360,800 kilograms of silver), 32 million kilograms of molybdenum and 236 kilograms of rhenium from 367 million tonnes of ore.

BHP Minerals Canada Ltd. ceased mining operations in July 1995 and finished milling of surface stockpiles by the end of the year. Reserves estimated by the company at January 1, 1995 were 23.4 million tonnes grading 0.33 per cent copper, 0.02 per cent molybdenum, 0.16 gram per tonne gold and 1.2 grams per tonne silver. Some of this material will be left in the south wall of the pit

CAPSULE GEOLOGY

(Information Circular 1996-1, page 6). The open pit was flooded in May 1996 and reclamation work continued for two years. A saw mill and lumber kiln, utilizing mine buildings and facilities, are being established at the mine site.

In 1998, BHP received the 1997 British Columbia Mine Reclamation Award.

In November 1999, GTN Copper Technology Ltd. of Sydney Australia (with an office in Englewood, California) announced their intention to develop an \$80 million copper processing plant employing approximately 70 persons at the former Island Copper Mine site near Port Hardy. The facility will import copper concentrate from mines in Western Canada, the U.S. and South America, with initial capacity to process 50,000 tons of copper per year, with potential to increase production to over 200,000 tons.

BIBLIOGRAPHY

- EMPR AR 1966-65; 1967-68; 1968-84,88; 1971-A51,A53; 1972-A51,A53;
1973-A51,A53; 1974-A117,A119; 1975-A91,A93; 1976-A101,A103;
1977-113,115; 1978-125,127; 1979-126,128
EMPR ASS RPT 567, 710, 731, 738, 1079, 8150, 9305, 15707, 16778,
17297, 17892
EMPR BC METAL MM00015
EMPR ENG INSP Annual Report 1989, 1990
EMPR EXPL 1975-E114; 1980-273; 1987-C222; 1992-48-49; 1993-55;
1994-4,68; 1995-6,74; 2002-29-40
EMPR FIELDWORK 1990, pp. 85-88; 1991, pp. 232,341-347; 1993, pp.
63-85; 1994, pp. 9-21, 23-33, 49-59; 1995, pp. 57-59
EMPR GEM 1969-204; 1970-254,*267; 1971-320; 1971-27,320; 1972-23,*293;
1973-24,260; 1974-26,214
EMPR INF CIRC 1985-1, pp. 34-35; 1989-1, p. 36; 1993-13, pp. 4,6;
1994-1, pp. 4,6; 1994-19, p. 6; 1995-1, p. 4; 1995-19, p. 6;
1996-1, p. 6; 1997-1, p. 10
EMPR IR 1984-2, pp. 99,101; 1984-3, pp. 105,107; 1984-4, pp. 111,120;
1984-5, pp. 113,114; 1986-1, pp. 109,110
EMPR MAP 65 (1989)
EMPR MIN STATS 1985, pp. 47,48; 1987, pp. 36,38,65,66; 1990, pp.
26,30,68,69; 1980-1992, pp. 7,11; 1980-1993, pp. 16,21; 1980-1994,
pp. 20,25
EMPR MINING Vol.1 1975-1980, pp. 16-17,54,59,63,66,69,73; 1981-1985,
pp. 12,38; 1986-1987, pp. 54-55; 1988, p. 54
EMPR OF 1989-22; 1992-1; 1994-1; 1998-8-F, pp. 1-60; 1998-8-K, pp.
1-22; 1998-10
EMPR PF (Various maps, Utah Mines; Report on Mining Operations,
Mineral Leases M31 to M37, Utah Mines, 1974; Mineral Industries in
Western Canada, The Tenth Commonwealth Mining and Metallurgical
Congress, September 2-28, 1974, CIMM, pp. 1-10; Lamb, J. (1981):
The Island Copper Mine, Port Hardy B.C., Paper Presented at Sixth
Annual District 6 Meeting, CIMM, Victoria; Ross, K. and Leitch,
C. (1995): Island Copper Mine Core Library, notes and disk;
Overseas Travel Report Study Leave in Canada, Apr. 1988-89, A.B.
Christie, New Zealand Geological Survey Report M179, Island
Copper; Notes from CIM 1981 meeting; Geological notes; Pit maps
and geology map, 1983)
EMR MP CORPFILE (Utah International Inc.; Utah Mines Ltd.; General
Electric Company)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974
GSC MEM 23
GSC OF 9; 170; 463; 722; 2167, p. 141
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30; 1995-A, pp. 51-59
CAN ROCKHOUND Internet Magazine, Summer 1997, Vol. 1, No. 3;
Rockhounding on Vancouver Island
CIM Oct. 1972;
CIM Spec. Vol. *15, pp. 206-218; *46, pp. 214-238
CJES 18, p. 1; 20, p. 1 (Jan. 1983)
CMH 1972-73, p. 335
CMJ Sept. 1986, p. 14
EMJ Nov. 1981, p. 200
GAC/MAC (1990): Program with Abstracts, V.15, p. A4
GAC 1983 Field Trip Guidebook, pp. 21-35
GAC/MAC Victoria '95 Field Trip
GCNL #35, 1969; #241, 1985; #104(May 30),#189(Sept.29), 1990
N MINER April 14, 1977; Jan.26, 1978; June 5, 1989; Oct.12, 1998
N MINER MAG July 1989
W MINER *Feb. 1971, pp. 21,31-40; *Dec. 1974, pp. 11-24; Feb. 1979,
p. 19
WWW http://www.canadianrockhound.com/summer97/cr9701308_vancouver_island.html;

BIBLIOGRAPHY

- http://www.infomine.com/index/properties/ISLAND_COPPER_MINE.html
*Cargill, D.G. (1975): Geology of the Island Copper Mine, Port Hardy, British Columbia, Ph.D. Thesis, University of British Columbia, 133 pp.
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Fahey, P.L. (1979): The Geology of Island Copper Mine, Vancouver Island, British Columbia; M.Sc. Thesis, University of Washington, Seattle, Washington, 52 pp.
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, pp. 190-191
Mining Journal March 19, 1971, p. 209
Mining Magazine Oct. 1972, p. 344
Mining Quarterly, Vol. 3, No. 2, Fall 1996
Perello, J.A. (1987): The Occurrence of Gold at Island Copper Mine, Vancouver Island, British Columbia; M.Sc. Thesis (Mineral Exploration), Queen's University, Kingston, Ontario, 85 pp.
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Times Colonist Newspaper Jan.15, 1996; Nov.17, 1999

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/20

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

The region is underlain by northwest trending belts of Upper Triassic volcanic rocks and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanic rocks and sediments. These rocks have been intruded by stocks of the Jurassic Island Plutonic Suite.

The Rainbow showings are spread out along a strike length of 500 metres and have widths of up to 18 metres. Skarn is erratically developed in narrow beds of limestone and along limestone-volcanic (andesite, basalt) contacts. The host rocks strike 070 degrees and dip 035 degrees south. Stratigraphically, the limestones and volcanics lie near the top of the Karmutsen Formation. The rocks have been intruded by andesite dykes and quartz diorite.

The skarn consists of grossularite disseminated with chalcocopyrite and minor magnetite ("brown ore") and hedenbergite, hornblende, tremolite, actinolite, ilvaite, magnetite and sphalerite and disseminated chalcocopyrite ("black ore"). Two 18 kilogram samples assayed, respectively, 3.070 per cent copper, 0.11 per cent zinc, 66.85 grams per tonne silver, 0.02 per cent lead and 0.10 grams per tonne gold ("brown ore") and 4.88 per cent copper, 4.42 per cent zinc, 91.87 grams per tonne silver, 0.10 per cent lead and 0.14 grams per tonne gold ("black ore"), (Assessment Report 8284). Malachite can be found at surface.

Similar showings are nearby. Refer to Frances (092L 113), Cranberry (092L 315), West (092L 316), Swamp (092L 317) and South (092L 318).

BIBLIOGRAPHY

- EMPR AR 1959-132; 1963-99; 1968-84,90
EMPR ASS RPT 2381, *8284, 9853, 11407, 17029
EMPR EXPL 1978-E182; 1979-190; 1981-136; 1983-335
EMPR GEM 1970-254,266
EMR MP CORPFILE (Yellowknife Bear Mines Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A; 4-1974
GSC MEM 23
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/30

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 160**

NATIONAL MINERAL INVENTORY: 092L11 Cu8

NAME(S): **ROAD, TREY, BAY 30 & 43,
ISLAND COPPER**

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:
LATITUDE: 50 35 49 N
LONGITUDE: 127 27 46 W
ELEVATION: 15 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Road No. 1 claim.

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5606133
EASTING: 608796

COMMODITIES: Copper Molybdenum Iron

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Magnetite Pyrite
ASSOCIATED: Pyrite Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: 154 +/- 6 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Porphyry Industrial Min.
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
	ISOTOPIC AGE: 200 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Mollusks		
Jurassic			Island Plutonic Suite
	ISOTOPIC AGE: 154 +/- 6 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		

LITHOLOGY: Andesite
Andesite Flow
Andesite Tuff
Andesite Breccia
Quartz Feldspar Porphyry

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite K-Ar from Ruper Inlet stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP: Syn-mineralization
GRADE: Amphibolite

CAPSULE GEOLOGY

The region is underlain by northwest trending belts of Upper Triassic volcanic rocks and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanic rocks and sediments. These rocks have been intruded by stocks of the Jurassic Island Plutonic Suite.

Locally pyrite, chalcopyrite, magnetite and molybdenite occur in quartz stringers and as disseminations in silicified wallrock. Host rocks consist of silicified andesitic flows, tuffs and breccias of the Bonanza Group. Quartz feldspar porphyry intrudes the rocks. For detailed description of similar geology refer to the Island Copper deposit (092L 158).

BIBLIOGRAPHY

EMPR AR 1964-172; *1968-84,88
EMPR ASS RPT 567, 731, 1079, 9305
EMPR GEM 1970-254
EMPR PF (092L 158 - Island Copper)
EMR NMI (*092L11 Cu, Road)
GSC ANN RPT 1886
GSC BULL 242

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 311
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 4-1974
GSC MEM 23
GSC OF 9; 170; 463; 722
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
CIM Spec. Vol. *46, pp. 214-238
CJES 18, p. 1; 20, p. 1, Jan. 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/21

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 161**

NATIONAL MINERAL INVENTORY: 092L7 Fe4

NAME(S): **BON 15**, BIG MAC

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 15 57 N
LONGITUDE: 126 41 27 W
ELEVATION: 754 Metres

NORTHING: 5570739
EASTING: 664569

LOCATION ACCURACY: Within 500M

COMMENTS: Location of sample 2148 in Geology, Exploration and Mining in British Columbia 1970 is 8.9 kilometres southeast of Bonanza Lake.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Epidote
ALTERATION TYPE: Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated Vein
CLASSIFICATION: Volcanogenic Epigenetic
TYPE: D03 Volcanic redbed Cu
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION: 0030 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Visual estimate of 0.2 to 0.3 per cent copper over 30 metres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 150 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Amygdaloidal Flow
Andesite
Basalt
Granodiorite

HOSTROCK COMMENTS: Ammonites from Hisnit Inlet; biotite from Bonanza batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

CAPSULE GEOLOGY

The area is underlain by an assemblage of alternating massive to amygdaloidal andesites and basalts of the Upper Triassic Vancouver Group, Karmutsen Formation. Minor lenses of limestone are interbedded with the volcanic rocks. Granodiorite of the Late Jurassic Nimpkish batholith, which is part of the Jurassic Island Plutonic Suite, intrudes the Karmutsen Formation volcanics. Locally, the granodiorite is epidote-altered.

The Bon 15 occurrence is one of several which occur along a 1.2 kilometre long 285 degree trend.

On the property a 1.2 metre section of amygdaloidal flow in an area of tensional fracturing contains chalcopyrite within amygdules. The chalcopyrite forms 1 to 2 millimetre pockets in some of the larger amygdules and constitutes most of all of the smaller ones. Visual estimates of 0.2 to 0.3 per cent copper over 30 metres are reported in Geology, Exploration and Mining 1970, page 278.

Some 100 metres to the southwest, still within the area of tensional fracturing, narrow quartz veins are present along some of the fractures. The quartz veins host minor pyrite and chalcopyrite.

BIBLIOGRAPHY

EMPR ASS RPT 1821, 8644
EMPR EXPL 1980-271
EMPR GEM 1969-209; *1970-274-278
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 72-44; *74-8
GSC SUM RPT 1929 Part A; 1931 Part A
CJES 18, p. 1; 20, p. 2, 1983
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/04

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 162**

NATIONAL MINERAL INVENTORY: 092L12 Cu9

NAME(S): **HAW 24**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 42 44 N
LONGITUDE: 127 42 48 W
ELEVATION: 338 Metres

NORTHING: 5618613
EASTING: 590841

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on Haw 24 claim (Assessment Report 1736).

COMMODITIES: Zinc Copper

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Podiform
CLASSIFICATION: Replacement Hydrothermal Epigenetic
SHAPE: Irregular
DIMENSION: 0030 Metres STRIKE/DIP: 090/ TREND/PLUNGE:
COMMENTS: Mineralization in old trenches over 30 metres in east-west direction (Assessment Report 1736).

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvavite ammonites			

LITHOLOGY: Limestone
Andesite

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake. Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

CAPSULE GEOLOGY

The area geology consists of Upper Triassic Vancouver Group, Karmutsen Formation andesites and minor limestone in contact to the southwest with Upper Triassic Vancouver Group, Quatsino Formation limestone.

Sphalerite and minor chalcopyrite in irregular stringers and pods are present in narrow silicified limestone of the Karmutsen Formation. The mineralization is found in old trenches for 30 metres in an east-west direction. Sphalerite is also exposed in a creek 85 metres to the southwest.

BIBLIOGRAPHY

EMPR AR 1968-84
EMPR ASS RPT *1736, 2815
EMPR GEM 1970-254,263
EMR MP CORPFILE (Gladiator Resources)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 1552A; 4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1929, Part A, p. 143

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 315
REPORT: RGEN0100

BIBLIOGRAPHY

CJES 18, p. 1; 20, p. 1, Jan., 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/01

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 163**

NATIONAL MINERAL INVENTORY: 092L8 Cu3

NAME(S): **BILLY 19, ROONEY, CV,
PLUS, BERNA, CATHY,
MOON**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L08E

UTM ZONE: 09 (NAD 83)

BC MAP:
LATITUDE: 50 20 59 N
LONGITUDE: 126 08 15 W
ELEVATION: 351 Metres

NORTHING: 5581434
EASTING: 703639

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Assessment Report 3795. The centre of Billy 19 claim, 1.4 kilometres east of Rooney Lake and 1.4 kilometres west of Adam River.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Pyrite Magnetite
ALTERATION: Epidote Chlorite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Irregular
MODIFIER: Fractured

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 155 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Massive Basalt
Amygdaloidal Basalt

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island. Island intrusions biotite from Adam River batholith (Geological Survey of Canada, Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1972
SAMPLE TYPE: Drill Core
COMMODITY: Copper GRADE Per cent
Copper 0.5300

COMMENTS: Over 1.5 metres, 0.27 per cent copper over 3.8 metres, in diamond-drill hole #1.

REFERENCE: Assessment Report 3795.

CAPSULE GEOLOGY

The Billy showing is hosted by basalts of the Upper Triassic Karmutsen Formation of the Vancouver Group, near the contact with Jurassic Island Plutonic Suite granodiorite. The contact runs along Adam River, 1 kilometre east of the occurrence.

The occurrence consists of disseminated chalcopyrite and bornite, accompanied by minor pyrite and magnetite in fractured massive to amygdaloidal basalts. Chlorite and epidote alteration are present near the mineralization.

Diamond drilling returned values of 0.53 per cent copper over

CAPSULE GEOLOGY

1.5 metres and 0.27 per cent over 3.8 metres from hole number one. Hole number two, at the same location but drilled at a different azimuth, has as its highest assay 0.41 per cent copper over 1.5 metres. A drill hole located 113 metres north of the above holes (diamond-drill hole #5) returned 0.14 per cent copper over 6 metres (Assessment Report 3795).

BIBLIOGRAPHY

EMPR ASS RPT 1859, 2379, *3795
EMPR GEM 1969-209; 1972-292
GSC MAP 4-1974; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-1A; 72-44; 74-8
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/01

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 164**

NATIONAL MINERAL INVENTORY: 092L7 Cu4

NAME(S): **STEELE CREEK, BONANZA (BOB), BOB 9-10,
STAN, HAB, CHESTER MILLAR,
E, BONANZA**

STATUS: Past Producer Open Pit
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W

MINING DIVISION: Nanaimo

BC MAP:

LATITUDE: 50 18 29 N

LONGITUDE: 126 45 23 W

ELEVATION: 290 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of open pit from Figure 7, Assessment Report 4898 is 2.5 kilometres south of Bonanza Lake, 1 kilometre northeast of Steele Lake.

UTM ZONE: 09 (NAD 83)

NORTHING: 5575290

EASTING: 659756

COMMODITIES: Copper Magnetite Silver Gold Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Pyrite Pyrrhotite Sphalerite

COMMENTS: Gold, silver mineralogy not known.

ASSOCIATED: Garnet Pyroxene Epidote Actinolite Quartz

Chlorite Calcite

ALTERATION: Garnet Pyroxene Epidote Actinolite Quartz

Chlorite Calcite

ALTERATION TYPE: Skarn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Podiform
CLASSIFICATION: Skarn Replacement Industrial Min.

SHAPE: Tabular

DIMENSION: 0060 Metres STRIKE/DIP: 315/

TREND/PLUNGE:

COMMENTS: Skarn zone, along a northwest striking contact, is 150 metres long but significant copper values occur over only 60 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Vancouver Karmutsen

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

Jurassic

ISOTOPIC AGE: 151 +/- 14 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Island Plutonic Suite

LITHOLOGY: Garnet Skarn
Limestone
Hornblende Quartz Diorite
Pillow Lava
Basalt
Breccia
Tuff
Mafic Dike
Felsic Dike

HOSTROCK COMMENTS: Ammonites from Hisnit Island; biotite from Nimpkish batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1994

COMMODITY	GRADE	
Silver	2.8000	Grams per tonne
Copper	0.3800	Per cent

COMMENTS: The main copper zone over 16 metres in Zone E.

REFERENCE: Assessment Report 24601, page 1.

CAPSULE GEOLOGY

The Bonanza deposit is located on the Bob 9 and 10 claims and lies within Upper Triassic Vancouver Group, Karmutsen Formation skarned limestone that occurs as thin layers or lenses within a sequence of pillow lavas, basalt, breccia and minor tuff.

The volcanic rocks have been intruded by the Late Jurassic Nimpkish batholith which is part of the Jurassic Island Plutonic Suite. Mafic and felsic dykes cut all rock types.

Mineralization occurs intermittently over 2.5 kilometres along the northwest striking hornblende quartz diorite contact (see also 092L 255, 092L 134 and 092L 337). At this occurrence, pods of garnet skarn (+/- pyroxene, epidote, actinolite, quartz, chlorite and calcite) contain magnetite, chalcopyrite and pyrite and minor amounts of sphalerite, pyrrhotite, gold and silver.

Diamond drilling (diamond drill hole 2, Section DD in McDougall, 1962) down the dip of the skarn zone intersected 9.8 metres of 3.05 per cent copper. Other nearby holes encountered values up to 60 per cent magnetite and 3.09 grams per tonne gold. McDougall reports that the skarn zone is 150 metres long but that significant copper values occur only over 60 metres. He also reports significant copper values in volcanic rocks adjacent to the skarn zone, and calculated that some 29900 tonnes of 4.0 per cent copper material may be available, including "50 cents per ton" gold and silver, and that 9000 tonnes of magnetite concentrate could be produced (McDougall, 1961, page 5). Production in 1968 and 1971 of 4718 tonnes averaged 2.48 per cent copper and 8.7 grams per tonne silver.

Drilling in September 1994 intersected garnet and garnet-pyroxene skarn over 80.5 metres in Zone E. Drillhole 94-2 intersected the main copper zone over 16 metres averaging 0.38 per cent copper and 2.8 grams per tonne silver (Assessment Report 24601, page 1).

BIBLIOGRAPHY

- EMPR AR 1967-71; 1968-100
EMPR ASS RPT 953, 3698, 4350, 4351, 4353, 4898, 5394, 5868, 6267, 6769, *24601
EMPR GEM 1970-274; 1972-290; 1973-258; *1976-E128; 1977-E173
EMPR PF (McDougall, J.J. (1961): Report on Bonanza Lake Copper, Falconbridge Ltd.; McDougall, J.J. (1962): Summary Report on Bob Claims, Falconbridge Ltd.; Various maps from Assessment Reports 4350,4898; Drill logs from Assessment Report 5394; 1977 drill log, Diamond drill hole Bob 11; 1977 Report on Bob-Hab)
EMR MP CORPFILE (Imperial Oil Ltd.)
GSC ANN RPT 1886
GSC BULL 47; 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 72-44; *74-8
GSC SUM RPT 1929 Part A; 1931 Part A
CJES 18, p. 1; 20, p. 2, 1983
WWW http://www.infomine.com/index/properties/STEELE_CREEK.html
Alsen, J.B. (1975): A Magnetite Skarn Deposit near Bonanza Lake, unpubl., B.Sc. Thesis, University of British Columbia
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/02

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 165**

NATIONAL MINERAL INVENTORY: 092L8 Cu1

NAME(S): **BOYES 3**, BOYES CREEK, TAMMY

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L08E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 16 47 N
LONGITUDE: 126 03 11 W
ELEVATION: 5618 Metres

NORTHING: 5573887
EASTING: 709954

LOCATION ACCURACY: Within 500M

COMMENTS: Location is the centre of 14 trenches along Boyes Creek (unofficial name), located 0.8 kilometres west of Adam River on L.465 (Assessment Report 1993).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Chalcocite Copper
ALTERATION: Epidote Chlorite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Massive Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 0305 Metres STRIKE/DIP: 280/80S TREND/PLUNGE:
COMMENTS: Width of mineralization is 0.3 to 4.6 metres. Fault zone strikes 280 degrees.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 155 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Amygdaloidal Basalt
Massive Basalt
Limestone

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island. Intrusion biotite from Adam River (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1969
SAMPLE TYPE: Channel
COMMODITY GRADE
Copper 3.9000 Per cent

COMMENTS: Weighted average of 7 channel samples over 116 metre strike length (average width 1.2 metres).

REFERENCE: Assessment Report 1993.

CAPSULE GEOLOGY

The area, on the east side of Vancouver Island, is underlain by gently to moderately dipping massive and amygdaloidal basalts of the Upper Triassic Karmutsen Formation of the Vancouver Group. Interbedded with the basalts are minor limestone strata, 15 metres thick. Adam River defines the contact between sediments and volcanic rocks to the west and Jurassic Island Plutonic Suite to the east. The occurrence (in amygdaloidal basalt directly below a thin limestone bed contact) lies on the Boyes 3 claim and is associated

CAPSULE GEOLOGY

with a 280 degree striking, steeply south dipping fault structure in which a sheeted or braided zone of stringers, lenses and disseminations of chalcopyrite and bornite, minor chalcocite and native copper occurs. Fault-offsets and weak chlorite-epidote alteration occur. The occurrence was explored by 13 trenches over a strike length of 305 metres, ranging from 0.3 to 4.6 metres in width. On the westernmost section, 7 channel samples over 116 metres averaged 3.9 per cent copper over an average width of 1.2 metres. Associated silver and gold values are low, with maximum values of 18.66 grams per tonne and 0.62 grams per tonne respectively, but averaging much lower (Assessment Report 1993).

BIBLIOGRAPHY

EMPR AR 1967-72; 1968-100
EMPR ASS RPT *1993, 3235, 3403
EMPR GEM 1969-210; 1971-315,320
GSC MAP 4-1974; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-1A; 72-44; 74-8
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/02

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 166**

NATIONAL MINERAL INVENTORY: 092L8 Cu2

NAME(S): **GEORGE 5**, SOUTH CREEK, TAMMY

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L08E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 16 27 N
LONGITUDE: 126 02 45 W
ELEVATION: 366 Metres

NORTHING: 5573290
EASTING: 710493

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization from Assessment Report 1993, is 200 metres west of Adam River, 4.5 kilometres south of Keta Lake.

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Calcite Epidote Pyrite
COMMENTS: Chalcopyrite and pyrite in calcite-epidote breccia.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
SHAPE: Regular
DIMENSION: 0003 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Mineralization occurs over 3.6 metres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Basalt
Calcite Epidote Breccia

HOSTROCK COMMENTS: Ammonites from Hisnit Island (Geological Survey of Canada, Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1969
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 6.2000 Grams per tonne
Gold 0.6000 Grams per tonne
Copper 0.9000 Per cent
COMMENTS: Sample over 1.5 metres.
REFERENCE: Assessment Report 1993, page 11.

CAPSULE GEOLOGY

At the George 5 occurrence (termed South Creek in Assessment Report 1993, page 10) chalcopyrite with pyrite is present over 3.6 metres. This mineralization occurs in a pod of calcite-epidote breccia in basalt of the Upper Triassic Vancouver Group, Karmutsen Formation, 1 kilometre west of Jurassic Island Intrusions granodiorite. A sample over 1.5 metres assayed 0.9 per cent copper, 0.6 grams per tonne gold and 6.2 grams per tonne silver (Assessment Report 1993, page 11).

BIBLIOGRAPHY

EMPR AR 1969-210
EMPR ASS RPT *1993, 3235, 3306
EMPR GEM 1971-315,320
GSC MAP 4-1974; 1552A
GSC OF 9; 170; 463

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

GSC P 69-1A; 70-1A; 71-1A; 72-44; 74-8

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/02

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 167**

NATIONAL MINERAL INVENTORY: 092L8 Cu1

NAME(S): **GEORGE** NORTH CREEK, BOYES,
ADAM

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L08E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 17 15 N
LONGITUDE: 126 02 42 W
ELEVATION: 320 Metres

NORTHING: 5574774
EASTING: 710494

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralization located in North Creek, 300 metres west of Adam River near the corner of Lots 463-466 (from Assessment Report 1993).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
COMMENTS: Chalcocite may be present.
ALTERATION: Epidote Chlorite Calcite Quartz
ALTERATION TYPE: Propylitic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: D03 Volcanic redbed Cu
SHAPE: Irregular
MODIFIER: Faulted

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Massive Basalt
Amygdaloidal Basalt

HOSTROCK COMMENTS: Ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: TRENCH REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1969
SAMPLE TYPE: Grab
COMMODITY GRADE
Copper 0.2500 Per cent
COMMENTS: Visual estimate of 4 trenches, over 1.6 metres width.
REFERENCE: Assessment Report 1993, page 10.

CAPSULE GEOLOGY

The George 1 occurrence is underlain by volcanic rocks and minor sediments of the Upper Triassic Vancouver Group and crystalline rocks of the Jurassic Island Intrusions.

The Vancouver Group is composed of a thick sequence of tholeiitic basalts (Karmutsen Formation) overlain by carbonates (Quatsino Formation).

At the occurrence, massive and amygdaloidal basalts are faulted and exhibit quartz, epidote, calcite and chlorite alteration. Chalcopyrite and bornite mineralization occurs as veinlets, small lenses and as disseminations. Chalcocite may be present.

A visual estimate of 4 trenches averages 0.25 per cent copper over a width of 1.6 metres (Assessment Report 1993, page 10).

BIBLIOGRAPHY

EMPR AR 1969-210

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *1993, 3235, 3403, 14284
EMPR EXPL 1985-C233
EMPR GEM 1971-320
GSC MAP 4-1974; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-1A; 72-44; 74-8

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/02

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 168**

NATIONAL MINERAL INVENTORY: 092L8 Cu1

NAME(S): **KEVIN 25, M28, M29,
E 2, TAMMY, BOYES**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L08E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 16 16 N
LONGITUDE: 126 02 15 W
ELEVATION: 351 Metres

NORTHING: 5572974
EASTING: 711100

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on Kevin 25 claim is 250 metres east of Adam River, 2.5 kilometres west of Tlowils Lake (Assessment Report 1993).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ALTERATION: Pyroxene Amphibole Quartz
ALTERATION TYPE: Carbonate Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork
CLASSIFICATION: Epigenetic Porphyry
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Parson Bay	
	ISOTOPIC AGE: 215 Ma		
	DATING METHOD: Fossil		
Upper Triassic	MATERIAL DATED: Halobia mollusks	Karmutsen	
	ISOTOPIC AGE: 230 Ma		
	DATING METHOD: Fossil		
Jurassic	MATERIAL DATED: Gymnotropite ammonites		Island Plutonic Suite
	ISOTOPIC AGE: 155 +/- 6 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		
	LITHOLOGY: Limy Basaltic Tuff Limestone Granodiorite		

HOSTROCK COMMENTS: Parson Bay mollusks from Beaver Cove; Karmutsen ammonites from Hisnit Island; Island Plutonic Ste biotite from Adam River (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP:
GRADE: Amphibolite

CAPSULE GEOLOGY

The Kevin occurrence lies at the contact of Jurassic Island Plutonic Suite granodiorite and an assemblage of limy basaltic tuff and limestone of the Upper Triassic Parson Bay Formation (Vancouver Group). Contact metamorphism of sediments is evident from recrystallization of limestone and carbonate alteration of volcanic rocks. Upper Triassic Karmutsen Formation basalts lie west of Adam River. Minor chalcopyrite occurs in quartz impregnations and veinlets. The occurrence is referred to as the E2 zone in Assessment Report 1993.

BIBLIOGRAPHY

EMPR AR 1967-72; 1968-100
EMPR ASS RPT *1993, 3306
EMPR GEM 1969-210, 1971-316, 320
GSC MAP 4-1974; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-1A; 72-44; 74-8

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/02

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 169**

NATIONAL MINERAL INVENTORY: 092L8 Cu2

NAME(S): **KETA**, E 1, DENNIS 22,
BRUCE 20

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L08E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 17 50 N
LONGITUDE: 126 02 10 W
ELEVATION: 320 Metres

NORTHING: 5575880
EASTING: 711084

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Assessment Report 1993, on the west flowing tributary of Adam River, 0.6 kilometres from the mouth, south of Keta Lake, referred to as "Zone E 1" in the Assessment Report.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ALTERATION: Epidote Chlorite K-Feldspar
ALTERATION TYPE: Epidote Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork
CLASSIFICATION: Porphyry
SHAPE: Irregular
MODIFIER: Sheared Fractured

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			Island Plutonic Suite
Jurassic			
ISOTOPIC AGE: 155 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Hornblende Diorite
Migmatitic Volcanic Rock

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island; intrusive biotite from Adam River (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
Plutonic Rocks
RELATIONSHIP:
GRADE: Granulite

CAPSULE GEOLOGY

The Keta occurrence (the E-1 Zone of Assessment Report 1993) is comprised of strongly sheared and fractured hornblende diorite and migmatized volcanic rocks, at the western contact of the Adam batholith of the Jurassic Island Plutonic Suite with Upper Triassic Vancouver Group Karmutsen Formation volcanic rocks. Conspicuous epidote and potassium feldspar alteration are present, minor chloritic alteration also occurs. Minor chalcopyrite is present in fractures.

BIBLIOGRAPHY

EMPR AR 1969-210
EMPR ASS RPT *1993
EMPR PF (092L 165,166,167,168,222)
GSC MAP 4-1974; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-1A; 72-44; 74-8
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
WWW http://www.infomine.com/index/properties/DENIS_CLAIM.html

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/02

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 169**

MINFILE NUMBER: **092L 170**

NATIONAL MINERAL INVENTORY: 092L8 Cu3

NAME(S): **ROONEY 1-4, CV, PLUS,
BILLY, CATHY, BERNA,
MOON**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L08E

UTM ZONE: 09 (NAD 83)

BC MAP:
LATITUDE: 50 21 14 N
LONGITUDE: 126 08 45 W
ELEVATION: 244 Metres

NORTHING: 5581874
EASTING: 703029

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Assessment Report 1859, is the centre of the showings near the east fork of Rooney Creek, 1.8 kilometres from its confluence with Adam River and 0.7 kilometres east of Rooney Lake.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Pyrite Magnetite

ALTERATION: Epidote Chlorite Quartz

COMMENTS: Silicification exhibited as bleaching.

ALTERATION TYPE: Propylitic Silicific'n

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 155 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Massive Basalt
Amygdaloidal Basalt

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island; Island Plutonic Suite biotite from Adam River batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1969

SAMPLE TYPE: Chip

COMMODITY

GRADE

Copper

0.2300

Per cent

COMMENTS: Sample over 6.0 metres.

REFERENCE: Assessment Report 1859, Figure 2.

CAPSULE GEOLOGY

The area of the Rooney showing is located in basalts of the Upper Triassic Karmutsen Formation of the Vancouver Group, near the contact with Jurassic Island Plutonic Suite granodiorite. The contact runs along Adam River, 1.0 kilometre east of the occurrence.

The occurrence consists of disseminated chalcopyrite and bornite, accompanied by minor pyrite and magnetite in an area where the massive to amygdaloidal basalts are fractured and bleached.

Chlorite and epidote alteration are present near mineralization. A chip sample over 6.0 metres assayed 0.23 per cent copper, but other samples in the vicinity ran in the 0.03 range (Assessment Report 1859, Figure 2).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

EMPR ASS RPT *1859, *1993, 2379, 3795
EMPR GEM 1969-209; 1972-292
EMPR PF (092L 163,249)
GSC MAP 4-1974; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-1A; 72-44; 74-8
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/01

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 171**

NATIONAL MINERAL INVENTORY: 092L7 Fe4

NAME(S): **BON 24**, BIG MAC

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 15 47 N
LONGITUDE: 126 41 50 W
ELEVATION: 884 Metres

NORTHING: 5570416
EASTING: 664123

LOCATION ACCURACY: Within 500M

COMMENTS: Location of sample 2149 in Geology, Exploration and Mining in British Columbia, 1970 is 8.9 kilometres southeast of Bonanza Lake.

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
ALTERATION: Epidote Limonite
ALTERATION TYPE: Epidote Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Podiform
CLASSIFICATION: Industrial Min.
TYPE: K03 Fe skarn
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 0076 x 0008 x 0003 Metres STRIKE/DIP: 285/40W
COMMENTS: Dimension of magnetite pod, dip of shear zone host and local trend.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

Jurassic

ISOTOPIC AGE: 150 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Island Plutonic Suite

LITHOLOGY: Andesite
Basalt
Granodiorite
Limestone

HOSTROCK COMMENTS: Ammonites from Hisnit Inlet; biotite from Bonanza batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

CAPSULE GEOLOGY

The area is underlain by andesites and basalts with minor inter-bedded limestone lenses of the Upper Triassic Vancouver Group, Karmutsen Formation. Granodiorite of the Upper Jurassic Nimpkish batholith, which is part of the Jurassic Island Plutonic Suite, intrudes the Karmutsen Formation volcanics. Locally, the granodiorite is epidote-altered. The Bon 24 occurrence is one of several which occur along a 1.2 kilometre long 285 degree trend.

At the occurrence, described as No. 2149 in Minister of Mines Annual Report 1970, a large pod of reddish platy magnetite lies within a shear zone that dips 40 degrees west. The pod is 7.6 metres wide, 3.0 metres thick and is exposed intermittently for 18 metres. A corresponding magnetic anomaly has been traced for 76 metres. Small limonite-bearing cavities are present.

BIBLIOGRAPHY

EMPR ASS RPT 1821, 8644
EMPR EXPL 1980-271
EMPR GEM 1969-209; *1970-274
GSC ANN RPT 1886

BIBLIOGRAPHY

GSC BULL 47; 172; 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT 1929 Part A; 1931 Part A
CJES 18, p. 1; 20, p. 2, 1983
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern British Columbia, Ph.D. Thesis, University of British
Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/04

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 172**

NATIONAL MINERAL INVENTORY:

NAME(S): **M**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 10 N
LONGITUDE: 127 38 42 W
ELEVATION: 362 Metres

NORTHING: 5615796
EASTING: 595718

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of M 19,20,21 claims (Assessment Report 2068).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 159 +/- 5 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Argillite
Andesite Dike
Diorite
Shale

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake; Bonanza mollusks from Quatsino Sound; biotite K-Ar from southwest Nahwitti Lake (GSC P 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
Plutonic Rocks
RELATIONSHIP: Syn-mineralization
GRADE: Hornfels

CAPSULE GEOLOGY

The geology of the area, from northeast to southwest, consists of northwest trending Upper Triassic Karmutsen Formation andesites and minor limestone, Upper Triassic Quatsino Formation limestone of the Vancouver Group, and Lower Jurassic Bonanza Group shales. To the south, this succession is in fault contact with the Karmutsen Formation.

Pyrite and chalcopyrite are present in Bonanza and Quatsino sediments along Bonanza andesite dyke contacts and near diorite intrusives, possibly of Jurassic Island Plutonic Suite.

BIBLIOGRAPHY

EMPR AR 1968-84
EMPR ASS RPT *2068
EMPR GEM 1969-203; 1970-254,264
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan., 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 334
REPORT: RGEN0100

BIBLIOGRAPHY

emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/03

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 173**

NATIONAL MINERAL INVENTORY: 092L11 Cu6

NAME(S): **HAR**, EXPO, KOENER

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 34 17 N
LONGITUDE: 127 24 42 W
ELEVATION: 50 Metres

NORTHING: 5603368
EASTING: 612474

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located along Coekwaus Creek about 1.5 kilometres southeast of Rupert Inlet.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: 154 +/- 6 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 220 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks

ISOTOPIC AGE: 154 +/- 6 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

Island Plutonic Suite

LITHOLOGY: Volcanic Rock
Porphyry Dike
Quartz Monzonite

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; biotite K-Ar date from Rupert Inlet stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

Plutonic Rocks

RELATIONSHIP: Syn-mineralization

GRADE: Amphibolite

CAPSULE GEOLOGY

The region is underlain by northwest trending Upper Triassic volcanic rocks and sediments of the Vancouver Group (Karmutsen, Quatsino and Parson Bay formations) and Lower Jurassic Bonanza Group volcanic rocks and sediments. These rocks have been intruded by stocks of the Jurassic Island Plutonic Suite.

Locally, minor disseminated pyrite and chalcopyrite are found in volcanic rocks of the Bonanza Group, which have been intruded by porphyry dykes believed to be linked to the quartz monzonite Rupert Inlet stock. This stock has been dated by K-Ar methods at 154 plus or minus 6 million years (Geological Survey of Canada Paper 74-8). Refer to 092L 158-Island Copper for detailed description of copper mineralization associated with porphyry dyke intrusions.

BIBLIOGRAPHY

EMPR AR 1968-97
EMPR ASS RPT 1681, 2514, 2607, 15367
EMPR EXPL *1986-C279
EMPR GEM *1964-205; 1970-270; 1972-304
EMR National Mineral Inventory 092L11 Cu2-Koerner
GSC ANN RPT 1886
GSC BULL 242
GSC MEM 23
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 336
REPORT: RGEN0100

BIBLIOGRAPHY

CJES 18, p. 1; 20, p. 1, Jan. 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/29

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 174**

NATIONAL MINERAL INVENTORY: 092L3 Cu1

NAME(S): **KYU, C, ELECTRUM**

MINING DIVISION: Alberni

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 09 39 N
LONGITUDE: 127 21 46 W
ELEVATION: 183 Metres

NORTHING: 5557796
EASTING: 616940

LOCATION ACCURACY: Within 500M
COMMENTS: Approximate centre of claims.

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Pyrite
COMMENTS: Copper reported in National Mineral Inventory file but not substantiated from references.

ASSOCIATED: Quartz Carbonate
ALTERATION: Quartz Carbonate Pyrite

ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION: 0500 x 0100 Metres STRIKE/DIP: 135/90
COMMENTS: Vein trends are east, southeast and south-southwest. Swarm of veins found over area 500 metres long and 100 metres wide.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Siliceous Limestone
Basalt
Quartz Porphyry Rhyodacite Dike
Diorite

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; Parson Bay mollusks-Beaver Cove; intrusion biotite-Nimkish batholith (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
Plutonic Rocks
RELATIONSHIP: GRADE: Hornfels

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Silver 34.3000 Grams per tonne
Gold 5.1000 Grams per tonne
COMMENTS: Average of surface sampling and short hole percussion drilling.
REFERENCE: Vancouver Stockwatch November 19, 1987.

CAPSULE GEOLOGY

The region of the Kyu occurrence is underlain by Lower Jurassic Bonanza Group intermediate to felsic flows and pyroclastics. Minor

CAPSULE GEOLOGY

calcareous sediments of the Upper Triassic Parson Bay and Quatsino formations of the Vancouver Group are in fault contact with the volcanic rocks. A diorite stock of the Jurassic Island Plutonic Suite occurs at the head of Kashutl Inlet, 5.0 kilometres to the northeast.

The Kyu occurrence (Kyu claims, Minister of Mines Annual Report 1969, page 215) is believed to be the same as the "C" zone of Assessment Report 15521, where a swarm of quartz and quartz carbonate veins are found over an area of 100 metres wide and 500 metres long. The veins occupy an east trending fracture zone in an assemblage of silicified limestone and basalt. A flow banded quartz-eye rhyodacite dyke has intruded the fracture zone prior to the veining and alteration event, and locally hosts well developed stockwork veining.

Within the fracture zone, extensive pyrite, quartz and carbonate alteration are present.

Three vein trends are recognized: east and southeast attitudes, dipping vertically or steeply north, and south-southwest, with a shallow east dip.

Most of the veins consist of multiple bands of quartz, with variable quantities of re-cemented quartz-breccia. Other veins contain quartz-carbonate bands. One vein carries 0.5 to 2.0 per cent combined galena-sphalerite, but most contain only traces of sulphides.

Two of the eight major veins carry significant gold values:

- 1) The vein of sample 1028 assays 5.2 grams per tonne gold and 14.1 grams per tonne silver over 2 metres.
- 2) The vein at 51+00N, 51+00E returned a weighted average gold equivalent grade of 10.97 grams per tonne from 24 samples; the footwall stringer zone assayed 8.5 grams per tonne gold. A minimum strike length of 55 metres is indicated (Assessment Report 15521, pages 10,11).

Surface sampling and short hole percussion drilling in 1987 on the C Vein returned values averaging 5.1 grams per tonne gold and 34.3 grams per tonne silver. Highest values were 16.5 grams per tonne gold and 3874.8 grams per tonne silver (Vancouver Stockwatch Nov.19, 1987).

BIBLIOGRAPHY

- EMPR ASS RPT *15521, 17763
EMPR EXPL 1987-C220
EMPR GEM 1969-215
EMPR PF (092L 202 - Easy)
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1913; 1920A; 1929A
GCNL #110,*#178, 1986; #23,#44, 1987; #197, 1988
N MINER May 18,Nov.23, 1987
V STOCKWATCH Aug.26,Nov.19, 1987
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/19

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 175**

NATIONAL MINERAL INVENTORY: 092L11 Cu2

NAME(S): **SAUCE, E**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 37 49 N
LONGITUDE: 127 23 38 W
ELEVATION: 135 Metres

NORTHING: 5609943
EASTING: 613591

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Sauce 21-40 (Assessment Report 1685).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn Replacement

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			

LITHOLOGY: Limy Sediment/Sedimentary
Skarn
Volcanic Rock

HOSTROCK COMMENTS: Ammonites from Hisnit Island; mollusks from Beaver Cove (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP: Syn-mineralization
GRADE: Hornfels

CAPSULE GEOLOGY

The region is underlain by a northwest trending sequence of Upper Triassic Vancouver Group volcanic rocks and sediments (Karmutsen and Parson Bay formations) and Lower Jurassic Bonanza Group volcanic rocks and sediments. These rocks have been intruded by the Jurassic Island Intrusions.

Locally disseminated pyrite and chalcopyrite are found in limy sediments (Parson Bay Formation?) enclosed by Karmutsen Formation volcanics.

BIBLIOGRAPHY

EMPR AR 1968-84,87
EMPR ASS RPT *1685, 8235
EMPR GEM 1969-205; 1970-254
GSC ANN RPT 1886
GSC BULL 242
GSC MEM 23
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/28

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 176**

NATIONAL MINERAL INVENTORY: 092L11 Cu6

NAME(S): **BRAD, K, MADHAT**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 19 24 N
LONGITUDE: 127 39 56 W
ELEVATION: 412 Metres

NORTHING: 5575433
EASTING: 594991

LOCATION ACCURACY: Within 500M

COMMENTS: Location of skarn mineralization on Brad 3 claim of Assessment Report 2652 is 4 kilometres northeast of the head of Klaskino Inlet, 1.5 kilometres southwest of Mahatta Creek.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
COMMENTS: Pyrite-chalcopyrite associated with skarn.
ASSOCIATED: Quartz
COMMENTS: Minor quartz-pyrite-chalcopyrite veins.
COMMENTS: Pyrite.

ALTERATION TYPE: Skarn

MINERALIZATION AGE: Unknown

ISOTOPIC AGE: 154 +/- 8 Ma

DATING METHOD: Unknown

MATERIAL DATED:

DEPOSIT

CHARACTER: Stratabound Vein Massive Podiform
CLASSIFICATION: Skarn Hydrothermal Epigenetic
SHAPE: Regular
MODIFIER: Folded

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			
Jurassic			Island Plutonic Suite
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Calcareous Sediment/Sedimentary
Diorite
Basalt Flow
Andesite Flow

HOSTROCK COMMENTS: Ammonites from Hisnit Island. Mollusks from Beaver Cove. Biotite from Island Copper Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

CAPSULE GEOLOGY

The area lies within the Insular Belt and is underlain mainly by volcanic and crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage of sediments of the Paleozoic Sicker Group and basalts and minor carbonate and clastic sediments of the Upper Triassic Vancouver Group.

The Bonanza Group volcanic rocks are coeval with, or genetically related to granodiorite stocks of the Jurassic Island Plutonic Suite. These granodiorites intrude all rocks in the area.

At the Brad occurrence, sediments of the Parson Bay Formation (Vancouver Group) form a west plunging syncline surrounded by basaltic and andesitic flows of the Karmutsen Formation (also Vancouver Group). At the nose of the fold two small sections of calcareous sediments of limited extent have been altered to skarn by a nearby diorite intrusion. The skarn contains small pods of pyrite

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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REPORT: RGEN0100

CAPSULE GEOLOGY

and chalcopyrite. Minor chalcopyrite and pyrite occur in quartz veins. Assessment Report 2652 also reports weak disseminated and fracture controlled chalcopyrite and pyrite in diorite and Bonanza Group sediments.

BIBLIOGRAPHY

EMPR ASS RPT *2652, 3792
EMPR GEM 1969-206; 1972-288
GSC ANN RPT 1886
GSC BULL 172; 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918 Part B; 1929 Part A
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/06

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 177**

NATIONAL MINERAL INVENTORY: 092L11 Cu10

NAME(S): **TIE, SUSAN, GGB,
IAN**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 35 17 N
LONGITUDE: 127 18 06 W
ELEVATION: 120 Metres

NORTHING: 5605394
EASTING: 620220

LOCATION ACCURACY: Within 500M
COMMENTS: Approximate centre of claims (Assessment Report 1907).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite

COMMENTS: Exact mineralogy not reported.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Volcanic Rock

HOSTROCK COMMENTS: Mollusks from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

RELATIONSHIP:

GRADE: Zeolite

CAPSULE GEOLOGY

The region is underlain by a northwest trending sequence of Upper Triassic Vancouver Group volcanic rocks and sediments (Karmutsen and Parson Bay formations) and Lower Jurassic Bonanza Group volcanic rocks and sediments. These rocks have been intruded by the Jurassic Island Intrusions.

Locally, copper and molybdenite mineralization occur in Lower Jurassic Bonanza volcanic rocks.

BIBLIOGRAPHY

EMPR ASS RPT *1907, 2273
EMPR GEM *1969-208
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC MEM 23
GSC OF 9; 170; 463; 722
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/28

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

The results were disappointing as the holes encountered argillite and quartz but returned low gold values.

In 1995, Solaia Ventures Inc. optioned the property from the current owners and commissioned Ashworth Explorations Limited to conduct a variety of grid-based and other exploration programs. Over two years, it re-sampled the old trenches, collected stream sediment samples, conducted magnetometer and VLF-EM geophysical surveys over the main vein cluster, implemented both wide spaced and in-fill soil geochemical surveys and hand trenched and sampled several areas of anomalous soil geochemistry. The soil survey located a pronounced polymetallic (gold, lead, zinc and arsenic) soil geochemical anomaly coincident with a newly discovered quartz vein approximately 80 metres to the south of the 'main' vein. The anomaly displays an east southeasterly trend and extends for a minimum strike length of 225 metres. The best sample, taken across a 0.35-metre width of vein, returned 475.44 grams per tonne gold, 135.6 grams per tonne silver and "significant" copper, lead and zinc (Assessment Report 24334). The work identified coincident geochemical and geophysical anomalies which indicate extensions of the No's 3, 5 and 6 veins. (The number 6 Vein extends to the Bobmac (092L 179)). The work outlined a new soil anomaly parallel to the Main Showing.

The 1995 mapping identified tuffaceous layers and slaty argillites interbedded with the sediments in the pendant. The mineralized vein system is parallel to a set of faults in the slaty argillite which is oriented at 291/74 northeast. The Malasapina Fault strikes 305 and lies immediately west of the claims.

In 1996 a geological, geochemical and trenching program was carried out to test the extension of the know gold-bearing mineralization between the Numbers 4 and 6 veins, and to test the 1995 geochemical anomaly by trenching. This led to the discovery of a new vein, Vein Number 8, which strikes 280 degrees and dips 85 degrees northeast, and was followed 20 metres along strike. Vein Number 8 is mineralized milky quartz, and is 2.5 metres at its widest part. Mineralization is fine grained pyrite, minor galena, chalcopyrite, sphalerite. The best chip sample across 1 metre of the new vein returned values of 34.978 grams per tonne gold (Assessment Report 24958). Solaia revisited the site in 1997, but little work was done.

The Queen and Nugget claims are held in good standing until January 30, 2000 by David Heyman of Burnaby.

BIBLIOGRAPHY

- EM FIELDWORK 1999, pp. 325-332
- EMPR AR 1939-41,59; 1940-28; 1941-28; 1949-218
- EMPR ASS RPT 4252, 7991, *11283, *24334, *24958, 25884
- EMPR BC METAL MM00210 (Silta); MM00208 (Nugent Queen)
- EMPR EXPL 1980-276; 1983-338; 1997-63
- EMPR GEM 1973-263
- EMPR INDEX 3-207,212
- EMPR PF (*Bobmac Mine, 1938; assay Plan #4 vein 1:240-1:480; Claim Map 1:6000; Geol 1:6000; *Report on Bobmac Property (circa 1938); Letter from J.T. Mandy (1944))
- EMR MP CORPFILE (Q.C. Explorations Ltd.)
- GSC MAP 4-1974; 1386A; 1552A
- GSC OF 722
- GSC P 74-8
- WWW <http://www.infomine.com/index/properties/QUEEN-NUGGET.html>
- Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/23

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 179**

NATIONAL MINERAL INVENTORY: 092L14 Au 1

NAME(S): **BOBMAC 6, WHELAKIS, QC,
SILTA, DORA, NUGGET QUEEN,
NUGENT QUEEN, DUD**

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L14E

Open Pit

MINING DIVISION: Nanaimo

BC MAP:
LATITUDE: 50 59 26 N

UTM ZONE: 09 (NAD 83)

LONGITUDE: 127 12 38 W

NORTHING: 5650299

ELEVATION: 162 Metres

EASTING: 625586

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Number Six vein is 1.7 kilometres east of the junction of McKinnon Lagoon and Nenahimai Lagoon of Seymour Inlet. Location from Property File - claim map. This occurrence is part of the Nugget Queen (092L 178), which includes the production.

COMMODITIES: Gold Silver Lead Zinc

MINERALS

SIGNIFICANT: Galena Sphalerite Pyrrhotite Chalcopyrite

COMMENTS: Gold, silver mineralogy not known.

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

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

SHAPE: Tabular

MODIFIER: Faulted Sheared

DIMENSION: 56 x 1 Metres STRIKE/DIP: 315/80E

TREND/PLUNGE:

COMMENTS: The Number Six vein strikes northwest and dips steeply northeast and averages 0.9 metre in width.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Triassic-Jurassic
Mesozoic

GROUP

Unnamed/Unknown Group

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Coast Plutonic Complex

LITHOLOGY: Argillite
Basalt
Granite
Granodiorite

HOSTROCK COMMENTS: Area underlain by sub-vertical roof pendant consisting of intercalated sedimentary and volcanic rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Fiord Ranges (Southern)

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1939

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

37.2000

Grams per tonne

Gold

21.7700

Grams per tonne

COMMENTS: Located 1.2 metres west of creek over 0.9 metre width.

REFERENCE: Property File: Author, date unknown, page 4.

CAPSULE GEOLOGY

The Bobmac and Nugget Queen (092L 178) occurrences cover a cluster of quartz veins near a pendant contact on the east side of Nenahimai Lagoon, approximately 36 kilometres northeast of Port Hardy. Between them, the two prospects cover eight veins, seven of which were known in the 1930s. They were extensively explored and trenched by Mining Company of Canada Limited, in 1938. The eighth vein, a more recent discovery, was located by Solaiia Ventures Inc. in 1996.

The area of the occurrence is underlain by granite and granodiorite of the Mesozoic Coast Plutonic Complex, and a northwest

CAPSULE GEOLOGY

striking sub-vertical roof pendant of undetermined age (probably Cretaceous). The roof pendant consists of intercalated sedimentary and volcanic rocks.

The 2 veins of the occurrence are referred to as the Number Six and Seven veins and are located 0.4 kilometre and 1.1 kilometres respectively southeast of the Number Five vein of the Nugget Queen occurrence (092L 178).

No description is available for the Number Seven vein, located in granitic rocks.

Number 6 vein, located in argillite, is of irregular width and is offset by several small displacement faults. The vein strikes northwest and dips steeply northeast.

The vein matter consists of irregular masses of quartz containing partly replaced wallrock, locally heavily mineralized with galena, sphalerite, pyrrhotite and chalcopyrite. For 29 metres northwest from a creek the vein ranges from 0.5 to 1.7 metres wide averaging more than 0.9 metre wide. Much of it is well-mineralized with sulphides. A sample across 0.9 metre, 1.2 metres from the creek, assayed 21.77 grams per tonne gold and 37.2 grams per tonne silver (1938 Report in Property File).

About 23 metres to the northwest a sample across 0.3 metre measured from the footwall assayed 92.06 grams per tonne gold, 136.9 grams per tonne silver, and 2.5 per cent lead. The adjoining 0.6 metre to the hangingwall assayed 12.44 grams per tonne gold and 2.49 grams per tonne silver. From 29 metres to the end of the exposure, 56 metres northwest from the creek, the vein matter does not exceed 0.3 metre in width and at the end of the exposure it has pinched to a narrow stringer. Some sulphides occur in small masses or stringers, but most of this part of the vein contains very little sulphide mineralization. A sample of quartz containing some fragments of wallrock but practically no sulphides assayed 1.87 grams per tonne gold and 49.8 grams per tonne silver (Property File).

Production between 1939 and 1949 is included with the Nugget Queen. In 1972, Q.C. Explorations Limited conducted a limited VLF-EM geophysical survey in the area and in 1980 Frank Beban Logging Limited undertook additional geophysical and regional mapping programs. In 1995, Solaia Ventures Inc. optioned the property from the current owners and commissioned Ashworth Explorations Limited to conduct a variety of grid-based and other exploration programs.

BIBLIOGRAPHY

- EM FIELDWORK 1999, pp. 325-332
EMPR AR 1939-41,59; 1949-218
EMPR ASS RPT 4252, 7991, *11283, 24334, 24958, 25884
EMPR EXPL 1980-276; 1983-338; 1997-63
EMPR GEM 1973-263
EMPR PF (*Bobmac Mine, 1938; assay Plan #4 vein 1:240-1:480; Claim Map 1:6000; Geol 1:6000; *Report on Bobmac Property (circa 1938); Letter from J.T. Mandy (1944), in 092L 178-Nugget Queen)
EMR MP CORPFILE (Q.C. Explorations Ltd.)
GSC MAP 4-1974; 1386A; 1552A
GSC OF 722
GSC P 69-1A; 70-1A; 71-1A; 72-44; 74-8
WWW <http://www.infomine.com/index/properties/QUEEN-NUGGET.html>
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/09

CODED BY: GSB
REVISED BY: RHP

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092L 180**

NATIONAL MINERAL INVENTORY: 092L1 Cu2

NAME(S): **CAM - DOC**, DIK, DOK,
DAVE

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L01E 092L08E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 14 59 N
LONGITUDE: 126 02 35 W
ELEVATION: 366 Metres

NORTHING: 5570580
EASTING: 710799

LOCATION ACCURACY: Within 500M

COMMENTS: The showing is located on Adam River, 3.0 kilometres west of Tlowils Lake, 15.0 kilometres south southwest of Kelsey Bay (Assessment Report 8190).

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
COMMENTS: Gold, silver mineralogy not known.
ASSOCIATED: Quartz
ALTERATION: Chlorite Silica
ALTERATION TYPE: Silicific'n Chloritic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratiform
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: K01 Cu skarn
DIMENSION: 0057 x 0002 Metres STRIKE/DIP: 350/80W TREND/PLUNGE:
COMMENTS: Attitude of vein. Main mineralized zone, striking 350 degrees and dipping 80 degrees west, was traced for 57 metres with an average width of 2 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE:	225 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Juravite ammonites		
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE:	230 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Gymnotropite ammonites		

LITHOLOGY: Limestone
Dacite Porphyry Dike
Andesitic Flow
Andesitic Tuff

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake; Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell

INVENTORY

ORE ZONE: EAST

REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1980
SAMPLE TYPE:	Chip		
COMMODITY		GRADE	
Silver		17.7700	Grams per tonne
Gold		11.8500	Grams per tonne
Copper		1.2700	Per cent

COMMENTS: Average of four samples over 2.29 metres.
REFERENCE: Assessment Report 8190, page 4.

CAPSULE GEOLOGY

The Cam-Doc occurrence lies in Upper Triassic Vancouver Group, Quatsino Formation limestone that overlies Karmutsen Formation andesitic flows and tuffs. The limestone is intruded by a dacite porphyry dyke that is chlorite altered and heavily oxidized. Weak

CAPSULE GEOLOGY

bleaching of the limestone occurs up to 1 metre from the dyke.
Mineralization occurs at the limestone-dyke contact and consists of up to 25 per cent sulphides and quartz lenses.

Assessment Report 17449 identifies two zones of mineralization that are believed to represent the same structure.

The River Level zone has been traced for 14 metres and was explored by two short adits before the 1950's. One adit follows the footwall for about 5 metres, the other (shorter one) crosscuts the 2 to 2.5 metre wide zone.

The zone averages 5 per cent pyrite, 0.5 to 2.5 per cent chalcopyrite and variable amounts of pyrrhotite. Samples assayed 0.27 to 11.2 grams per tonne gold (Assessment Report 17449, page 10).

The Plateau Level zone has been traced intermittently for 30 metres and is 0.45 to 1 metre wide. This zone averages 10 per cent pyrite and only minor chalcopyrite. Assay results range from 0.27 to 9.5 grams per tonne gold (Assessment Report 17449, page 10).

The main mineralized zone strikes 350 degrees and dips 80 degrees west. It has been traced for 57 metres with an average width of 2 metres. Four samples taken over a width of 2.3 metres from the main zone averaged 1.27 per cent copper, 17.77 grams per tonne silver and 11.85 grams per tonne gold (Assessment Report 8190). The assessment report refers to diamond drilling (Cominco, 1926) and other exploration work for which there is no record.

BIBLIOGRAPHY

- EMPR ASS RPT 3306, *8190, 9065, *17449, 17755
EMPR EXPL 1980-267; 1983-330
EMPR GEM 1969-210; 1970-279
GSC MAP 4-1974, 1552A
GSC P 74-8
GCNL #30, 1981
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/06

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 181**

NATIONAL MINERAL INVENTORY:

NAME(S): **MO, BUD, TI,
MON**

MINING DIVISION: Nanaimo

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 43 03 N
LONGITUDE: 127 55 47 W
ELEVATION: 488 Metres

NORTHING: 5618957
EASTING: 575555

LOCATION ACCURACY: Within 500M
COMMENTS: Location of trenches, Assessment Report 5758.

COMMODITIES: Silver Lead Zinc Magnetite

MINERALS

SIGNIFICANT: Galena Sphalerite Magnetite
COMMENTS: In skarn.
ASSOCIATED: Pyrite Chalcopyrite
COMMENTS: Magnetite in skarn; chalcopyrite in rhyolite and quartz diorite float.
ALTERATION: Epidote Garnet Amphibole
ALTERATION TYPE: Skarn Silicific'n Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Industrial Min.
SHAPE: Irregular
DIMENSION: 0210 x 0030 Metres STRIKE/DIP: 280/45S TREND/PLUNGE:
COMMENTS: Skarn zone area is 210 by 30 metres, trends west-northwest and dips moderately south.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 169 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Skarn
Quartz Diorite
Andesitic Sill
Rhyolite
Argillite
Amygdaloidal Basalt
Amygdaloidal Andesite

HOSTROCK COMMENTS: Quatsino ammonites-Alice Lake; Bonanza mollusks-Quatsino Sound; biotite K-Ar-Nahwitti Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

INVENTORY

ORE ZONE: SKARN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY

YEAR: 1976

	GRADE	
Silver	4.1000	Grams per tonne
Lead	0.2800	Per cent
Zinc	3.9700	Per cent

COMMENTS: Chip sample over 2.4 metres.
REFERENCE: Assessment Report 5758.

CAPSULE GEOLOGY

The regional geology consists of northwest trending belts of Upper Triassic volcanic rocks and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanic rocks and sediments. These rocks have been intruded by Jurassic Island Plutonic Suite.

The property geology consists of Karmutsen Formation amygdaloidal andesites and basalts overlain by northwest trending Quatsino Formation limestone. Younger Bonanza Group volcanics (andesitic sills, rhyolite) intercalated with sediments (argillites) are found in the south portion of the claims. These rocks have been intruded by quartz diorite.

The Bonanza Group rocks show silicification and pyritization. Skarn is found within the limestone, showing compositional changes from epidote-garnet to garnet-amphibolite to amphibolite skarn. Disseminated and massive sphalerite and disseminated galena carrying silver values are found within the skarn. Lenses of magnetite are present in one locality. Mapping and trenching have outlined the skarn zone lying in an area 210 by 30 metres, trending west-northwest and dipping moderately south. A chip sample over 4.9 metres assayed 6.02 per cent zinc, 0.04 per cent lead and 4.8 grams per tonne silver. Another chip sample over 2.4 metres assayed 3.97 per cent zinc, 0.28 per cent lead and 4.1 grams per tonne silver (Assessment Report 5758).

Chalcopyrite has been found in quartz diorite float and in rhyolite float.

BIBLIOGRAPHY

EMPR AR 1968-96
EMPR ASS RPT 1762, 2286, 2820, 4251, *5758, 12539, 12867
EMPR GEM 1969-201; 1970-254,262; 1973-261; 1975-E114; 1977-E175
EMR MP CORPFILE (Acheron Mines Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/05

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 182**

NATIONAL MINERAL INVENTORY: 092L5 Cu4

NAME(S): **RH 1-24**, ELK 1-8, ECHO 1-6,
CAM 1-20

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 17 24 N
LONGITUDE: 127 31 31 W
ELEVATION: 686 Metres

NORTHING: 5571915
EASTING: 605050

LOCATION ACCURACY: Within 500M

COMMENTS: At the head of Colonial Creek, 8 kilometres southwest of the south end of Neroutsos Inlet (Geology, Exploration and Mining in B.C., page 206).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork
CLASSIFICATION: Hydrothermal Replacement Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Volcanic Rock
Granite
Limestone

HOSTROCK COMMENTS: Mollusks from Quatsino Sound. Biotite from Island Copper Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

CAPSULE GEOLOGY

The area lies within the Insular Belt and is underlain mainly by volcanic and crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage of Paleozoic Sicker Group sediments and basalts and Upper Triassic Vancouver Group minor carbonate and clastic sediments.

The Bonanza Group volcanics are coeval with, or genetically related to granodiorite stocks of the Jurassic Island Plutonic Suite, which intrude all rocks in the area.

At the RH occurrence, copper and molybdenum mineralization occurs as fracture fillings in Bonanza Group volcanics and in the Hart Lake Stock, an unofficial name for a small granite stock of the Island Plutonic Suite. Some mineralization occurs as replacements in limestone.

BIBLIOGRAPHY

EMPR AR 1968-99
EMPR ASS RPT 5128, 5129, 5335, 12913
EMPR EXPL 1976-127; 1984-241
EMPR GEM 1969-206; 1974-211
EMR MP CORPILE (*Cambridge Mines Ltd.)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 353
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918 Part B; 1929 Part A
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University
Placer Dome File
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/12

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

The Bon 22, 24 showing is one of several which occur along a 1.2 kilometre mineralized zone striking about 285 degrees. This showing encompasses sample numbers 2150 to 2154 which were collected over a distance of 380 metres (Geology, Exploration and Mining in British Columbia 1970, page 277).

Locally, the andesite has been altered to garnet-epidote skarn which hosts lenses of massive magnetite or pyrrhotite. The magnetite lenses dip 30 degrees to the southwest (parallel to bedding?), range up to 2.4 metres in width and are cut by pyrite veinlets. A 1.8 metre wide pyrrhotite lens with minor magnetite and pyrite assayed 0.4 per cent copper (Geology, Exploration and Mining in British Columbia 1970, page 277). Disseminated magnetite and magnetite veins ranging up to 7.3 centimetres in width have been reported within andesite and in garnet-epidote skarn.

Copper values ranging from 0.78 to 2.5 per cent copper have been reported from this occurrence (National Mineral Inventory 092L7 Fe4).

BIBLIOGRAPHY

- EMPR ASS RPT 1821, 8644
EMPR EXPL 1980-271
EMPR GEM 1969-209; *1970-274
GSC ANN RPT 1886
GSC BULL 47; 172; 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT 1929 Part A; 1931 Part A
CJES 18, p. 1; 20, p. 2, 1983
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/04

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 184**

NATIONAL MINERAL INVENTORY:

NAME(S): **ACORN**, RONNIE MCDONNY, LAWN POINT,
BLAND

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05W
BC MAP:

MINING DIVISION: Nanaimo

LATITUDE: 50 19 49 N
LONGITUDE: 127 56 31 W
ELEVATION: 240 Metres

UTM ZONE: 09 (NAD 83)

LOCATION ACCURACY: Within 1 KM

NORTHING: 5575889
EASTING: 575306

COMMENTS: Location of centre of Ronnie McDonny 1 claim is 0.5 kilometres from
Newton Entrance, Side Bay on the south slope of Restlers Mt.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Exact mineralogy not reported.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Andesite
Rhyodacite

HOSTROCK COMMENTS: Mollusks from Quatsino Sound (Geological Survey of Canada Paper
74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1986

COMMODITY

GRADE

Gold

26.4000

Grams per tonne

COMMENTS: Highest value in drill core.

REFERENCE: George Cross Newsletter 11, 1986 (Acorn Resources).

CAPSULE GEOLOGY

The Restless Mountain area is underlain by andesitic to rhyo-
dacitic tuff lava and breccia of the Lower Jurassic Bonanza Group.
Gold values between 11.3 and 26.4 grams per tonne over 0.9 to
2.4 metres are reported (George Cross Newsletter #11, 1986).

BIBLIOGRAPHY

EMPR ASS RPT 14263
EMPR EXPL 1985-C231
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 72-44; *74-8
GSC SUM RPT 1929 Part A, p. 133
GCNL #227,#246, 1985; *#11,#22,#41, 1986
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern British Columbia, Ph.D. Thesis, University of British

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 357
REPORT: RGEN0100

BIBLIOGRAPHY

Columbia

DATE CODED: 1989/05/04
DATE REVISED: 1989/05/30

CODED BY: WV
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 185**

NATIONAL MINERAL INVENTORY: 092L12 T1c1

NAME(S): **HUSHAMU**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 39 59 N
LONGITUDE: 127 50 36 W
ELEVATION: 427 Metres

NORTHING: 5613365
EASTING: 581742

LOCATION ACCURACY: Within 500M

COMMENTS: Showing is located about 4.0 kilometres south of Nahwitti Lake near the headwaters of Hushamu Creek.

COMMODITIES: Pyrophyllite Copper

MINERALS

SIGNIFICANT: Pyrophyllite Chalcopyrite Pyrite
ALTERATION: Sericite Clay Zeolite Silica
ALTERATION TYPE: Zeolitic Sericitic Argillic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation L01 Subvolcanic Cu-Ag-Au (As-Sb)

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Siliceous Breccia
Volcanic Rock
Pyrophyllite

HOSTROCK COMMENTS: Mollusks from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Zeolite

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics. Locally, pyrophyllite-bearing silicified breccia has been interpreted as a volcanic centre (Geology, Exploration and Mining 1974, page 217). Additional centres are found to the northwest (refer to 092L 078-Hep, 092L 200-Red Dog and 102I 013-South Knob). Similar mineralization is found to the southeast, including another pyrophyllite-bearing breccia interpreted as a volcanic centre (092L 308-Pemberton) and in the vicinity of the Island Copper Mine (092L 158) where pyrophyllite-bearing zones are exposed in the mine workings. The Hushamu occurrence is described as a pyrophyllite-bearing silicified breccia which hosts minor disseminated pyrite and chalcopyrite. The breccia also contains sericite, clay and zeolites. The pyrophyllite is thought to be formed as a product of hydrothermal alteration during low grade regional metamorphism (Open File 1988-19).

BIBLIOGRAPHY

EMPR GEM *1974-217,218 Fig.29
EMPR OF 1988-19
GSC BULL 242
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC P 69-1A; 72-44; *74-8; 79-30
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/05/09
DATE REVISED: / /

CODED BY: LLD
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 186**

NATIONAL MINERAL INVENTORY:

NAME(S): **NIMPKISH LAKE LIMESTONE**, TSULTON

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5587234
EASTING: 645196

LATITUDE: 50 25 09 N
LONGITUDE: 126 57 22 W
ELEVATION: 262 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location centered on diamond drill hole Pt-88-2 on west side of Nimpkish Lake (Assessment Report 17759, Figure 4).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Pyrite Quartz
COMMENTS: As pyritic chert lenses in limestone.

MINERALIZATION AGE: Upper Triassic

ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Various fossils

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.

SHAPE: Irregular

MODIFIER: Folded Faulted

DIMENSION: 9999 x 4500 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Folded into a broad, north trending syncline. Deposit dimension is 15000 by 4500 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Vancouver

FORMATION

Quatsino

IGNEOUS/METAMORPHIC/OTHER

DATING METHOD: Fossil

MATERIAL DATED: Various fossils

LITHOLOGY: Limestone

Argillite

Basaltic Flow

Biotite Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

COMMENTS: Deposit rests on a shallow marine platform of ocean rift volcanics.

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1968

SAMPLE TYPE: Chip

COMMODITY

GRADE

Limestone

55.2700

Per cent

COMMENTS: Across 48.8 metres of limestone. Grade given for calcium oxide.

REFERENCE: Minister of Mines Annual Report 1968, page 318.

CAPSULE GEOLOGY

A band of limestone of the Upper Triassic Quatsino Formation (Vancouver Group) up to 4.5 kilometres wide trends south-southeast from the north end of Nimpkish Lake for 15 kilometres. The limestone band is bounded to the east by overlying black argillite and limestone of the Upper Triassic Parsons Bay Formation (Vancouver Group). To the west the limestone is conformably underlain by or faulted against basaltic flows of the Upper Triassic Karmutsen Formation (Vancouver Group). A northwest trending mass of coarse grained, biotite quartz monzonite of the Jurassic Island Intrusions truncates the limestone band at its south end.

Mapping and diamond drilling along the east side of Nimpkish Lake, 7.5 to 12.5 kilometres south of its north end, revealed the limestone is comprised of an upper medium to dark grey member with off white to light grey interbeds and a lower white to light grey, generally fine grained member containing some dark grey and cherty

CAPSULE GEOLOGY

beds. The two members appear to be folded into a broad north trending syncline. Pyritic chert lenses become more frequent southward towards the monzonite intrusion and near the basalt contact. A few thin sills and dykes of fine grained diabase and silicified and pyritized andesite intrude the limestone.

Various exposures of fine grained, massive, black limestone occur along the Tsulton River, 4 kilometres north of the area mapped in detail. A sample composed of chips taken at 1.5 metre intervals for 48.8 metres along a cut starting 183 metres north of the 6 mile post of the Nimpkish Valley logging railway contained 55.27 per cent CaO, 0.04 per cent MgO, 0.95 per cent insolubles, 0.45 per cent R2O3, 0.06 per cent Fe2O3, 0.009 per cent MnO, 0.03 per cent P2O5, less than 0.01 per cent sulphur and 43.39 per cent ignition loss (Minister of Mines Annual Report 1968, p. 318, Sample 27).

Industrial Fillers Ltd. staked a large portion of the limestone band in 1987. Mapping and diamond drilling were conducted by the company in 1988 to assess the deposit for its white coloured limestone.

BIBLIOGRAPHY

EM EXPL 2000-25-32
EMPR AR 1968-312,317,318
EMPR ASS RPT *17759
EMPR OF 1992-18, pp. 31, 33-34
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC OF 9; 170; 463 (Sheet 2)
GSC P 70-1A; 72-44; 74-8
Falconbridge File

DATE CODED: 1989/09/18
DATE REVISED: / /

CODED BY: PSF
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

CAPSULE GEOLOGY

These rocks have been subjected to some low grade metamorphism by an intrusion just north of the deposit. The entire sequence strikes northeast and dips 30 to 60 degrees south. The upper (southern) bed is approximately 46 metres thick while the lower bed is approximately 61 metres thick.

The carbonate beds consists of massive, pearl grey to white, medium to coarse grained limestone (marble). Three samples comprised of chips taken at 4.6 metre intervals across accessible outcrops of the upper limestone bed assayed as follows in per cent (D.D. Campbell, 1973, page 7):

Sample	Length	CaO	CaCO3	MgO	Insol.	Al2O3	Fe2O3	Undetermined
K1	30 m	55.06	98.26	0.30	0.60	0.36	0.34	0.14
K2	45 m	54.92	98.01	0.20	1.01	0.30	0.32	0.16
K3	60 m	54.83	97.84	0.30	1.20	0.31	0.25	0.10

Probable (indicated) reserves are calculated at 7.6 million tonnes of limestone assuming a strike length of 180 metres for each bed and a down dip extension of 150 metres (Industrial Mineral File - D.D. Campbell, 1973, pages 1, 8). The deposit is estimated to contain a total potential of at least 27 million tonnes of limestone.

The limestone was examined and sampled by Douglas D. Campbell during 1958 and 1962. Sicamous Resources Ltd. (B.C. Pyrophyllite Co. Ltd.) held a lease on the deposit in the early 1970's. In 1984 C.K. & G. Management attempted unsuccessfully to acquire the mineral rights to the deposit.

BIBLIOGRAPHY

EMPR OF 1992-18, pp. 46-47
EMPR PF (*Geology Report-Kashutl Inlet Limestone by Campbell, D.D. 1973; Two letters from Holland, R. dated June 18 & Aug. 24, 1984)
GSC BULL 242
GSC MAP 4-1974; 225A; 1552A
GSC OF 9; 170; 463 (Sheet 2)
GSC P 69-1A; 70-1A; 74-8; 79-30

DATE CODED: 1989/07/25
DATE REVISED: 1989/07/25

CODED BY: PSF
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 188**

NATIONAL MINERAL INVENTORY: 092L7 Fe4

NAME(S): **BON 20**, BIG MAC

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 15 35 N
LONGITUDE: 126 40 43 W
ELEVATION: 1067 Metres

NORTHING: 5570087
EASTING: 665461

LOCATION ACCURACY: Within 500M

COMMENTS: Location of sample 2155 in Geology, Exploration and Mining in British Columbia 1970, is 10 kilometres southeast of Bonanza Lake.

COMMODITIES: Magnetite Iron Lead

MINERALS

SIGNIFICANT: Magnetite Galena
ASSOCIATED: Pyrite Epidote
ALTERATION: Epidote Quartz
ALTERATION TYPE: Skarn Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Disseminated
CLASSIFICATION: Skarn Industrial Min.
DIMENSION: 0150 x 0004 Metres STRIKE/DIP: 285/90 TREND/PLUNGE:
COMMENTS: Band of massive magnetite is exposed for 150 metres and at the easternmost exposure averages 3.6 metres in width with a vertical dip, along 285 degree trend.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 150 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Siliceous Volcanic Rock
Granodiorite

HOSTROCK COMMENTS: Ammonites from Hisnit Inlet; biotite from Bonanza batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

The area is underlain by basalts and andesites with minor interbedded limestone of the Upper Triassic Vancouver Group, Karmutsen Formation. Granodiorite of the Upper Jurassic Nimpkish batholith, which is part of the Jurassic Island Plutonic Suite, intrude the Karmutsen Formation volcanics. Locally, the granodiorite is epidote altered.

The Bon 20 showing is one of several which occur along a 1.2 kilometre mineralized zone striking about 285 degrees (the Bon 20 represents sample 2155 in Geology, Exploration and Mining 1970, page 274).

Locally, a band of massive magnetite in silicified volcanic rocks is exposed for about 150 metres. Enclosing rocks are variably skarn altered with localized massive epidote containing disseminated pyrite and galena. At the easternmost exposure, the massive magnetite band averages 3.6 metres in width and dips near vertical.

BIBLIOGRAPHY

EMPR AR 1969-209; *1970-274
EMPR ASS RPT 1821, 8644
EMPR EXPL 1980-271
GSC ANN RPT 1886

BIBLIOGRAPHY

GSC BULL 47; 172; 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT 1929 Part A; 1931 Part A
CJES 18, p. 1; 20, p. 2, 1983
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern British Columbia, Ph.D. Thesis, University of British
Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/04

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 189**

NATIONAL MINERAL INVENTORY:

NAME(S): **RADIO (L.1627)**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E 092L06W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 20 43 N
LONGITUDE: 127 14 37 W
ELEVATION: 502 Metres

NORTHING: 5578496
EASTING: 624968

LOCATION ACCURACY: Within 500M

COMMENTS: Name from old claim map; location from Open File 1991-8.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Middle Jurassic
ISOTOPIC AGE: 178 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Phlogopite

DEPOSIT

CHARACTER: Podiform
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Triassic
Unknown

GROUP

Vancouver

FORMATION

Quatsino

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Limestone
Basaltic Sill
Tholeiitic Basalt
Skarn

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE:

CAPSULE GEOLOGY

The oldest rocks in the Merry Widow camp are massive to pillowed volcanics and subvolcanic gabbroic intrusions of the Upper Triassic Karmutsen Formation (Vancouver Group). These are unconformably overlain by approximately 1000 metres of massive to bedded grey limestone of the Upper Triassic Quatsino Formation (Vancouver Group). The Quatsino is unconformably overlain by the Lower Jurassic Bonanza Group which consists of andesitic ash and lapilli tuff, breccia, greenstone and well bedded tuffaceous siltstone.

The area includes two major episodes of intrusive rocks. The oldest rocks, the Keystone suite, is believed to be coeval with the Bonanza Group and probably formed feeders to the tuffs, breccias and greenstones in that succession. Many Keystone suite dikes and sills that cut the Quatsino limestone are associated with barren and mineralized skarn. The second major intrusive episode resulted in the emplacement of the Early to Middle Jurassic Coast Copper stock. This is mostly a coarse grained, mafic gabbro.

A distinctive sill-like body of tholeiitic basalt of unknown age intrudes the Quatsino limestone in the southern part of the camp. It is near here that the Radio skarn showing has developed. Chalcopyrite and pyrrhotite mineralization has been observed (Open File 1991-8).

BIBLIOGRAPHY

EMPR FIELDWORK 1990, pp. 85-88
EMPR MAP Preliminary Geological Map Alice Lake-Benson Lake Area, Jeffery, W.G., 1962
EMPR OF 1988-28; *1991-8
GSC BULL 172, p. 63
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
Carson, D.J.T. (1968): Metallogenic study of Vancouver Island with

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 366
REPORT: RGEN0100

BIBLIOGRAPHY

- emphasis on the relationship of plutonic rocks to Mineral deposits,
Ph.D. Thesis, Carleton University, Ottawa
- Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of
British Columbia, Vol. 1: Vancouver Island, p. 187
- Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern B.C., Ph.D. Thesis, University of British Columbia
- Wittur, G.E., (1961): Geology of the Magnetite Deposits of Empire
Development Co. Ltd., Vancouver Island, British Columbia, unpub.
B.Sc. Thesis, University of British Columbia

DATE CODED: 1991/01/23
DATE REVISED: 1993/04/02

CODED BY: IW
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 190**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUEBIRD 1**

MINING DIVISION: Nanaimo

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 21 06 N
LONGITUDE: 127 15 01 W
ELEVATION: 807 Metres

NORTHING: 5579195
EASTING: 624477

LOCATION ACCURACY: Within 500M

COMMENTS: Named from an old claim map (see Benson Lake, 092L 091).

COMMODITIES: Copper Zinc Gold Cobalt

MINERALS

SIGNIFICANT: Pyrrhotite Magnetite Chalcopyrite Sphalerite Arsenopyrite
Gold Cobaltite

COMMENTS: Trace gold and cobaltite.

ALTERATION: Epidote Garnet Chlorite Carbonate

ALTERATION TYPE: Epidote

MINERALIZATION AGE: Lower Jurassic

ISOTOPIC AGE: 178 +/- 8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Phlogopite

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Mesothermal Replacement Skarn Epigenetic

SHAPE: Tabular
COMMENTS: Date from Geological Survey of Canada Paper 74-8.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic Bonanza Undefined Formation

LITHOLOGY: Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The Bluebird 1 occurrence consists of a narrow lens of massive sulphides containing abundant pyrrhotite with lesser magnetite, chalcopyrite, black sphalerite, arsenopyrite and trace gold and cobaltite. Within the sulphides are small quantities of carbonate, epidote, garnet and chlorite.

The sulphide lens is gently dipping and is hosted in thinly-bedded tuffs of the Lower Jurassic Bonanza Group (Open File 1991-8).

BIBLIOGRAPHY

EMPR OF 1991-8
GSC MAP 255A; 4-1974; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1991/01/23
DATE REVISED: 1992/10/27

CODED BY: IW
REVISED BY: IW

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **092L 191**

NATIONAL MINERAL INVENTORY: 092L5 Cu7

NAME(S): **JARR**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E 092L05W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 18 39 N
LONGITUDE: 127 41 46 W
ELEVATION: 366 Metres

NORTHING: 5574004
EASTING: 592841

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on Jar 16-20 boundary is 2.5 kilometres northeast of Klaskino Inlet, 3 kilometres southeast of Mt. Kotzebue (Assessment Report 3166).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite Magnetite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn Hydrothermal
SHAPE: Regular
MODIFIER: Folded Faulted

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
MATERIAL DATED: Mollusks			

LITHOLOGY: Calcareous Sediment/Sedimentary
Volcanic Rock
Dike

HOSTROCK COMMENTS: Parson Bay mollusks from Beaver Cove. Bonanza mollusks from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP:
GRADE:

CAPSULE GEOLOGY

The area lies within the Insular Belt and is underlain mainly by volcanic and crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage of Paleozoic Sicker Group sediments and basalts and Upper Triassic Vancouver Group minor carbonate and clastic sediments.

The Bonanza Group volcanics are coeval with, or genetically related to granodiorite stocks of the Jurassic Island Intrusions, which intrude all rocks in the area.

The Jarr occurrence is underlain by calcareous sediments of the Parson Bay Formation (Vancouver Group) and volcanic rocks of the Bonanza Group which are complexly folded and faulted and intruded by dykes.

Chalcopyrite occurs as low grade disseminations and in skarn, associated with pyrite, pyrrhotite and magnetite, at or near an east trending fault.

BIBLIOGRAPHY

EMPR ASS RPT *3166, *11226
EMPR GEM 1970-271; 1971-318
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 369
REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918 Part B; 1929 Part A
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/07

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 192**

NATIONAL MINERAL INVENTORY: 092L12 Cu6

NAME(S): **MOR**, ADD, WOB

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 46 N
LONGITUDE: 127 43 56 W
ELEVATION: 350 Metres

NORTHING: 5616799
EASTING: 589538

LOCATION ACCURACY: Within 1 KM

COMMENTS: Approximate centre of many showings on the west half of the claim group (Assessment Report 1719).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Copper
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Andesite
Limestone
Shale

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island; Bonanza mollusks from Quatsino Sound.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

In this area the geology from northeast to southwest consists of northwest trending Karmutsen Formation andesites and minor limestone, Quatsino Formation limestone, both of the Upper Triassic Vancouver Group, and Lower Jurassic Bonanza Group shales. To the south this succession is in fault contact with Karmutsen Formation rocks.

In the southern block of the Karmutsen Formation, there are many small showings of chalcopyrite, bornite and native copper.

BIBLIOGRAPHY

EMPR AR 1968-84,*85
EMPR ASS RPT *1719, 2208, 2787, 3086, 10852, 12405
EMPR EXPL 1982-231
EMPR GEM 1969-364; 1970-254,264; 1971-322
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/01

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 193**

NATIONAL MINERAL INVENTORY: 092L7 Zn1

NAME(S): **DIA**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 16 14 N
LONGITUDE: 126 55 18 W
ELEVATION: 130 Metres

NORTHING: 5570779
EASTING: 648105

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of claims is located 1.2 kilometres east of Hustan Lake.

COMMODITIES: Zinc Copper

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork
CLASSIFICATION: Hydrothermal
SHAPE: Irregular
MODIFIER: Faulted

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			

LITHOLOGY: Limestone

HOSTROCK COMMENTS: Ammonites from Alice Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

North striking carbonates and calcareous sediments of the Quatsino and Parson Bay formations overlie Karmutsen Formation tholeiitic basalts, all of the Upper Triassic Vancouver Group.

Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff, breccia and minor sediments are coeval with, or genetically related to granodiorite of the Nimpkish Batholith of the Jurassic Island Intrusions.

Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area. At the Dia occurrence, several small stringers of sphalerite with minor chalcopyrite occur in Quatsino Formation limestone.

BIBLIOGRAPHY

EMPR GEM *1970-274
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; *74-8
GSC SUM RPT 1929 Part A; 1931 Part A

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/24

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 194**

NATIONAL MINERAL INVENTORY: 092L12 Cu9

NAME(S): **HAW 12**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 42 49 N
LONGITUDE: 127 43 42 W
ELEVATION: 440 Metres

NORTHING: 5618749
EASTING: 589779

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on Haw 12 claim (Assessment Report 2815).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Hydrothermal
SHAPE: Irregular
MODIFIER: Sheared

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
Upper Triassic	Vancouver	Quatsino	

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

Upper Triassic

ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarites ammonites

LITHOLOGY: Andesite
Limestone

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake; Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

TERRANE: Wrangell

METAMORPHIC TYPE: Regional

RELATIONSHIP: Syn-mineralization

GRADE: Greenschist

CAPSULE GEOLOGY

In this area the geology consists of Karmutsen Formation andesites and minor limestone in contact to the southwest with Quatsino Formation limestone, both of the Upper Triassic Vancouver Group.

Chalcopyrite and minor bornite are present as disseminations and fracture fillings in sheared andesite.

BIBLIOGRAPHY

EMPR AR 1968-84
EMPR ASS RPT 1736, *2815
EMPR GEM 1970-254,263
EMR MP CORPFILE (Gladiator Resources)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1929A, p. 143
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/01

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 195**

NATIONAL MINERAL INVENTORY: 092L12 Cu9

NAME(S): **HAW 15**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 42 29 N
LONGITUDE: 127 43 58 W
ELEVATION: 393 Metres

NORTHING: 5618126
EASTING: 589476

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on Haw 15 claim (Assessment Report 1736).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ALTERATION: Calcite Epidote Quartz
ALTERATION TYPE: Epidote Carbonate Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Hydrothermal
DIMENSION: 0010 Metres STRIKE/DIP: 315/50E TREND/PLUNGE:
COMMENTS: Copper mineralization scattered across 10 metre width in northwest striking altered andesite which dips 50 degrees east (Assessment Report 1736).

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropites ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarites ammonites			

LITHOLOGY: Andesite
Limestone

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake; Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

In this area the geology consists of Karmutsen Formation andesites and minor limestone in contact to the southwest with Quatsino Formation limestone both of the Upper Triassic Vancouver Group.

Chalcopyrite and minor bornite occur in a narrow, strongly altered zone in andesite striking northwest and dipping 50 degrees east. Calcite, epidote and quartz are found in fractures and amygdules. Copper mineralization is scattered across an approximately 10 metre width to the east.

BIBLIOGRAPHY

- EMPR AR 1968-84
- EMPR ASS RPT *1736, 2815
- EMPR GEM 1970-254,263
- EMR MP CORPFILE (Gladiator Resources Limited)
- GSC ANN RPT 1886
- GSC BULL 242
- GSC MAP *4-1974; 1552A
- GSC OF 9; 170; 463; 722
- GSC P 69-1A; 72-44; *74-8; 79-30
- GSC SUM RPT *1929A, p. 143

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 374
REPORT: RGEN0100

BIBLIOGRAPHY

CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/01

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 196**

NATIONAL MINERAL INVENTORY: 092L12 Cu9

NAME(S): **HAW 14,6**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 42 02 N
LONGITUDE: 127 43 41 W
ELEVATION: 375 Metres

NORTHING: 5617298
EASTING: 589824

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on Haw 14 and 6 claims (Assessment Report 1736).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Malachite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal
SHAPE: Regular
MODIFIER: Sheared
DIMENSION: 0004 Metres STRIKE/DIP: 090/50N TREND/PLUNGE:
COMMENTS: Strongest mineralization is found in a shear striking 090 degrees, dipping 50 degrees north and a shear trending 020 degrees dipping 60 degrees west (Assessment Report 1736).

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarites ammonites			

LITHOLOGY: Andesite
Limestone

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake; Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

In this area the geology consists of Karmutsen Formation andesites and minor limestone in contact to the southwest with Quatsino Formation limestone, both of the Upper Triassic Vancouver Group.
Bornite, chalcopyrite and malachite are present in strongly sheared volcanic rocks. The rocks show two shear directions, 090 degrees with a 50 degree north dip and 020 degrees with a 60 degree west dip. The strongest mineralization occurs in the east striking shear. The mineralization has been found over 4 metres in the north bank of an east flowing creek, and is capped by barren volcanic rocks.

BIBLIOGRAPHY

EMPR AR 1968-84
EMPR ASS RPT *1736, 2815
EMPR GEM 1970-254,263
EMR MP CORPFILE (Gladiator Resources Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 376
REPORT: RGEN0100

BIBLIOGRAPHY

GSC SUM RPT *1929A, p. 143
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/01

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 197**

NATIONAL MINERAL INVENTORY: 092L12 Cu9

NAME(S): **HAW 34**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 42 17 N
LONGITUDE: 127 45 59 W
ELEVATION: 457 Metres

NORTHING: 5617715
EASTING: 587109

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on Haw 34 claim (Assessment Report 2815).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Hydrothermal
SHAPE: Irregular
MODIFIER: Sheared

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarites ammonites			

LITHOLOGY: Andesite
Limestone

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake; Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

In this area the geology consists of Karmutsen Formation andesites and minor limestone in contact to the southwest with Quatsino Formation limestone, both of the Upper Triassic Vancouver Group.

Chalcopyrite and minor bornite are present as disseminations and fracture fillings in sheared andesite.

BIBLIOGRAPHY

EMPR ASS RPT 1736, *2815
EMPR GEM 1970-254,263
EMR MP CORPFILE (Gladiator Resources)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1929A, p. 143
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/31

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 198**

NATIONAL MINERAL INVENTORY: 092L12 Cu9

NAME(S): **WIT 21**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 42 26 N
LONGITUDE: 127 45 58 W
ELEVATION: 457 Metres

NORTHING: 5617994
EASTING: 587124

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on Wit 21 claim (Assessment Report 2815).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Hydrothermal
SHAPE: Irregular
MODIFIER: Sheared

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarites ammonites			

LITHOLOGY: Andesite
Limestone

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake; Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

In this area the geology consists of Karmutsen Formation andesites and minor limestone in contact to the southwest with Quatsino Formation limestone, both of the Upper Triassic Vancouver Group.

Chalcopyrite and minor bornite are present as disseminations and fracture fillings in sheared andesite.

BIBLIOGRAPHY

EMPR ASS RPT 1736, *2815
EMPR GEM 1970-254,263
EMR MP CORPFILE (Gladiator Resources Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1929A, p. 143
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/31

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 199**

NATIONAL MINERAL INVENTORY: 092L3 Cu2

NAME(S): **MARK**, LAURA LEE

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03E
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 03 29 N
LONGITUDE: 127 05 26 W
ELEVATION: 10 Metres

NORTHING: 5546832
EASTING: 636675

LOCATION ACCURACY: Within 500M

COMMENTS: Location of 1970 diamond drilling, as reported in Assessment Report 8931, is 0.5 kilometres east of the head of Tahsish Inlet.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
COMMENTS: Mineralization occurs as disseminations and in k-feldspar-quartz stockwork.

ASSOCIATED: Quartz K-Feldspar
ALTERATION: Epidote Chlorite Calcite

ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Hydrothermal
COMMENTS: Classification is unknown, probably hydrothermal.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Crystal Tuff
Granodiorite

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; intrusive phlogopite-Zeballos stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

CAPSULE GEOLOGY

The region of the Mark occurrence lies within northwest striking Lower Jurassic Bonanza Group volcanic rocks, intruded several kilometres to the south and east by the Amai and Zeballos intrusions respectively. The intrusions range from quartz-diorite to quartz-feldspar porphyry and belong to the Jurassic Island Plutonic Suite. Mineralization consists of sparsely disseminated chalcopyrite in dark crystal tuffs that exhibit strong epidote, chlorite and calcite alteration near a granodiorite intrusion. Assessment Report 8931 reports boulders containing coarse clots of chalcopyrite and bornite within irregular K-feldspar-quartz stockwork from the drillsites. The occurrence lies 1.0 kilometre east of the Mica quartz-sericite occurrence (092L 277).

BIBLIOGRAPHY

EMPR ASS RPT *8931
EMPR GEM 1970-284; 1971-479
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1913; 1920A

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 380
REPORT: RGEN0100

BIBLIOGRAPHY

Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/25

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 200**

NATIONAL MINERAL INVENTORY: 092L12 Cu11

NAME(S): **RED DOG**

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5618142
EASTING: 572566

LATITUDE: 50 42 38 N
LONGITUDE: 127 58 20 W
ELEVATION: 400 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Red Dog claims (Assessment Report 12027).

COMMODITIES: Copper Gold Molybdenum Silver

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Molybdenite Chalcocite
ASSOCIATED: Quartz Magnetite
ALTERATION: Quartz Pyrophyllite Pyrite Sericite Kaolinite
Zeolite

ALTERATION TYPE: Sericitic Argillic Zeolitic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stockwork Vein
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic Bonanza Undefined Formation

ISOTOPIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks

Jurassic Island Plutonic Suite
ISOTOPIC AGE: 145 +/- 5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Hornblende Biotite Hornfels
Siliceous Breccia
Tuff
Quartz Feldspar Porphyry
Quartz Diorite
Diorite

HOSTROCK COMMENTS: Age dates from Geological Survey of Canada Paper 74-8.

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels

INVENTORY

ORE ZONE: RED DOG REPORT ON: Y
CATEGORY: Combined YEAR: 1992
QUANTITY: 25000000 Tonnes
COMMODITY GRADE
Gold 0.4400 Grams per tonne
Copper 0.3500 Per cent
Molybdenum 0.0060 Per cent
COMMENTS: Drill indicated, mineable open pit reserves.
REFERENCE: MDAP - Crew Natural Resources, Prospectus, 1992.

CAPSULE GEOLOGY

The Red Dog occurrence area is underlain by northwest trending Lower Jurassic Bonanza Group volcanics and sediments, Upper Triassic Karmutsen Formation (Vancouver Group) volcanics and Quatsino Formation (Vancouver Group) limestone, all of which have been intruded by stocks of the Early-Middle Jurassic Island Plutonic Suite.
Locally, bedded tuff, massive tuff, lapilli tuff and tuff breccia of the Bonanza Group are intruded by diorite, quartz diorite and quartz feldspar porphyry of the Island Plutonic Suite. On the

CAPSULE GEOLOGY

northeast side of the property, the Bonanza rocks are metamorphosed to hornblende-biotite hornfels in contact zones with silicification and hydrothermal alteration in shear zones. On the southwest side, the Bonanza rocks have either been intensely silicified and brecciated or show alteration to pyrophyllite, pyrite, sericite, zeolite and kaolinite.

To the northeast, chalcopyrite occurs as fine-grained disseminations and in fractures in hornfels. Molybdenite is most abundant on fracture surfaces and in quartz-sericite veins following shear zones. To the southwest, copper mineralization is more sporadic, occurring mainly in association with magnetite in siliceous breccia. Drilling in this area in 1983 identified chalcocite, bornite, chalcopyrite and molybdenite (Assessment Report 12027). Results from the first hole of a four hole drilling program averaged 0.44 per cent copper and 0.48 grams per tonne gold over 146 metres (George Cross News Letter #183, 1988).

Drill indicated, mineable open pit reserves are 25 million tonnes grading 0.35 per cent copper, 0.44 gram per tonne gold and 0.006 per cent molybdenum (MDAP - Crew Natural Resources, Prospectus, 1992).

BIBLIOGRAPHY

- EM EXPL 2002-29-40
EMPR AR 1967-69; 1968-96
EMPR ASS RPT 5262, 10982, 11048, *12027, 18023, 20610, 21352
EMPR FIELDWORK 1991, p. 232
EMPR GEM *1970-254,259; 1972-307
EMPR INF CIRC 1992-1, pages 7-8; 1993-13
EMPR MAP 65 (1989)
EMPR OF 1992-1; 1992-6; 1994-1; 1998-8-K, pp. 1-22
EMR MIN BULL MR 223 B.C. 182
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983
EMJ April, 1989
GCNL Jul.19, 1978; *#183,#191,#225, 1988; *#3, 1989; #41(Feb.27), #75(Apr.18),#97(May 18),#108(Jun.5),#117(Jun.18),#133(Jul.11), #189(Sept.29), 1990; #24(Feb.4),#62(Mar.28),#78(Apr.23),#83(Apr.30) #128(Jul.4), 1991; #48(Mar.9),#112(June 10), 1992
N MINER July 15, 1991
WWW <http://www.infomine.com/>
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/07

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 201**

NATIONAL MINERAL INVENTORY: 092L3 Cu3

NAME(S): **BP, SIN 3, GOLDSCOPE,
ELECTRUM**

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 11 34 N
LONGITUDE: 127 22 41 W
ELEVATION: 396 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5561324
EASTING: 615772

LOCATION ACCURACY: Within 500M

COMMENTS: Location is of centre of BP claims at headwaters of Malksope River,
4.5 kilometres west of the head of Kashutl Inlet.

COMMODITIES: Copper Iron Magnetite

MINERALS

SIGNIFICANT: Chalcopyrite Hematite Magnetite
ALTERATION: Hematite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Hydrothermal Industrial Min.
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: STRIKE/DIP: 045/30S
COMMENTS: General attitude of volcanic and sedimentary rocks in area is
northeast.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
	ISOTOPIC AGE: 200 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Mollusks		
Jurassic			Island Plutonic Suite
	ISOTOPIC AGE: 151 +/- 14 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		

LITHOLOGY: Calcareous Sediment/Sedimentary
Quartz Porphyry

HOSTROCK COMMENTS: Mollusks from Quatsino Sound; intrusive biotite from Nimpkish
batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area is underlain by calcareous sediments and intermediate to felsic flows of the Lower Jurassic Bonanza Group, striking east-northeast to northeast, dipping east to southeast at 30 degrees. A medium-grained syenodiorite stock of the Jurassic Island Plutonic Suite occurs 4.0 kilometres east at the head of Kashutl Inlet.

The BP occurrence consists of chalcopyrite, hematite and magnetite in a shear zone in dark calcareous sediments. A quartz-eye porphyry is indicated nearby (Assessment Report 3008, Map 4).

BIBLIOGRAPHY

EMPR ASS RPT 3008, *15521
EMPR EXPL 1987-C220
EMPR GEM 1971-316
GSC ANN RPT 1886
GSC MAP 4-1974; 255A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1913; 1920A; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 384
REPORT: RGEN0100

BIBLIOGRAPHY

Falconbridge File
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/18

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 202**

NATIONAL MINERAL INVENTORY: 092L3 Cu4

NAME(S): **EASY, SIN**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 09 59 N
LONGITUDE: 127 21 06 W
ELEVATION: 457 Metres

NORTHING: 5558431
EASTING: 617720

LOCATION ACCURACY: Within 500M

COMMENTS: The location is the north boundary of Easy 61 claim (Assessment Report 3008).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal

SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
	ISOTOPIC AGE: 200 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Mollusks		
Upper Triassic	Vancouver	Parson Bay	
	ISOTOPIC AGE: 215 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Halobia mollusks		
Jurassic			Island Plutonic Suite
	ISOTOPIC AGE: 151 +/- 14 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		

LITHOLOGY: Volcanic Rock
Sediment/Sedimentary Rock
Diorite

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; Parson Bay mollusks-Beaver Cove; intrusive biotite-Nimkish batholith (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group intermediate to felsic flows and pyroclastics. Minor calcareous sediments of the Upper Triassic Vancouver Group, Parson Bay and Quatsino formations are in fault contact with the volcanic rocks. A diorite stock of the Jurassic Island Plutonic Suite occurs at the head of Kashutl Inlet, 4.0 kilometres to the northeast.

Assessment Report 3008 describes the Easy occurrence as a wide-spread zone hosting minor chalcopyrite and pyrite associated with quartz veins in volcanics and sediments.

The location of the occurrence, within the Easy claim group, from Assessment Report 3008 is uncertain and may coincide with the Kyu occurrence (092L 174).

BIBLIOGRAPHY

EMPR ASS RPT *3008, 11664, 15521
EMPR GEM 1971-316; 1982-226; 1987-C220
GSC ANN RPT 1886
GSC MAP 4-1974; 255A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1913; 1920A; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 386
REPORT: RGEN0100

BIBLIOGRAPHY

emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/19

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 203**

NATIONAL MINERAL INVENTORY: 092L3 Zn1

NAME(S): **ON, SIN 6**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 07 49 N
LONGITUDE: 127 20 21 W
ELEVATION: 91 Metres

NORTHING: 5554436
EASTING: 618702

LOCATION ACCURACY: Within 500M

COMMENTS: The centre of the On claims is located 2.0 kilometres west of Easy Inlet on Easy Creek.

COMMODITIES: Zinc Gold

MINERALS

SIGNIFICANT: Sphalerite
COMMENTS: Gold mineralogy not known.

ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Skarn Epigenetic
TYPE: K02 Pb-Zn skarn
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Altered Calcareous Sediment/Sedimentary
Quartz Latite
Diorite

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; Parson Bay mollusks-Beaver Cove; intrusive biotite-Nimpkish batholith (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
Plutonic Rocks
RELATIONSHIP:
GRADE: Amphibolite

INVENTORY

ORE ZONE: DRILLHOLE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
COMMODITY: Gold
GRADE: 0.5850 Grams per tonne
COMMENTS: Maximum value.
REFERENCE: Assessment Report 11664, page 44.
YEAR: 1982

CAPSULE GEOLOGY

The Kyoquot Peninsula is underlain by sediments and volcanics of the Lower Jurassic Bonanza Group, comprised of a lower sequence of calcareous sediments overlain by intermediate flows and intermediate to felsic pyroclastics. Small wedges of Upper Triassic Vancouver Group calcareous sediments of the Parson Bay Formation are in fault contact with the younger Bonanza Group rocks.
A medium-grained syeno-diorite stock occurs 7.0 kilometres north, at the head of Kashutl Inlet. A quartz porphyry stock is reported at Malskope River, 5.0 kilometres northwest (Assessment Report 3008,

CAPSULE GEOLOGY

page 4).

The On occurrence consists of extensive skarn mineralization with minor disseminated sphalerite. An area of silicification is reported 800 metres west of the skarn (Assessment Report 11664, Figure 5 and 15521, page 7).

Diamond drilling in 1982 intersected quartz-latite, skarned calcareous sediments and diorite. Gold values up to 0.585 grams per tonne were encountered (Assessment Report 11664, page 44).

BIBLIOGRAPHY

EMPR ASS RPT 3008, 8279, *11664, 15521
EMPR EXPL 1980-269; 1982-226; 1987-C220
EMPR GEM 1971-316
GSC ANN RPT 1886
GSC MAP 4-1974; 255A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1913; 1920A; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/18

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 205**

NATIONAL MINERAL INVENTORY: 092L5 Cu11

NAME(S): **R, SU, RSU,
PAN, GE**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 27 59 N
LONGITUDE: 127 36 46 W
ELEVATION: 488 Metres

NORTHING: 5591407
EASTING: 598451

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralization on R 23 claim (Assessment Report 4355) is 1.7 kilo-
metres south of Kultus Cove, Bucholz Channel.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite
ALTERATION: Epidote Calcite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Andesitic Tuff

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; Parson Bay mollusks-Beaver Cove;
biotite-Island Copper stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

CAPSULE GEOLOGY

The area is underlain by small isolated granodioritic plutons of the Jurassic Island Plutonic Suite which cut volcanic rocks of the Lower Jurassic Bonanza Group.

The R occurrence is underlain by Bonanza Group andesitic tuff which is locally epidote and calcite altered, and hosts minor pyrite with disseminated chalcopyrite.

BIBLIOGRAPHY

EMPR ASS RPT 3023, 3164, 3165, 3652, *4355
EMPR GEM 1971-317; 1972-289; 1973-258
EMR MP CORPFILE (Celtic Minerals Ltd.)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/20

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 206**

NATIONAL MINERAL INVENTORY: 092L7 Cu1

NAME(S): **EAST HAZEL (NIMPKISH COPPER)**, KINMAN, HAZEL 3

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5577558
EASTING: 652802

LATITUDE: 50 19 49 N
LONGITUDE: 126 51 11 W
ELEVATION: 792 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of diamond-drill hole 18 on Hazel 3 claim (Assessment Report 456) is 500 metres west of Kinman-Nimpkish Copper (092L 036), 5.0 kilometres east of the south end of Nimpkish Lake.

COMMODITIES: Gold Copper Zinc Molybdenum Cadmium

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Magnetite Molybdenite Bornite
Greenockite Covellite Marcasite

COMMENTS: Gold mineralogy not known.

ASSOCIATED: Magnetite Pyrrhotite Garnet Epidote Pyrite

ALTERATION: Calcite Quartz Garnet Actinolite Chlorite
Sericite Epidote Calcite

ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive

CLASSIFICATION: Skarn

SHAPE: Tabular

MODIFIER: Faulted

DIMENSION: 6 Metres

COMMENTS: Lenses are up to 6 metres in length and are 0.5 metres thick.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER

Upper Triassic

Vancouver

Quatsino

ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarite ammonites

Jurassic

Island Plutonic Suite

ISOTOPIC AGE: 151 +/- 14 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Limestone
Garnet Epidote Skarn
Granodiorite
Lamprophyre Dike

HOSTROCK COMMENTS: Ammonites from Alice Lake; biotite from Nimpkish batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1930

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Gold

85.0400

Grams per tonne

Copper

0.2900

Per cent

COMMENTS: Diamond-drill hole 18.

REFERENCE: Assessment Report 456, Figure A.

CAPSULE GEOLOGY

The area is underlain by north striking Upper Triassic Vancouver Group, Karmutsen Formation tholeiitic basalts and overlying carbonates of the Quatsino Formation. Late Jurassic granodiorite of the Nimpkish

CAPSULE GEOLOGY

batolith (which is part of Jurassic Island Plutonic Suite) intrudes the Vancouver Group rocks. Strong regional north to northwest trending faults, often defining intrusive and lithological contacts, traverse the area.

The East Hazel occurrence is located within the east-central portion of Hazel 3 claim (Assessment Report 456). This showing corresponds with showings 7 to 15 in the Geological Survey of Canada Summary Report of 1929.

The occurrence consists of a number of replacement pyrrhotite-chalcopyrite-sphalerite-garnet lenses or stringers with minor amounts of magnetite, marcasite, covellite, bornite, molybdenite, greenockite, epidote, calcite, quartz, actinolite, chlorite and sericite. The lenses are 0.5 metres thick and range up to 6 metres in length. They lie south of a 200 metre long tongue of granodiorite that projects northwestward into Quatsino limestone as a 50 degree south dipping sheet. Lamprophyre dykes are present. The lenses lie within the limestone and are within 60 metres of the contact zone.

Diamond-drill hole 18 (Figure A, Assessment Report 456) includes a 0.7 metre section of 85.04 grams per tonne gold and 0.29 per cent copper. A sample from a nearby trench assayed 17.6 per cent zinc and 0.73 per cent copper over 0.5 metres.

The occurrence lies 500 metres west of Nimpkish Copper (092L 036) and 600 metres east of Hazel 7 (092L 118), with several small occurrences in between (see Geological Survey of Canada Summary Report 1929, Figure 6).

BIBLIOGRAPHY

- EMPR AR 1928-379; 1929-381; 1930-299; 1965-230; 1966-68
EMPR ASS RPT *456, *831, 832
EMPR GEM 1970-273
EMPR PF (Various Maps in 092L 036-Nimpkish Copper)
GSC ANN RPT 1886
GSC BULL 47, 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC SUM RPT *1929A, pp. 128,129, Fig.6; 1931A
CJES 18, p. 1; 20, p. 2, 1983
Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake, unpubl. B.Sc. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/05

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 207**

NATIONAL MINERAL INVENTORY: 092L7 Cu1

NAME(S): **COPPER CREEK 18**, KINMAN, HAZEL,
YU, DRY, B,C,H,S,
ALPHA 2, NIMPKISH COPPER

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:
LATITUDE: 50 19 39 N
LONGITUDE: 126 50 36 W
ELEVATION: 762 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showing 18 of Geological Survey of Canada Summary Report 1929A,
Figure 6, is 7.0 kilometres from the mouth of Kinman Creek on
Nimpkish Lake, Alpha 2 claim (Assessment Report 831).

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5577269
EASTING: 653503

COMMODITIES: Copper Zinc Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Molybdenite Sphalerite
ASSOCIATED: Pyrite Quartz
ALTERATION: Pyrite Sericite Kaolinite
ALTERATION TYPE: Sericitic Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Disseminated
CLASSIFICATION: Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Irregular
MODIFIER: Faulted Sheared
DIMENSION: 0023 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Mineralization occurs over 23 metres in narrow shear zone.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 151 +/- 14 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Granodiorite

HOSTROCK COMMENTS: Age date on Nimpkish batholith biotite (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks

CAPSULE GEOLOGY

The area is underlain by granodiorite of the Nimpkish batholith which is part of the Jurassic Island Plutonic Suite. The batholith intrudes Upper Triassic Vancouver Group rocks comprised of Karmutsen Formation volcanics and Quatsino Formation carbonates as well as the overlying Lower Jurassic Bonanza Group.

The Copper Creek 18 occurrence comprises 23 metres of quartz-pyrite-chalcopyrite-molybdenite mineralization in a narrow shear zone cutting sericite-kaolinite altered granodiorite. Pyrite and chalcopyrite also occur in a quartz vein stockwork and are disseminated through the intrusive (Geological Survey of Canada Summary Report 1929, page A129 and Showing number 17 on Figure 6).

About 30 metres downstream from the occurrence is a large rusty outcrop of coarse pyrite in the creek bed, measuring 3 by 10 metres which hosts chalcopyrite and molybdenite in a quartz-sericite gangue.

There are other small showings of copper, zinc and molybdenite along the creek.

BIBLIOGRAPHY

EMPR AR 1965-230; 1966-68
EMPR ASS RPT *831, 832
EMPR GEM 1970-273
GSC ANN RPT 1886
GSC BULL 242

BIBLIOGRAPHY

GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 72-44; *74-8
GSC SUM RPT *1929A, p. 127; 1931A
CJES 18, p. 1; 20, p. 1, 1983
Alsen, J.B., (1975): A Magnetite Skarn Deposit near Bonanza Lake,
B.Sc. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern British Columbia, Ph.D. Thesis, University of British
Columbia
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/26

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 208**

NATIONAL MINERAL INVENTORY: 092L7 Cu2

NAME(S): **SMITH COPPER (MAIN)**, ZIP, B,
C, JOE, JAF,
ANDY, BONANZA, VERNON,
MAIN, STOREY CREEK

MINING DIVISION: Nanaimo

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 21 51 N
LONGITUDE: 126 55 06 W
ELEVATION: 305 Metres

NORTHING: 5581193
EASTING: 648051

LOCATION ACCURACY: Within 500M

COMMENTS: Main showing (Assessment Report 10337).

COMMODITIES: Zinc Copper Lead Silver

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Galena
ASSOCIATED: Pyrite Pyrrhotite
ALTERATION: Epidote Pyroxene Garnet Calcite Quartz
 Chlorite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Skarn Replacement
 TYPE: K02 Pb-Zn skarn
DIMENSION:
COMMENTS: Main zone STRIKE/DIP: 340/35W TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropites ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Andesite
Skarn
Quartz Diorite
Granodiorite
Feldspar Porphyry Dike
Diabase Dike
Andesite Dike

HOSTROCK COMMENTS: Age dates from Geological Survey of Canada Paper 74-8.

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels

INVENTORY

ORE ZONE: SMITH COPPER

REPORT ON: Y

CATEGORY:	Indicated	YEAR:	1981
QUANTITY:	83906 Tonnes		
COMMODITY		GRADE	
Silver		64.4000	Grams per tonne
Copper		1.6900	Per cent
Lead		3.7000	Per cent
Zinc		12.5000	Per cent

COMMENTS: Drill indicated.
 REFERENCE: George Cross News Letter December 7, 1988.

CAPSULE GEOLOGY

The Smith Copper occurrence region is underlain by volcanics and sediments of the Upper Triassic Vancouver Group (Karmutsen, Quatsino and Parson Bay formations) and by volcanics of the Lower Jurassic Bonanza Group. These rocks have been intruded by the Early-Middle Jurassic Island Plutonic Suite which are cogenetic with the Bonanza Group.

Locally, Karmutsen Formation andesitic and basaltic flows are overlain by Quatsino Formation limestone, which are overlain by Bonanza Group argillites, tuffs and quartzites. These are intruded by medium-grained intrusives varying from quartz diorite to granodiorite. The volcanic and sedimentary rocks are cut by numerous dykes varying in composition from diabase and andesite to feldspar porphyries.

In the Main zone, lead-zinc-copper replacement mineralization follows the contact between Quatsino Formation limestone and Karmutsen Formation andesite. Mineralization consists of galena, sphalerite, pyrrhotite, chalcopyrite and pyrite in a gangue of epidote, pyroxene, garnet, calcite, quartz and chlorite. The zone strikes 340 degrees and dips 35 degrees west.

Drill indicated reserves are 83,906 tonnes grading 64.4 grams per tonne silver, 1.69 per cent copper, 3.7 per cent lead and 12.5 per cent zinc (George Cross News Letter December 7, 1988).

Doublestar Resources Ltd. staked the property in 1998.

BIBLIOGRAPHY

EM EXPL 1999-25-32
 EMR AR 1921-348; 1929-382; 1930-299; 1931-172
 EMR ASS RPT 417, 765, 972, 2854, 3009, 3401, 3749, 4352, 7227, *10337, 11147
 EMR EXPL 1979-190; 1982-228
 EMR GEM 1971-319; 1972-291; 1973-259
 EMR MAP 65 (1989)
 EMR OF 1988-28, p. 153; 1992-1
 EMR PF (see 092L 037, Smith Copper - *Awmack, (1988): 1988 Summary Report on the Nimpkish Project, in Prospectus for Hercules Ventures Inc., July 12, 1988; Doublestar Resources Ltd., Annual Report, December 1999)
 EMR MIN BULL MR 223 B.C. 177
 EMR MP RESFILE (Zip Resources)
 GSC ANN RPT 1886
 GSC BULL 172; 242
 GSC EC GEOL 3, Vol.1
 GSC MAP *4-1974; 255A; 1029A
 GSC MEM 272
 GSC OF 9; 170; 463
 GSC P 38-2; 38-3; 71-36; 72-44; *74-8
 GSC SUM RPT 1929 Part A; 1931 Part A
 CJES 18, p. 1; 20, p. 1, 1983
 GCNL #159, #180, #200, #211, #219, #231, 1981; #2, #124, #167, #172, #178, #202, 1982; #3, #40, 1983; #57, #101, #121, 1985; #229, 1988; #1, #8, 1989; #105 (June 2), 1998
 MIN REV Jul./Aug., 1983
 N MINER Oct. 29, Dec. 10, 1981; Jun. 20, 1985
 WWW <http://www.infomine.com/>
 Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
 Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
 EMR OF 1998-10

DATE CODED: 1985/07/24
 DATE REVISED: 1989/04/12

CODED BY: GSB
 REVISED BY: NJH

FIELD CHECK: N
 FIELD CHECK: N

MINFILE NUMBER: **092L 209**

NATIONAL MINERAL INVENTORY: 092L12 Cu1

NAME(S): **CALEDONIA**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 38 47 N
LONGITUDE: 127 36 06 W
ELEVATION: 300 Metres

NORTHING: 5611436
EASTING: 598863

LOCATION ACCURACY: Within 500M

COMMENTS: 170 metres north and 90 metres above principal workings on Caledonia (L.1294, 092L 061), (Geological Survey of Canada Summary Report 1929A, page 122).

COMMODITIES: Iron Copper Zinc Lead Magnetite

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite Sphalerite Galena
ASSOCIATED: Garnet Epidote Actinolite Quartz
ALTERATION: Garnet Epidote Actinolite Quartz
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn Replacement Industrial Min.
SHAPE: Irregular
DIMENSION: 0300 x 0015 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Skarn zone is up to 15 metres wide and is exposed over a 300 metre distance.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
	ISOTOPIC AGE: 230 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Gymnotropite ammonites		
Jurassic			Island Plutonic Suite
	ISOTOPIC AGE: 159 +/- 5 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		

LITHOLOGY: Limestone
Skarn
Volcanic
Granodiorite

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island; Biotite K-ar date from south-west Nahwitti Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

CAPSULE GEOLOGY

The area is underlain by the Upper Triassic Vancouver Group, comprising Karmutsen Formation volcanics and Quatsino Formation limestone, and Lower Jurassic Bonanza Group volcanics. This assemblage is intruded by Jurassic Island Plutonic Suite.

Locally, magnetite and minor chalcopyrite in garnet-epidote-actinolite skarn with a maximum width of about 15 metres is exposed by open cuts over a 300 metre distance. The skarn is found at the top of a bank in a grey crystalline limestone unit overlain and underlain by Karmutsen Formation volcanics. This limestone is probably an intercalating lens within the upper part of the Karmutsen Formation.

Mineralization continues east, where chalcopyrite, sphalerite and galena are found in strongly silicified limestone.

BIBLIOGRAPHY

EMPR AR 1929-380; 1968-84,88
EMPR ASS RPT 9853
EMPR GEM 1970-254,265

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 398
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR PF (Refer to 092L 061-Caledonia (L.1294)
EMR MP CORPFILE (North Island Mines Limited; McCullough Utah Mines
Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1929A, p. 123
CJES 18, p. 1; 20, p. 1, Jan. 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/23

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 210**

NATIONAL MINERAL INVENTORY: 092L2 Fe4

NAME(S): **BARNACLE (3060 ADIT)**, EXTENSION 4 (L.2011)

MINING DIVISION: Alberni

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 03 14 N
LONGITUDE: 126 49 50 W
ELEVATION: 932 Metres

NORTHING: 5546877
EASTING: 655297

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Bulletin 27, Figure 2, of #4 adit, is 2 to 3 kilometres northwest of Zeballos River, eight kilometres north of Zeballos.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Mesothermal Epithermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Sheared Folded
DIMENSION: 0010 Metres STRIKE/DIP: 022/
COMMENTS: Vein strike is 022 degrees and has been explored over 10 metres.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			
Eocene			Catface Intrusions
ISOTOPIC AGE: 38 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Andesite
Diabase Dike

HOSTROCK COMMENTS: Isotopic age and sample locations from Geological Survey of Canada Paper 74-8.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The Barnacle/3060 adit occurrence lies in the Zeballos gold camp which is underlain by the Lower Jurassic Bonanza Group. The Bonanza Group is an island arc sequence consisting of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza Group rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and Karmutsen Formation tholeiitic basalts, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic plutons of the Zeballos Intrusion phase of the Jurassic Island Plutonic Suite, have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

The occurrence, 150 metres south-southwest of the Barnacle Extension 1-3 showing (092L 029), consists of a shear zone set with three gouge zones. These are 2.5 to 15 centimetres wide and contain

CAPSULE GEOLOGY

2.5 to 7.5 centimetre wide vuggy quartz veins that carry coarse gold. The shear zone follows the wall of a 1 metre wide diabase dyke in fine-grained Bonanza Group andesite. The vein strikes 022 degrees and has been explored by an open cut and adit for 10 metres.

BIBLIOGRAPHY

EMPR AR 1945-116
EMPR BULL 20-V, p. 16; *27, p. 129
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMR MP CORPFILE (Anyox Metals Ltd.; Zeballos River Mines Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A
GSC MEM 204; 272, p. 60
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/25

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

plutons of the Zeballos intrusion phase of the Early-Middle Jurassic Island Plutonic Suite have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Tertiary Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

Recorded production for the Zeballos gold camp totals 9465 kilograms of gold and 4119 kilograms of silver from 652,000 tonnes of ore mined (Fieldwork 1982, page 291). Most of the production came from the Spud Valley deposits (092L 013 and 092L 211) and Privateer mine (092L 008).

The Gold Field mine and associated vein occurrences are hosted in quartz diorite of the Zeballos stock, near its western contact with Bonanza Group andesites and tuffs. Seven veins are recognized, among them the Goldfield and its branching Spur vein, which together produced all of the ore in the past. The AT, Linton and Linton North veins are located over a distance of 250 metres northwest from the Goldfield vein, and the GF2 and GF5 veins are located short distances southeast of the Goldfield vein. The Roper vein (092L 013) is 200 metres southeast of the Goldfield vein.

The veins are associated with steeply dipping northeast trending structures. Narrow zones of chloritic and argillic alteration envelope the structures, ranging from a few centimetres to a metre or more in width. Mafic components of the quartz diorite are altered to chlorite and feldspar minerals are clay-altered. Only the Goldfield and Spur veins are detailed here. Other veins are indicated on various maps and reports (see Property File) and have undergone some exploration activity.

The Goldfield vein strikes 050 to 062 degrees, dips 75 to 85 degrees north, and ranges in width from less than 1 centimetre to 40 centimetres. It follows a generally well-defined shear zone up to 60 centimetres wide. The vein, locally sheeted, is generally competent with thin bands of fine-grained pyrite, arsenopyrite, sphalerite, galena and chalcopyrite in a quartz (plus or minus calcite) gangue. Weakly mineralized, short, diagonal veins striking east, are also present.

The Spur vein strikes 070 degrees, dips vertically to 85 degrees north, and branches off the Goldfield vein, with which it shows a strong similarity. Its average width is 15 centimetres and mineralization is usually less than that of the Goldfield vein, but some high-grade sections, with assays up to 6.86 grams per tonne gold, were mined (Bulletin 27, page 92). The northeast end of the Spur vein ends in 0.6 centimetre of quartz in 1.2 centimetres of gouge.

Bulletin 27 (pages 92,94) reports production from the Spur vein totalling 24,130 tonnes averaging 9.6 grams per tonne gold. The Goldfield vein produced 63,500 tonnes grading 11.7 grams per tonne gold. Recent work on the AT, Linton and Linton North veins returned values up to 109.3 grams per tonne gold over 0.24 metres (Sample G20), 24.8 grams per tonne gold over 0.31 metres (Sample G12) and 223.5 grams per tonne gold over 0.64 metres (Sample G18), respectively. Drifting on the Linton North vein followed it for 61 metres. The average gold content over 59.0 metres was 12.07 grams per tonne over an average width of 1.2 metres (Property File - Prospectus, McAdam Resources, Spud Valley Project, 1988).

Production figures are combined production for the Roper (092L 013) and Gold Field occurrences. The combined occurrences are known as Spud Valley.

Proven/probable/possible reserves in 4 veins (combined with the Roper deposit, 092L 013) are 220,429 tonnes grading 10.7 grams per tonne gold. In view of an unsuccessful 1989 mill test, the reserve figure of 49,890 tonnes in old workings grading 4.6 grams per tonne gold reported in 1942 near the end of the mine life, may be more credible (McAdam Resources Inc. Annual Report 1988).

BIBLIOGRAPHY

- EMPR AR 1935-F38; 1936-A37; 1939-41-42,87-88; 1940-27,72; 1941-27, 70; 1942-28,65; 1943-37; 1946-179,296; 1947-180,230; 1951-40
- EMPR BC METAL MM00103
- EMPR BULL 20 Part V, pp. 16-20; *27, pp. 15,90-94,102
- EMPR ENG INSP Fiche No. 61592-61596
- EMPR EXPL 1987-A77
- EMPR FIELDWORK 1982, p. 290; 1983, p. 219
- EMPR INDEX 3-214
- EMPR MAP 65 (1989)
- EMPR OF 1992-1
- EMPR P 1991-4, p. 188
- EMPR PF (Various assay and geology plans, claim maps etc. on the Roper, Spur and Goldfield veins, various scales; Statement of

BIBLIOGRAPHY

- Material Facts, (1987), Tashota-Nipigon Mines Ltd.; Prospectus, McAdam Resources, Spud Valley Project, Apr., 1988)
- EMR MIN BULL MR 223 (1989) B.C. 172
- EMR MP CORPFILE (Spud Valley Gold Mines Ltd.; Valley Explorations Ltd.; Glencair Resources Ltd.; Tashota-Nipigon Mines Ltd.; McAdam Resources Ltd.)
- GSC EC GEOL 1
- GSC MAP 4-1974; 255A; 1028A
- GSC MEM 204; 272, p. 64
- GSC OF 9; 170; 463
- GSC P 38-5; 40-12, pp. 18-20; 69-1A; 70-1A; 72-44; 74-8; 79-30
- GSC SUM RPT 1929 Part A; 1932 Part A
- CIM Transactions Volume 42 (1939), pp. 225-237; (1948), pp. 78-85; 72, pp. 116-125
- GCNL #104, 1983; #45,#84,#234, 1988; #216(Nov.9), 1989; #13(Jan.18), 1990
- N MINER Jul.4, Sept.16, 1985; Jan.13,26, Jul.21, Sept.22, Dec.1, 1986; Jan.5, Feb.16, 1987; Feb.20, Aug.14, Oct.2, Nov.13, 1989; Jan.15, Feb.19, May 28, 1990
- NW PROSP Dec. 1987/Jan. 1988; Oct./Nov., 1988, p. 32; Mar./Apr., 1989, p. 33
- WWW http://www.infomine.com/index/properties/SPUD_VALLEY.html
- Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
- Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, p. 178
- Stevenson, J.S. (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/15

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

ORE ZONE: CENTRAL ZEBALLOS REPORT ON: Y
CATEGORY: Inferred YEAR: 1989
QUANTITY: 43631 Tonnes
COMMODITY _____ GRADE _____
Gold 12.0000 Grams per tonne
COMMENTS: Possible reserve estimates are based on results from old mine data as supported by recent underground sampling and drilling.
REFERENCE: SMF 43/89, Consolidated Impact Res.Inc., J.C. Freeze, June 1989.

ORE ZONE: CENTRAL ZEBALLOS REPORT ON: Y
CATEGORY: Indicated YEAR: 1989
QUANTITY: 8163 Tonnes
COMMODITY _____ GRADE _____
Gold 12.0000 Grams per tonne
COMMENTS: Probable reserves are estimated where indicated by compiling results of recent underground sampling with old mine data.
REFERENCE: SMF 43/89, Consolidated Impact Res.Inc., J.C. Freeze, June 1989.

CAPSULE GEOLOGY

The Central Zeballos mine lies in the Zeballos gold camp which is underlain by the Lower Jurassic Bonanza Group. The Bonanza Group consists of a sequence of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza Group are limestones and limy clastics of the Quatsino and Parson Bay formations, and Karmutsen Formation tholeiitic basalts, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic plutons of the Zeballos intrusion phase of the Early-Middle Jurassic Island Plutonic Suite have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Tertiary Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

Recorded production for the Zeballos gold camp totals 9465 kilograms of gold and 4119 kilograms of silver from 652,000 tonnes of ore mined (Fieldwork 1982, page 291). Most of the production came from the Spud Valley deposits (092L 013 and 092L 211) and the Privateer mine (092L 008).

The area of the Central Zeballos mine is underlain by dark-coloured granodiorite near its gradational contact with a lighter coloured, border phase of granodiorite and quartz diorite. Roof pendants or inliers of calc-silicate rocks, skarn-altered limestone and dark green andesite of the Quatsino Formation and Bonanza Group are present nearby.

The Central Zeballos vein lies in a 0.6 by 1.8 kilometre east-west body of porphyritic granodiorite of the Island Plutonic Suite. The light coloured border phase of the southern margin has a slightly schistose texture. This phase contains less biotite, and in the ground mass the orthoclase content is higher than plagioclase, as compared to the darker phase, which it has intruded. Contact relationships and distribution between the two granodiorite phases are indefinite. Inclusions of volcanic rock ranging up to 7 metres in width are present within the granodiorite.

West and below the granodiorite lies quartz diorite of the northwest trending South Zeballos pluton. Small dykes of quartz diorite have invaded granodiorite for short distances from the contact. Diabase dykes are present only in the layered rocks. Carbonate-sericite altered porphyritic dacite dykes, from several centimetres to 7 metres wide, occur in quartz diorite and granodiorite. Felsic dykes of less than 10 centimetres width cut quartz diorite and locally attain stockwork frequency.

The Central Zeballos vein has been explored and developed along a strike length of 450 metres and down dip for 340 metres. It occupies a well-defined west striking, 75 to 80 degree south dipping shear zone 7 to 45 centimetres wide containing quartz and strongly sheared country rock and gouge. Northeast trending diagonal joints interrupt the continuity of the vein. These joints may offset or briefly redirect the vein. The main shear locally splits into two or more breaks over a space of 1.2 metres, running parallel for as much as 15 metres before converging. Post-vein movement along the shear is indicated.

The best mineralization occurs in the wider sections of quartz, usually 20 to 25 centimetres, where comb structures and well-formed quartz crystals may be present.

Alteration of wallrock extends only a few centimetres from the shear. In the granodiorite, where most of the mineralization is located, alteration consists of bleaching with sericite, kaolin and quartz.

CAPSULE GEOLOGY

Banwolt (Geological Survey of Canada Paper 40-12, page 29) emphasizes the fact that the vein and shear zone follow, to a large degree, the path of an aplite dyke. The dyke has been shattered in places, its fragments cemented by quartz and sulphides.

Intermittent mining between 1938 and 1947 developed 10 levels, sublevels and related raises, winzes and crosscuts, and produced 37,789 tonnes of milling ore averaging 16.85 grams per tonne gold, 11.44 grams per tonne silver, 0.02 per cent copper and 0.19 per cent lead.

Possible reserves are 43,631 tonnes grading 12 grams per tonne gold and are estimates based on results from old mine data as supported by recent underground sampling and diamond drilling. The estimated grade given is based on historical data and not from current point sampling. Probable reserves are 8163 tonnes grading 12 grams per tonne gold and are estimates where indicated by compiling results of recent underground sampling with old mine data (Statement of Material Facts, Consolidated Impact Resources Inc., Report by J.C. Freeze, June 1989).

BIBLIOGRAPHY

- EMPR AR *1938-38,39,43-45; 1939-40,42,88; 1940-72; 1941-A27,70;
1942-28,65; 1946-36,179,295; 1947-180-181
EMPR ASS RPT 12077, 18556, 18577, 18770
EMPR BULL 20 Part V, pp. 16-20; *27, pp. 15, 104-112
EMPR ENG INSP Fiche Numbers 60270-60273
EMPR EXPL 1979-188; 1983-330
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR GEM 1970-255; 1937-1953
EMPR MAP 65 (1989)
EMPR OF 1992-1
EMPR PF (Starr, C.C. (1939): Report on the Central Zeballos Gold Mines Ltd., 9 p.; Central Zeballos Gold Mines, Claims and Surface Geology (1"=300'), 1939; Starr, C.C. (1947): Report on the Central Zeballos Mine, 6 p.; Central Zeballos Mine, Section on East-West Plane (1"=100'), 1947; Central Zeballos Gold Mines, Claim sketch (1"=600'), 1947; Starr, C.C. (1939): Central Zeballos Gold Mine, article in Northern Miner, April, p. 37)
EMR MP CORPFILE (Central Zeballos Gold Mines Ltd.; Reno Gold Mines Ltd.)
GSC EC GEOL 1 (1947)
GSC MAP 4-1974; 255A; 1028A
GSC MEM 204; 272, pp. 48, 63
GSC OF 9; 170; 463
GSC P 38-5; 40-12, p. 30; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929 Part A; 1932 Part A
CIM Transactions Vol.42 (1939), pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
GCNL #299, 1980; #53,#128, 1981; #42,#174, 1982; #87,#189, 1983; #190,#202,#213,#231,#248, 1988; #11,#24,#45,#52,#93(May 15),#134(Jul.13),#207(Oct.27), 1989
N MINER Apr., 1938, pp. 39-45; Dec.19, 1988
NW PROSP Oct./Nov., 1988
V STOCKWATCH Jul.3, 1987
WWW
http://www.infomine.com/index/properties/CENTRAL_ZEBALLOS_MINE.html
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/10

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 213**

NATIONAL MINERAL INVENTORY: 092L2 Cu5

NAME(S): **EXTENSION 5 (L.1048)**, CENTRAL ZEBALLOS SKARN, NORTH SKARN

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 02 14 N
LONGITUDE: 126 47 25 W
ELEVATION: 457 Metres

NORTHING: 5545109
EASTING: 658235

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Sample CZ 105-83, from Assessment Report 12077, is 1 kilometre south of the Zeballos-Nomash Rivers confluence, 7.5 kilometres northeast of Zeballos.

COMMODITIES: Copper Gold Silver Magnetite

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Magnetite
COMMENTS: Silver, gold mineralogy not known.
ALTERATION: Diopside
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Industrial Min.
SHAPE: Tabular
DIMENSION: 0300 x 0006 Metres STRIKE/DIP: 315/ TREND/PLUNGE:
COMMENTS: Strike of mineralization is northwest, skarn is up to 6 metres wide and can be traced along strike for 300 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
	ISOTOPIC AGE: 225 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Juvavite ammonites		
Eocene			Catface Intrusions
	ISOTOPIC AGE: 38 +/- 14 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		

LITHOLOGY: Limestone
Granodiorite
Diopside Skarn

HOSTROCK COMMENTS: Ammonites from Alice Lake; Catface biotite from Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: SKARN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	44.5800	Grams per tonne
Gold	0.5800	Grams per tonne
Copper	6.1800	Per cent

COMMENTS: Sample CZ 105-83, high grade selected sample.
REFERENCE: Assessment Report 12077, page 10 and Figure 4.

CAPSULE GEOLOGY

The Extension 5 (Lot 1048) copper skarn occurrence lies approximately 0.5 kilometres northwest of the Central Zeballos gold mine (092L 212) in what appears to be a roof pendant of Upper Triassic Vancouver Group, Quatsino Formation limestone. The roof pendant stratigraphically overlies Upper Triassic Karmutsen Formation tholeiitic basalts and is, in turn, overlain by Lower Jurassic Bonanza Group volcanic rocks.

CAPSULE GEOLOGY

The limestone lies at the northern contact with the Eocene Zeballos pluton (Catface Intrusions) granodiorite, and skarn-altered rocks hosting massive diopside replacement. The skarn attains a maximum width of 6.0 metres and is traceable along its northwest strike length for 300 metres. Mineralization consists of massive chalcopyrite with some bornite in lenses within the skarn. Bancroft (Geological Survey of Canada Paper 40-12, page 30) reports assays across a 1.5 metre width of 7.25 per cent copper and 1.7 grams per tonne gold. The high grade sample CZ 105-83 (page 10 and Figure 4, Assessment Report 12077) assayed 6.18 per cent copper, 0.58 grams per tonne gold and 44.58 grams per tonne silver. Magnetite was reported more distant from the intrusive contact.

BIBLIOGRAPHY

- EMPR AR 1938-F45
EMPR ASS RPT 7012, 12077
EMPR BULL 20-V; *27, p. 18,104-112
EMPR ENG INSP Number 60270-60273
EMPR EXPL 1979-188; 1983-330
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (Starr, C.C., (1939): The Central Zeballos Mine, article in Northern Miner, April, p. 37; Starr, C.C. (1939): Report on the Central Zeballos Gold Mines Ltd., 9 p.; Central Zeballos Gold Mines, Claims and Surface Geology (1"=300'), 1939; Starr, C.C. (1947): Report on the Central Zeballos Mine, 6 p.; Central Zeballos Mine, Section on East-West Plane (1"=100'), 1947; Central Zeballos Gold Mines, Claim sketch (1"=600'), 1947, (in 092L 212))
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A
GSC MEM 204; 272
GSC OF 9; 170; 463
GSC P 38-5; 40-12, p. 30; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
N MINER Apr., 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/09

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 214**

NATIONAL MINERAL INVENTORY: 092L2 Dol1

NAME(S): **ZEBALLOS DOLOMITE** CENTRAL ZEBALLOS

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 02 29 N
LONGITUDE: 126 47 15 W
ELEVATION: 200 Metres

NORTHING: 5545578
EASTING: 658420

LOCATION ACCURACY: Within 500M

COMMENTS: Location of 900 adit on Bibb Creek, Lot 1047 (from Bulletin 27, Figure 2) is 650 metres south of the confluence of Nomash and Zeballos Rivers, 8 kilometres northeast of Zeballos.

COMMODITIES: Dolomite Limestone Marble Building Stone

MINERALS

SIGNIFICANT: Dolomite Calcite
ASSOCIATED: Garnet Diopside Magnetite Sulphide
ALTERATION: Garnet Diopside Magnetite

COMMENTS: Along contact with intrusives.

ALTERATION TYPE: Skarn
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Evaporite Replacement Industrial Min.

TYPE: R10 Dolomite R09 Limestone

R04 Dimension stone - marble
DIMENSION: 2000 x 314 Metres

STRIKE/DIP: TREND/PLUNGE:

COMMENTS: Limestone mass trends west for 2000 metres.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Quatsino	
DATING METHOD: Fossil			
MATERIAL DATED: Various fossils			
Eocene			Catface Intrusions

LITHOLOGY: Limestone
Dolomite
Basaltic Flow
Quartz Diorite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges

TERRANE: Wrangell

METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Amphibolite

COMMENTS: Formed on a shallow marine platform of ocean rift volcanics.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1950
SAMPLE TYPE: Chip
COMMODITY GRADE
Dolomite 17.0000 Per cent

COMMENTS: Average across 27.4 metres. Grade given for MgO.

REFERENCE: Bulletin 27, page 47.

CAPSULE GEOLOGY

Limestone and dolomite are exposed in the 900 crosscut of the Central Zeballos Mine (92L 212), 7 kilometres northeast of the community of Zeballos, 110 kilometres due west of the town of Campbell River.

The deposit lies within a discontinuous belt of limestone of the Upper Triassic Quatsino Formation (Vancouver Group) that extends from Quatsino Sound southeastward to Tlupana Inlet for 120 kilometres. The belt is locally intruded along its southwest flank by quartz diorite and granodiorite of the Jurassic Island Intrusions. Underlying basaltic flows of the Upper Triassic Karmutsen Formation (Vancouver Group) outcrop to the northeast. The limestone strikes

CAPSULE GEOLOGY

northwest and dips moderately southwest.
 The 900 crosscut is situated near the west end of a mass of medium to coarse grained, recrystallized limestone that extends westward from the Nomash River for 2000 metres along the northern margin of a stock of granodiorite. The crosscut exposes grey calcium limestone intermingled with white dolomite and magnesian limestone along its 314 metre length. Most of the white carbonate is confined to a zone between 46 and 122 metres from the portal. Microscopic studies indicate the white carbonate is comprised mostly of dolomite with a little interstitial calcite. The dolomite and magnesian limestone occur as white streaks commonly ranging from a few centimetres to 10 metres thick, with one streak attaining a thickness of 21 metres. These streaks are likely the result of metasomatic activity associated with the emplacement of nearby intrusives. Samples taken along a section of white carbonate between 57.9 metres and 85.3 metres from the portal averaged 36.2 per cent CaO, 17.0 per cent MgO, 0.93 per cent insolubles and 0.28 per cent R2O3 (E.M.P.R. Bulletin 27, p. 47). Samples from a section of grey limestone between 182.9 and 201.2 metres from the portal averaged 47.3 per cent CaO, 7.26 per cent MgO, 1.8 per cent insolubles and 0.25 per cent R2O3 (E.M.P.R. Bulletin 27, p. 48). Various grab samples collected by Impact Resources Inc. analyzed as follows (in per cent) (Calcium Carbonate Co., 1981, Econotech Services Ltd., 1981, 1982):

	Sample A	Sample B	Sample C	Sample D
CaCO3	87.9	61.95	61.2	93.0
MgCO3	9.5	37.35	38.5	1.76
SiO2	-	-	-	0.50
Insol.	2.6	0.78	-	-
Water	-	-	0.13	-
Brightness				
- Blue light	90.4	90.8	84.6	-
- Green light	91.25	92.1	-	-
- Unspecified	-	-	-	89.6

Dolomite reserves are estimated at several million tonnes (R.F. Kent, 1989). Zones of garnet-diopside skarn sometimes containing magnetite and sulphides are frequently formed along the intrusive contacts.

The deposit was sampled in 1981 and diamond drilled in 1982 by Impact Resources Inc.

BIBLIOGRAPHY

EMPR ASS RPT 12077
 EMPR BULL *27, pp. 16-18,47,48
 EMPR ENG INSP Number 60270-60273
 EMPR OF 1992-18, pp. 31, 35-36
 EMPR PF (Letter by Kent, R.F. 1989, with accompanying Assay certificates by Calcium Carbonate Co., 1981 and Econotech Services Ltd. 1981, 1982)
 GSC MAP 4-1974; 255A; 1028A
 GSC MEM 204; 272, p. 49
 GSC OF 9; 170; 463
 GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
 Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
 DATE REVISED: 1989/07/26

CODED BY: GSB
 REVISED BY: PSF

FIELD CHECK: N
 FIELD CHECK: N

MINFILE NUMBER: **092L 215**

NATIONAL MINERAL INVENTORY: 092L2 Au30

NAME(S): **KING MIDAS LYNCH**, BIG BEN 3 (L.1677)

STATUS: Prospect
 REGIONS: British Columbia, Vancouver Island
 NTS MAP: 092L02W
 BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 03 41 N
 LONGITUDE: 126 47 47 W
 ELEVATION: 213 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5547782
 EASTING: 657718

LOCATION ACCURACY: Within 500M

COMMENTS: Adit on north side of Fault Creek on Crown Grant Lot 1677, 50 metres from Zeballos River, 9.6 kilometres north of Zeballos (Bulletin 27, Figure 2).

COMMODITIES: Gold Copper Silver Zinc

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Pyrite Pyrrhotite Arsenopyrite
 ASSOCIATED: Quartz
 ALTERATION TYPE: Silicific'n Oxidation
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Mesothermal Epithermal Epigenetic
 TYPE: I06 Cu±Ag quartz veins
 SHAPE: Tabular
 MODIFIER: Folded Sheared
 DIMENSION:
 COMMENTS: Lynch Vein strikes north, dips vertically. STRIKE/DIP: 360/90 TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
	ISOTOPIC AGE: 230 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Gymnotropite ammonites		
Upper Triassic	Vancouver	Quatsino	
	ISOTOPIC AGE: 225 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Juvarite ammonites		
Eocene			Catface Intrusions
	ISOTOPIC AGE: 38 +/- 14 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		

LITHOLOGY: Siliceous Andesite
 Limestone
 Porphyry Dike

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island; Quatsino ammonites from Alice Lake; Catface biotite from Zeballos (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
 TERRANE: Wrangell Plutonic Rocks
 METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1938
 SAMPLE TYPE: Grab
 COMMODITY GRADE
 Silver 6.8600 Grams per tonne
 Gold 63.0900 Grams per tonne
 Copper 0.5000 Per cent
 Zinc 2.8000 Per cent
 COMMENTS: Sample of oxidized material.
 REFERENCE: Bulletin 27, page 116.

CAPSULE GEOLOGY

The King Midas Lynch vein lies in the Zeballos gold camp, in an area underlain by the Lower Jurassic Bonanza Group. The Bonanza

CAPSULE GEOLOGY

Group is an island arc sequence of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos Intrusion phase of the Island Intrusions have invaded all older rocks. The Eocene Zeballos Stock, a quartz diorite phase of the Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a north-west axis.

The King Midas Lynch vein adit is located 50 metres from the mouth of Fault Creek. A 0.8 to 5.0 centimetre calcite vein, striking north and dipping vertically, is present in andesite. Fifteen metres uphill, a silicified quartz-shear zone has been explored by several open cuts. The "vein" is 15 to 25 centimetres wide and contains quartz, sphalerite, chalcopyrite, pyrite and pyrrhotite. A sample of oxidized material assayed 63.09 grams per tonne gold, 6.86 grams per tonne silver, 0.5 per cent copper, and 2.8 per cent zinc (Bulletin 27, page 116).

On the south bank of Fault Creek, a 7.5 to 15 centimetre shear zone striking 020 degrees and dipping 45 degrees south, contains banded quartz. A sample assayed 20.57 grams per tonne gold, 3.4 grams per tonne silver, trace copper, 3.1 per cent arsenopyrite (Bulletin 27, page 116).

BIBLIOGRAPHY

- EMPR AR 1929-376; 1932-205; 1933-253; 1934-F6; 1938-F53,F56; 1940-27; 1954-65
EMPR BULL 20-V, p. 16; *27, p. 115
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (Starr, C.C. (1938): Report on the King Midas Mine, 10 p; North Half of Claims Showing Locations of Veins and Contacts, 1938; Sketch of King Midas Workings on North Fork of Zeballos River, 1938; Letter from Charles Starr to King Midas Mining Co. Ltd., 1938 (see 092L 020); Stevenson, J.S. (1938): Lode Gold Deposits of the Zeballos Area)
EMR MP CORPFILE (King Midas Mining Co., Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A
GSC MEM 204, p. 17; 272, p. 47,59
GSC OF 9; 170; 463
GSC P 38-5; *40-12, p. 30-32; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; *1932A II, p. 38-42
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
GCNL # 146, 1983; # 5, 1984
N MINER Apr., 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/27

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 216**

NATIONAL MINERAL INVENTORY: 092L2 Au29

NAME(S): **KING MIDAS CONTACT**, KING MIDAS GLORY HOLE

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 03 55 N
LONGITUDE: 126 47 37 W
ELEVATION: 228 Metres

NORTHING: 5548220
EASTING: 657904

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the vein is 370 metres north of the mouth of Fault Creek, east of Zeballos River, 10 kilometres north of Zeballos.

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Mesothermal Epithermal Epigenetic

TYPE: I06 Cu±Ag quartz veins

SHAPE: Tabular

DIMENSION: 0260 Metres STRIKE/DIP: 355/70E

TREND/PLUNGE:

COMMENTS: Vein strike is 355 degrees, dip 70 degrees east, has been traced for 260 metres and is 2.5 to 13 centimetres wide.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Hornblende			
Eocene			Catface Intrusions
ISOTOPIC AGE: 38 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Andesitic Greenstone

HOSTROCK COMMENTS: Isotopic dates and sample locations from Geological Survey of Canada Paper 74-8.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1938

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold

6.8600

Grams per tonne

COMMENTS: Sample of "typical" vein material, trace silver.

REFERENCE: Bulletin 27, page 117.

CAPSULE GEOLOGY

The King Midas-Contact vein occurrence lies in the Zeballos gold camp, in an area underlain by the Lower Jurassic Bonanza Group. The Bonanza Group is an island arc sequence of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are lime-stones and limy clastics of the Quatsino and Parson Bay formations,

CAPSULE GEOLOGY

and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos Intrusion phase of the Island Plutonic Suite have intruded all older rocks. The Eocene Zeballos Stock, a quartz diorite phase of the Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

The Contact or Glory Hole vein lies 30 metres east of the Zeballos River and has been traced for 260 metres. It strikes 355 degrees and dips 75 degrees east, is 2.5 to 13 centimetres wide and follows a 13 to 25 centimetre wide shear zone. The quartz-gangue contains pyrite, chalcopyrite and pyrrhotite. A sample of "typical" vein material assayed 6.86 grams per tonne gold and trace silver (Bulletin 27, page 117). The vein occurs at the contact between Quatsino limestone and Karmutsen andesitic greenstone, about 1 kilometre east of the Jurassic Zeballos Intrusion and 1 kilometre north of the South Zeballos Pluton of the Eocene Catface Intrusions.

The Contact vein lies 75 metres west of the King Midas Trail vein (092L 217) and is believed to converge with it to the south.

BIBLIOGRAPHY

- EMPR BULL 20-V, p. 16; *27, p. 115
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A
GSC MEM 204, p. 17; 272, p. 47,59
GSC OF 9; 170; 463
GSC P 38-5; 40-12, p. 30-32; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932A II, p. 38-42
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125
GCNL #146, 1983; #5, 1984
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/27

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 217**

NATIONAL MINERAL INVENTORY: 092L2 Au29

NAME(S): **KING MIDAS TRAIL, TRAIL**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 04 01 N
LONGITUDE: 126 47 45 W
ELEVATION: 244 Metres

NORTHING: 5548401
EASTING: 657740

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Trail vein is 75 metres east of Zeballos River, 10 kilometres north of Zeballos (Bulletin 27, page 116).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I06 Cu±Ag quartz veins

SHAPE: Tabular

DIMENSION: 0550

Metres

STRIKE/DIP: 010/77E

TREND/PLUNGE:

COMMENTS: Strike is 10 degrees, dip ranges from 65 to 90 degrees east.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Eocene			Catface Intrusions
ISOTOPIC AGE: 38 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Volcanic Rock

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island. Quatsino ammonites from Alice Lake. Catface biotite from Zeballos (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1950

SAMPLE TYPE: Grab

COMMODITY

GRADE

Copper

0.8000

Per cent

COMMENTS: Contains trace gold and silver.

REFERENCE: Bulletin 27, page 117.

CAPSULE GEOLOGY

The King Midas Trail vein occurrence lies in the Zeballos gold camp, in an area underlain by the Lower Jurassic Bonanza Group. The Bonanza Group is an island arc sequence of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Intrusions have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially re-

CAPSULE GEOLOGY

lated to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

The King Midas Trail vein, striking 010 degrees and dipping 65 to 90 degrees east has been intermittantly traced for 550 metres. The vein is in Karmutsen Formation volcanic rocks, and lies 75 metres east of and parallel to the Contact vein (092L 216) with which it merges to the south. Vein mineralization consists of pyrite, chalcopyrite and pyrrhotite.

A sample by Stevenson (Bulletin 27, page 117) ran trace gold and silver and 0.8 per cent copper.

BIBLIOGRAPHY

- EMPR AR 1929-376; *1938-F56
EMPR BULL 20-V, p. 16; *27, p. 115
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMR MP CORPFILE (King Midas Mining Co. Ltd.)
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A
GSC MEM 204; 272, pp. 47,59
GSC OF 9; 170; 463
GSC P 38-5; *40-12, pp. 30-32; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; *1932AII, pp. 38-42
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
GCNL # 146, 1983; # 5, 1984
N MINER Apr. 1938, pp. 39-45
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/27

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 218**

NATIONAL MINERAL INVENTORY:

NAME(S): **HALLIDIE**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 35 44 N
LONGITUDE: 127 35 06 W
ELEVATION: 1 Metres

NORTHING: 5605806
EASTING: 600149

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location is on the west side of Coal Harbour on Holberg Inlet.

COMMODITIES: Coal

MINERALS

SIGNIFICANT: Coal
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: 100 Ma

DATING METHOD: Fossil

MATERIAL DATED: Albian microflora

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: A ORGANIC
SHAPE: Tabular

STRIKE/DIP: 270/15S

TREND/PLUNGE:

DIMENSION:
COMMENTS: Formations strike west and dip 15 degrees south.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Queen Charlotte	Undefined Formation	
ISOTOPIC AGE: 100 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Albian Microflora			

LITHOLOGY: Coal
Shale
Conglomerate
Greywacke

HOSTROCK COMMENTS: Albian fossils from location 3.6 kilometers northeast of Hankin Point (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
COMMENTS: Grade of coal is unknown.

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The Hallidie occurrence is underlain by west striking, 15 degrees south dipping conglomerate and greywacke of the Lower Cretaceous Queen Charlotte Group.

Locally, a 1.5 metre coal seam was encountered while drilling in Coal Harbour. Another 0.60 metre wide coal seam of fair quality is reported on the west side of Coal Harbour (Geological Survey of Canada Paper 74-8, page 73). The same seam also outcrops 3.6 kilometres northeast of Hankin Point on Rupert Inlet, 5.5 kilometres east of the Hallidie occurrence. At that location, three coal seams are 15 centimetres, 15 centimeters and 2.5 centimeters thick and are separated by about 1 metre of shale. The location hosts Albian microflora fossils.

The grade of the coal is not reported.

BIBLIOGRAPHY

EMPR AR 1899-797, 1968-84
EMPR EXPL 1970-254
GSC ANN RPT 1886 Vol.2B pp 1-107
GSC BULL 242
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC P 72-44

DATE CODED: 1985/07/24
DATE REVISED: 1989/06/01

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 219**

NATIONAL MINERAL INVENTORY:

NAME(S): **JACKIE**, JACKIE 2, BONBONAZ

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L01E 092E16E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 00 25 N
LONGITUDE: 126 10 05 W
ELEVATION: 860 Metres

NORTHING: 5543246
EASTING: 702914

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the upper showing, from Assessment Report 16557, is at the headwaters of White River and Gold River, 2.0 kilometres north-west of Twaddle Lake, 2.0 kilometres southwest of White Gold Pass.

COMMODITIES: Lead Cadmium Zinc Molybdenum Silver Garnet Gold Copper

MINERALS

SIGNIFICANT: Galena Sphalerite Chalcopyrite Garnet Molybdenite
Pyrite

COMMENTS: Cadmium, gold and silver mineralogy not known (presence detected by geochemical sampling).

ALTERATION: Epidote Sericite Chlorite
ALTERATION TYPE: Propylitic Sericitic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein Massive Disseminated
CLASSIFICATION: Igneous-contact Epigenetic Hydrothermal Industrial Min.

SHAPE: Regular
MODIFIER: Faulted

COMMENTS: Sulphide-rich zone in chlorite schist is 1.6 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 155 +/- 6 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Argillite
Chert
Chlorite Schist
Calcareous Sediment/Sedimentary
Limestone
Quartz Diorite
Coarse Grained Diorite
Andesitic Sill
Basaltic Sill
Gabbroic Sill

HOSTROCK COMMENTS: Sediment-sill unit poorly understood. Intrusive biotite from Adam River Pluton (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1987

COMMODITY	GRADE	
Silver	23.6000	Grams per tonne
Gold	0.0300	Grams per tonne
Cadmium	0.0870	Per cent
Copper	0.4800	Per cent
Lead	8.2000	Per cent
Zinc	4.8000	Per cent

COMMENTS: Sample over 1.0 metre of argillite and interbedded chert containing massive sulphide lenses.

REFERENCE: Assessment Report 16557, page 26.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group, Karmutsen volcanics comprised mainly of pillowed basalts, tuffs and breccia. The Karmutsen rocks are intruded by Jurassic granodiorite of the Island Plutonic Suite.

The property is underlain by a sediment-sill unit, in fault contact with Karmutsen mafic flows. The former consists of thin-bedded argillites and siltstones interbedded with cherts, cherty and mafic tuffs, minor calcareous sediments, chloritic schist and graphitic lenses and zones. Interbedded sills are of andesitic and basaltic to gabbroic compositions.

Diorite intrudes the sediment-sill unit in the eastern part of the claim group along a northwest trending contact.

Two showings, referred to as "Upper" and "Lower" in Assessment Report 16557, are 300 metres apart, and lie in the sediment-sill sequence, near its contact with quartz diorite and coarse-grained diorite.

At the "Upper Showing", galena, sphalerite, chalcopyrite and pyrite occur as banded and disseminated lenses with quartz veins and veinlets, exposed over an area 3.0 metres wide within argillite interbedded with chert, with local chloritic schist, and epidote and sericite alteration.

Assays from a chip sample over 1.6 metres of sulphide-rich chloritic schist near a mafic volcanic contact assayed 5.6 grams per tonne silver, 0.08 per cent copper, 0.54 per cent lead, 0.66 per cent zinc and 0.03 grams per tonne gold. A 1.0 metre chip sample of argillite with interbedded chert with massive sulphide lenses assayed 23.6 grams per tonne silver, 0.48 per cent copper, 8.20 per cent lead, 4.80 per cent zinc and 0.03 grams per tonne gold. In addition ICP (induced coupled plasma) geochem values of 874 parts per million cadmium and 19 parts per million molybdenum were reported (Assessment Report 16557, page 26). The mineralization appears to be associated with a major west trending fault.

At the "Lower Showing", mineralization is confined to a sheared limestone band, 6.0 metres wide. ICP analyses returned values to 21.9 parts per million silver, 685 parts per billion gold, 361 parts per million copper, 6399 parts per million lead, 9535 parts per million zinc and 137 parts per million cadmium (Assessment Report 16557, page 28).

Other limonitic zones and minor sulphides are reported on Jackie 2 and Bonbonaz 4 claims. Minute gem quality garnets, light orange-red in color, are reported from Jackie 2 claim.

BIBLIOGRAPHY

- EMPR ASS RPT 14319, 15223, *16557
- EMPR EXPL 1985-C229; 1986-C153; 1987-C130
- EMPR PF (Geological and Geochemical Report on Jackie Group; B.Y. Thomae and T.G. Hawkins, 1987)
- GSC MAP 4-1974; 1537A
- GSC OF 9; 170; 463
- GSC P 69-1A; 70-1A; 72-44; 74-8; 79-30; 80-16
- Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1986/06/03
DATE REVISED: 1988/12/04

CODED BY: AFW
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1988/11/30
DATE REVISED: 1989/05/10

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 222**

NATIONAL MINERAL INVENTORY:

NAME(S): **ADAM WEST**

MINING DIVISION: Nanaimo

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L08E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 17 34 N
LONGITUDE: 126 03 50 W
ELEVATION: 670 Metres

NORTHING: 5575308
EASTING: 709125

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Assessment Report 14284, is 1.6 kilometres west of Adam River, 3.0 kilometres southwest of Keta Lake.

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Copper Chalcocite
ALTERATION: Chlorite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Replacement Epigenetic
TYPE: D03 Volcanic redbed Cu
SHAPE: Tabular
DIMENSION: 0002 Metres

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Amygdaloidal Lava
Limestone
Volcanic Rock

HOSTROCK COMMENTS: Ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1985

COMMODITY	GRADE	
Silver	0.0160	Grams per tonne
Gold	1.4000	Grams per tonne
Copper	0.5700	Per cent

COMMENTS: Sample 18705, taken from old drill zone.
REFERENCE: Assessment Report 14284.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group rocks comprised of a thick sequence of tholeiitic basalts of the Karmutsen Formation and overlying carbonates of the Quatsino Formation. The Vancouver Group rocks are intruded by granodiorite of the Jurassic Island Intrusions.

The Adam West occurrence includes an area where six diamond-drill holes reportedly intersected copper mineralization (Assessment Report 14284). Examination of the drill core indicates that chalcopyrite and bornite with minor chalcocite and native copper occur in volcanic rocks immediately below an interbedded limestone lens within the Karmutsen volcanics.

The copper minerals are found replacing amygdules in the amygdaloidal lavas as well as along dry, tight fractures. A sample taken from old drill core assayed 0.5729 per cent copper, 1.4 grams per tonne silver and 0.016 grams per tonne gold (Sample 18705, Assessment

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CAPSULE GEOLOGY

Report 14284). Drilling in 1972 returned assays that included 0.84 per cent copper over 23.5 metres (GCNL # 95, 1973).

BIBLIOGRAPHY

EMPR ASS RPT *14284
EMPR EXPL 1985-C233
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; *74-8; 79-30
GCNL # 95, 1973
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1988/12/02
DATE REVISED: 1989/05/15

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 223**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARIO**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L01E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 12 06 N
LONGITUDE: 126 07 25 W
ELEVATION: 488 Metres

NORTHING: 5565013
EASTING: 705263

LOCATION ACCURACY: Within 500M

COMMENTS: Location of 1985 drillhole (Assessment Report 13589) is on Adam River, 3.5 kilometres southwest of the confluence with Compton Creek.

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Pyrite Pyrrhotite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Irregular
MODIFIER: Faulted

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

Jurassic

ISOTOPIC AGE: 155 +/- 6 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Island Plutonic Suite

LITHOLOGY: Volcanic Rock
Quartz Feldspar Porphyry Dike
Feldspar Porphyry Dike

HOSTROCK COMMENTS: Ammonites from Hisnit Island; intrusive biotite from Adam River (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group rocks comprised of a thick sequence of tholeiitic basalts with minor intercalated sediments of the Karmutsen Formation. The Vancouver Group rocks are in fault contact with the underlying Permian Sicker Group sediments. Granodiorite of the Jurassic Island Plutonic Suite, intrudes the older rocks.

The Mario occurrence is underlain by Karmutsen volcanic rocks which are crosscut by a few east striking quartz feldspar porphyry and feldspar porphyry dykes, presumed to be related to the Island Plutonic Suite. Several northwest and east striking faults cut the rocks in the central claim area.

Locally, pyrite, pyrrhotite, chalcopyrite and molybdenite occur in quartz veins and veinlets in volcanic rocks. Slightly elevated values for silver and mercury in soils are reported in the area of the quartz veining.

BIBLIOGRAPHY

EMPR ASS RPT *13589
EMPR EXPL 1985-C230
GSC MAP *4-1974
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; *74-8; 79-30
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,

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BIBLIOGRAPHY

Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1988/12/05
DATE REVISED: 1989/05/15

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 224**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELOISE**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L01E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 13 54 N
LONGITUDE: 126 02 07 W
ELEVATION: 716 Metres

NORTHING: 5568595
EASTING: 711433

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of pits along Lois Creek (from Assessment Report 11730) is 3.5 kilometres south of Thowils Lake, 1.5 kilometre east of Adam River, 18.0 kilometres southwest of Kelsey Bay.

COMMODITIES: Copper

MINERALS

SIGNIFICANT:	Chalcopyrite	Bornite	Pyrite	Hematite
ALTERATION:	Epidote	Quartz	Calcite	
ALTERATION TYPE:	Propylitic			
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Porphyry
DIMENSION: 0900 x 0001 Metres STRIKE/DIP: 110/30E TREND/PLUNGE:
COMMENTS: Attitude of mineralized fractures. Average width of mineralization is between 1 and 2 metres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE:	230 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Gymnotropite ammonite		

LITHOLOGY: Amygdaloidal Basalt
Limestone

HOSTROCK COMMENTS: Ammonites from Hisnit Island.

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1969
SAMPLE TYPE:	Chip		
COMMODITY		GRADE	
Copper		2.0000	Per cent

COMMENTS: Range from 0.3 to 2.0 per cent copper along a 900 metre strike length.
REFERENCE: Assessment Report 10479.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group rocks comprised of a thick sequence of tholeiitic basalts of the Karmutsen Formation and overlying carbonates of the Quatsino Formation. Mineralization at the Eloise occurrence consists of chalcopyrite, bornite, hematite and pyrite as fine disseminations or localized in small fractures, veinlets or lenses in amygdaloidal basalt of the Karmutsen Formation. The attitudes of the mineralized fractures vary. One set, striking 110 degrees and dipping 30 degrees east, is thought to be parallel to flow contacts in the basalt. A minor intercalated limestone band, averaging 1.0 metre in thickness, reportedly controls localized mineralization (Assessment Report 11730). In 1969, fifteen test pits were dug along a 900 metre strike length, across mineralization which averaged between 1 and 2 metres. Assay results ranged from 0.3 to 2.0 per cent copper (Assessment Report 10479).

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BIBLIOGRAPHY

EMPR ASS RPT *10479, 11730
EMPR EXPL 1981-304; 1983-330
EMPR GEM 1969-210; 1970-279
GSC MAP *4-1974
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; *74-8; 79-30
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1988/12/06
DATE REVISED: 1989/05/15

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 225**

NATIONAL MINERAL INVENTORY: 092L2 Au30

NAME(S): **KING MIDAS COPPER**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 03 44 N
LONGITUDE: 126 47 47 W
ELEVATION: 215 Metres

NORTHING: 5547875
EASTING: 657716

LOCATION ACCURACY: Within 500M

COMMENTS: Located 250 metres north of Fault Creek, west bank of Zeballos River, 9.8 kilometres north of Zeballos. Location from Bulletin 27, page 117.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite Pyrrhotite Quartz
ALTERATION: Epidote Chlorite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Porphyry
DIMENSION: 0060 x 0030 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Best mineralization occurs in area 30 by 60 metres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			Island Plutonic Suite
Jurassic			
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Hornblende			

LITHOLOGY: Chlorite Andesitic Flow
Andesitic Fragmental Rock
Feldspar Porphyry Dike

HOSTROCK COMMENTS: Ammonites from Hisnit Island; hornblende from Zeballos Intrusion.

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

The King Midas copper occurrence lies within Upper Triassic Karmutsen volcanic rocks of the Vancouver Group near the east flank of granodiorite of the Jurassic Island Plutonic Suite. The occurrence is located 200 metres north of the King Midas mine (092L 020).

The King Midas copper occurrence extends for some 750 metres north from Fault Creek along the west bank of Zeballos River. The area of best mineralization is centered 250 metres north of the creek over an area of 30 by 60 metres and contains disseminated chalcopyrite in chloritized andesitic flows and fragmental rocks intruded by feldspar porphyry dykes. Mineralization is accompanied by quartz, epidote, pyrite and pyrrhotite.

Similar mineralization occurs south of Fault Creek, and some skarn mineralization is present east of Zeballos River in Quatsino limestone.

BIBLIOGRAPHY

EMPR BULL 20-V, p. 16; *27, p. 117
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A
GSC MEM 204; 272
GSC OF 9; 170; 463

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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REPORT: RGEN0100

BIBLIOGRAPHY

GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; *1932AII, p. 42
N MINER Apr., 1938, pp. 39-45
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

DATE CODED: 1989/02/27
DATE REVISED: 1989/02/27

CODED BY: WV
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 226**

NATIONAL MINERAL INVENTORY:

NAME(S): **SIN 4.6**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 08 39 N
LONGITUDE: 127 22 18 W
ELEVATION: 488 Metres

NORTHING: 5555929
EASTING: 616346

LOCATION ACCURACY: Within 500M

COMMENTS: Location of pyrophyllite occurrence on SIN 6 claim is 1.8 kilometres south of Malsope River, 3.5 kilometres north east of Malsope Inlet.

COMMODITIES: Pyrophyllite Talc

MINERALS

SIGNIFICANT: Pyrophyllite Talc

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Industrial Min.

SHAPE: Regular
MODIFIER: Faulted

DIMENSION:

STRIKE/DIP: 360/

TREND/PLUNGE:

COMMENTS: Pyrophyllite occurs along north and northeast trending faults.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Andesitic Tuff
Andesitic Flow

HOSTROCK COMMENTS: Bonanza Mollusks from Quatsino Sound (Geological Survey of Canada, Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

Occurrences of talc and pyrophyllite are indicated on Figure 5 of Assessment Report 11664. The showings lie in Lower Jurassic Bonanza Group andesitic tuffs and flows.

The pyrophyllite is indicated as occurring along two north and northeast trending faults.

A talc occurrence, hosted by similar Bonanza Group rocks, is located at an elevation of 365 metres, about 1.0 kilometre north of the pyrophyllite. No further information is available.

BIBLIOGRAPHY

EMPR ASS RPT *11664
GSC ANN RPT 1886
GSC MAP 4-1974; 255A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1913; 1920A; 1929A

DATE CODED: 1989/01/17
DATE REVISED: / /

CODED BY: WV
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 227**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELECTRUM**, ANOMALY CREEK, SIN,
B, EXTENSION, D

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 09 44 N
LONGITUDE: 127 23 36 W
ELEVATION: 183 Metres

UTM ZONE: 09 (NAD 83)

LOCATION ACCURACY: Within 500M

NORTHING: 5557903
EASTING: 614755

COMMENTS: Location of Electrum vein, from Assessment Report 15521, is 0.7 kilometres from Malksope River, 3.5 kilometres northeast of the head of Malksope Inlet.

COMMODITIES: Gold Copper Lead Zinc Silver

MINERALS

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

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 0075 x 0003 Metres STRIKE/DIP: 270/45S TREND/PLUNGE:
COMMENTS: Electrum vein exposed over 75 metres is 1.5 to 3.0 metres thick, strikes 270 degrees and dips 45 degrees south.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			

LITHOLOGY: Limestone
Calcareous Siltstone
Siliceous Limestone
Basalt
Quartz Carbonate Vein

HOSTROCK COMMENTS: Bonanza Mollusks from Quatsino Sound. Parson Bay Mollusks from Beaver Cove (Geological Survey of Canada, Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Channel
COMMODITY

	<u>GRADE</u>	
Silver	431.3700	Grams per tonne
Gold	9.2600	Grams per tonne

COMMENTS: Average of 6 panel samples.
REFERENCE: Assessment Report 15521, page 9.

CAPSULE GEOLOGY

The region of the Electrum occurrence is underlain by Lower Jurassic Bonanza Group intermediate to felsic flows and pyroclastics. Minor calcareous sediments of the Upper Triassic Vancouver Group, Parson Bay Formation are in fault contact with the volcanic rocks. A diorite stock of the Jurassic Island Intrusions occurs at the head of Kashutl Inlet, 7 kilometres northeast.

CAPSULE GEOLOGY

Two mineralized veins have been recognized, the Electrum vein, occurring within interbedded limestone, calcareous siltstone and basalt, and the Anomaly Creek vein, located 80 metres west in siliceous limestone and basalt. Both veins occur at the basalt-sediment contact and are on strike with each other, suggesting continuity.

The quartz-carbonate Anomaly Creek vein returned values to 13.75 grams per tonne gold and 624.08 grams per tonne silver over 1.1 metres (Assessment Report 15521, Figure 16).

The Electrum vein comprised of banded quartz carbonate is 1.5 to 3.0 metres wide and has been exposed over 75 metres. It strikes west and dips 45 degrees south. Locally, it contains 2 to 25 millimetres thick seams of chalcopyrite-sphalerite-galena-pyrite and electrum. On the east side, the vein is terminated by a 125 degree striking fault that dips west at 60 degrees. Six panel samples averaged 9.26 grams per tonne gold and 431.37 grams per tonne silver (Assessment Report 15521, page 9).

The Electrum vein is included in what is being referred to as the "B Zone", which contains two quartz veins about 4 metres wide.

In 1987, work on the B Zone included 14 percussion drill holes. Assay values ranged from 3.4 to 127.9 grams per tonne gold; the latter value, with 2571.8 grams per tonne silver, over a 4 metre width (Vancouver Stockwatch, August 26, 1987).

Drilling on another large vein in the same area averaged 3.4 grams per tonne gold or higher over 1 to 2 metre widths (average of 6 out of 18 holes). The highest value was 13.4 grams per tonne gold and 102.9 grams per tonne silver over 2 metres (Vancouver Stockwatch, August 26, 1987).

Additional 1987 drill results include values to 30.18 grams per tonne gold over 2.0 metres and 960 grams per tonne silver over 1.8 metres (George Cross Newsletter #44, November 4, 1987).

The Electrum vein and B Zone are likely a westward continuation of the "Main vein" of Assessment Report 11664 (Figure 5).

BIBLIOGRAPHY

- EMPR ASS RPT 11664, *15521, 17763
- EMPR EXPL 1982-226; 1987-C220
- EMPR PF (Taywin Resources Ltd. information brochure)
- GSC MAP 4-1974; 255A
- GSC OF 9; 170; 463
- GSC P 69-1A; 70-1A; 72-44; *74-8
- GCNL #110,*#178, 1986; #24,#44,#197,#243, 1987
- N MINER May 18,Nov.23, 1987
- V STOCKWATCH Aug.26,Nov.19,Dec.18, 1987
- Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/01/24
DATE REVISED: / /

CODED BY: WV
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 228**

NATIONAL MINERAL INVENTORY:

NAME(S): **IRON COP**, LONDON 1, BOZO 2,
HART LAKE

MINING DIVISION: Nanaimo
Alberni
UTM ZONE: 09 (NAD 83)
NORTHING: 5569590
EASTING: 599848

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:
LATITUDE: 50 16 12 N
LONGITUDE: 127 35 56 W
ELEVATION: 670 Metres
LOCATION ACCURACY: Within 500M

COMMENTS: Location of the centre of mineralization east of small lakes at the headwaters of the west branch of Nasparti River, 9.0 kilometres north of the head of Nasparti Inlet, 10 kilometres east of the head of Klaskish Inlet.

COMMODITIES: Copper Cobalt Silver Gold Iron

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Erythrite Magnetite
COMMENTS: Silver, gold mineralogy not known, erythrite assumed.
ALTERATION: Quartz Sericite Calcite Chlorite Epidote
ALTERATION TYPE: Propylitic Sericitic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stockwork Disseminated Podiform
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: D03 Volcanic redbed Cu
SHAPE: Irregular
MODIFIER: Sheared Faulted
DIMENSION: 330 x 120 Metres STRIKE/DIP:
COMMENTS: Area over which mineralization occurs is 330 by 120 metres. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Ammonites			
Upper Triassic	Vancouver	Parson Bay	
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Hornblende Basalt
Andesite
Quartz Diorite
Granodiorite
Limestone

HOSTROCK COMMENTS: Ammonites from Hisnit Island Stock; biotite from Island Copper Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: TRENCH REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 14.8000 Grams per tonne
Gold 0.8250 Grams per tonne
Copper 3.2500 Per cent

COMMENTS: Silver reported in parts per million, gold in parts per billion.
REFERENCE: Gonzales, R.A., 1987 Report, page 14.

CAPSULE GEOLOGY

The Iron Cop area is underlain by basaltic lava, tuffs and

CAPSULE GEOLOGY

breccia of the Upper Triassic Vancouver Group, Karmutsen Formation. The Nimpkish batholith, consisting mainly of granodiorite intrudes the Karmutsen volcanics (Geological Survey of Canada Map 4-1974). The batholith is part of the Jurassic Island Plutonic Suite. Upper Triassic Parson Bay carbonaceous limestone is reported in the showing area.

The Iron Cop occurrence is located in generally northwest trending dark green basalts of the Karmutsen Formation near a 1.0 kilometre wide quartz diorite stock related to the Island Plutonic Suite. Minor pods of limestone are present.

The showings are reported to be quartz veins and shear zones with high grade copper along with gold and silver values. Narrow stringers of chalcopyrite and pyrite occur in discontinuous lenses in shears associated with regional northeast trending faults. The mineralized shears occur within hornblende basalts, located about 60 metres from an andesite contact. The basalts exhibit quartz, sericite, calcite, chlorite and epidote alteration. Isolated areas with disseminated chalcopyrite are present. The mineralization occurs over an area of 330 by 120 metres.

A chip sample from Trench 1 assayed 3.25 per cent copper, 14.8 grams per tonne silver and 0.825 grams per tonne gold (Gonzales, 1987, page 14). The same source reports narrow widths of cobalt mineralization, 1 kilometre to the southwest. Trench samples yielded up to 5.14 per cent copper, 3 grams per tonne gold and 18 grams per tonne silver over 2.1 metres (Assessment Report 21659, page 3. Early drilling was reported to have yielded 0.341 per cent copper over 25.41 metres (Assessment Report 21659, page 4). Sellmer (1964) reports massive magnetite on the Iron Cop 9-16 claims, the centre of which is located 1.5 kilometres northeast of the Iron Cop showing.

Copper-magnetite mineralization was discovered on the Wilf property (092L 265) by Wilf Tremblay in 1960. In 1962, Riocanex optioned the property and others nearby. They carried out geological mapping, trenching and surface sampling in 1963. In 1964, they drilled two shallow holes near a well-mineralized trench (Assessment Report 21966, page 3). Riocanex also carried out mapping, geochemical surveys and self potential surveys on the Iron Cop occurrence during this period. They trenched several occurrences and drilled 3 holes for a total of 161 metres. The property lapsed in 1969 and was restaked by Kaiser who were reported to be searching for copper-magnetite skarns. No work was filed by them on the Iron Cop. Vanco Explorations Ltd. was reported to have held the Iron Cop property in 1974 but the work was not filed. The Fang claims (Wilf showings) were held by Imperial Oil Limited in 1974. They diamond drilled one hole and conducted a 4.2-kilometre induced polarization and magnetics survey. Soil and rocks sampling also occurred. From 1973 to 1983, the Iron Cop was controlled by various individuals that attempted to form companies. In 1984, the Iron Cop was consolidated with several nearby showings and optioned to Brinco Mining. In 1983 and 1984, Brinco carried out geological mapping, geochemical surveys, magnetic surveying and the diamond-drilling of 7 holes totalling 505 metres. From 1986 to 1989, the Iron Cop property was explored by Jim McDonald who carried out trenching and sampling. Defiant Minerals held an option on the property briefly in 1987. In 1990, several claims were sold to Petra Gem Explorations of Canada Ltd. and several others to Omax Resources Ltd. In 1990, Petra Gem carried out a program of re-examining the Brinco core. At the same time, Omax carried out magnetic and VLF-EM geophysical surveys and soil sampling on a grid over the Wilf showing area. In 1991, Omax carried out an induced polarization survey (6.7 kilometres), a magnetics survey (3.6 kilometres) and a VLF survey (0.8 kilometres) in the Iron Cop area. In the same year, Omax resampled the Wilf showing trenches.

BIBLIOGRAPHY

- EMPR ASS RPT 3034, *12913, 18124, 18125, 18184, *20723, 21659, *21996
- EMPR EXPL 1984-241
- EMPR FIELDWORK 1992, pp. 17-35
- EMPR GEM 1970-283; 1971-137; 1976-E126
- EMPR OF 1993-10; 1997-13
- EMPR PF (092L 332-Patch; Prospectus, Golden Kristy Resources Ltd.; Claim map 1:50,000, 1963; *Gonzales, R.A., (1987): Report on the Iron Cop Showing in 1987 Prospectus, Defiant Minerals)
- GSC ANN RPT 1886
- GSC BULL 242
- GSC MAP 4-1974; 255A; 1552A
- GSC OF 9; 170; 463
- GSC P 69-1A; 70-1A; 72-44; 74-8
- GSC SUM RPT 1918B; 1929A
- GCNL #136, 1988
- Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 435
REPORT: RGEN0100

BIBLIOGRAPHY

Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern British Columbia, Ph.D. Thesis, University of British
Columbia
Sellmer, H.W., (1964): *A Report on the Iron Cop Claims, Vancouver
Island, B.C. unpubl. B.Sc. Thesis, University of British Columbia
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1998/12/01

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 229**

NATIONAL MINERAL INVENTORY: 092L1 Cu3

NAME(S): **DAVIS, ASTA, RITA,**
NISNAK, GOLDEN, GYLDEN,
POSLATIENO, BRAVO, DORATO,
BRUNO

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L01E
BC MAP:

MINING DIVISION: Nanaimo

LATITUDE: 50 07 39 N
LONGITUDE: 126 07 17 W
ELEVATION: 549 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5556775
EASTING: 705740

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Davis copper showing in Gerald Creek, 5.5 kilometres west of White River, 11.0 kilometres southeast of Schoen Lake.

COMMODITIES: Copper Silver Gold Arsenic

MINERALS

SIGNIFICANT: Chalcopyrite Covellite Galena Pyrite Arsenopyrite
COMMENTS: Silver, gold and arsenic mineralogy not known.
ASSOCIATED: Quartz Siderite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Sheared Faulted
DIMENSION:
COMMENTS: Attitude of shear zone is 315 degrees.

STRIKE/DIP: 315/

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Andesite
Siliceous Andesite
Mylonite
Diorite Sill

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island. Sediment sill unit not defined (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1985
SAMPLE TYPE: Channel
COMMODITY
Arsenic 3.6000 Per cent
Gold 1.3000 Grams per tonne
COMMENTS: Sample of second type of mineralization.
REFERENCE: Assessment Report 13836.

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1985
SAMPLE TYPE: Chip
COMMODITY
Silver 20.0000 Grams per tonne
Copper 2.4200 Per cent
COMMENTS: Sample over 0.5 metres.
REFERENCE: Assessment Report 13836, page 13.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group, Karmutsen volcanics comprised of a thick sequence of tholeiitic basalts. The base of the Karmutsen Formation is comprised of a sediment-diabase sill unit (Middle Triassic (?) in age), which separates the Vancouver Group rocks from the underlying Paleozoic Sicker Group.

The Davis occurrence is underlain by the sediment-sill unit that has been divided into three sub-units. The sill unit consists of rhyolite, quartz-porphry and diorite and a sedimentary unit contains argillite, chert, minor greywacke and siltstone. The third sub-unit consists of a 50 metre wide limestone band. A major west-northwest trending fault along Gerald Creek separates the sediment-sill unit on the south side from pillow basalts, breccia and flows of the Karmutsen Formation to the north. Vertical displacement along the fault is believed to be at least several hundred metres (Assessment Report 13836).

Hosted in the Karmutsen rocks, the Davis occurrence consists of hydrothermal quartz and quartz-siderite veins and mylonitic shear zones in andesite and silicified andesite. Two mineral assemblages are recognized. The first, consisting of copper-silver, occurs in a 2.5 metre wide quartz vein in a mylonized zone between two 30 centimetre shear zones. Minerals recognized are chalcopyrite, pyrite, covellite, galena and malachite. A chip sample over 0.5 metre assayed 2.42 per cent copper and 20.0 grams per tonne silver. The second assemblage is gold-arsenic, occurring in quartz veins and lenses up to 0.5 metres wide. A channel sample assayed 1.3 grams per tonne gold and 3.6 per cent arsenic (Assessment Report 13836, page 13).

BIBLIOGRAPHY

EMPR ASS RPT 1884, 12168, 13000, *13836
EMPR EXPL 1984-238; 1985-C229
EMPR PF (Gale, R.E., (1988): Engineering Report on Bruno Prospect;
report appended to Prospectus, 1989, Doromin Resources)
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; *74-8
GCNL #20, #142, 1984
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/04

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 230**

NATIONAL MINERAL INVENTORY: 092L5 Cu8

NAME(S): **LES**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 27 07 N
LONGITUDE: 127 45 16 W
ELEVATION: 366 Metres

NORTHING: 5589623
EASTING: 588424

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Assessment Report 2391, is 2.5 kilometres south of Quatsino Sound, 3.5 kilometres east of the village of Mahatta River.

COMMODITIES: Copper

MINERALS

SIGNIFICANT:	Chalcopyrite	Pyrite	Hematite	Magnetite
ALTERATION:	Quartz	Clay	Tourmaline	
ALTERATION TYPE:	Argillic		Silicific'n	Carbonate
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER:	Disseminated			
CLASSIFICATION:	Hydrothermal	Epigenetic	Porphyry	
SHAPE:	Tabular			
DIMENSION:	0150 x 0030	Metres	STRIKE/DIP:	TREND/PLUNGE:
COMMENTS:	Mineralization occurs over an area 150 by 30 metres.			

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIIC AGE:	200 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Mollusks		
Jurassic			Island Plutonic Suite
ISOTOPIIC AGE:	154 +/- 6 Ma		
DATING METHOD:	Potassium/Argon		
MATERIAL DATED:	Biotite		

LITHOLOGY: Volcanic Breccia
Fine Grained Andesite
Vesicular Andesite
Hornblende Albite Diorite

HOSTROCK COMMENTS: Mollusks from Quatsino Sound; biotite from Island Copper stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT:	Insular	PHYSIOGRAPHIC AREA:	Vancouver Island Ranges
TERRANE:	Wrangell	RELATIONSHIP:	
METAMORPHIC TYPE:	Contact	GRADE:	Greenschist

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1970
SAMPLE TYPE:	Chip		
COMMODITY		GRADE	
Copper		0.6000	Per cent
COMMENTS:	Samples ranged from 0.15 to 0.60 per cent copper.		
REFERENCE:	National Mineral Inventory Number 092L5 Cu8.		

CAPSULE GEOLOGY

The area is underlain by andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group. The Bonanza Group volcanics have been intruded by granodioritic stocks of the Jurassic Island Plutonic Suite.

The Les occurrence consists of disseminated chalcopyrite, magnetite, hematite and pyrite in volcanic breccia, interbedded with fine-grained and vesicular andesite adjacent to a small hornblende-albite diorite stock. The volcanic rocks exhibit tourmaline-argillic-carbonate and silicic alteration resulting from the intrusions.

The mineralization occurs over an area of 150 by 30 metres. Chip samples returned values of 0.15 to 0.60 per cent copper (National

CAPSULE GEOLOGY

Mineral Inventory Card 092L5 Cu8).

BIBLIOGRAPHY

EMPR ASS RPT 2391
EMPR PF (Sketch Map, Mahatta River Area, 1:4023, 1973, Stokes Expl. Mgmt.; Report by Leighton, D.G., (1974): Explorations in the Mahatta River Area, Stokes Expl. Mgmt, Brinco Expl. Ltd.; Base Map, Mahatta River Area 1:4023)
EMR MP CORPFILE (Skaist Mines Ltd.)
GSC ANN RPT 1986
GSC BULL 242
GSC EC GEOL Series 3, Vol. 1
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/04

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 232**

NATIONAL MINERAL INVENTORY: 092L6 Cu7

NAME(S): **BLUE**, BLUE 1-3

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 29 19 N
LONGITUDE: 127 20 51 W
ELEVATION: 518 Metres

NORTHING: 5594263
EASTING: 617222

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on east side of Blue #2 claim (Assessment Report 1662) is 4.5 kilometres east of Alice Lake, 8 kilometres north of Benson River.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Andesite
Basalt

HOSTROCK COMMENTS: Ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area is underlain by the Upper Triassic Vancouver Group, Karmutsen Formation which is comprised mainly of a thick sequence of tholeiitic basalts. Regional north and northeast trending faults crosscut the volcanics (Geological Survey of Canada Map 4-1974). Disseminated chalcopyrite and bornite mineralization are reported to occur in andesite and basalt of the Karmutsen Formation. The mineralization is localized in the southeast corner of the Blue 3 claim and about 1.0 kilometre to the east, on the far east side of the Blue 2 claim (Assessment Report 1662).

BIBLIOGRAPHY

EMPR AR 1968-98
EMPR ASS RPT *1662
EMPR Prelim. Geol. Map (Jeffery, W.G., (1962): Alice Lake-Benson Lake)
EMR MP CORPFILE (Alpha Mines Ltd.)
GSC MAP 4-1974; 255A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; 1929A

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/15

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 233**

NATIONAL MINERAL INVENTORY: 092L6 Cu7

NAME(S): **BLUE 44**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 29 54 N
LONGITUDE: 127 22 24 W
ELEVATION: 152 Metres

NORTHING: 5595304
EASTING: 615366

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on west side of Blue #44 claim (Assessment Report 1662) is 3 kilometres east of Alice Lake, 9 kilometres north of Benson River.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Andesite
Basalt

HOSTROCK COMMENTS: Ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The Blue 44 occurrence is located about 2.5 kilometres northwest of the Blue 1 and 2 claims (092L 232). Similar mineralization occurs on all these claims and consists of disseminated chalcopyrite and bornite in andesite and basalt of the Upper Triassic Vancouver Group, Karmutsen Formation. The disseminated copper mineralization reportedly occurs on the west side of the Blue 44 claims (Assessment Report 1662).

BIBLIOGRAPHY

EMPR AR 1968-98
EMPR ASS RPT *1662
EMPR Prelim. Geol. Map (Jeffery, W.G., (1962): Alice Lake-Benson Lake)
EMR MP CORPFILE (Alpha Mines Ltd.)
GSC MAP 4-1974; 255A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; 1929A

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/15

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 234**

NATIONAL MINERAL INVENTORY: 092L6 Cu8

NAME(S): **ECILA**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 28 34 N
LONGITUDE: 127 21 36 W
ELEVATION: 400 Metres

NORTHING: 5592854
EASTING: 616366

LOCATION ACCURACY: Within 500M

COMMENTS: Location (from Property File) of Drillhole #1 is 4 kilometres east of Alice Lake, 6.5 kilometres north of the mouth of the mouth of Benson River.

COMMODITIES: Copper Magnetite Iron

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite
ASSOCIATED: Pyrite Pyrrhotite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia
CLASSIFICATION: Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Siliceous Brecciated Amygdaloidal Basalt
Quartz Latite

HOSTROCK COMMENTS: Ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1964
SAMPLE TYPE: Drill Core

<u>COMMODITY</u>	<u>GRADE</u>	
Copper	0.9800	Per cent
Iron	10.0000	Per cent

COMMENTS: Copper over 0.6 metres, iron over 3 metres.
REFERENCE: Property File - McDougal, J.J., 1964, page 3.

CAPSULE GEOLOGY

The area is underlain by the Upper Triassic Vancouver Group, Karmutsen Formation which is comprised mainly of a thick sequence of tholeiitic basalts. Regional north and northeast trending faults crosscut the area (Geological Survey of Canada Map 4-1974).

The Ecila occurrence consists of finely disseminated magnetite and chalcopyrite, and fracture coatings of pyrite and pyrrhotite, in amygdaloidal basalt and quartz latite of the Karmutsen Formation. Diamond drilling intersected 0.6 metres of 0.98 per cent copper in siliceous, slightly brecciated basalt. Iron content was reported as 10 per cent over 3 metres (Property File - McDougall, J.J., 1964, page 3).

BIBLIOGRAPHY

EMPR MAP (Alice Lake-Benson Lake, Jeffery, W.G., 1962)
EMPR PF (McDougall, J.J., (1964): *Report on Elica Magnetite)
GSC MAP 4-1974; 255A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits

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PAGE: 443
REPORT: RGEN0100

BIBLIOGRAPHY

of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/17

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 235**

NATIONAL MINERAL INVENTORY: 092L5 Cu9

NAME(S): **STAR 24**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 24 19 N
LONGITUDE: 127 31 09 W
ELEVATION: 137 Metres

NORTHING: 5584741
EASTING: 605230

LOCATION ACCURACY: Within 500M

COMMENTS: Location of diamond-drill hole 76-1 (Assessment Report 5997) on Star 24 claim is 2.0 kilometres up Teeta Creek from Nerutosos Inlet.

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Pyrite
ASSOCIATED: Sphalerite Marcasite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Andesite
Tuff
Altered Quartz Diorite
Porphyritic Quartz Diorite
Dike

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite from Island Copper stock.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area is underlain by andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group. The Bonanza Group volcanics have been intruded by granodiorite stocks of the Jurassic Island Plutonic Suite.

At the Star 24 occurrence, chalcopyrite, molybdenite and wide-spread pyrite are reported to occur in an area where a highly altered quartz diorite intrudes tuff and andesite of the Bonanza Group. Some of the intrusive phases are porphyritic. Numerous barren dykes are present.

Alteration minerals or style of mineralization are not reported. Marcasite and sphalerite were reported in 1975 drill core (Assessment Report 5567).

BIBLIOGRAPHY

EMPR AR 1968-99
EMPR ASS RPT 5567, 5997, 8629, 9451, 12773, 16552
EMPR EXPL 1975-114; 1976-128; 1980-270; 1984-241; 1987-220
EMPR GEM 1969-206
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 445
REPORT: RGEN0100

BIBLIOGRAPHY

GSC SUM RPT 1918B; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of
Southwestern British Columbia, Vancouver, Ph.D. Thesis, University
of British Columbia
Chevron File

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/19

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 236**

NATIONAL MINERAL INVENTORY: 092L5 Pb1

NAME(S): **TUSCARORA (L.84)**, UKE 1

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 27 44 N
LONGITUDE: 127 34 01 W
ELEVATION: 305 Metres

NORTHING: 5591006
EASTING: 601713

LOCATION ACCURACY: Within 500M

COMMENTS: Location of drill holes near centre of Lot 84 is 0.7 kilometres west of Neroutsos Inlet on the east slope of Comstock Mountain (Assessment Report 7981).

COMMODITIES: Zinc Copper Lead

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Bornite Galena
ASSOCIATED: Pyrite Pyrrhotite Epidote Garnet
ALTERATION: Epidote Garnet
ALTERATION TYPE: Skarn Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Podiform
CLASSIFICATION: Skarn
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 0027 x 0003 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			Island Plutonic Suite
Jurassic			
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Siliceous Rhyolite
Skarn Altered Limy Tuff

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Parson Bay mollusks from Beaver Cove; biotite from Island Copper stock.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks PHYSIOGRAPHIC AREA: Vancouver Island Ranges
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1971
SAMPLE TYPE: Chip
COMMODITY: Zinc GRADE Per cent
Zinc 2.0000

COMMENTS: Copper also present.
REFERENCE: Assessment Report 3165, page 11.

CAPSULE GEOLOGY

The area is underlain by calcareous sediments of the Upper Triassic Vancouver Group, Parson Bay Formation which are in fault contact with Lower Jurassic Bonanza Group volcanics. The main faults strike northwest and north-northeast (Geological Survey of Canada, Map 4-1974). The Comstock Mountain granodiorite pluton, which is part of the Jurassic Island Plutonic Suite, occurs as a small, isolated pluton within Bonanza Group volcanics.

CAPSULE GEOLOGY

The Tuscarora mineralization lies 0.7 kilometres north of the Yreka mine (092L 052) and consists of up to 20 per cent sulphide lenses in silicified rhyolite and epidote-garnet skarn altered limy tuffs. Mineralization consists of pyrite, sphalerite, galena and bornite.

Assessment Report 3165 defines two mineralized zones, stratigraphically 45 metres apart. A 3.0 metre section, traced over a minimum distance of 27 metres, contains 2.0 per cent zinc (Assessment Report 3165, page 11). Chalcopyrite and pyrrotite are also reported (Assessment Report 7981).

BIBLIOGRAPHY

EMPR AR *1953-167
EMPR ASS RPT 3164, 3165, 4425, 7981
EMPR EXPL 1980-270
EMPR GEM 1971-317; 1972-289; 1973-258
EMPR PF (Various Maps in 092L 052-Yreka); (Uke Resources Composite Map, Approx. scale 1:6395)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
GCNL #163, 1972; #14, #32, #78, #80, #116, #120, 1980; #177, 1981
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/20

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 237**

NATIONAL MINERAL INVENTORY: 092L5 Cu5

NAME(S): **RUF 41**, MEXICAN KLASKINO,
KI

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 18 09 N
LONGITUDE: 127 43 41 W
ELEVATION: 150 Metres

NORTHING: 5573039
EASTING: 590582

LOCATION ACCURACY: Within 500M

COMMENTS: Location of "East Zone" mineralized area on Ruf 41 claim (Assessment Report 2407) is on the northside at the head of Klaskino Inlet, 10.0 kilometres from Brooks Bay.

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite Molybdenite
ASSOCIATED: Quartz
ALTERATION: Actinolite Chlorite Silica
ALTERATION TYPE: Skarn Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Stratabound Disseminated Podiform
CLASSIFICATION: Hydrothermal Skarn Replacement
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 0900 x 0600 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Mineralized zone measures 900 by 600 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Calcareous Sediment/Sedimentary Rock
Microdiorite Dike
Diorite

HOSTROCK COMMENTS: Biotite from Island Copper stock, Parson Bay mollusks from Beaver Cove (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks
PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: EAST REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1973
SAMPLE TYPE: Rock
COMMODITY: Copper GRADE: 0.7000 Per cent
COMMENTS: Maximum value, obtained near faults.
REFERENCE: Leighton, D.G., 1975.

CAPSULE GEOLOGY

The area is underlain by calcareous siltstone, shale, limestone, conglomerate and breccia of the Upper Triassic Vancouver Group, Parson Bay Formation. These sediments have been intruded by granodiorite of the Jurassic Island Plutonic Suite.

The Ruf 41 occurrence, previously reported as the Mexican showing (Minister of Mines Annual Report 1903) lies in calcareous sediments. The sediments have undergone extensive northeast and northwest faulting. Microdiorite dykes of the Jurassic Island Plutonic Suite have intruded and locally silicified or skarned the

CAPSULE GEOLOGY

sediments. Abundant diorite float suggests the presence of an intrusive east of the occurrence.

A gossan on the Ruf 41 claim (the Klaskino 17, 18, 33, 34 claims in Leighton's 1973 report) contains abundant pyrite and pyrrhotite with some finely disseminated chalcopyrite, as thin discontinuous replacement lenses in limy sediments. Skarn minerals comprise actinolite and chlorite.

Values up to 0.7 per cent copper were obtained near faults (D.G. Leighton, 1975, page 3). The mineralized zone measures 900 by 600 metres, and includes scattered dry-fracture molybdenite and stockwork quartz-molybdenite mineralization.

BIBLIOGRAPHY

- EMPR AR 1903-195; 1967-70
EMPR ASS RPT 96, *2407, 4730, 11226
EMPR GEM 1973-257; 1974-212
EMPR PF (Untitled Report, Leighton, D.G., (1973): for Stokes Expl. Mngt; General Property compilation - 1:15840, Brivex, 1974; Report by Leighton, D.G., (1975): Klaskino Property, North Vancouver Island for British Newfoundland Expl. Ltd.)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918A; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D.Thesis, Carleton University

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/10

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 238**

NATIONAL MINERAL INVENTORY: 092L5 Cu10

NAME(S): **WM**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 27 39 N
LONGITUDE: 127 49 46 W
ELEVATION: 150 Metres

NORTHING: 5590525
EASTING: 583085

LOCATION ACCURACY: Within 1 KM

COMMENTS: Minister of Mines Annual Report 1968, page 97, gives location as 1.6 kilometres west of Mahatta River on Quatsino Sound.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 220 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Carbonate Clastic Rock
Volcanic

HOSTROCK COMMENTS: Parson Bay mollusks-Beaver Cove; mollusks-Quatsino Sound; biotite from Island Copper Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
Plutonic Rocks
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The area lies within the Insular Belt of the Cordillera and is underlain mainly by volcanics, crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage consisting of sediments of the Paleozoic Sicker Group and Upper Triassic Vancouver Group basalts and minor carbonate and clastic sediments. The Bonanza volcanics are coeval with, or genetically related to, granodiorite stocks of the Jurassic Island Plutonic Suite which intrude all older rocks in the area.

At the Wm occurrence chalcopyrite mineralization probably occurs in a quartz vein stockwork in Parson Bay Formation (Vancouver Group) carbonate clastics, near the contact with Bonanza Group volcanics.

The location given in Minister of Mines Annual Report 1968, page 97, coincides with that of the Kimo occurrence (092L 291). Evidence of past exploration activity is reported here (Assessment Report 8018, Figure 1).

BIBLIOGRAPHY

EMPR AR 1968-97
EMPR ASS RPT 8018
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 451
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/04

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 239**

NATIONAL MINERAL INVENTORY: 092L12 Zn3

NAME(S): **A, B, X,
St**

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:
LATITUDE: 50 40 15 N
LONGITUDE: 127 42 07 W
ELEVATION: 395 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showings on St claim (Assessment Report 7847).

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5614025
EASTING: 591725

COMMODITIES: Zinc Copper Lead Silver Gold

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Galena
ASSOCIATED: Pyrite
ALTERATION: Hornblende Chlorite Epidote Calcite Quartz
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Massive Layered
CLASSIFICATION: Skarn Replacement
TYPE: K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 159 +/- 5 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Shaly Limestone
Skarn
Quartz Feldspar Porphyry
Feldspar Hornblende Porphyry

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite K-Ar from southwest of Nahwitti Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Drill Core

COMMODITY	GRADE	
Silver	26.7000	Grams per tonne
Gold	0.1000	Grams per tonne
Copper	0.3900	Per cent
Lead	0.4300	Per cent
Zinc	4.5800	Per cent

COMMENTS: 3.4 metre drill intersection.
REFERENCE: George Cross Newsletter #189, 1980.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group, Karmutsen Formation volcanics and Quatsino Formation limestone, and Lower Jurassic Bonanza Group volcanics and sediments intruded by the Jurassic Island Plutonic Suite. Locally, near the headwaters of a branch of Wanokana Creek, sphalerite, galena, chalcopyrite and pyrite are found in skarn-like rock at the contact of a quartz feldspar porphyry and/or a feldspar hornblende porphyry with shaly limestone of the Bonanza Group. The

CAPSULE GEOLOGY

sulphides are disseminated or weakly massive, associated with coarse-bladed hornblende and chlorite, epidote, calcite and quartz. Banding of the mineralization is common, with the elongate axis of the hornblende perpendicular to the banding. The banding may represent relict bedding. Three mineralized zones are known, which were drilled and surface sampled in 1980.

A 3.0 metre chip sample of one of the zones assayed 4.77 per cent zinc, 0.614 per cent copper, 0.25 per cent lead, 26.4 grams per tonne silver and 0.1 grams per tonne gold (Assessment Report 8837). A 3.4 metre intersection from a diamond-drill hole on one of the other zones assayed 4.58 per cent zinc, 0.39 per cent copper, 0.43 per cent lead, 26.7 grams per tonne silver and 0.1 grams per tonne gold (George Cross Newsletter #189, 1980).

BIBLIOGRAPHY

- EMPR AR 1968-84
- EMPR ASS RPT *7847, *8837
- EMPR EXPL 1979-191; 1980-274
- EMPR GEM 1970-254,263; 1971-321
- GSC ANN RPT 188
- GSC BULL 242
- GSC MAP *4-1974; 1552A
- GSC OF 9; 170; 463; 722
- GSC P 69-1A; 72-44; *74-8; 79-30
- CJES 18, p. 1; 20, p. 1, Jan. 1983
- GCNL *#189, 1980
- Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/24

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 240**

NATIONAL MINERAL INVENTORY: 092L12 Cu18

NAME(S): **HUSHAMU** EXPO, NORTHWEST EXPO

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 40 31 N
LONGITUDE: 127 51 29 W
ELEVATION: 350 Metres

NORTHING: 5614338
EASTING: 580687

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of copper zone (Property File - Prospectus, Moraga Resources Ltd. - July, 1988).

COMMODITIES: Copper Gold Molybdenum

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Magnetite Carbonate
ALTERATION: Pyrite Clay Sericite Quartz Pyrophyllite
Epidote Chlorite Zunyite

COMMENTS: Also laumontite.

ALTERATION TYPE: Silicific'n Argillic Sericitic Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au
L01 Subvolcanic Cu-Ag-Au (As-Sb)

H04 Epithermal Au-Ag-Cu: high sulphidation

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 145 +/- 5 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Andesite
Andesite Breccia
Andesite Tuff
Lapilli Tuff
Andesite Flow
Quartz Monzonite
Diorite Dike

HOSTROCK COMMENTS: Age dates from Geological Survey of Canada Paper 74-8.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: HUSHAMU

REPORT ON: Y

CATEGORY: Combined	YEAR: 1994
QUANTITY: 173237000 Tonnes	
COMMODITY	GRADE
Gold	0.3400 Grams per tonne
Copper	0.2700 Per cent
Molybdenum	0.0090 Per cent

COMMENTS: Proven and probable reserves.

REFERENCE: Information Circular 1994-19, page 14.

CAPSULE GEOLOGY

The Hushamu occurrence area is underlain by northwest trending Lower Jurassic Bonanza Group volcanics and sediments, and Upper Triassic Vancouver Group Karmutsen Formation volcanics and Quatsino Formation limestone, all of which have been intruded by stocks of the Early-Middle Jurassic Island Plutonic Suite.

CAPSULE GEOLOGY

Locally, andesitic breccia, tuff, lapilli tuff and flows of the Bonanza Group are intruded by quartz monzonite and dykes of generally dioritic composition.

Several areas of intense silicification of the volcanics are thought to represent explosive volcanic centres. These areas show alteration to pyrite, pyrophyllite, clays (kaolinite?) and sericite. They are enveloped by volcanics showing argillic and sericitic alteration. At further distances the rocks show propylitic alteration to chlorite, epidote, clays and minor sericite. Zunyite has been identified by x-ray diffraction methods (A. Panteleyev, personal communication, 1992). These areas are also mineralized with disseminated magnetite and carbonate and laumontite in fractures and joint-controlled veinlets (see Island Copper, 092L 158).

The most abundant sulphide is pyrite, which increases in concentration, up to 25 per cent, near the areas of intense silicification. Chalcopyrite has been found associated with one of the centres.

Proven and probable reserves are 173,237,000 tonnes grading 0.27 per cent copper, 0.34 gram per tonne gold and 0.009 per cent molybdenum (Information Circular 1994-19, page 14).

BIBLIOGRAPHY

- EMPR AR 1968-96
EMPR ASS RPT 2190, 3400, 3402, 3958, 4000, 4754, 5262, 5346, 6184, 6531, 10982, 11132, *11776, 12302, 13389, 13739; 14058, 14394, 15876, 16139, 19386, 21612
EMPR EXPL 1977-E174; 1980-275; 1983-337; 1985-C238; 1986-C281
EMPR FIELDWORK 1991, p. 232
EMPR GEM 1969-202; 1970-254,262; 1971-322; 1972-304; 1973-262; 1974-217,218
EMPR INF CIRC 1993-13; 1994-19, p. 14
EMPR MAP 65 (1989)
EMPR OF 1992-1; 1992-6; 1994-1; 1998-8-F, pp. 1-60; 1998-8-K, pp. 1-22
EMPR PF (Prospectus, Moraga Resources, July 1988; Various geological maps)
EMR MIN BULL MR 223 B.C. 180
EMR MP CORPFILE (Moraga Resources Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983
GCNL #225,#226,#237, 1988; #8, 1989; #41(Feb.27),#75(Apr.18), #97(May 18),#104(May 30),#108(Jun.5),#137(Jul.17),#149(Aug.2), #154(Aug.10),#169(Aug.31),#189(Sept.29),#210(Oct.30),#214(Nov.5), 1990; #237(Dec.10),#7(Jan.10),#13(Jan.18),#82(Apr.29), #102(May 28),#103(May 29),#107(June 4),#206(Oct.25), 1991; #11(Jan.16),#29(Feb.11),#32(Feb.14),#41(Feb.27), 1992
N MINER June 25, Nov.5, 1990; Oct.28, 1991; Mar.9, 1992
WWW <http://www.infomine.com/>
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/14

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 241**

NATIONAL MINERAL INVENTORY: 092L12 Pb1

NAME(S): **HPH 2**, NAHWITTI LAKE

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 39 N
LONGITUDE: 127 47 30 W
ELEVATION: 210 Metres

NORTHING: 5616512
EASTING: 585343

LOCATION ACCURACY: Within 500M

COMMENTS: Showings, Assessment Report 870.

COMMODITIES: Silver Lead Zinc Copper Gold

MINERALS

SIGNIFICANT: Galena Sphalerite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil			
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma DATING METHOD: Fossil			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 159 +/- 5 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite			
LITHOLOGY: Siliceous Limestone Andesite Quartz Diorite			

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake; Karmutsen ammonites from Hisnit Island; biotite K-ar from southwest Nahwitti Lake.

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1988
SAMPLE TYPE:	Chip		
COMMODITY		GRADE	
Silver		267.4000	Grams per tonne
Gold		0.0700	Grams per tonne
Copper		0.1100	Per cent
Lead		3.9900	Per cent
Zinc		9.2400	Per cent

COMMENTS: Chip sample across 1.5 metre.
REFERENCE: Property File - Christopher, 1988.

CAPSULE GEOLOGY

The area is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by the Jurassic Island Plutonic Suite.

Locally, galena-sphalerite mineralization occurs as stringers in silicified limestone near the contact with Karmutsen Formation

CAPSULE GEOLOGY

andesite. Quartz diorite of the Island Plutonic Suite is nearby. At least four showings are present. Selective samples gave assays of trace gold, 61.7 grams per tonne silver, 2.6 per cent lead, 8.3 per cent zinc; 0.3 grams per tonne gold, 500.5 grams per tonne silver, 20.8 per cent lead, 15.4 per cent zinc; trace gold, 404.5 grams per tonne silver, 29.1 per cent lead, 9.2 per cent zinc (Minister of Mines Annual Report 1936, page F47). In 1987, two grab samples assayed 222.2 grams per tonne silver, 12.3 per cent lead, 30.6 per cent zinc and 131.6 grams per tonne silver, 5.69 per cent lead and 30.6 per cent zinc (Assessment Report 16347). A 1.5 metre chip sample collected in 1988 from the Pond Zone assayed 0.07 grams per tonne gold, 267.4 grams per tonne silver, 3.99 per cent lead, 9.24 per cent zinc and 0.11 per cent copper (Christopher, P.A., 1988).

BIBLIOGRAPHY

EMPR AR 1930-297; 1931-171; *1936-F37; 1965-227; 1966-63; 1968-95
EMPR ASS RPT 30, *870, 2205, 3609, 7566, 9507, *16347, *17393,
17445
EMPR EXPL 1979-191; 1980-275; 1987-C224
EMPR GEM 1970-254,263; 1972-306; 1973-261
EMPR PF (H. Lundberg, (1948): Geophysical Report of the HPH Group of
Claims for the Western Mining and Development Syndicate;
*Christopher, P.A., (1988): Report in Prospectus for Hisway
Resources Corp., Jan.11, 1989 - refer to 092L 069-HPH 1)
EMR MP CORPFILE (Giant Explorations Limited; Giant Mascot Mines
Limited; See 092L 069 for details)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983
GCNL 69, 1989
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/23

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

fillings and disseminations in sheared and/or silicified Quatsino Formation limestone near a contact with Karmutsen Formation andesites. Quartz diorite of the Island Plutonic Suite is nearby. Magnetite can also be present. Areas of the limestone are altered to skarn. Mineralization is exposed in outcrops and trenches over a distance of 135 metres. A chip sample collected across 2.1 metres in 1966 assayed 373.7 grams per tonne silver, 3.18 per cent lead and 4.97 per cent zinc (Assessment Report 870). A 1966 grab sample assayed 356.5 grams per tonne silver, 3.18 per cent lead, 3.34 per cent zinc, 0.17 per cent copper and 0.34 grams per tonne gold (Assessment Report 870).

A 2.1 metre chip sample collected in 1988 assayed 743.9 grams per tonne silver, 2.55 per cent lead, 3.92 per cent zinc, 0.21 per cent copper and 0.07 grams per tonne gold (Christopher, P.A., 1988).

BIBLIOGRAPHY

- EMPR AR 1930-297; 1931-171; *1936-F47; 1965-227; 1966-63; 1968-95
EMPR ASS RPT 30, *870, 2205, 3609, 7566, 9507, 12852, 16347, *17393, 17445
EMPR EXPL 1979-191; 1980-275; 1984-247; 1987-C224
EMPR GEM 1970-254,263; 1972-306; 1973-261
EMPR PF (Lundberg, H., (1948): Geophysical Report of the HPH Group of Claims for Western Mining & Development syndicate - refer to 092L 241 - HPH 2; *Christopher, P.A., (1988): Report in Prospectus for Hisway Resources Corp. Jan.11, 1989 - refer to 092L 069 - HPH 1)
EMR MP CORPFILE (Giant Explorations Limited; Giant Mascot Mines Limited; See 092L 069 for details)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983
GCNL 69, 1989
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/23

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 243**

NATIONAL MINERAL INVENTORY: 092L12 Pb1

NAME(S): **HPH BLUFF**, TAXI, NAHWITTI LAKE

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 27 N
LONGITUDE: 127 48 04 W
ELEVATION: 320 Metres

NORTHING: 5616131
EASTING: 584682

LOCATION ACCURACY: Within 500M

COMMENTS: Showings, Assessment Report 870.

COMMODITIES: Zinc Lead Copper

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite Chalcopyrite
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform
CLASSIFICATION: Hydrothermal Replacement
TYPE: J01 Polymetallic manto Ag-Pb-Zn
DIMENSION: 0015 x 0001 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Mineralization occurs in two lenticular areas up to 1.4 metres wide exposed over 15 metres length.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			Island Plutonic Suite
Jurassic			
ISOTOPIC AGE: 159 +/- 5 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Siliceous Limestone
Argillaceous Limestone
Rhyodacite
Quartz Diorite

HOSTROCK COMMENTS: Quatsino ammonites-Alice Lake; Karmutsen ammonites-Hisnit Island; biotite K-Ar-southwest Nahwitti Lake (Geol. Surv.of Canada Paper 74-8)

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

CAPSULE GEOLOGY

The area is underlain by northwest trending belts of Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by the Jurassic Island Plutonic Suite.

Locally, galena, sphalerite, pyrite and sparse chalcopyrite in two small lenticular areas up to 1.4 metres wide is exposed by pits and trenches over a length of 15 metres. The mineralization is present in silicified limestone of the Quatsino Formation, close to the contact with interbedded argillaceous limestone and rhyodacite of the Bonanza Group. Quartz diorite of the Island Plutonic Suite is nearby.

BIBLIOGRAPHY

EMPR AR 1936-F51
EMPR ASS RPT 870, 2205, 3609, 4472, 7566, 12852, 17393, 17445
EMPR EXPL 1979-191; 1984-247
EMPR GEM 1970-254; 1972-306; 1973-261

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 461
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR PF (Christopher, P.A., (1988): Report in Prospectus for Hisway Resources Corp., Jan.11, 1989 - refer to 092L 069 - HPH 1)
EMR MP CORPFILE (Giant Explorations Limited; Giant Mascot Mines Limited; See 092L 069 for details)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/24

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 244**

NATIONAL MINERAL INVENTORY: 092L12 Zn2

NAME(S): **SOUTH SHORE (RAS 4)**, RAS 4, MONZONITE CREEK

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:
LATITUDE: 50 42 03 N
LONGITUDE: 127 51 40 W
ELEVATION: 305 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Showings, Assessment Report 870.

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5617176
EASTING: 580427

COMMODITIES: Zinc Silver Copper Lead Cadmium

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Magnetite Greenockite
ASSOCIATED: Pyrite Pyrrhotite
COMMENTS: Pyrite, pyrrhotite in volcanics and sediments south and east of showings.
ALTERATION: Garnet Actinolite Ilvaite
ALTERATION TYPE: Skarn Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
	ISOTOPIC AGE: 225 Ma		
	DATING METHOD: Fossil		
Lower Jurassic	MATERIAL DATED: Juvarite ammonites	Undefined Formation	
	Bonanza		
	ISOTOPIC AGE: 200 Ma		
	DATING METHOD: Fossil		
Jurassic	MATERIAL DATED: Mollusks		Island Plutonic Suite
	ISOTOPIC AGE: 145 +/- 5 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		

LITHOLOGY: Limestone
Felsite Dike
Andesite
Cherty Sediment/Sedimentary
Granodiorite

HOSTROCK COMMENTS: Quatsino ammonites-Alice Lake; Bonanza mollusks-Quatsino Sound; biotite K-Ar-Hepler Creek (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
Plutonic Rocks
RELATIONSHIP: Syn-mineralization
GRADE: Hornfels

INVENTORY

ORE ZONE: SKARN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY

COMMODITY	GRADE	
Silver	6.9000	Grams per tonne
Cadmium	0.0400	Per cent
Copper	0.2600	Per cent
Zinc	7.1700	Per cent

COMMENTS: Chip sample across 6.1 metres; assay includes trace amounts of lead.

REFERENCE: Assessment Report 870.

CAPSULE GEOLOGY

The area is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen

CAPSULE GEOLOGY

and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by the Jurassic Island Plutonic Suite.

Locally garnet-actinolite skarn occurs in Quatsino limestone in contact with a felsite dyke. Granodiorite intrusions are nearby. Mineralization consists of sphalerite, chalcopyrite, magnetite and greenockite. Ilvaite is also present. A chip sample across 6.1 metres assayed 7.17 per cent zinc, 0.26 per cent copper, 6.9 grams per tonne silver and 0.04 per cent cadmium (Assessment Report 870). Three drill holes in 1952 encountered weak mineralization at limestone-intrusive contacts (Assessment Report 870).

Pyrite and pyrrhotite are present in Bonanza Group andesites and cherty(?) sediments south of the showings, where silicification of the volcanics is evident.

BIBLIOGRAPHY

- EMPR AR *1936-F52; 1965-227; 1966-64; 1968-95
EMPR ASS RPT *870, 2205, 3055, 3609, 3954, 4180, 4472, 7652, 9507,
12652
EMPR EXPL 1979-192; 1981-53
EMPR GEM 1970-254,263; 1971-323; 1972-306; 1973-261
EMR MP CORPFILE (Giant Explorations Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983
GCNL #95, 1980
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/12

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 245**

NATIONAL MINERAL INVENTORY: 092L12 Zn2

NAME(S): **SOUTH SHORE (HSW 3)**, HSW 3, ZINC CREEK

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:
LATITUDE: 50 41 58 N
LONGITUDE: 127 50 57 W
ELEVATION: 330 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of showings, Assessment Report 870.

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5617034
EASTING: 581273

COMMODITIES: Silver Zinc Lead Copper

MINERALS

SIGNIFICANT: Sphalerite Galena
COMMENTS: Silver mineralogy not known.
ASSOCIATED: Pyrite Pyrrhotite Chalcopyrite
ALTERATION TYPE: Skarn Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Skarn Replacement
SHAPE: Irregular
MODIFIER: Faulted

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 145 +/- 5 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Trachytic Dike
Granodiorite
Andesite
Cherty Sediment/Sedimentary

HOSTROCK COMMENTS: Quatsino ammonites-Alice Lake; Bonanza mollusks-Quatsino Sound; biotite-K-Ar-Hepler Creek (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP: Syn-mineralization GRADE: Hornfels

INVENTORY

ORE ZONE: SKARN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1966
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 3.4000 Grams per tonne
Copper 0.0100 Per cent
Lead 0.4000 Per cent
Zinc 2.4900 Per cent
COMMENTS: Chip sample across 2.4 metres.
REFERENCE: Assessment Report 870.

CAPSULE GEOLOGY

The area is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by the Jurassic Island

CAPSULE GEOLOGY

Plutonic Suite.

Locally, skarn mineralized with sphalerite, galena and chalcopyrite is found in Quatsino limestone in contact with a north trending trachytic dyke. Small bodies of granodiorite are nearby. Three showings are exposed in a creek from near the base of the Quatsino Formation to near the Quatsino-Bonanza contact. The lowermost showing is cut off to the north by a west striking fault. A chip sample across 2.4 metres assayed 2.49 per cent zinc, 0.4 per cent lead, 0.01 per cent copper and 3.4 grams per tonne silver (Assessment Report 870). A drilling program of 5 holes, intersected up to 12.3 metres grading 3.0 per cent zinc and 0.15 per cent lead (Assessment Report 870).

Pyrite and pyrrhotite are present in Bonanza Group andesites and cherty(?) sediments south of the showings. Silicification of the volcanics is evident.

BIBLIOGRAPHY

- EMPR AR *1936-F52; 1965-227; 1966-64; 1968-95
EMPR ASS RPT *870, 2205, 3055, 3609, 3954, 4180, 4472, 7652, 9507, 12652
EMPR EXPL 1979-192; 1981-53
EMPR GEM 1970-254,263; 1971-323; 1972-306; 1973-261
EMR MP CORPFILE (Giant Explorations Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983
GCNL #95, 1980
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/13

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 246**

NATIONAL MINERAL INVENTORY:

NAME(S): **SOCKEYE (L.528)**, CURTIS, EASY FOUR,
SOC

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 07 09 N
LONGITUDE: 127 17 36 W
ELEVATION: 1 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5553275
EASTING: 622006

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Sample 6115 on Sockeye claim (from Minister of Mines, Annual Report 1920, page 190) is 270 metres east of the creek draining Jensen Lake into Easy Inlet. See also Monteith Bay (092L 343).

COMMODITIES: Pyrophyllite Potassium Potash

MINERALS

SIGNIFICANT: Pyrophyllite Alunite
ASSOCIATED: Pyrite
ALTERATION: Quartz Alunite Pyrophyllite Sericite Limonite
Kaolin

ALTERATION TYPE: Silicific'n Sericitic Alunitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Replacement Industrial Min.
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 0076 x 0046 Metres STRIKE/DIP: 270/30S TREND/PLUNGE:
COMMENTS: Deposit dimensions on Sockeye claim are 76 by 46 metres. Strike is west.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic Bonanza Undefined Formation

ISOTOPIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks
Jurassic Island Plutonic Suite

ISOTOPIC AGE: 154 +/- 6 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Andesite
Dacite
Quartz Diorite Dike
Quartz Diorite Porphyry Dike
Andesite Dike
Breccia

HOSTROCK COMMENTS: Biotite from Island Copper stock; Bonanza mollusks from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1920
SAMPLE TYPE: Rock
COMMODITY GRADE
Potash 3.1000 Per cent
COMMENTS: Potash reported as K2O. Potential for several hundred thousand tonnes.
REFERENCE: Min. of Mines, Ann. Rpt. 1920, p. 199; Canmet Rpt. 803, pp. 131-135.

CAPSULE GEOLOGY

Rocks in the area of the showing are mainly volcanics of the Lower Jurassic Bonanza Group, consisting of porphyritic and fragmental andesites and dacites. These have been intruded by quartz

CAPSULE GEOLOGY

diorite dykes or quartz diorite porphyry, and by numerous andesitic dykes related to the Jurassic Island Plutonic Suite. The volcanics, along their contacts with the intrusive diorite and andesite, have been altered and replaced resulting in well-defined masses of quartz-sericite, quartz-alunite and quartz-pyrophyllite. Quartz makes up from 20 to 50 per cent of the quartz-pyrophyllite rock, with sericite up to 8 per cent, some pyrite (weathering to limonite) and kaolin. Irregular streaks and thin beds of quartz-sericite rock occur in the pyrophyllite zones. The rock has been more or less sheared, producing in places zones filled with soft gouge composed largely of quartz, pyrophyllite and kaolin, in other places fault breccia consisting of fragments of quartz-pyrophyllite, kaolin and iron oxides. The pyrophyllite is in the form of very fine microscopic flakes and is of the compact, massive type.

On the Sockeye claim, pyrophyllite is exposed for 76 metres along strike, with widths up to 46 metres. On the adjoining Curtis claim, to the east, there is an exposure measuring 46 by 30 by 9 metres. The intervening 550 metres between the two exposures is obscured by overburden. If the deposit proves to be continuous it would contain several thousand tonnes. The quartz content is about 45 per cent, and at a depth of 2 metres, the rock is fresh and free from iron stain (Canmet Report 803, pages 131-135).

See also Monteith Bay (092L 343).

BIBLIOGRAPHY

EMPR AR *1920-198; 1947-223
EMPR ASS RPT 23139
EMPR GEM 1973-552; 1974-400
EMPR OF 1988-19
GSC ANN RPT 1886
GSC MAP 4-1974; 255A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1913, pp. 109-126; 1920A
CANMET RPT 803, pp. 131-135; 1940

DATE CODED: 1989/02/01
DATE REVISED: 1989/05/16

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 247**

NATIONAL MINERAL INVENTORY: 092L12 Cu15

NAME(S): **HOL**, NATIVE CREEK

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 36 48 N
LONGITUDE: 127 55 17 W
ELEVATION: 395 Metres

NORTHING: 5607383
EASTING: 576312

LOCATION ACCURACY: Within 500M

COMMENTS: Showings on Hol 3 claim, Assessment Report 3771.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Bornite Chalcopyrite Copper Azurite Malachite
ALTERATION: Azurite Malachite Calcite Quartz Epidote
Zeolite Prehnite

ALTERATION TYPE: Zeolitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Hydrothermal
TYPE: D03 Volcanic redbed Cu

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Lower Jurassic Bonanza
ISOTOPIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks

Undefined Formation

LITHOLOGY: Porphyritic Amygdaloidal Basalt
Basic Dike
Limestone

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound (Geological Survey of Canada Paper 74-8). Volcanics believed to be Bonanza Group.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP: Syn-mineralization GRADE: Zeolite

CAPSULE GEOLOGY

The area is largely underlain by volcanics and sediments of the Lower Jurassic Bonanza Group, which are in fault contact with limestone of the Upper Triassic Vancouver Group, Quatsino Formation. The main belt of limestone lies to the west and east, with fault slices found north and south of the showing.

On the Hol 3 claim (or Assessment Report 3771), porphyritic amygdaloidal basalt of the Bonanza (?) Group is intruded by an augite bearing basic dyke. The dyke may have been a feeder of the volcanics. Epidote, zeolite, prehnite, quartz and calcite amygdules are present, resulting from low grade regional metamorphism. Copper occurs within the intrusive as bornite and chalcopyrite. Near the contact with the volcanics are zones containing sulphides and hematite. Native copper, bornite, azurite and malachite are found in fractures and joints in the volcanics.

BIBLIOGRAPHY

EMPR ASS RPT *1770, *3771
EMPR GEM 1970-254; 1972-306
EMPR PF (Morgan, D.R., (1970): Geological Report on the 300 Claim
Property of Holberg Mines Ltd.)
EMR MP CORPFILE (Holberg Mines Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
GSC SUM RPT *1929A, p. 138
CJES 18, p. 1; 20, p. 1, Jan. 1983

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 469
REPORT: RGEN0100

BIBLIOGRAPHY

Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/21

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 248**

NATIONAL MINERAL INVENTORY: 092L4 Au1

NAME(S): **AMOS CREEK**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L04W
BC MAP:

Underground

MINING DIVISION: Alberni

LATITUDE: 50 06 41 N
LONGITUDE: 127 48 54 W
ELEVATION: 61 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5551688
EASTING: 584728

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Minister of Mines Annual Report 1913, page 283, near fork of Amos and Gold creeks, on Brooks Peninsula.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold

COMMENTS: Placer.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer Residual
TYPE: C01 Surficial placers
DIMENSION: 5000 Metres

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Permian-Triassic

ISOTOPIC AGE: 245 Ma

DATING METHOD: Zircon

MATERIAL DATED: Biotite gneiss

Tertiary

Glacial/Fluvial Gravels

LITHOLOGY: Unconsolidated Gravel

HOSTROCK COMMENTS: Zircon from Tofino area. Area is underlain by the West Coast Complex metamorphic rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP:

GRADE: Granulite

CAPSULE GEOLOGY

The area is underlain by the West Coast Complex, comprised of a high grade crystalline, metamorphic complex derived from pre-Lower Mesozoic volcanic and sedimentary rocks.

Coarse and fine placer gold was found over 5.0 kilometres near the junction of Amos and Gold creeks.

The Energy, Mines and Resources Canada reference reports the development of an adit. There is no record of any production.

BIBLIOGRAPHY

EMPR AR 1913-283

EMPR BULL 28, p. 15

EMPR FIELDWORK 1985, p. 161

GSC MAP 4-1974

GSC OF 9; 170; 463

GSC P 69-1A; 72-44; *74-8; 79-30

Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, p. 186

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/06

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 249**

NATIONAL MINERAL INVENTORY: 092L8 Cu3

NAME(S): **BILLY 11, ROONEY, CATHY, BERNA, MOON**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L08E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 20 24 N
LONGITUDE: 126 07 52 W
ELEVATION: 495 Metres

NORTHING: 5580371
EASTING: 704135

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Assessment Report 1859 is the centre of Billy 11 claim, 2.0 kilometres southeast of Rooney Lake, 1.5 kilometre west of Adam River.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Magnetite Pyrite
ALTERATION: Chlorite Epidote
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: D03 Volcanic redbed Cu
SHAPE: Tabular
MODIFIER: Fractured

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 155 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Massive Amygdaloidal Basalt
Granodiorite

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island; Island Plutonic Suite biotite from Adam River batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1969
SAMPLE TYPE: Drill Core
COMMODITY: Copper GRADE: 0.4800 Per cent
COMMENTS: Assay over 3.6 metres from drill hole 6.
REFERENCE: Assessment Report 3795.

CAPSULE GEOLOGY

The area of the Billy 11 showing is underlain by basalts of the Upper Triassic Vancouver Group, Karmutsen Formation near the contact with granodiorite of the Late Jurassic Island Plutonic Suite. The contact runs along the Adam River, 1.0 kilometre east of the occurrence.

The occurrence consists of disseminated chalcopyrite and bornite with minor pyrite and magnetite in an area where the massive amygdaloidal basalts are highly fractured. Chlorite and epidote alteration are present near mineralization.

Diamond-drill Hole 6, located 1220 metres southeast of 092L 163, assayed 0.48 per cent copper over 3.6 metres (Assessment Report

CAPSULE GEOLOGY

3795).

BIBLIOGRAPHY

EMPR ASS RPT 1859, 2379, *3795
EMPR GEM 1969-209; 1972-292
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC P 69-1A; 72-44; *74-8; 79-30
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/04

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 250**

NATIONAL MINERAL INVENTORY: 092L2 Cu3

NAME(S): **TONY, KA**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 04 11 N
LONGITUDE: 126 59 12 W
ELEVATION: 166 Metres

NORTHING: 5548324
EASTING: 644076

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location at the confluence of Rowland Creek and Kaouk River, 9 kilometres east of Fair Harbour (Geology, Exploration and Mining, 1973, page 286).

COMMODITIES: Copper Zinc Lead

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Galena
ASSOCIATED: Pyrite Pyrrhotite
ALTERATION: Epidote Chlorite K-Feldspar
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: STRIKE/DIP: 315/35S TREND/PLUNGE:
COMMENTS: Regional strike of lithology is northwest with moderate south dips.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
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Lower Jurassic	Bonanza	Undefined Formation	
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ISOTOPIC AGE: 200 Ma

DATING METHOD: Fossil

MATERIAL DATED: Mollusks

Jurassic

ISOTOPIC AGE: 148 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Phlogopite

Island Plutonic Suite

LITHOLOGY: Andesite
Basalt
Tuff
Breccia
Limestone
Granodiorite

HOSTROCK COMMENTS: Phlogopite from Zeballos intrusion; Bonanza mollusks from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP:

GRADE: Amphibolite

CAPSULE GEOLOGY

The area of the Tony occurrence is underlain by andesite, basalt, tuff, breccia and limestone of the Lower Jurassic Bonanza Group. These rocks have been intruded by Jurassic granodiorite of the Island Plutonic Suite.

Epidote, chlorite and k-feldspar alteration are present at some contact locations and faulting is extensive.

Small veins contain pyrite, pyrrhotite, chalcopyrite, sphalerite and galena.

BIBLIOGRAPHY

EMPR GEM 1972-286
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-5; 69-1A; 70-1A; 72-44; 74-8; 79-30

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 474
REPORT: RGEN0100

BIBLIOGRAPHY

GSC SUM RPT 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/01

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 251**

NATIONAL MINERAL INVENTORY: 092L4,5 Cu1

NAME(S): **BROOKS**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L04E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 14 49 N
LONGITUDE: 127 43 21 W
ELEVATION: 61 Metres

NORTHING: 5566868
EASTING: 591084

LOCATION ACCURACY: Within 500M

COMMENTS: The location is the centre of Brooks 1-24 claims, at the head of Klaskish Inlet off Brooks Bay.

COMMODITIES: Copper Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Galena
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn Replacement Epigenetic
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	

ISOTOPIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks

Jurassic ISOTOPIC AGE: 181 +/- 8 Ma Island Plutonic Suite
DATING METHOD: Potassium/Argon
MATERIAL DATED: Phlogopite

LITHOLOGY: Rhyodacite Dike
Granitic Dike

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Intrusions phlogopite from Empire Development Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanic rocks comprised mainly of andesitic to rhyodacitic flows, tuffs and breccia. Locally, the Bonanza Group rocks are intruded by granodiorite of the Jurassic Island Plutonic Suite.

Skarn-type copper, lead and zinc mineralization occurs along the contacts of granitic to rhyodacite dykes (related to the Island Plutonic Suite) where they intrude the Bonanza volcanics. Mineralization is comprised mainly of disseminated chalcopyrite with minor galena and sphalerite.

BIBLIOGRAPHY

EMPR GEM 1972-287
GSC P 69-1A; 70-1A; 72-44; *74-8
GSC MAP 4-1974
GSC OF 9; 170; 463
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/16

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 252**

NATIONAL MINERAL INVENTORY: 092L8 Cu4

NAME(S): **PORT, I, STAN,
H & B, CDC**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L08E
BC MAP:
LATITUDE: 50 29 41 N
LONGITUDE: 126 06 35 W
ELEVATION: 275 Metres

Underground

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

NORTHING: 5597629
EASTING: 704988

LOCATION ACCURACY: Within 500M

COMMENTS: Location is the centre of I2 claim in Assessment Report 4895,
located 2.0 kilometres northwest of Port Neville on Johnstone Strait.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Chalcocite
ALTERATION: Epidote Malachite
ALTERATION TYPE: Epidote Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stockwork
CLASSIFICATION: Hydrothermal Porphyry Volcanogenic
TYPE: D03 Volcanic redbed Cu
DIMENSION: 0014 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Mesozoic			Coast Plutonic Complex

LITHOLOGY: Massive Basalt
Amygdaloidal Basalt
Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1970
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Copper 0.8800 Per cent
COMMENTS: Chalcopyrite over 14.0 metres in drill core.
REFERENCE: Assessment Report 4929, page 1.

CAPSULE GEOLOGY

The property is located 13 kilometres north-northwest of Kelsey Bay and 1.6 kilometres west of Port Neville at about 180 metres elevation. The property was worked on in the early 1900s indicated by old workings consisting of two adits and one shaft.

The Port Neville area lies at the boundary between the Coast Crystalline Belt and the Insular Tectonic Belt.

The area is underlain by Upper Triassic Vancouver Group, Karmutsen Formation basalt flows cut by numerous basic feeder dikes. Bodies of quartz-diorite, of unknown age assumed to belong to the Coast Plutonic Complex, occur in the northern part of the claims.

Mineralization occurs in massive and amygdaloidal basalts and consists of disseminated chalcopyrite, bornite and chalcocite in unaltered basalt, in amygdules in flow tops, and in small fractures. Better grades of mineralization are commonly accompanied by some increase in epidotization. Malachite staining is present.

The highest assay reported is from an iron-stained bluff between the upper and lower adits where chip samples over 6.3 metres assayed 1.69 per cent copper (Property File: K. Northcote; Assessment Report

CAPSULE GEOLOGY

4929, Map 2). Diamond drilling in 1970 returned 0.61 per cent copper over 4.0 metres and 0.88 per cent copper over 14.0 metres; both holes were lost while still in mineralization (Assessment Report 4929, page 1). The location of these holes is not known.

In 1970 Stanley Weston (Valdes Syndicate) held the property at which time two holes for 12 metres and 14 metres were diamond drilled. The property in 1972 consisted of I1 and I2, Stan 1 to 3, 87 to 90 and Port 3 to 22 claims. Work carried out included surface and underground workings mapped, a magnetometer survey covering the Port claims, and 91 cubic metres of trenching on I2 and Stan 3. In 1973 the claims held by S. Weston included I1 and I2, Port 3 to 22, Stan 1 to 3, and H & B 1 to 6. An induced polarization survey was carried out on I1 and I2. Work in 1974 included an induced polarization survey and surface diamond drilling of two holes, for 7.6 metres and 38 metres on I2.

BIBLIOGRAPHY

EMPR ASS RPT 4178, 4895, 4929
EMPR EXPL 1975-G52
EMPR GEM 1972-292; 1973-260; 1974-214
EMPR PF (Copies of Assessment Report Maps; *Report by K. Northcote, 1975; various correspondence)
GSC MAP 4-1974; 1386A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; *74-8
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/24

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 253**

NATIONAL MINERAL INVENTORY: 092L12 Zn1

NAME(S): **RAIN**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 20 N
LONGITUDE: 127 45 45 W
ELEVATION: 340 Metres

NORTHING: 5615960
EASTING: 587413

LOCATION ACCURACY: Within 500M

COMMENTS: Location of vein, Assessment Report 4180.

COMMODITIES: Zinc Silver Copper

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite
COMMENTS: Silver mineralogy not known.
ASSOCIATED: Pyrite Quartz
ALTERATION: Silica
ALTERATION TYPE: Skarn Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: K02 Pb-Zn skarn
SHAPE: Tabular
DIMENSION: 0027 Metres STRIKE/DIP: 100/50S TREND/PLUNGE:
COMMENTS: Vein, averages 0.6 metres in width and has surface strike length of 27 metres conforms to attitude of enclosing rocks which strike 100 degrees and dip 40 to 60 degrees south.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u> Lower Jurassic	<u>GROUP</u> Bonanza	<u>FORMATION</u> Undefined Formation	<u>IGNEOUS/METAMORPHIC/OTHER</u>
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			Island Plutonic Suite
Jurassic	ISOTOPIC AGE: 159 +/- 5 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		

LITHOLOGY: Limestone
Argillite
Chert
Monzonite Intrusive
Dioritic Intrusive

HOSTROCK COMMENTS: Bonanza mollusks-Quatsino Sound; biotite K-Ar-southwest Nahwitti Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1972
SAMPLE TYPE: Chip
COMMODITY
Silver GRADE 29.5000 Grams per tonne
Zinc 6.4000 Per cent
COMMENTS: Chip sample over 0.60 metres.
REFERENCE: Assessment Report 4180.

CAPSULE GEOLOGY

The area is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These are intruded by the Jurassic Island Plutonic Suite. Locally a vein of sphalerite with minor pyrite and chalcopyrite

CAPSULE GEOLOGY

is found south of a monzonite or possibly dioritic intrusive. The vein averages 0.60 metres in width and has a surface strike length of 27 metres. The attitude of the vein conforms to that of the Bonanza sediment, striking 100 degrees and dipping 40 to 60 degrees south. Bonanza limestone is found in the footwall at surface, while drilling encountered Bonanza sediments in the hangingwall and siliceous skarn in the footwall. Stringers of sphalerite between 18.3 and 21.3 metres depth assayed up to 11.2 per cent zinc with low amounts of silver (Assessment Report 4180). A 0.60 metre chip sample at surface assayed 6.4 per cent zinc and 29.5 grams per tonne silver (Assessment Report 4180).

BIBLIOGRAPHY

EMPR ASS RPT *4180, 17445
EMPR GEM 1970-254; 1972-306
EMPR PF (Magrum, M., (1988): Summary Report and Proposed Exploration Program, Dorlon project in Prospectus, Silver Drake Resources, July 12, 1988 - refer to 092L 076 - Dorlon)
EMR MP CORPFILE (Giant Explorations Limited)
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983
WWW <http://www.infomine.com/>
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/30

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 254**

NATIONAL MINERAL INVENTORY: 092L7 Cu4

NAME(S): **HAB 11**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 19 19 N
LONGITUDE: 126 44 33 W
ELEVATION: 457 Metres

NORTHING: 5576864
EASTING: 660698

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralization at boundary between Hab 11 and Hab 12 claims is located 2.0 kilometres south of Bonanza Lake (Assessment Report 4350).

COMMODITIES: Copper Magnetite

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Pyrite Copper
ASSOCIATED: Garnet Epidote
ALTERATION: Garnet Epidote
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Stratabound
CLASSIFICATION: Hydrothermal Skarn Epigenetic Industrial Min.
SHAPE: Tabular
MODIFIER: Faulted Sheared

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Andesite
Garnet Epidote Skarn
Granodiorite

HOSTROCK COMMENTS: Ammonites from Hisnit Island; biotite from Nimpkish batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

CAPSULE GEOLOGY

The area is underlain by basalts and lavas of the Upper Triassic Vancouver Group, Karmutsen Formation. The volcanics are intruded by Late Jurassic granodiorite of the Nimpkish Batholith which is part of the Jurassic Island Plutonic Suite.

The Hab 11 occurrence consists of several faulted shear zones that range up to 20 centimetres in width, containing minor chalcopyrite, pyrite and native copper.

A small area contains disseminated chalcopyrite and pyrite, and a 30 centimetre wide garnet-epidote skarn band hosts chalcopyrite, pyrite and magnetite.

All the mineralization lies within andesite of the Upper Triassic Karmutsen Formation.

BIBLIOGRAPHY

EMPR AR 1967-71; 1968-100
EMPR GEM 1970-274; 1972-290; 1973-258; *1976-E128; 1977-E173
EMPR ASS RPT 953, 3698, *4350, 4351, 4353, *4898, 5394, 5868, 6267, 6769
GSC BULL 172; 242
GSC OF 9; 170; 463
GSC ANN RPT 1886

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 481
REPORT: RGEN0100

BIBLIOGRAPHY

GSC SUM RPT 1929A; 1931A
GSC MEM 272
GSC P 38-2; 38-3; 72-44; *74-8
GSC MAP 4-1974; 255A; 1029A; 1552A
EMR MP CORPFILE (Imperial Oil Ltd.)
CJES 18, p. 1; 20, p. 2, 1983
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/03

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 255**

NATIONAL MINERAL INVENTORY: 092L7 Cu4

NAME(S): **WHITE FANG**, BOB 4, SKARN HILL

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 17 49 N
LONGITUDE: 126 44 30 W
ELEVATION: 747 Metres

NORTHING: 5574087
EASTING: 660841

LOCATION ACCURACY: Within 500M

COMMENTS: The Bob 4 occurrence is located on the shore of a small lake,
4.0 kilometres south of Bonanza Lake (Assessment Report 4898).

COMMODITIES: Copper Magnetite

MINERALS

SIGNIFICANT:	Chalcopyrite	Magnetite			
ASSOCIATED:	Garnet	Pyroxene	Epidote	Actinolite	Quartz
	Chlorite	Calcite			
ALTERATION:	Garnet	Pyroxene	Epidote	Actinolite	Quartz
	Chlorite	Calcite			

ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER:	Stratabound	Disseminated	Massive	
CLASSIFICATION:	Skarn	Replacement	Epigenetic	Industrial Min.
SHAPE:	Tabular			
DIMENSION:	0457 x 0076	Metres	STRIKE/DIP:	TREND/PLUNGE:
COMMENTS:	Skarn occurs over 457 by 76 metre area.			

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE:	230 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Gymnotropite ammonites		
Jurassic			Island Plutonic Suite
ISOTOPIC AGE:	151 +/- 14 Ma		
DATING METHOD:	Potassium/Argon		
MATERIAL DATED:	Biotite		

LITHOLOGY: Limestone
Hornblende Quartz Diorite
Garnet Skarn
Mafic Dike
Felsic Dike
Pillow Lava
Basalt
Breccia
Tuff

HOSTROCK COMMENTS: Ammonites from Hisnit Island; biotite from Nimpkish batholith
(Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular	PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell	Plutonic Rocks
METAMORPHIC TYPE: Contact	RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1961
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Magnetite	80.0000 Per cent
COMMENTS: Magnetite body, 3 to 63 metres wide, 100 metres northeast of the White Fang showing.	
REFERENCE: Property File - McDougall, J.J., 1961.	

MINFILE NUMBER: **092L 256**

NATIONAL MINERAL INVENTORY: 092L3 Cu6

NAME(S): **TINY**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 03 29 N
LONGITUDE: 127 20 46 W
ELEVATION: 91 Metres

NORTHING: 5546396
EASTING: 618384

LOCATION ACCURACY: Within 500M

COMMENTS: Location of centre of Tiny 6 claim is 2 kilometres northeast of McKay Cove and 2.5 kilometres northwest of Crowther Channel.

COMMODITIES: Copper

MINERALS

SIGNIFICANT:	Chalcopyrite	Bornite		
ALTERATION:	Azurite	Malachite	Epidote	Chlorite
ALTERATION TYPE:	Oxidation		Epidote	Chloritic
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER:	Disseminated	Stockwork		
CLASSIFICATION:	Hydrothermal	Epigenetic		
SHAPE:	Tabular			
MODIFIER:	Faulted	Fractured		
DIMENSION:	0030	Metres	STRIKE/DIP:	035/86E
COMMENTS:	Attitude of fault associated with mineralization strikes 035 degrees, dipping 86 degrees east.			TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE:	200 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Mollusks		

LITHOLOGY: Andesite
Tuff
Agglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: TRENCH

REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1973
SAMPLE TYPE:	Chip		
COMMODITY	Copper	GRADE	1.3400 Per cent

COMMENTS: Over 10 metre trench.
REFERENCE: Assessment Report 4600.

CAPSULE GEOLOGY

The region of the Tiny occurrence is underlain by volcanic rocks of the Lower Jurassic Bonanza Group.

Locally, an assemblage of grey-green fine-grained andesite, fine to medium-grained tuff and agglomerate with fragments ranging from 3 to 30 centimetres set in a fine-grained grey/green matrix, show weak chlorite and epidote alteration on fractures. Quartz-eyes and veinlets occur in tuff and agglomerate. Pyrite occurs locally as disseminations and 1 centimetre fracture fillings.

On the Tiny 6 claim, in association with a fault striking 035 degrees and dipping 86 degrees east, copper mineralization occurs as chalcopyrite, bornite, malachite and azurite. A chip sample over 10 metres assayed 1.34 per cent copper (Assessment Report 4600).

Fracturing at the occurrence is in sets striking 030 to 035 degrees, dipping 60 degrees west and striking 110 degrees dipping near vertically.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

EMPR GEM 1973-256
EMPR ASS RPT *4600
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC OF 9; 170; 463
GSC SUM RPT 1913; 1920A
GSC MAP 4-1974; 255A
GSC ANN RPT 1886

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/24

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 257**

NATIONAL MINERAL INVENTORY: 092L5 Cu14

NAME(S): **PABLO 22**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 15 19 N
LONGITUDE: 127 44 41 W
ELEVATION: Metres

NORTHING: 5567768
EASTING: 589484

LOCATION ACCURACY: Within 500M

COMMENTS: Located at Klaskish Basin at the head of Klaskish Inlet off Brooks Bay.

COMMODITIES: Copper Zinc Silver Iron

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Magnetite Pyrrhotite

COMMENTS: Silver mineralogy not known.

ASSOCIATED: Pyrite

ALTERATION: Epidote

ALTERATION TYPE: Epidote

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated

CLASSIFICATION: Igneous-contact Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

Jurassic

ISOTOPIC AGE: 181 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Phlogopite

Island Plutonic Suite

LITHOLOGY: Andesite
Basalt
Granodiorite
Diorite

HOSTROCK COMMENTS: Ammonites from Hisnit Island; Intrusions phlogopite from Empire Development Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1973

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver	9.9500	Grams per tonne
Copper	0.3700	Per cent
Iron	13.6000	Per cent
Zinc	1.9200	Per cent

COMMENTS: Sample 30501 over 7 metres. Sample 30502 taken nearby assayed 13.6 per cent iron.

REFERENCE: Assessment Report 4598.

CAPSULE GEOLOGY

The Pablo 22 occurrence is underlain by andesite and basalt of the Upper Triassic Vancouver Group, Karmutsen Formation. The volcanics have been intruded by a granodiorite to diorite stock related to the Jurassic Island Plutonic Suite. The volcanics are epidote altered and host disseminated pyrite and pyritic fracture fillings. Chalcopyrite, pyrrhotite, magnetite and sphalerite mineralization is disseminated within the andesite near the intrusive contact.

A sample taken over 7 metres assayed 0.37 per cent copper, 1.92

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RUN TIME: 11:19:00

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CAPSULE GEOLOGY

per cent zinc and 9.95 grams per tonne silver (Sample #30501; Assessment Report 4598, Map 8). A sample nearby ran 13.6 per cent iron (Sample #30502).

BIBLIOGRAPHY

EMPR GEM 1973-257
EMPR ASS RPT 4598
GSC P 69-1A; 70-1A; 72-44; *74-8
GSC MAP 4-1974
GSC OF 9; 170; 463
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/16

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 258**

NATIONAL MINERAL INVENTORY: 092L5 Cu14

NAME(S): **PABLO 24-2**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 15 36 N
LONGITUDE: 127 44 26 W
ELEVATION: Metres

NORTHING: 5568298
EASTING: 589772

LOCATION ACCURACY: Within 500M

COMMENTS: Located west of Klaskish Basin at the head of Klaskish Inlet off Brooks Bay.

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Pyrite

COMMENTS: Silver mineralogy not known.

ALTERATION: Epidote Silica

ALTERATION TYPE: Epidote Silicific'n

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Igneous-contact
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

Jurassic

ISOTOPIC AGE: 181 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Phlogopite

Island Plutonic Suite

LITHOLOGY: Andesite
Basalt
Siliceous Breccia
Granodiorite
Diorite

HOSTROCK COMMENTS: Ammonites from Hisnit Island; Intrusions phlogopite from Empire Development Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1973

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

5.6000

Grams per tonne

Copper

0.4200

Per cent

COMMENTS: Sample 30504 over 5.0 metres.

REFERENCE: Assessment Report 4598.

CAPSULE GEOLOGY

The Pablo 24-2 occurrence is underlain by andesite and basalt of the Upper Triassic Vancouver Group, Karmutsen Formation. The volcanics have been intruded by a granodiorite to diorite stock related to the Jurassic Island Plutonic Suite. The volcanics are epidote altered and host disseminated pyrite and pyritic fracture fillings.

Locally, chalcopyrite and pyrite are disseminated throughout a silicified breccia at the volcanic-intrusive contact. A sample over 5.0 metres assayed 0.42 per cent copper and 5.6 grams per tonne silver (Assessment Report 4598).

Similar mineralization occurs on the Pablo 24-3 claim located

CAPSULE GEOLOGY

about 300 metres to the southwest. Minor disseminated chalcopyrite and bornite are hosted within a breccia zone along the intrusive contact.

BIBLIOGRAPHY

EMPR GEM 1973-257
EMPR ASS RPT 4598
GSC P 69-1A; 70-1A; 72-44; *74-8; 79-30
GSC MAP 4-1974
GSC OF 9; 170; 463
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/16

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 260**

NATIONAL MINERAL INVENTORY: 092L2 Cu4

NAME(S): **ATLUCK**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W 092L03E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 11 47 N
LONGITUDE: 126 59 51 W
ELEVATION: 137 Metres

NORTHING: 5562386
EASTING: 642923

LOCATION ACCURACY: Within 500M

COMMENTS: Location is the centre of mineral occurrences at boundary of Atluck 3 and 4 claims in Assessment Report 4818, 300 metres west of Atluck Lake, 25 kilometres northwest of Zeballos.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite Epidote Malachite
ALTERATION: Epidote Quartz Clay Prehnite Malachite
ALTERATION TYPE: Argillic Epidote Fenitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Irregular
MODIFIER: Sheared
DIMENSION: STRIKE/DIP: 315/ TREND/PLUNGE:
COMMENTS: Northwest striking sediments.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Amygdaloidal Basalt
Limestone

HOSTROCK COMMENTS: Ammonites from Hisnit Island. Mollusks from Quatsino Sound (Geological Survey of Canada, Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group rocks comprised of Quatsino Formation limestones which overlie Karmutsen Formation volcanics. Lower Jurassic Bonanza Group volcanics overlie the Quatsino limestone.

Locally, subhorizontal northwest striking white recrystallized limestone of the Quatsino Formation is in contact with fine-grained amygdaloidal basalt of the Bonanza Group (Assessment Report 4818) or the Karmutsen Formation (Geological Survey of Canada Paper 4-1974). The basalt shows multidirectional shearing with associated epidote, quartz and locally prehnite and clay. The predominant fracture set trends 045 degrees, with a steep southeast dip. Mineralization occurs as fine chalcopyrite disseminations and fracture fillings, accompanied by pyrite, epidote and malachite.

BIBLIOGRAPHY

EMPR GEM 1973-255
EMPR ASS RPT 4818
EMR MP CORPFILE (Groundstar Resources)
GSC P 38-5; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC OF 9; 170; 463

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

GSC MEM 272
GSC SUM RPT 1929A
GSC MAP 4-1974; 255A; 1028A
GSC EC GEOL 1-1947

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/16

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 261**

NATIONAL MINERAL INVENTORY: 092L4 Cu2

NAME(S): **BATTLE**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L04E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 13 47 N
LONGITUDE: 127 35 06 W
ELEVATION: 500 Metres

NORTHING: 5565131
EASTING: 600923

LOCATION ACCURACY: Within 500M

COMMENTS: Location is centre of Battle 1 to 6 claims, 5.0 kilometres northeast of the head of Nasparti Inlet.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	

ISOTOPIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks

Jurassic Island Plutonic Suite

ISOTOPIC AGE: 181 +/- 8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Phlogopite

LITHOLOGY: Andesite Flow
Sediment/Sedimentary
Andesite Dike
Diorite Dike
Diorite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Intrusions phlogopite from Empire Development Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1974

COMMODITY: Copper
GRADE: 0.0500 Per cent

COMMENTS: Average of 30 samples.

REFERENCE: Geology, Exploration and Mining 1973, page 256.

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics comprised mainly of andesitic to rhyodacitic lava, tuff and breccia. On the Battle claims, the Bonanza Group andesite flows with minor intercalated sediments are cut by numerous andesitic to diorite dykes. A small diorite stock intrudes volcanic rocks on the Battle 2 claim. The intrusives are related to the Jurassic Island Plutonic Suite.

Locally, mineralization consisting of pyrite, pyrrhotite and chalcopyrite occurs in the volcanics and intercalating sediments. Up to 15 per cent pyrite is disseminated throughout the rocks with minor associated pyrrhotite and chalcopyrite. Thirty samples collected from the mineralized zone by Kennco in 1974 averaged 0.05 per cent copper (Geology, Exploration and Mining 1973, page 256).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM 1973-256
GSC P 69-1A; 70-1A; 72-44; *74-8
GSC MAP *4-1974
GSC OF 9; 170; 463
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/16

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 262**

NATIONAL MINERAL INVENTORY: 092L10 Cu2

NAME(S): **LORENA**, BEAVER 2, NIMROD 2

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L10W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 31 10 N
LONGITUDE: 126 52 46 W
ELEVATION: 20 Metres

NORTHING: 5598535
EASTING: 650324

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location is the centre of area "A" in Assessment Report 4596, located 1.0 kilometre southwest of Beaver Cove off Johnstone Strait.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: D03 Volcanic redbed Cu

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

Jurassic

ISOTOPIC AGE: 154 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Island Plutonic Suite

LITHOLOGY: Basalt
Granodiorite

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island; Island Plutonic Suite biotite from Soren Hill (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Regional

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE:

CAPSULE GEOLOGY

The occurrence is underlain by rocks of the Upper Triassic Vancouver Group comprised of Quatsino limestone which overlies older Karmutsen volcanic rocks. Granodiorite of the Jurassic Island Plutonic Suite occur to the west and east as small stocks.

The occurrence consists of disseminations, fracture fillings and amygdaloidal coatings of chalcopyrite in basalt on the Beaver 2 claim (Assessment Report 4596) or Nimrod 2 claim (Assessment Report 8285).

A massive sphalerite occurrence 2.0 kilometres southwest on the same claim group is described as 092L 221.

BIBLIOGRAPHY

EMPR GEM 1973-260
EMPR EXPL 1980-271; 1984-242; 1986-C279
EMPR ASS RPT *4596, 8285, 12764, 15230
GSC P 69-1A; 70-1A; 72-44; *74-8
GSC MAP 4-1974
GSC OF 9; 170; 463
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1988/11/29

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 263**

NATIONAL MINERAL INVENTORY: 092L3 Cu7

NAME(S): **CU**, KWOIS

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03E
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 10 54 N
LONGITUDE: 127 10 06 W
ELEVATION: 686 Metres

NORTHING: 5560435
EASTING: 630771

LOCATION ACCURACY: Within 500M

COMMENTS: Location is for the Waterfall zone of Assessment Report 5193, located 5.5 kilometres northwest of the head of Tahsish Inlet and 3.0 kilometres west of the confluence of the Kwois Creek and Tahsish River.

COMMODITIES: Copper Molybdenum Magnetite

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Molybdenite Magnetite
COMMENTS: Minor gold values.
ALTERATION: Quartz Pyrite Epidote
ALTERATION TYPE: Silicific'n Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Porphyry Industrial Min.
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Hornblende			

LITHOLOGY: Porphyritic Trachyandesite
Quartz Granodiorite
Diorite
Biotite Hornfels
Andesite Flow
Agglomerate
Tuff

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Intrusive hornblende from Nimpkish batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1974
SAMPLE TYPE: Chip
COMMODITY: Copper GRADE
Copper 0.3100 Per cent
COMMENTS: Disseminated and porphyry type mineralization, inner core of intrusion. Maximum value.
REFERENCE: Assessment Report 5193, page 18.

CAPSULE GEOLOGY

The Cu occurrence on Kwois Creek is located in an area where Lower Jurassic Bonanza andesite flows, agglomerates and tuffs have been intruded by the Kauwinch Pluton of the Jurassic Island Plutonic Suite.

The pluton is strongly zoned, with a core of trachyandesite porphyry surrounded by quartz granodiorite and an outer phase of

CAPSULE GEOLOGY

diorite. A 30 metre wide zone of biotite hornfels represents contact alteration of volcanic rocks.

The core of the intrusive complex contains fine fracture coatings of chalcopyrite and bornite, accompanied by quartz-pyrite alteration. Finely disseminated copper mineralization is also present. Samples returned maximum values of 0.31 per cent copper, 0.001 per cent molybdenite and 0.1 grams per tonne gold (Assessment Report 5193, page 18).

The two outer phases and the intruded volcanic rocks are weakly mineralized with disseminated chalcopyrite. Erratic and sparse quartz-molybdenite veins are present in the diorite outer phase. A sample of the biotite hornfels contact zone returned 0.21 per cent copper (Assessment Report 5193, page 18). Epidote altered andesite carries 3 to 5 per cent magnetite.

A copper occurrence is reported at the boundary of the Cu 5 and 6 claims, 1 kilometre north of the main showing (Assessment Report 5193, Map 1) but no details are given.

BIBLIOGRAPHY

- EMPR ASS RPT *5193
EMPR GEM 1974-210
EMPR PF (Leighton, D.G., (1974): Report on the Kwois and Chachelot prospects, Stokes Exploration Management, for Brinex)
GSC OF 9; 170; 463
GSC ANN RPT 1886
GSC MAP 4-1974; 255A
GSC P 69-1A; 70-1A; 74-8; 72-44
GSC SUM RPT 1913; 1920A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/24

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 264**

NATIONAL MINERAL INVENTORY: 092L3 Cu8

NAME(S): **KUQ**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03E
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 12 24 N
LONGITUDE: 127 11 34 W
ELEVATION: 838 Metres

NORTHING: 5563172
EASTING: 628958

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of claims is located 2.5 kilometres west of Kwois River, 8 kilometres northwest of head of Tahsish Inlet.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ALTERATION: Garnet Diopside
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Skarn Replacement
SHAPE: Tabular
MODIFIER: Fractured Faulted
DIMENSION: 610 Metres STRIKE/DIP: 315/30W TREND/PLUNGE:
COMMENTS: Mineralization occurs over 610 metre strike length in limestone bed striking 315 degrees and dipping 30 degrees west.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Hornblende			

LITHOLOGY: Limestone
Quartz Diorite
Garnet Diopside Skarn
Andesite Flow
Agglomerate
Tuff

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Intrusive hornblende from Nimpkish batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Hornfels

CAPSULE GEOLOGY

The KUQ occurrence is located in an area underlain by Lower Jurassic Bonanza Group rocks, consisting of andesitic flows, tuffs and agglomerates. Minor sediments are interbedded with the volcanic rocks.

The Kauwitch intrusive stock of the Jurassic Island Plutonic Suite lies immediately west of the occurrence.

The occurrence consists of weak disseminated chalcopyrite mineralization over 610 metres of strike length in a garnet-diopside skarn altered limestone bed. The limestone bed strikes northwest and dips 30 degrees west. The mineralized skarn lies at the contact of a quartz diorite intrusive. Flat faults and fractures occur throughout the host rock.

BIBLIOGRAPHY

EMPR GEM 1974-210
EMPR PF (Nordin, G., B.Sc., (1975): Geological Report on the KUQ claims, Texada Mines)

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 498
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 9; 170; 463
GSC SUM RPT 1913; 1920A
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC ANN RPT 1886
GSC MAP 4-1974; 255A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/24

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 265**

NATIONAL MINERAL INVENTORY: 092L5 Cu16

NAME(S): **FANG**, WILF, HARAT LAKE

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 17 39 N
LONGITUDE: 127 34 58 W
ELEVATION: 488 Metres

NORTHING: 5572299
EASTING: 600945

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization on Fang 1 claim (from Assessment Report 5129) is 10.0 kilometres due east of the head of Klaskino Inlet, at the headwaters of Klaskish River.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite
ALTERATION: Quartz Epidote
ALTERATION TYPE: Epidote Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork
CLASSIFICATION: Hydrothermal Igneous-contact Epigenetic
TYPE: * Unknown
SHAPE: Irregular
MODIFIER: Fractured
DIMENSION: 33 Metres STRIKE/DIP: 315/ TREND/PLUNGE:
COMMENTS: Mineralized zone, 33 metres wide, parallels contact with northwest trending pluton.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Andesite Flow
Dacite Fragmental Flow
Diorite

HOSTROCK COMMENTS: Mollusks from Quatsino Sound; biotite from Island Copper stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1974
SAMPLE TYPE: Chip
COMMODITY GRADE
Copper 0.7100 Per cent
COMMENTS: 9.0 metres of 0.71 per cent copper and 24 metres estimated at 0.5 per cent copper.
REFERENCE: Assessment Report 5129, Figure 7.

CAPSULE GEOLOGY

The area lies within the Insular Belt of the Cordillera and is underlain mainly by volcanics, crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage consisting of sediments of the Paleozoic Sicker Group and basalts and minor carbonate and clastic sediments of the Upper Triassic Vancouver Group. The Bonanza volcanics are coeval with, or genetically related to, granodiorite

CAPSULE GEOLOGY

stocks of the Jurassic Island Plutonic Suite which intrude all older rocks.

The Fang or Wilf occurrence lies on the flank of a northwest trending multiphased dioritic pluton of the Island Plutonic Suite that separate Bonanza Group felsic to intermediate volcanics from Karmutsen Formation (Vancouver Group) tholeiitic basalts. The mineralization consists of a 33 metre wide zone of pyrite, chalcopyrite, quartz and epidote in a zone of intense fracturing and silicification of Bonanza andesite flows and interbedded dacite fragmental flow rocks. The zone parallels the intrusive contact and lies 120 metres away from it. Mineralized fractures are oriented at 300 to 325 degrees with a 60 to 85 degree north dip. A second set of mineralized fractures has the same strike, dipping 25 to 40 degrees north. The zone contains 1 to 2 per cent disseminated pyrite. Magnetite occurs at the north and south end.

Mapping in 1990 was reported to indicate that the showing occurs in the contact zone between limy Karmutsen or Bonanza volcanic rocks and granodiorite.

A 9.0 metre section was sampled and assayed 0.71 per cent copper. An additional 24 metre section was not sampled but was estimated to contain 0.50 per cent copper (Assessment Report 5129, Figure 7).

Copper-magnetite mineralization was discovered on the Wilf property by Wilf Tremblay in 1960. In 1962, Riocanex optioned the property and others nearby. They carried out geological mapping, trenching and surface sampling in 1963. In 1964, they drilled two shallow holes near a well-mineralized trench (Assessment Report 21966, page 3). Riocanex also carried out mapping, geochemical surveys and self potential surveys on the Iron Cop (92L 330) occurrence during this period. They trenched several occurrences and drilled 3 holes for a total of 161 metres. The property lapsed in 1969 and was restaked by Kaiser. No work was filed by them on the Iron Cop. Vanco restaked a group of claims in the vicinity in 1974. From 1973 to 1983, the Iron Cop was controlled by various individuals that attempted to form companies. In 1984, the Iron Cop was consolidated with several nearby showings and optioned to Brinco Mining. In 1983 and 1984, Brinco carried out geological mapping, geochemical surveys, magnetic surveying and diamond drilling of 7 holes totalling 505 metres. From 1986 to 1989, the Iron Cop property was explored by Jim McDonald who carried out trenching and sampling. Defiant Minerals held an option on the property briefly in 1987. In 1990, several claims were sold to Petra Gem Explorations of Canada Ltd. and several others to Omax Resources. In 1990, Petra Gem carried out a program of re-examining the Brinco core. At the same time Omax carried out magnetic and VLF-EM geophysical surveys and soil sampling on a grid over the Wilf showing area. In 1991, Omax carried out an induced polarizaiotn survey (6.7 kilometres), a magnetics survey (3.6 kilometres) and a VLF survey (0.8 kilometres) in the Iron Cop area. In the same year, Omax resampled the Wilf showing trenches.

BIBLIOGRAPHY

- EMPR GEM 1974-211
EMPR EXPL 1976-E127; 1984-241
EMPR ASS RPT 5128, 5129, 5335, 12913, 21996
EMPR OF 1993-10; 1997-13
EMPR FIELDWORK 1992, pp. 17-35
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC OF 9; 170; 463
GSC BULL 242
GSC SUM RPT 1918B; 1929A
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1998/12/01

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 266**

NATIONAL MINERAL INVENTORY: 092L5 Cu15

NAME(S): **TENT**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 19 05 N
LONGITUDE: 127 35 21 W
ELEVATION: 396 Metres

NORTHING: 5574946
EASTING: 600440

LOCATION ACCURACY: Within 500M

COMMENTS: Location of diamond-drill hole 74-1 (from Assessment Report 4989) on the boundary of Tent 1 and 18 claims is at the headwaters off a north fork of Klaskish River, 13.5 kilometres north of the head of Nasparti Inlet.

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Pyrite
ALTERATION: Biotite Kaolin Chlorite Carbonate Pyrite
ALTERATION TYPE: Argillic Propylitic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Irregular
MODIFIER: Faulted Sheared

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Amphibolite Quartz Diorite
Andesite
Tholeiitic Basalt
Dacite Rhyolite Dike
Quartz Diorite Dike

HOSTROCK COMMENTS: Ammonites from Hisnit Island; mollusks from Quatsino Sound; biotite from Island Copper stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1991

COMMODITY: Copper
GRADE: 0.0900 Per cent

COMMENTS: An average of chip sampling over 50 metres.
REFERENCE: Assessment Report 22167, page 7.

CAPSULE GEOLOGY

The area lies within the Insular Belt of the Cordillera and is underlain mainly by volcanics, crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage consisting of sediments of the Paleozoic Sicker Group and basalts and minor carbonate and

CAPSULE GEOLOGY

clastic sediments of the Upper Triassic Vancouver Group. The Bonanza volcanics are coeval with, or genetically related to, granodiorite stocks of the Jurassic Island Plutonic Suite which intrude all older rocks.

The Tent occurrence lies at the faulted contact between Vancouver Group Karmutsen Formation tholeiitic basalts and Bonanza Group andesite. A small northwest-elongated amphibolite quartz diorite has intruded the contact area. Dacite-rhyolite and quartz diorite dykes are common. Faulting and shearing is prominent. Chlorite and carbonate alteration is present on fractures in the intrusive rock.

Traces of disseminated and fracture coating pyrite, molybdenite and chalcopyrite occur in biotite-kaolinite altered intrusive rocks and volcanics, and in 3 millimetre quartz stringers that occur at a frequency of about 3 per metre. The main zone of intrusive hosted copper-molybdenum mineralization is reported to have minimum dimensions of 300 by 600 metres. The highest sample value from a grab sample obtained by Stow Resource in 1991 was 0.28 per cent copper, 0.1 gram per tonne gold and 0.074 per cent molybdenum (Assessment Report 22167, page 7). A 50-metre continuous chip sample averaged 0.09 per cent copper (Assessment Report 22167, page 7).

Rio Tinto is thought to have conducted mapping, geochemistry and trenching on the Tent property in the 1960s. Vanco Explorations staked the claims covering the prospect in 1969 and followed up in 1970 by collecting 2225 soil samples and conducting IP and ground magnetics surveys. They also excavated 65 trenches. Branta Explorations drilled two holes totalling 184 metres. In 1974, Imperial Oil Limited drilled five holes totalling 497 metres. No other work is documented prior to the 1991 work program of Stow Resources Ltd. which included the collection of 41 rock samples and the 65 stream silt samples.

BIBLIOGRAPHY

- EMPR ASS RPT 2457, 2739, *4989, 5334, *22167
EMPR GEM 1970-271; 1971-318; 1972-287; 1974-212
EMPR OF 1993-10; 1997-13
EMPR FIELDWORK 1992, pp. 17-35
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC OF 9; 170; 463
GSC BULL 172; 242
GSC SUM RPT 1918B; 1929A
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
EMR MP CORPFILE (Rio Tinto Canadian Exploration Ltd.; Branta Explorations Ltd.)
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1998/12/03

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 267**

NATIONAL MINERAL INVENTORY:

NAME(S): **FOX**, HOLBERG INLET, WEST ARM-QUATSINO SOUND

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 37 12 N
LONGITUDE: 127 56 09 W
ELEVATION: 341 Metres

NORTHING: 5608109
EASTING: 575280

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location centered on outcrop of western limestone deposit
(Assessment Report 5413, Map 3, page 15).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Sulphide
MINERALIZATION AGE: Upper Triassic
ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Various fossils

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: R09 Limestone
SHAPE: Tabular
DIMENSION: 1800 x 1300 x 46 Metres

Massive
Industrial Min.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	

DATING METHOD: Fossil
MATERIAL DATED: Various fossils

LITHOLOGY: Limestone
Amygdaloidal Basalt
Vesicular Andesite
Tuff

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
COMMENTS: Formed on a shallow marine platform of ocean rift volcanics.

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: WESTERN

REPORT ON: Y

CATEGORY: Unclassified
QUANTITY: 236000000 Tonnes
COMMODITY: Limestone
GRADE: 54.3300 Per cent
YEAR: 1975

COMMENTS: Over a minimum thickness of 46 metres. Grade based on grab sampling. Grade given for calcium oxide.

REFERENCE: Assessment Reports 5413, page 17; 5666, page 16.

CAPSULE GEOLOGY

This occurrence is situated 6 kilometres east of the head of Holberg Inlet on its south shore, 34 kilometres southwest of Port McNeill.

A discontinuous belt of limestone of the Upper Triassic Quatsino Formation (Vancouver Group), commonly segmented by north to northwest trending faults, extends west-northwest from Quatsino Narrows at the entrance to Holberg Inlet along the south side of the inlet for 53 kilometres to William Lake. The belt is bounded to the south by overlying volcanics of the Lower Jurassic Bonanza Group and argillite and black limestone of the Upper Triassic Parsons Bay Formation (Vancouver Group). Underlying mafic volcanics of the Upper Triassic Karmutsen Formation (Vancouver Group) occasionally outcrop along the northern margin of the belt.

Three masses of limestone are exposed in the central portion of a 1.8 kilometre wide rectangular fault block that extends

CAPSULE GEOLOGY

southeastward from the shore of Holberg Inlet for 2.5 kilometres. The western most deposit outcrops over a 1.8 by 1.3 kilometre area (190 hectares). The mass is underlain by chloritic, amygdaloidal basalt of the Upper Triassic Karmutsen Formation. Variably amygdaloidal Lower Jurassic Bonanza Group (?) volcanics outcrop around the east, west and south sides of the deposit.

The western deposit is comprised of fine grained, white to dark grey limestone that is commonly cut by calcite veinlets. Minor sulphides are present. The limestone becomes intercalated with some tuff, basalt and vesicular andesite in a few places. An analysis of various grab samples contained 54.33 per cent CaO, 1.19 per cent MgO, 0.51 per cent SiO₂, 0.20 per cent Al₂O₃, 0.14 per cent Fe₂O₃, 0.011 per cent phosphorus, 0.01 per cent sulphur and 43.40 per cent ignition loss (E.M.P.R. Assessment Report 5413, p. 17). Reserves in the western deposit are estimated at 236 million tonnes of limestone over a minimum thickness of 46 metres. (E.M.P.R. Assessment Report 5666, p. 16)

World Cement Industries Inc. carried out 1529 metres of diamond drilling accompanied by some mapping and sampling between 1971 and 1980. The limestone was to be used to supply a cement plant that the company proposed to construct at Nanaimo with a capacity to manufacture 900,000 tonnes of cement a year.

BIBLIOGRAPHY

- EMPR ASS RPT 4908, *5413, 5414, 5666, *6053, 6951, 8073
- EMPR EXPL 1975-200; 1976-205
- EMPR GEM 1970-254; 1974-218
- EMPR OF 1992-18, pp. 31, 34
- EMPR PF (1976 Prospectus, Holberg Mines Ltd.)
- GSC ANN RPT 1886
- GSC BULL 242
- GSC MAP *4-1974; 1552A
- GSC OF 9; 170; 463, Sheet 2; 722
- GSC P 69-1A; 72-44; *74-8
- CJES 18, p. 1; 20, p. 1, Jan. 1983
- Lockie, D.A. (1957): A Petrographic Analysis of Some Limestones of Southwestern British Columbia, University of British Columbia unpub. B.A. Thesis, pp. 22,23

DATE CODED: 1985/07/24
DATE REVISED: 1989/07/25

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 268**

NATIONAL MINERAL INVENTORY: 092L12 Cu6

NAME(S): **WOB 16**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 31 N
LONGITUDE: 127 41 15 W
ELEVATION: 485 Metres

NORTHING: 5616390
EASTING: 592705

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on Wob 16 claim (Assessment Report 1719).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Copper
COMMENTS: Native copper.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Andesite
Limestone
Shale

HOSTROCK COMMENTS: Karmutsen ammonites-Hisnit Island; Bonanza mollusks-Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

In this area the geology from northeast to southwest, consists of northwest trending Karmutsen Formation andesites and minor limestone, Quatsino Formation limestone, both of the Upper Triassic Vancouver Group and Lower Jurassic Bonanza Group shales. To the south this succession is in fault contact with the Karmutsen Formation.

In the southern block of the Karmutsen Formation, close to the contact with the Bonanza Group, there is a showing of native copper (Assessment Report 1719).

BIBLIOGRAPHY

EMPR AR *1968-84
EMPR GEM 1969-364; 1970-254,264; 1971-322
EMPR EXPL 1982-231
EMPR ASS RPT *1719, 2208, 2787, 3086, 10852, 12405
GSC ANN RPT 1886
GSC P 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1989/02/02
DATE REVISED: / /

CODED BY: NJH
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 269**

NATIONAL MINERAL INVENTORY: 092L12 Sia1

NAME(S): **H & W**

MINING DIVISION: Nanaimo

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 36 43 N
LONGITUDE: 127 42 00 W
ELEVATION: 69 Metres

NORTHING: 5607480
EASTING: 591978

LOCATION ACCURACY: Within 500M

COMMENTS: H & W 1 claim (Assessment Report 8151).

COMMODITIES: Silica

MINERALS

SIGNIFICANT: Silica
ASSOCIATED: Pyrite
ALTERATION: Silica Kaolinite
ALTERATION TYPE: Silicific'n Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: R12 Volcanic glass - perlite

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Lower Cretaceous	Queen Charlotte	Longarm	
ISOTOPIC AGE: 122 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Various fauna			

LITHOLOGY: Dacite Tuff
Rhyodacite Tuff

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Longarm fauna from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
Overlap Assemblage
RELATIONSHIP: Post-mineralization
GRADE: Zeolite

INVENTORY

ORE ZONE: H & W 1

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 15500000 Tonnes
COMMODITY: Silica
GRADE: 42.9900 Per cent
YEAR: 1979

COMMENTS: Grade given was 91.97 per cent SiO₂; conversion to Si using the factor 2.1393.

REFERENCE: Assessment Report 8151.

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics and Lower Cretaceous Queen Charlotte Group, Longarm Formation sediments.

On the H & W 1 claim there is a silica-rich knoll in dacitic to rhyodacitic tuffs. Silica is the main alteration product with minor kaolinite present as well. In some areas the rocks are pyrite rich. The rocks weather yellow-brown with soft surfaces. No geologic contacts have been observed, but the east end of the dacitic rocks is inferred to terminate against a northeast trending fault, the south end is terminated near Holberg Inlet, and the northend is inferred to be near the edge of outcrop exposure. No reference to the west is available.

Based on surface sampling and the inferred boundaries of the dacitic rocks, a reserve of 15,500,000 tonnes grading 91.97 per cent

CAPSULE GEOLOGY

silica (SiO₂) has been estimated (Assessment Report 8151).
To the east on the H & W 8 claim, rhyolite was quarried in 1965 by Lafarge Cement of North America Ltd. (refer to 092L 150 - Holberg).
Bog iron, derived from pyrite-rich andesites, is present at the base of the knoll in the southwest (refer to 092L 087 - Quatsino Iron Ore).

BIBLIOGRAPHY

EM EXPL 2000-25-32; 2002-29-40
EMPR AR 1968-84
EMPR ASS RPT 6142, 6544, *8151
EMPR EXPL 1976-207; 1977-256; 1979-337
EMPR GEM 1970-254
EMPR OF *1987-15
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/26

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 270**

NATIONAL MINERAL INVENTORY: 092L12 Cu12

NAME(S): **KW**, KW 59, KW 81

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 37 24 N
LONGITUDE: 127 48 33 W
ELEVATION: 122 Metres

NORTHING: 5608616
EASTING: 584234

LOCATION ACCURACY: Within 500M

COMMENTS: Several showings on KW Group from Hushamu Creek to Clesklagh Creek (Assessment Report 3233).

COMMODITIES: Copper Coal

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Coal
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: A04 Bituminous coal
COMMENTS: Coal seam is 30 centimetres wide and is part of the Koskeemo coal area.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 220 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Lower Cretaceous	Queen Charlotte	Longarm	
ISOTOPIC AGE: 122 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Various fauna			

LITHOLOGY: Andesite
Andesite Flow
Andesite Tuff
Andesite Agglomerate
Andesite Lapilli Tuff
Siltstone
Sandstone
Coal

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Longarm fauna from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Nawwhitti Lowland
Overlap Assemblage
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by andesitic volcanics of the Lower Jurassic Bonanza Group and minor sediments of the Lower Cretaceous Queen Charlotte Group, Longarm Formation.

Several small showings of chalcopyrite and pyrite are found on the old KW group of claims from Hushamu Creek and west to Clesklagh Creek.

Also, a 30 centimetre wide coal seam is located within the Lower Cretaceous Longarm Formation on the old KW 89 claim. This is part of the Koskeemo coal area (refer to 092L 095).

BIBLIOGRAPHY

EMPR GEM 1968-84; 1969-202; 1970-254,259; 1971-322
EMPR ASS RPT 1929, 2521, *3233
GSC ANN RPT 1886
GSC P 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 509
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BIBLIOGRAPHY

CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/16

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 271**

NATIONAL MINERAL INVENTORY: 092L12 Cu12

NAME(S): **H, H 9**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 38 23 N
LONGITUDE: 127 53 53 W
ELEVATION: Metres

NORTHING: 5610341
EASTING: 577919

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ALTERATION: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 220 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Lower Cretaceous	Queen Charlotte	Longarm	
ISOTOPIC AGE: 122 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Various fauna			

LITHOLOGY: Siliceous Tuff
Andesite Flow
Agglomerate
Siltstone
Sandstone

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Longarm fauna from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP: Syn-mineralization
GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by andesitic volcanics of the Lower Jurassic Bonanza Group and minor sediments of the Lower Cretaceous Queen Charlotte Group, Longarm Formation. Pyrite and minor chalcopyrite are present in silicified tuff of the Bonanza Group on the H 9 claim in a small creek. Further up the creek, andesite flows and agglomerate contain up to 20 per cent disseminated pyrite. Siltstone and sandstone of the Longarm Formation are located nearby, along the shore of Holberg Inlet.

BIBLIOGRAPHY

EMPR GEM 1968-84; 1969-202; 1970-254,259; 1971-322
EMPR ASS RPT *2561, 3233
GSC ANN RPT 1886
GSC P 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1989/02/17
DATE REVISED: 1989/05/16

CODED BY: NJH
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 272**

NATIONAL MINERAL INVENTORY: 092L12 Fe5

NAME(S): **WANOKANA**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 39 53 N
LONGITUDE: 127 40 00 W
ELEVATION: 335 Metres

NORTHING: 5613390
EASTING: 594230

LOCATION ACCURACY: Within 1 KM

COMMENTS: Wanokana 1-6 claims, at the headwaters of Wanokana Creek (Assessment Report 665).

COMMODITIES: Copper Iron Magnetite

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite
ASSOCIATED: Pyrite
ALTERATION: Quartz Calcite K-Feldspar
COMMENTS: Amygdules.
ALTERATION TYPE: Silicific'n Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal Volcanogenic Industrial Min.
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 159 +/- 5 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Amygdaloidal Andesite
Amygdaloidal Basalt
Hornblende Biotite Quartz Diorite

HOSTROCK COMMENTS: Karmutsen ammonites-Hisnit Island; biotite K-Ar from southwest of Nahwitti Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: Syn-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group, Karmutsen Formation volcanics. To the south the rocks are intruded by granodiorite rocks of the Jurassic Island Plutonic Suite. Locally, disseminated pyrite, chalcopyrite and magnetite are present in amygdaloidal basalts and andesites, and in quartz diorite near the headwaters of Wanokana Creek. The volcanics contain quartz, calcite and K-feldspar amygdules. The intrusive is generally a medium-grained grey hornblende-biotite quartz diorite.

BIBLIOGRAPHY

EMPR AR 1966-248; 1968-84
EMPR GEM 1970-254
EMPR ASS RPT *665, 804
GSC ANN RPT 1886
GSC P 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 512
REPORT: RGEN0100

BIBLIOGRAPHY

emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/23

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 273**

NATIONAL MINERAL INVENTORY: 092L11 Cu12

NAME(S): **RUPERT, EXPO, CAR,
TAR, RUPERT INLET, ISLAND COPPER**

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:
LATITUDE: 50 35 17 N
LONGITUDE: 127 23 24 W
ELEVATION: 30 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5605254
EASTING: 613968

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT:	Chalcopyrite	Molybdenite	Pyrite	Magnetite	
ASSOCIATED:	Pyrite	Magnetite	Quartz		
ALTERATION:	Quartz	Calcite	Chlorite	Epidote	Sericite
	Hematite	Pyrophyllite			
ALTERATION TYPE:	Sericitic	Propylitic	Argillic	Oxidation	
MINERALIZATION AGE:	Unknown				
ISOTOPIC AGE:	154 +/- 6 Ma	DATING METHOD:	Potassium/Argon	MATERIAL DATED:	Biotite

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE:	200 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Mollusks		
Jurassic			Island Plutonic Suite
ISOTOPIC AGE:	154 +/- 6 Ma		
DATING METHOD:	Potassium/Argon		
MATERIAL DATED:	Biotite		

LITHOLOGY: Andesite Tuff
Quartz Feldspar Porphyry Dike
Andesite
Quartz Monzonite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite K-Ar date from Rupert Inlet stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP: Syn-mineralization
GRADE: Amphibolite

CAPSULE GEOLOGY

The region is underlain by northwest trending Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen, Quatsino and Parson Bay formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by stocks of the Jurassic Island Plutonic Suite.

Locally, a quartz feldspar porphyry dyke similar to that at the Island Copper deposit (refer to 092L 158-Island Copper) intruded andesite tuff of the Bonanza Group and is associated with disseminated magnetite, pyrite and minor chalcopyrite and molybdenite. Minor chalcopyrite and molybdenite are also found in shears and quartz veins. The dyke is an offshoot of the Rupert Island Stock, which has been dated at 154 plus or minus 6 million years (Geological Survey of Canada Paper 74-8).

Sericitic, propylitic and argillic alteration has resulted in the formation of quartz, calcite, epidote, sericite and pyrophyllite. Secondary hematite is also present.

BIBLIOGRAPHY

EMPR GEM 1970-269; 1974-215
EMPR EXPL 1977-E174; 1980-272; 1983-335; 1984-243; 1985-C235;

BIBLIOGRAPHY

1986-C280,C281; 1987-C222
EMPR ASS RPT *2658, 2659, 5102, 6056, 6270, 8178, 11460, *12768,
13009, 13716, 14393, 15077, 15707, 16510, 17368
GSC ANN RPT 1886
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MEM 23
GSC MAP *4-74; 255A
GSC OF 9; 170; 463; 722
GSC SUM RPT *1929A
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/29

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 274**

NATIONAL MINERAL INVENTORY: 092L12 Cu8

NAME(S): **BERG 16**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 44 19 N
LONGITUDE: 127 57 54 W
ELEVATION: 200 Metres

NORTHING: 5621269
EASTING: 573032

LOCATION ACCURACY: Within 500M

COMMENTS: Skarn in outcrop, Assessment Report 1771.

COMMODITIES: Copper Magnetite Iron

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite
COMMENTS: Chalcopyrite occurs with massive magnetite.
ASSOCIATED: Pyrite
ALTERATION: Malachite
ALTERATION TYPE: Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Skarn Industrial Min.
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvavites ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 169 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Andesite
Intrusive Rock

HOSTROCK COMMENTS: Quatsino ammonites-Alice Lake; Karmutsen ammonites-Hisnit Island; biotite from Nahwitti Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP: Syn-mineralization
GRADE: Hornfels

CAPSULE GEOLOGY

The area is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen, Quatsino and Parsons Bay formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by Jurassic Island Plutonic Suite.

Locally, Karmutsen Formation andesites containing two narrow bands of limestone near the top of the unit are overlain by Quatsino Formation limestone. Younger Bonanza volcanics are found to the west and southwest.

Skarn is found near the top of the Karmutsen rocks, where minor chalcopyrite occurs with massive magnetite. In the Quatsino limestone, minor pyrite and chalcopyrite have been noted close to intrusive contacts (Island Plutonic Suite?). Disseminated pyrite is present in one of the Karmutsen limestone bands.

Oxidation of chalcopyrite to malachite is common.

BIBLIOGRAPHY

EMPR GEM 1970-254; 1971-324
EMPR ASS RPT *1771, 2189, 2834

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 516
REPORT: RGEN0100

BIBLIOGRAPHY

GSC ANN RPT 1886
GSC P 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
EMR MP CORPFILE (Gladiator Resources Limited)
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/10

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 517
REPORT: RGEN0100

MINFILE NUMBER: **092L 275**

NATIONAL MINERAL INVENTORY:

NAME(S): **GILFORD ISLAND**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L09W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 39 29 N
LONGITUDE: 126 29 23 W
ELEVATION: 1 Metres

NORTHING: 5614807
EASTING: 677426

LOCATION ACCURACY: Within 500M

COMMENTS: In a cove on the south shore of Port Elisabeth Harbour, Knight Inlet.

COMMODITIES: Clay

MINERALS

SIGNIFICANT: Clay
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Recent			Unnamed/Unknown Informal

LITHOLOGY: Clay

HOSTROCK COMMENTS: Recent clay, area is underlain by Coast Plutonic Complex granitic rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Fiord Ranges (Southern)

CAPSULE GEOLOGY

Gilford Island is underlain by granitic rocks of the Coast Plutonic Complex. Bulletin 30, page 46, reports bluish compact stratified clay of Recent glacial or fluvial origin (?) that has a tenacious habit when wet, and is probably suitable for brick and tile.

BIBLIOGRAPHY

EMPR BULL *30, p. 46
GSC MAP 1386A
GSC MEM *23, pp. 122,144
GSC OF 722

DATE CODED: 1985/07/24
DATE REVISED: 1989/05/04

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 275**

MINFILE NUMBER: **092L 276**

NATIONAL MINERAL INVENTORY: 092L3 Sia2

NAME(S): **SIC (L.529)**, EASY FIVE

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 06 59 N
LONGITUDE: 127 17 16 W
ELEVATION: 60 Metres

NORTHING: 5552975
EASTING: 622410

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location is centre of Lots 528 and 529 at the head of Easy Inlet off Kashutl Inlet. See also Monteith Bay (092L 343).

COMMODITIES: Silica

MINERALS

SIGNIFICANT: Silica
ALTERATION: Quartz Alunite Pyrophyllite Sericite
ALTERATION TYPE: Silicific'n Alunitic Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Replacement Industrial Min.
DIMENSION: STRIKE/DIP: 270/30S TREND/PLUNGE:
COMMENTS: Locally attitude of bedding is west, dipping gently south.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Andesite Dike
Basalt
Limestone

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Inlet. Bonanza mollusks from Quatsino Sound (Geological Survey of Canada, Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The region is underlain by volcanic rocks and minor related sediments of the Lower Jurassic Bonanza Group and Upper Triassic Vancouver Group, Karmutsen Formation.

Andesite dykes cut Karmutsen Formation basalts and overlying limestone. Quartz-sericite, quartz-pyrophyllite and quartz-alunite alteration have occurred.

The occurrence is on the same claim group as SOC (092L 246). See also Monteith Bay (092L 343).

BIBLIOGRAPHY

EMPR ASS RPT 23139
EMPR GEM 1973-552; *1974-400
EMPR OF 1987-15
EMR CORPFILE (*Sicamous Resources)
GSC ANN RPT 1886
GSC MAP 4-1974; 255A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1913; 1920A

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/01

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

The occurrence is within an assemblage of chloritic andesite and fine to medium-grained tuff, intruded by a quartz-porphyry dyke. Mineralization occurs in an alteration zone along a fault striking west and consists of quartz and massive sericite with pyrite, magnetite and minor dumortierite.

In the visible exposures north of the base of the slope, the rocks have been highly altered, along the steep fault zone. The visible exposures indicated that the alteration is zoned but not enough can be seen to allow accurate measurements of zone widths. From the unaltered tuff northward, there is an intensely silicified band ranging up to 2 metres wide. Next is a band consisting of a mixture of fine-grained silica, sericite, and magnetite, and finally, an undetermined width of silicified and pyritized material.

Rock from the silicified zone is pale, creamy white, often brown weathering, hard and fine-grained. A streaky foliation visible in some outcrops probably represents original bedding. In thin sections the rock is seen to consist of recrystallized quartz in grains with diameters of 0.01 to 0.12 millimetres, occasionally reaching 0.20 millimetres. Sericite and pyrite are present in minor quantities.

One channel sample cut along 3.4 metres in a shallow trench across the silica-sericite-magnetite zone contained: SiO₂ = 64.52, Al₂O₃ = 22.11, K₂O = 1.21, Na₂O = 0.22, Fe(total) = 4.50, H₂O(+105 degrees C) = 4.20, SO₃ = 1.54 (Geology, Exploration and Mining 1971, page 481).

The property is adjacent to a copper showing on the east (Laura Lee-Mark - 092L 277).

BIBLIOGRAPHY

- EMPR ASS RPT *8931
- EMPR GEM *1971-479,481
- EMPR OF 1987-15
- GSC OF 9; 170; 463
- GSC SUM RPT 1913; 1920A
- GSC P 69-1A; 70-1A; 72-44; 74-8
- GSC ANN RPT 1886
- GSC MAP 4-1974; 255A
- Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/01/25

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 278**

NATIONAL MINERAL INVENTORY:

NAME(S): **PENNY**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 32 42 N
LONGITUDE: 127 21 06 W
ELEVATION: 90 Metres

NORTHING: 5600526
EASTING: 616787

LOCATION ACCURACY: Within 1 KM
COMMENTS: Approximate centre of claims (Assessment Report 2832).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Quartz
ALTERATION: Epidote Chlorite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Andesite Tuff
Andesite Flow

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite K-Ar date from Rupert Inlet stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Zeolite

CAPSULE GEOLOGY

The region is underlain by northwest trending Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen, Quatsino and Parson Bay formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by stocks of the Jurassic Island Intrusions.

On the old Penny claims, andesitic tuffs and flows of the Bonanza Group are mineralized with disseminated chalcopyrite and lesser bornite. Alteration where present consists mainly of chlorite and epidote. Chalcopyrite is also present in quartz stringers and amygdules.

BIBLIOGRAPHY

EMPR GEM 1970-270
EMPR ASS RPT *1742, *2832, 13009, 14234
EMPR EXPL 1985-C235
GSC ANN RPT 1886
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MEM 23
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/29

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 279**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEAVER COVE** TSULTON RIVER

STATUS: Past Producer Open Pit

MINING DIVISION: Nanaimo

REGIONS: British Columbia, Vancouver Island

UTM ZONE: 09 (NAD 83)

NTS MAP: 092L10W

BC MAP:

LATITUDE: 50 30 59 N

NORTHING: 5598167

LONGITUDE: 126 53 36 W

EASTING: 649349

ELEVATION: 200 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Located 2.5 kilometres west of Beaver Cove off Johnstone Strait
(Minister of Mines Annual Report 1968, page 316).

COMMODITIES: Limestone Marble Building Stone

MINERALS

SIGNIFICANT: Calcite

ASSOCIATED: Pyrrhotite Epidote Garnet

ALTERATION: Pyrrhotite Epidote Garnet

ALTERATION TYPE: Skarn

MINERALIZATION AGE: Upper Triassic

ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvavite ammonites

DEPOSIT

CHARACTER: Stratiform Massive

CLASSIFICATION: Sedimentary Igneous-contact Industrial Min.

TYPE: R09 Limestone

SHAPE: Tabular

MODIFIER: Faulted

DIMENSION: 2500 x 150 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Strata strike northwest, dip steeply southwest.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE:	225 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Juvavite ammonites		
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE:	230 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Gymnotropite ammonites		
Jurassic			Island Plutonic Suite
ISOTOPIC AGE:	154 +/- 8 Ma		
DATING METHOD:	Potassium/Argon		
MATERIAL DATED:	Biotite		

LITHOLOGY: Limestone
Marble
Basalt
Diorite
Pyrrhotite Epidote Garnet Skarn

HOSTROCK COMMENTS: Quatsino & Karmutsen ammonites from Alice Lake & Hisnit Island respectively; Plutonic biotite from Soren Hill (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

TERRANE: Wrangell

Plutonic Rocks
RELATIONSHIP:

METAMORPHIC TYPE: Contact

GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1968

SAMPLE TYPE: Chip

COMMODITY

GRADE

Limestone

55.1700 Per cent

COMMENTS: A 67 metre long sample across the north end of the deposit. Grade given for calcium oxide.

REFERENCE: Minister of Mines Annual Report 1968, page 318, Sample 22 .

CAPSULE GEOLOGY

A band of limestone, of the Upper Triassic Quatsino Formation

CAPSULE GEOLOGY

(Vancouver Group), extends south across the east side of a hill, just west of Beaver Cove, for 2500 metres to the Tsulton River. The band is truncated to the north by a northwest trending fault and to the south, along the Tsulton River, by a northeast trending fault. This band is the faulted extension of a belt of limestone that continues southward from the Tsulton River to Bonanza Lake (092L 280). The band is bounded to the west by an elongate, north trending diorite stock of the Early to Middle Jurassic Island Plutonic Suite. Underlying basalts of the Upper Triassic Karmutsen Formation (Vancouver Group) outcrop along the east side of the band. The strata strike northwest and dip steeply southwest. The limestone bed varies from 120 to 150 metres in thickness.

Near its north end, the band is comprised mostly of fine grained, white to black streaked limestone that becomes coarse grained near the diorite contact. Some pyrrhotite-garnet-epidote skarn is developed at the contact. The limestone here contains some chert and a few, 0.6 to 1.2 metre wide, dykes. Exposures to the south in the Tsulton River display creamy white, sugary limestone that is interbedded with a few bands of fine grained, bluish grey limestone.

Occasional small nodules of chert and a few thin dykes are present. A 67 metre long chip sample taken across white sugary textured limestone on the north end of the band contained in per cent (Minister of Mines Annual Report 1968, p. 318, Sample 22):

CaO	-	55.17
MgO	-	0.08
Insolubles	-	1.22
R2O3	-	0.30
Fe2O3	-	0.13
MnO	-	0.023
P2O5	-	0.02
Sulphur	-	0.01
Ignition Loss	-	43.21

A sample of white limestone from the south end assayed, in per cent (CANMET Report 811, p. 142, Sample 8):

CaO	-	54.34
MgO	-	0.34
SiO2	-	1.04
Al2O3	-	0.12
Fe2O3	-	0.16
Sulphur	-	0.02

It is reported that some marble was quarried from the south end of this deposit around 1884 at a point 2.8 kilometres southwest of Beaver Cove on the Tsulton River, but no production figures are available (Minister of Mines Annual Report 1904, page 249).

BIBLIOGRAPHY

- EMPR AR 1904-249; *1968-316,318
- EMPR OF 1992-18, pp. 31, 34-35
- EMPR PF (Report on Limestone Deposits of the Pacific Northwest, p. 2)
- GSC MAP 4-1974; 1552A
- GSC OF 9; 170; 463, Sheet 2
- GSC P 69-1A; 70-1A; 72-44; *74-8
- GSC SUM RPT 1931A, p. 35
- CANMET RPT 452, Vol.5, pp. 171,172; 811, Part 5, pp. 136,137

DATE CODED: 1985/07/24
DATE REVISED: 1989/09/28

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 280**

NATIONAL MINERAL INVENTORY:

NAME(S): **BONANZA LAKE**, BONANZA LAKE WEST

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 24 03 N
LONGITUDE: 126 48 57 W
ELEVATION: 305 Metres

NORTHING: 5585479
EASTING: 655221

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on sample site Number 28, on the north end of Bonanza Lake (Minister of Mines Annual Report 1968, page 312).

COMMODITIES: Limestone Marble Building Stone

MINERALS

SIGNIFICANT: Carbonate
ASSOCIATED: Dolomite
MINERALIZATION AGE: Upper Triassic
ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Various fossils

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary
TYPE: R09 Limestone

Massive
Industrial Min.

R04 Dimension stone - marble

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
DATING METHOD:	Fossil		
MATERIAL DATED:	Various fossils		
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE:	230 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Gymnotropite ammonites		

LITHOLOGY: Limestone
Marble
Dolomite
Chert
Basaltic Flow
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional
COMMENTS: Formed on a shallow marine platform of ocean rift volcanics.

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1968
SAMPLE TYPE: Chip
COMMODITY: Limestone GRADE: 54.6500 Per cent
COMMENTS: Sample taken across 61 metres. Grade given for calcium oxide.
REFERENCE: Minister of Mines Annual Report 1968, page 318, Sample 28.

CAPSULE GEOLOGY

A 24 kilometre long band of limestone of the Upper Triassic Quatsino Formation (Vancouver Group) extends northward along the west side of Bonanza River and Bonanza Lake to the Tsulton River, where it is truncated by a northeast trending fault. The limestone is overlain by argillite of the Upper Triassic Parsons Bay Formation (Vancouver Group) and volcanics and sediments of the Lower Jurassic Bonanza Group. Basaltic flows of the Upper Triassic Karmutsen Formation (Vancouver Group) conformably underlie the unit. The sequence strikes north-northwest and dips gently to the west. The limestone is 300 metres thick in the vicinity of Bonanza Lake. The lower portion of the unit is comprised of white and grey, fine-grained limestone. In the middle, the deposit becomes darker in colour and dolomitic in some beds. The upper portion consists of

CAPSULE GEOLOGY

black limestone with scattered 5 to 15 centimetre thick lenses of black chert. A 61 metre long sample comprised of chips taken at 3.0 metre intervals across mixed layers of black and white limestone just west of the north end of Bonanza Lake analyzed 54.65 per cent CaO, 0.22 per cent MgO, 1.88 per cent insolubles, 0.35 per cent R2O3, 0.09 per cent Fe2O3, 0.006 per cent MnO, 0.03 per cent P2O3, 0.02 per cent sulphur and 42.94 per cent ignition loss (Minister of Mines Annual Report 1968, page 318, Sample 28).

A portion of the deposit was staked in 1989 by Industrial Fillers Ltd. during a search for white limestone.

BIBLIOGRAPHY

EMPR AR *1968-312,318
EMPR ASS RPT 17760, 19023, 20362
EMPR MAP 65 (1989)
EMPR OF 1991-20; 1992-1; 1992-9; 1992-18, pp. 31, 33
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC OF 9; 170; 463
GSC P 70-1A; 72-44; 74-8

DATE CODED: 1985/07/24
DATE REVISED: 1989/07/24

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 281**

NATIONAL MINERAL INVENTORY:

NAME(S): **COVE**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092L10W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 32 59 N
LONGITUDE: 126 53 06 W
ELEVATION: 100 Metres

NORTHING: 5601890
EASTING: 649834

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Assessment Report 24129.

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Limonite Clay
MINERALIZATION AGE: Triassic

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Sedimentary
TYPE: R09 Limestone
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Quatsino	

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Monashee Mountains

CAPSULE GEOLOGY

The Cove property is a limestone property located in a band of upper Triassic Quatsino Formation, adjacent to Telegraph Cove (also shown on some maps as Beaver Cove) 14 kilometres east of Port McNeill.

Two distinct limestones occur on the Cove property, one white and one brown. The white limestone is more abundant; it is dense, fine to medium grained, with a dull, grey-white appearance. It is delicately feathered with dark material. The rock is strongly brecciated, and microfractures are filled with carbonate, clays and limonite. Outcrops are strongly fractured. The brown limestone is dense, fine-grained, cut by a criss-crossing network of white carbonate veinlets. Some samples show pronounced black feathering. Limonite and clays coat fracture surfaces.

The Cove property was staked and prospected by Tim Hennebury in 1994 and 1995. He determined that both the brown and the white limestones are too fractured to be suitable for dimension stone. However, the white limestone was found to be within the acceptable range for low end industrial filler applications. He planned to test the market for the white limestone as a landscape rock.

BIBLIOGRAPHY

EMPR ASS RPT *24129
GSC P 74-8
GSC SUM RPT 1929A, p. 94-143

DATE CODED: 1999/07/20
DATE REVISED: 1999/09/15

CODED BY: JMR
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 282**

NATIONAL MINERAL INVENTORY:

NAME(S): **PORT McNEILL**, ERIC, IMA 4-5,
S.U.P. 6000, JOE

STATUS: Past Producer Open Pit

MINING DIVISION: Nanaimo

REGIONS: British Columbia, Vancouver Island

UTM ZONE: 09 (NAD 83)

NTS MAP: 092L11E

BC MAP:

LATITUDE: 50 33 24 N

LONGITUDE: 127 03 46 W

ELEVATION: 122 Metres

NORTHING: 5602318

EASTING: 637220

LOCATION ACCURACY: Within 500M

COMMENTS: Quarry located 3.5 kilometres southeast of Port McNeil, south of Hyde Creek (from Assessment Report 8082). Produced for short time period but no figures have been found.

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite

ASSOCIATED: Pyrite Silica Quartz

MINERALIZATION AGE: Upper Triassic

ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvavite ammonites

DEPOSIT

CHARACTER: Stratiform

Massive

CLASSIFICATION: Sedimentary

Industrial Min.

SHAPE: Tabular

MODIFIER: Faulted

DIMENSION: 1600 x 800 x 34 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Limestone forms lens shaped mound at least 1.6 kilometres long and 0.8 kilometre wide.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Upper Triassic Vancouver

Quatsino

ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvavite ammonites

Upper Triassic Vancouver

Karmutsen

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

LITHOLOGY: Limestone

Amygdaloidal Lava

Porphyritic Lava

Basalt Flow

Pyrite Andesite Dike

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake; Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

TERRANE: Wrangell

INVENTORY

ORE ZONE: QUARRY

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1968

SAMPLE TYPE: Chip

COMMODITY

GRADE

Limestone

53.6400

Per cent

COMMENTS: Taken across 18.0 metres. Grades given for calcium oxide.

REFERENCE: Minister of Mines Annual Report 1968, page 318, Sample 21.

CAPSULE GEOLOGY

The Port McNeill occurrence outcrops about 4 kilometres southeast of Port McNeill on a northward flowing tributary of Hyde Creek.

A mass of limestone of the Upper Triassic Quatsino Formation (Vancouver Group) is exposed as a west trending lens shaped mound at least 1.6 kilometres long and 800 metres wide on both sides of the creek. The mass is situated near the northeast corner of a 10

CAPSULE GEOLOGY

kilometre long triangular fault block comprised essentially of the Upper Triassic Parsons Bay Formation (Vancouver Group) and the Lower Jurassic Bonanza Group (Geological Survey of Canada Map 1552A). To the east the limestone is observed to rest on underlying amygdaloidal and porphyritic basaltic lavas of the Upper Triassic Karmutsen Formation (Vancouver Group). To the south the limestone is in fault contact with these volcanics. Bedding in outcrops to the west strikes 051 to 055 degrees and dips 47 to 60 degrees northwest. Drilling in 1980 revealed the limestone is at least 60 metres thick.

The deposit consists mostly of well-jointed, fine-grained, light grey to white banded limestone with occasional dark patches and bands. The darker material becomes more common in the eastern portion of the deposit. Exposed surfaces display siliceous fossil remains(?) weathering out of the limestone. The limestone is pyritic in a few instances. In thin section the rock displays sparsely scattered quartz grains in fine grained calcite. A quarry just west of the creek reveals the limestone is intruded by several andesitic dykes 0.3 to 1.5 metres wide and a mass of serpentinite 23 metres in diameter.

A sample comprised of chips taken at 0.30-metre intervals across 18.0 metres of quarry face contained 53.64 per cent CaO, 0.22 per cent MgO, 3.10 per cent insolubles 0.33 per cent R2O3, 0.17 per cent Fe2O3, 0.015 per cent MnO, 0.02 per cent P2O5, 42.49 per cent ignition loss and 0.20 per cent water (Minister of Mines Annual Report 1968, p. 318, Sample 21). A grab sample of randomly collected chips from the quarry floor contained 55.26 per cent CaO, 0.08 per cent MgO, 0.92 per cent insolubles, 0.12 per cent R2O3, 0.06 per cent Fe2O3, 0.003 per cent MnO, 0.03 per cent P2O5, 0.01 per cent sulphur, 43.43 per cent ignition loss and 0.11 per cent water (Minister of Mines Annual Report 1986, p. 318, Sample 18). A 244 by 244 metre block encompassing the quarry is estimated to contain 5.4 million tonnes of limestone down to a depth of 18 metres below the quarry floor (Assessment Report 10193, p. 6).

This deposit was quarried by Lamac Construction Ltd. during 1967 and 1968 for riprap for a breakwater at Port McNeill. The rock broke into pieces too small for this use, because of the extensive jointing, bringing the operation to an eventual halt. International Marble and Stone Company carried out 499 metres of diamond drilling and some geological mapping in 1980 and 1981. Industrial Fillers Ltd. staked the deposit in 1987 and geologically mapped the northeastern extension of the deposit in 1988, while exploring for white limestone. No production figures are available.

BIBLIOGRAPHY

EMPR AR *1968-312-318
EMPR ASS RPT 8082, 17761, 10193
EMPR EXPL 1980-538
EMPR GEM 1970-255
EMPR PF (Report on Limestone Deposits of the Pacific Northwest,
pp. 4,5 (in 092L 279 File))
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; *74-8

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/08

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 530
REPORT: RGEN0100

CAPSULE GEOLOGY

cent ignition loss (Minister of Mines Annual Report 1968, p. 318, Sample 17).

BIBLIOGRAPHY

EMPR AR *1968-315,318
EMPR GEM 1970-255
EMPR OF 1992-18, pp. 31, 35
GSC MAP 4-1974; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8

DATE CODED: 1985/07/24
DATE REVISED: 1988/12/08

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 284**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARBLE RIVER**

STATUS: Past Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

Open Pit

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 26 19 N
LONGITUDE: 127 23 51 W
ELEVATION: 60 Metres

NORTHING: 5588626
EASTING: 613795

LOCATION ACCURACY: Within 500M

COMMENTS: The location is the limestone quarry 0.5 kilometre north of Marble River on Alice Lake, adjacent to the Zeballos Dev. Co., Peerless Mine (092L 057). No production figures are available.

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Quartz
COMMENTS: As chert nodules.

MINERALIZATION AGE: Upper Triassic
ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarite ammonites

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary

Massive
Industrial Min.

SHAPE: Tabular
DIMENSION: 61 x 11

Metres STRIKE/DIP: 315/35W

TREND/PLUNGE:

COMMENTS: Dimensions are of quarry. Attitude of stratigraphy is 315 degrees.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 181 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Tholeiitic Basalt
Limy Pelitic Sediment/Sedimentary
Diorite
Intrusive Dike

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake; Karmutsen ammonites from Hisnit Is.; Intrusive biotite from Empire Mine (Geol. Surv. Can. Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: QUARRY

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1968

COMMODITY: Limestone
GRADE: 44.5900 Per cent

COMMENTS: Commodity is CaO. Sample from largest of three small quarries.
REFERENCE: Minister of Mines Annual Report 1968, page 318, Sample 13.

CAPSULE GEOLOGY

Limestone was produced from three quarries along the Jeune Landing - Alice Lake Road in the vicinity of the southwest shore of Alice Lake.

The quarries lie within a 120 kilometre long belt of limestone of the Upper Triassic Quatsino Formation (Vancouver Group) that

CAPSULE GEOLOGY

extends discontinuously from Quatsino Sound southeastward to Tlupana Inlet. Locally the limestone is bounded to the west by underlying basalts of the Upper Triassic Karmutsen Formation (Vancouver Group) and intruded to the south by a stock of diorite of the Jurassic Island Plutonic Suite. The limestone strikes northwest and dips 12 to 40 degrees southwest.

The quarried rock generally consists of fine grained, light grey to black limestone that sometimes contains chert nodules. The largest of the three quarries, 0.5 kilometres northwest of the Marble River, exposes fine grained light grey limestone that is intruded by a dyke and several sills. In thin section the rock displays fine grained calcite that is sporadically replaced by coarser dolomite rhombs. A sample of randomly collected chips from the quarry contained 44.59 per cent CaO, 9.43 per cent MgO, 0.46 per cent insolubles, 0.30 per cent R2O3, 0.07 per cent Fe2O3, 0.004 per cent MnO, 0.01 per cent P2O5, less than 0.01 per cent sulphur and 45.31 per cent ignition loss (Minister of Mines Annual Report 1968, p. 318, Sample 13).

BIBLIOGRAPHY

EMPR AR *1968-312,318
EMPR GEM 1970-255
EMPR MAP 1962 (092L06)
EMPR OF 1992-18, p. 43
EMPR PF (see 092L 057, Marble River Project, 1974, Zeballos Development Co. Ltd.)
GSC MAP 4-1974; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; *74-8

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/11

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 285**

NATIONAL MINERAL INVENTORY:

NAME(S): **HANKIN POINT**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 35 07 N
LONGITUDE: 127 33 12 W
ELEVATION: 1 Metres

NORTHING: 5604707
EASTING: 602412

LOCATION ACCURACY: Within 500M

COMMENTS: Location centered on limestone band outcropping just north of Hankin Point (Geological Survey of Canada Map 1552A).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Quartz
COMMENTS: Cherty masses.
MINERALIZATION AGE: Upper Triassic
ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarte ammonites

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 7000 x 3000 x 305 Metres
COMMENTS: Local stratigraphy strikes west, limestone band is up to 305 metres wide.

Massive
Industrial Min.

STRIKE/DIP: 270/

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Quatsino	
	ISOTOPIC AGE: 225 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Juvarte ammonites		
Upper Triassic	Vancouver	Karmutsen	
	ISOTOPIC AGE: 230 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Gymnotropite ammonites		
Jurassic			Island Plutonic Suite
	ISOTOPIC AGE: 169 +/- 6 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		

LITHOLOGY: Limestone
Porphyritic Basalt Breccia
Intrusive Dike

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake. Karmutsen ammonites from Hisnit Inlet. Intrusive biotite from Nahwitti batholith (GSC P 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY: Limestone
GRADE: 54.2600 Per cent

YEAR: 1968

COMMENTS: Taken across 91 metres at west end. Grade given for calcium oxide.
REFERENCE: Minister of Mines Annual Report 1968, page 318, Sample 3.

CAPSULE GEOLOGY

A 300 metre wide band of limestone of the Upper Triassic Quatsino Formation (Vancouver Group) extends westward from Rupert Inlet to Holberg Inlet for 2.5 kilometres, just north of Hankin Point, 16 kilometres south-southwest of Port Hardy. Underlying porphyritic basalts of the Upper Triassic Karmutsen Formation (Vancouver Group) outcrop along the southern margin of the band. To

CAPSULE GEOLOGY

the north the limestone is in fault contact with clastic sediments of the Lower Cretaceous Queen Charlotte Group. The limestone appears to be dipping northward.

The band is comprised of light to dark grey limestone with numerous irregular masses and lenses of chert, especially along the band's northern margin. A few dykes intrude the limestone. A 91 metre long chip sample taken across the band at its west end contained 54.26 per cent CaO, 1.01 per cent MgO, 0.60 per cent insolubles, 0.42 per cent R2O3, 0.06 per cent Fe2O3, 0.019 per cent MnO, 0.02 per cent P2O5, less than 0.01 per cent sulphur and 43.77 per cent ignition loss (Minister of Mines Annual Report 1968, p. 318, Sample 3). A sample of chips taken across the east end of the band over a length of 122 metres contained 54.09 per cent CaO, 1.21 per cent MgO, 0.53 per cent insolubles, 0.40 per cent R2O3, 0.09 per cent Fe2O3, 0.018 per cent MnO, 0.01 per cent P2O5, 0.01 per cent sulphur and 43.81 per cent ignition loss (Minister of Mines Annual Report 1968, p. 318, Sample 4).

BIBLIOGRAPHY

EMPR AR *1968-313,318
EMPR GEM 1970-255
EMPR OF 1992-18, pp. 31, 36
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1913; 1920A; 1929A

DATE CODED: 1985/07/24
DATE REVISED: 1989/10/02

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 286**

NATIONAL MINERAL INVENTORY:

NAME(S): **QUATSE LAKE**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 38 25 N
LONGITUDE: 127 32 14 W
ELEVATION: 92 Metres

NORTHING: 5610845
EASTING: 603432

LOCATION ACCURACY: Within 5 KM

COMMENTS: Located 0.5 kilometres east of the east end of Quatse Lake, 10 kilometres south of Port Hardy.

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Quartz
MINERALIZATION AGE: Upper Triassic
ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvavite ammonites

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
SHAPE: Tabular
DIMENSION: 317 x 305 Metres
COMMENTS: Streaks in limestone that may represent bedding strike 295 degrees, dip 45 degrees south. Limestone outcrops intermittently for 300 metres.

Massive
Industrial Min.

STRIKE/DIP: 295/45S
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvavite ammonites			
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Limestone

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake. Karmutsen ammonites from Hisnit Island (Geological Survey of Canada, Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY: Limestone
GRADE: 54.6900 Per cent
COMMENTS: Commodity is CaO. Collected at 0.6 metre intervals along 21 metre road cut.
REFERENCE: Minister of Mines Annual Report 1968, page 318, Sample 2.

CAPSULE GEOLOGY

A 500 metre wide band of limestone of the Upper Triassic Quatsino Formation (Vancouver Group) trends west-northwest from the northeast end of Quatse Lake for 3.75 kilometres, 5 kilometres northeast of Coal Harbour and 10 kilometres southwest of Port Hardy. The limestone becomes overlain to the south by argillite of the Upper Triassic Parsons Bay Formation (Vancouver Group), while underlying basaltic volcanics of the Upper Triassic Karmutsen Formation (Vancouver Group) outcrop to the north.

Various exposures along a 300 metre section of a logging road near the northeast end of Quatse Lake reveal fine grained, light to dark grey, streaked limestone that strikes 115 degrees and dips 45 degrees south. A few scattered lenses of chert occur in the

CAPSULE GEOLOGY

limestone. These become more common to the west. A sample of chips collected in 0.6 metre intervals along a 21 metre long road cut contained 54.69 per cent CaO, 0.40 per cent MgO, 1.36 per cent insolubles, 0.33 per cent R2O3, 0.14 per cent Fe2O3, 0.039 per cent MnO, 0.05 per cent P2O5, 0.03 per cent sulphur, 43.11 per cent ignition loss and 0.18 per cent water (Minister of Mines Annual Report 1968, p. 318, Sample 2).

BIBLIOGRAPHY

EM EXPL 2001-23-31
EMPR AR *1968-313-318
EMPR GEM 1970-255
EMPR PF (Various maps; Report, 1974)
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC SUM RPT 1913; 1920A; 1929A
GSC P 69-1A; 70-1A; 72-44; 74-8

DATE CODED: 1985/07/24
DATE REVISED: 1989/10/02

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 287**

NATIONAL MINERAL INVENTORY:

NAME(S): **KAINS LAKE**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 58 N
LONGITUDE: 127 40 02 W
ELEVATION: 358 Metres

NORTHING: 5617250
EASTING: 594122

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location is 11 kilometres west of Port Hardy, on Kains Lake -
(Minister of Mines Annual Report 1968, pages 312,313).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
MINERALIZATION AGE: Upper Triassic
ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarte ammonites

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
SHAPE: Tabular

Massive
Industrial Min.

DIMENSION: Metres

STRIKE/DIP: 270/

TREND/PLUNGE:

COMMENTS: Regional strike is west.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Vancouver

FORMATION

Quatsino

IGNEOUS/METAMORPHIC/OTHER

ISOTOPIC AGE: 225 Ma

DATING METHOD: Fossil

MATERIAL DATED: Juvarte ammonites

LITHOLOGY: Limestone

HOSTROCK COMMENTS: Ammonites from Alice Lake (Geological Survey of Canada, Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1968

SAMPLE TYPE: Grab

COMMODITY

GRADE

Limestone

54.2900

Per cent

COMMENTS: Commodity is CaO. Average of 4 samples.

REFERENCE: Minister of Mines Annual Report 1968, page 318, Sample 1.

CAPSULE GEOLOGY

A 250 to 350 metre wide band of limestone of the Upper Triassic Quatsino Formation (Vancouver Group) extends for 5 kilometres east-southeast from Kains Lake, approximately 11 kilometres west of Port Hardy. The band is bounded to the southwest by overlying argillite of the Upper Triassic Parsons Bay Formation (Vancouver Group) and to the northeast by underlying basalts of the Upper Triassic Karmutsen Formation (Vancouver Group). Four grab samples averaged 54.29 per cent CaO, 0.04 per cent MgO, 1.64 per cent insolubles, 0.17 per cent R2O3, 0.14 per cent Fe2O3, 0.060 per cent MnO, 0.02 per cent P2O5, 0.03 per cent sulphur and 43.40 per cent ignition loss (Minister of Mines Annual Report 1968, p. 318, Sample 1).

BIBLIOGRAPHY

EMPR AR *1968-312,318
EMPR ASS RPT 10852
EMPR EXPL 281-231
EMPR GEM 1970-255
EMPR OF 1992-18, pp. 31, 36
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 538
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1913; 1920A; 1929A

DATE CODED: 1985/07/24
DATE REVISED: 1989/10/03

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 290**

NATIONAL MINERAL INVENTORY:

NAME(S): **AMAZON**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 37 59 N
LONGITUDE: 127 25 36 W
ELEVATION: 150 Metres

NORTHING: 5610202
EASTING: 611266

LOCATION ACCURACY: Within 500M

COMMENTS: Rock sample location (Assessment Report 9811).

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite

COMMENTS: Exact mineralogy not reported.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown

CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Limestone
Volcanic

HOSTROCK COMMENTS: From regional geology (Geological Survey of Canada Paper 74-8); host rock is probably replaced limestone of Karmutsen Formation.

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

RELATIONSHIP: Syn-mineralization

GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1980

SAMPLE TYPE: Grab

COMMODITY

GRADE

Copper

4.1200

Per cent

Zinc

1.4500

Per cent

COMMENTS: Grab sample from mineralized zone.

REFERENCE: Assessment Report 9811.

CAPSULE GEOLOGY

The region is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by stocks of the Jurassic Island Intrusions.

Locally, copper and zinc mineralization is present in rocks of the Karmutsen Formation, and based on other mineralization in the area (092L 159 - Little Joe), this mineralization is probably in a replaced limestone lens which is intercalated within the Karmutsen volcanics.

A grab sample collected in 1980 assayed 4.12 per cent copper and 1.45 per cent zinc (Assessment Report 9811).

BIBLIOGRAPHY

EMPR AR 1968-84,91
EMPR GEM 1970-254
EMPR EXPL 1980-273
EMPR ASS RPT 1709, *9811
GSC ANN RPT 1886
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC BULL 242

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 540
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 23
GSC MAP *4-74; 255A; 1552A
GSC OF 9; 170; 463; 722
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/28

CODED BY: GSB
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 291**

NATIONAL MINERAL INVENTORY:

NAME(S): **KIMO**, KOSKIMO, SALAL

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 27 14 N
LONGITUDE: 127 49 46 W
ELEVATION: 300 Metres

NORTHING: 5589753
EASTING: 583097

LOCATION ACCURACY: Within 500M

COMMENTS: Location of 3-4-5-6 common post is 1.5 kilometres west of Mahatta River on Quatsino Sound (from Assessment Report 8018).

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Pyrite

ASSOCIATED: Quartz Calcite

COMMENTS: Quartz-calcite veins.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
	ISOTOPIC AGE: 200 Ma		
	DATING METHOD: Fossil		
Upper Triassic	Mollusks	Parson Bay	
	Vancouver		
	ISOTOPIC AGE: 215 Ma		
	DATING METHOD: Fossil		
Jurassic	MATERIAL DATED: Halobia mollusks		Island Plutonic Suite
	ISOTOPIC AGE: 154 +/- 6 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		

LITHOLOGY: Feldspathic Tuff
Calcareous Sediment/Sedimentary
Basalt

HOSTROCK COMMENTS: Parson Bay mollusks-Beaver Cove; Bonanza mollusks-Quatsino Sound; biotite-Island Copper stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by calcareous siltstone, shale, limestone, greywacke, conglomerate and breccia of the Upper Triassic Vancouver Group Parson Bay Formation. Conformably overlying the Parson Bay sediments are andesitic to rhyodacitic volcanics of the Lower Jurassic Bonanza Group (Geological Survey of Canada Map 4-1974).

At the Kimo occurrence, basalts are overlain by northwest striking, 40 degrees west dipping black calcareous sediments and feldspathic tuffs. Quartz-calcite veinlets, occur mainly in tuffs, and contain pyrite, chalcopyrite and sphalerite.

The host rocks are believed to be either part of the Parson Bay Formation (Vancouver Group) or the Bonanza Group. The occurrence may coincide with the Wm showing (092L 238).

BIBLIOGRAPHY

EMPR EXPL 1980-269
EMPR ASS RPT 8018, 18038
EMPR PF (Leighton, D.G.,: Report on Explorations in Mahatta River Area, Brinco, in 092L 230-Les)
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC OF 9; 170; 463
GSC BULL 242

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 542
REPORT: RGEN0100

BIBLIOGRAPHY

GSC SUM RPT 1918B
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University

DATE CODED: 1985/07/24
DATE REVISED: 1989/04/04

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 292**

NATIONAL MINERAL INVENTORY:

NAME(S): **BONANZA, DRURY, FOUNDIT,
MAJOR BONANZA, ATKINS**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L14E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 57 51 N
LONGITUDE: 127 07 09 W
ELEVATION: 396 Metres

NORTHING: 5647524
EASTING: 632074

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Diamond-drill hole #1 is 0.7 kilometre northwest of Mount Bulloch, between Lee Lake and Drury Inlet.

COMMODITIES: Gold Copper Zinc Lead

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Galena Sphalerite Pyrite
COMMENTS: Exact gold mineralogy was not reported, but associated with galena and sphalerite.

ASSOCIATED: Quartz Pyrite
ALTERATION: Silica Carbonate
ALTERATION TYPE: Silicific'n Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 280 x 1 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Vein has been traced over 280 metres; its average width is 1.55 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Mesozoic Coast Plutonic Complex

LITHOLOGY: Phyllitic Argillite
Calcareous Argillite
Greenstone
Amphibolite
Chlorite Biotite Hornfels
Granodiorite
Quartz Diorite
Basalt

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Fiord Ranges (Southern)
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels

INVENTORY

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Grab
COMMODITY: GRADE
Gold 3.3900 Grams per tonne
COMMENTS: Average grade of vein from trenches.
REFERENCE: Assessment Report 9303, page 2.

CAPSULE GEOLOGY

The area is underlain by granitic rocks of the Mesozoic Coast Plutonic Complex. An unnamed northwest trending roof pendant of greenstone and amphibolite, with overlying phyllitic and calcareous argillite overlies the intrusive rocks. The volcanic and sedimentary rocks have been chlorite-biotite-hornfels altered. Calcareous argillite has been altered to calc-silicate. Greenstone and amphibolite dykes and sills cut the sediments. Minor pyrite and chalcopyrite occur in thin quartz stringers.

A quartz vein shear in argillite, with associated silica

CAPSULE GEOLOGY

alteration, contains massive to disseminated pyrite, galena, chalcopyrite, sphalerite and bornite. Gold values are correlated with higher galena and sphalerite concentrations.

The vein has been traced intermittantly over 280 metres and has an average width of 1.55 metres. In 1981, trench sampling by Cominco Ltd. along the veins returned an average grade of 3.39 grams per tonne gold (Assessment Report 9303, page 2). The assessment report states that exploration work on the occurrence goes back to 1945 when it was known as the Atkins Group; trenching was done. American Bullion Minerals Limited examined the property in 1987.

BIBLIOGRAPHY

EM FIELDWORK 1999, pp. 325-332
EMPR ASS RPT 9237, *9303, *17049
EMPR EXPL 1981-14,16
GSC MAP 4-1974; 1386A
GSC OF 722
GSC P 74-8
PR REL Royal County Minerals Corp., Feb.6, 2003

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/09

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 293**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARINO**, FIDO, KILPALA

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 26 44 N
LONGITUDE: 127 02 06 W
ELEVATION: 381 Metres

NORTHING: 5590016
EASTING: 639515

LOCATION ACCURACY: Within 500M

COMMENTS: Location of area of mineralization from Assessment Report 11292, is 2 kilometres west of Nimpkish Lake, 1 kilometre north of Kilpala River.

COMMODITIES: Copper Gold Silver Zinc Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Sphalerite Molybdenite
ASSOCIATED: Quartz
ALTERATION: Malachite Chlorite Sericite
ALTERATION TYPE: Oxidation Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 0006 Metres STRIKE/DIP: 315/ TREND/PLUNGE:
COMMENTS: Shear zone strikes northwest. Area of quartz veining is 6 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 181 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Basalt

HOSTROCK COMMENTS: Ammonites from Hisnit Island. Phlogopite from Benson Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1983
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Silver	65.2000 Grams per tonne
Gold	39.1000 Grams per tonne
Copper	0.8300 Per cent
Molybdenum	0.2700 Per cent
Zinc	11.5000 Per cent

COMMENTS: Maximum values obtained from 1982 and 1983 sampling.
REFERENCE: Assessment Report 11543, page 1.

CAPSULE GEOLOGY

The area is underlain by a thick sequence of tholeiitic basalts of the Upper Triassic Vancouver Group, Karmutsen Formation. The volcanics are intruded by granodiorite of the Jurassic Island Plutonic Suite.

The occurrence consists of a 6 metre wide area of quartz veins in the centre of an 18 metre wide northwest trending shear zone. The

CAPSULE GEOLOGY

area of quartz veins is flanked by zones of barren calcite veining. Chloritic and sericitic alteration of the basalt host rock are associated with the shear zone.

The quartz veins are from 1 to 8 centimetres wide and carry sphalerite, chalcopyrite, pyrite and molybdenite. A high grade sample returned 4.79 per cent zinc and 0.55 per cent copper (Assessment Report 11292, page 4).

Samples from mineralized quartz veins submitted in 1982 and 1983 returned 0.27 per cent molybdenite, 0.14 to 0.83 per cent per cent copper, 15.4 to 39.1 grams per tonne gold, 48.0 to 65.2 grams per tonne silver and 11.5 per cent zinc (Assessment Report 11543, page 1).

BIBLIOGRAPHY

EMPR ASS RPT *11292, 11543
EMPR EXPL 1983-333
GSC MAP 4-1974; 255A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Chevron File

DATE CODED: 1985/07/24
DATE REVISED: 1989/03/16

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 294**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER QUEEN 2 (L.1451)**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 00 19 N
LONGITUDE: 126 46 35 W
ELEVATION: 686 Metres

NORTHING: 5541587
EASTING: 659335

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Bulletin 27, Figure 2, is centre of Lot 1451, at headwaters of Gold Valley Creek, 6 kilometres northeast of Zeballos.

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Eocene

Catface Intrusions

ISOTOPIC AGE: 38 +/- 14 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Biotite Hornblende Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1984

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	15.4000	Grams per tonne
Gold	0.1700	Grams per tonne
Copper	1.7000	Per cent

REFERENCE: Assessment Report 12770, page 3.

CAPSULE GEOLOGY

The Silver Queen occurrence consists of a poorly exposed quartz-vein in Eocene biotite hornblende granodiorite of the South Zeballos Pluton of the Catface Intrusions.

The occurrence lies at the south end of the Zeballos gold camp.

A sample collected from the quartz vein which hosts chalcopyrite mineralization assayed 0.17 grams per tonne gold, 15.4 grams per tonne silver and 1.7 per cent copper (Assessment Report 12770).

BIBLIOGRAPHY

EMPR ASS RPT 12770
EMPR BULL 20-V, p. 16; *27, p. 53
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR EXPL 1984-239
EMPR PF (Racey, P.W., (1937): Silver Queen Group)
EMPR Stevenson, J.S.: Lode Gold Deposits of the Zeballos Area, 1938
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC OF 9; 170; 463
GSC MEM 204; 272
GSC SUM RPT 1929A; 1932A
GSC MAP 4-1974; 255A; 1028A
GSC EC GEOL 1-1947
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 548
REPORT: RGEN0100

BIBLIOGRAPHY

Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1989/02/26

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 295**

NATIONAL MINERAL INVENTORY:

NAME(S): **BENSON LAKE**, BENSON LAKE LIMESTONE, IRON LAKE,
IMASCO

STATUS: Producer Open Pit
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:
LATITUDE: 50 22 59 N
LONGITUDE: 127 15 13 W
ELEVATION: 244 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location centred on a test pit, as shown on the map accompanying the
Notice of quarry opening, 1985 (Industrial Mineral File).

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5582680
EASTING: 624158

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Carbonate
MINERALIZATION AGE: Upper Triassic
ISOTOPIC AGE: 225 Ma
DATING METHOD: Fossil
MATERIAL DATED: Juvarte ammonites

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R09 Limestone
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION: Metres
COMMENTS: Attitude of local stratigraphy.
STRIKE/DIP: 120/30N
TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvartes ammonites			

LITHOLOGY: Limestone

HOSTROCK COMMENTS: Age date from Geological Survey of Canada Paper 74-8.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: BENSON LAKE LIMESTONE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1985
SAMPLE TYPE: Grab
COMMODITY Limestone GRADE 55.1000 Per cent
COMMENTS: Sample of chips from quarry. Grade given for calcium oxide. Bright-
ness is 95.5 per cent.
REFERENCE: Fieldwork 1985, page 239.

CAPSULE GEOLOGY

Limestone is quarried by the International Marble and Stone Company (Imasco) 3 kilometres southwest of Benson Lake, 26 kilometres south-southwest of Port McNeill.

The quarry is situated within a discontinuous belt of limestone of the Upper Triassic Quatsino Formation (Vancouver Group) that extends from Quatsino Sound southeastward for 120 kilometres to Tlupana Inlet. The belt is segmented by a number of northeast trending faults. Bedding at the quarry strikes 120 degrees and dips 30 degrees northeast.

The quarried limestone is massive, fine grained, and white in colour with a brightness of 95.5 per cent (Fieldwork 1985, page 239). One third of the exposed limestone is extensively fractured. A series of randomly collected samples from the quarry averaged 55.1 per cent CaO, 2.49 per cent MgO, 0.27 per cent SiO₂, 0.05 per cent Al₂O₃, less than 0.09 per cent Fe₂O₃, less than 0.003 percent MnO, less than 0.01 per cent TiO₂ and 43.97 per cent ignition loss (Fieldwork 1985, page 239).

CAPSULE GEOLOGY

Several kilometres to the southeast in the vicinity of Iron and Truite lakes, the limestone is generally light grey and fine grained, although an outcrop on the northern tip of Truite Lake displays black limestone that is highly fractured and veined with white calcite. A sample of chips collected at 6.1 metre intervals along 152 metres of roadcut on the south shore of Iron Lake analyzed 54.60 per cent CaO, 0.58 per cent MgO, 1.10 per cent insolubles, 0.31 per cent R2O3, 0.12 per cent Fe2O3, 0.013 per cent MnO, 0.01 per cent P2O5, 0.11 per cent sulphur, 43.62 per cent ignition loss and 0.25 per cent water (Minister of Mines Annual Report 1968, page 318, Sample 16).

Imasco has been quarrying limestone at Benson Lake since late 1985. The limestone is shipped to Surrey, British Columbia, where it is crushed and ground at the company's plant for a variety of products including white extenders and fillers. Between 1985 and 1987, 26,807 tonnes of limestone were quarried. In 1990, the company mined 40,000 tonnes (Z.D. Hora, personal communication, 1991).

BIBLIOGRAPHY

EMPR AR 1960-92,93; *1968-312,315,318
EMPR EXPL 1985-A48; 1996-A13
EMPR FIELDWORK *1985, p. 289
EMPR INF CIRC 1995-1, p. 9; 1996-1, p. 9; 1997-1, p. 13;
1998-1, p. 13
EMPR MAP 65 (1989)
EMPR MINING 1986-1987, p. 88; 1988, p. 88
EMPR OF 1992-1; 1992-9; 1992-18, pp. 30-31; 1994-1
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1929 Part A

DATE CODED: 1986/03/14
DATE REVISED: 1989/10/03

CODED BY: ZDH
REVISED BY: PSF

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092L 296**

NATIONAL MINERAL INVENTORY:

NAME(S): **ENGL, NIMPKISH**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 17 39 N
LONGITUDE: 126 49 41 W
ELEVATION: 853 Metres

NORTHING: 5573595
EASTING: 654698

LOCATION ACCURACY: Within 500M

COMMENTS: Location of centre of grid (Assessment Report 13738) is 8 kilometres southeast of Nimpkish Lake, 6.5 kilometres southwest of Bonanza Lake.

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite
ASSOCIATED: Pyrrhotite
ALTERATION: Sericite Silica Chlorite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Stockwork Vein Massive
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Faulted

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil MATERIAL DATED: Juvarite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil MATERIAL DATED: Mollusks			
Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 151 +/- 14 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite			

LITHOLOGY: Pyroclastic
Calcareous Sediment/Sedimentary
Felsic Dike

HOSTROCK COMMENTS: Ammonites from Alice Lake. Mollusks from Quatsino Sound. Biotite from Nimpkish batholith.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Greenschist
Hornfels

CAPSULE GEOLOGY

The area is underlain by carbonates and calcareous sediments of the Upper Triassic Vancouver Group, Quatsino Formation. The Quatsino sediments are in fault contact with the overlying Lower Jurassic Bonanza Group volcanics. Strong, regional north to northwest trending faults traverse the area. Granodiorite of the Nimpkish Batholith, which is part of the Jurassic Island Plutonic Suite, intrudes the older rocks. The contact is located 1.0 kilometre north of the occurrence.

Mineralization at the Engl property consists of sphalerite with local pods of pyrrhotite and chalcopyrite associated with a 1.0 metre wide fault zone. The fault occurs in Bonanza Group pyroclastic rocks which overlie calcareous sediments of the Quatsino Formation. Felsic dykes and sills are common. Sericite, silica and chlorite are present. A silicified quartz vein stockwork, 3 to 5 metres wide, occurs in the hangingwall of the fault and contains sphalerite mineralization.

The occurrence may be located on the Nimpkish claim (Geological

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RUN TIME: 11:19:00

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CAPSULE GEOLOGY

Survey of Canada Summary Report 1931A page 33).

BIBLIOGRAPHY

EMPR ASS RPT *13738
EMPR EXPL 1985-232
GSC ANN RPT 1886
GSC BULL 242
GSC MAP 4-1974; 255A; 1029A; 1552A
GSC MEM 272
GSC OF 9; 170; 463
GSC P 38-2; 38-3; 69-1A; 72-44; *74-8
GSC SUM RPT 1929A; 1931A, p. 33
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University
CJES 18, p. 1; 20, p. 1, 1983
Falconbridge File

DATE CODED: 1986/02/20
DATE REVISED: 1989/05/24

CODED BY: AFW
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 297**

NATIONAL MINERAL INVENTORY:

NAME(S): **WOB 52**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 40 N
LONGITUDE: 127 37 50 W
ELEVATION: 440 Metres

NORTHING: 5616741
EASTING: 596721

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on Wob 52 claim (Assessment Report 1719).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE:	230 Ma		
DATING METHOD:	Fossil		
MATERIAL DATED:	Gymnotropite ammonites		

LITHOLOGY: Andesite
Limestone

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

In this area the geology from northeast to southwest, consists of northwest trending Karmutsen Formation andesites with minor limestone and Quatsino Formation limestone, both of the Upper Triassic Vancouver Group. The Vancouver Group rocks are overlain by Lower Jurassic Bonanza Group shales. To the south a thin shaly succession is in fault contact with the Karmutsen Formation.

In the northeast block of the Karmutsen Formation, disseminated chalcopyrite and pyrite are present in andesite close to interbedded limestone (Assessment Report 1719).

BIBLIOGRAPHY

EMPR AR *1968-84
EMPR GEM 1969-364; 1970-254,264; 1971-322
EMPR EXPL 1982-231
EMPR ASS RPT *1719, 2208, 2787, 3086, 10852, 12405
GSC ANN RPT 1886
GSC P 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1989/02/02
DATE REVISED: 1989/02/02

CODED BY: NJH
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 298**

NATIONAL MINERAL INVENTORY:

NAME(S): **WOB 48**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 59 N
LONGITUDE: 127 38 37 W
ELEVATION: 320 Metres

NORTHING: 5617311
EASTING: 595789

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on Wob 48 claim (Assessment Report 1719).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcocite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Tabular
COMMENTS: The vein is 0.1 metre wide (Assessment Report 1719).

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	

ISOTOPIC AGE: 230 Ma
DATING METHOD: Fossil
MATERIAL DATED: Gymnotropite ammonites

LITHOLOGY: Andesite

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

In this area the geology from northeast to southwest, consists of northwest trending Karmutsen Formation andesites with minor limestone and Quatsino Formation limestone, both of the Upper Triassic Vancouver Group. The Vancouver Group rocks are overlain by Lower Jurassic Bonanza Group shales which are in fault contact with the Karmutsen Formation.

In the northeast block of the Karmutsen Formation, a quartz-chalcocite vein, 0.1 metres wide, is exposed in a roadcut in andesite (Assessment Report 1719).

BIBLIOGRAPHY

EMPR AR *1968-84
EMPR GEM 1969-364; 1970-254,264; 1971-322
EMPR EXPL 1982-231
EMPR ASS RPT *1719, 2208, 2787, 3086, 10852, 12405
GSC ANN RPT 1886
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1989/02/02
DATE REVISED: 1989/02/02

CODED BY: NJH
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 299**

NATIONAL MINERAL INVENTORY:

NAME(S): **ESPERANZA**, WHITEDOME, VALENTINE

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 07 04 N
LONGITUDE: 126 53 06 W
ELEVATION: 457 Metres

NORTHING: 5553868
EASTING: 651199

LOCATION ACCURACY: Within 500M

COMMENTS: Location is the Number One Trench of Assessment Report 8612, Figure 3. Located 13 kilometres north of Zeballos, 2 kilometres south of Artlish River.

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Magnetite Arsenopyrite
COMMENTS: Silver and gold mineralogy not known.
ASSOCIATED: Quartz Actinolite
ALTERATION: Actinolite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn
TYPE: K04 Au skarn
SHAPE: Tabular
DIMENSION: 0170 x 0030 Metres STRIKE/DIP: 090/ TREND/PLUNGE:
COMMENTS: Local stratigraphy strikes east.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma DATING METHOD: Fossil			
Upper Triassic	Halobia mollusks Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil			
Jurassic	Juvarite mollusks		Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Phlogopite			

LITHOLOGY: Siltstone
Calcareous Rock
Actinolite Rock
Granodiorite

HOSTROCK COMMENTS: Halobia mollusks from Beaver Cove. Juvarite mollusks from Alice Lake. Phlogopite from Zeballos intrusion (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: TRENCH REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1979
SAMPLE TYPE: Chip
COMMODITY: Gold GRADE: 5.9000 Grams per tonne
COMMENTS: Weighted average over 1.0 metre.
REFERENCE: Assessment Report 8612, page 8.

CAPSULE GEOLOGY

The Esperanza occurrence lies within a broad east striking sequence of interbedded sediments and volcanics of the Lower Jurassic Bonanza Group and Upper Triassic Parson Bay and Quatsino formations of

CAPSULE GEOLOGY

the Vancouver Group. This assemblage lies on the northern flank of the extensive granodiorite Zeballos Intrusion, belonging to the Jurassic Island Plutonic Suite.

The occurrence consists of pyritic beds hosted by siltstone that is intercalated with calcareous beds that locally swell into actinolitic zones. The host rock is believed to represent the Parson Bay-Quatsino transition zone.

The pyritic zone contains pyrrhotite, magnetite and some associated massive arsenopyrite. Chip samples over a width of 30 metres and a strike length of 170 metres returned significant gold values, the highest of which was 20.73 grams per tonne over one metre (Assessment Report 8612, page 8). The Number One Trench (Figure 3, Assessment Report 8612) gave a weighted average of 5.9 grams per tonne gold over 1.0 metre.

The occurrence may coincide with A25 (092L 302).

BIBLIOGRAPHY

- GSC OF 9; 170; 463
GSC SUM RPT 1929A
GSC P 38-5; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC MAP 4-1974; 255A; 1028A
GSC MEM 272
GSC EC GEOL 1-1947
EMPR EXPL 1980-268; 1984-240; 1986-C276
EMPR ASS RPT 8612, 12327, 14508
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/02/03
DATE REVISED: 1989/05/16

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 300**

NATIONAL MINERAL INVENTORY:

NAME(S): **HILLER 1**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 04 47 N
LONGITUDE: 126 50 14 W
ELEVATION: 975 Metres

NORTHING: 5549735
EASTING: 654737

LOCATION ACCURACY: Within 500M

COMMENTS: Located 0.75 kilometres north of Churchill (092L 031) and 10.7 kilometres north of Zeballos, 4.5 kilometres west of Zeballos Lake (from Saukko, 1967).

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Igneous-contact Industrial Min.
SHAPE: Tabular
DIMENSION: 0125 x 0020 Metres STRIKE/DIP: 330/90
COMMENTS: Zone is up to 20 metres wide and has been traced over 125 metres along its northwest strike.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Diorite

HOSTROCK COMMENTS: Ammonites from Alice Lake. Phlogopite from Zeballos intrusion. Mollusks from Quatsino Sound (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

CAPSULE GEOLOGY

The Hiller #1 magnetite occurrence lies within a belt dotted with 9 similar occurrences that extends from Zeballos River for about 8 kilometres in a northwest direction. The mineralization occurs at or near the conformable contact between the Upper Triassic Vancouver Group, Quatsino Formation crystalline limestone and overlying altered and folded volcanic and sedimentary rocks of the Parson Bay Formation and Lower Jurassic Bonanza Group. These rocks lie on the northeast flank of the northwest elongated Zeballos phase of the Late Jurassic Island Plutonic Suite.

The Hiller #1 occurrence lies 0.75 kilometres north of the Churchill magnetite occurrence (092L 031) in a similar geological environment, where magnetite has replaced limestone at a diorite contact. Magnetite occurs also in stringers within the intrusive rock. The mineralized zone is believed to dip steeply with the intrusive contact. Magnetite surveys suggest limited potential for the deposit (Saukko, 1967). The zone is up to 20 metres wide and has been traced over 125 metres on surface along its north-northwest strike.

In 1999, Doublestar Resources Ltd. plans to acquire the property

CAPSULE GEOLOGY

from Falconbridge Limited.

BIBLIOGRAPHY

EMPR BULL *27-131
EMPR AR 1945-116; 1951-197; 1962-100; 1965-232; 1966-73
EMPR ASS RPT *433, 14457
EMPR PF (Saukko, R.N., (1967): *"Hiller-Churchill Properties, 1966"
in Hiller - 092L 127)
EMPR EXPL 1985-C230; 1986-C275
GSC P 38-5; 40-12; 69-1A; 70-1A; 71-36; 72-44; 74-8; 79-30
GSC OF 9; 170; 463
GSC MEM 272, p. 68
GSC SUM RPT 1929A; 1932A-48
GSC MAP 4-1974; 255A; 1028A
GSC EC GEOL 1-1947
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Falconbridge File

DATE CODED: 1989/02/09
DATE REVISED: 1989/05/16

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 301**

NATIONAL MINERAL INVENTORY: 092L2 Fe3

NAME(S): **HILLER 8-12**, HILLER, HILLER 22

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 06 24 N
LONGITUDE: 126 52 46 W
ELEVATION: 640 Metres

NORTHING: 5552644
EASTING: 651631

LOCATION ACCURACY: Within 500M

COMMENTS: The No. 8 zone on the Hiller 22 claim of Saukko (1967), 13.5 kilometres north of Zeballos and 2.5 kilometres south of Artlish River (Property File - Saukko, 1967).

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Podiform Massive
CLASSIFICATION: Skarn Industrial Min.
TYPE: K03 Fe skarn
SHAPE: Tabular
DIMENSION: 1500 Metres STRIKE/DIP: 315/90 TREND/PLUNGE:
COMMENTS: Five massive magnetite lenses occur over a 1500 metre strike length.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil MATERIAL DATED: Juvarite ammonites			
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148.8 +/- 8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Phlogopite			

LITHOLOGY: Andesite
Limestone
Granodiorite
Andesite Dike
Porphyry Feldspar Dike

HOSTROCK COMMENTS: Age dates from Geological Survey of Canada Paper 74-8.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
Plutonic Rocks
RELATIONSHIP:
GRADE:

INVENTORY

ORE ZONE: HILLER 8 REPORT ON: Y
CATEGORY: Indicated YEAR: 1967
QUANTITY: 180000 Tonnes
COMMODITY GRADE
Iron 30.0000 Per cent
COMMENTS: Iron grades 30 to 40 per cent. Drill indicated reserves contained in two pods.
REFERENCE: Property File - Saukko, 1967.

CAPSULE GEOLOGY

The Hiller magnetite occurrence lies within a belt of mineralization comprising 9 or more similar occurrences that extend from the Zeballos River for about 8 kilometres in a northwest direction. The mineralization occurs at or near the conformable contact between the Upper Triassic Vancouver Group, comprising

CAPSULE GEOLOGY

Quatsino Formation crystalline limestone and overlying Parson Bay Formation highly altered and folded volcanic and sedimentary rocks, and the Lower Jurassic Bonanza Group. These rocks lie on the northeast flank of the northwest elongated Zeballos granodiorite phase of the Early to Middle Jurassic Island Plutonic Suite.

The Hiller occurrences, located 2.5 kilometres northwest of the Hiller 4-5 occurrence (092L 127), consist of a cluster of 5 massive magnetite lenses striking 315 degrees and dipping vertically. The lenses occur over a 1.5 kilometre strike length in skarned andesite or at limestone-andesite contacts in close proximity to the Zeballos intrusive. Andesite dykes and porphyry feldspar dykes are common.

The Hiller No. 8 zone consists of 2 magnetite pods striking east and dipping steeply south. Drill indicated reserves are 180,000 tonnes grading 30 to 40 per cent iron (Property File - Saukko, 1967).

The Hiller No. 9 zone is a flat-lying magnetite lens 0.3 to 1.5-metres wide at the limestone-andesite contact. It has been traced over 30 metres. Magnetometer surveys indicate limited potential.

In 1999, Doublestar Resources Ltd. plans to acquire the property from Falconbridge Limited.

BIBLIOGRAPHY

- EMPR BULL *27, p. 131
EMPR AR 1945-116; 1951-197; 1962-232; 1966-73
EMPR ASS RPT *433, 13665, 14457
EMPR PF (In 092L 127 - *Saukko, R.N. (1967): Hiller-Churchill Properties)
EMPR MAP 65 (1989)
EMPR OF 1992-1; 1992-9
GSC P 38-5; 40-12; 69-1A; 70-1A; 71-36; 72-44; 74-8; 79-30
GSC OF 9; 170; 463
GSC MEM 272, p. 68
GSC SUM RPT 1929 Part A; 1932 Part A, p. 48
GSC MAP 4-1974; 255A; 1028A
GSC EC GEOL 1, 1947
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
GCNL #8(Jan.12),#34(Feb.17),#43(Mar.2), 1989
NW PROSP March/April 1989
Falconbridge File

DATE CODED: 1989/02/10
DATE REVISED: 1989/05/16

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 302**

NATIONAL MINERAL INVENTORY: 092L2 Au35

NAME(S): **A25, HILLER 25, ZEB 1-12, WHITEDOME**

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 07 04 N
LONGITUDE: 126 53 41 W
ELEVATION: 527 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5553848
EASTING: 650504

LOCATION ACCURACY: Within 500M

COMMENTS: Location of diamond-drill hole #24 on boundary of Hiller 25 and 26 claims is 15 kilometres north of Zeballos on Toray Creek, a tributary of Artlish River.

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Gold Chalcopyrite Magnetite Pyrrhotite Tellurobismuthite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Igneous-contact Skarn
SHAPE: Tabular
DIMENSION: 250 x 100 Metres STRIKE/DIP: 158/45S TREND/PLUNGE:
COMMENTS: Attitude of local stratigraphy is 158 degrees dipping 45 degrees south.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvavite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Andesitic Pyroclastic
Limy Argillite
Dacite Dike
Rhyolite Dike
Diorite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Quatsino ammonites from Alice Lake; phlogopite from Zeballos intrusion (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1985
SAMPLE TYPE: Drill Core
COMMODITY: Gold GRADE: 310.0000 Grams per tonne
COMMENTS: Over 2 metres, drill hole 85-24.
REFERENCE: Prospectus, Footwall Explorations, page 10 appendix.

CAPSULE GEOLOGY

The A25 occurrence, at the boundary of Hiller 25 and 26 claims, coincides with the Hiller #12 anomaly of the 092L 301 magnetite occurrence (Hiller 8-12).
This gold-magnetite occurrence lies within a belt dotted with

CAPSULE GEOLOGY

9 magnetite occurrences that extend from Zeballos River for about 8 kilometres in a northwest direction. Mineralization occurs at or near the conformable contact between the Upper Triassic Vancouver Group, comprising Quatsino Formation crystalline limestone and overlying Parson Bay Formation highly altered and folded volcanic and sedimentary rocks and the Lower Jurassic Bonanza Group. These rocks lie on the northeast flank of the northwest elongated Zeballos phase of the Jurassic Island Plutonic Suite.

At the A25 occurrence, a sequence of alternating andesitic pyroclastics and limy argillites of the lower Bonanza Group trends 158 degrees and dips 45 degrees southwest. Extensive dacitic to rhyolitic dykes are present. Diorite is present nearby. Intruded rocks are extensively skarn-altered. A body of magnetite mineralization (the Hiller #12 showing of occurrence 092L 301) measures 250 by 100 metres, as indicated by ground magnetometer surveys.

Diamond drilling has returned values to 310 grams per tonne gold over 2 metres (diamond-drill hole 85-24, Prospectus, Footwall Explorations, 1988, page 10 of appended report on the Hiller-Churchill Group).

Magnetite mineralization is accompanied by pyrrhotite, native gold, chalcopyrite and tellurobismuthite.

In 1999, Doublestar Resources Ltd. plans to acquire the property from Falconbridge Limited.

BIBLIOGRAPHY

- GCNL #133,#157,#161,#169,#186,#193, 1988; #8,#34,#43,#60, 1989
N MINER Aug.29,Oct.3, 1988
NW PROSPECTOR Oct./Nov., 1988, pp. 14,15; Mar./Apr., 1989, p. 23
EMPR EXPL 1985-C230; 1986-C275
EMPR ASS RPT *13665, 14457
EMPR PF (Footwall Explorations, Prospectus, 1988)
GSC P 38-5; 69-1A; 70-1A; 71-36; 72-44; 74-8; 79-30
GSC OF 9; 170; 463
GSC MEM 204; 272
GSC SUM RPT 1929A; 1932AII-48
GSC MAP 4-1974; 255A; 1028A
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Falconbridge File

DATE CODED: 1989/02/10
DATE REVISED: 1989/05/16

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 303**

NATIONAL MINERAL INVENTORY: 092L2 Au15

NAME(S): **BRITANNIA DYKE**, B-2 FR. (L. 1054)

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 01 30 N
LONGITUDE: 126 48 03 W
ELEVATION: 600 Metres

NORTHING: 5543727
EASTING: 657519

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit on Lot 1054 is 350 metres west of Gold rally.

COMMODITIES: Gold Molybdenum Copper

MINERALS

SIGNIFICANT: Pyrite Molybdenite
COMMENTS: Gold, pyrite in quartz veins. Molybdenite as fracture coatings in porphyritic diorite.

ASSOCIATED: Quartz
ALTERATION: Sericite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epithermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au

SHAPE: Tabular
MODIFIER: Folded

STRIKE/DIP: 060/90

TREND/PLUNGE:

COMMENTS: Vein strike northeast to east, dipping steeply.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

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

ISOTOPIC AGE: 38 +/- 14 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Diorite
Porphyritic Hornblende Diorite

HOSTROCK COMMENTS: Biotite from Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: VEINS

REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1983
SAMPLE TYPE:	Grab		
COMMODITY	GRADE		
Gold	10.2300	Grams per tonne	
Copper	0.4900	Per cent	

COMMENTS: Highest value from samples of veins in area.
REFERENCE: Assessment Report 12077 Fig. 4.

CAPSULE GEOLOGY

The Britannia Dyke vein lies in the Zeballos gold camp, which is underlain by the Lower Jurassic Bonanza Group. The Bonanza Group is an island arc sequence of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos Intrusion phase of the Island Intrusions have intruded all older rocks. The Eocene Zeballos Stock, a quartz diorite phase of the Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a north-west axis.

The Britannia Dyke vein occurrences were explored by 2 adits in

CAPSULE GEOLOGY

the 1930's. Three additional veins were sampled in the work reported in Assessment Report 12077. The highest sample (BB003-83) returned 10.32 grams per tonne gold and 0.49 per cent copper (Assessment Report 12077, Figure 4).

The vein consists of vuggy quartz with heavy pyrite. A 2 metre wide sericite alteration zone envelopes the vein which is hosted by Eocene quartz diorite.

A 60 metre wide molybdenite occurrence is reported in the vicinity of the veins, as fracture coatings accompanied by pyrite, quartz and porphyritic hornblende, in a quartz diorite host rock. The location is not specified (Assessment Report 12077, page 10).

BIBLIOGRAPHY

- EMPR EXPL 1983-330
EMPR ASS RPT *12077
EMPR BULL 20-V; 27, p. 97
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area
GSC P 38-5; 40-12, p. 21; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC OF 9; 170; 463
GSC MEM 204; 272
GSC SUM RPT 1929A; 1932A
GSC MAP 4-1974; 255A; 1028A
GSC EC GEOL 1-1947
N MINER Apr., 1938, pp. 39-45
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/03/06
DATE REVISED: 1989/05/16

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 304**

NATIONAL MINERAL INVENTORY:

NAME(S): **KAOUK**, AMY 1

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 04 59 N
LONGITUDE: 126 56 56 W
ELEVATION: 122 Metres

NORTHING: 5549880
EASTING: 646738

LOCATION ACCURACY: Within 500M

COMMENTS: Location from H. Veerman Report (Property File) on Timber L. 422 on the Kaouk River, 13.6 kilometres northwest of Zeballos.

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Massive
CLASSIFICATION: Industrial Min.

DIMENSION: STRIKE/DIP: 315/
COMMENTS: Limestone hosting mineralization strikes northwest.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
	ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil		
Upper Triassic	Mollusks Vancouver	Quatsino	
	ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil		
Jurassic	Ammonites		Island Plutonic Suite
	ISOTOPIC AGE: 148 +/- 8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Phlogopite		

LITHOLOGY: Limestone
Granodiorite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; Quatsino ammonites from Alice Lake; phlogopite from Zeballos (Geolog. Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area between Kaouk and Artlish Rivers is underlain by Jurassic granodiorite of the Island Plutonic Suite. Lower Jurassic Bonanza Group volcanics and sediments lie to the west and north (Geological Survey of Canada Map 4-1974).

A property examination (Property File - H. Veerman) indicates a northwest trending belt of Quatsino(?) limestone extending between the two rivers, possibly as a roof pendant within the intrusive rocks. The examination indicates pods of magnetite mineralization in the location given.

BIBLIOGRAPHY

EMPR BULL 20-V; 27
GSC OF 9; 170; 463
GSC MEM 204; 272
GSC P 74-8
EMPR PF (Veerman, H.: Untitled and undated report)
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 566
REPORT: RGEN0100

BIBLIOGRAPHY

Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/03/08
DATE REVISED: 1989/05/15

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 305**

NATIONAL MINERAL INVENTORY:

NAME(S): **KAOUK PYTT**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 05 44 N
LONGITUDE: 126 59 13 W
ELEVATION: 457 Metres

NORTHING: 5551196
EASTING: 643978

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Property File, 1.6 kilometres north of Kaouk River,
16 kilometres northwest of Zeballos.

COMMODITIES: Iron

MINERALS

SIGNIFICANT: Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Granodiorite

HOSTROCK COMMENTS: Bonanza Mollusks from Quatsino Sound. Quatsino ammonites from Alice Lake. Phlogopite from Zeballos (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area between Kaouk and Artlish Rivers is underlain by Jurassic granodiorite of the Island Plutonic Suite. Lower Jurassic Bonanza Group volcanics and sediments lie to the west and north (Geological Survey of Canada Map 4-1974).

A property examination (Property File - H. Veerman) indicates a northwest trending belt of Quatsino (?) limestone extending between the two rivers, possibly as a roof pendant within the intrusive rocks. The examination indicates unspecified pyrrhotite mineralization in the location given.

BIBLIOGRAPHY

- EMPR PF (Veerman, H.,: Report, see Kaouk - 092L 304)
EMPR BULL 20-V; 27
GSC OF 9; 170; 463
GSC MEM 204; 272
GSC P 74-8
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/03/08
DATE REVISED: 1989/05/16

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 305**

MINFILE NUMBER: **092L 306**

NATIONAL MINERAL INVENTORY:

NAME(S): **KAOUK MAG**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 06 24 N
LONGITUDE: 126 58 36 W
ELEVATION: 335 Metres

NORTHING: 5552451
EASTING: 644680

LOCATION ACCURACY: Within 500M

COMMENTS: Location, from Property File, 2.5 kilometres north of Kaouk River,
16 kilometres northwest of Zeballos.

COMMODITIES: Magnetite Iron

MINERALS

SIGNIFICANT: Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Podiform Massive
CLASSIFICATION: Industrial Min.
DIMENSION: STRIKE/DIP: 315/
COMMENTS: Limestone hosting mineralization strikes northwest.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil			
Upper Triassic	Mollusks	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil			
Jurassic	Ammonites		Island Plutonic Suite
ISOTOPIC AGE: 148 +/- 8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Phlogopite			

LITHOLOGY: Limestone
Granodiorite

HOSTROCK COMMENTS: Bonanza Mollusks from Quatsino Sound. Quatsino ammonites from Alice Lake. Phlogopite from Zeballos (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area between Kaouk and Artlish Rivers is, according to Geological Survey of Canada Map 4-1974, underlain by Jurassic granodiorite of the Island Plutonic Suite. Lower Jurassic Bonanza Group volcanics and sediments lie to the west and north.

A property examination (Property File - H. Veerman) indicates a northwest trending belt of Quatsino (?) limestone extending between the two rivers, possibly as a roof pendant within the intrusive rocks. The examination indicates pods of magnetite mineralization in the limestone located about 3.5 kilometres northwest of the Kaouk showing (092L 304).

BIBLIOGRAPHY

- EMPR PF (Veerman, H.,: Report, see Kaouk - 092L 304)
EMPR BULL 20-V; 27
GSC OF 9; 170; 463
GSC MEM 204; 272
GSC P 74-8
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 569
REPORT: RGEN0100

BIBLIOGRAPHY

Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/03/08
DATE REVISED: 1989/05/16

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 307**

NATIONAL MINERAL INVENTORY:

NAME(S): **ARTLISH MO**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 06 49 N
LONGITUDE: 126 58 26 W
ELEVATION: 122 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: 122.

NORTHING: 5553228
EASTING: 644858

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Igneous-contact

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
	ISOTOPIC AGE: 200 Ma DATING METHOD: Fossil		
Upper Triassic	Mollusks	Quatsino	
	ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil		
Jurassic	Ammonites		Island Plutonic Suite
	ISOTOPIC AGE: 148 +/- 8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Phlogopite		

LITHOLOGY: Limestone
Granodiorite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound. Quatsino ammonites from Alice Lake. Phlogopite from Zeballos (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area between Kaouk and Artlish Rivers is underlain by Jurassic granodiorite of the Island Plutonic Suite. Lower Jurassic Bonanza Group volcanics and sediments lie to the west and north (Geological Survey of Canada Map 4-1974).

A property examination (Property File - H. Veerman) indicates a northwest trending belt of Quatsino (?) limestone extending between the two rivers, possibly as a roof pendant within the intrusive rocks. The examination indicates unspecified molybdenite mineralization near the limestone-intrusive contact.

BIBLIOGRAPHY

EMPR PF (Veerman, H.,: Report, see Kaouk - 092L 304)
EMPR BULL 20-V; 27
GSC OF 9; 170; 463
GSC MEM 204; 272
GSC P 74-8
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/03/08
DATE REVISED: 1989/05/15

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 308**

NATIONAL MINERAL INVENTORY: 092L12 Tic2

NAME(S): **PEMBERTON**, EXPO

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L12W 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 37 49 N
LONGITUDE: 127 45 56 W
ELEVATION: 305 Metres

NORTHING: 5609439
EASTING: 587306

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Pyrophyllite

MINERALS

SIGNIFICANT: Pyrophyllite
COMMENTS: Pyrophyllite-bearing silicified breccia.
ASSOCIATED: Silica Pyrite
ALTERATION: Pyrophyllite Silica Clay Sericite Zeolite
ALTERATION TYPE: Zeolitic Silicific'n Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
DIMENSION: STRIKE/DIP: 285/ TREND/PLUNGE:
COMMENTS: Silicified breccia masses appear to follow a zone trending 285 degrees (Assessment Report 4754).

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 159 +/- 5 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Siliceous Breccia
Pyroclastic
Flow
Diorite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound; biotite K-Ar date from southwest Nahwitti Lake.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP: Syn-mineralization
GRADE: Zeolite

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics intruded by Jurassic Island Plutonic Suite.

Locally, in the Pemberton Hills area, pyrophyllite-bearing silicified breccia has been interpreted as a volcanic centre (Geology, Exploration and Mining 1974, page 217). Additional centres are found to the northwest (Refer to 092L 078 - Hep; 092L 185 - Hushamu; 200 - Red Dog; 102I 013 - South Knob). Similar mineralization is found to the southeast in the vicinity of Island Copper Mine (092L 138) where pyrophyllite-bearing zones are exposed in the mine workings.

At the Pemberton occurrence, silicified breccia masses appear to follow a zone trending 285 degrees truncated by either diorite masses or Bonanza pyroclastics and flows. The breccias contain pyrophyllite, sericite and clay. Other volcanic centres are reported to contain zeolites.

The pyrophyllite has probably formed as a product of hydrothermal alteration during low grade regional metamorphism (Open File 1988-19, pages 16,17).

Pyrite is associated with the breccias. Chalcopyrite is present at others. The volcanic centres are receiving interest due to the potential of being bulk tonnage, low grade gold deposits.

BIBLIOGRAPHY

EM EXPL 2001-23-31; 2002-29-40
EMPR AR 1968-98
EMPR ASS RPT 2190, 3402, 4000, *4754, 14394
EMPR EXPL 1976-129; 1977-E174; 1980-275; 1983-337; 1985-C238;
1986-C281
EMPR GEM 1970-254,262; 1971-321; 1972-304; 1973-262; *1974-217,218,
Fig.29
EMPR OF *1988-19, pp. 16,17
EMPR PF (1988 Prospectus: Moraga Resources, see 092L 240-Expo;
Maps, various geological, see 092L 240-Expo)
EMR NMI 092L12 Tlc1-Hushamu
GSC ANN RPT 1886
GSC BULL 242
GSC MAP *4-1974
GSC OF 9; 170; 463
GSC P 69-1A; 72-44; *74-8; 79-30
CJES 18, p. 1; 20, p. 1, Jan. 1983
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/03/12
DATE REVISED: 1989/05/10

CODED BY: NJH
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 309**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRIVATEER PE** WHITE STAR (L.1031), PILGRIM EXTN (L.1043)

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 01 35 N
LONGITUDE: 126 48 45 W
ELEVATION: 305 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5543857
EASTING: 656679

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit on Lot 1031's west side (from Bulletin 27, page 69) is 0.5 kilometres southeast of Zeballos River, 6.0 kilometres north-east of Zeballos.

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Gold Galena Pyrite Arsenopyrite
ASSOCIATED: Quartz
ALTERATION TYPE: Carbonate Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal Epigenetic Hydrothermal
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
DIMENSION: 0230 x 0168 Metres STRIKE/DIP: 044/90 TREND/PLUNGE:
COMMENTS: Vein strike is 040 to 048 degrees and dips vertically. Vein width is 15 to 71 centimetres and has been traced over 230 metre strike length and a down dip length of 168 metres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			Catface Intrusions
Eocene			
ISOTOPIC AGE: 38 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Altered Crystal Tuff
Quartz Diorite

HOSTROCK COMMENTS: Mollusks from Quatsino Sound. Biotite from Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels

CAPSULE GEOLOGY

The Privateer-PE vein lies in the Zeballos gold camp which is underlain by the Lower Jurassic Bonanza Group. The Bonanza Group is an island arc sequence consisting of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza Group rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and Karmutsen Formation tholeiitic basalts, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic plutons of the Zeballos intrusion phase of the Jurassic Island Intrusions have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a north-west axis.

The PE Vein strikes 040 to 048 degrees and dips vertically. Width ranges from 15 to 71 centimetres. The vein has been traced by trenching and tunnelling over a 230 metre strike length and a down dip length of 168 metres.

The vein consists of quartz, pyrite, galena and arsenopyrite. The vein is located 280 metres south of the Privateer No. 1 Vein (092L 008), and is hosted in calc-silicate altered crystal tuff of

CAPSULE GEOLOGY

the Bonanza Group near the contact with Eocene Catface quartz diorite.

BIBLIOGRAPHY

- EMPR BULL 20-V; *27, p. 69
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
Stevenson, J.S.: Lode Gold Deposits of the Zeballos Area, 1938
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC OF 9; 170; 463
GSC MEM 204; 272
GSC SUM RPT 1929A; 1932A
GSC MAP 4-1974; 255A; 1028A
GSC EC GEOL 1-1947
N MINER Apr. 1938, pp. 39-45
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/03/13
DATE REVISED: 1989/05/16

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 310**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRIVATEER P4A**, RIVERSIDE (L.1781)

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 01 39 N
LONGITUDE: 126 49 35 W
ELEVATION: 197 Metres

NORTHING: 5543952
EASTING: 655681

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit on Lot 1781 (from Bulletin 27, page 70) is 200 kilometres southeast of Ford Bridge, Zeballos River, 5.5 kilometres northeast of Zeballos.

COMMODITIES: Gold Silver Lead Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Galena Chalcopyrite Arsenopyrite Pyrrhotite

Sphalerite
COMMENTS: Gold in pyrite. Silver in galena.

ASSOCIATED: Quartz Calcite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal Epigenetic Hydrothermal

TYPE: I06 Cu±Ag quartz veins

SHAPE: Tabular

MODIFIER: Sheared Folded

DIMENSION: 0048 Metres

STRIKE/DIP: 070/75N TREND/PLUNGE:

COMMENTS: Vein strikes 070 degrees, dips 75 degrees north.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER

Lower Jurassic Bonanza Undefined Formation

ISOTOPIC AGE: 200 Ma

DATING METHOD: Fossil

MATERIAL DATED: Mollusks

Eocene

Catface Intrusions

ISOTOPIC AGE: 38 +/- 14 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Andesitic Pyroclastic

HOSTROCK COMMENTS: Mollusks from Quatsino Sound. Biotite from Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1950

SAMPLE TYPE: Chip

COMMODITY	GRADE	
Silver	178.3000	Grams per tonne
Gold	62.4000	Grams per tonne
Copper	0.1400	Per cent
Lead	5.3600	Per cent
Zinc	2.7700	Per cent

COMMENTS: Selected sample from pyrite-sphalerite-galena mineralized quartz vein material.

REFERENCE: Bulletin 27, page 71.

CAPSULE GEOLOGY

The Privateer P4A vein lies in the Zeballos gold camp which is underlain by the Lower Jurassic Bonanza Group. The Bonanza Group is an island arc sequence consisting of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza Group rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and Karmutsen Formation tholeiitic basalts, all belonging to the Upper

CAPSULE GEOLOGY

Triassic Vancouver Group. Dioritic to granodioritic plutons of the Zeballos intrusion phase of the Jurassic Island Intrusions have intruded all older rocks. The Zeballos stock, a quartz diorite phase of the Eocene Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

The P4A vein strikes 070 degrees and dips 75 degrees north, following a 10 metre wide fracture zone in andesitic pyroclastics of the Bonanza Group. The vein is to 20 centimetres wide but averages about 7.5 centimetres and is often lency. The quartz gangue contains varying amounts of pyrite, arsenopyrite, pyrrhotite, chalcopyrite, sphalerite and coarse calcite. Gold values to 19.9 grams per tonne were obtained from massive pyrite. A sample of pyrite-sphalerite galena with vein quartz assayed 62.4 grams per tonne gold, 178.3 grams per tonne silver, 0.14 per cent copper, 5.36 per cent lead and 2.77 per cent zinc (Bulletin 27, page 71). The vein is located 0.7 kilometres west of the Privateer mine (092L 008).

BIBLIOGRAPHY

- EMPR BULL 20-V; *27, p. 70
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
GSC EC GEOL 1-1947
GSC MAP 4-1974; 255A; 1028A
GSC MEM 204; 272
GSC OF 9; 170; 463
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC SUM RPT 1929A; 1932AII
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
N MINER Apr. 1938, pp. 39-45
WWW <http://www.newmex-minerals.com>
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa
Stevenson, J.S.: Lode Gold Deposits of the Zeballos Area, 1938

DATE CODED: 1989/03/13
DATE REVISED: 1989/05/16

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 311**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRIVATEER P3D**, PROGRESS 3 (L.1063)

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 01 53 N
LONGITUDE: 126 48 55 W
ELEVATION: 335 Metres

NORTHING: 5544407
EASTING: 656464

LOCATION ACCURACY: Within 500M

COMMENTS: Location of adit, on Lot 1063 (from Bulletin 27, page 71) is 350 metres southeast of Zeballos River, 6 kilometres northeast of Zeballos.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal Epigenetic Hydrothermal
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
MODIFIER: Folded
DIMENSION: STRIKE/DIP: 025/64W TREND/PLUNGE:
COMMENTS: Vein strikes 025 degrees, dips 64 degrees west. Vein width is 10 centimetres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

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

ISOTOPIC AGE: 38 +/- 14 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Diorite Breccia
Quartz Diorite
Granodiorite Dike

HOSTROCK COMMENTS: Biotite from Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks
PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The Privateer P3D vein lies in the Zeballos gold camp which is underlain by the Lower Jurassic Bonanza Group. The Bonanza Group is an island arc sequence consisting of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza Group rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and Karmutsen Formation tholeiitic basalts, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic plutons of the Zeballos intrusion phase of the Jurassic Island Intrusions have intruded all older rocks. The Zeballos stock, a quartz diorite phase of the Eocene Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

The P3D vein strikes 025 degrees and dips 64 degrees west. It lies in Eocene quartz diorite breccia (Bulletin 27, Figure 2), cut by small granodiorite dykes, is 10 centimetres wide and consists of massive quartz with patches of chalcopyrite. The sphalerite-galena-pyrite mineralogy typical for the Zeballos district producing mines is absent.

BIBLIOGRAPHY

EMPR BULL 20-V; *27, p. 71
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
Stevenson, J.S.: Lode Gold Deposits of the Zeballos Area, 1938
GSC P 38-5; 40-12; 69-1A; 70-1A; 72-44; 74-8; 79-30

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
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ENERGY AND MINERALS DIVISION

PAGE: 578
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 9; 170; 463
GSC MEM 204; 272
GSC SUM RPT 1929A; 1932AII
GSC MAP 4-1974; 255A; 1028A
GSC EC GEOL 1-1947
N MINER Apr. 1938, pp. 39-45
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/03/13
DATE REVISED: 1989/05/15

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 311**

MINFILE NUMBER: **092L 312**

NATIONAL MINERAL INVENTORY:

NAME(S): **GREEN STAR (L.1700)**

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 01 06 N
LONGITUDE: 126 48 35 W
ELEVATION: 317 Metres

NORTHING: 5542968
EASTING: 656904

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization, from Geological Survey of Canada Paper 40-12, page 16.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite
ALTERATION: Garnet
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn
SHAPE: Tabular
DIMENSION: 0003 Metres STRIKE/DIP: 335/60W TREND/PLUNGE:
COMMENTS: Stratigraphy strikes 335 degrees, dips 60 degrees west. Mineralization is 1.5 to 3 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Eocene			Catface Intrusions
ISOTOPIC AGE: 38 +/- 14 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Calcareous Tuff
Garnet Skarn
Quartz Diorite

HOSTROCK COMMENTS: Mollusks from Quatsino Sound. Biotite from Zeballos (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PLUTONIC ROCKS RELATIONSHIP:
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
GRADE: Amphibolite

CAPSULE GEOLOGY

The Green Star occurrence, described by Bancroft (Geological Survey of Canada Paper 40-12, page 17) lies in brown garnet skarn replacing green calcareous tuff near the west side of the Eocene Zeballos Pluton quartz diorite. The tuff, of the Lower Jurassic Bonanza Group, strikes 335 degrees and dips 60 degrees west. Chalcopyrite and pyrrhotite are reported to occur over a width of 1.5 to 3 metres.

BIBLIOGRAPHY

EMPR BULL 20-V, p. 18; *27, p. 80
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
Stevenson, J.S.: Lode Gold Deposits of the Zeballos Area, 1938
GSC P 38-5; *40-12, p. 17; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC OF 9; 170; 463
GSC MEM 204; 272
GSC SUM RPT 1929A; 1932AII
GSC MAP 4-1974; 255A; 1028A
GSC EC GEOL 1-1947
N MINER Apr. 1938, pp. 39-45
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 580
REPORT: RGEN0100

BIBLIOGRAPHY

Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/03/15
DATE REVISED: 1989/05/16

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 313**

NATIONAL MINERAL INVENTORY: 092L2 Au13

NAME(S): **BROWN BOMBER**, GOLDEN PEAK 3 (L.1037)

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L02W
BC MAP:

MINING DIVISION: Alberni

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 01 01 N
LONGITUDE: 126 48 02 W
ELEVATION: 495 Metres

NORTHING: 5542832
EASTING: 657566

LOCATION ACCURACY: Within 500M

COMMENTS: Location of bottom trench on the vein is located in the east corner of Lot 1037 (Bulletin 27, Figure 2), 2 kilometres southeast of the mouth of Spud Creek, 5.5 kilometres northeast of Zeballos.

COMMODITIES: Gold Zinc

MINERALS

SIGNIFICANT: Sphalerite Pyrite
COMMENTS: Gold mineralogy not known.
ASSOCIATED: Quartz
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Epithermal Epigenetic Hydrothermal
TYPE: I06 Cu±Ag quartz veins
SHAPE: Tabular
DIMENSION: 0030 Metres STRIKE/DIP: 057/80N TREND/PLUNGE:
COMMENTS: Vein exposed for 30 metres, striking 057 degrees, dipping 080 degrees north.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

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

ISOTOPIC AGE: 38 +/- 14 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Diorite

HOSTROCK COMMENTS: Biotite from Zeballos Pluton (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks

CAPSULE GEOLOGY

The Brown Bomber showing lies in the Zeballos gold camp which is underlain by the Lower Jurassic Bonanza Group. The Bonanza Group is an island arc sequence consisting of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza Group rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and Karmutsen Formation tholeiitic basalts, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic plutons of the Zeballos intrusion phase of the Jurassic Island Intrusions have intruded all older rocks. The Zeballos stock, a quartz diorite phase of the Eocene Catface Intrusions, is spatially related to the areas gold-quartz veins. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

The Brown Bomber vein in 1940 was explored for 30 metres by open cuts. The vein strikes 057 degrees and dips 80 degrees north. It shows rusty vein material, gouge and a 5 centimetre quartz stringer carrying finely disseminated pyrite and sphalerite. It is located in quartz diorite of the Catface Intrusions.

BIBLIOGRAPHY

EMPR BULL 20-V, p. 18; *27, p. 80
EMPR FIELDWORK 1982, p. 290; 1983, p. 219
EMPR PF (Golden Peak - 092L 011)
Stevenson, J.S.: Lode Gold Deposits of the Zeballos Area, 1938
GSC P 38-5; *40-12, p. 16; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC OF 9; 170; 463

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 582
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 204; 272
GSC SUM RPT 1929A; 1932AII
GSC MAP 4-1974; 255A; 1028A
GSC EC GEOL 1-1947
N MINER Apr. 1938, pp. 39-45
CIM TRANS Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72,
pp. 116-125
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/03/15
DATE REVISED: 1989/05/16

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 314**

NATIONAL MINERAL INVENTORY:

NAME(S): **BIG ZINC**, CLANCY

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 26 19 N
LONGITUDE: 127 26 04 W
ELEVATION: 250 Metres

NORTHING: 5588570
EASTING: 611172

LOCATION ACCURACY: Within 500M

COMMENTS: Location (from Property File - 092L 057 - Peerless) is 2 kilometres north of Victoria Lake, 2 kilometres west of Alice Lake.

COMMODITIES: Zinc

MINERALS

SIGNIFICANT: Sphalerite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn
TYPE: K02 Pb-Zn skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
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Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			

Upper Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Quartz Diorite
Calcareous Clastic Rock

HOSTROCK COMMENTS: Mollusks from Beaver Cove. Intrusive biotite from Island Copper Mine (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

INVENTORY

ORE ZONE: BIG ZINC

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 4500 Tonnes
COMMODITY: Zinc
GRADE: 4.5000 Per cent
YEAR: 1974

COMMENTS: Grade reported as 4 to 5 per cent for surface exposures.
REFERENCE: Property File - 1974 Report on Marble River Project, Zeballos Dvlp.

CAPSULE GEOLOGY

The Big Zinc occurrence is underlain by limestone and calcareous clastics of the Upper Triassic Vancouver Group, Quatsino Formation. Quartz diorite of the Late Jurassic Island Plutonic Suite, intrudes the Quatsino carbonates.

A massive sphalerite occurrence is reported to occur in skarned rocks near the limestone-quartz diorite contact. Similar mineralization occurs about 3.2 kilometres to the southeast at the Peerless showing (092L 057).

About 4,500 tonnes of ore grading between 4.0 to 5.0 per cent zinc was reported to occur in surface exposures (Zeballos Development Corp., Marble River Project, 1974, Figure 2).

BIBLIOGRAPHY

EMPR AR 1969-207
EMPR ASS RPT 1661, 1885

BIBLIOGRAPHY

- EMPR BULL 101, p. 185
EMPR PF (*092L 057 - Peerless: Zeballos Development Corp., "Marble River Project", 1974, Fig. 2)
EMPR Prelim. Geol. Map (Jeffery, W.G., (1962): Alice Lake-Benson Lake)
GSC MAP 4-1974; 255A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, p. 188

DATE CODED: 1989/03/20
DATE REVISED: 1989/05/17

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 315**

NATIONAL MINERAL INVENTORY: 092L11 Cu3

NAME(S): **CRANBERRY, T, CLIFF**

MINING DIVISION: Nanaimo

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 38 16 N
LONGITUDE: 127 28 31 W
ELEVATION: 215 Metres

NORTHING: 5610655
EASTING: 607818

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of showing (Assessment Report 8284).

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Malachite
ALTERATION: Malachite
ALTERATION TYPE: Skarn Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn
SHAPE: Irregular
DIMENSION: 0060 x 0002 Metres STRIKE/DIP: 070/35S TREND/PLUNGE:
COMMENTS: Average trend of host rocks. Cranberry A zone is 2 metres thick and has been exposed for 60 metres.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			Island Plutonic Suite
Jurassic			
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Andesite
Basalt
Quartz Diorite
Andesite Dike

HOSTROCK COMMENTS: Ammonites from Hisnit Island; biotite K-Ar date from Rupert Inlet Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

INVENTORY

ORE ZONE: CRANBERRY A REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1980
SAMPLE TYPE:	Grab		
COMMODITY		GRADE	
Silver		11.6600	Grams per tonne
Gold		0.1000	Grams per tonne
Copper		3.1800	Per cent

COMMENTS: Grab sample, Cranberry A showing.
REFERENCE: Assessment Report 8284.

CAPSULE GEOLOGY

The region is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by stocks of the Jurassic Island Plutonic Suite.

Locally, quartz diorite and andesite dykes intrude Karmutsen Formation limestone, andesite and basalt. The sediments and volcanics

CAPSULE GEOLOGY

strike 070 degrees and dips 35 degrees south. The Cranberry A showing is a 2.0 metre thick zone of skarn exposed for 60 metres along a limestone-andesite contact. A grab sample from the showing assayed 3.180 per cent copper, 11.66 grams per tonne silver and 0.10 grams per tonne gold (Assessment Report 8284). The Cranberry B showing is a 1.7 metre thick zone of skarn exposed for 27 metres along a limestone-andesite contact, and may be a faulted portion of the Cranberry A showing. Chalcopyrite and malachite are reported to be present.

Assay results are similar to those from the nearby Rainbow (092L 159) showings, where chalcopyrite and minor magnetite are disseminated in skarn comprised mainly of grossular (refer to 092L 159-Little Joe; 092L 113-Frances; 092L 316-West; 092L 317-Swamp and 092L 318-South).

BIBLIOGRAPHY

- EMPR AR 1959-132; 1963-99; 1968-84,90
EMPR GEM 1970-254,266
EMPR EXPL 1978-E182; 1979-190; 1981-136; 1983-335
EMPR ASS RPT 2381, *8284, 9853, 11407, 17029
GSC ANN RPT 1886
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MEM 23
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983
GCNL #221, 1981; #120, 1982; #112, 1983
N MINER Jul.4, 1963; Oct.10,Dec.12, 1968; Sept.17, 1970; Mar.4, 1982

DATE CODED: 1989/03/23
DATE REVISED: / /

CODED BY: NJH
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 316**

NATIONAL MINERAL INVENTORY: 092L11 Cu3

NAME(S): **WEST**, CLIFF

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 37 59 N
LONGITUDE: 127 29 06 W
ELEVATION: 150 Metres

NORTHING: 5610116
EASTING: 607141

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of showing (Assessment Report 8284).

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
DIMENSION: 0003 x 0001 Metres STRIKE/DIP: 070/35S TREND/PLUNGE:
COMMENTS: Average trend of host rocks. Skarn lens is 3 by 1 metres in size.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
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Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Tuff
Quartz Diorite
Andesite Dike

HOSTROCK COMMENTS: Ammonites from Hisnit Island; biotite K-Ar date from Rupert Inlet Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
Plutonic Rocks
RELATIONSHIP: Syn-mineralization GRADE: Hornfels

INVENTORY

ORE ZONE: WEST REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 44.6000 Grams per tonne
Gold 0.3090 Grams per tonne
Copper 6.7000 Per cent
COMMENTS: Grab sample, West showing.
REFERENCE: Assessment Report 8284.

CAPSULE GEOLOGY

The region is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by stocks of the Jurassic Island Plutonic Suite.

Locally, quartz diorite and andesite dykes intrude Karmutsen Formation limestone and tuff which strike 070 degrees and dip 35 degrees south. At the West showing a 1 by 3 metre lens of skarn is present in limestone near a limestone-tuff contact. The skarn contains a high amount of disseminated pyrite and chalcopyrite. Similar skarns, comprised of grossularite, are found nearby (refer to 092L 159-Little Joe; 092L 113-Frances; 092L 315-Cranberry;

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 588
REPORT: RGEN0100

CAPSULE GEOLOGY

092L 317-Swamp and 092L 318-South). A grab sample assayed 6.7 per cent copper, 44.6 grams per tonne silver and 0.309 grams per tonne gold (Assessment Report 8284).

BIBLIOGRAPHY

EMPR AR 1959-132; 1963-99; 1968-84,90
EMPR GEM 1970-254,266
EMPR EXPL 1978-E182; 1979-190; 1981-136; 1983-335
EMPR ASS RPT 2381, *8284, 9853, 11407, 17029
GSC ANN RPT 1886
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MEM 23
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983
GCNL #221, 1981; #120, 1982; #112, 1983
N MINER Jul.4, 1963; Oct.10,Dec.12, 1968; Sept.17, 1970; Mar.4, 1982

DATE CODED: 1989/03/23
DATE REVISED: / /

CODED BY: NJH
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 317**

NATIONAL MINERAL INVENTORY:

NAME(S): **SWAMP, CLIFF**

MINING DIVISION: Nanaimo

STATUS: Prospect
 REGIONS: British Columbia, Vancouver Island
 NTS MAP: 092L11W
 BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 38 11 N
 LONGITUDE: 127 29 26 W
 ELEVATION: 135 Metres

NORTHING: 5610478
 EASTING: 606740

LOCATION ACCURACY: Within 500M

COMMENTS: Showing at Swamp (Assessment Report 11407).

COMMODITIES: Copper Zinc Silver Lead Gold

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Galena Bornite
 ASSOCIATED: Pyrite Magnetite
 ALTERATION: Grossularite Andradite Calcite Chlorite Quartz
 ALTERATION TYPE: Skarn
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Massive
 CLASSIFICATION: Skarn
 SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
 Hornblende Granodiorite
 Andesite Dike

HOSTROCK COMMENTS: Ammonites from Hisnit Island; biotite K-Ar date from Rupert Inlet Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
 TERRANE: Wrangell Plutonic Rocks
 METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1983
 SAMPLE TYPE: Drill Core
 COMMODITY GRADE

Silver	57.2500	Grams per tonne
Gold	0.1700	Grams per tonne
Copper	1.2600	Per cent
Lead	0.2800	Per cent
Zinc	7.7200	Per cent

COMMENTS: 8.4 metre diamond drill intersection.
 REFERENCE: Assessment Report 11407.

CAPSULE GEOLOGY

The region is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by stocks of the Jurassic Island Plutonic Suite.

Locally, hornblende granodiorite and an andesite dyke intrude Karmutsen Formation limestone. Skarn has formed at the granodiorite-limestone contact. The skarn is mineralized with grossularite, andradite, calcite, chlorite, quartz and magnetite and contains disseminated to massive pyrite, chalcopyrite and sphalerite with lesser

CAPSULE GEOLOGY

galena and bornite. The skarn is irregular in outline, having a sharp contact with the limestone and a gradual contact with the grano-diorite. Diamond drilling in 1983 intersected 8.4 metres assaying 1.26 per cent copper, 7.72 per cent zinc, 57.25 grams per tonne silver, 0.28 per cent lead and 0.17 grams per tonne gold (Assessment Report 11407).

Similar skarns are located nearby (refer to 092L 113-Frances; 092L 159-Little Joe; 092L 315-Cranberry; 092L 316-West; 092L 318-Branch).

BIBLIOGRAPHY

- EMPR AR 1959-132; 1963-99; 1968-84,90
EMPR GEM 1970-254,266
EMPR EXPL 1978-E182; 1979-190; 1981-136; 1983-335
EMPR ASS RPT 2381, 8284, 9853, *11407, 17029
GSC ANN RPT 1886
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MEM 23
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983
GCNL #221, 1981; #120, 1982; #112, 1983
N MINER Jul.4, 1963; Oct.10,Dec.12, 1968; Sept.17, 1970; Mar.4, 1982

DATE CODED: 1989/03/23
DATE REVISED: / /

CODED BY: NJH
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 318**

NATIONAL MINERAL INVENTORY: 092L11 Cu3

NAME(S): **SOUTH**, BRANCH 7, EAST,
CLIFF

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:
LATITUDE: 50 37 59 N
LONGITUDE: 127 28 13 W
ELEVATION: 150 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of several showings (Assessment Report 8284).

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5610137
EASTING: 608182

COMMODITIES: Copper Silver Gold Magnetite Iron

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn Industrial Min.
DIMENSION: 0200 x 0200 Metres STRIKE/DIP: 315/30S TREND/PLUNGE:
COMMENTS: Attitude of limestone-andesite contact (Assessment Report 8284).
Several showings are present in a 200 by 200 metre area.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Marble
Andesite
Andesite Dike

HOSTROCK COMMENTS: Ammonites from Hisnit Island; biotite K-Ar date from Ruper Inlet Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

INVENTORY

ORE ZONE: SKARN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 6.8600 Grams per tonne
Copper 5.7500 Per cent
COMMENTS: The sample also contained trace gold.
REFERENCE: Assessment Report 8284.

CAPSULE GEOLOGY

The region is underlain by northwest trending belts of Upper Triassic volcanics and sediments of the Vancouver Group (Karmutsen and Quatsino formations) and Lower Jurassic Bonanza Group volcanics and sediments. These rocks have been intruded by stocks of the Jurassic Island Plutonic Suite.

Locally, limestone (Karmutsen Formation) is altered to skarn along limestone-andesite contacts. The skarn is rich in disseminated chalcopyrite and, in places, magnetite. Several showings are present within a 200 by 200 metre area. The largest showing (South Showing) is traceable for 35 metres, striking northwest and dipping 30 degrees south. Skarn is also developed along the margins of an andesite

CAPSULE GEOLOGY

dyke. The limestone in this area has been metamorphosed to marble. A grab sample of the skarn containing chalcopyrite and magnetite assayed 5.75 per cent copper, 6.86 grams per tonne silver and trace gold (Assessment Report 8284).

The Branch 7 showing outcrops along a logging road. A grab sample of this skarn assayed 8.45 per cent copper, 65.13 grams per tonne silver and 0.69 grams per tonne gold (Assessment Report 8284).

The East showing is a small exposure 150 metres southeast of the Branch 7 showing and may be a continuation of that showing. A grab sample assayed 1.69 per cent copper, 1.31 grams per tonne silver and 0.34 grams per tonne gold (Assessment Report 8289).

Similar mineralization is nearby (refer to 092L 113-Frances; 092L 159-Little Joe; 092L 315-Cranberry; 092L 316-West and 092L 317-Swamp).

BIBLIOGRAPHY

- EMPR AR 1959-132; 1963-99; 1968-84,90
EMPR GEM 1970-254,266
EMPR EXPL 1978-E182; 1979-190; 1981-136; 1983-335
EMPR ASS RPT 2381, *8284, 9853, 11407, 17029
GSC ANN RPT 1886
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MEM 23
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983
GCNL #221, 1981; #120, 1982; #112, 1983
N MINER Jul.4, 1963; Oct.10,Dec.12, 1968; Sept.17, 1970; Mar.4, 1982

DATE CODED: 1989/03/23
DATE REVISED: / /

CODED BY: NJH
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 319**

NATIONAL MINERAL INVENTORY:

NAME(S): **FOR 40**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W 092L12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 31 32 N
LONGITUDE: 127 30 01 W
ELEVATION: 85 Metres

NORTHING: 5598141
EASTING: 606302

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on For 40 claim (Assessment Report 1726).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Tetrahedrite Malachite
COMMENTS: Mineralization in limestone.
ALTERATION: Malachite Chlorite Quartz
COMMENTS: Chlorite, quartz in amygdules.
ALTERATION TYPE: Chloritic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Replacement
DIMENSION:
COMMENTS: Bedding in limestone.

STRIKE/DIP: 305/30S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Limestone
Amygdaloidal Andesite

HOSTROCK COMMENTS: Quatsino ammonites from Alice Lake; Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The region is underlain by northwest trending volcanics and sediments of the Upper Triassic Vancouver Group (Karmutsen, Quatsino, and Parson Bay formations).

Approximately 750 metres south of Marble River, traces of tetrahedrite and malachite are present in an outcrop of Quatsino Formation limestone. The limestone strikes 305 degrees, dipping 30 degrees south. Amygdaloidal andesite of the Karmutsen Formation is located to the northeast, across the river. The amygdules are filled with chlorite and quartz.

BIBLIOGRAPHY

EMPR ASS RPT *1726
GSC ANN RPT 1886
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MAP *4-74; 255A; 1552A
GSC MEM 23
GSC OF 9; 170; 463; 722
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 594
REPORT: RGEN0100

BIBLIOGRAPHY

CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1989/03/30
DATE REVISED: / /

CODED BY: NJH
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 320**

NATIONAL MINERAL INVENTORY:

NAME(S): **IDAHO FR (L.1481)**, OLD SPORT, COAST COPPER

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 22 59 N
LONGITUDE: 127 14 16 W
ELEVATION: 110 Metres

NORTHING: 5582706
EASTING: 625283

LOCATION ACCURACY: Within 500M

COMMENTS: Location (from Property File (J.C. Lund) and Geological Survey of Canada Summary Report 1929, page 120) of Idaho Ore Zone is 350 metres east of Benson Lake, on Lot 1481.

COMMODITIES: Copper Magnetite Iron

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Pyrite Pyrrhotite
ALTERATION: Epidote
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Replacement Industrial Min.
DIMENSION: 0210 x 0001 Metres STRIKE/DIP:
COMMENTS: Mineralization is 0.9 metres wide, developed for 210 metres.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	

ISOTOPIC AGE: 230 Ma
DATING METHOD: Fossil
MATERIAL DATED: Gymnotropite ammonites

LITHOLOGY: Andesite

HOSTROCK COMMENTS: Ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

The Idaho occurrence is reported to occur 400 metres northeast of the Old Sport mine (092L 035) in a parallel structure within Upper Triassic Vancouver Group, Karmutsen andesites.

Locally, massive sulphides comprised of magnetite, chalcopyrite, pyrite and pyrrhotite occur in a skarn zone. The massive sulphides average 0.9 metres in width. The pyrrhotite content is higher than at the Old Sport mine and skarn mineralogy is poorly developed. Epidote is present as well as minor quartz veining.

BIBLIOGRAPHY

EMPR MAP Preliminary Geological Map, Alice Lake-Benson Lake Area, Jeffery, W.G., (1962)
EMPR PF (Lund, J.C., (1962): Geology and Mineralogy of the 5500 Level Ore Zones of Coast Copper Mine in Old Sport - 092L 035)
GSC OF 9; 170; 463
GSC SUM RPT 1918B; *1929A-120
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC MAP 4-1974; 255A
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/03/31
DATE REVISED: 1989/05/17

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 321**

NATIONAL MINERAL INVENTORY: 092L11 Cu11

NAME(S): **KEOGH, REYNOLDS**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5597260
EASTING: 629076

LATITUDE: 50 30 47 N
LONGITUDE: 127 10 46 W
ELEVATION: 430 Metres

LOCATION ACCURACY: Within 500M
COMMENTS: Showing on Reynolds claim (Assessment Report 2240).

COMMODITIES: Copper Molybdenum Nickel

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Pyrrhotite Pyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein Disseminated
CLASSIFICATION: Igneous-contact
SHAPE: Irregular
MODIFIER: Sheared

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	

ISOTOPIC AGE: 230 Ma
DATING METHOD: Fossil
MATERIAL DATED: Gymnotropite ammonites

LITHOLOGY: Andesite
Mafic Dike

HOSTROCK COMMENTS: Ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).
Basic dyke may be Tertiary in age.

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist

CAPSULE GEOLOGY

The region is largely underlain by Upper Triassic volcanic rocks of the Vancouver Group, Karmutsen Formation. Tertiary volcanics are present to the west while Lower Jurassic Bonanza Group volcanics and sediments occur to the northeast.

Locally, a mafic dyke (possibly Tertiary) intrudes Karmutsen andesite. Quartz-filled shears in the andesite contain minor disseminated pyrite, pyrrhotite and chalcopyrite. Nickel values and molybdenite are reported to be present (Assessment Report 2240).

BIBLIOGRAPHY

EMPR GEM *1970-270
EMPR ASS RPT *2240
GSC ANN RPT 1886
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MEM 23
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1989/03/30
DATE REVISED: / /

CODED BY: NJH
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 322**

NATIONAL MINERAL INVENTORY:

NAME(S): **HAPPY JACK (L.1495)**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 22 24 N
LONGITUDE: 127 14 01 W
ELEVATION: 138 Metres

NORTHING: 5581632
EASTING: 625605

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization 100 metres east of Benson River in centre of Lot 1495 (from Assessment Report 80), 1 kilometre south of Benson Lake.

COMMODITIES: Copper Magnetite Iron

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn Replacement Industrial Min.
SHAPE: Tabular
MODIFIER: Folded

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
Upper Triassic	Vancouver	Karmutsen	
Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 225 Ma
DATING METHOD: Fossil
MATERIAL DATED: Juvarite ammonites
Upper Triassic
ISOTOPIC AGE: 230 Ma
DATING METHOD: Fossil
MATERIAL DATED: Gymnotropite ammonites
Jurassic
ISOTOPIC AGE: 178 +/- 8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Phlogopite

LITHOLOGY: Limestone
Andesite
Gabbro
Diorite

HOSTROCK COMMENTS: Quatsino and Karmutsen ammonites from Alice Lake and Hisnit Island, respectively. Phlogopite from Empire Mine (GSC Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

The Happy Jack occurrence is reported to host skarn mineralization similar to the Old Sport mine (092L 035) which is located 1.5 kilometres to the northwest across Benson River. Isoclinal folding of Upper Triassic Vancouver Group, Karmutsen Formation andesite and Quatsino Formation limestone, has repeated the stratiform skarn chalcopyrite-magnetite horizon which host the Old Sport deposit. The "Coast Copper" diorite gabbro stock of the Jurassic Island Plutonic Suite lies 1 kilometre to the west.

BIBLIOGRAPHY

EMPR AR 1970-273
EMPR ASS RPT *80, 2306
EMPR Prelim. Geol. Map (Jeffery, W.G., (1962): Alice Lake-Benson Lake)
GSC OF 9; 170; 463
GSC SUM RPT 1918B; 1929A
GSC P 69-1A; 70-1A; 72-44; 74-8

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 598
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 4-1974; 255A
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of
British Columbia
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/03/31
DATE REVISED: 1989/05/17

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 323**

NATIONAL MINERAL INVENTORY: 092L11 Cu13

NAME(S): **KEN**, LAKE, F

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 37 04 N
LONGITUDE: 127 27 36 W
ELEVATION: 135 Metres

NORTHING: 5608454
EASTING: 608944

LOCATION ACCURACY: Within 500M

COMMENTS: Area of drilling (Assessment Reports 5033, 6027, and 7562).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ALTERATION: Calcite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic Skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			

LITHOLOGY: Limestone
Limy Argillite
Limy Tuff
Volcanic Rock

HOSTROCK COMMENTS: Ammonites from Hisnit Island; mollusks from Beaver Cove (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: Syn-mineralization GRADE: Hornfels

CAPSULE GEOLOGY

The area is underlain by northwest trending volcanics and sediments of the Upper Triassic Vancouver Group (Karmutsen, Quatsino and Parson Bay formations). To the south are volcanics of the Lower Jurassic Bonanza Group.

In the area of the Lake, Ken and F claims, diamond drilling has shown interbedded limy argillites and tuffs of the Parson Bay Formation to be underlain by Quatsino Formation limestone, which in turn underlain by Karmutsen Formation volcanics.

Disseminated pyrite and chalcopyrite are present in fractures and calcite veinlets in the Parson Bay rocks, and in skarn located near the Quatsino-Karmutsen contact.

BIBLIOGRAPHY

EMPR AR 1968-84
EMPR GEM 1970-254; 1972-304; *1974-215
EMPR EXPL 1977-E174
EMPR ASS RPT 894, 1693, 3474, *5033, *6027, *7562
GSC ANN RPT 1886
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MEM 23
GSC MAP *4-74
GSC OF 9; 170; 463; 722
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 600
REPORT: RGEN0100

BIBLIOGRAPHY

Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1989/04/05
DATE REVISED: 1989/05/17

CODED BY: NJH
REVISED BY: NJH

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 324**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLEAGH**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 26 29 N
LONGITUDE: 127 43 36 W
ELEVATION: 200 Metres

NORTHING: 5588483
EASTING: 590416

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization is 4 kilometres south of Quatsino Sound,
2 kilometres west of Kewquodie Creek (Leighton, D.G., 1974).

COMMODITIES: Copper Molybdenum Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Sphalerite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	

ISOTOPIC AGE: 200 Ma

DATING METHOD: Fossil

MATERIAL DATED: Mollusks

Jurassic

ISOTOPIC AGE: 154 +/- 6 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Island Plutonic Suite

LITHOLOGY: Basic Lava
Felsic Breccia
Granitic Rock

HOSTROCK COMMENTS: Mollusks from Quatsino Sound. Biotite from Island Copper Stock
(Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area lies within the Insular Belt of the Cordillera and is underlain mainly by volcanics, crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage consisting of Paleozoic Sicker Group sediments and Upper Triassic Vancouver Group basalts and minor carbonate and clastic sediments.

The Bonanza volcanics are coeval with, or genetically related to, granodiorite stocks of the Jurassic Island Plutonic Suite which intrude all older rocks.

Mineralization at the Cleagh occurrence, consists of copper-molybdenum-sphalerite in quartz veins at the contact between basic lavas and felsic breccia, both of the Bonanza Group. A small (1 kilometre diameter) granitoid stock lies 1.7 kilometres to the northeast.

BIBLIOGRAPHY

GSC P 69-1A; 70-1A; 72-44; 74-8
GSC OF 9; 170; 463
GSC BULL 242
GSC SUM RPT 1918B; 1929A
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
EMPR PF (Leighton, D.G., (1974): *Report on Exploration in Mahatta River area, Brinco in LES - 092L 230)
Carson, D.J.T., 1968, Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 602
REPORT: RGEN0100

BIBLIOGRAPHY

Ph.D. thesis, Carleton University, Ottawa.

DATE CODED: 1989/04/05
DATE REVISED: / /

CODED BY: WV
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 325**

NATIONAL MINERAL INVENTORY:

NAME(S): **KEW**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 27 34 N
LONGITUDE: 127 42 12 W
ELEVATION: 180 Metres

NORTHING: 5590519
EASTING: 592038

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization is 2.5 kilometres southeast of the mouth of Kewquodie Creek on the south side of Quatsino Sound (Leighton, D.G., 1974).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	

ISOTOPIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks

Jurassic

ISOTOPIC AGE: 154 +/- 6 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

Island Plutonic Suite

LITHOLOGY: Basic Dike
Tuffaceous Breccia
Granitic Rock

HOSTROCK COMMENTS: Mollusks from Quatsino Sound. Biotite from Island Copper Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area lies within the Insular Belt of the Cordillera and is underlain mainly by volcanics, crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage consisting of Paleozoic Sicker Group sediments and Upper Triassic Vancouver Group basalts and minor carbonate and clastic sediments.

The Bonanza volcanics are coeval with, or genetically related to, granodiorite stocks of the Jurassic Island Plutonic Suite which intrude all older rocks.

D.G. Leighton (1974) reports disseminated chalcopyrite and bornite mineralization in basic dykes intruding Bonanza Group tuff breccia, 1 kilometre north of a granitic intrusion.

BIBLIOGRAPHY

GSC P 69-1A; 70-1A; 72-44; 74-8
GSC OF 9; 170; 463
GSC BULL 242
GSC SUM RPT 1918B; 1929A
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
EMPR PF (Leighton, D.G., (1974): *Report on Exploration in Mahatta R. area, Brinco, 1974, in LES - 092L 230)
Carson, D.J.T., 1968, Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. thesis, Carleton University, Ottawa.

DATE CODED: 1989/04/05
DATE REVISED: / /

CODED BY: WV
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 325**

MINFILE NUMBER: **092L 326**

NATIONAL MINERAL INVENTORY:

NAME(S): **PM 7**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 37 02 N
LONGITUDE: 127 18 11 W
ELEVATION: 70 Metres

NORTHING: 5608634
EASTING: 620048

LOCATION ACCURACY: Within 500M

COMMENTS: Location of dyke (Assessment Report 10855).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Malachite Azurite Pyrite
ASSOCIATED: Pyrite
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Vancouver

FORMATION

Parson Bay

IGNEOUS/METAMORPHIC/OTHER

ISOTOPIC AGE: 215 Ma

DATING METHOD: Fossil

MATERIAL DATED: Halobia mollusks

Tertiary

Unnamed/Unknown Informal

LITHOLOGY: Quartz Feldspar Porphyry Dike
Limestone

HOSTROCK COMMENTS: Halobia mollusks from Beaver Cove (Geological Survey of Canada Paper 74-8). Limestone thought to be Parson Bay Formation.

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

RELATIONSHIP: Syn-mineralization

GRADE: Zeolite

CAPSULE GEOLOGY

The area is underlain by northwest trending volcanics and sediments of the Upper Triassic Vancouver Group, Karmutsen and Parson Bay formations. To the south are Lower Jurassic Bonanza Group volcanics. To the northeast lie sediments of the Upper Cretaceous Saquatch Formation.

On the southern boundary of the PM 7 claim, limestone (Parson Bay Formation?) is intruded by quartz feldspar porphyry dykes (Tertiary?). Pyrite is concentrated at the dyke-limestone contacts. One dyke is mineralized with malachite and azurite.

BIBLIOGRAPHY

EMPR EXPL 1982-C230
EMPR ASS RPT *10855
GSC ANN RPT 1886
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MEM 23
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1989/04/05
DATE REVISED: / /

CODED BY: NJH
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 327**

NATIONAL MINERAL INVENTORY:

NAME(S): **PL**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 32 27 N
LONGITUDE: 127 25 28 W
ELEVATION: 150 Metres

NORTHING: 5599951
EASTING: 611641

LOCATION ACCURACY: Within 1 KM

COMMENTS: Southwest corner of PL Group (Assessment Report 1687).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Malachite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Volcanic

HOSTROCK COMMENTS: Gymnotropite ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP:

GRADE: Greenschist

CAPSULE GEOLOGY

The area is underlain by volcanics of Upper Triassic Vancouver Group, Karmutsen Formation. To the northeast are volcanics of the Lower Jurassic Bonanza Group.

On the old PL group of claims, minor amounts of chalcopyrite, bornite and malachite are present in Karmutsen Formation volcanics.

BIBLIOGRAPHY

EMPR ASS RPT *1687
GSC ANN RPT 1886
GSC P 67-1A; 69-1A; 72-44; *74-8; 79-30
GSC BULL 242
GSC MEM 23
GSC MAP *4-74; 1552A
GSC OF 9; 170; 463; 722
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
CJES 18, p. 1; 20, p. 1, Jan. 1983

DATE CODED: 1989/04/05
DATE REVISED: / /

CODED BY: NJH
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 328**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEMARE 1, CAM**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 25 09 N
LONGITUDE: 127 53 58 W
ELEVATION: 50 Metres

NORTHING: 5585816
EASTING: 578185

LOCATION ACCURACY: Within 500M

COMMENTS: Located 2.5 kilometres east of Harvey Cove at the entrance to Quatsino Sound (from Assessment Report 8593).

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite
ASSOCIATED: Pyrite
ALTERATION: Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 0600 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Andesite Flow
Dacite Lapilli Tuff
Rhyodacite Crystal Tuff
Andesite Dike

HOSTROCK COMMENTS: Mollusks from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Zeolite

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Chip
COMMODITY
Copper GRADE 1.4000 Per cent
COMMENTS: Best of several samples.
REFERENCE: Assessment Report 8593, Figure 2.

CAPSULE GEOLOGY

The area is underlain entirely by Lower Jurassic Bonanza Group intermediate to felsic volcanic flows and pyroclastics that have undergone regional low grade zeolite and laumontite grade metamorphism. Dark green andesite flows, dacite lapilli tuffs and rhyodacite crystal tuff are intruded by sporadic andesite dykes and bisected by steeply dipping faults.

Chalcopyrite, pyrite, sphalerite, malachite and azurite, associated with fractures, are present for 600 metres along a road cut. Assays range from 0.2 to 1.4 per cent copper (Assessment Report 8593). Similar mineralization was located on a road cut 400 metres to the southeast.

BIBLIOGRAPHY

EMPR AR 1980-270

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 607
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *8593, 22162, 22679, 22792
GSC ANN RPT 1886
GSC BULL 172; 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
Carson, D.J.T. (1968) Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. thesis, Carleton University, Ottawa.
Falconbridge File

DATE CODED: 1989/04/06
DATE REVISED: 1989/06/09

CODED BY: WV
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 609
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *8593, 22162, 22679, 22792
GSC ANN RPT 1886
GSC BULL 172; 242
GSC MAP 4-1974; 255A; 1552A
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
Carson, D.J.T. (1968) Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. thesis, Carleton University, Ottawa.
Falconbridge File

DATE CODED: 1989/04/06
DATE REVISED: 1989/06/07

CODED BY: WV
REVISED BY: DEJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 330**

NATIONAL MINERAL INVENTORY: 092L5 Cu13

NAME(S): **LOIS, LOIS 1-36, BOZO 1,4,
HART LAKE**

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo
Alberni
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 15 32 N
LONGITUDE: 127 36 59 W
ELEVATION: 533 Metres

NORTHING: 5568332
EASTING: 598624

LOCATION ACCURACY: Within 500M

COMMENTS: The location is for the centre of the mineralized Lois complex (Assessment Report 21755, Sheet (Map) D4). The complex stretches about 1.6 kilometres along a northwest direction by about 1.4 kilometres in an northeast direction. Located about 9 kilometres east of the head of Klaskish Inlet.

COMMODITIES: Copper Silver Molybdenum Cobalt Zinc Lead Gold

MINERALS

SIGNIFICANT: Arsenopyrite Pyrite Chalcopyrite Molybdenite Sphalerite
Galena Gold

COMMENTS: Visible gold in quartz-vein. Cobalt and silver mineralogy not known.

ALTERATION: Biotite Mariposite

ALTERATION TYPE: Biotite Argillic Quartz-Carb.

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Breccia 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 Vancouver Karmutsen

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

Jurassic

ISOTOPIC AGE: 154 +/- 6 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Island Plutonic Suite

LITHOLOGY: Quartz Diorite
Rhyolite Breccia
Quartz Diorite Porphyry
Rhyolite Dike
Basalt

HOSTROCK COMMENTS: Ammonites from Hisnit Island. Biotite from Island Copper Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE: Amphibolite

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1963

SAMPLE TYPE: Chip

COMMODITY

GRADE

Copper

0.1500

Per cent

COMMENTS: The assay was reported in the above Assessment Report as a having been obtained by Riocanex in the early 1960s, probably 1963 or 1964.

REFERENCE: Assessment Report 21755, page 28.

CAPSULE GEOLOGY

The Lois occurrence lies within the Insular Belt of the Cordillera, and is underlain by Upper Triassic tholeiitic basalts of the Karmutsen Formation (Vancouver Group). These have been intruded by a small quartz diorite stock of the Jurassic Island Plutonic

CAPSULE GEOLOGY

Suite. The stock, called the Lois stock, is about 1.4 by 1.6 kilometres in area. Quartz diorite forms the outer portion of the complex and makes up more than half the rock present. Quartz diorite porphyry occupies much of the core of the complex. It is usually well fractured and wraps around or rims the rhyolite breccia core rocks. The youngest rock is the aforementioned rhyolite breccia which outcrops as a lobe-shaped area in the core of the complex. The Southwest Margin rhyolite breccia, located at the southwest margin of the complex, superficially resembles the main rhyolite breccia. The rock is, however, more frequently fractured and cut by mafic to intermediate dikes. Rhyolite dikes are common and are presumably related to the stock.

The most widespread alteration is biotitization and is common in all main rock types except the rhyolite breccia. In the main rhyolite breccia, incipient argillic alteration has destroyed any primary or secondary biotite that may have been present in the original rhyolite. In the Southwest Margin rhyolite breccia, several different alteration types occur over the 100-125 metre length of the outcrop. The most common type is quartz-carbonate accompanied by 2 to 4 per cent pyrite and trace chalcocopyrite. The carbonate is siderite or ankerite with traces of mariposite or fuchsite. Argillic alteration similar to the alteration within the main rhyolite breccia is less common.

The occurrence encompasses several styles and locations of weak mineralization. Up to 5 per cent sulphides occur in the rhyolite breccia as disseminations with minor amounts occurring in fractures. Up to 3 per cent arsenopyrite is common in the main rhyolite breccia. This breccia also hosts disseminated black sphalerite in amounts up to 0.5 per cent. Galena is present in trace amounts. Erratic amounts of chalcocopyrite and molybdenite occur in the biotite-altered zone of the intrusive rocks. Sphalerite and galena occur in rhyolite dykes on the Lois 15 claim (Assessment Report 2384). Unspecified cobalt mineralization is found on the Lois 5 claim's west corner.

Assessment Report 3034 reports minor values in silver and gold but gives no details. Assessment Report 3035 reports weak chalcocopyrite and molybdenite in basalt on the boundary of the Lois 13 and 15. Assessment Report 6024 reports visible gold in a quartz vein intersected in 1976 diamond drilling. The disseminated and vein copper occurrence at the northeast side of the Lois claim group (Assessment Report 3034) is believed to be the Iron Cop occurrence (092L 228).

A small andesite porphyry about 60 metres in diameter exposed west of the main rhyolite breccia is reported to have yielded 0.15 per cent copper across 60 metres (as reported in Assessment Report 21755, page 28). The rock was reported to contain 2-3 per cent arsenopyrite and up to 1 per cent chalcocopyrite. A 3-metre chip sample obtained by Vanco Explorations Ltd. within a strongly silicified carbonate-altered mariposite zone in the Southwest Margin rhyolite breccia yielded 8.6 grams per tonne gold (as reported in Assessment Report 21755, page 28).

The property was originally staked in the early 1960s by Riocanex Ltd. During 1963 and 1964, Riocanex conducted geochemical sampling, limited geological and self-potential surveys and drilling exploration. The claims were allowed to lapse and were staked in 1969 by Vanco Explorations Ltd. Vanco conducted geological, geochemical and ground magnetometer surveys over the "Lois" stock and the surrounding area. In addition, about 16 kilometres of induced polarization survey were run over the northern portion of the stock. In the mid-1970s, under a joint venture between Vanco and Esso Minerals, limited mapping and the drilling of a single 214-metre deep diamond-drill hole were executed. The property was subsequently dropped. In 1984, Brinco Mining Ltd. optioned the property (held as the Bozo 4 claim) from Jim McDonald as part of a larger property extending north, south and east (see Iron Cap (092L 228) and Fang (092L 265)). The company conducted detailed geological mapping near Hart Lake on the Bozo 4 claim and reconnaissance mapping on the eastern portion of the claim. Gold Leaf Ventures optioned the property from Jim McDonald and during the 1988 and 1990 field season laid out a new grid in the Northwest portion of the Bozo claim, collected 663 soil samples and conducted 20 kilometres of ground magnetometer and VLF-EM surveys.

BIBLIOGRAPHY

EMPR ASS RPT *2384, *3034, 3035, 5873, 6024, *12913, *21755
EMPR EXPL 1984-241
EMPR FIELDWORK 1992, pp. 17-35
EMPR GEM 1970-283; 1971-317; 1976-E126
EMPR OF 1993-10; 1997-13
EMR MP CORPILE (Vanco Explorations Ltd.)

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 612
REPORT: RGEN0100

BIBLIOGRAPHY

GSC ANN RPT 1886
GSC BULL 242
GSC OF 9; 170; 463
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC SUM RPT 1918B; 1929A
GSC MAP 4-1974; 255A; 1552A
Carson, D.J.T. (1968) Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. thesis, Carleton University, Ottawa.

DATE CODED: 1989/04/11
DATE REVISED: 1998/12/01

CODED BY: WV
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 331**

NATIONAL MINERAL INVENTORY:

NAME(S): **LONDON 1**, HART LAKE

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 16 07 N
LONGITUDE: 127 34 01 W
ELEVATION: 1800 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5569479
EASTING: 602128

LOCATION ACCURACY: Within 500M

COMMENTS: Location of centre of Grid #2 of Assessment Report 12913 is located 0.5 kilometres east of Nasparti River, 8.5 kilometres from the head of Nasparti Inlet.

COMMODITIES: Magnetite Iron Copper Zinc

MINERALS

SIGNIFICANT: Magnetite Pyrite Malachite Sphalerite Chalcopyrite
ALTERATION: Malachite Silica
ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive Disseminated Stockwork Vein
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: * Unknown
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 150 Metres STRIKE/DIP: 020/78E TREND/PLUNGE:
COMMENTS: Veins strike 020 degrees, dip 78 degrees east. Magnetite patches are up to 0.4 metres thick and occur over a distance of 150 metres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Porphyritic Mafic Flow
Intrusive Breccia
Siliceous Volcanic Rock
Felsic Intrusive Rock

HOSTROCK COMMENTS: Ammonites from Hisnit Island. Biotite from Island Copper Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks

CAPSULE GEOLOGY

The London 1 area lies within the Insular Belt of the Cordillera and is underlain mainly by volcanics, crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage consisting of Paleozoic Sicker Group sediments and Upper Triassic Vancouver Group basalts and minor carbonate and clastic sediments.

The Bonanza volcanics are coeval with, or genetically related to, granodiorite stocks of the Jurassic Island Plutonic Suite which intrude all older rocks.

The London occurrence consists of 3 patches of pyrite-veined magnetite, up to 0.4 metres thick, which occur over a distance of 150 metres. These patches are hosted by Vancouver Group, Karmutsen Formation porphyritic flows. An intrusive breccia lies nearby along an east trending fault. The pyrite veins strike 020 degrees, parallel to the flows, and dip 78 degrees east. Pyrite content is 5 to 15 per cent. Malachite staining is associated with the magnetite.

The occurrence represents showings #1,2 and 3 in Assessment Report 12913 (page 10, Appendix). Showing #6 and #8 (from the same report) are located on the #2 grid and 500 metres to the north,

CAPSULE GEOLOGY

respectively. The #6 showing is in a 300 by 150 metre, 75 metres thick silicified zone containing erratic mineralization, with up to 5 per cent pyrite, 4 per cent sphalerite and traces of native sulphur (Assessment Report 12913, page 11). The #8 showing contains disseminated chalcopyrite in leucocratic intrusive or silicified volcanic rock.

The London 1 was discovered in 1984 by Brinco Mining Limited. See the Iron Cop occurrence (092L 228) for additional information.

BIBLIOGRAPHY

EMPR AR 1984-241
EMPR ASS RPT *12913, 20723
EMPR OF 1993-10; 1997-13
EMPR FIELDWORK 1992, pp. 17-35
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC OF 9; 170; 463
GSC BULL 172; 242
GSC SUM RPT 1918B; 1929A
GSC ANN RPT 1886
GSC MAP 4-1974; 255A
Sangster, D.F. (1964) The Contact Metasomatic Magnetite Deposits of Southwestern B.C., Ph.D. Thesis, University of B.C..
Carson, D.J.T. (1968) Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. thesis, Carleton University, Ottawa.

DATE CODED: 1989/04/14
DATE REVISED: 1998/12/02

CODED BY: WV
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 332**

NATIONAL MINERAL INVENTORY:

NAME(S): **PATCH**, HART LAKE

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Alberni

LATITUDE: 50 17 24 N
LONGITUDE: 127 35 35 W
ELEVATION: 700 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5571822
EASTING: 600222

LOCATION ACCURACY: Within 500M

COMMENTS: Location of showing is at the headwaters of Nasparti Creek and Klaskish River, 10.5 kilometres north of the head of Nasparti Inlet (from Assessment Report 12913).

COMMODITIES: Magnetite Iron Copper

MINERALS

SIGNIFICANT: Magnetite Pyrite Malachite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Massive
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

Jurassic

ISOTOPIC AGE: 154 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Island Plutonic Suite

LITHOLOGY: Porphyritic Mafic Flow
Intrusive Breccia

HOSTROCK COMMENTS: Ammonites from Hisnit Island. Biotite from Island Copper Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area lies within the Insular Belt of the Cordillera and is underlain mainly by volcanics, crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage consisting of Paleozoic Sicker Group sediments and Upper Triassic Vancouver Group basalts and minor carbonate and clastic sediments.

The Bonanza volcanics are coeval with, or genetically related to, granodiorite stocks of the Jurassic Island Plutonic Suite which intrude all older rocks.

The Patch occurrence consists of lenses of pyrite-veined magnetite in Vancouver Group, Karmutsen Formation porphyritic mafic flows. Malachite staining is associated with the magnetite.

The occurrence is the #4 showing in Assessment Report 12913 (page 10,11, Appendix), and may coincide with massive magnetite reported in Sellmer (1964). (See 092L 228, Iron Cap).

The Patch showing was discovered in 1984 by Brinco Mining Limited. See the Iron Cop occurrence (092L 228) for further details.

BIBLIOGRAPHY

EMPR ASS RPT *12913, 20723
EMPR EXPL 1984-241
EMPR OF 1993-10; 1997-13
EMPR FIELDWORK 1992, pp. 17-35
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC OF 9; 170; 463

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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PAGE: 616
REPORT: RGEN0100

BIBLIOGRAPHY

GSC BULL 172; 242
GSC SUM RPT 1918B; 1929A
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
Carson, D.J.T. (1968) Metallogenic study of Vancouver Island with
emphasis on the relationship of plutonic rocks to mineral deposits,
Ph.D. thesis, Carleton University, Ottawa.
Sangster, D.F. (1964) The Contact Metasomatic Magnetite Deposits of
Southwestern B.C., Ph.D. Thesis, University of B.C..

DATE CODED: 1989/04/14
DATE REVISED: 1998/12/02

CODED BY: WV
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 333**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOZO 2**, HART LAKE

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo
Alberni
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 16 59 N
LONGITUDE: 127 35 56 W
ELEVATION: 900 Metres

NORTHING: 5571042
EASTING: 599821

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Assessment Report 12913, is at the headwaters of Nasparti Creek and Klawkish River, 10 kilometres north of the head of Nasparti Inlet.

COMMODITIES: Zinc

MINERALS

SIGNIFICANT: Sphalerite Pyrite
ALTERATION: Sericite Silica
ALTERATION TYPE: Silicific'n Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: * Unknown
DIMENSION: 500 x 500 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Silicified zone measures at least 500 by 500 metres.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Intrusive Breccia
Siliceous Mafic Flow
Granodiorite

HOSTROCK COMMENTS: Ammonites from Hisnit Island. Biotite from Island Copper Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks
PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area lies within the Insular Belt of the Cordillera and is underlain mainly by volcanics, crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage consisting of Paleozoic Sicker Group sediments and Upper Triassic Vancouver Group basalts and minor carbonate and clastic sediments.

The Bonanza volcanics are coeval with, or genetically related to, granodiorite stocks of the Jurassic Island Plutonic Suite which intrude all older rocks.

The Bozo 2 showing, on the Bozo 2 claim near the junction of the Patch, Bozo 2, Reg 1 and London 2 claims, is the #5 showing of Assessment Report 12913. It consists of silicified mafic flows of the Karmutsen Formation, Vancouver Group. The zone of silicification measures at least 500 by 500 metres and contains veins of pyrite and sphalerite, some associated with breccia. Sericite alteration is present.

A later report (Assessment Report 20723, page 11) describes this as the Patch showing but MINFILE has previously designated Showing #4 (Assessment Report 12913) as the Patch (see 092L 332).

The Bozo 2 showing was discovered in 1984 by Brinco Mining Limited. See the Iron Cop occurrence (092L 228) for further details.

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RUN TIME: 11:19:00

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BIBLIOGRAPHY

EMPR AR 1984-241
EMPR ASS RPT *12913, 20723
EMPR OF 1993-10; 1997-13
EMPR FIELDWORK 1992, pp. 17-35
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC OF 9; 170; 463
GSC BULL 242
GSC SUM RPT 1918B; 1929A, p. 103
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
Carson, D.J.T. (1968) Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. thesis, Carleton University, Ottawa.

DATE CODED: 1989/04/14
DATE REVISED: 1998/12/02

CODED BY: WV
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 334**

NATIONAL MINERAL INVENTORY:

NAME(S): **NASPARTI LAKE**, HART LAKE

MINING DIVISION: Alberni

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E 092L04E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 15 01 N
LONGITUDE: 127 36 09 W
ELEVATION: 218 Metres

NORTHING: 5567393
EASTING: 599632

LOCATION ACCURACY: Within 500M

COMMENTS: Location of centre of grid #1 (from Assessment Report 12913), immediately southwest of the lake ("Nuspartí or Hart Lake") on Naspartí River, 6 kilometres north of the head of Naspartí Inlet.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I06 Cu±Ag quartz veins D03 Volcanic redbed Cu
DIMENSION: Metres STRIKE/DIP: 122/90 TREND/PLUNGE:
COMMENTS: Vein strikes at 122 degrees, dips vertically and is 3 centimetres wide.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Mafic Flow
Mafic Volcanic Rock

HOSTROCK COMMENTS: Ammonites from Hisnit Island. Biotite from Island Copper Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The Naspartí (Hart) Lake area lies within the Insular Belt of the Cordillera and is underlain mainly by volcanics, crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage consisting of Paleozoic Sicker Group sediments and Upper Triassic Vancouver Group basalts and minor carbonate and clastic sediments.

The Bonanza volcanics are coeval with, or genetically related to, granodiorite stocks of the Jurassic Island Plutonic Suite which intrude all older rocks.

The Naspartí Lake occurrence is a vertical 3 centimetre wide quartz-pyrite-chalcopyrite-malachite vein striking 122 degrees, in Karmutsen Formation, Vancouver Group, mafic volcanics (the #9 showing, Assessment Report 12913). The #7 showing of the same report consists of disseminated chalcopyrite in unaltered aphanitic mafic volcanic rocks and is located 1.5 kilometres due east. The Naspartí Lake showing was discovered in 1984 by Brinco Mining Limited. See the Iron Cop (092L 228) and Lois (092L 330) occurrences for further details.

BIBLIOGRAPHY

EMPR EXPL 1984-241

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

EMPR ASS RPT *12913
EMPR OF 1993-10; 1997-13
EMPR FIELDWORK 1992, pp. 17-35
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC OF 9; 170; 463
GSC BULL 242
GSC SUM RPT 1918B; 1929A
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
Carson, D.J.T. (1968) Metallogenic Study of Vancouver Island with
emphasis on the Relationship of Plutonic Rocks to Mineral Deposits,
Ph.D. thesis, Carleton University, Ottawa.

DATE CODED: 1989/04/14
DATE REVISED: 1998/12/02

CODED BY: WV
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 335**

NATIONAL MINERAL INVENTORY:

NAME(S): **KLOOTCH**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 27 05 N
LONGITUDE: 127 39 56 W
ELEVATION: 150 Metres

NORTHING: 5589671
EASTING: 594736

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization is 300 metres west of Klootchlimmis Creek, 3.5 kilometres from its mouth on Quatsino Sound (from Property File, 092L 230).

COMMODITIES: Copper Magnetite

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal Porphyry Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	

ISOTOPIC AGE: 200 Ma

DATING METHOD: Fossil
MATERIAL DATED: Mollusks

Jurassic

ISOTOPIC AGE: 154 +/- 6 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

Island Plutonic Suite

LITHOLOGY: Albite Feldspar Diorite Dike
Clastic Sediment/Sedimentary

HOSTROCK COMMENTS: Mollusks from Quatsino Sound. Biotite from Island Copper Stock (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The area lies within the Insular Belt of the Cordillera and is underlain mainly by volcanics, crystalline rocks and minor sediments. Andesitic to rhyodacitic lava, tuff and breccia of the Lower Jurassic Bonanza Group overlie an assemblage consisting of Paleozoic Sicker Group sediments and Upper Triassic Vancouver Group basalts and minor carbonate and clastic sediments.

The Bonanza volcanics are coeval with, or genetically related to, granodiorite stocks of the Jurassic Island Plutonic Suite which intrude all older rocks.

The Klootch occurrence consists of disseminated pyrite and chalcopyrite in a magnetite rich subvolcanic albite-feldspar diorite dyke intruding Upper Bonanza (?) clastic sediments.

BIBLIOGRAPHY

GSC P 69-1A; 70-1A; 72-44; 74-8
GSC OF 9; 170; 463
GSC BULL 242
GSC SUM RPT 1918B; 1929A
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
Carson, D.J.T. (1968) Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. thesis, Carleton University, Ottawa.
EMPR PF (Leighton, D.G., (1974): *Report on Exploration in Mahatta R. area, Brinco, in Les - 092L 230)

DATE CODED: 1989/04/06
DATE REVISED: / /

CODED BY: WV
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 336**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUEGROUSE (YREKA)**, MOUNTAIN KING (L.86), PRIDE OF THE ISLE,
MOUNTAIN QUEEN (L.83), ELVA (L.81)

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L05E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 27 19 N
LONGITUDE: 127 33 31 W
ELEVATION: 300 Metres

NORTHING: 5590245
EASTING: 602319

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Bluegrouse showing at centre of Lot 86 is 1 kilometre west of Neroutsos Inlet, east of Comstock Mountain, 0.9 kilometres southeast of Yreka Mine (092L 052).

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite
ASSOCIATED: Pyrite Magnetite Specularite Epidote Garnet
ALTERATION: Epidote Garnet
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive
CLASSIFICATION: Skarn
SHAPE: Irregular
MODIFIER: Folded Faulted
DIMENSION: STRIKE/DIP: 060/ TREND/PLUNGE:
COMMENTS: 4 occurrences lie on east-northeast trending fault.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Upper Triassic	Vancouver	Parson Bay	
ISOTOPIC AGE: 215 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Halobia mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 6 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Biotite			

LITHOLOGY: Limy Tuff
Garnet Epidote Skarn
Limestone
Agglomerate
Andesite Flow
Andesite Tuff
Basaltic Dike
Diabase Dike
Feldspar Porphyry Dike
Diorite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound. Parson Bay mollusks from Beaver Cove. Biotite from Island Copper Stock.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Vancouver Island Ranges
RELATIONSHIP: Plutonic Rocks
GRADE: Amphibolite

CAPSULE GEOLOGY

The Blue Grouse occurrence lies within the Insular Belt of the Cordillera and is underlain mainly by volcanics, crystalline rocks and minor sediments.

Northwest striking, moderately west dipping calcareous sediments of the Parson Bay Formation overlie Karmutsen Formation tholeiitic basalts, both of the Upper Triassic Vancouver Group. Overlying Lower Jurassic Bonanza Group andesitic to rhyodacitic lava, tuff and breccia are coeval or related genetically to Jurassic Island Plutonic Suite.

CAPSULE GEOLOGY

The intrusives occur as small isolated plutons.

The Blue Grouse lies in skarn-altered limy tuffs. The tuffs, with agglomerates, lenses of limestone and a 30 metre thick limestone unit form a 300 metre thick assemblage overlying andesitic lava and underlying andesitic flows and tuffs. These rocks have been folded about a northwest plunging and trending axis. The beds on the southwest limb dip 35 to 55 degrees west. Basalt, diabase and feldspar porphyry dykes cut all rocks. A small diorite stock lies nearby on Mount Comstock.

Several northeast trending, ore-localizing faults occur. Epidote-garnet skarn is confined to three stratigraphic horizons and contains most of the mineralization. The skarn is in altered tuff. Limestone beds have been recrystallized but are otherwise unaltered.

Mineralization includes pyrrhotite, chalcopyrite and sparse pyrite. Magnetite and specular hematite are locally present.

The occurrence encompasses the following nearby showings (from Assessment Report 3164): Blue Grouse (Lot 86, Mountain King), Upper Blue Grouse (Lot 90, New Comstock), Pride of the Isle (Lot 83, Mountain Queen) and the Creek showing (Lot 81, Elva). These occurrences lie on a northeast trend over a distance of 1 kilometre. Work on these claims is included with that recorded for Yreka (092L 052).

BIBLIOGRAPHY

- GSC P 69-1A; 70-1A; 72-44; 74-8
GSC OF 9; 170; 463
GSC BULL 242
GSC SUM RPT 1918B, p. 35; 1929A, p. 124
GSC ANN RPT 1886
GSC MAP 4-1974; 255A; 1552A
EMPR AR 1900-924; 1901-1100; 1902-234; 1903-194,198-200,256; 1904-245, 301,302; 1905-213; 1906-183,200; 1916-337-339; 1917-254,292; 1919-203; 1928-376; *1953-167; 1954-164; 1955-76; 1956-117; 1964-154; 1965-228; 1966-65; 1967-70
EMPR GEM 1970-272; 1971-317; 1972-288; 1973-258
EMPR ASS RPT 3164, 3165, 4425, 7981
EMPR EXPL 1980-270
Carson, D.J.T.(1968) Metallogenic study of Vancouver Island with emphasis on the relationship of plutonic rocks to mineral deposits, Ph.D. thesis, Carleton University, Ottawa.
Sangster, D.F.(1964) The Contact Metasomatic Magnetite Deposits of Southwestern B.C., Ph.D. Thesis, University of B.C..
GCNL #163, 1972; #14,#32,#78,#80,#116,#120, 1980; #177, 1981
N MINER Feb.4, 1965
Wilson, P.R., (1955): Yreka Property, Unpublished M.Sc., University of British Columbia, Vancouver, British Columbia

DATE CODED: 1989/04/21
DATE REVISED: 1989/06/01

CODED BY: WV
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 337**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOB 17, CLIFF**

MINING DIVISION: Nanaimo

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W 092L07E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 18 05 N
LONGITUDE: 126 45 07 W
ELEVATION: 731 Metres

NORTHING: 5574558
EASTING: 660095

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Zone "B" mineralization on the Bonanza Mine (092L 164) property location is 3.5 kilometres due south.

COMMODITIES: Copper Magnetite Iron Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Pyrite

COMMENTS: Gold, silver mineralogy not known.

ASSOCIATED: Garnet Pyroxene Epidote Actinolite Quartz

Chlorite Calcite

ALTERATION: Garnet Pyroxene Epidote Actinolite Quartz

Chlorite Calcite

ALTERATION TYPE: Skarn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Podiform Massive
CLASSIFICATION: Skarn Industrial Min.
TYPE: K01 Cu skarn K03 Fe skarn
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
	ISOTOPIC AGE: 230 Ma		
	DATING METHOD: Fossil		
	MATERIAL DATED: Gymnotropite ammonites		
Jurassic			Island Plutonic Suite
	ISOTOPIC AGE: 151 +/- 14 Ma		
	DATING METHOD: Potassium/Argon		
	MATERIAL DATED: Biotite		

LITHOLOGY: Limestone
Hornblende Quartz Diorite
Garnet Skarn
Mafic Dike
Felsic Dike
Pillow Lava
Basalt
Breccia
Tuff

HOSTROCK COMMENTS: Ammonites from Hisnit Island; biotite from Nimpkish batholith (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Amphibolite

INVENTORY

ORE ZONE: CLIFF REPORT ON: Y

CATEGORY: Inferred YEAR: 1961
QUANTITY: 12608 Tonnes

COMMODITY	GRADE
Copper	3.0000 Per cent
Magnetite	30.0000 Per cent

COMMENTS: Estimated reserves also includes values in gold and silver (about \$2.45 per tonne).

REFERENCE: Property File - McDougall, 1961, page 2.

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group,

CAPSULE GEOLOGY

Karmutsen Formation skarned limestone that occurs as thin layers or lenses within a sequence of pillow lavas, basalts, breccia and minor tuff.

The occurrence lies within the Bob 17 claim (Assessment Report 4350) and consists of pods of garnet skarn plus or minus epidote, pyroxene, actinolite, quartz, chlorite and calcite, with magnetite, chalcopryrite, pyrite, gold and silver.

McDougall (1961, page 2) estimates that 12608 tonnes averaging 3.0 per cent copper and 30 per cent magnetite are present, containing "about \$2.45 per tonne" in gold and silver.

This deposit lies 800 metres southeast of the Bonanza Mine (092L 164) and is referred to as "Area B" in Assessment Report 4898.

BIBLIOGRAPHY

- EMPR AR 1967-71; 1968-100
EMPR GEM 1970-274; 1972-290; 1973-258; *1976-E128; 1977-E173
EMPR ASS RPT 953, 3698, *4350, 4351, 4353, *4898, 5394, 5868, 6267, 6769
EMPR PF (*McDougal, J.J., (1961): Report on Bonanza Lake Copper, Falconbridge Ltd. in Bonanza Mine-092L 164)
GSC BULL 242
GSC OF 9; 170; 463
GSC ANN RPT 1886
GSC SUM RPT 1929A; 1931A
GSC MEM 272
GSC P 38-2; 38-3; 72-44; *74-8
GSC MAP 4-1974; 255A; 1029A; 1552A
CJES 18, p. 1; 20, p. 2, 1983
EMR MP CORPFILE (Imperial Oil Ltd.)
Carson, D.J.T.(1968) Metallogenic study of Vancouver Island with emphasis on the relationship of plutonic rocks to mineral deposits, Ph.D. thesis, Carleton University, Ottawa.
Sangster, D.F.(1964) The Contact Metasomatic Magnetite Deposits of Southwestern B.C., Ph.D. Thesis, University of B.C..
Falconbridge File

DATE CODED: 1989/05/02
DATE REVISED: 1989/05/17

CODED BY: WV
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 338**

NATIONAL MINERAL INVENTORY: 092L7 Cu5

NAME(S): **HK 10, BON**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 23 59 N
LONGITUDE: 126 49 06 W
ELEVATION: 365 Metres

NORTHING: 5585350
EASTING: 655047

LOCATION ACCURACY: Within 500M

COMMENTS: Location as given by National Minerals Inventory (092L Cu5)
is located 350 metres west of the north end of Bonanza Lake,
east of Mt. Hoy.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Exact mineralogy not reported.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Igneous-contact Skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma DATING METHOD: Fossil MATERIAL DATED: Gymnotropite ammonites			
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma DATING METHOD: Fossil MATERIAL DATED: Juvarite ammonites			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 150 +/- 8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite			

LITHOLOGY: Limestone
Volcanic Rock
Basalt
Granodiorite

HOSTROCK COMMENTS: Karmutsen Quatsino ammonites from Hisnit Island and Alice Lake
respectively; biotite from Bonanza batholith.

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell Plutonic Rocks

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The occurrence is underlain by Upper Triassic Vancouver Group
Karmutsen Formation basalts and overlying limestones of the Quatsino
Formation. The Vancouver Group rocks are intruded by granodiorite of
the Jurassic Island Plutonic Suite.
Unspecified copper mineralization occurs along the contact
between the volcanics and the limestone.

BIBLIOGRAPHY

EMR MP CORPFILE (*Ground Star Resources)
GSC BULL 47; 242
GSC OF 9; 170; 463
GSC ANN RPT 1886
GSC SUM RPT 1929A; 1931A
GSC MEM 272
GSC P 38-2; 38-3; 71-36; 72-44; *74-8
GSC MAP 4-1974; 255A; 1029A; 1552A
CJES 18, p. 1; 20, p. 2, 1983
Sangster, D.F., (1964): The Contact Metasomatic Magnetite Deposits
of Southwestern British Columbia, Ph.D. Thesis, University of

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 627
REPORT: RGEN0100

BIBLIOGRAPHY

British Columbia

DATE CODED: 1989/05/03
DATE REVISED: / /

CODED BY: WV
REVISED BY:

FIELD CHECK: N
FIELD CHECK:

MINFILE NUMBER: **092L 339**

NATIONAL MINERAL INVENTORY:

NAME(S): **LEO D'OR**

STATUS: Developed Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L07W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 23 43 N
LONGITUDE: 126 48 01 W
ELEVATION: 450 Metres

NORTHING: 5584894
EASTING: 656344

LOCATION ACCURACY: Within 500M

COMMENTS: On the Leo D'or claim, east of the north end of Bonanza Lake
(Assessment Report 16111).

COMMODITIES: Marble Dimension Stone Building Stone

MINERALS

SIGNIFICANT: Marble
COMMENTS: Local surface staining indicates iron impurities.
MINERALIZATION AGE: Upper Triassic

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R04 Dimension stone - marble R09 Limestone
SHAPE: Tabular
MODIFIER: Folded Faulted

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Quatsino	Island Plutonic Suite
Jurassic			

LITHOLOGY: Marble
Limestone
Biotite Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: LEO D'OR REPORT ON: Y
CATEGORY: Inferred YEAR: 1988
QUANTITY: 660000 Tonnes

<u>COMMODITY</u>	<u>GRADE</u>
Marble	100.0000 Per cent

COMMENTS: Estimated quantity available for quarrying. The actual grade of the marble is not known.

REFERENCE: Industrial Mineral File - Broughton and Bruce, 1988.

CAPSULE GEOLOGY

The Leo D'or marble prospect is located approximately 30 kilometres southwest of Port MacNeil on northern Vancouver Island. The property is situated at the northeast end of Bonanza Lake on a tree covered slope which rises from the lake shore to the east at an average slope of 30 degrees.

A band of limestone of the Upper Triassic Quatsino Formation, Vancouver Group, up to 2.5 kilometres wide, trends northward along the east side of Bonanza River and Bonanza Lake for 6.25 kilometres. To the west, the limestone is in fault contact with basaltic flows of the Upper Triassic Karmutsen Formation, Vancouver Group. An elongate stock of coarse-grained, biotite quartz monzonite of the Early to Middle Jurassic Island Plutonic Suite intrudes the limestone from the southeast. On the Leo D'or property, the limestone has been recrystallized to marble by these intrusions. Discontinuous dykes of basalt, averaging 60 centimetres in width, are also observed throughout the area.

Bedding in the marble has a regional dip of approximately 20 degrees; strike varies considerably. Locally, the beds are folded into tight synclines or anticlines, the limbs of which dip as steeply as 40 to 60 degrees. The fold axes vary in plunge from 0 to 65

CAPSULE GEOLOGY

degrees. A major fault trends north through Bonanza Lake and minor east trending faults cut through the property. The faults on the property have offsets up to 1 metre and are generally steeply dipping to both the north and south. Joints in the area are also steeply dipping and have variable strikes. Joint spacing varies from several centimetres to as much as 10 metres.

The marble varies in colour from very light grey to dark grey or almost black, to mottled grey and white. In some areas, distinct black to light grey bands of marble, varying from several centimetres to several metres, occur. The grain size of the marble varies from fine to coarse grained, the majority (approximately 75 per cent) is medium grained. Light brown to light orange surface staining is caused by the oxidation of iron impurities in the marble. The percentage of iron is estimated to vary from 0 to 4 per cent, locally. One bed on the property contains small cherty nodules and dips approximately 10 degrees to the east. Minor amounts of pyrite were noted in some of the thin (less than 5 centimetres) dark marble bands.

During a preliminary engineering study of the area in 1988, a preferred site, approximately 160 by 100 metres, was outlined for further evaluation based on its consistency of colour. The overall slope of the ground is 30 degrees, although individual faces are as steep as 45 degrees. The site consists of very light grey to white marble, with varying amounts of iron-staining on weathered surfaces. Very little colour banding was observed within this area. The majority of the rock is massive and for the most part hard and resistant to weathering. Some areas are blocky and dissected by joints.

A volume of marble available within the investigated area of consistent colour has been estimated, assuming that the rock is similar at depth to that on surface. It is further assumed that rock waste due to close joint spacing or karst would be 50 per cent, and that the quarry slopes would extend up at about 60 degrees. Based on these assumptions, a rock volume of 240,000 cubic metres (about 660,000 tonnes) would be available for quarrying (Industrial Minerals File - Broughton and Bruce, 1988). Petrographic analysis of the marble indicates that it consists of approximately 99.5 per cent grey to white calcite (Industrial Minerals File - Read, 1988).

In 1991, a short-hole drilling program consisting of 6 holes was undertaken to further assess the marble resource on the property (Assessment Report 22218). This time the area of examination was on "Onyx Hill" in the southeast part of the property, about 1 kilometre east-southeast of the above 1988 preferred area of investigation. Drilling encountered medium-grained, faintly banded, light to medium grey marble, the dominant rock type, which graded into creamy white to buff, medium-grained marble containing scattered 1 to 0.5 centimetre calcite crystals. The marble sequence is cut by a number of quartz porphyry and mafic sills, some up to 10 metres thick. The frequency of fracturing and jointing, as seen in drill cores, is reported to be within acceptable limits for extraction of blocks up to 15 tonnes. Two chemical analyses of selected core samples of marble indicated few impurities and CaCO₃ contents of 99.14 and 99.51 per cent.

According to M. Shariatmadari (Personal Communication, 1992), in 1992, Leo D'Or Mining Inc. expanded the 1988 preferred site area to 250 by 180 metres by stripping and cleaning the surface. The marble in the expanded area proved to be of the same consistent quality as that described for the original smaller area. The total thickness of the marble based on one drill hole and various outcroppings is estimated to be at least 120 metres. Two 25-tonne white marble blocks were excavated from this area. In addition 35 blocks were cut in 1993.

Considerable potential exists to define a larger reserve of marble over the entire property based on distribution of marble outcrops over the entire property.

BIBLIOGRAPHY

- EMPR ASS RPT 14937, 16111, *22218
- EMPR EXPL 1993-56; 1994-70
- EMPR OF 1992-18, pp. 31, 32-33
- EMPR PF (Read, P.B. (1988): Petrographic Analysis of Marbles, Leo D'or Marble Claims, by Geotex Consultants Limited; *Broughton, S.E. and Bruce, I.G. (1988): Summary of Fieldwork and Preliminary Evaluation - Bonanza Lake Marble Property, Klohn Leonoff Ltd.; Statement of Work Done to Date - Proposal for Geological Engineering Services, Claim - Leo D'Or Marble, Klohn Leonoff Limited, April 18, 1990; Letter by M. Shariatmadari, 1990; Mcfeel, T. (1992): Stone Cold on Marble (article in British Columbia Report, January 13, 1992))

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 630
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 4-1974; 255A; 1029A; 1552A
GSC OF 7; 170; 463, Sheet 2
GSC P 70-1A; 72-44; 74-8
WWW <http://www.infomine.com/>
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of
British Columbia, Vol. 1: Vancouver Island, p. 176

DATE CODED: 1990/12/03
DATE REVISED: 1992/10/04

CODED BY: GJP
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092L 340**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUEBIRD 2**

MINING DIVISION: Nanaimo

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 21 14 N
LONGITUDE: 127 15 01 W
ELEVATION: 777 Metres

NORTHING: 5579443
EASTING: 624471

LOCATION ACCURACY: Within 500M

COMMENTS: Named from an old claim map (see Benson Lake, 092L 091).

COMMODITIES: Copper Zinc Gold Cobalt

MINERALS

SIGNIFICANT: Pyrrhotite Magnetite Chalcopyrite Sphalerite Arsenopyrite
Gold Cobaltite

COMMENTS: Trace gold and cobaltite.

ALTERATION: Epidote Garnet Carbonate Chlorite

ALTERATION TYPE: Epidote

MINERALIZATION AGE: Lower Jurassic

ISOTOPIC AGE: 178 +/- 8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Phlogopite

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Mesothermal Replacement Epigenetic Skarn

SHAPE: Tabular
COMMENTS: Date from Geological Survey of Canada Paper 74-8.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Vancouver Quatsino

LITHOLOGY: Limestone
Altered Greenstone Sill
Tuff

HOSTROCK COMMENTS: The dyke and tuff may belong to the Jurassic Keystone Suite and Lower Jurassic Bonanza Group, respectively.

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell Plutonic Rocks

CAPSULE GEOLOGY

The Bluebird 2 occurrence consists of an irregular lens of massive sulphides that probably represents a small manto. The lens is between 0.3 and 1.5 metres wide and contains abundant pyrrhotite with lesser magnetite, chalcopyrite, black sphalerite, arsenopyrite and trace gold and cobaltite. Within the massive sulphides are small quantities of carbonate, epidote, garnet and chlorite. The sulphide lens is gently dipping and is underlain by bleached, massive Quatsino Formation limestone of the Upper Triassic Vancouver Group. Overlying the sulphide lens are poorly exposed mafic rocks that could be either thinly-bedded tuffs of the Lower Jurassic Bonanza Group or an altered greenstone sill of the Jurassic Keystone Suite (Open File 1991-8).

BIBLIOGRAPHY

EMPR OF 1991-8
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC OF 9; 170; 463
GSC MAP 255A; 4-1974; 1552A
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1991/10/23
DATE REVISED: 1992/10/27

CODED BY: IW
REVISED BY: GR

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **092L 341**

NATIONAL MINERAL INVENTORY:

NAME(S): **SNOWLINE 2**

MINING DIVISION: Nanaimo

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 21 12 N
LONGITUDE: 127 15 19 W
ELEVATION: 701 Metres

NORTHING: 5579372
EASTING: 624117

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Zinc Gold

MINERALS

SIGNIFICANT: Pyrrhotite Arsenopyrite Magnetite Chalcopyrite Sphalerite
ALTERATION: Garnet Chlorite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Lower Jurassic
ISOTOPIC AGE: 178 +/- 8 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Phlogopite

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Mesothermal Replacement Skarn Epigenetic
COMMENTS: Date from Geological Survey of Canada Paper 74-8.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Vancouver Quatsino

LITHOLOGY: Limestone
Altered Greenstone Dike
Marble

HOSTROCK COMMENTS: The dykes are part of the Jurassic Keystone Suite.

GEOLOGICAL SETTING

TECTONIC BELT: Insular Plutonic Rocks PHYSIOGRAPHIC AREA: Vancouver Island Ranges
TERRANE: Wrangell

CAPSULE GEOLOGY

The area is underlain by Quatsino Formation limestone of the Upper Triassic Vancouver Group which is intruded by greenstone dykes/sills of the Jurassic Keystone Suite (Open File 1991-8).

Mineralization at the Snowline 2 occurrence consists of massive pyrrhotite and arsenopyrite with lesser magnetite, chalcopyrite and black sphalerite. Small quantities of garnet and chlorite occur within the sulphide mass.

The mineralization resembles that of the Marten occurrence (092L 050) and probably represents sulphide-rich manto mineralization related to the iron skarns in the area (Merry Widow (092L 044), Kingfisher (092L 045)). However, unlike the Marten occurrence, the narrow sulphide zone is subvertical and may represent a chimney. The southern margin of the zone is in contact with marble, whereas the northern margin lies adjacent to a thin, altered greenstone dyke.

BIBLIOGRAPHY

EMPR OF 1991-8
GSC P 69-1A; 70-1A; 71-36; 72-44; 74-8
GSC OF 9; 170; 463
GSC MAP 255A; 4-1974; 1552A
Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern British Columbia, Ph.D. Thesis, University of British Columbia
Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

DATE CODED: 1992/10/27
DATE REVISED: 1992/10/27

CODED BY: GR
REVISED BY: GR

FIELD CHECK: Y
FIELD CHECK: Y

MINFILE NUMBER: **092L 342**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH NOTCH**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L06E 092L06W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 21 35 N
LONGITUDE: 127 14 50 W
ELEVATION: 716 Metres

NORTHING: 5580096
EASTING: 624673

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Open File 1991-8.

COMMODITIES: Copper Cobalt

MINERALS

SIGNIFICANT: Chalcopyrite Cobaltite

ASSOCIATED: Magnetite

ALTERATION TYPE: Skarn

MINERALIZATION AGE: Middle Jurassic

ISOTOPIC AGE: 178 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Phlogopite

DEPOSIT

CHARACTER: Podiform

CLASSIFICATION: Skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Jurassic	Bonanaza	Unnamed/Unknown Formation	
Upper Triassic	Vancouver	Quatsino	

LITHOLOGY: Limestone
Ash Tuff
Tuffaceous Sediment/Sedimentary
Skarn

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

GRADE:

CAPSULE GEOLOGY

The oldest rocks in the Merry Widow camp are massive to pillowed volcanic and subvolcanic gabbroic intrusions of the Upper Triassic Karmutsen Formation (Vancouver Group). These are unconformably overlain by approximately 1000 metres of massive to bedded grey limestone of the Upper Triassic Quatsino Formation (Vancouver Group). The Quatsino is unconformably overlain by the Lower Jurassic Bonanza Group which consists of andesitic ash and lapilli tuff, breccia, greenstone and well bedded tuffaceous siltstone.

The area includes two major episodes of intrusive rocks. The oldest rocks, the Keystone suite, is believed to be coeval with the Bonanza Group and probably formed feeders to the tuffs, breccias and greenstones in that succession. Many Keystone suite dikes and sills that cut the Quatsino limestone are associated with barren and mineralized skarn. The second major intrusive episode resulted in the emplacement of the Early to Middle Jurassic Coast Copper stock. This is mostly a coarse grained, mafic gabbro.

A distinctive sill-like body of tholeiitic basalt of unknown age intrudes the Quatsino limestone in the southern part of the camp.

The North Notch skarn showing is located at or very close to the contact of Quatsino limestone with ash tuff and tuffaceous sediments of the Bonanza Group. Magnetite, chalcopyrite and cobaltite have been observed (Open File 1991-8).

BIBLIOGRAPHY

EMPR MAP Preliminary Geological Map Alice Lake-Benson Lake Area, Jeffery, W.G., 1962
EMPR FIELDWORK 1990, pp. 85-88
EMPR OF 1988-28; *1991-8
GSC P 69-1A; 70-1A; 72-44; 74-8
GSC BULL 172, p. 63
GSC OF 9; 170; 463
GSC MAP 4-1974; 255A; 1552A

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 634
REPORT: RGEN0100

BIBLIOGRAPHY

- Wittur, G.E., (1961): Geology of the Magnetite Deposits of Empire Development Co. Ltd., Vancouver Island, British Columbia, unpub. B.Sc. Thesis, University of British Columbia
- Carson, D.J.T. (1968): Metallogenic study of Vancouver Island with emphasis on the relationship of plutonic rocks to Mineral deposits, Ph.D. Thesis, Carleton University, Ottawa
- Sangster, D.F. (1964): The Contact Metasomatic Magnetite Deposits of Southwestern B.C., Ph.D. Thesis, University of British Columbia

DATE CODED: 1993/04/02
DATE REVISED: 1993/04/02

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 343**

NATIONAL MINERAL INVENTORY:

NAME(S): **MONTEITH BAY, TOO EASY, EASY THREE,
MONTEITH BAY GEYSERITE**

STATUS: Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L03W
BC MAP:

Underground

MINING DIVISION: Alberni

LATITUDE: 50 07 51 N
LONGITUDE: 127 17 23 W
ELEVATION: 30 Metres

UTM ZONE: 09 (NAD 83)

NORTHING: 5554578
EASTING: 622234

LOCATION ACCURACY: Within 500M

COMMENTS: Proposed quarry site near the shoreline in Monteith Bay, on the headland between Easy and Kashutl inlets in Kyoquot Sound, about 36 kilometres west-northwest of Zeballos (Property File - Prospectus, New Global Resources Ltd., September 1993). See also Morris (092L 072), At Monteith (092L 117), Sockeye (092L 246) and Sic (092L 276).

COMMODITIES: Pyrophyllite Alunite Silica

MINERALS

SIGNIFICANT: Geysерite Silica Pyrophyllite
ALTERATION: Silica Sericite Alunite Pyrophyllite
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Epithermal Industrial Min.
TYPE: H09 Hydrothermal alteration clays-Al-Si R12 Volcanic glass - perlite

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	

LITHOLOGY: Hornblende Plagioclase Porphyritic Andesite
Amygdaloidal Flow
Flow Breccia
Porphyritic Andesite Dike
Porphyritic Andesite Sill

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

INVENTORY

ORE ZONE: MAIN

REPORT ON: Y

CATEGORY: Measured YEAR: 1993
QUANTITY: 1814200 Tonnes
COMMODITY GRADE Per cent
Silica 44.6800

COMMENTS: A preliminary reserve of pure geysерite based on volume calculations on cross-sections spaced 20 metres apart.

REFERENCE: Property File - Prospectus, New Global Resources Ltd., September 1993.

CAPSULE GEOLOGY

The Monteith Bay geysерite deposit consists mainly of replacement silica in a concentration greater than 96 per cent SiO2. It is a paleo-hot-springs deposit of massive thickness, originally of gently dipping bedding, now somewhat faulted, bent and dipping to the south about 40 to 50 degrees.

The volcanic hostrocks in the Monteith Bay area consist of hornblende-plagioclase porphyritic andesite, amygdaloidal flows and flow breccias of the Lower Jurassic Bonanza Group. Late intrusive rocks occur as fine grained porphyritic andesite dikes and sills.

The rocks are altered to various degrees, with silicic and advanced argillic zones present. The lack of structural control, of associated large intrusions and overall distribution of the alteration assemblages suggest that the silicification took place contemporaneously with volcanism before significant structural dislocation. The sericite-rich alteration in Monteith Bay appears to correlate directly with the emplacement and shearing of the later

CAPSULE GEOLOGY

andesite dikes. The presence of chalcedonic silica, alunite and pyrophyllite indicate a probable near surface origin for the main phase of alteration.

Diamond drilling demonstrates the continuity and purity of the geyselite material (geyselite is a synonym of siliceous sinter). A typical analysis of geyselite for major elements is as follows: 1.02% Al₂O₃, 0.13% CaO, <0.01% Cr₂O₃, 0.34% Fe₂O₃, 0.26% K₂O, 0.04% MgO, <0.01% MnO, 0.05% Na₂O, 0.09% P₂O₅, 95.6% SiO₂, 0.24% TiO₂ and 2.0% LOI. Volume calculations on cross-sections spaced 20 metres apart give a preliminary reserve of 1,814,200 tonnes of pure geyselite. Conversion of SiO₂ to Si using the factor 2.1393 (Prospectus, New Global Resources Ltd., September 1993).

Silica, one of the minor constituents of Portland cement manufactured by the Tilbury plant in Delta, is to be supplied from the Monteith Bay geyselite property.

In 1995, Monteith Bay Resources Limited received a certificate to produce "geyselite" silica from a seasonal quarry on East Inlet. The quarry is permitted to produce up to 100 000 tonnes per year but it is not yet in production. In 1998, Tilbury Cement Limited brought the property and prepared it for production. It expects to make its first shipment of approximately 30 000 tonnes in 1999. Construction Aggregates plan production in 1999.

New Global Resources Ltd. received a Mine Development Certificate in 1995. It has applied for permits to extract a 10,000-tonne sample of creamy-white, compact, soapy pyrophyllite from an old quarry a few hundred metres south of Monteith Bay silica deposit.

See also Morris (092L 072), At Monteith (092L 117), Sockeye (092L 246) and Sic (092L 276).

Monteith Bay Resources Ltd. produces silica from the property.

BIBLIOGRAPHY

- EM EXPL 1998-49-50
- EMPR ASS RPT 4539, 8279, 11374, 12681, 23139, 23837
- EMPR INF CIRC 1996-1, p. 20
- EMPR OF 1994-1
- EMPR PF (*Prospectus, New Global Resources Ltd., Monteith Bay Geyselite Project, September 1993)
- GSC ANN RPT 1886
- GSC MAP 255A; 41-1974; 1552A
- GSC OF 9; 170; 463
- GSC P 69-1A; 70-1A; 72-44; 74-8
- Carson, D.J.T. (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa
- Falconbridge File

DATE CODED: 1993/10/29
DATE REVISED: 1993/10/29

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 344**

NATIONAL MINERAL INVENTORY:

NAME(S): **VAR**

MINING DIVISION: Nanaimo

STATUS: Showing

REGIONS: British Columbia, Vancouver Island

NTS MAP: 092L12E

BC MAP:

LATITUDE: 50 33 44 N

LONGITUDE: 127 31 09 W

ELEVATION: 144 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Approximate centre of the Var 1 claim, northeast of Varney Bay along Rupert Inlet, about 18 kilometres south of Port Hardy.

UTM ZONE: 09 (NAD 83)

NORTHING: 5602191

EASTING: 604882

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite

MINERALIZATION AGE: Upper Triassic

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Sedimentary

Stratiform
Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Vancouver

FORMATION

Quatsino

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

CAPSULE GEOLOGY

Eight diamond-drillholes were completed on the Var claims to test chemical grade limestone of the Upper Triassic Quatsino Formation of the Vancouver Group (R. Pinsent, personal communication, 1994).

BIBLIOGRAPHY

EM EXPL 1998-47-55
GSC BULL 242
GSC MAP 255A; 4-1974; 1552A
GSC OF 9; 170; 463; 722
GSC P 69-1A; 72-44; 74-8; 79-30

DATE CODED: 1994/12/04
DATE REVISED: 1994/12/04

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092L 345**

NATIONAL MINERAL INVENTORY:

NAME(S): **TSITIKA GREY**, TSITIKA, S90,
TSITIKA STONE

STATUS: Producer
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L08W
BC MAP:
LATITUDE: 50 16 47 N
LONGITUDE: 126 20 46 W
ELEVATION: 396 Metres

Open Pit

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

NORTHING: 5573102
EASTING: 689078

LOCATION ACCURACY: Within 500M

COMMENTS: Boulder test site on the south bank of Eve River, about 200 metres south of Highway 19, 80 kilometres north-northwest of Campbell River.

COMMODITIES: Granite Dimension Stone Building Stone

MINERALS

SIGNIFICANT: Plagioclase Quartz Hornblende Biotite Orthoclase
ASSOCIATED: Magnetite Apatite Clinozoisite
ALTERATION: Sericite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Magmatic Industrial Min.
TYPE: R03 Dimension stone - granite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Jurassic			Island Plutonic Suite

LITHOLOGY: Quartz Monzonite
Hornblende Biotite Granodiorite
Granite

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Plutonic Rocks

Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The Tsitika Grey sites are located 10 kilometres south of Woss on the Island Highway, 100-200 metres, north and south, on each side of the highway on logging roads.

The sites occur on the Tsitika or S90 property which lies within the Jurassic Island Plutonic Suite.

The stone is found as scattered outcrops and boulder fields along the Island Highway west of the Tsitika River. It is fresh and boulders vary in size from 45 to 725 tonnes. There are no visible microfracture or exfoliation features. Rounded inclusions of darker facies rock are a common feature in the whole area.

The stone on the S90-1 claim outcrops in a natural bench and a series of massive to fractured ridges. Preliminary mapping was concentrated on the natural quarry bench.

Tsitika Grey is a fairly uniform, medium to coarse-grained quartz monzonite. The colour is medium grey with black peppering by coarse-grained mafic minerals. Major constituents are plagioclase, quartz, hornblende, biotite and orthoclase. Minor constituents are magnetite, apatite and clinozoisite. The mafic minerals are unaltered and feldspar has minor sericitization. The rock looks fresh with no alteration, fabric or staining on the polished face. It takes a good, bright polish (8/10) with rare pitting on biotite. Magnetite grain aggregates, up to 3 millimetres across, give a scattered metallic glint. Mafic knots are rare, small, less than 2 centimetres across, and consist of mats of hornblende, biotite and feldspar. No sulphides were noted in any samples, or on the weathered surfaces.

The stone is massive in outcrop and lies in a series of benches progressing up the hill toward a solid knob at the top. The nature of this exposure will facilitate significantly easier quarrying, as drilling will be minimized. The fracture pattern as evidenced in the series of benches is spaced close enough that master blocks in the order of 453 to 907 tonnes can be easily produced.

CAPSULE GEOLOGY

The 1994 exploration program consisted of preliminary prospecting and mapping, followed by a boulder testing program on one of the boulders on the S90-2 claim. Approximately 9 tonnes was cut into 25.8 centimetre squared split face granite, while approximately 544 tonnes was cut into 4.5-tonne blocks and sent to Vancouver for market testing. Approximately 18 tonnes and 27 tonnes have been used on two jobsites respectively.

The 1995 program consisted of further boulder testing on the S90 property, now 80 per cent complete. The presence of xenoliths confirmed to be a serious problem for the polished stone market, but split stone was favourably received by masons on Vancouver Island and the Lower Mainland. Three potential quarry sites were identified.

Tsitika Stone Industries operates the quarry.

BIBLIOGRAPHY

- EMPR ASS RPT *23891, 24251
- EMPR EXPL 1992, pp. 107-116; 1996-A13
- EMPR FIELDWORK 1994, pp.365-369; *1996, pp.301-306
- EMPR INF CIRC 1996-1, p. 10; 1997-1, p. 13; 1998-1, p. 15; 2000-1, p. 11
- GSC MAP 1836A
- GSC OF 9; 170; 463
- Streckeisen, A. (1976): To Each Plutonic Rock its Proper Name; Earth and Science Reviews, Volume 12, pages 1-33.

DATE CODED: 1995/12/13
DATE REVISED: 1997/02/13

CODED BY: GO
REVISED BY: ZDH

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092L 346**

NATIONAL MINERAL INVENTORY:

NAME(S): **TSITIKA BLACK**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L08W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 18 59 N
LONGITUDE: 126 29 05 W
ELEVATION: Metres

NORTHING: 5576835
EASTING: 679066

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located 18 kilometres northeast of Woss on the Tsitika River
(Fieldwork 1996, pp.301-306)

COMMODITIES: Granite Dimension Stone Building Stone

MINERALS

SIGNIFICANT: Plagioclase Biotite Augite
ASSOCIATED: Magnetite Pyrite Quartz Apatite
ALTERATION: Chlorite Albite
ALTERATION TYPE: Chloritic Albitic
MINERALIZATION AGE: Jurassic

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Magmatic Industrial Min.
TYPE: R03 Dimension stone - granite

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Jurassic _____ _____ Island Plutonic Suite

LITHOLOGY: Diorite
Gabbro

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Plutonic Rocks Wrangell

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

CAPSULE GEOLOGY

The Tsitika Black showing is located 18 kilometres northeast of Woss on the Tsitika River.

The area is underlain by rocks of the Jurassic Island Plutonic Suite.

The rock is found as scattered outcrops and boulder fields in the Tsitika River valley. This stone is a more fractured and darker phase of Tsitika Grey (092L 345). Because of the high fracture density, it has limited use other than for masonry blocks.

Tsitika Black is light black with grey-pink highlights. It is a uniform, fine to medium-grained diorite/gabbro. Major constituents are plagioclase, biotite and clinopyroxene (augite). Minor constituents are chlorite, magnetite, pyrite (3 per cent), quartz and apatite. Pyroxene is strongly altered to chlorite, biotite is generally unaltered and plagioclase shows weak albitization. Pyrite is fresh and unaltered. The rock takes a good polish (8/10) and has minor pitting on biotite. The rock has a well developed planar fabric but no visible alteration or staining. There is no macroscopic fracturing and only minor microfracturing of primarily plagioclase.

BIBLIOGRAPHY

EMPR EXPL 1992, pp.107-116
EMPR FIELDWORK 1994, pp. 365-369; *1996, pp. 301-306
GSC MAP 1836A
GSC OF 9; 170; 463
Streckeisen, A. (1976): To Each Plutonic Rock its Proper Name; Earth and Science Reviews, Volume 12, pages 1-33.

DATE CODED: 1995/12/13
DATE REVISED: 1997/11/02

CODED BY: GO
REVISED BY: ZDH

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092L 347**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLUXEWE MOUNTAIN**, PORT MCNEILL ANDESITE

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 092L11E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 34 24 N
LONGITUDE: 127 09 44 W
ELEVATION: Metres

NORTHING: 5604000
EASTING: 630140

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located 7 kilometres west of Port McNeill on top of Cluxewe Mountain (Fieldwork 1994, pp.365-369).

COMMODITIES: Andesite Dimension Stone Building Stone

MINERALS

SIGNIFICANT: Feldspar Biotite
COMMENTS: Andesite.
ASSOCIATED: Magnetite Quartz
ALTERATION: Sericite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Volcanogenic Industrial Min.
TYPE: R05 Dimension stone - andesite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Miocene

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Feldspar Porphyritic Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Georgia Depression

CAPSULE GEOLOGY

The Port McNeil Andesite prospect is located 7 kilometres west of Port McNeil on top of Cluxewe Mountain. The owner is Tim Henneberry and the operator is Tsitika Stone Industries.

The site occurs as a flat, horizontal lava flow of Miocene age that caps the table shaped Cluxewe Mountain. The stone is exposed in cliffs 5 to 10 metres high. The flow is vertically fractured with spacing up to several metres apart. The surface is smooth, very homogeneous, light grey in colour and almost aphanitic in appearance. This volcanic rock, because of its texture, colour and splitting characteristics, could be used in applications where sandstone would normally be used. In contrast to British Columbian sandstones, this type of andesite has an excellent performance record and durability in the coastal climate (see 092L 146).

The Port McNeil andesite is a buff, very fine-grained andesite. The rock is made up of a dense mat of feldspar laths with biotite disseminated or forming small clumps throughout creating a slight speckle to the appearance. Minor constituents are magnetite and quartz with weak sericite alteration of the feldspar. The cut, unpolished rock has a very uniform texture with no alteration, staining and minor, tight cracking visible. The rock has uniform void space (vugs) about 0.2 millimetre in diameter and form approximately 1 per cent of the rock. Thin section work indicates the rock is not microfractured and so is probably quite impermeable, though slightly porous.

BIBLIOGRAPHY

EMPR EXPL 1992, pp.107-116
EMPR FIELDWORK 1994, pp.365-369; *1996, pp.365-369
GSC MAP 1836A
Streckeisen, A. (1976): To Each Plutonic Rock its Proper Name; Earth and Science Reviews, Volume 12, pages 1-33.

DATE CODED: 1985/07/24
DATE REVISED: 1997/02/10

CODED BY: GSB
REVISED BY: ZDH

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092L 347**

MINFILE NUMBER: **092M 001**

NATIONAL MINERAL INVENTORY:

NAME(S): **KITCHENER**, HAIG (L.1313), HAIG NO. 1 (L.1314),
HAIG NO. 2 (L.1315), HAIG NO. 3 (L.1316), HAIG NO. 4 (L.1317),
HAIG NO. 5 (L.1318)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092M02E
BC MAP:
LATITUDE: 51 07 15 N
LONGITUDE: 126 44 22 W
ELEVATION: 88 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located on sample 8 on Lot 1315, between Haig Bay and Wigwam Bay, 10 kilometres south-southwest of the head of Seymour Inlet (Geological Survey of Canada Economic Geology Report 1926).

MINING DIVISION: Vancouver
UTM ZONE: 09 (NAD 83)
NORTHING: 5665692
EASTING: 658201

COMMODITIES: Iron Magnetite

MINERALS

SIGNIFICANT: Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Disseminated Vein Concordant
CLASSIFICATION: Replacement Epigenetic Industrial Min.
TYPE: K03 Fe skarn
SHAPE: Irregular
COMMENTS: Magnetite deposits are generally concordant with contacts and foliation in the host rocks, which strike northwest and dip vertically or steeply northeast.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Meta Sediment/Sedimentary
Meta Volcanic
Limestone
Hornblende Mica Schist
Gneiss
Diorite
Granodiorite

HOSTROCK COMMENTS: Metasedimentary and metavolcanic unit within diorite and granodiorite of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Undivided Metamorphic Assembl. Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: PHYSIOGRAPHIC AREA: Fiord Ranges (Southern)
GRADE:

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1917
SAMPLE TYPE: Grab
COMMODITY GRADE
Iron 65.5000 Per cent
COMMENTS: Type of sample not specified in reference.
REFERENCE: Minister of Mines Annual Report 1917.

CAPSULE GEOLOGY

The Kitchener occurrence consists of a number of magnetite showings on the northwest side of Seymour Inlet, a fiord on the western edge of the Coast Mountains. It is located on the Haig group of claims which occupy a small peninsula between Haig Bay and Wigwam Bay, 10 kilometres southwest of the head of Seymour Inlet. Two other magnetite deposits are in this area: the Wigwam occurrence (092M 010) is 2 kilometres to the north, and the Alexander group of showings (092M 002) is 3 kilometres away on the opposite, southeast side of Seymour Inlet.

The area is part of the Jurassic to Tertiary Coast Plutonic Complex, and is underlain by a complex of metasedimentary and metavolcanic schists and gneisses, and intrusive rocks typically of

CAPSULE GEOLOGY

dioritic or granodioritic composition (Geological Survey of Canada Map 1386A). The Haig claims are underlain by a 600-metre wide band of dark, fine-grained hornblende-mica schists of sedimentary and/or volcanic origin, and which includes several narrow bands of recrystallized limestone (Geological Survey of Canada Economic Geology Report 1926). Contacts and foliations in the rocks strike northwest and have a subvertical to steep, northeasterly dip. Granodiorite and diorite border this band of rocks to the northeast and southwest of the claim group, respectively, and may occur locally within it.

Magnetite is confined to the metasediments and metavolcanics, and occurs in several localities (at least 4) over a width of about 450 metres. Individual showings are up to about 6 metres in width. The magnetite occurs in irregular, centimetre-scale aggregates, or in narrow veins, or it is disseminated in the host rocks over a few square metres; sulphides are lacking. The massive aggregates are quite pure, dense, bluish black magnetite, assaying up to 65.5 per cent iron (Minister of Mines Annual Report 1917). These lenses or zones are generally concordant with the structures in the host rocks; one "vein" is at a limestone contact.

The magnetite is interpreted to be a replacement deposit (Geological Survey of Canada Economic Geology Report 1926).

BIBLIOGRAPHY

EMPR AR *1917-64; 1919-211
EMPR ASS RPT 12204
GSC MAP 1386A
GSC EC GEOL *3, Vol.1, 1926, pp. 55-58

DATE CODED: 1985/07/24
DATE REVISED: 1992/02/26

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092M 002**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALEXANDER, DOLPHIN, IRON PYRITE,
GILLIS, GLADYS, TIN HAT,
GILLIS FRACTION, IRON PIRATE**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092M02E
BC MAP:
LATITUDE: 51 07 04 N
LONGITUDE: 126 41 31 W
ELEVATION: 344 Metres
LOCATION ACCURACY: Within 500M

MINING DIVISION: Vancouver
UTM ZONE: 09 (NAD 83)
NORTHING: 5665456
EASTING: 661536

COMMENTS: Located on Lot 1038, from description of occurrence No. 4, in a gully on the southeast side of Seymour Inlet, 9 kilometres from head of inlet (Geological Survey of Canada Economic Geology Report 1926).

COMMODITIES: Iron Magnetite

MINERALS

SIGNIFICANT: Magnetite
ASSOCIATED: Pyrite
COMMENTS: Pyrite is generally associated with disseminated magnetite.
ALTERATION: Epidote Limonite
COMMENTS: The product of oxidation, probably of pyrite, is presumed to be limonite.

ALTERATION TYPE: Epidote Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Disseminated
CLASSIFICATION: Replacement Industrial Min.
TYPE: K03 Fe skarn
SHAPE: Irregular
DIMENSION: 15 x 4 Metres STRIKE/DIP: 295/90
COMMENTS: Typical orientation and dimensions of zones of magnetite.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Hornblende Biotite Schist
Meta Sediment/Sedimentary
Meta Volcanic
Diorite
Granodiorite
Dike

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Undivided Metamorphic Assembl. Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: PHYSIOGRAPHIC AREA: Fiord Ranges (Southern)
GRADE:

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1903
SAMPLE TYPE: Rock
COMMODITY GRADE
Iron 60.7000 Per cent
Magnetite 83.8200 Per cent
COMMENTS: Average analysis from one body of magnetite.
REFERENCE: Property File - Gilman, E.P., 1903.

CAPSULE GEOLOGY

This occurrence consists of a number of magnetite showings on the Alexander group of claims on the southeast side of Seymour Inlet, a fiord on the western edge of the Coast Mountains. It is located 9 kilometres south of the head of Seymour Inlet. Two other magnetite deposits, the Kitchener (092M 001) and Wigwam (092M 010) occurrences are also in this area, on the opposite, northwest side of Seymour Inlet.

The area is part of the Jurassic to Tertiary Coast Plutonic Complex, a complex of metasedimentary and metavolcanic schists and

CAPSULE GEOLOGY

gneisses, and intrusive rocks typically of dioritic or granodioritic composition (Geological Survey of Canada Map 1386A).

A steep-sided gully drains into Seymour Inlet opposite Wigwam Bay. Locally, the rocks consist of dark grey, fine to medium-grained hornblende-biotite schists of sedimentary and/or volcanic origin, which are intruded by sheets of diorite, granodiorite, and late-stage dykes (Geological Survey of Canada Economic Geology Report 1926). Commonly the rocks are sheared and epidotized (Minister of Mines Annual Report 1919; Property File - Gilman, E.P., 1903).

At least 11 different zones of magnetite mineralization occur in the vicinity of this gully, at various elevations ranging from about 100 metres to 600 metres above sea level (Property File - Gilman, E.P., 1903). Typically, the zones measure 3 to 5 metres by 10 to 20 metres, and consist of a core of pure, massive, fine-grained, bluish-black to black magnetite, grading into a zone of disseminated magnetite, and finally into barren country rock (Geological Survey of Canada Economic Geology Report 1926). Pyrite is commonly associated with the disseminated magnetite, and some outcrops of mineralization have rusty-weathering oxidation.

An average sample from one magnetite body was analyzed at 83.82 per cent iron oxide (magnetite), or 60.7 per cent iron (Property File - Gilman, E.P., 1903). The average assay of samples from a number of bodies was 48.5 per cent iron; the maximum assay was 61.2 per cent iron (Property File - Gilman, E.P., 1903).

The zones of magnetite have a strike of 295 degrees and dip subvertically. The mineralization is discontinuous so its actual dimensions are not clear. However, it has been estimated that the maximum "ore" content is 18,000 tonnes, which was not regarded as economic (Geological Survey of Canada Economic Geology Report 1926).

The magnetite has been interpreted as a replacement deposit, related to the plutonism in the area (Geological Survey of Canada Economic Geology Report 1926).

BIBLIOGRAPHY

- EMPR AR 1917-65; 1919-210
- EMPR ASS RPT 12204
- EMPR PF (*Gilman, E.P. (1903): Report on the Alexander Group of claims)
- GSC MAP 1386A
- GSC EC GEOL *3, Vol.1, 1926, pp. 59-62

DATE CODED: 1985/07/24
DATE REVISED: 1992/02/26

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092M 003**

NATIONAL MINERAL INVENTORY:

NAME(S): **POWLEY 1-3**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092M08W
BC MAP:

MINING DIVISION: Vancouver

UTM ZONE: 09 (NAD 83)

LATITUDE: 51 17 16 N
LONGITUDE: 126 25 17 W
ELEVATION: 610 Metres

NORTHING: 5684986
EASTING: 679805

LOCATION ACCURACY: Within 500M

COMMENTS: Located on sample 4, site 4 on Powley 2 claim, north of Powley Creek, 30 kilometres north of the northern end of Wakeman Sound of Kingcome Inlet (Assessment Report 10522, Appendix 2).

COMMODITIES: Copper Silver Zinc Molybdenum Cobalt

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Economic minerals are not specified.
ALTERATION: Quartz Hornblende Garnet
COMMENTS: Presumed to be the products of skarn alteration.
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Skarn Hydrothermal Epigenetic
TYPE: K02 Pb-Zn skarn
DIMENSION: 10 x 3 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Typical dimensions of limestone or skarn bodies.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic Coast Plutonic Complex

LITHOLOGY: Skarn
Limestone
Quartz Diorite
Granite

HOSTROCK COMMENTS: Limestone and skarn form bodies within plutonic and/or metamorphic rocks of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Undivided Metamorphic Assembl. Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1981
SAMPLE TYPE: Rock
COMMODITY GRADE
Copper 0.3500 Per cent
COMMENTS: Spectrochemical analysis of chip sample; best copper result.
REFERENCE: Assessment Report 10522.

CAPSULE GEOLOGY

The Powley occurrence consists of low-grade, skarn-hosted copper, zinc and silver mineralization. It is located in mountainous terrain in the Powley Creek area, 30 kilometres north of Wakeman Sound of Kingcome Inlet.

The area is part of the Jurassic to Tertiary Coast Plutonic Complex, and is underlain by a body of quartz diorite (Geological Survey of Canada Map 1386A). This unit probably includes metasedimentary rocks because bodies of limestone and skarn have been mapped in the Powley Creek area, mostly on the Powley 1 and 3 claims (Assessment Report 10522). These bodies, at least 7 in number, are similar and widely spaced. They are 1 to 6 metres in width and 1 to 20 metres in length, and usually trend west-northwest, or rarely north. The limestone or skarn contains one or more veins of mineralization, each up to 0.5 metre wide; the surrounding "granite" may also be mineralized locally.

CAPSULE GEOLOGY

There is very little information on the mineralization (Assessment Report 10522). Quartz, hornblende and pockets of garnet are associated with the skarn alteration. Copper, zinc, molybdenum, silver and cobalt mineralization is present but the minerals are not specified.

Spectrochemical analysis on selected chip samples of limestone or skarn yielded between 0.03 and 0.35 per cent copper, and up to 0.11 per cent zinc (Assessment Report 10522). The best silver assay obtained was 9.6 grams per tonne, from site 4 on the Powley 2 claim in the extreme east of the property (Assessment Report 10522).

BIBLIOGRAPHY

EMPR ASS RPT *10522
EMPR EXPL 1981-316
GSC MAP 1386A

DATE CODED: 1992/03/01
DATE REVISED: 1992/03/03

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092M 004**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACK SAND**

MINING DIVISION: Vancouver

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092M04E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 51 07 47 N
LONGITUDE: 127 40 48 W
ELEVATION: 1 Metres

NORTHING: 5665079
EASTING: 592364

LOCATION ACCURACY: Within 500M

COMMENTS: Located at the northern end of the beach at Burnett Bay, 7 kilometres southeast of Cape Caution on the coast of the Coast Mountains (Property File - S.S.H., 1958).

COMMODITIES: Iron Titanium

MINERALS

SIGNIFICANT: Magnetite
COMMENTS: Concentrations of magnetite in beach sand.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer Industrial Min.
TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Quaternary
Mesozoic-Cenozoic

Unnamed/Unknown Group

Unnamed/Unknown Formation

Coast Plutonic Complex

LITHOLOGY: Black Sand
Quartz Diorite
Migmatitic Gneiss

HOSTROCK COMMENTS: Concentrations of magnetite occur in beach sand in an area underlain by quartz diorite and migmatitic gneiss of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Fjord Ranges (Southern)
Undivided Metamorphic Assembl.

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1956

SAMPLE TYPE: Rock

COMMODITY

GRADE

Iron

9.8000

Per cent

COMMENTS: Average assay of six samples of beach sand.

REFERENCE: Property File - Sargent, H., 1956.

CAPSULE GEOLOGY

Beach sands with concentrations of magnetite occur for about 3 kilometres on the shore of Burnett Bay, 7 kilometres southeast of Cape Caution on the coast of the Coast Mountains. The area was sampled and investigated geophysically in the 1950's, but no subsequent work is recorded (Property File - Noble, J.A., 1975).

The area is underlain by quartz diorite and migmatitic gneisses of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Map 1386A). Bedrock is exposed at the northern and southern ends of the beach and on the bluffs behind the backshore, and consists of quartz diorite (Property File - S.S.H., 1958). Ultramafic rocks in float blocks up to 2 metres across have also been found in the vicinity of the beach (Property File - Noble, J.A., 1975).

The sands at the northern end of Burnett Bay contain the most magnetite (Property File - S.S.H., 1958). The average assay of 6 samples of sand was 9.8 per cent iron, including a peak value of 14 per cent iron (Property File - Sargent, H., 1956). Spectrographic analysis showed that the metal content of the magnetite includes approximately 10 per cent titanium (Property File - S.S.H., 1958).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 649
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR PF (Sargent, H. (1956): Geochemical Report; S.S.H. (1958):
Report on Black Sand at Cape Caution; Noble, J.A. (1975): Note)
GSC MAP 1386A

DATE CODED: 1985/07/24
DATE REVISED: 1992/02/28

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092M 005**

NATIONAL MINERAL INVENTORY:

NAME(S): **NUGENT QUEEN 1,2**, NUGENT BETTY 1,2, BAY,
O.K.

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092M03W
BC MAP:

MINING DIVISION: Vancouver

LATITUDE: 51 05 38 N
LONGITUDE: 127 23 28 W
ELEVATION: 80 Metres

UTM ZONE: 09 (NAD 83)
NORTHING: 5661497
EASTING: 612664

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located in the centre of the Nugent Queen claims, on the north shore
of Nugent Sound, 5.5 kilometres east of the entrance off Seymour
Inlet (Mineral Inventory Map).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Quartz Diorite

HOSTROCK COMMENTS: Tentatively located in a unit of quartz diorite of the Jurassic to
Tertiary Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Fiord Ranges (Southern)

CAPSULE GEOLOGY

No geological description of the Nugent Queen deposit is available, and its exact location cannot be confirmed. It may be the O.K. property, further to the east, staked by R.D. Smith as agent for R.C. McCorkell in July 1938.

From available information, the occurrence is located on the north shore of Nugent Sound, 5.5 kilometres east of the entrance off Seymour Inlet. This provisionally places the occurrence in a unit of quartz diorite of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Map 1386A).

Three test lots of mineralized rock are reported from the Nugent Queen in the Minister of Mines Annual Report 1939, but these samples are likely from the Nugent Queen (092L 178), located 17 kilometres to the southeast.

BIBLIOGRAPHY

EM FIELDWORK 1999, pp. 325-332
EMPR AR 1939-A41,A59
EMPR BC METAL MM00208
GSC MAP 1386A

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/09

CODED BY: GSB
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092M 007**

NATIONAL MINERAL INVENTORY: 092M13 Cly1

NAME(S): **KISAMEET BAY**, CANADIAN CANAMIN, RAY-VITE

STATUS: Past Producer Open Pit

MINING DIVISION: Skeena

REGIONS: British Columbia

NTS MAP: 092M13W

BC MAP:

LATITUDE: 51 58 16 N

LONGITUDE: 127 52 56 W

ELEVATION: 15 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Located on Lot 1552, on the north side of Kisameet Bay near the southern tip of King Island, 12.5 kilometres north of the community of Namu (Minister of Mines Annual Report 1951, Figure 17).

UTM ZONE: 09 (NAD 83)

NORTHING: 5758415

EASTING: 576784

COMMODITIES: Clay

MINERALS

SIGNIFICANT: Clay

ASSOCIATED: Quartz Feldspar Hornblende Biotite Magnetite

Titanite Zircon

COMMENTS: These minerals represent a subordinate, coarser fraction of the clay.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform Unconsolidated

CLASSIFICATION: Sedimentary Industrial Min.

SHAPE: Tabular

DIMENSION: 200 x 100 x 13 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Approximate surface dimensions, and maximum thickness.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Quaternary
Mesozoic-Cenozoic

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Coast Plutonic Complex

LITHOLOGY:

Clay
Sand
Gravel
Schist
Gneiss

HOSTROCK COMMENTS: The clay deposit fills a small depression underlain by metamorphic rocks of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Fiord Ranges (Northern)

TERRANE: Undivided Metamorphic Assembl.

COMMENTS: A Quaternary clay deposit overlying the Coast Plutonic Complex.

INVENTORY

ORE ZONE: KISAMEET BAY

REPORT ON: Y

CATEGORY: Proven

YEAR: 1978

QUANTITY: 181400 Tonnes

COMMODITY

GRADE

Clay

100.0000

Per cent

REFERENCE: Northern Miner May 4, 1978.

CAPSULE GEOLOGY

The Kisameet Bay occurrence is a deposit of clay on the north side of Kisameet Bay, near the southern tip of King Island, 12.5 kilometres north of the community of Namu. The deposit is on Block A of Lot 1522 about 122 metres inland from, and less than 15 metres vertically above the north shore of Kisameet Bay. This clay has been known to local Indians for many years and was used by them for medicinal purposes.

A small, irregular topographic depression is present about 120 metres north of the shore of Kisameet Bay, at an elevation of 15 metres above sea level (Minister of Mines Annual Report 1951). The clay, presumably Quaternary in age, fills this depression under a thin, mostly organic overburden up to 2 metres thick. The clay itself reaches 13 metres in thickness in the centre of the depression, which covers an area of just over 2 hectares. The dimensions of the deposit were established by about 77 vertical and

CAPSULE GEOLOGY

inclined drill holes in 1946. The clay is underlain usually by sand and gravel, and locally by bedrock, which in this area consists of grey and black schist and gneiss of the Jurassic to Tertiary Coast Plutonic Complex (Minister of Mines Annual Report 1951; Geological Survey of Canada Map 1386A).

The clay is very fine grained and feels smooth and sticky in its natural state. It is dark blue-grey when moist and pale grey when dry. Analysis showed that the grain size of 85 per cent of the clay was less than 3 micrometres. Part of the remaining coarser fraction consists of fresh-looking mineral fragments, primarily quartz, feldspar, hornblende and biotite. None of the clay reacted to dilute or concentrated hydrochloric acid.

The clay is remarkably uniform in texture, lacking stratification or varves. Locally pebbles and cobbles up to 20 centimetres across are present, erratically distributed in the clay. These consist of plutonic or volcanic rock, and are generally rounded, or less commonly, faceted or scratched.

Vancouver interests, apparently through a private company Ray-Vite Laboratories, acquired the property in the 1940s to investigate the therapeutic properties of the clay. The deposit was closely drilled (about 77 holes) in 1946 and samples were submitted to the Mines Branch, Ottawa for differential thermal analysis and X-ray tests. The above interests incorporated Canadian Canamin Limited in April 1949 to acquire the mineral lease on Lot 1552. The clay was sold in a water suspension under the trade-name "Absorvite", to be taken internally for stomach ailments. It was also sold in jars as a mud under the trade-name "Dermavite", for use on burns, sprains, and in beauty packs. Some experimental use was made of the material by Vancouver medical and veterinary practitioners. The company charter was surrendered in 1957.

Starbird Mines Limited held a lease on the property in 1975 but no work was reported.

Claytron Energy Corporation in 1976 acquired a 100 per cent interest in Mineral Lease No. 14522 covering Block A of Lot 1522. The clay deposit was estimated at 181,440 tonnes proven (Northern Miner, May 4, 1978). About 23 tonnes of clay were sold in Europe and South America as a natural pharmaceutical product and cosmetic.

BIBLIOGRAPHY

EMPR AR *1951-216-219
EMR MP CORPFILE (Starbird Mines Ltd.; Claytron Energy Corporation)
GSC MAP 1386A
GCNL #42, 1977
N MINER May 12, 1977; May 4, 1978

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/20

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092M 008**

NATIONAL MINERAL INVENTORY:

NAME(S): **SMITH INLET**, LOT 403

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092M06E
BC MAP:

Open Pit

MINING DIVISION: Skeena

UTM ZONE: 09 (NAD 83)

LATITUDE: 51 21 59 N
LONGITUDE: 127 08 52 W
ELEVATION: 91 Metres

NORTHING: 5692198
EASTING: 628938

LOCATION ACCURACY: Within 1 KM

COMMENTS: Centre of Lot 403 on the north shore of Smith Inlet (National Topographic System Map 92M/06).

COMMODITIES: Limestone Dolomite

MINERALS

SIGNIFICANT: Calcite Dolomite

ASSOCIATED: Silica Pyrite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.

TYPE: R09 Limestone

DIMENSION: 800 x 700 Metres

STRIKE/DIP: 110/85N

TREND/PLUNGE:

COMMENTS: Limestone dips to the northeast.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Mesozoic-Cenozoic

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Coast Plutonic Complex

LITHOLOGY: Limestone
Dolomite
Granite
Mafic Dike

HOSTROCK COMMENTS: Hosted in a roof pendant comprised of sediments, of unknown affinity, in granitic Coast Plutonic Complex rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Plutonic Rocks

METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Fiord Ranges (Southern)

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1944

SAMPLE TYPE: Chip

COMMODITY

GRADE

Limestone

53.3900

Per cent

COMMENTS: Across 15 metres of limestone; grade given for CaO.

REFERENCE: CANMET Report 811, page 175, 27B.

CAPSULE GEOLOGY

A band of limestone, hosted in granitic rocks of the Jurassic to Tertiary Coast Plutonic Complex, outcrops on both sides of Smith Inlet in the vicinity of Nalos Landing. The limestone strikes 110 degrees and dips nearly vertical to the northeast. On the north side of the inlet the band is 700 metres wide and continues inland for 800 metres. On this side of the inlet the limestone is intruded by some mafic dykes that commonly parallel the strike of the band. These dykes vary up to 9 metres in width, but are usually less than a metre wide. They become numerous towards the edges of the deposit. Abundant dykes intrude the limestone on the south shore of the inlet.

The band on the north shore is composed of white, medium to coarse-grained interbedded high calcium limestone and dolomite that contains a trace of disseminated pyrite. The dolomite also occurs within the calcium limestone as irregular masses, up to 7.6 metres in diameter, and as fine disseminations in varying concentrations. The limestone becomes siliceous and more dolomitic along the edges of the deposit.

A sample taken across a 15 metre width in the centre of the deposit on the north shore of the inlet analyzed 53.39 per cent CaO,

CAPSULE GEOLOGY

1.14 per cent MgO, 1.08 per cent SiO₂, 0.02 per cent Al₂O₃, 0.08 per cent Fe₂O₃ and nil sulphur (CANMET Report 811, page 175, Sample 27B). A sample of white dolomite analyzed 32.48 per cent CaO, 19.61 per cent MgO, 0.058 per cent SiO₂, 0.19 per cent Al₂O₃, 0.09 per cent Fe₂O₃ and nil sulphur (CANMET Report 811, page 175, Sample 27A).

In 1929 two quarries were opened up on the deposit on Lot 403 along the north shore of Smith Inlet by Coast Calcite Co. Ltd.; no production figures are available. Operations were suspended a short time afterwards.

BIBLIOGRAPHY

EMPR OF 1992-18, p. 55
GSC MAP 92A; 1386A
GSC P 1968-1A, pp. 37-40
GSC SUM RPT 1908, pp. 38-40
CANMET Report *811, Part 5, pp. 166,167,175

DATE CODED: 1985/07/24
DATE REVISED: 1989/07/27

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092M 009**

NATIONAL MINERAL INVENTORY:

NAME(S): **RIVERS INLET**

MINING DIVISION: Skeena

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092M11W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 51 40 26 N
LONGITUDE: 127 25 46 W
ELEVATION: 472 Metres

NORTHING: 5725936
EASTING: 608598

LOCATION ACCURACY: Within 5 KM

COMMENTS: No information on location is available; placed near McAllister Point on the north side of Rivers Inlet, 12 kilometres west of the community of Rivers Inlet.

COMMODITIES: Graphite

MINERALS

SIGNIFICANT: Graphite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Metamorphic Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE

Mesozoic-Cenozoic

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Coast Plutonic Complex

LITHOLOGY: Migmatitic Gneiss
Meta Sediment/Sedimentary

HOSTROCK COMMENTS: The host rock is speculative because of the imprecise location; gneiss of sedimentary origin is considered the most likely host rock.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Undivided Metamorphic Assembl.
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Fiord Ranges (Northern)

RELATIONSHIP:

GRADE: Amphibolite

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1900

SAMPLE TYPE: Rock

COMMODITY

GRADE

Graphite

20.2200

Per cent

COMMENTS: Analysis of rock sample.

REFERENCE: Geological Survey of Canada Annual Report 1900.

CAPSULE GEOLOGY

Virtually nothing is known about the Rivers Inlet occurrence, except that it consists of disseminated graphite, and that it is located in the vicinity of Rivers Inlet on the coast of the Coast Mountains (Geological Survey of Canada Annual Report 1900).

A previous compilation has located it, for no known reason, near McAllister Point, 12 kilometres west of the community of Rivers Inlet. This places it in a unit of migmatitic gneisses of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Map 1386A). These rocks are at amphibolite metamorphic grade, and probably include metasedimentary components, and so it is feasible that they could host graphite.

A sample submitted for analysis contained 20.22 per cent graphite (Geological Survey of Canada Annual Report 1900).

BIBLIOGRAPHY

GSC ANN RPT 1900, p. 63R
GSC MAP 1386A

DATE CODED: 1985/07/24
DATE REVISED: 1992/03/03

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092M 010**

NATIONAL MINERAL INVENTORY:

NAME(S): **WIGWAM MAGNETITE**, WIGWAM, WIG,
WAM, BAY

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 092M02E
BC MAP:

MINING DIVISION: Vancouver
UTM ZONE: 09 (NAD 83)

LATITUDE: 51 08 19 N
LONGITUDE: 126 43 48 W
ELEVATION: 75 Metres

NORTHING: 5667689
EASTING: 658801

LOCATION ACCURACY: Within 500M

COMMENTS: Located on sample 2 on the Wig claim, 750 metres northwest of Wigwam Bay, 8 kilometres southwest of the head of Seymour Inlet (Assessment Report 12204, Figure 4).

COMMODITIES: Iron Magnetite Titanium Vanadium Silver

MINERALS

SIGNIFICANT: Magnetite Pyrite
COMMENTS: Magnetite is titaniferous due to inclusions of ilmenite.
ASSOCIATED: Ilmenite Quartz
COMMENTS: Ilmenite is exsolved in magnetite. Quartz is restricted to veins.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein Massive
CLASSIFICATION: Magmatic Hydrothermal Epigenetic Industrial Min.
TYPE: M05 Alaskan-type Pt±Os±Rh±Ir
COMMENTS: Most rocks contain a weak, northwest-striking foliation.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic Coast Plutonic Complex

LITHOLOGY: Pyritic Hornblende Gabbro
Pyritic Diorite
Meta Sediment/Sedimentary Gneiss
Meta Volcanic Gneiss
Migmatite
Micaceous Schist
Dike

HOSTROCK COMMENTS: A pyritic gabbro-diorite complex, including metamorphic rocks, is part of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Fiord Ranges (Southern)
TERRANE: Plutonic Rocks Undivided Metamorphic Assembl.
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: WIGWAM REPORT ON: Y
CATEGORY: Unclassified YEAR: 1984
QUANTITY: 1000000000 Tonnes
COMMODITY GRADE
Magnetite 7.5000 Per cent

COMMENTS: Reserves are judged to be in the multibillion tonne category; average magnetite content is 5 to 10 per cent.
REFERENCE: Assessment Report 12204.

CAPSULE GEOLOGY

The Wigwam occurrence consists of a low-grade deposit of magnetite, northwest of Wigwam Bay, 8 kilometres southwest of the head of Seymour Inlet. It is similar to two other magnetite deposits in the area, the Kitchener (092M 001) and Alexander (092M 002) occurrences to the south and southeast, respectively.

The area is in the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Map 1386A). The Wigwam occurrence is hosted in a northwest-trending complex of pyritic diorite, gabbro and metamorphic rocks. This complex is marked by a large and intense magnetic anomaly, due to unusually large amounts of titaniferous magnetite (Assessment Report 12204).

The host rocks mainly comprise intrusive diorite and

CAPSULE GEOLOGY

metasedimentary and metavolcanic gneiss and migmatite. The diorite is mostly fine grained, and is commonly foliated and metamorphosed to a dioritic gneiss or micaceous schist. It contains inclusions of metamorphic rocks. Pyritic quartz veins, related to dykes, occur over a large part of the diorite. Gabbro is widespread in the form of younger pegmatitic veins or pockets in the diorite or metamorphic rocks, and is hornblende-bearing. The rocks contain a weak northwest-striking foliation, and are cut by west or northwest-striking faults.

Magnetite occurs rarely in small (centimetre-scale) masses in the gabbro and diorite, and commonly as fine disseminated grains within hornblende, and in small veinlets (Assessment Report 12204). The average magnetite content is 5 to 10 per cent, but can reach 35 per cent. The magnetite generally contains exsolved ilmenite. The gabbro and dioritic rocks are also unusually rich in pyrite, with up to 3 per cent.

Only moderately magnetic rocks from the margin of the magnetic 'core' were examined and sampled. Bulk samples were upgraded by processing. Pyrite-rich samples had the highest titanium oxide ratio in titaniferous magnetite at 5 per cent, and also contained the highest silver assay at 6.5 grams per tonne, and the highest platinum value (Assessment Report 12204). Magnetic concentrates from 3 samples contained between 0.16 and 0.33 per cent vanadium (Assessment Report 12204).

Reserves of low grade magnetite (5 to 10 per cent) are judged to be in the multibillion tonne category (Assessment Report 12204).

BIBLIOGRAPHY

EMPR EXPL 1984-247
EMPR ASS RPT *12204
GSC MAP 1386A

DATE CODED: 1992/02/26
DATE REVISED: 1992/04/14

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092M 011**

NATIONAL MINERAL INVENTORY:

NAME(S): **SANDELL BAY**, FALSE INLET, RIVERS INLET

MINING DIVISION: Skeena

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092M12E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 51 39 17 N
LONGITUDE: 127 32 23 W
ELEVATION: 123 Metres

NORTHING: 5723646
EASTING: 601016

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on Lot 1275 on the east side of Sandell Bay
(National Topographic System Map 92M/12).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Silica Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R09 Limestone
DIMENSION: 460 x 90 Metres STRIKE/DIP: 155/ TREND/PLUNGE:
COMMENTS: Limestone band.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Unknown	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Limestone
Schist
Diabase
Granite

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Fiord Ranges (Southern)
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE:
COMMENTS: Situated in a roof pendant within the Coast Plutonic Complex.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1944
SAMPLE TYPE: Chip
COMMODITY Limestone GRADE 54.5900 Per cent
COMMENTS: Average across width of deposit; grade given for CaO.
REFERENCE: CANMET Report 811, page 175, Samples 28,28A.

CAPSULE GEOLOGY

A 76 to 90-metre wide band of limestone outcrops on Lot 1275 on the east side of Sandell Bay, 25 kilometres up Rivers Inlet. The limestone is bounded to the west by schist and to the east by diabase, within a granitic roof pendant of the Tertiary-Jurassic Coast Plutonic Complex. The band strikes 155 degrees for at least 460 metres.

The carbonate mass is composed of medium-grained, light bluish grey and white, thinly bedded to massive, high calcium limestone containing a trace of disseminated pyrite and a few lenticular beds of siliceous limestone. Two chip samples taken in succession across the east half and west half of the deposit averaged 54.59 per cent CaO, 0.43 per cent MgO, 0.71 per cent SiO₂, 0.14 per cent Al₂O₃, 0.24 per cent Fe₂O₃ and nil sulphur (Canada Bureau of Mines Report 811, page 175, Samples 28, 28A).

BIBLIOGRAPHY

EMPR OF 1992-18, p. 57
GSC MAP 92A; 1386A
GSC P 1968-1A, pp. 37-40

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 660
REPORT: RGEN0100

BIBLIOGRAPHY

GSC SUM RPT 1908, pp. 38-40
CANMET RPT 811, Part 5, pp. 167,175

DATE CODED: 1985/07/24
DATE REVISED: 1989/07/27

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092M 012**

NATIONAL MINERAL INVENTORY:

NAME(S): **KOEYE RIVER**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092M13W
BC MAP:
LATITUDE: 51 46 55 N
LONGITUDE: 127 51 42 W
ELEVATION: 20 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of quarry on the north bank of the Koeye River (Air Photo BC 4423-153).

Open Pit

MINING DIVISION: Skeena

UTM ZONE: 09 (NAD 83)

NORTHING: 5737399
EASTING: 578525

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Dolomite Silicate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R09 Limestone
DIMENSION: 1000 x 122 Metres
COMMENTS: Limestone band.

STRIKE/DIP: 060/90

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Unknown
Mesozoic-Cenozoic

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Coast Plutonic Complex

LITHOLOGY: Limestone
Schist
Gneiss
Granite
Dike

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks
METAMORPHIC TYPE: Contact
COMMENTS: Situated in a roof pendant within the Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Fiord Ranges (Northern)

RELATIONSHIP:
GRADE:

INVENTORY

ORE ZONE: QUARRY

REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1944

SAMPLE TYPE: Chip

COMMODITY Limestone GRADE 54.1500 Per cent

COMMENTS: Across 122 metres of limestone; grade given for calcium oxide.

REFERENCE: CANMET Report 811, page 176, sample 30A.

CAPSULE GEOLOGY

A wide band of limestone extends northeast from the mouth of the Koeye River for 1000 metres, outcropping mostly along its northwest bank, 9 kilometres south of Namu on the coast. The band is situated in an elongate roof pendant of schist and gneiss within granitic rocks of the Jurassic to Tertiary Coast Plutonic Complex. The limestone strikes 060 degrees and dips nearly vertical. The band is 122 metres wide near its northeast end.

The deposit is comprised of fine to coarse-grained, white to dark bluish grey limestone. The band contains streaks, veinlets and disseminations of dolomite and silicates over most of its length, except at the northeast end where the limestone lacks such impurities. Dykes commonly intrude the limestone, especially to the southwest.

A chip sample taken across the 122 metre width on the northeast end of the band in the vicinity of a quarry analyzed 54.15 per cent CaO, 0.93 per cent MgO, 0.74 per cent SiO₂, 0.23 per cent Al₂O₃, 0.12 per cent Fe₂O₃ and nil sulphur (CANMET Report 811, page 176, Sample 30A).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 662
REPORT: RGEN0100

CAPSULE GEOLOGY

Limestone was quarried on the north side of the Koeve River, 1.6 kilometres northeast of Koeve Point between 1934 and 1969 for the Ocean Falls pulp mill.

BIBLIOGRAPHY

EMPR AR 1934-641; 1935-B30; 1936-F65; 1937-F38; 1938-F71; 1939-112;
1940-98; 1941-93; 1942-91; 1943-86; 1944-82; 1945-131; 1946-205;
1947-218; 1948-189; 1949-256; 1950-224; 1957-88; 1958-97; 1959-
175; 1960-147; 1961-150; 1963-146; 1964-187; 1965-267; 1966-268;
1967-310
EMPR OF 1992-18, p. 55
GSC MAP 92A; 1386A
GSC P 1968-1A, pp. 37-40
GSC SUM RPT 1908, pp. 38-40
CANMET RPT *811, Part 5, pp. 167,168,176

DATE CODED: 1985/07/24
DATE REVISED: 1989/07/27

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 664
REPORT: RGEN0100

BIBLIOGRAPHY

CANMET RPT *811, Part 5, pp. 168,176
GSC SUM RPT 1908, pp. 38-40
GSC P 1968-1A, pp. 37-40
GSC MAP 1386A

DATE CODED: 1985/07/24
DATE REVISED: 1989/07/27

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092M 014**

NATIONAL MINERAL INVENTORY:

NAME(S): **OWIKENO LAKE**

MINING DIVISION: Skeena

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092M10W
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 51 39 27 N
LONGITUDE: 126 49 49 W
ELEVATION: 45 Metres

NORTHING: 5725175
EASTING: 650078

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location is uncertain. Located on the south shore of Owikeno Lake, 30 kilometres east of the community of Rivers Inlet (CANMET Report 811).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Mica
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R09 Limestone
COMMENTS: Limestone trends northward.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Limestone
Granite
Mafic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

A deposit of white, coarse-grained limestone within granitic rocks of the Tertiary-Jurassic Coast Plutonic Complex outcrops on the south shore of Owikeno Lake, 0.8 kilometres east of the fish hatchery and continues southwesterly up the mountain side. The limestone is cut by a few mafic dykes and contains some brown mica. A second large deposit of high calcium limestone is reported to occur 3.2 kilometres east of here.

BIBLIOGRAPHY

CANMET RPT 811, Part 5, p. 167
GSC P 1968-1A, pp. 37-40
GSC MAP 1386A
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1989/07/27

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092M 015**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROSE**, SEA ROSE, ARTHUR POINT

STATUS: Past Producer Open Pit

MINING DIVISION: Skeena

REGIONS: British Columbia

NTS MAP: 092M12W

BC MAP:

LATITUDE: 51 31 56 N

LONGITUDE: 127 47 52 W

ELEVATION: 5 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: On Arthur Point in Fitz Hugh Sound on the mainland, across from Safety Cove on Calvert Island, 94 kilometres north of Port Hardy.

UTM ZONE: 09 (NAD 83)

NORTHING: 5709698

EASTING: 583389

COMMODITIES: Rhodonite Gemstones

MINERALS

SIGNIFICANT: Rhodonite Silica Garnet Jasper

COMMENTS: Also primary iron and manganese oxides.

ASSOCIATED: Quartz Garnet Tremolite Actinolite Epidote

Calcite Barite Zoisite

MINERALIZATION AGE: Upper Paleozoic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Sedimentary Syngenetic Industrial Min.

TYPE: Q02 Rhodonite

SHAPE: Tabular

DIMENSION: 40 x 2 Metres STRIKE/DIP: 140/90

COMMENTS: A bed of rhodonite from 1 to 3 metres thick has been exposed for 30 metres along strike; the bed strikes 130 to 150 degrees.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Devonian	Sicker	McLaughlin Ridge	

LITHOLOGY: Chert
Argillaceous Chert
Amphibolite
Gneiss
Basalt
Argillite
Gabbro

HOSTROCK COMMENTS: Host rock lithologies are similar to the Permian-Mississippian Fourth Lake Formation (Buttle Lake Group).

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Wrangell

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Fiord Ranges (Northern)

Plutonic Rocks

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

Rhodonite showings at Arthur Point were found in the 1960s. The Sea Rose claims were staked in 1982 by A.G. Karup of Bella Coola. A few tonnes of rhodonite were extracted at that time. In 1985, 1989 and 1990 the property was owned by Rhode West Resources, and about 2000 tonnes were removed for jewelry, carving, and tile-grade rhodonite. The property was examined by K.D. Hancock of the B.C. Geological Survey in 1991. Much of the following is taken from his report in Exploration in BC 1991.

The rhodonite quarry exposes a zone 1 to 3 metres wide and about 30 metres long; the bed strikes 130 to 150 degrees. The quality of rhodonite is considered high as it has a bright pink colour and attractive, black manganese-coated fractures. The material has been sold to carvers in the Lower Mainland and Vancouver Island as well as overseas to Asian brokers.

Rhodonite occurs as stratabound zones within black cherts and argillaceous cherts. The mineralized zones have a distinctive, yellow, pockmarked weathering surface. There are five distinct rhodonite layers in the northern bay, including the ore zone, and six layers in the southern bay. The mineralized layers exhibit a distinct symmetrical zoning which is repeated around each layer. These zones consist of an outermost jasperoid chert, and intermediate pistachio-green zone, and a core of rhodonite. Associated minerals include layers of iron and manganese oxides.

CAPSULE GEOLOGY

Hostrocks are black and grey chert.

The outer jasperoid zone has sharp, bedding-parallel contacts with the chert, and appears in layers 1 to 10 centimetres thick. The intermediate zone of pistachio-coloured rock is again mostly chert but also contains a variety of other minerals. Compositional layering is defined by colour, typically pistachio green and yellow. The green layers may contain one or more of the following minerals: quartz, garnet, tremolite/actinolite, epidote, calcite, barite and rhodonite.

Rhodonite, where present, occurs at the centre of the jasper and pistachio zones, forming stratabound layers, lenses and strings of blebs. The boundary between rhodonite is either massive or occurs as layers interbedded with pistachio rock. The massive rhodonite is bright pink to reddish pink on fresh surfaces. The weathered surface is typically a black rind of manganese oxide 1 to 10 millimetres thick. Massive rhodonite varies in width from less than a centimetre to about three metres. Thin rhodonite bands, less than 10 centimetres across, typically pinch out over several metres in outcrop. Rhodonite layers wider than 10 centimetres are continuous for distances in excess of 50 metres. Towards the edges of the massive material, there are layers of black rhodonite, grey silica or yellow garnetite. Transverse fractures, filled by black manganese oxide are common. Fractures filled by quartz, calcite, epidote, garnet, chlorite, zoisite, tremolite/actinolite, white mica, plagioclase, and opaque minerals are also present. Rhodonite interbedded with yellow garnetite or silica occurs at the margins of some of the thicker massive rhodonite zones. The yellow colour greatly diminishes the value of the material. Barite is a minor constituent of the rhodonite ore zone.

Arthur Point is situated at the western margin of the Coast Plutonic Complex, which includes plutonic rocks with pendants of gneiss, amphibolite, and other metasedimentary and metavolcanic rocks. The pendant ages range from Devonian through Cretaceous. Most are metamorphosed to greenschist or amphibolite grade. North of Rivers Inlet and east of Calvert Island is a large basalt and greenstone body which hosts the Arthur Point rhodonite deposit. The greenstone is largely derived from mafic tuffs with some argillite and chert.

The rhodonite is folded with the host cherts. The massive rhodonite has been brittly deformed. The mineralized zone is crosscut by basaltic dikes related to a gabbro intrusion.

The age and affinity of host cherts are uncertain. The greenstones are largely derived from volcanic tuffs and related material that is likely Late Paleozoic or Mesozoic in age. The Upper Devonian McLaughlin Ridge Formation of the Sicker Group hosts other rhodonite occurrences on Vancouver Island, which suggests a correlation with the pendant rocks at Arthur Point.

Metamorphism post-dates mineralization. The mineralization appears to be metasomatic and is restricted to discrete favourable horizons. The oxide layers and the mineralized zones have significantly anomalous quantities of barium, strontium, vanadium and cerium. The anomalous levels suggest the source of the oxide layers was hydrothermal vents or black smokers. This could indicate that the layers were distal to either a volcanogenic massive sulphide or sedex type environment.

BIBLIOGRAPHY

- EMPR EXPL 1991, p. 89-98
- EMPR MAP 65 (1989)
- EMPR Mineral Market Update July, 1991
- EMPR OF 1992-1; 1994-1
- EMPR PF (In Commodity File: Rhodonite in British Columbia (1986), Gem Materials of British Columbia (1976) and Manganese Occurrences in British Columbia (Mexico, 1956); In General File: Pearson, D.E. (1973): Mineral Potential of the Proposed Fish Egg Inlet Marine Park; Harding, R.R. (1989): Rhodonite and Argillite from British Columbia (Sea Rose and Slatechuck respectively))
- GSC MAP 92A; 1386A

DATE CODED: 1989/07/12
DATE REVISED: 1999/08/05

CODED BY: ELF
REVISED BY: JMR

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092M 016**

NATIONAL MINERAL INVENTORY:

NAME(S): **KILBELLA BAY LIMESTONE**, RIVERS INLET

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092M11W
BC MAP:

MINING DIVISION: Skeena

UTM ZONE: 09 (NAD 83)

LATITUDE: 51 40 55 N
LONGITUDE: 127 22 15 W
ELEVATION: 135 Metres

NORTHING: 5726921
EASTING: 612631

LOCATION ACCURACY: Within 500M

COMMENTS: Located on a marble band, west of the entrance to Kilbella Bay, 8 kilometres west of the head of Rivers Inlet (Geological Survey of Canada Map 92A).

COMMODITIES: Marble Limestone Magnetite Dimension Stone Building Stone

MINERALS

SIGNIFICANT: Calcite Magnetite
COMMENTS: A seam of magnetite occurs in calcitic marble.
ASSOCIATED: Pyrite Pyrrhotite
COMMENTS: Minor amounts of pyrite and pyrrhotite are associated with magnetite.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Igneous-contact Industrial Min.
TYPE: R09 Limestone R04 Dimension stone - marble
SHAPE: Tabular
DIMENSION: 30 Metres STRIKE/DIP: 360/ TREND/PLUNGE:
COMMENTS: The marble band trends north and is 30 to 45 metres thick.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic Coast Plutonic Complex

LITHOLOGY: Calcite Marble
Limestone
Granite
Greenstone
Granitic Gneiss
Dioritic Gneiss
Intrusive

HOSTROCK COMMENTS: A marble band occurs in metamorphic and intrusive rocks of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Fjord Ranges (Northern)
TERRANE: Undivided Metamorphic Assembl. Plutonic Rocks
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1946
SAMPLE TYPE: Rock
COMMODITY GRADE
Marble 97.0900 Per cent
COMMENTS: Analysis of sample taken across the marble band.
REFERENCE: CANMET Report 811.

CAPSULE GEOLOGY

The Kilbella Bay Limestone occurrence is a band of very pure limestone or marble, located west of the entrance of Kilbella Bay, 8 kilometres west of the head of Rivers Inlet on its north shore. The limestone also contains a seam of magnetite in which a 30-metre deep shaft was dug before it was abandoned in the early years of the twentieth century (Geological Survey of Canada Summary Report 1908). The area is underlain predominantly by granitic to dioritic gneisses and intrusive rocks of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Summary Report 1908, Map 1386A). Within these rocks is a band of recrystallized limestone, more appropriately called marble (Geological Survey of Canada Summary Report 1908). This marble is white, very

CAPSULE GEOLOGY

coarse grained, and is 30 to 45 metres thick (Geological Survey of Canada Map 92A; CANMET Report 811). The band trends north, and has inclusions of granite and greenstone, which also occur outside the marble.

A sample taken across the marble band was analyzed at 97.09 per cent calcium carbonate (calcite), indicating a high purity; in addition, there was 1 per cent silica and 1.19 per cent magnesium carbonate (CANMET Report 811).

Within the marble is a seam of massive magnetite, up to 0.3 metre thick, which is apparently traceable for 550 metres (Geological Survey of Canada Summary Report 1908). Smaller veins of magnetite may also be present. Minor pyrite and pyrrhotite are associated with the magnetite.

BIBLIOGRAPHY

EMPR OF 1992-18, p. 58
GSC MAP 92A; 1386A
GSC P 1968-1A, pp. 37-40
GSC SUM RPT *1908, p. 40
CANMET RPT *811, Part 5, pp.167,175

DATE CODED: 1989/07/27
DATE REVISED: 1992/02/28

CODED BY: PSF
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092M 017**

NATIONAL MINERAL INVENTORY:

NAME(S): **AA 1-22**, AA, BENTINCK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092M15E
BC MAP:

MINING DIVISION: Skeena

UTM ZONE: 09 (NAD 83)

LATITUDE: 51 58 33 N
LONGITUDE: 126 41 03 W
ELEVATION: 76 Metres

NORTHING: 5760883
EASTING: 659058

LOCATION ACCURACY: Within 500M

COMMENTS: Located on trench No. 1 on the AA claims, 1.4 kilometres north of the southern end of Bentinck Arm of Burke Channel, 44 kilometres south of Bella Coola (Assessment Report 21649, Figure 4).

COMMODITIES: Graphite Copper

MINERALS

SIGNIFICANT: Graphite Chalcopyrite
COMMENTS: Chalcopyrite is in trace amounts.
ASSOCIATED: Pyrite Quartz Garnet
COMMENTS: Quartz occurs locally in veinlets; garnet is present in the host rocks.
ALTERATION: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear
CLASSIFICATION: Metamorphic Industrial Min.
TYPE: P04 Crystalline flake graphite
DIMENSION: 10 Metres STRIKE/DIP: 320/75E TREND/PLUNGE:
COMMENTS: Orientation and exposed length of a graphite zone in trench No. 1.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Coast Plutonic Complex
Paleozoic			Unnamed/Unknown Informal

LITHOLOGY: Graphitic Schist
Garnet Meta Sediment/Sedimentary
Argillite
Greywacke
Chert
Garnet Gneissic Diorite
Dioritic Gneiss
Quartz Dioritic Gneiss
Granodiorite Gneiss
Felsic Intrusive

HOSTROCK COMMENTS: A belt of Paleozoic metamorphic rocks is included in the Jurassic to Tertiary Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Undivided Metamorphic Assembl.
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: TRENCH REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1991
SAMPLE TYPE: Channel
COMMODITY: Graphite GRADE: 12.2600 Per cent
COMMENTS: Average of 13 channel sample analyses.
REFERENCE: Assessment Report 21649.

CAPSULE GEOLOGY

The AA occurrence is a graphite showing near the southern end of South Bentinck Arm of Burke Channel, 44 kilometres south of Bella Coola. No work on the showing is recorded before 1990, when a ground electromagnetic survey was conducted over the showing which indicated a strong response typical of a steeply-dipping, near surface conductor.

CAPSULE GEOLOGY

The AA occurrence is located in a belt of dioritic, quartz dioritic and granodioritic gneisses and amphibolite of Paleozoic age, within the otherwise Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Map 1386A; Assessment Report 21649).

Only the immediate area around the graphite showing has been mapped in detail (Assessment Report 21649). The rocks strike northwest and dip steeply northeast. From northeast to southwest, the area is underlain by fine-grained, garnetiferous gneissic diorite, a strongly sheared metasedimentary unit consisting of argillite, greywacke and local chert, and gneiss and foliated diorite and quartz diorite believed to be derived from Paleozoic sediments and volcanics (Assessment Report 21649). The last unit contains a small felsic intrusive.

Graphite layers are associated with the strongly sheared metasedimentary unit (Assessment Report 21649). A strongly fractured and sheared graphite zone strikes 320 degrees and dips 75 degrees northeast, and is exposed for 10 metres in trench number 1. The rocks here are grey to black, strongly sheared graphitic schists, locally with garnet and quartz veinlets. Some rocks are silicified. Locally the graphite is very coarse, forming large flakes.

Ten 1-metre channel samples were taken across this graphite zone, yielding 13 analyses. Some samples contained up to 25 per cent pyrite, and a trace of chalcopyrite. Carbon ranged from 2.98 to 22.9 per cent; the average of the 13 samples was 12.26 per cent (Assessment Report 21649). This was regarded as adequate to justify further evaluation of the property.

In 1992 Resolute Resources submitted three grab ore samples to Process Research Associates, Vancouver B.C., for preliminary metallurgical tests to determine if the quality was high enough to produce saleable graphite products (Assessment Report 22957). Specifically, the tests were performed to provide high grade +48 mesh, -48 mesh, +100 mesh and -100 mesh, using grinding, flotation, and gravity concentration. Results were:

Product	Grade (%carbon)	Yield (Weight %)	Carbon recovery (%)
+48 mesh	92.5	2.08	10.5
48 to 100 mesh	78.3	8.18	35.0
-100 mesh	64.9	11.3	40.0

Total 21.6 85.6

The metallurgists predicted better recovery results with increased grinding times, and recommended further work on a bulk sample obtained by trenching and drilling.

The prospect was visited and reported on by geologists from the Industrial Minerals Section of the B.C. Geological Survey Branch in 1992 (Fieldwork 1992).

The AA graphite prospect is located on the southern extension of the Work Channel Lineament, as are eight other graphite showings on mapsheet 093D to the north (for example Elcho Harbour, 093D 028 and Grey Giant, 093D 020).

BIBLIOGRAPHY

EMPR ASS RPT *21649, *22967
EMPR FIELDWORK *1992, pp. 389-398
GSC MAP 1386A
GCNL #99, 1991; #23, 1992

DATE CODED: 1992/02/26
DATE REVISED: 1999/10/07

CODED BY: CJR
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092M 018**

NATIONAL MINERAL INVENTORY:

NAME(S): **KINGCOME GLACIER**, TRUDEL GLACIER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092M08E
BC MAP:

MINING DIVISION: Vancouver

UTM ZONE: 09 (NAD 83)

LATITUDE: 51 25 05 N
LONGITUDE: 126 08 32 W
ELEVATION: 5050 Metres

NORTHING: 5700191
EASTING: 698703

LOCATION ACCURACY: Within 500M

COMMENTS: Mineralized breccia pipe (Personal Communication, Tark Hamilton).

COMMODITIES: Copper Opal Gemstones

MINERALS

SIGNIFICANT: Malachite Opal
ASSOCIATED: Celadonite Pyrolusite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Breccia
CLASSIFICATION: Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Quaternary	Unnamed/Unknown Group	Silverthorne	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Rhyolite
Dacite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

Multicoloured clay and silica minerals are observed in a mineralized dacite breccia pipe. Minerals tentatively identified include malachite, celadonite, pyrolusite and opal.

The receding headwall of the Kingcome Glacier, since the photos and topos of 1979, has newly exposed celadonite, opaline silica and intense blue green colours throughout. Enclaves of dacite pitchstone remain.

BIBLIOGRAPHY

GSC Report of activities pending.
PERS COMM Tark Hamilton, Sept.23, 1996.

DATE CODED: 1996/09/23
DATE REVISED: 1996/11/15

CODED BY: TSH
REVISED BY: DJ

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092M 019**

NATIONAL MINERAL INVENTORY:

NAME(S): **DECOSMOS**, WH7052, WH7054,
CLAY BAY, NOTICE BAY, HUNTER ISLAND,
KING ISLAND CLAY

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092M13W
BC MAP:
LATITUDE: 51 55 48 N
LONGITUDE: 127 58 43 W
ELEVATION: Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location given is at the Clay Bay locality (Assessment Report 22733).

Open Pit

MINING DIVISION: Skeena
UTM ZONE: 09 (NAD 83)
NORTHING: 5753745
EASTING: 570227

COMMODITIES: Clay

MINERALS

SIGNIFICANT: Montmorillonite Glauconite Kaolinite Illite
COMMENTS: Composition of clay is undetermined.

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Syngenetic Industrial Min.
COMMENTS: Decosmos Lagoon occupies a steep sided northerly trending graben.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Quaternary

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Unconsolidated Clay

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Hecate Depression

INVENTORY

ORE ZONE: DECOSMOS

REPORT ON: Y

CATEGORY: Proven
QUANTITY: 10780 Tonnes
COMMODITY: Clay
GRADE: 100.0000 Per cent

COMMENTS: 5720 tonnes between the high tide line and 2 metres below; 5060 tonnes between 2 and 4 metres below high tide line for a total of 10780. Tonnages calculated using specific gravity of 2.2 for water saturated clay.

REFERENCE: Assessment Report 22733.

CAPSULE GEOLOGY

The Decosmos clay property covers three areas on the eastern shore of Decosmos Lagoon on Hunter Island from which clay has been produced. Good quality clay deposits occur at the Clay Bay and Notice Bay localities. Poor quality clay mixed with sand and silt occurs near the mouth of the creek on the northern shore of Otter Narrows at the northern end of the lagoon.

Bedrock geology on Hunter Island consists of quartz diorites and granodiorite of the primarily Mesozoic Coast Plutonic Complex. During the Tertiary Period, overlying sedimentary and volcanic rocks were eroded away leaving a flat erosional surface. This surface is preserved in this region as the Milbanke Strandflat.

Around Decosmos Lagoon, post-glacial uplift has been slight. Decosmos Lagoon itself occupies a steep sided northerly trending graben that probably was downfaulted during Eocene crustal extension. The clay at Decosmos Lagoon appears to have derived from the narrow ridge east of the lagoon during an interglacial period. Only mud, settling out from suspension, was deposited near the eastern margin of the lagoon. At Clay Bay and Notice Bay, the mud accumulation exceeded four metres. Local southwestward ice movement during a subsequent glaciation scoured out most of the interglacial sediment from the floor and margins of the lagoon. The deposits were preserved only in the southwestward facing bays, Notice Bay and Clay Bay, where pressure shadow areas developed beneath the ice. The ice

CAPSULE GEOLOGY

paved over the interglacial clay with a thin cobble till which is preserved at both locations near the high tide level. There lacks internal structure other than varves. On removal from drill core it resembles light blue toothpaste. After exposure for a day, it stiffens and turns to a green colour. When thoroughly dried, it regains its blue colour.

The composition of the clay is not known and has been a point of disagreement among geologists working on the property. They have speculated kaolinite, or illite, or montmorillonite. The blue colour suggests the presence of glauconite.

Local lore contains accounts of the local native people using clay from Hunter Island for medicinal purposes. Several exploration pits were dug by persons unknown, probably in the 1980s.

King Island Clay Limited located two claims, WH7052 and WH7054 in January 1990. About 455 tonnes of clay was excavated by the Company during the summer of 1990 and reclamation work was done. Two areas were excavated by persons unknown other than the owners of the claims after the 1990 reclamation and before 1992. The first area is adjacent to the southern margin of reclaimed pit at Notice Bay, and the second is at Clay Bay. It is believed that an estimated 600 tonnes of marketable clay was stolen from the claims.

In May 1992 geological mapping and a sedimentological survey were conducted for King Island Clay Limited by John Ostler and Barrie Field-Dyde. Core-proven reserves were calculated as 5720 tonnes between the high tide line and 2 metres below the high tide line, and 5060 tonnes between 2 and 4 metres below the high tide line, for a total of 10780 tonnes. Tonnages were calculated using specific gravity of 2.2 for water saturated clay.

Claims WH7054 and WH7052 are held in good standing until August 13, 2008 by Ironwood Clay Company Limited of Richmond.

BIBLIOGRAPHY

EMPR ASS RPT *22733
EMPR BULL 48, p. 40
GSC MAP 92A

DATE CODED: 1999/08/26
DATE REVISED: 1999/12/22

CODED BY: JMR
REVISED BY: LDJ

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 001**

NATIONAL MINERAL INVENTORY: 092N8 Cu1

NAME(S): **SPOKANE (L.702)**, COPPER DYKE (L.704), COPPER DYKE EXTENSION (L.703),
ISAAC T. (L.701), TAT 1-9, TATLICO 1,2

STATUS: Developed Prospect

MINING DIVISION: Clinton

REGIONS: British Columbia

NTS MAP: 092N08W

UTM ZONE: 10 (NAD 83)

BC MAP:

LATITUDE: 51 23 52 N

LONGITUDE: 124 26 15 W

ELEVATION: 1860 Metres

NORTHING: 5695041

EASTING: 399998

LOCATION ACCURACY: Within 500M

COMMENTS: Located on sample 1, approximately at the centre of the zone of copper mineralization, 5.5 kilometres south of the southern end of Tatlayoko Lake (Assessment Report 1663, Map B2).

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Chalcocite

COMMENTS: Rare chalcocite.

ASSOCIATED: Calcite Epidote

ALTERATION: Malachite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein Stratabound

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: D03 Volcanic redbed Cu L01 Subvolcanic Cu-Ag-Au (As-Sb)

DIMENSION: 600 x 8 Metres STRIKE/DIP: 340/70N TREND/PLUNGE: /

COMMENTS: The stratabound mineralization is in a unit of andesite which strikes 340 degrees and dips 70 degrees northeast.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous Unnamed/Unknown Group Unnamed/Unknown Formation

LITHOLOGY: Andesite
Basalt
Andesitic Volcanic
Basaltic Volcanic
Porphyritic Rhyolite Dike

HOSTROCK COMMENTS: Mineralization is mainly confined to the northeast margin of a unit of andesite, interbedded with basalt, both of Lower Cretaceous age.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Pacific Ranges

TERRANE: Gambier

COMMENTS: Volcanic rocks on the northeast margin of the Coast Plutonic Complex.

INVENTORY

ORE ZONE: AREA REPORT ON: Y
CATEGORY: Unclassified YEAR: 1968
QUANTITY: 335000 Tonnes
COMMODITY: Copper GRADE: 1.5000 Per cent
COMMENTS: Estimated over the area of the occurrence. Undiluted, based on 210 metres strike length, 8 metres width and 6 metres vertical extent.
REFERENCE: Assessment Report 1663.

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1968
SAMPLE TYPE: Rock
COMMODITY: Silver GRADE: 6.0000 Grams per tonne
Copper 1.2500 Per cent
COMMENTS: Average of a suite of samples.
REFERENCE: Assessment Report 1663.

CAPSULE GEOLOGY

The Spokane occurrence consists of a zone of copper mineralization in volcanic rocks, in rugged terrain 5.5 kilometres

CAPSULE GEOLOGY

south of the southern end of Tatlayoko Lake. It is located in an area with a long history of exploration primarily devoted to gold-silver-antimony-bearing quartz veins, which outcrop in sedimentary rocks about 500 metres to the southwest, and which are covered by the Morris occurrence (092N 002).

The Spokane occurrence lies in the Gambier overlap assemblage, about 6 kilometres north of a large quartz diorite intrusion, the Tiedemann pluton, which forms the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex in this region (Geological Survey of Canada Open File 1163, Map 1713A). The occurrence is within Lower Cretaceous volcanic rocks, associated with sedimentary rocks, just north of a south-dipping thrust sheet comprising Upper Triassic rocks.

The occurrence is in interbedded andesitic and basaltic volcanics, which strike 340 degrees and dip 70 degrees northeast (Assessment Reports 1663, 10520). At least one porphyritic rhyolitic dyke, striking 280 degrees and dipping 75 degrees south, intrudes the volcanics; it pre-dates mineralization.

Most of the mineralization is confined to one 60-metre thick unit of andesite, particularly along its northeastern margin adjacent to a unit of purple-brown basalt; the basalt is virtually unmineralized. This mineralization extends, somewhat erratically, for over 600 metres, with a surface width varying from 1 and 15 metres. Within this strike length is a central zone about 210 metres long and averaging 8 metres in width, where mineralization is strongest.

The mineralization consists of chalcopyrite and bornite, with rare chalcocite. These minerals are disseminated in the andesite, and locally occur as fracture-fillings, associated with calcite and epidote (Assessment Reports 1663, 10520). Malachite is abundant. Various assay results are given in the reports cited. While results from individual samples may be high, a more representative average of 11 chip samples taken over the strike length of the zone, with an average width of 6 metres, was 1.04 per cent copper (Assessment Report 1663). Another suite of samples yielded 1.25 per cent copper and 6 grams per tonne silver (Assessment Report 1663). Five samples averaged 1 gram per tonne gold (Assessment Report 10520).

It was estimated that the occurrence contains 335,000 tonnes grading 1.5 per cent copper (undiluted), based on a strike length of 210 metres, a width of 8 metres, and a vertical extent of 6 metres (Assessment Report 1663).

BIBLIOGRAPHY

EMPR AR 1910-K156; 1937-F34; 1968-154
EMPR EXPL 1981-315
EMPR ASS RPT *1663, 8320, *10520
GSC OF 1163
GSC SUM RPT *1924A, pp. 59-73
GSC P 68-33
GSC MAP 5-1968; 1713A
EMR MIN BULL MR 223 B.C. 184

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/20

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 002**

NATIONAL MINERAL INVENTORY: 092N8 Au1

NAME(S): **MORRIS**, TATLICO (L.699), TYEE (L.700),
ISAAC T. (L.701), SPOKANE (L.702), TAT,
JB 1,2, TATLICO 1,2, COPPER DYKE,
COPPER DYKE EXTENSION, HUME, GOLD CAMP

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 092N08W
BC MAP:

Underground

MINING DIVISION: Clinton

LATITUDE: 51 23 42 N
LONGITUDE: 124 25 45 W
ELEVATION: 1860 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5694721
EASTING: 400572

LOCATION ACCURACY: Within 500M

COMMENTS: Located on Number 1 adit (Lot 699), 6 kilometres south of the southern end of Tatlayoko Lake (Assessment Report 1663, Map B1).

COMMODITIES: Gold Silver Antimony Copper Zinc
Arsenic

MINERALS

SIGNIFICANT: Gold Stibnite Arsenopyrite Pyrite Sphalerite
Tetrahedrite Bornite Chalcocite

COMMENTS: Gold is native, associated with quartz or around arsenopyrite.
Tetrahedrite, also as inclusions in sphalerite, contains silver.
Bornite and chalcocite are very rare.

ASSOCIATED: Quartz Calcite
ALTERATION: Quartz Limonite

ALTERATION TYPE: Silicific'n Argillic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

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

DIMENSION: STRIKE/DIP: 320/45N TREND/PLUNGE:
COMMENTS: The host strata generally strike east and dip moderately south. The veins generally strike north-northwest and dip moderately northeast.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous Tertiary	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex

LITHOLOGY: Mudstone
Argillite
Greywacke
Sandstone
Quartz Diorite
Quartz Feldspar Porphyry Dike
Basaltic Dike
Quartzite
Quartz Pebble Conglomerate
Limestone

HOSTROCK COMMENTS: Host rocks are Lower Cretaceous sedimentary rocks; quartz diorite intrusions are presumed related to the Tertiary Tiedemann pluton.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Gambier Plutonic Rocks
COMMENTS: Sedimentary rocks near the northeast margin of Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: VEINS REPORT ON: Y
CATEGORY: Indicated YEAR: 1982
QUANTITY: 172000 Tonnes
COMMODITY: Gold GRADE: 8.3000 Grams per tonne
COMMENTS: Provisional estimate of drill indicated reserves, over an effective mining width of 4 metres.
REFERENCE: George Cross News Letter No.166, 1982.

CAPSULE GEOLOGY

over a strike length of 95 metres and width of 40 centimetres was 18.5 grams per tonne gold, 252 grams per tonne silver, and 10 per cent antimony (Assessment Report 8320).

The Number 2 vein averages 20 centimetres in thickness and has been followed underground for 73 metres (Assessment Report 1663). Mineralization in this vein, and in the Number 4 vein, is similar to that in the Number 1 vein. The Number 3 vein, traceable for 30 metres on the surface, yielded a sample assaying 38 grams per tonne gold, 1060 grams per tonne silver, and 10 per cent antimony, over a 30 centimetre width (Assessment Report 10520).

Seven diamond-drill holes were completed in 1981 to test the Number 1 and Number 3 veins; several smaller veins were penetrated in the process (Assessment Report 10520). Sporadic mineralization in a variety of host rocks was encountered, with a wide range of gold and silver grades.

The high values of gold and silver at the Morris occurrence led to a program of bulk sampling and metallurgical tests. A 90 kilogram, composite bulk sample from Number 1 and Number 3 veins assayed 27 grams per tonne gold, 431 grams per tonne silver, 2.92 per cent antimony, and 4.92 per cent arsenic (Assessment Report 10520).

In 1966 it was estimated that based on a strike length of 104 metres, the Number 1 vein contained 19,000 tonnes of "ore" with an average grade of 10 grams per tonne gold, 110 grams per tonne silver, and 2.1 per cent antimony (Assessment Report 1663). In 1982 a reserve calculation was announced: this partly consisted of a summary of the bulk sampling referred to above, and also gave a provisional estimate of drill-indicated reserves of 172,000 tonnes grading 8.3 grams per tonne gold over an effective mining width of 4 metres (George Cross News Letter #116, 1982).

BIBLIOGRAPHY

EMPR AR 1910-K156; 1916-K169; 1920-N214; *1921-G215; 1934-F12;
*1935-F29; 1937-F34; 1968-154
EMPR EXPL 1980-279; 1981-315; 1983-340
EMPR ASS RPT 1663, *8320, *10520, 11961
GSC OF 1163
GSC SUM RPT *1924A, pp. 59-73
GSC P 68-33, p. 87
GSC MAP 2063; 5-1968; 1713A
N MINER Jan.15, 1981
GCNL #166, 1982
EMR MIN BULL MR 223 B.C. 183

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/19

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 003**

NATIONAL MINERAL INVENTORY:

NAME(S): **JAY 1-49**

MINING DIVISION: Vancouver

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N13E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 50 50 N
LONGITUDE: 125 43 22 W
ELEVATION: 1981 Metres

NORTHING: 5747551
EASTING: 312461

LOCATION ACCURACY: Within 1 KM

COMMENTS: Exact location of mineralization is not known. Located from description, near the northwest edge of the Jay 1-49 claim block, 5 kilometres south of the southern end of Knots Lakes (Geology, Mining and Exploration in British Columbia 1969; Property File - claim map 71-January 1970).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ALTERATION: Chlorite
COMMENTS: Chlorite may represent metamorphic recrystallization rather than alteration.

ALTERATION TYPE: Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Meta Sediment/Sedimentary
Meta Volcanic

HOSTROCK COMMENTS: The host rock is metasedimentary within a dominantly metavolcanic unit of uncertain age in the Gambier overlap assemblage.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Pacific Ranges

TERRANE: Gambier

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE:

COMMENTS: Located near the northeastern margin of the Coast Plutonic Complex.

CAPSULE GEOLOGY

The Jay occurrence consists of a minor copper showing in mountainous terrain 5 kilometres south of the southern end of Knot Lakes, just south of Tweedsmuir Provincial Park.

The occurrence is located in a unit of metavolcanic rocks in the Gambier overlap assemblage near the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163, Map 1713A). Very little information is available on the mineralization, or even on its precise location (Geology, Exploration and Mining in British Columbia 1969).

Chalcopyrite occurs as a replacement in chloritized metasedimentary rocks.

BIBLIOGRAPHY

EMPR GEM 1969-189
EMPR PF (Claim map 71, dated Jan. 1970)
GSC OF 1163
GSC MAP 1713A

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/30

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 004**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEN 37**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 18 16 N
LONGITUDE: 124 25 00 W
ELEVATION: 2066 Metres

NORTHING: 5684634
EASTING: 401247

LOCATION ACCURACY: Within 500M

COMMENTS: Located on the approximate centre of a north-trending zone of mineralization on claim Ben 37, 16 kilometres south of the southern end of Tatlayoko Lake (Assessment Report 2670, Map 2).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Pegmatite
TYPE: L04 Porphyry Cu ± Mo ± Au
COMMENTS: Fracture-controlled pegmatitic quartz veins occur in a variety of orientations. The most important zone trends north.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary			Tiedemann Pluton

ISOTOPIC AGE: 63 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Granodiorite
Tonalite
Granite Dike
Lamprophyre Dike

HOSTROCK COMMENTS: Age date from Geological Survey of Canada Open File 1163.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks
COMMENTS: In granodiorite intrusion of the northeastern Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1970
SAMPLE TYPE: Channel
COMMODITY: Copper GRADE
0.1000 Per cent
COMMENTS: Based on channel samples from the main mineralized area.
REFERENCE: Assessment Report 2670.

CAPSULE GEOLOGY

The Ben 37 occurrence consists of copper-molybdenum mineralization in mountainous terrain 16 kilometres south of the southern end of Tatlayoko Lake. It is related to similar mineralization covered by the Ben 28 occurrence (092N 005). The area is underlain mostly by a lobe of a large intrusion, the Tiedemann pluton, on the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex. This pluton consists of granodiorite mainly, and tonalite, and is dated at 63 million years (Early Tertiary) by the potassium-argon method on biotite (Geological Survey of Canada Open File 1163). The pluton contains northeast-striking shear zones, some of which contain lamprophyre or granite dykes. The granodiorite contains fracture-controlled pegmatitic quartz veins containing coarse chalcopyrite and molybdenite (Assessment Report 2670). The density of fractures and veining varies, and at least 3 common orientations are present. Individual quartz veins

CAPSULE GEOLOGY

range from 2 to 25 millimetres in thickness.

The Ben 37 occurrence is located in the granodiorite, 2 kilometres west of its contact with Lower Cretaceous greywacke. It is in the most fractured and mineralized area, measuring about 900 by 120 metres, which also contains 4 narrow shear zones (Assessment Report 2670). Channel samples from here indicate that the occurrence contains 0.1 per cent copper, but only 0.002 per cent molybdenum. Individual samples contain up to 0.4 per cent copper and 0.22 per cent molybdenum (Assessment Report 2670).

BIBLIOGRAPHY

EMPR GEM 1970-212
EMPR ASS RPT *2670
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/21

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 005**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEN 28**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 18 49 N
LONGITUDE: 124 23 51 W
ELEVATION: 2585 Metres

NORTHING: 5685628
EASTING: 402603

LOCATION ACCURACY: Within 500M

COMMENTS: Located at the centre of the Ben 28 claim, in the centre of an area of copper-molybdenum showings, 15 kilometres south of the southern end of Tatlayoko Lake (Assessment Report 2670, Map 2).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Pegmatite
TYPE: L04 Porphyry Cu ± Mo ± Au
COMMENTS: Fracture-controlled pegmatitic quartz veins occur in a variety of orientations.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary			Tiedemann Pluton

ISOTOPIC AGE: 63 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Granodiorite
Tonalite
Granite Dike
Lamprophyre Dike

HOSTROCK COMMENTS: Age date from Geological Survey of Canada Open File 1163.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks
COMMENTS: In granodiorite intrusion of the northeastern Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Ben 28 occurrence consists of copper-molybdenum mineralization in mountainous terrain 15 kilometres south of the southern end of Tatlayoko Lake. It is related to similar mineralization covered by the Ben 37 occurrence (092N 004), 1.7 kilometres to the southwest.

The area is underlain mostly by a lobe of a large intrusion, the Tiedemann pluton, on the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex. This pluton consists of granodiorite mainly, and tonalite, and is dated at 63 million years (Early Tertiary) by the potassium-argon method on biotite (Geological Survey of Canada Open File 1163). The pluton contains northeast-striking shear zones, some of which contain lamprophyre or granite dykes.

The occurrence is located in the granodiorite about 1 kilometre inside its contact, in the centre of the Ben 28 claim (Assessment Report 2670). This location is approximately in the centre of a small area of chalcopyrite and molybdenite showings, hosted in fracture-controlled pegmatitic quartz veins. The density of fractures and veining varies, and at least 3 common orientations are present. Individual quartz veins range from 2 to 25 millimetres in thickness. No geochemical information from these showings is available.

BIBLIOGRAPHY

EMPR GEM 1970-212
EMPR ASS RPT *2670

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 684
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 1163
GSC P 68-33
GSC MAP 5-1968

DATE CODED: 1985/07/24
DATE REVISED: 1992/02/04

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 006**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLUE 33-36**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N01W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 13 21 N
LONGITUDE: 124 29 20 W
ELEVATION: 2469 Metres

NORTHING: 5675621
EASTING: 396028

LOCATION ACCURACY: Within 500M

COMMENTS: Located on sample 6 in the centre of the mineralized zone,
8 kilometres west of Majestic Peak, 25 kilometres south of the
southern end of Tatlayoko Lake (Assessment Report 2669, Map 2).

COMMODITIES: Copper Molybdenum Silver

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Molybdenite

ASSOCIATED: Quartz Pyrite

ALTERATION: Quartz Limonite

COMMENTS: The product of oxidation is presumed to be limonite.

ALTERATION TYPE: Silicific'n Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: L04 Porphyry Cu ± Mo ± Au

COMMENTS: Mineralized quartz veins and fractures have a variety of orientations.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Tertiary			Tiedemann Pluton

ISOTOPIC AGE: 63 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Foliated Biotite Granodiorite
Lamprophyre Dike
Felsite Dike
Aplite Dike
Pegmatite Dike

HOSTROCK COMMENTS: Age date from Geological Survey of Canada Open File 1163.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Plutonic Rocks

COMMENTS: The Tiedemann pluton is part of the Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1970

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver 6.8000 Grams per tonne

Copper 0.7500 Per cent

COMMENTS: Composite grab sample taken across a copper-rich zone 23 by 3 metres.

REFERENCE: Assessment Report 2669.

CAPSULE GEOLOGY

The Blue occurrence consists of copper-molybdenum-silver mineralization in mountainous, glacier-covered terrain 25 kilometres south of the southern end of Tatlayoko Lake.

The area is underlain by a large intrusion, the Tiedemann pluton, on the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex. This pluton consists of granodiorite mainly, and tonalite, and is dated at 63 million years (Early Tertiary) by the potassium-argon method on biotite (Geological Survey of Canada Open File 1163).

In the area of the occurrence, the pluton consists of foliated biotite granodiorite (Assessment Report 2669). Numerous, variably oriented dykes are widespread in the area, comprising lamprophyre,

CAPSULE GEOLOGY

and less commonly feldspar, aplite and pegmatite. Quartz veins are also abundant.

The Blue occurrence is centred on an area 600 by 300 metres, covering the Blue 33 to 36 claims, containing many mineralized quartz veins (Assessment Report 2669). The granodiorite is fractured and silicified and contains disseminated pyrite. Oxidation has produced zones of gossan. Molybdenite occurs in quartz-filled fractures up to 10 or 20 centimetres thick. Molybdenum values are not high, ranging from 0.001 to 0.05 per cent.

Other quartz veins contain bornite, chalcopyrite and locally molybdenite. A composite grab sample taken across a copper-rich zone 23 by 3 metres assayed 0.75 per cent copper and 6.8 grams per tonne silver. Another sample assayed 1.22 per cent copper (Assessment Report 2669).

Minor showings of molybdenite also occur 900 metres to the southwest, in the Blue 32 claim (Assessment Report 2669).

BIBLIOGRAPHY

EMPR GEM 1970-212
EMPR ASS RPT *2669
GSC OF 1163

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/22

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 007**

NATIONAL MINERAL INVENTORY:

NAME(S): **AUSTEN**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N01W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 13 30 N
LONGITUDE: 124 18 11 W
ELEVATION: 1722 Metres

NORTHING: 5675653
EASTING: 409010

LOCATION ACCURACY: Within 500M

COMMENTS: Located from a mineral occurrence map symbol, 8 kilometres west of Franklyn Arm of Chilko Lake (Bulletin 81, Figure 5).

COMMODITIES: Copper Molybdenum Silver

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Lower Cretaceous

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Hornfels Volcanic
Mafic Dike
Rhyolitic Basaltic Pyroclastic
Volcanic Breccia
Volcaniclastic
Argillite
Siltstone
Sandstone
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Gambier

METAMORPHIC TYPE: Contact

COMMENTS: Close to the northeast margin of the Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges

GRADE:

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1990

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver 14.0000 Grams per tonne

Copper 1.8000 Per cent

Molybdenum 0.1700 Per cent

COMMENTS: Probably a select grab sample, from the main showing of mineralization.

REFERENCE: Bulletin 81.

CAPSULE GEOLOGY

The Austen occurrence consists of a showing of copper and molybdenum mineralization at the toe of Austen glacier, north of Nine Mile Creek, 8 kilometres west of Franklyn Arm of Chilko Lake. It was found during a mineral resource assessment of the Chilko Lake area (Bulletin 81).

The area is in the Gambier overlap assemblage and is situated about halfway between an important northwest-striking fault to the northeast, the Stikelan fault, and the Early Tertiary Tiedemann pluton of the Jurassic to Tertiary Coast Plutonic Complex to the southwest (Geological Survey of Canada Open File 1163, Map 1713A). The latter intrusion may be responsible for contact metamorphism at the Austen occurrence.

The occurrence is located in a Lower Cretaceous unit of rhyolitic to basaltic pyroclastics and flows, volcanic breccia and volcaniclastics, and sedimentary rocks including argillite,

CAPSULE GEOLOGY

siltstone, sandstone and conglomerate (Bulletin 81; Geological Survey of Canada Open File 1163). Within 1 kilometre to the north is the contact (possibly a fault) with another Lower Cretaceous unit comprising sedimentary rocks which are mapped as Taylor Creek Group by the Geological Survey of Canada (Open File 1163), although they are not assigned as such by Bulletin 81.

The showing consists of chalcopyrite and molybdenite in a branching quartz vein which cuts fractured and hornfelsed volcanic rocks (Bulletin 81). Mafic dykes are subparallel to the fractures. A grab sample of the mineralization assayed 1.8 per cent copper, 0.17 per cent molybdenum, 14 grams per tonne silver, and 0.3 gram per tonne gold (Bulletin 81).

BIBLIOGRAPHY

EMPR FIELDWORK *1986, pp. 231-243
EMPR BULL *81, p. 83
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1992/01/23
DATE REVISED: 1992/02/12

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092N 008**

NATIONAL MINERAL INVENTORY:

NAME(S): **RUM 66**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 15 58 N
LONGITUDE: 124 17 26 W
ELEVATION: 2370 Metres

NORTHING: 5680209
EASTING: 409963

LOCATION ACCURACY: Within 500M

COMMENTS: Located on sample 2 in the centre of the mineralized area on the Rum 66 claim, 23 kilometres south of the southern end of Tatlayoko Lake (Assessment Report 2671, Map 2).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Quartz Calcite Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic Cretaceous-Tertiary	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex

LITHOLOGY: Granodiorite
Quartz Diorite
Andesitic Volcanic
Lamprophyre Dike
Aplite Dike
Pegmatite Dike
Greywacke
Sandstone
Shale
Conglomerate

HOSTROCK COMMENTS: Host rock is primarily a post-Lower Cretaceous granodiorite stock; Upper Triassic volcanic country rocks host very minor mineralization.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks Stikine
METAMORPHIC TYPE: Contact RELATIONSHIP:
COMMENTS: Located between the Stikelan fault and the Coast Plutonic Complex. PHYSIOGRAPHIC AREA: Pacific Ranges
GRADE:

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1970
SAMPLE TYPE: Rock
COMMODITY GRADE
Copper 0.5000 Per cent
COMMENTS: Estimated content of the mineralized zone. Individual samples range between 0.04 and 0.86 per cent copper.
REFERENCE: Assessment Report 2671.

CAPSULE GEOLOGY

The Rum 66 occurrence consists of copper and molybdenum mineralization in mountainous terrain immediately east of the Tredcroft Glacier, 23 kilometres southeast of the southern end of Tatlayoko Lake.

The occurrence lies within a granodiorite to quartz diorite stock, 2 kilometres southwest of an important northwest-striking fault, the Stikelan fault, and 12 kilometres northeast of the Tiedemann pluton of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163). The stock is probably related to the Coast Plutonic Complex, and was emplaced into a complex belt of Upper Triassic and Lower Cretaceous sedimentary and

CAPSULE GEOLOGY

volcanic rocks of Stikinia Terrane and the Gambier overlap assemblage, respectively (Geological Survey of Canada Map 1713A).

The granodiorite stock is about 4 kilometres long and about 2 kilometres wide, elongate in a northwest direction, in common with the dominant structural trends in the area. The intrusion of the stock caused doming of the country rocks and low grade contact metamorphism. Lamprophyre dykes are common in the area.

The immediate country rocks are dominantly Upper Triassic andesitic volcanics, although on the southwest side Lower Cretaceous greywacke, sandstone, shale, conglomerate and siltstone are dominant. The Lower Cretaceous rocks are mapped as Taylor Creek Group by the Geological Survey of Canada (Open File 1163), although they are not assigned as such by Bulletin 81.

The mineralization is virtually confined to the granodiorite near its northwestern end (Assessment Report 2671). An area about 1500 by 200 metres contains a number of small mineral showings, each about 25 by 3 metres. Coarse chalcopyrite and minor molybdenite occur in closely-spaced fracture-fillings of quartz, or as disseminations in the granodiorite. Locally aplite dykes and pegmatite are present, as are veinlets of calcite and epidote. In one locality, chalcopyrite occurs in volcanics, probably Upper Triassic, 300 metres north of the stock.

Assay values of samples from the mineralized zone range from 0.04 to 0.86 per cent copper. The zone is estimated to contain 0.5 per cent copper overall (Assessment Report 2671). Gold and silver were also assayed but they are not significant.

BIBLIOGRAPHY

EMPR GEM 1970-212
EMPR BULL 81, p. 83
EMPR ASS RPT *2671
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/22

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 009**

NATIONAL MINERAL INVENTORY:

NAME(S): **RUM 2**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N01W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 13 54 N
LONGITUDE: 124 19 01 W
ELEVATION: 2088 Metres

NORTHING: 5676412
EASTING: 408053

LOCATION ACCURACY: Within 500M

COMMENTS: Located on sample 4 in a zone of gossan on the Rum 2 claim, 25 kilometres southeast of the southern end of Tatlayoko Lake (Assessment Report 2671, Map 2).

COMMODITIES: Copper Molybdenum Silver

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Pyrite
ALTERATION: Limonite
COMMENTS: The product of oxidation is presumed to be limonite.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Taylor Creek	Undefined Formation	

LITHOLOGY: Greywacke
Shale
Siltstone

HOSTROCK COMMENTS: The Lower Cretaceous host rocks may or may not belong to the Taylor Creek Group.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage
COMMENTS: Situated between the Stikelan fault and the Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1970
SAMPLE TYPE: Rock
COMMODITY: Silver
GRADE: 3.4000 Grams per tonne

COMMENTS: Highest silver value recorded.
REFERENCE: Assessment Report 2671.

CAPSULE GEOLOGY

The Rum 2 occurrence consists of a small showing of copper and molybdenum mineralization on a narrow ridge north of Nine Mile Creek, between the toes of Hamilton Glacier and Austen Glacier, 25 kilometres southeast of the southern end of Tatlayoko Lake.

The area of the occurrence is underlain by greywacke, shale and siltstone; bedding strikes northwest and dips moderately southwest (Assessment Report 2671). These rocks are Lower Cretaceous and are mapped as Taylor Creek Group by the Geological Survey of Canada (Open File 1163), although they are not assigned as such by Bulletin 81. The area is part of a Cretaceous overlap assemblage, and is situated about halfway between an important northwest-striking fault to the northeast, the Stikelan fault, and the Early Tertiary Tiedemann pluton of the Jurassic to Tertiary Coast Plutonic Complex to the southwest (Geological Survey of Canada Open File 1163, Map 1713A).

Information on the mineralization is very limited. Pyrite, chalcopyrite and molybdenite are present in a northeast-trending gossanous zone (Assessment Report 2671). One rock sample assayed 3.4 grams per tonne silver (Assessment Report 2671).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 692
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM 1970-212
EMPR BULL 81, p. 83
EMPR ASS RPT *2671
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/22

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 695
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM 1970-202; 1971-326; 1972-310; 1973-264; 1974-220
EMPR EXPL 1975-E117; 1976-E130; 1978-E184; 1979-192; 1983-341;
1988-A39; 1989-27,60
EMPR ASS RPT *2540, 5301, 5773, 6397, 6960
EMPR PF *(Mandy J.T. (1948): Report on Mountain King and Mountain
City Groups); (Hretchka, M. (1978): EMPR MEIP Report, Kleena
Kleene Gold Mines Ltd.); (Sargent, H. (1938): Maps and Notes)
GSC OF 1163
GSC SUM RPT 1925, p. 162A
GSC P 68-33, p. 87
GSC MAP 5-1968; 1713A
N MINER April 2, 1981
GCNL #34, 1981

DATE CODED: 1985/07/24
DATE REVISED: 1991/12/11

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 011**

NATIONAL MINERAL INVENTORY: 092N14 Fe1

NAME(S): **BRITON (L.1062), MONARCH (L.1076), BRITON-MONARCH, HAEMATITE MINING CO., WALLACE IRON**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N14E
BC MAP:

Underground

MINING DIVISION: Cariboo

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 48 04 N
LONGITUDE: 125 04 20 W
ELEVATION: 2290 Metres

NORTHING: 5740949
EASTING: 3571119

LOCATION ACCURACY: Within 500M

COMMENTS: Located on the overlapping quadrant of Lots 1076 and 1062, approximately coincident with an iron occurrence map symbol, 1.2 kilometres southeast of Perkins Peak, 23 kilometres southwest of the community of Kleena Kleene (Geological Survey of Canada Map 5-1968).

COMMODITIES: Iron

MINERALS

SIGNIFICANT:	Hematite	Specularite	Pyrite	Corundum	Nacrite
ASSOCIATED:	Quartz	Pyrophyllite	Andalusite		
ALTERATION:	Pyrite	Sericite	Chlorite	Kaolinite	
ALTERATION TYPE:	Pyrite		Sericitic	Chloritic	Argillic
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER:	Stratiform	Massive		
CLASSIFICATION:	Igneous-contact	Replacement	Hydrothermal	Epigenetic
SHAPE:	Tabular			
DIMENSION:	90 x 90 x 6	Metres	STRIKE/DIP: 070/20S	TREND/PLUNGE:
COMMENTS:	Deposit limits not defined; it occupies a dip slope, disrupted by rock slides.			

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous Cretaceous-Tertiary	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex

LITHOLOGY: Andesitic Tuff
Basaltic Tuff
Andesitic Breccia
Basaltic Breccia
Sediment/Sedimentary
Granodiorite
Granitic Pegmatite Dike
Pyritic Sericitic Schist

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline	PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Gambier	Plutonic Rocks
METAMORPHIC TYPE: Contact	RELATIONSHIP: Syn-mineralization
COMMENTS: Near the northeastern margin of the Coast Plutonic Complex.	GRADE:

INVENTORY

ORE ZONE: OPENCUT	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1916
SAMPLE TYPE: Rock	
COMMODITY	GRADE
Iron	47.6000 Per cent
COMMENTS: Estimated grade of massive hematite with a thickness of 2 metres.	
REFERENCE: Minister of Mines Annual Report 1916.	

CAPSULE GEOLOGY

An exceptionally pure, stratiform hematite deposit occurs on the north face of a cirque 1.2 kilometres southeast of Perkins Peak, 23 kilometres southwest of the community of Kleena Kleene. The Briton-Monarch occurrence is in a Lower Cretaceous unit of andesitic and basaltic breccia and tuff, interbedded with minor sedimentary rocks, belonging to the Gambier overlap assemblage (Geological Survey of Canada Open File 1163, Map 1713A). The occurrence is 3.5 kilometres northeast of the contact with a large granodioritic intrusion of the Jurassic to Tertiary Coast Plutonic

CAPSULE GEOLOGY

Complex. The intervening rocks are rich in pyrite, locally including well-developed, altered shear zones marked by pyritic and sericitic schist.

The host rocks strike 070 degrees and dip 20 degrees south. The hematite deposit itself is in a bed of tuff between 3 and 9 metres thick, but it occupies a large surface area (at least 90 by 90 metres) because it is roughly a dip slope, and has been disrupted by rock slides. The tuff is locally completely replaced by dark red to almost black hematite, and is cut by small veins of quartz and specularite. Granite and granitic pegmatite dykes, probably emanating from the main intrusion to the south, are closely associated with the mineralization; the dykes are strongly altered to kaolinite and chlorite.

The deposit is adjacent to a wide shear zone trending east-northeast and south dipping.

The iron deposit has been interpreted as of contact metamorphic origin, formed by the irregular metasomatic replacement of "argillite" (probably tuff) inclusions or enclaves within the granitic bodies by iron-bearing hydrothermal solutions (Minister of Mines Annual Report 1916).

Distinctive, soft, beige orange to pale bluish grey alteration is intimately associated with the hematite. The beige material contains local radiating masses of pyrophyllite up to a centimetre in diameter. X-ray diffraction shows it to consist of quartz, pyrophyllite, minor andalusite, and possibly zussmanite. A soft beige vug filler in the hematite is nacrite. The pale bluish alteration is harder and seen to be andalusite with corundum, quartz, pyrophyllite and minor nacrite. If the bluish colour is due to corundum, perhaps sapphire may be found locally.

The hematite is 81.7 per cent iron oxide but contains 3.21 TiO₂, .45 % P₂O₅, with anomalous vanadium (3619 ppm) and antimony (5.6ppm).

The main work on the deposit was done early in the century, consisting of at least 8 open cuts and a 183 metre-long tunnel, all now largely caved in. One cut contained about 2 metres of massive hematite which assayed 47.6 per cent iron over the 2 metres (Minister of Mines Annual Report 1916); other samples assayed up to 57.6 per cent iron (Minister of Mines Annual Report 1921). Apparently, samples from underground workings were inferior to the grades from the surface. The deposit has been estimated to contain about 90,000 tonnes of hematite (Geological Survey of Canada Summary Report 1925A).

BIBLIOGRAPHY

EMPR AR *1916-166; *1921-218; 1938-F38; 1940-57; 1945-82
EMPR ASS RPT 2540, 5301, 5773, 6397, 6960
EMPR EXPL 1976-E130; 1978-E184; 1979-192; 2002-82-85
EMPR GEM 1970-202; 1971-326; 1973-264
GSC EC GEOL 1926-3-1, p. 63
GSC MAP 5-1968; 1713A
GSC OF 1163
GSC P 68-33
GSC SUM RPT *1925A, p. 162

DATE CODED: 1985/07/24
DATE REVISED: 1992/02/15

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

rocks, and outcrop 1.5 kilometres to the south near Perkins Peak and southwards.

The silicification in the area, which includes several gossans, has been attributed to a small quartz diorite stock which occurs about 1 kilometre south of the Bluebell occurrence, and which is probably a satellite intrusion of the Coast Plutonic Complex. Numerous small, altered felsic to intermediate dykes and sills which intrude the sedimentary rocks may be related to the stock. Sulphide mineralization is proportional to the degree of silicification in the sedimentary rocks and quartz dioritic intrusions.

The occurrence is centred on the Bluebell adit. A significant Very Low Frequency (VLF) electromagnetic conductor around the adit is in alignment with that around the Mountain Boss occurrence, and it is likely that they represent portions of the same zone of mineralization (Assessment Report 6397; Minister of Mines Annual Report 1945). Around the adit are several irregular and poorly defined silicified zones, 3 to 6 metres wide, with minor disseminated arsenopyrite, containing a small amount of gold ("East" showings in Geological Survey of Canada Summary Report 1925). Several lenses and stringers of quartz, and massive pyrite and arsenopyrite are present at the Bluebell adit along the sheared contact between silicified argillite and black graphitic argillite. The latter represents a "substantial occurrence of graphite" which may have been produced by a leaching process related to the shear zone (Minister of Mines Annual Report 1945). The rocks are strongly oxidized, even below the surface.

BIBLIOGRAPHY

EMPR AR 1916-166; 1921-218; *1938-F38; 1940-57; *1945-82
EMPR GEM 1970-202; 1971-326; 1972-310; 1973-264; 1974-220
EMPR EXPL 1975-E117; 1976-E130; 1978-E184; 1979-192
EMPR ASS RPT *2540, 5301, 5773, *6397, 6960
GSC OF 1163
GSC SUM RPT *1925A, p. 162
GSC P 68-33
GSC MAP 5-1968; 1713A
N MINER April 2, 1981
GCNL #34, 1981

DATE CODED: 1985/07/24
DATE REVISED: 1992/02/15

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 013**

NATIONAL MINERAL INVENTORY:

NAME(S): **VB, SAND, KG,
BEAR 1**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N11E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 38 04 N
LONGITUDE: 125 03 06 W
ELEVATION: 2300 Metres

NORTHING: 5722375
EASTING: 358015

LOCATION ACCURACY: Within 500M

COMMENTS: Located on the centre of an oxidized, mineralized area, 7 kilometres southwest of Middle Lake, 42 kilometres southwest of the community of Tatla Lake (Assessment Report 2942, Figure 2).

COMMODITIES: Molybdenum Copper

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite Bornite
ASSOCIATED: Pyrite Quartz
ALTERATION: Pyrite Sericite Chlorite Epidote
Limonite Malachite Ferrimolybdenite

COMMENTS: The product of oxidized pyrite is presumed to be limonite.

ALTERATION TYPE: Pyrite Sericitic Propylitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Stratabound

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: L05 Porphyry Mo (Low F-type)

DIMENSION: 450 x 180 Metres STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Mineralization and alteration are concentrated in steeply dipping, northeasterly-trending zones, veins and fractures.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Coast Plutonic Complex
Cretaceous-Tertiary			Klinaklini Pluton

LITHOLOGY: Porphyritic Biotite Granodiorite
Quartz Monzonite Porphyry
Quartz Feldspar Porphyry Dike
Porphyritic Quartz Felsite Dike
Gneissic Diorite
Biotite Schist
Amphibolite Gneiss
Aplite Dike
Trachyte Dike
Lamprophyre Dike

HOSTROCK COMMENTS: The host rocks are all part of the Klinaklini pluton, which includes metamorphosed remnants of older rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Pacific Ranges

TERRANE: Plutonic Rocks

Undivided Metamorphic Assembl.

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Amphibolite

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1971

SAMPLE TYPE: Chip

COMMODITY

GRADE

Molybdenum

0.0300

Per cent

COMMENTS: Analysis is not an assay; grade given is actually molybdenite. Values range between 0.007 and 0.15 per cent.

REFERENCE: Assessment Report 2942.

CAPSULE GEOLOGY

The VB occurrence comprises molybdenum and minor copper mineralization in rugged terrain, 7 kilometres southwest of Middle Lake, 42 kilometres southwest of the community of Tatla Lake.

The area is underlain by diverse metamorphic and plutonic rocks

CAPSULE GEOLOGY

of the Jurassic to Tertiary Coast Plutonic Complex near its northeastern margin. Specifically, the area lies within a large, composite intrusion called the Klinaklini pluton (Geological Survey of Canada Open File 1163). Older components of the intrusion in the area include biotite schists, amphibolitic gneisses, gneissic diorite and coarse-grained biotite granodiorite. These are post-dated by small irregular bodies of Cretaceous-Tertiary quartz monzonite porphyry, and numerous dykes of variable composition and texture, such as quartz-feldspar porphyry, porphyritic quartz felsite, aplite, trachyte, and less commonly lamprophyre (Assessment Reports 2942, 8115, 8345).

Rocks in the vicinity of the VB occurrence are mostly northeast-trending porphyritic intrusives, predominantly biotite granodiorite and quartz monzonite porphyry. These rocks contain roughly 10 per cent pervasive pyrite which has oxidized to produce a conspicuous gossan. The main deposit is approximately 450 by 180 metres. Molybdenite occurs in quartz veins, up to 3 centimetres thick, and as thin coatings in fractures, and locally as fine disseminated grains. Chip and grab samples from one quartz monzonite body, the most favourable host rock for molybdenite mineralization, were reported to contain between 0.007 and 0.15 per cent molybdenite, with an estimated average of 0.03 per cent (Assessment Report 2942).

Molybdenite also occurs as fine disseminated grains in oxidized granodiorite and quartz-feldspar porphyry dykes; molybdenite outside the main gossanous area is rare. As well as molybdenite, very small quantities of chalcopyrite (up to 5 per cent in some quartz veins), bornite and malachite occur locally, and some weathered surfaces have ferrimolybdate (Assessment Reports 2942, 8115).

Molybdenite content is proportional to the density of fractures, which is locally intense. There are two main sets of fractures: one set dips steeply and strikes northeast to southeast, and the other set strikes northwest and dips moderately to the southwest. Dyke emplacement, mostly trending northeast, is related to the fracturing.

Apart from the pyritization and its oxidation, sericitic and propylitic alteration are reported. Evidence of other alteration is present in float, including chloritization, clay alteration of feldspars, silicification, and secondary biotite and magnetite.

One diamond drill hole in the area of the VB showing penetrated heterogeneous, generally pyritic intrusive rocks with only very minor, sporadic molybdenite (Assessment Report 8345).

Oxidized pyritic and mineralized rocks of similar composition extend intermittently for 3 kilometres to the southwest, into the area covered by the A & E occurrence (092N 032).

BIBLIOGRAPHY

EMPR GEM 1971-325; 1974-220
EMPR EXPL 1980-280
EMPR ASS RPT *2942, *8115, 8345
GSC OF 1163

DATE CODED: 1985/07/24
DATE REVISED: 1992/02/16

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 014**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORFA 18, 20**, CT, RONCAM 5,
SKINNER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N01E
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 11 27 N
LONGITUDE: 124 11 15 W
ELEVATION: 1966 Metres

UTM ZONE: 10 (NAD 83)

LOCATION ACCURACY: Within 500M

NORTHING: 5671717
EASTING: 417017

COMMENTS: Located on one of several mineral showings between Franklyn Arm of Chilko Lake and Good Hope Mountain to the south (Assessment Reports 3271, Map 3; 8295, Figure 4).

COMMODITIES: Copper Molybdenum Tungsten

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
COMMENTS: Chalcopyrite and molybdenite are minor. No tungsten mineral is reported.

ASSOCIATED: Quartz Pyrite Pyrrhotite
ALTERATION: Chlorite Limonite

COMMENTS: The product of oxidation is presumed to be limonite.

ALTERATION TYPE: Chloritic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Porphyry Epigenetic
COMMENTS: Mineralized quartz-filled fractures in granodiorite strike east and dip moderately north or south.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous Cretaceous-Tertiary	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex

LITHOLOGY: Andesitic Pyroclastic Volcanic
Dacitic Pyroclastic Volcanic
Basaltic Pyroclastic Volcanic
Hornfels Argillite
Biotite Granodiorite
Quartz Monzonite
Mafic Dike
Lamprophyre Dike

HOSTROCK COMMENTS: The granodiorite is probably related to the Early Tertiary Tiedemann pluton of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Gambier
METAMORPHIC TYPE: Contact
COMMENTS: Located between the Stikelan fault and the Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges
RELATIONSHIP: Plutonic Rocks
GRADE:

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Rock
COMMODITY: Tungsten GRADE: 0.1000 Per cent
COMMENTS: Geochemical analysis of rock samples.
REFERENCE: Assessment Report 8295.

CAPSULE GEOLOGY

The Norfa occurrence is centred on a showing of minor copper-molybdenum mineralization, but it informally covers several other showings within a few square kilometres between Franklyn Arm of Chilko Lake and Good Hope Mountain to the south (see maps in Assessment Reports 3271, 8295; Property File - Renshaw, R.E., 1975). It is only about 2 kilometres east of the more significant Daisie occurrence (92N 026), but the Daisie is skarn-hosted whereas the

CAPSULE GEOLOGY

Norfa showings are apparently mainly weak, porphyry-type mineralization (Assessment Report 8295; Bulletin 81).

The area lies in the Gambier overlap assemblage, and is situated between an important northwest-striking fault, the Stikelan fault, to the northeast, and the Early Tertiary Tiedemann pluton of the Jurassic to Tertiary Coast Plutonic Complex to the south (Geological Survey of Canada Open File 1163, Map 1713A; Bulletin 81).

The area of the Norfa occurrence is dominated by a differentiated biotite granodiorite to quartz monzonite intrusion which is probably related to the Tiedemann pluton about 2 kilometres to the south. The granodiorite was intruded into a Lower Cretaceous unit of andesitic, dacitic and basaltic tuffs and breccias, and minor argillite (Geological Survey of Canada Open File 1163; Assessment Reports 3271, 8295). Regionally, strata strike northwest and dip moderately to steeply northeast, although their orientations may be modified by the intrusion. Mafic and lamprophyre dykes occur locally.

The contact between the granodiorite intrusion and the volcanics may be sharp or gradational. Hornfelsing and chloritic alteration is common. Several gossanous zones are present on or near the granodiorite contact (Assessment Report 8295). These are generally mineralized with disseminated pyrite and pyrrhotite, locally accompanied by very minor chalcopyrite and molybdenite. The Norfa occurrence is centred on one such zone, a northeast-trending, gossanous and hornfelsed band separating the volcanics from a subunit of argillite, about 400 metres west of the granodiorite (Assessment Report 3271).

Within the granodiorite itself are widely-spaced fractures, between 0.25 and 1.0 centimetre thick, filled with quartz which is locally vuggy (Assessment Report 8295). They strike east and dip moderately north or south. Some veins contain weak chalcopyrite and molybdenite. It is described as a poorly-developed porphyry system (Assessment Report 8295).

Reported values of copper and molybdenum are low, although samples from two zones contained 0.1 per cent tungsten (Assessment Report 8295).

BIBLIOGRAPHY

- EMPR GEM 1971-325
- EMPR EXPL 1980-277
- EMPR BULL 81, p. 83
- EMPR ASS RPT *3271, *8295
- EMPR PF (Renshaw, R.E. (1975): Geological Report on the Roncam Group)
- GSC OF 1163
- GSC P 68-33
- GSC MAP 5-1968; 1713A

DATE CODED: 1985/07/24
DATE REVISED: 1992/02/02

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 015**

NATIONAL MINERAL INVENTORY:

NAME(S): **GLASGOW**, CT 100, RONCAM

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N01E
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 10 24 N
LONGITUDE: 124 08 09 W
ELEVATION: 1806 Metres

NORTHING: 5669714
EASTING: 420597

LOCATION ACCURACY: Within 500M

COMMENTS: Located on a copper-molybdenum occurrence map symbol, 200 metres east of Glasgow Lakes, south of Franklyn Arm of Chilko Lake (Property File - Renshaw, R.E., 1975).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
COMMENTS: These minerals occur in minor amounts.
ASSOCIATED: Quartz Pyrite Pyrrhotite

ALTERATION: Chlorite Limonite

COMMENTS: The product of oxidation is presumed to be limonite.

ALTERATION TYPE: Chloritic Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Porphyry Epigenetic
COMMENTS: Mineralized quartz-filled fractures in the granodiorite strike east and dip moderately north or south.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous Cretaceous-Tertiary	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex

LITHOLOGY: Biotite Granodiorite
Quartz Monzonite
Andesitic Pyroclastic Volcanic
Dacitic Pyroclastic Volcanic
Basaltic Pyroclastic Volcanic

HOSTROCK COMMENTS: Mineralization is hosted in quartz fractures in granodiorite and/or in the altered contact zone with adjacent Lower Cretaceous volcanics.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Gambier
METAMORPHIC TYPE: Contact
COMMENTS: Located between the Stikelan fault and the Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges
RELATIONSHIP: Plutonic Rocks
GRADE:

CAPSULE GEOLOGY

The Glasgow occurrence consists of a showing of minor copper-molybdenum mineralization, 200 metres east of Glasgow Lakes, south of Franklyn Arm of Chilko Lake.

It is not well-documented, being based on a map symbol on a claim map (Property File - Renshaw, R.E., 1975). This location is apparently on or close to the contact between a granodiorite intrusion and volcanic rocks. Both the intrusion and the volcanics are known to be mineralized locally with chalcopyrite and molybdenite (Assessment Report 8295). Supplementing this indirect information, the possible setting of mineralization at the Glasgow showing is given here.

The area lies in the Gambier overlap assemblage and is situated between an important northwest-striking fault, the Stikelan fault, to the northeast, and the Early Tertiary Tiedemann pluton of the Jurassic to Tertiary Coast Plutonic Complex to the south (Geological Survey of Canada Open File 1163, Map 1713A; Bulletin 81).

The area west of the Glasgow occurrence is dominated by a differentiated biotite granodiorite to quartz monzonite intrusion, which is probably related to the Tiedemann pluton about 2 kilometres to the south. The granodiorite was intruded into a unit of andesitic, dacitic and basaltic tuffs and breccias, mostly of Early Cretaceous age although Upper Cretaceous rocks may also be present (Geological Survey of Canada Open File 1163; Assessment Report 8295).

CAPSULE GEOLOGY

Regionally strata strike northwest and dip moderately to steeply northeast, although their orientations may be modified by the intrusion.

The interior of the granodiorite contains widely-spaced fractures, between 0.25 and 1.0 centimetre thick, filled with quartz which is locally vuggy (Assessment Report 8295). They strike east and dip moderately north or south. Some veins contain weak chalcopyrite and molybdenite. This was interpreted as weak, porphyry-type mineralization.

The contact with the Lower Cretaceous volcanics is generally characterized by hornfelsing and chloritic alteration, and locally by gossanous zones due to the oxidation of disseminated pyrite and pyrrhotite (Assessment Report 8295). These sulphides may be accompanied by very minor chalcopyrite and molybdenite.

The Glasgow occurrence is located approximately on the contact between the granodiorite intrusion and the Lower Cretaceous volcanics. Thus, it could contain either or both of the mineralization types described above.

No significant values of copper or molybdenum have been reported.

BIBLIOGRAPHY

EMPR EXPL 1980-277
EMPR BULL 81, p. 83
EMPR ASS RPT *8295
EMPR PF (Renshaw, R.E. (1975): Geological Report on the Roncam Group)
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968

DATE CODED: 1985/07/24
DATE REVISED: 1992/02/16

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 016**

NATIONAL MINERAL INVENTORY:

NAME(S): **CINDY 16-41**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N01E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 13 03 N
LONGITUDE: 124 09 57 W
ELEVATION: 1274 Metres

NORTHING: 5674658
EASTING: 418578

LOCATION ACCURACY: Within 500M

COMMENTS: Located on Pit 3, Cindy 20 claim, 1.5 kilometres northeast of the west end of Franklyn Arm of Chilko Lake (Assessment Report 3319, Map 3).

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Epidote Calcite Pyrite Pyrrhotite
ALTERATION: Malachite Limonite Ankerite
COMMENTS: The products of oxidation are presumed to be limonite and ankerite.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein Massive Stratabound
CLASSIFICATION: Volcanogenic Syngenetic Hydrothermal
COMMENTS: Bedding strikes north-northwest and dips moderately steeply east. Quartz and epidote-calcite veinlets have a variety of orientations.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Andesitic Volcanic Tuff
Basaltic Volcanic Tuff
Greywacke
Limy Sediment/Sedimentary
Rhyolitic Tuff
Quartz Feldspar Porphyry
Quartz Diorite
Cherty Conglomerate
Limestone
Argillite

HOSTROCK COMMENTS: Mineralization is interpreted to be of syngenetic volcanogenic origin in Lower Cretaceous volcanic and sedimentary rocks (Bulletin 81).

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Gambier
COMMENTS: Located between the Stikelan fault and the Coast Plutonic Complex.

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Rock
COMMODITY: GRADE
Silver 5.0000 Grams per tonne
Copper 0.3000 Per cent
COMMENTS: Geochemical analysis.
REFERENCE: Bulletin 81.

CAPSULE GEOLOGY

The Cindy occurrence consists of copper mineralization immediately north of Franklyn Arm of Chilko Lake. The occurrence is in Lower Cretaceous volcanic and sedimentary rocks of the Gambier overlap assemblage (Geological Survey of Canada Map 1713A). It is about 2 kilometres southwest of an important northwest-striking fault, the Stikelan fault, and about 9 kilometres north of the Early Tertiary Tiedemann pluton of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163).

CAPSULE GEOLOGY

The Lower Cretaceous unit hosting the occurrence comprises bedded andesitic and basaltic volcanic tuffs and breccias, and rhyolitic tuffs and flows with spherulitic textures (Bulletin 81; Geological Survey of Canada Open File 1163). Interbedded with the volcanics are epiclastic sedimentary rocks including quartz-rich greywacke, cherty conglomerate, minor limestone and argillite (Assessment Report 3319). Bedding strikes north-northwest and dips moderately steeply east; some rocks are foliated.

The rocks are intruded by bodies of quartz-feldspar porphyry of possible subvolcanic origin, and reportedly by quartz diorite and granodiorite probably related to the Coast Plutonic Complex (Bulletin 81; Assessment Report 3319).

The main mineral showings occur in volcanic or limy sedimentary rocks (Bulletin 81; Assessment Reports 3319, 3949). They are gossanous due to the oxidation of pyrite and pyrrhotite which are disseminated or localized along fractures or in massive pods. Minor chalcopyrite and malachite are also present locally. The mineralization is generally associated with variably-oriented quartz or epidote-calcite veinlets.

Rock samples from the mineralized zones contain anomalous silver, copper, lead, zinc and iron (Bulletin 81). One sample was analysed to contain 0.3 per cent copper and 5 grams per tonne silver. Two other samples contained 0.29 and 0.17 per cent copper, respectively (Bulletin 81).

This occurrence has been interpreted as an example of volcanogenic massive sulphide mineralization (Bulletin 81).

BIBLIOGRAPHY

EMPR GEM 1971-324; 1972-308
EMPR FIELDWORK 1986, pp. 231-243
EMPR BULL *81, p. 84
EMPR ASS RPT *3319, 3949
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/24

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092N 017**

NATIONAL MINERAL INVENTORY:

NAME(S): **TAB 1-29**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N09W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 41 12 N
LONGITUDE: 124 25 15 W
ELEVATION: 853 Metres

NORTHING: 5727145
EASTING: 401782

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located approximately from description, on the Tab 1-29 claims, on Homathko River at Tatlayoko Lake settlement (Minister of Mines Annual Report 1968).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
COMMENTS: Chalcopyrite is sparse.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous	Jackass Mountain	Undefined Formation	

LITHOLOGY: Shale

HOSTROCK COMMENTS: Host rock given is tentative. An alternative is a unit of Lower to Middle Jurassic sedimentary rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Chilcotin Plateau

TERRANE: Cadwallader

COMMENTS: In sedimentary rocks on northeastern margin of Coast Plutonic Complex.

CAPSULE GEOLOGY

The Tab occurrence is based and located on very meagre information which merely reports sparse chalcopyrite in shale on the Homathko River (Minister of Mines Annual Report 1968). The area lies in the Cadwallader terrane between the Yalakom fault and the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163, Map 1713A).

Assuming the location is approximately accurate, the most likely host rock is shale of the Lower Cretaceous Jackass Mountain Group, as this is the closest outcrop shown in the Homathko River Valley (Geological Survey of Canada Open File 1163). An alternative host rock is a unit of Lower to Middle Jurassic sedimentary rocks. In either case, the occurrence lies within 2 kilometres of a large quartz diorite intrusion, probably related to the Coast Plutonic Complex.

BIBLIOGRAPHY

EM GEOMAP 2002-03
EMPR AR 1968-153
GSC MAP 5-1968; 1713A
GSC OF 1163
GSC P 68-33

DATE CODED: 1985/07/24
DATE REVISED: 1992/02/16

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 018**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOST FIDDLE 1-4**, EVELYN M. 1,2, MARY M.,
LEADER 1,2, SNAP 1,2, FROST,
REEL 4

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N10E

UTM ZONE: 10 (NAD 83)

BC MAP:
LATITUDE: 51 30 30 N
LONGITUDE: 124 34 30 W

NORTHING: 5707532

EASTING: 390698

ELEVATION: 1304 Metres
LOCATION ACCURACY: Within 500M

COMMENTS: Located at the centre of the Lost Fiddle (1-4) claims, 500 metres west of Ottarasko Creek, 44 kilometres south of the community of Tatla Lake (Minister of Mines Annual Report 1968).

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Arsenopyrite Chalcopyrite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Taylor Creek	Undefined Formation	

LITHOLOGY: Rhyolite

HOSTROCK COMMENTS: Assigning the host rock to the Taylor Creek Group is very tentative.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Gambier
COMMENTS: In a thrust belt, on the northeast margin of Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

Very little information is available on the Lost Fiddle occurrence. Its location is taken as the centre of the Lost Fiddle claims (1-4), immediately west of Ottarasko Creek, 10 kilometres west of Tatlayoko Lake.

The showing consists of quartz veins, containing chalcopyrite and arsenopyrite, in rhyolite. The mineralization contains gold and silver as well as copper (Minister of Mines Annual Report 1967, 1968). Work completed on the showing includes 4 trenches and 7 diamond-drill holes.

The geological setting is difficult to define, as it is in a complex area of thrusts and steep faults involving Lower, Middle and Upper Cretaceous sedimentary and volcanic rocks, in the Gambier overlap assemblage near the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163; Papers 68-33, 88-1E, 89-1E; Map 1713A; Geology 1991). The contacts between these units apparently follow the Ottarasko Creek Valley in the vicinity of the Lost Fiddle occurrence. Of the stratigraphic units involved, the Lower Cretaceous Taylor Creek Group contains rhyolitic volcanics, so it may be the most likely host for the occurrence.

BIBLIOGRAPHY

EMPR AR 1967-126; 1968-153
GSC OF 1163
GSC P 68-33; 88-1E, pp. 185-190; 89-1E, pp. 163-167
GSC MAP 5-1968; 1713A
GSA GEOLOGY 1991, pp. 941-944

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/14

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 019**

NATIONAL MINERAL INVENTORY:

NAME(S): **BLACKHORN MOUNTAIN**, HOMATHKO GOLD MINES LIMITED, MCDUCK,
MCCOPE, MCDON, MCMUL,
J.J., GOLDEN LODGE, VICTOR,
BONANZA

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 092N10W
BC MAP:

Underground

MINING DIVISION: Clinton

LATITUDE: 51 34 40 N
LONGITUDE: 124 47 19 W
ELEVATION: 2130 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5715595
EASTING: 376064

LOCATION ACCURACY: Within 500M

COMMENTS: Located on Homathko adit, 3.3 kilometres south of Blackhorn Mountain,
46 kilometres south-southeast of Kleena Kleene (Assessment Report
12691, Figure 3).

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS

SIGNIFICANT: Arsenopyrite Pyrite Pyrrhotite Sphalerite Chalcopyrite

Galena Gold
ASSOCIATED: Quartz Calcite

COMMENTS: Mineralization occurs in quartz veins with minor calcite-filled
fractures.

ALTERATION: Chlorite Sericite Quartz Limonite

ALTERATION TYPE: Chloritic
MINERALIZATION AGE: Unknown

Sericitic

Silicific'n

Oxidation

DEPOSIT

CHARACTER: Vein Disseminated Shear Concordant
CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I01 Au-quartz veins

SHAPE: Bladed

MODIFIER: Faulted

DIMENSION: 60 x 1

Metres

STRIKE/DIP: 050/80N

TREND/PLUNGE:

COMMENTS: The main mineralized vein strikes 050 degrees and dips 80 degrees
northwest. It is offset by northwest-trending faults.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Upper Triassic
Lower Cretaceous

GROUP

Unnamed/Unknown Group
Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Andesitic Volcanic
Andesitic Tuff
Andesitic Breccia
Greenstone
Chlorite Schist
Felsic Intermediate Dike
Quartz Porphyry Dike
Conglomerate
Sericitic Schist
Argillite

HOSTROCK COMMENTS: Hosted in thrust-imblicated Upper Triassic and Lower Cretaceous
volcanic and sedimentary rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Stikine

METAMORPHIC TYPE: Regional

COMMENTS: In thrust-imblicated rocks northeast of the Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges

Gambier

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: WORKINGS

REPORT ON: Y

CATEGORY: Unclassified
QUANTITY: 3 Tonnes

YEAR: 1937

COMMODITY

GRADE

Gold

79.0000

Grams per tonne

COMMENTS: Average grade of 3.18 tonnes of milled ore; gold was recovered by
amalgamation.

REFERENCE: Minister of Mines Annual Report 1937, page F3.

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1982

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

56.2000

Grams per tonne

Gold

71.7000

Grams per tonne

COMMENTS: Uncut average of 5 chip samples over a 0.5-metre vein width; locally the samples contain visible gold.

REFERENCE: Assessment Report 10654.

CAPSULE GEOLOGY

The Blackhorn Mountain occurrence refers to several significant showings of gold and silver-bearing quartz veins which outcrop in the mountainous terrain south of Blackhorn Mountain. Work on the showings took place in two phases: the first was from their discovery in 1936 until 1939, and the second phase was between 1979 and 1988. Detailed information on the early work is given in the Minister of Mines Annual Reports for 1937 and 1938.

The area lies in the Stikinia Terrane and the Gambier overlap assemblage near the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex, within a complex stack of recumbent folds and imbricated, gently southwest-dipping thrust sheets (Geological Survey of Canada Open File 1163, Map 1713A). The northeast-directed thrusting placed Upper Triassic (Carnian) and Lower Cretaceous volcanic and sedimentary rocks over Lower Cretaceous (Hauterivian) sedimentary rocks (Geological Survey of Canada Open File 1163, Papers 88-1E, 89-1E; Geology 1991). The thrusting took place in the Late Cretaceous because the thrusts are cut by a quartz diorite intrusion dated at 68 million years by the uranium-lead method on zircon (Geological Survey of Canada Paper 88-1E).

The area of economic interest lies within the imbricated Upper Triassic and Lower Cretaceous rocks. The local geology probably involves more than one thrust sheet, but as thrusts were not recognized as such in the pertinent data sources, a structural interpretation of the local stratigraphy is not attempted here.

Most of the area of the occurrence is underlain by andesitic tuff and breccia, metamorphosed at greenschist grade and usually described as greenstone, or as chlorite schist where the rocks are sheared. Minor shale or argillite or sericitic schist is intercalated with the volcanics. Locally there are units of sedimentary rocks, including limestone, shale, greywacke and conglomerate. In general, the strata strike north to northeast and dip moderately to the northwest. The area is intruded by numerous felsic to intermediate porphyritic dykes and sills; the dykes are generally steep, and strike east.

Mineralization is associated with large quartz veins, which are generally concordant with bedding or foliation in the host rocks, although most are irregular and discontinuous. The most important vein is at the Homathko adit, in pyritic andesitic volcanics. The vein varies from 0.3 to 1.0 metre in thickness, and strikes 050 degrees and dips 80 degrees northwest. The vein has a strike length of at least 60 metres, but is locally offset by steep, northwest-striking faults, and by a vertical, 2 metre-thick quartz porphyry dyke. The vein also contains calcite, mainly along fractures. The main quartz vein pinches out into a quartz-veined, chlorite schist shear zone, but its actual limits have not been defined.

Chloritic and sericitic alteration of the host rock, or of inclusions in the quartz vein, is common, as is some silicification. The vein contains up to 10 per cent sulphides, averaging 2 per cent; in order of abundance, these are arsenopyrite, pyrite or pyrrhotite, sphalerite, chalcopyrite and galena. Pyrite is disseminated whereas the other sulphides tend to be in small masses. Visible gold occurs as fine grains on fracture surfaces, suggesting that it may have been introduced later than the other minerals (Minister of Mines Annual Report 1938). One such sample assayed 653 grams per tonne gold and 148 grams per tonne silver (Assessment Report 10654). An uncut average of 5 chip samples taken over 0.5 metre in sulphide-bearing quartz or quartz-carbonate vein material, locally with visible gold, was 71.7 grams per tonne gold and 56.2 grams per tonne silver (Assessment Report 10654). More typical values of samples from the adit are between 5 and 50 grams per tonne gold, and between 7 and 40 grams per tonne silver (Assessment Reports 9575, 12691; Minister of Mines Annual Reports 1937, 1938).

An area of about 1 square kilometre centred on the Homathko adit contains several other mineral showings in pyritic or limonitic (oxidized) sheared volcanics (Assessment Reports 9575, 12691), or in

CAPSULE GEOLOGY

oxidized conglomerate (Assessment Report 17858).

Most of the development work that has been done was between 1936 and 1939, during which time the Homathko Gold Mines Limited company was formed. This work included the underground drifting, trenching, and 640 metres of diamond drilling over several holes. In addition, a mill was constructed locally, which processed 3.18 tonnes of high-grade ore from the Homathko adit and surface workings. This resulted in the recovery, by amalgamation, of 275 dollars of gold, from an average grade of milled ore of approximately 79 grams per tonne gold (Minister of Mines Annual Report 1937).

The more recent work has concentrated on prospecting the old workings, with some new, short diamond drilling and blasting. One verdict is that the mineralized quartz veins have restricted lengths and widths, limiting potential tonnage at high grades, although low-grade, bulk tonnage potential remains (Assessment Report 12691).

BIBLIOGRAPHY

EMPR AR *1937-F3; *1938-F29; 1939-A72
EMPR ASS RPT 9575, *10654, *12691, 17858
EMPR BULL 20 Part 4, p. 36
EMPR EXPL 1981-66; 1982-236; 1984-248; 1988-C130
GSA GEOLOGY 1991, pp. 941-944
GSC MAP 5-1968; 1713A
GSC OF 1163
GSC P 68-33, p. 87; 88-1E, pp. 185-190; 89-1E, pp. 163-167; 91-2,
pp. 109-113
GSC SUM RPT 1925, p. 155A
PR REL Skeena Resources Inc., Mar.5, 10, 2003
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/04

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 020**

NATIONAL MINERAL INVENTORY:

NAME(S): **NIUT MOUNTAIN**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N10E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 38 03 N
LONGITUDE: 124 30 53 W
ELEVATION: 2255 Metres

NORTHING: 5721437
EASTING: 395171

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located from a copper occurrence map symbol, 750 metres southeast of Niut Mountain, 7 kilometres west of the north end of Tatlayoko Lake (Geological Survey of Canada Map 5-1968).

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Chalcopyrite
COMMENTS: Trace of gold reported.
ALTERATION: Limonite Malachite
COMMENTS: Limonite is presumed to be the main constituent of the gossan.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Andesitic Basaltic Breccia
Andesitic Basaltic Tuff
Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Gambier

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Niut Mountain copper occurrence is based on a map symbol 750 metres southeast of Niut Mountain, 7 kilometres west of the north end of Tatlayoko Lake (Geological Survey of Canada Map 5-1968; note that Niut Mountain is wrongly labelled on this map).

Very little information is available. The occurrence apparently lies within a Lower Cretaceous unit of andesitic and basaltic breccia and tuff, with minor sedimentary rocks, belonging to the Gambier overlap assemblage (Geological Survey of Canada Open File 1163, Map 1713A, Paper 68-33). The area lies between the northwest-striking Niut and Tchaikazan faults on the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex, and contains several subordinate faults.

The occurrence itself consists of a large, conspicuous gossan that contains small amounts of chalcopyrite and malachite, and a trace of gold.

BIBLIOGRAPHY

EM GEOMAP 2002-03
GSC MAP 5-1968; 1713A
GSC OF 1163
GSC P 68-33, p. 87

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/13

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 021**

NATIONAL MINERAL INVENTORY:

NAME(S): **MATH**, NEWMAC 8

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N10E
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 43 36 N
LONGITUDE: 124 36 13 W
ELEVATION: 2167 Metres

NORTHING: 5731855
EASTING: 389245

LOCATION ACCURACY: Within 500M

COMMENTS: Located on a mineralized outcrop, probably corresponding to a copper occurrence map symbol in earlier work, about 1 kilometre north of the source of Homathko River, 14 kilometres west-northwest of the community of Tatlayoko Lake (Assessment Report 20860, Drawing No.9; Geological Survey of Canada Map 5-1968).

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Covellite Bornite
ASSOCIATED: Quartz
ALTERATION: Quartz Epidote Chlorite Malachite Azurite
COMMENTS: Epidote and chlorite are inferred from propylitic alteration.
ALTERATION TYPE: Silicific'n Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
DIMENSION: STRIKE/DIP: 130/90 TREND/PLUNGE:
COMMENTS: Mineralized shear zone in tuff strikes 130 degrees and dips 90 degrees.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex
Cretaceous-Tertiary			

LITHOLOGY: Andesitic Tuff
Porphyritic Andesitic Flow
Basaltic Flow Breccia
Quartz Diorite

HOSTROCK COMMENTS: Host is sheared andesitic tuff, roughly 500 metres from the contact with a quartz diorite intrusion related to the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Gambier Plutonic Rocks
COMMENTS: In volcanic rocks close to northeast margin of Coast Plutonic Complex.

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 58.9000 Grams per tonne
Copper 2.4500 Per cent
COMMENTS: Grab sample was taken from a sheared andesitic tuff containing copper minerals.
REFERENCE: Assessment Report 20860.

CAPSULE GEOLOGY

The Math occurrence was originally based and roughly located on a showing of bornite in a quartz vein, reported along with meagre information (Geological Survey of Canada Paper 68-33, Map 5-1968). Its likely location and geological setting may be more accurately deduced from more recent mapping completed during exploration work (Assessment Report 20860).
Combining the available information, the Math showing occurs in Lower Cretaceous volcanic rocks of the Gambier overlap assemblage, roughly 500 metres west of the contact with a quartz diorite intrusion, probably related to the Jurassic to Tertiary Coast

CAPSULE GEOLOGY

Plutonic Complex (Geological Survey of Canada Open File 1163, Map 1713A). The area lies between two major northwest-striking faults, the Yalakom and Tchaikazan faults, along the northeastern margin of the Coast Plutonic Complex.

Outcrop is limited to a short ridge top, exposing andesitic tuff, porphyritic andesitic flow, and minor basaltic flow breccia. The rocks contain steeply-dipping, northwest and northeast-striking shear zones. They are moderately to locally intensely silicified, and also have propylitic alteration. Mineralization is partly hosted in quartz veins.

A grab sample was taken from a sheared andesitic tuff, with a vertical foliation striking 130 degrees. The sample contained 10 to 15 per cent malachite, 2 to 3 per cent azurite, 2 to 5 per cent covellite, and a trace of bornite; it was analysed at 2.45 per cent copper and 58.9 grams per tonne silver (Assessment Report 20860).

BIBLIOGRAPHY

EM EXPL 1998-57-64
EMPR ASS RPT *20860
GSC MAP 5-1968; 1713A
GSC OF 1163
GSC P 68-33, p. 87

DATE CODED: 1985/07/24
DATE REVISED: 1991/12/29

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 022**

NATIONAL MINERAL INVENTORY:

NAME(S): **KLIN**

MINING DIVISION: Cariboo

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N14E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 58 15 N
LONGITUDE: 125 08 33 W
ELEVATION: 985 Metres

NORTHING: 5759962
EASTING: 352829

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located on a gold occurrence map symbol, 1 kilometre north of Klinaklini River, 14.3 kilometres west of Kleena Kleene (Geological Survey of Canada Map 5-1968).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Lower Cretaceous

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Andesitic Breccia
Basaltic Breccia
Andesitic Tuff
Basaltic Tuff
Sediment/Sedimentary
Aplitic Quartz Monzodiorite

HOSTROCK COMMENTS: The occurrence is apparently in Lower Cretaceous volcanic rocks close to a fault contact with an intrusion of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Gambier

PHYSIOGRAPHIC AREA: Chilcotin Plateau

COMMENTS: Occurrence is located on northeast margin of Coast Plutonic Complex.

CAPSULE GEOLOGY

No geological description of the Klin occurrence is available. However, according to the geological setting, the occurrence is situated within the Gambier overlap assemblage in a unit of Lower Cretaceous andesitic and basaltic breccia and tuff, with minor sedimentary rocks (Geological Survey of Canada Open File 1163, Maps 5-1968, 1713A). It is about 250 metres southeast of a northeast-striking fault contact with an aplitic quartz monzodiorite intrusion on the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex.

BIBLIOGRAPHY

GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1985/07/24
DATE REVISED: 1991/12/18

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 023**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOM**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N07E
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 22 49 N
LONGITUDE: 124 31 28 W
ELEVATION: 1676 Metres

NORTHING: 5693217
EASTING: 393910

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located on the approximate centre of the Hom 1-22 claims, 6 kilometres east-northeast of Homathko Peak, 9 kilometres southwest of the southern end of Tatlayoko Lake (Property File - map reproduced from Claim Map 32B).

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Arsenopyrite Chalcopyrite Pyrite
ASSOCIATED: Quartz

COMMENTS: Quartz is presumed to be the vein gangue.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
COMMENTS: The host rocks generally strike northeast and dip moderately south.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Andesitic Pyroclastic
Andesitic Flow
Shale
Sandstone
Conglomerate

HOSTROCK COMMENTS: Upper Triassic volcanic and sedimentary units are interleaved by thrusting.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Stikine
COMMENTS: Located 3 kilometres northeast of the Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Hom occurrence consists of gold-silver mineralization. Its location is known only very approximately, being about 6 kilometres east-northeast of Homathko Peak, and 9 kilometres southwest of the southern end of Tatlayoko Lake.

Very little information is available (Minister of Mines Annual Report 1965). Geologically, the occurrence is situated in a complex area of thrusts involving Upper Triassic rocks of the Stikinia Terrane, about 3 kilometres northeast of the margin of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163, Map 1713A).

The thrusting has resulted in the interleaving of Upper Triassic volcanic units comprising mainly andesitic pyroclastics and flows, and sedimentary units comprising mainly shale, sandstone and conglomerate. The thrusts strike east and dip south; the strata within them apparently strike northeast and dip moderately southeast.

The presence of gold and silver is related to arsenopyrite, pyrite and chalcopyrite mineralization in fissure veins.

BIBLIOGRAPHY

EMPR AR *1965-143
EMPR EXPL 1983-339
EMPR ASS RPT 11770
EMPR PF (Claim map 32B)
GSC OF 1163
GSC P 68-33

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 718
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 5-1968; 1713A

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/31

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 024**

NATIONAL MINERAL INVENTORY:

NAME(S): **ICT, KATHLEEN, MARGARET,
SALLY, NANCY, TATLICO 1,2**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N08W
BC MAP:
LATITUDE: 51 23 41 N
LONGITUDE: 124 24 57 W
ELEVATION: 2210 Metres

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

NORTHING: 5694672
EASTING: 401499

LOCATION ACCURACY: Within 500M

COMMENTS: Approximately located from the description of the location of an open-cut, 6 kilometres south of the southern end of Tatlayoko Lake (Property File - O'Grady, B.T., 1937).

COMMODITIES: Gold Silver Antimony

MINERALS

SIGNIFICANT: Arsenopyrite Stibnite Pyrite

ASSOCIATED: Quartz Calcite

ALTERATION: Quartz Limonite

COMMENTS: The product of oxidation is presumed to be limonite.

ALTERATION TYPE: Silicific'n Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia Disseminated Vein Stratabound

CLASSIFICATION: Hydrothermal Epigenetic

DIMENSION: STRIKE/DIP: 090/30S TREND/PLUNGE:

COMMENTS: The fault (thrust) zone containing most of the mineralization strikes east and dips south between 30 and 70 degrees. Local mineralized fractures strike northwest.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Lower Cretaceous	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Tertiary			Coast Plutonic Complex

LITHOLOGY: Tuff
Cherty Tuff
Greenstone
Quartz Diorite

HOSTROCK COMMENTS: Hosted in a thrust zone separating Triassic from Cretaceous volcanics, and in diorite presumed related to the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Pacific Ranges

TERRANE: Stikine Gambier

COMMENTS: In thrust volcanics, northeast margin of the Coast Plutonic Complex.

INVENTORY

ORE ZONE: OPENCUT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1937

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver 55.0000 Grams per tonne

Gold 2.7000 Grams per tonne

COMMENTS: Chip sample taken across 0.8 metre in the altered fault zone.

REFERENCE: Property File - O'Grady, B.T., (1937).

ORE ZONE: MAIN SHOWING

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1937

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver 34.0000 Grams per tonne

Gold 0.7000 Grams per tonne

Antimony 16.0000 Per cent

COMMENTS: The zone is informally named. A selected grab sample was assayed. The antimony grade given is actually stibnite.

REFERENCE: Property File - O'Grady, B.T., (1937).

CAPSULE GEOLOGY

The ICT occurrence consists of gold-silver showings in rugged terrain 6 kilometres south of the southern end of Tatlayoko Lake. The claims involved were originally worked in the 1930's. The adjacent Morris property (092N 002), which contains similar mineralization, has a much longer history of exploration, devoted to gold-silver-antimony bearing quartz veins (Assessment Report 10520).

The ICT occurrence lies in the Stikinia Terrane and Gambier overlap assemblage, about 6 kilometres north of a large quartz diorite intrusion, the Tiedemann pluton, which forms the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex in this region (Geological Survey of Canada Open File 1163, Map 1713A). This pluton has an Early Tertiary age of 63 million years, based on the potassium-argon method on biotite (Geological Survey of Canada Open File 1163).

Based on the available information, the ICT occurrence is apparently associated within a major, east-striking thrust fault. The footwall of the fault to the north comprises sedimentary and volcanic rocks of Early Cretaceous age (Gambier); the hanging wall to the south comprises similar rocks of Late Triassic age (Stikinia) (Property File - O'Grady, B.T., 1937; Geological Survey of Canada Open File 1163).

Mineralization is largely confined to the fault zone, which strikes east and dips south between 30 and 70 degrees, and rocks immediately adjacent to it. To the north are purple tuffs striking north-northeast; to the south are pale, cherty tuffs and greenstones striking northwest. To the east, a large quartz diorite stock intrudes the hanging wall of the thrust; it is probably related to the Coast Plutonic Complex.

The fault zone varies between 3 and 9 metres in thickness. The rocks within it are highly brecciated, silicified and oxidized, and the matrix is partly unconsolidated. Pyrite, arsenopyrite and stibnite are present in minor amounts in the showings, associated with quartz and locally calcite. Similar mineralization also occurs in narrow widths in northwest-striking fractures to the south of the fault, some of which cut the quartz diorite.

The main showing is in an opencut which exposes the fault zone. A 2-metre thick zone in the hanging wall contains 2 oxidized and altered bands mineralized with stibnite and arsenopyrite. A selected grab sample assayed 0.7 gram per tonne gold, 34 grams per tonne silver, and 16 per cent "stibnite" (Property File - O'Grady, B.T., 1937). Another group of opencuts, which borders on the Morris property to the northwest, also exposes the altered fault zone. A sample taken here across 0.8 metre was assayed at 2.7 grams per tonne gold and 55 grams per tonne silver (Property File - O'Grady, B.T., 1937). A selected grab sample containing disseminated arsenopyrite assayed 9.6 grams per tonne gold and 185 grams per tonne silver (Property File - O'Grady, B.T., 1937).

BIBLIOGRAPHY

EMPR ASS RPT 8320, 10520
EMPR PF (*O'Grady, B.T. (1937): Special Report of the Minister of
Mines, Part F)
GSC OF 1163
GSC SUM RPT *1924A, pp. 59-73
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/20

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 025**

NATIONAL MINERAL INVENTORY:

NAME(S): **FARM**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N01E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 13 53 N
LONGITUDE: 124 12 38 W
ELEVATION: 2195 Metres

NORTHING: 5676253
EASTING: 415480

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located on a copper occurrence map symbol, 2.9 kilometres northwest of the west end of Franklyn Arm, Chilko Lake (Geological Survey of Canada Map 5-1968).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Lower Cretaceous

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Andesitic Volcanic
Basaltic Volcanic
Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Gambier

PHYSIOGRAPHIC AREA: Pacific Ranges

COMMENTS: Located near a possible splay of the northwest-trending Stikelan fault

CAPSULE GEOLOGY

The Farm occurrence is a showing of copper mineralization 2.9 kilometres northwest of the west end of Franklyn Arm of Chilko Lake. It is located from a copper occurrence map symbol (Geological Survey of Canada Map 5-1968).

No description of the mineralization is available. However, from its geological setting, the host rocks are inferred to be Lower Cretaceous andesitic and basaltic volcanics and minor sedimentary rocks of the Gambier overlap assemblage (Geological Survey of Canada Open File 1163, Map 1713A). The occurrence is immediately south of an east-trending fault which may be a splay of the northwest-striking Stikelan fault (Geological Survey of Canada Map 5-1968, Paper 68-33).

Copper mineralization is known in the area. The Cindy occurrence (092N 016) is located 3.5 kilometres to the southeast in similar rocks, and consists of minor chalcopyrite and malachite mineralization.

BIBLIOGRAPHY

GSC OF 1163
GSC P 68-33, p. 87
GSC MAP 5-1968; 1713A

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/26

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 026**

NATIONAL MINERAL INVENTORY:

NAME(S): **DAISIE**, COPPER QUEEN, DUCHARNE,
CT, RONCAM BIRD,
DESCARMES

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N01E

UTM ZONE: 10 (NAD 83)

BC MAP:
LATITUDE: 51 11 36 N
LONGITUDE: 124 12 33 W

NORTHING: 5672019
EASTING: 415508

ELEVATION: 1295 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Located on an outcrop of skarn on the boundary between Daisie 3 and 4 claims, 2.4 kilometres southwest of the west end of Franklyn Arm, Chilko Lake (Assessment Report 7574, Map 2).

COMMODITIES: Copper Molybdenum Silver Tungsten Zinc
Gold Lead

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Molybdenite Arsenopyrite Scheelite

Bornite Sphalerite Galena

ASSOCIATED: Quartz Pyrite Epidote Chlorite Andalusite

ALTERATION: Epidote Clinozoisite Garnet Diopside Wollastonite

Biotite Calcite Chlorite

COMMENTS: Malachite, azurite, actinolite, apatite and sphene are also present.

ALTERATION TYPE: Skarn Silicific'n Sericitic Chloritic Epidote

MINERALIZATION AGE: Oxidation
Unknown

DEPOSIT

CHARACTER: Stratabound Disseminated Massive Vein

CLASSIFICATION: Skarn Hydrothermal

TYPE: K01 Cu skarn

COMMENTS: The skarn-altered limestone strikes approximately northeast and dips moderately northwest. Mineralization follows bedding or crosscutting fractures.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic Cretaceous-Tertiary	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex

LITHOLOGY: Skarn
Marble
Limestone
Andesitic Basaltic Volcanic
Andesitic Basaltic Breccia
Feldspar Porphyry Flow
Argillite
Greywacke
Hornblende Granodiorite
Diorite

HOSTROCK COMMENTS: Mineralization is hosted in Upper Triassic skarn-altered limestone interbedded with volcanics and sediments, hornfelsed by granodiorite.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Pacific Ranges

TERRANE: Gambier

METAMORPHIC TYPE: Contact

RELATIONSHIP: Syn-mineralization

GRADE:

COMMENTS: Situated adjacent to the Coast Plutonic Complex.

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1978

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Molybdenum

0.9700

Per cent

Tungsten

1.2000

Per cent

COMMENTS: Highest values given.

REFERENCE: Assessment Report 7156.

CAPSULE GEOLOGY

Mineralization on the Daisie claims occurs in a northeast-trending, 800-metre long, 60 to 120-metre wide belt of marble and skarn, immediately south of the contact with the granodiorite stock (Assessment Reports 5712, 7574). The marble band is bounded by metavolcanics, and includes a few small, altered dioritic intrusions. The mineralization is exposed in a series of trenches and cuts on the claims. It may be concordant or discordant, following either bedding planes in the marble or crosscutting fractures; stronger mineralization is associated with the latter (Fieldwork 1986). Commonly, mineralization comprises disseminations or pods of massive sulphides consisting of variable amounts of chalcopyrite, pyrite, pyrrhotite, arsenopyrite, bornite, molybdenite and scheelite. In addition, veinlets of chalcopyrite and pyrrhotite occur in strongly silicified zones, partly oxidized to limonite. There are also quartz-molybdenite veins (Property File - Renshaw, 1975). Minor amounts of sphalerite and galena are common; malachite and azurite occur on fracture surfaces.

Four samples collected from massive sulphide pods and skarn mineralization yielded anomalous values of copper, zinc, molybdenum and silver (Bulletin 81). Samples ranged from 1.7 to 5.1 per cent copper, 0.14 to 0.76 per cent zinc, up to 0.5 per cent tungsten, and 30 to 80 grams per tonne silver (Bulletin 81). No significant gold values are reported. Notable results from earlier work include a sample analysed at 15.6 per cent copper, 117 grams per tonne silver and 1.8 grams per tonne gold (Assessment Report 5712). Drill core results include assays of 0.97 per cent molybdenum and 1.2 per cent tungsten (Assessment Report 7156).

Between 1978 and 1980, 1200 metres of diamond drilling was completed in 29 holes (Assessment Reports 7156, 7574, 8682). Some fairly long intersections of low-grade mineralization were encountered: for example, 0.416 per cent copper over 39.6 metres, 0.32 per cent molybdenum over 15 metres, and 0.3 per cent tungsten over 55 metres (Assessment Reports 7156, 8682).

Overall, however, skarn alteration in the area is irregular and thin, and associated mineralization is erratic in significance.

BIBLIOGRAPHY

- EMPR EXPL 1975-E115; 1978-E183; 1980-277
- EMPR FIELDWORK 1986, pp. 231-243
- EMPR BULL *81, p. 83
- EMPR ASS RPT 3271, 5357, *5712, 7156, 7574, *8295, 8682
- EMPR PF (Renshaw, R.E. (1975): Geological Report on the Roncam Group; Rae, D.H. (1956): Examination Report on Copper Queen Group)
- EMPR OF 1987-12; 1991-17
- GSC OF 1163
- GSC SUM RPT *1924A, p. 69
- GSC P 68-33, p. 87
- GSC MAP 5-1968; 1713A
- GCNL #88, 1981

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/26

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092N 027**

NATIONAL MINERAL INVENTORY:

NAME(S): **SG, SAM**

MINING DIVISION: Vancouver

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N01W 092K16W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 00 02 N
LONGITUDE: 124 21 01 W
ELEVATION: 915 Metres

NORTHING: 5650754
EASTING: 405254

LOCATION ACCURACY: Within 500M

COMMENTS: Located on sample 115 in the centre of the mineralized area on the Sam 44 claim, 23 kilometres west-southwest of the southern end of Chilko Lake (Assessment Report 3272, Map 2).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Quartz Sericite K-Feldspar Epidote Magnetite
COMMENTS: Magnetite is rare.
ALTERATION: Quartz Sericite Epidote
ALTERATION TYPE: Silicific'n Sericitic Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Hydrothermal
COMMENTS: The mineralized fractures strike east and dip moderately north.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Tertiary			Tiedemann Pluton

ISOTOPIC AGE: 63 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Quartz Monzonite
Biotite Granodiorite
Biotite Hornblende Granodiorite

HOSTROCK COMMENTS: Fracture-controlled mineralization and alteration straddles the eastern margin of a quartz monzonite stock and its granodiorite host.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Plutonic Rocks
COMMENTS: Located within the Coast Plutonic Complex.

CAPSULE GEOLOGY

The SG occurrence consists of minor copper mineralization in quartz monzonite and granodiorite intrusions. It is located 700 metres east of the Southgate River, 23 kilometres west-southwest of the southern end of Chilko Lake.

The area is within a large biotite-hornblende granodiorite intrusion of the Jurassic to Tertiary Coast Plutonic Complex. This is the Early Tertiary Tiedemann pluton, dated at 63 million years by the potassium-argon method on biotite (Geological Survey of Canada Open File 1163). Within this intrusion is a small stock of paler, more felsic quartz monzonite to biotite granodiorite, forming an elliptical outcrop ranging from 2100 to 1500 metres in diameter, slightly elongate north-south (Assessment Report 3272). The contact between the two igneous phases is quite sharp, not marked by chilling, brecciation or local alteration. They are probably similar in age.

A broad area of alteration overlaps the eastern half of the quartz monzonite stock and the adjacent granodiorite host (Assessment Report 3272). It is mainly fracture-controlled, there being a prominent set of east-striking, moderately north-dipping fractures in this area. The alteration consists of silicification, sericitization and epidotization, in order of degree. The fractures are commonly filled with white quartz, and range from 0.5 to 1.0 centimetre in thickness, spaced a few tens of centimetres apart.

The fractures are mineralized with sparsely disseminated chalcopyrite and bornite, locally accompanied by secondary sericite, potassium feldspar, epidote and rare magnetite. Pyrite is

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REPORT: RGEN0100

CAPSULE GEOLOGY

conspicuous by its absence. Other, minor sets of fractures trending northeast or northwest also contain chalcopyrite and bornite. In summary, the mineralization is relatively widespread, but very low grade.

BIBLIOGRAPHY

EMPR AR 1967-58
EMPR GEM 1971-315
EMPR ASS RPT *3272
GSC OF 1163

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/28

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 028**

NATIONAL MINERAL INVENTORY:

NAME(S): **HANNAH 8,10,11**, BIG FRANK, SAFFRON,
 BHA

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 092N06W
 BC MAP:

MINING DIVISION: Vancouver
 UTM ZONE: 10 (NAD 83)

LATITUDE: 51 17 27 N
 LONGITUDE: 125 24 16 W
 ELEVATION: 1680 Metres

NORTHING: 5684913
 EASTING: 332349

LOCATION ACCURACY: Within 500M

COMMENTS: Located on sample locality 34641, 1.5 kilometres southeast of Breccia Mountain, 25 kilometres northeast of the head of Knight Inlet (Assessment Report 8744, Map 1).

COMMODITIES: Gold Silver Copper Molybdenum

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Molybdenite
 ASSOCIATED: Quartz Carbonate Specularite Magnetite
 ALTERATION: Quartz Pyrite Sericite Kaolinite Chlorite
 COMMENTS: The product of clay alteration is presumed to be kaolinite.
 ALTERATION TYPE: Sericitic Silicific'n Argillic Chloritic
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Shear
 CLASSIFICATION: Hydrothermal Porphyry Epigenetic
 TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE Mesozoic-Cenozoic GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
 Mesozoic-Cenozoic Coast Plutonic Complex

LITHOLOGY: Biotite Quartz Monzonite
 Intermediate Feldspar Porphyry Dike
 Mafic Felsic Dike
 Foliated Granodiorite
 Quartz Diorite
 Intermediate Volcanic Agglomerate
 Intermediate Volcanic Flow
 Volcanic Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
 TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: AREA REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1980
 SAMPLE TYPE: Channel
 COMMODITY GRADE
 Gold 1.0000 Grams per tonne
 Molybdenum 0.0870 Per cent
 COMMENTS: Refers to a main altered area of "hybrid rocks". Values given are averages of 64 samples: 34 channel assays and 30 chip sample analyses.
 REFERENCE: Assessment Report 8744.

ORE ZONE: SHOWING REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1988
 SAMPLE TYPE: Channel
 COMMODITY GRADE
 Silver 51.0000 Grams per tonne
 Gold 85.0000 Grams per tonne
 Copper 1.0000 Per cent
 COMMENTS: Values given are average geochemical analyses over a 2-metre channel.
 REFERENCE: Assessment Report 18202.

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RUN TIME: 11:19:00

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REPORT: RGEN0100

BIBLIOGRAPHY

PR REL Saxony Explorations Ltd., Dec.18, 2002

DATE CODED: 1991/12/22
DATE REVISED: 1997/05/07

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

molybdenite in disseminations and in small quartz veinlets. Drilling indicates that silica-flooding and quartz stockwork veinlets with weak chalcopyrite, molybdenite and sphalerite mineralization increase with depth. Values up to 0.011 per cent molybdenum, 0.085 per cent copper and 0.39 per cent zinc have been reported (Assessment Report 8218).

A feldspar porphyry has been dated at 10.0 Ma +/- 0.7 Ma (Late Miocene, whole rock, method unknown; Assessment Report 7415). Distinctive quartz-feldspar porphyry and feldspar-hornblende-quartz porphyry dykes occur in steeply northeast-dipping, northwest-trending swarms covering at least 2000 by 500 metres. They show argillic and sericitic alteration of feldspars, and up to 1 per cent disseminated pyrite; values up to 0.14 per cent zinc have been obtained from drill core (Assessment Report 8218).

A 600-metre thick outlier of laharic breccia and associated andesitic tuffs, with crude stratification dipping gently west, may be the extrusive equivalent of the intrusive breccia described above. Locally, clasts contain veins of pyrite and chalcopyrite. A rhyolitic breccia unit has minor disseminated pyrite and fault-controlled carbonate alteration.

Although most attention has been paid to the Tertiary complex, the older gneisses host widespread quartz veins, commonly mineralized with pyrite, chalcopyrite, sphalerite and galena; assay values up to 0.31 per cent copper and 0.98 per cent zinc are reported (Assessment Report 8218). A quartz-pyrite vein (host not specified) contained 0.12 per cent tungsten (Assessment Report 7415).

Locally, faults and shear zones host highly oxidized veins, up to 20 centimetres thick, containing quartz, pyrite, chalcopyrite and sphalerite.

BIBLIOGRAPHY

EMPR ASS RPT 1668, 6819, *7415, *8218, 9377
EMPR EXPL 1977-E175; 1978-E183; 1979-192; 1980-278; 1981-26;
2002-29-40
EMR MP CORPFILE (Canamax Resources Inc.)
GSC OF 1163
PR REL Saxony Explorations Ltd., Dec.18, 2002

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/20

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 030**

NATIONAL MINERAL INVENTORY:

NAME(S): **BU**, NEWMAC 2-3, M.S.B.

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N10E
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 43 55 N
LONGITUDE: 124 38 08 W
ELEVATION: 1818 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5732491
EASTING: 387052

LOCATION ACCURACY: Within 500M

COMMENTS: Located on diamond-drill hole NM-88-2, 6 kilometres east-southeast of Bluff Lake, 16 kilometres west-northwest of the community of Tatlayoko Lake (Assessment Report 18036, Geology Map).

COMMODITIES: Gold Silver Copper Molybdenum Zinc
 Lead

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite Molybdenite Sphalerite

 Galena

ASSOCIATED: Quartz

 Calcite

ALTERATION: Pyrite Pyrrhotite Quartz Sericite Epidote

 Chlorite Kaolinite Goethite

COMMENTS: The product of argillic alteration is presumed to be kaolinite.

ALTERATION TYPE: Pyrite Propylitic Silicific'n Sericitic Argillic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Shear

CLASSIFICATION: Hydrothermal Porphyry Epigenetic

TYPE: L04 Porphyry Cu ± Mo ± Au

COMMENTS: North and northeast-striking fault and fracture systems are the most commonly associated with mineralization.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Lower Cretaceous
Mesozoic-Cenozoic

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Coast Plutonic Complex

LITHOLOGY: Andesitic Tuff
 Porphyritic Quartz Diorite
 Quartz Feldspar Porphyry Dike
 Rhyodacitic Flow
 Rhyodacitic Tuff
 Andesitic Breccia
 Andesitic Porphyritic Flow
 Amygdaloidal Basalt Flow
 Monzonite Dike
 Hornblende Feldspar Porphyry Dike

HOSTROCK COMMENTS: Lower Cretaceous volcanics and minor sedimentary rocks are intruded by dykes and intrusions in part related to the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Gambier

Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

COMMENTS: Along the faulted northeast margin of the Coast Plutonic Complex.

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Gold

0.5400

Grams per tonne

Copper

0.3000

Per cent

COMMENTS: Geochemical analyses from hole NM-88-2. Copper is an average over an 18-metre interval; gold is an average over an 8.5-metre interval.

REFERENCE: Assessment Report 18036.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM 1972-309
GSC MAP 5-1968; 1713A
GSC OF 1163
GSC P 68-33
GCNL #53(Mar.17), 1997; #93 (May 14), 1998

DATE CODED: 1985/07/24
DATE REVISED: 1991/12/28

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092N 031**

NATIONAL MINERAL INVENTORY:

NAME(S): **MO 1-83**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N11E 092N10W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 38 12 N
LONGITUDE: 125 00 11 W
ELEVATION: 2134 Metres

NORTHING: 5722529
EASTING: 361385

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location based on description, within the Mo 1-83 claims, 4.8 kilometres southwest of the southern end of Middle Lake, 40 kilometres southwest of the community of Tatla Lake (Geology, Exploration and Mining in British Columbia 1972).

COMMODITIES: Copper Molybdenum Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Galena Sphalerite
ASSOCIATED: Pyrite
ALTERATION: Malachite Azurite Molybdite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Unknown Mesozoic-Cenozoic	Unnamed/Unknown Group	Unnamed/Unknown Formation	Klinaklini Pluton

LITHOLOGY: Quartz Monzonite
Quartz Diorite
Diorite
Felsite Dike
Andesite
Basalt
Tuff

HOSTROCK COMMENTS: Mineralization is apparently hosted in a quartz monzonite stock in the Klinaklini pluton of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Plutonic Rocks
COMMENTS: Within a large composite intrusion of the Coast Plutonic Complex.

CAPSULE GEOLOGY

The Mo occurrence consists of base metal mineralization in plutonic rocks, 4.8 kilometres southwest of the southern end of Middle Lake, 40 kilometres southwest of the community of Tatla Lake. Only limited information is available, and its location is very approximate (Geology, Exploration and Mining in British Columbia 1972).

The area lies within a large composite intrusion, the Klinaklini pluton, of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163). This consists locally of quartz diorite and diorite, which are intruded by a quartz monzonite stock and a large number and variety of felsite dykes. Older, volcanic rocks including andesite, basalt and tuff, form roof pendants in the intrusions.

The mineralization is apparently associated with the quartz monzonite stock. Pyrite, chalcopyrite, molybdenite, galena, sphalerite, molybdite, malachite and azurite have been found.

BIBLIOGRAPHY

EMPR GEM 1972-310
GSC OF 1163

DATE CODED: 1985/07/24
DATE REVISED: 1991/12/30

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

gneiss, quartz diorite gneiss and coarse-grained biotite granodiorite. These are intruded by small irregular bodies of fine to medium-grained biotite granite porphyry, quartz monzonite porphyry, and numerous quartz-feldspar porphyry, micromonzonite and felsite dykes. Dyke emplacement was generally fault or fracture-controlled, typically trending northeast (preferred) to northwest. The most abundant rock is porphyritic biotite granite or granodiorite. All the above rocks contain pervasive pyrite, averaging about 10 per cent, which has oxidized to produce a large and conspicuous area of gossan.

The rocks in the area are strongly fractured and friable. Fractures are generally steep and have similar trends to the dykes. Alteration is widespread, the degree of which corresponds to the degree of fracturing. As well as oxidation of pyrite, there is sericitic alteration and secondary biotite-magnetite-potassium feldspar. Supergene clay alteration is widespread; silicification is generally weak except around the strongest mineralization.

The A & E occurrence is centred on an east-southeast-trending ridge, largely covered by rusty-weathering talus derived from fractured and moderately altered and mineralized bedrock. A coincident copper-molybdenum anomaly is present in the area, based largely on talus or silt sampling. Mineralization is characterized by mainly fracture-controlled molybdenum and copper mineralization associated with quartz veinlets in pyritic intrusions. The strongest mineralization coincides with the area of strongest fracturing. Molybdenite occurs in quartz-filled fractures up to 3 centimetres thick, and also as thin coatings along hairline fractures; it is also widespread as fine disseminated grains, but in minor amounts. Similarly, chalcopyrite occurs in fracture-controlled veinlets, and less importantly as minor disseminations. Very minor amounts of bornite, malachite and ferrimolybdate are reported (Assessment Report 8115).

Geochemical analyses for copper, molybdenum, zinc, gold and silver generally indicate low or very low-grade mineralization, comparable to background anomalous values. One select grab sample assayed 1.85 per cent molybdenum (Assessment Report 4809). One source apparently indicates rock samples with up to 0.1 per cent copper (Assessment Report 2942, Map 3).

BIBLIOGRAPHY

EMPR GEM 1973-263
EMPR EXPL 1975-E116; 1980-280; 1981-48
EMPR ASS RPT 2942, *4809, *5501, 8115, 8345, 9484
GSC OF 1163

DATE CODED: 1985/07/24
DATE REVISED: 1991/12/14

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

ORE ZONE: MAIN SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
 SAMPLE TYPE: Rock
 COMMODITY

YEAR: 1972

COMMODITY	GRADE	
Silver	51.0000	Grams per tonne
Gold	52.0000	Grams per tonne
Copper	1.6100	Per cent
Lead	0.8200	Per cent
Antimony	0.0840	Per cent
Zinc	0.6100	Per cent

COMMENTS: Gold and silver values are highest in a range of best assays. Copper, zinc, lead and antimony are best analyses of high-grade material.

REFERENCE: Assessment Report 4572; Assessment Report 19245 for antimony.

CAPSULE GEOLOGY

The Orwill prospect is characterized by mineralized quartz veins containing significant gold and silver values. It is located 2.5 kilometres northwest of Klinaklini River, 20 kilometres northeast of Klinaklini Lake.

The occurrence lies in the Stikinia Terrane, within a large quartz diorite intrusion related to the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163, Map 1713A). The quartz diorite is dated at 66 million years (Late Cretaceous) by the potassium-argon method on hornblende and biotite (Geological Survey of Canada Open File 1163). It has a coarse-grained, equigranular to gneissic texture. To the southeast of the intrusion, and weakly contact metamorphosed by it, are Lower Cretaceous volcanics and minor sedimentary rocks of the Gambier overlap assemblage (Geological Survey of Canada Map 1713A). These rocks comprise andesitic and basaltic lapilli tuffs, breccia and minor shale, siltstone, greywacke and conglomerate. Relict bedding is preserved locally. Two major faults occur east of the area: the northwest-trending, steeply southwest-dipping Tchaikazan fault is truncated by a northeast-trending fault in the Klinaklini River valley.

The Main showing of the Orwill prospect occurs in a roof pendant of volcanic or volcanoclastic rocks, about 750 metres inside the border of the quartz diorite intrusion. A dyke-like phase of the intrusion, a porphyritic microdiorite, occurs near the contact with the volcanics. The volcanics are strongly hornfelsed and they and the microdiorite are marked by fracturing and veining, associated with disseminated arsenopyrite (up to 10 per cent), pyrite and pyrrhotite. The latter minerals may be oxidized, producing gossanous outcrops. Hydrothermal alteration present includes silicification and bleaching and the production of sericite, chlorite and biotite. All the above features increase with proximity to the Main showing, which measures about 16 by 8 metres. Most of the work done has been at the Main showing, although minor mineralization and soil anomalies are present elsewhere on the property.

Mineralization at the Main showing is concentrated in strongly fractured and altered microdiorite, and to a lesser degree in the hornfelsed volcanics. It occurs as disseminated sulphides, but more importantly in discontinuous lenses, veins and fracture-fillings of quartz, generally between 5 and 15 centimetres thick, and locally in massive sulphide lenses up to 2 by 0.3 metres. At least 5 significant veins have been discovered. The paragenesis is arsenopyrite, boulangerite, chalcopyrite, pyrite, native bismuth, gold-bismuth and gold; minor galena, sphalerite, stibnite and pyrrhotite are associated (Assessment Report 19245). As well as native gold, gold is present as fine grains in arsenopyrite. Argentite is also reported (Assessment Reports 4572, 11114).

Recorded gold and silver values are high but sporadic. The best assay results reported for chip and rock samples from the Main showing are in the ranges of 15 to 52 grams per tonne gold, and 6.8 to 51 grams per tonne silver (Assessment Reports 4572, 11114, 11994, 17528). Gold and silver each assayed 7.5 grams per tonne over a 30-centimetre core sample from 29 metres vertically below the surface (Assessment Report 4572). Other notable analyses are up to 1.61 per cent copper, 0.61 per cent zinc, 0.82 per cent lead, 0.084 per cent antimony and 0.003 per cent bismuth (Assessment Reports 4572, 11994, 19245). One sample contained anomalous scandium (Assessment Report 17528).

Fracture and vein orientations vary from northeast to northwest; dips vary widely from 20 degrees to vertical. They are probably related to the two major faults. Overall, the deposit appears to be structurally controlled along a northerly trend.

BIBLIOGRAPHY

EMPR GEM 1973-265

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RUN TIME: 11:19:00

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ENERGY AND MINERALS DIVISION

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REPORT: RGEN0100

BIBLIOGRAPHY

EMPR EXPL 1975-E117; 1982-237; 1983-341; 1988-C130
EMPR ASS RPT *4572, 11114, 11994, *17528, 18270, *19245
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1991/12/03

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 034**

NATIONAL MINERAL INVENTORY: 092N5 Cu1

NAME(S): **HOODOO SOUTH**, BZT 1, MCGOWAN
HOODOO CREEK, BZT 1-9

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N05E
BC MAP:

MINING DIVISION: Vancouver

LATITUDE: 51 20 35 N
LONGITUDE: 125 39 46 W
ELEVATION: 716 Metres

UTM ZONE: 10 (NAD 83)
NORTHING: 5691341
EASTING: 314550

LOCATION ACCURACY: Within 500M

COMMENTS: Located on sample location 7CS654, 600 metres south of Hoodoo Creek,
1.5 kilometres east of Klinaklini River, 28 kilometres north of the
head of Knight Inlet (Assessment Report 6819, Figure 4).

COMMODITIES: Molybdenum Copper

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite
COMMENTS: Very minor chalcopyrite.
ASSOCIATED: Pyrite Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Disseminated Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: L05 Porphyry Mo (Low F- type)
SHAPE: Irregular
DIMENSION: 500 x 500 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Area of molybdenite showings.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Quartz Monzonite
Granodiorite
Foliated Quartz Diorite
Diorite
Granitoid Gneiss
Dacite Dike
Feldspar Hornblende Quartz Dike
Andesite Dike
Rhyolite Dike
Quartz Monzonite Dike

HOSTROCK COMMENTS: Quartz monzonite and granodiorite stocks intruded into older plutons
and gneisses of the Jurassic to Tertiary Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Plutonic Rocks Undivided Metamorphic Assembl.
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Amphibolite

CAPSULE GEOLOGY

The Hoodoo South occurrence consists of molybdenum and copper mineralization, and covers the western part of the Hoodoo Creek property. It is 4.5 kilometres west-southwest of the Hoodoo North occurrence (092N 029), 28 kilometres north of the head of Knight Inlet.

Amax Incorporation, through Amax Potash Limited, staked the property as the BZT 1 to 9 claims (103 units) with BZT 1 covering Hoodoo South and BZT 5-8 Hoodoo North. Work during 1977-78 included geological mapping and geochemical soil and rock chip surveys (515 samples). Subsequent work was under a 50-50 joint venture agreement with Utah Mines Limited. Canamax Resources Incorporated was incorporated in December 1982 to consolidate Amax's Canadian exploration interests; a 63.9 per cent interest in the new company was held by Amax of Canada Limited.

The occurrence lies within the Jurassic to Tertiary Coast Plutonic Complex, which locally consists of foliated quartz diorite, diorite and granitoid gneisses of probable Mesozoic age (Geological Survey of Canada Open File 1163). These rocks are intruded by coarse-grained quartz monzonite and fine to medium-grained granodiorite stocks. These rocks may also be Mesozoic, or of

CAPSULE GEOLOGY

Tertiary age if they are related to the Miocene intrusions at the Hoodoo North occurrence.

Mineralization is largely restricted to the quartz monzonite stock, and consists of several molybdenite showings over an area of 500 by 500 metres. The intrusion of the stock was partly fault controlled: its contact with the dioritic rocks and gneisses is marked by breccia zones. These zones contain up to 5 per cent disseminated pyrite in the matrix, and very minor chalcopyrite. In the interior of the quartz monzonite, mineralization comprises mainly veins or widely-spaced fracture coatings containing quartz-pyrite, pyrite, quartz-molybdenite, or quartz-molybdenite-chalcopyrite. One spectacular quartz-molybdenite-pyrite-chalcopyrite vein, 10 centimetres wide, consists of at least 90 per cent sulphides, of which 50 per cent is coarse rosettes of molybdenite (Assessment Report 8218). Molybdenite also occurs in the granodiorite, in weak stockwork zones or widespread quartz veins.

Dikes are common in the area, cutting all the above-mentioned rocks. Quartz monzonite, dacite, feldspar-hornblende-quartz porphyry, andesite, and rarely rhyolite compositions are present; however, none show mineralization.

No significant hydrothermal alteration is reported in the stocks or the older rocks.

BIBLIOGRAPHY

EMPR ASS RPT *6819, 7415, *8218
EMPR EXPL 1977-E175; 1978-E183; 1979-192; 1980-278; 1981-26
GSC OF 1163

DATE CODED: 1985/07/24
DATE REVISED: 1999/08/20

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 035**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOMESTAKE**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N10W
BC MAP:

Underground

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 33 32 N
LONGITUDE: 124 47 09 W
ELEVATION: 2270 Metres

NORTHING: 5713490
EASTING: 376205

LOCATION ACCURACY: Within 1 KM

COMMENTS: Southwest of the head of Razor Creek, 43 kilometres south of Kleena Kleene, located from a sketch map (Property File - Berniolles, L.M., 1991), supported by description (Minister of Mines Annual Report 1938).

COMMODITIES: Gold Silver Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Sphalerite

ASSOCIATED: Quartz

COMMENTS: Sulphide minerals are concentrated in quartz veins.

ALTERATION: Quartz Limonite Chlorite

COMMENTS: The product of oxidation is presumed to be limonite.

ALTERATION TYPE: Silicific'n Oxidation Chloritic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Shear Concordant

CLASSIFICATION: Hydrothermal Epigenetic

COMMENTS: Quartz veins and stringers are generally concordant with the bedding and fabric of the host rocks, which strike north to northeast and dip moderately west.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Upper Triassic

Lower Cretaceous

GROUP

Unnamed/Unknown Group

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Andesitic Tuff
Andesitic Breccia
Greenstone
Chloritic Conglomerate
Sericitic Schist
Chloritic Schist
Argillite
Diabase Dike
Felsic Intermediate Dike

HOSTROCK COMMENTS: Host rocks are thrust-imblicated Upper Triassic and Lower Cretaceous metavolcanic and metasedimentary rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Stikine

METAMORPHIC TYPE: Regional

COMMENTS: In thrust-imblicated rocks northeast of the Coast Plutonic Complex.

Gambier

PHYSIOGRAPHIC AREA: Pacific Ranges

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1938

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

6.8000

Grams per tonne

Gold

26.7000

Grams per tonne

COMMENTS: Values given may not be assays. Chip sample taken over a width of 68 centimetres in quartz and greenstone.

REFERENCE: Minister of Mines Annual Report 1938.

CAPSULE GEOLOGY

The Homestake occurrence consists of several minor gold and silver-bearing quartz veins in the mountainous terrain at the head of Razor Creek, 43 kilometres south of Kleena Kleene. Similar, though more significant mineralization occurs about 2 kilometres to the

CAPSULE GEOLOGY

north at the Blackhorn Mountain occurrence (092N 019).

The area lies in the Stikinia Terrane near the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex, within a complex stack of recumbent folds and imbricated, gently southwest-dipping thrust sheets which also involve the Gambier overlap assemblage (Geological Survey of Canada Open File 1163, Map 1713A). The northeast-directed thrusting placed Upper Triassic (Carnian) and Lower Cretaceous volcanic and sedimentary rocks over Lower Cretaceous (Hauterivian) sedimentary rocks (Geological Survey of Canada Open File 1163, Papers 88-1E, 89-1E; Geology 1991). The thrusting took place in the Late Cretaceous because the thrusts are cut by a quartz diorite intrusion dated at 68 million years by the uranium-lead method on zircon (Geological Survey of Canada Paper 88-1E).

The area of economic interest lies within the imbricated Upper Triassic and Lower Cretaceous rocks. The local geology probably involves more than one thrust sheet, but as thrusts were not recognized as such in the pertinent data sources, a structural interpretation of the local stratigraphy is not attempted here.

Most of the area around the occurrence is underlain by andesitic tuff and breccia, metamorphosed at greenschist grade and usually described as greenstone, or as chlorite schist where the rocks are sheared. Minor shale or argillite or sericitic schist is intercalated with the volcanics. The strata strike north to northeast and dip gently to moderately to the west. Underneath the metavolcanics are grey sericitic schist, green chloritic conglomerate, and black, platy argillite. The area is intruded by diabase dykes and numerous felsic to intermediate porphyritic dykes and sills; the dykes are generally steep, and strike east.

Quartz veins, of various thickness and length, are numerous. They are more common in the more foliated or sheared rocks, typically concordant with the foliation, suggesting that they are structurally controlled. Some silicification and rusty alteration (oxidation) is reported around some quartz veins and lenses. Locally the quartz has a honeycomb texture.

The veins that have received the most attention occur in the chloritic conglomerate or the metavolcanic greenschist; some of these are associated with shearing or faulting. Typically, the lenticular veins and quartz stringers are under 50 centimetres thick, and are discontinuous, extending for less than 10 or 20 metres. Locally they contain sulphide-rich lenses consisting of pyrite and minor chalcopyrite and sphalerite. One quartz and greenstone sample, taken over a width of 68 centimetres, assayed 26.7 grams per tonne gold and 6.8 grams per tonne silver (Minister of Mines Annual Report 1938). The greenstone host rock, containing disseminated sulphides, was analysed at 0.7 gram per tonne gold and 6.8 grams per tonne silver, measured over a width of 74 centimetres.

Apparently the only work on the Homestake occurrence was between its discovery in 1936 to 1940. This consisted of several surface cuts, the digging of a 45-metre adit, and prospecting.

BIBLIOGRAPHY

- EMPR AR 1937-F5; *1938-F37; 1940-A96
EMPR PF (Berniolles, L.M. (1991): Letter dated Nov.21, 1991)
GSC OF 1163
GSC P 68-33, p. 87; 88-1E, pp. 185-190; 89-1E, pp. 163-167
GSC MAP 5-1968; 1713A
GSA GEOLOGY 1991, pp. 941-944

DATE CODED: 1985/07/24
DATE REVISED: 1992/12/06

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

A typical average assay of chip samples taken across the widths of veins or zones in the adits that are mineralized with arsenopyrite and pyrite is 6 grams per tonne gold and about 70 grams per tonne silver (Minister of Mines Annual Report 1934; Assessment Reports 16959, 17980). One quartz vein grab sample assayed 26.75 grams per tonne gold and 39.5 grams per tonne silver (Assessment Report 17980). Another grab sample assayed 2.52 per cent copper, 3.13 per cent zinc and 0.33 per cent lead, although high values of these metals are very sporadic (Assessment Report 16959).

BIBLIOGRAPHY

EMPR AR *1934-F13; *1935-F33; 1937-F34
EMPR GEM 1974-219
EMPR EXPL 1988-C129
EMPR BULL 20 Part 4, p. 37
EMPR ASS RPT *16959, *17980
GSC OF 1163
GSC P 68-33; 88-1E, pp. 185-190; 89-1E, pp. 163-167; 91-2, pp.
109-113
GSC MAP 5-1968; 1713A
GSA GEOLOGY 1991, pp. 941-944

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/13

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 037**

NATIONAL MINERAL INVENTORY:

NAME(S): **STANDARD (L.1176)**, FEDERAL (L.1179), ARGO 1,3,
LANGARA 1-7, ARGO (L.1177), MARY (L.1178)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N07E
BC MAP:

Underground

MINING DIVISION: Clinton

LATITUDE: 51 29 02 N
LONGITUDE: 124 36 04 W
ELEVATION: 1798 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5704853
EASTING: 388827

LOCATION ACCURACY: Within 500M

COMMENTS: Located on adit on Crown Granted Lot 1176, 5 kilometres west of
Ottarasko Creek, 45 kilometres south of the community of Tatla Lake
(Assessment Report 17980, Figure 4).

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Arsenopyrite Pyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Quartz Pyrite Limonite Malachite
ALTERATION TYPE: Silicific'n Pyrite Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Massive
CLASSIFICATION: Hydrothermal Epigenetic Replacement
TYPE: I02 Intrusion-related Au pyrrhotite veins
DIMENSION: STRIKE/DIP: TREND/PLUNGE: 160/
COMMENTS: Most mineralized quartz veins trend 160 degrees.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous Mesozoic-Cenozoic	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex

LITHOLOGY: Siltstone
Sandstone
Argillite
Greywacke
Conglomerate
Quartz Diorite
Mafic Dike

HOSTROCK COMMENTS: Mineralization is hosted in quartz veins in Lower Cretaceous
metasediments in the altered and hornfelsed aureole of an intrusion.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Gambier
METAMORPHIC TYPE: Contact
COMMENTS: In a fold-thrust belt, northeastern margin of Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges
RELATIONSHIP: Plutonic Rocks
GRADE:

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Rock
COMMODITY: Copper GRADE: 0.3000 Per cent
COMMENTS: Geochemical analysis, highest value.
REFERENCE: Assessment Report 17980.

ORE ZONE: VEIN REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Rock
COMMODITY: Silver 9.8000 Grams per tonne
Gold 19.2000 Grams per tonne
COMMENTS: Geochemical analysis of 4-centimetre thick quartz vein.
REFERENCE: Assessment Report 17980.

INVENTORY

ORE ZONE: ADIT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1935

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

20.6000

Grams per tonne

Gold

15.0000

Grams per tonne

COMMENTS: Assayed chip sample of massive mineralization in the Standard adit, taken over 2 metres.

REFERENCE: Minister of Mines Annual Report 1935.

CAPSULE GEOLOGY

The Standard occurrence is one of a group of gold-silver showings which occur in a small area 10 kilometres west of the south end of Tatlayako Lake. Other showings in this group are covered by the Langara (092N 036) and Argo (092N 038) occurrences. Gold was discovered in 1911, although the area was not explored properly until the mid-1930's, and again in 1987 and 1988.

The area lies in the Gambier overlap assemblage between the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex and the Tchaikazan fault to the northeast (Geological Survey of Canada Open File 1163, Map 1713A). It is located within a complex belt of folds and imbricated, gently southwest-dipping thrust sheets (Geological Survey of Canada Open File 1163, Papers 88-1E, 89-1E; Geology 1991). The thrusting took place in the Late Cretaceous because the thrusts are cut by a quartz diorite intrusion dated at 68 million years by the uranium-lead method on zircon (Geological Survey of Canada Papers 88-1E, 91-2).

The area of economic interest covers several square kilometres immediately south of a creek which flows east-northeast into Ottarasko Creek. The northern part of this area is underlain by a quartz diorite intrusion (which may be related to the 68 million year-old intrusion mentioned above). To the south of the intrusion are Lower Cretaceous siltstone, sandstone, greywacke and conglomerate (informally named the Cloud Drifter Formation in Geological Survey of Canada Papers 88-1E and 89-1E). These rocks contain isoclinal minor folds locally; bedding is obscure and rather irregular. The area also contains numerous, small mafic dykes.

The contact between the intrusion and the sedimentary rocks is irregular due to dyke-like projections and small stocks of quartz diorite, but generally it trends east-northeast for at least 3 kilometres. The adjacent sedimentary rocks have been strongly altered and hornfelsed by the intrusion for a width of 200 to 300 metres, and it is this zone that contains the most important mineral showings.

The hornfelsed and altered zone is characterized by silicification, pyritization and quartz veining. Fine pyrite and arsenopyrite are pervasive in trace amounts; chalcopyrite is less common. Locally oxidation has produced conspicuous limonitic zones. Quartz veins occupy fractures that cut both the quartz diorite and the sedimentary rocks. The veins are generally between 5 and 10 centimetres thick but may be up to 1.5 metres thick; some display epithermal textures. Some veins trend subparallel to the quartz diorite contact but these are much less mineralized than those that trend between northwest and north-northeast, which may be strongly mineralized with arsenopyrite and pyrite, with minor chalcopyrite and rare malachite.

The Standard occurrence is centred on a short adit in silicified and mineralized siltstone and sandstone, although it is about 500 metres south of the main silicified and pyritized aureole of the quartz diorite intrusion. Arsenopyrite and pyrite mineralization is associated with quartz-filled fractures trending 160 degrees, or it is disseminated in the host rocks, and is traceable for 75 metres over a width of 1 to 2 metres. Some of the mineralization is massive and described as a replacement in argillite; this was assayed at 15 grams per tonne gold and 20.6 grams per tonne silver over 2 metres (Minister of Mines Annual Report 1935). A 4-centimetre thick quartz vein was analyzed at 19.2 grams per tonne gold and 9.8 grams per tonne silver; another sample contained 0.3 per cent copper (Assessment Report 17980).

BIBLIOGRAPHY

EMPR AR *1934-F13; *1935-F33; 1937-F34
EMPR GEM 1974-219
EMPR EXPL 1988-C129
EMPR BULL 20 Part 4, p. 37
EMPR ASS RPT *16959, *17980

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 751
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 1163
GSC P 68-33; 88-1E, pp. 185-190; 89-1E, pp. 163-167; 91-2, pp.
109-113
GSC MAP 5-1968; 1713A
GSA GEOLOGY 1991, pp. 941-944

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/13

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 038**

NATIONAL MINERAL INVENTORY:

NAME(S): **ARGO (L.1177)**, MARY (L.1178), LANGARA 1-7,
ARGO 1,3, STANDARD (L.1176), FEDERAL (L.1179),
ARASKO IV

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N07E

UTM ZONE: 10 (NAD 83)

BC MAP:
LATITUDE: 51 29 29 N
LONGITUDE: 124 36 51 W

NORTHING: 5705707

EASTING: 387938

ELEVATION: 1494 Metres
LOCATION ACCURACY: Within 500M

COMMENTS: Located on outcrop 19080, Crown Grant claim Lot 1177, 5 kilometres west of Otterasko Creek, 45 kilometres south of the community of Tatla Lake (Assessment Report 17980, Figure 4).

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS

SIGNIFICANT: Arsenopyrite Pyrite Chalcopyrite Sphalerite Galena

COMMENTS: These minerals mainly occur in quartz veins but may also be disseminated in the host rocks.

ASSOCIATED: Quartz

ALTERATION: Quartz Pyrite Limonite Malachite

COMMENTS: Alteration is associated with the aureole of a quartz diorite intrusion.

ALTERATION TYPE: Silicific'n Pyrite Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I02 Intrusion-related Au pyrrhotite veins

COMMENTS: Most fracture-controlled, mineralized quartz veins are subvertical and trend north-northwest.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Lower Cretaceous
Mesozoic-Cenozoic

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Coast Plutonic Complex

LITHOLOGY: Siltstone
Sandstone
Argillite
Quartz Diorite
Greywacke
Conglomerate
Mafic Dike

HOSTROCK COMMENTS: Mineralization is mainly hosted in quartz veins in Lower Cretaceous metasediments in the altered and hornfelsed aureole of an intrusion.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Pacific Ranges

TERRANE: Gambier

Plutonic Rocks

METAMORPHIC TYPE: Contact

RELATIONSHIP: Syn-mineralization

GRADE:

COMMENTS: In a fold-thrust belt, northeastern margin of Coast Plutonic Complex.

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Rock

COMMODITY

GRADE

Silver 34.0000 Grams per tonne

Gold 8.0000 Grams per tonne

Copper 0.4300 Per cent

COMMENTS: Highest values in a range of reported geochemical analyses.

REFERENCE: Minister of Mines Annual Report 1935; Assessment Reports 16959, 17980.

CAPSULE GEOLOGY

The Argo occurrence is one of a group of gold-silver showings which occur in a small area 10 kilometres west of the south end of Tatlayako Lake. Other showings in this group are covered by the

CAPSULE GEOLOGY

Langara (092N 036) and Standard (092N 037) occurrences. Gold was discovered in 1911, although the area was not explored properly until the mid-1930's, and again in 1987 and 1988.

The area lies in the Gambier overlap assemblage between the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex and the Tchaikazan fault to the northeast (Geological Survey of Canada Open File 1163, Map 1713A). It is located within a complex belt of folds and imbricated, gently southwest-dipping thrust sheets (Geological Survey of Canada Open File 1163, Papers 88-1E, 89-1E; Geology 1991). The thrusting took place in the Late Cretaceous because the thrusts are cut by a quartz diorite intrusion dated at 68 million years by the uranium-lead method on zircon (Geological Survey of Canada Papers 88-1E, 91-2).

The area of economic interest covers several square kilometres immediately south of a creek which flows east-northeast into Ottarasko Creek. The northern part of this area is underlain by a quartz diorite intrusion (which may be related to the 68 million year-old intrusion mentioned above). To the south of the intrusion are Lower Cretaceous siltstone, sandstone, greywacke and conglomerate (informally named the Cloud Drifter Formation in Geological Survey of Canada Papers 88-1E and 89-1E). These rocks contain isoclinal minor folds locally; bedding is obscure and rather irregular. The area also contains numerous, small mafic dykes.

The contact between the intrusion and the sedimentary rocks is irregular due to dyke-like projections and small stocks of quartz diorite, but generally it trends east-northeast for at least 3 kilometres. The adjacent sedimentary rocks have been strongly altered and hornfelsed by the intrusion for a width of 200 to 300 metres, and it is this zone that contains the most important mineral showings.

The hornfelsed and altered zone is characterized by silicification, pyritization and quartz veining. Fine pyrite and arsenopyrite are pervasive in trace amounts; chalcopyrite is less common. Locally oxidation has produced conspicuous limonitic zones. Quartz veins occupy fractures that cut both the quartz diorite and the sedimentary rocks. The veins are generally between 5 and 10 centimetres thick but may be up to 1.5 metres thick; some display epithermal textures. Some veins trend subparallel to the quartz diorite contact but these are much less mineralized than those that trend between northwest and north-northeast, which may be strongly mineralized with arsenopyrite and pyrite, with minor chalcopyrite and rare malachite.

The Argo occurrence is centred on a series of oxidized outcrops of silicified sandstone and argillite, containing disseminated sulphides, at the quartz diorite contact on the original Argo Crown-granted claim Lot 1177. Strong pyrite and arsenopyrite in quartz veins are accompanied locally by chalcopyrite, galena, sphalerite and pyrrhotite. Typical samples from this area contained or averaged between 1.5 and 8 grams per tonne gold and between 3.5 and 34 grams per tonne silver, and up to 0.43 per cent copper (Minister of Mines Annual Report 1935; Assessment Reports 16959, 17980).

BIBLIOGRAPHY

- EMPR AR *1934-F13; *1935-F33; 1937-F34
- EMPR GEM 1974-219
- EMPR EXPL 1988-C129
- EMPR BULL 20 Part 4, p. 37
- EMPR ASS RPT *16959, *17980
- GSC OF 1163
- GSC P 68-33; 88-1E, pp. 185-190; 89-1E, pp. 163-167; 91-2, pp. 109-113
- GSC MAP 5-1968; 1713A
- GSA GEOLOGY 1991, pp. 941-944

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/13

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 039**

NATIONAL MINERAL INVENTORY:

NAME(S): **SKINNER**, VICTORIA VEIN, SK 3,
MOUNT SKINNER, SK 1-7

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092N09W
BC MAP:

Underground

MINING DIVISION: Clinton

LATITUDE: 51 41 33 N
LONGITUDE: 124 23 33 W
ELEVATION: 1219 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5727756
EASTING: 403753

LOCATION ACCURACY: Within 500M

COMMENTS: Located on the Victoria vein on the SK 3 claim, 2.5 kilometres southwest of Mount Skinner, 5 kilometres north of the northern end of Tatlayoko Lake (Assessment Report 21396, Figure 5).

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Gold Pyrite Chalcopyrite

COMMENTS: Chalcopyrite is in trace amounts. Visible gold is present.

ASSOCIATED: Quartz Sericite

ALTERATION: Quartz Malachite Chlorite Epidote Limonite
Hematite

COMMENTS: Propylitic alteration is associated with a dyke.

ALTERATION TYPE: Silicific'n Chloritic Sericitic Argillic Propylitic
Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Shear
CLASSIFICATION: Mesothermal Epigenetic

TYPE: I02 Intrusion-related Au pyrrhotite veins I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Tabular

DIMENSION: 110 x 1 Metres STRIKE/DIP: 060/70N

TREND/PLUNGE:

COMMENTS: Victoria vein, up to 1.4 metres wide and striking between 050 and 070 degrees.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic-Jurassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex
Mesozoic-Cenozoic			

LITHOLOGY: Quartz Diorite
Diorite
Mafic Dike
Intermediate Dike
Felsic Dike
Andesitic Flow
Andesitic Tuff

HOSTROCK COMMENTS: Host quartz diorite is probably related to the Jurassic to Tertiary Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Cadwallader

Plutonic Rocks

PHYSIOGRAPHIC AREA: Chilcotin Plateau

COMMENTS: Host intrusion is immediately southwest of the Yalakom fault.

INVENTORY

ORE ZONE: VICTORIA VEIN

REPORT ON: Y

CATEGORY: Possible
QUANTITY: 11800 Tonnes

YEAR: 1991

COMMODITY: Gold

GRADE: 16.0000 Grams per tonne

COMMENTS: Indicated reserves.

REFERENCE: Property File - Berniolles, L.M. 1991.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 756
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 5-1968; 1713A
GSC OF 1163
GSC P 68-33
GCNL #115,#116, 1991
MIN REV Winter 1992
N MINER June 6, 1994
V STOCKWATCH Jan.29, 1991, p. 10

DATE CODED: 1991/05/22
DATE REVISED: 1992/02/11

CODED BY: RAL
REVISED BY: CJR

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092N 040**

NATIONAL MINERAL INVENTORY:

NAME(S): **RASK**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N10E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 32 06 N
LONGITUDE: 124 35 57 W
ELEVATION: 1585 Metres

NORTHING: 5710534
EASTING: 389086

LOCATION ACCURACY: Within 500M

COMMENTS: Located from a gold-silver occurrence symbol, 1 kilometre west of Ottarasko Creek, 41 kilometres south of the community of Tatla Lake (Geological Survey of Canada Map 5-1968).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Unknown
COMMENTS: Unspecified minerals occur in quartz veins.
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Lower Cretaceous
Mesozoic-Cenozoic

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Coast Plutonic Complex

LITHOLOGY: Siltstone
Sandstone
Greywacke
Conglomerate
Intrusive

HOSTROCK COMMENTS: Mineralized quartz veins occur in Lower Cretaceous sedimentary rocks and/or small intrusions related to the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Pacific Ranges

TERRANE: Gambier

Plutonic Rocks

COMMENTS: In a fold-thrust belt, northeast margin of the Coast Plutonic Complex.

CAPSULE GEOLOGY

The Rask occurrence is based on a map symbol indicating gold and silver mineralization, near the headwaters of Ottarasko Creek (Geological Survey of Canada Map 5-1968).

Very little information is available. A probable reference to the showing indicates that it comprises gold and silver-bearing veins in Lower Cretaceous sedimentary rocks and/or small intrusions related to the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Paper 68-33). The Lower Cretaceous unit consists of siltstone, sandstone, greywacke and conglomerate (Geological Survey of Canada Open File 1163; informally named the Cloud Drifter Formation in Geological Survey of Canada Papers 88-1E and 89-1E).

The area lies in the Gambier overlap assemblage between the northeastern margin of the Coast Plutonic Complex and the Tchaikazan fault to the northeast (Geological Survey of Canada Open File 1163, Map 1713A). It is located within a complex belt of folds and imbricated, gently southwest-dipping thrust sheets (Geological Survey of Canada Open File 1163, Papers 88-1E, 89-1E; Geology 1991).

BIBLIOGRAPHY

GSC OF 1163
GSC P *68-33, p. 87; 88-1E, pp. 185-190; 89-1E, pp. 163-167
GSC MAP 5-1968; 1713A
GSA GEOLOGY 1991, pp. 941-944

DATE CODED: 1992/01/14
DATE REVISED: 1992/04/09

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 041**

NATIONAL MINERAL INVENTORY:

NAME(S): **K**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N10W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 43 07 N
LONGITUDE: 124 56 42 W
ELEVATION: 2195 Metres

NORTHING: 5731532
EASTING: 365645

LOCATION ACCURACY: Within 500M

COMMENTS: Located on proposed diamond drill hole 1, approximate centre of K claims, 4.5 kilometres north of Middle Lake, 30 kilometres south of Kleena Kleene (Assessment Report 5498, Map 5).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
COMMENTS: Chalcopyrite is not specified in the sources, but may be assumed to be present.

ASSOCIATED: Pyrite Pyrrhotite Quartz
ALTERATION: Pyrite Pyrrhotite Limonite Quartz Sericite
Biotite Magnetite Epidote

COMMENTS: Oxidation product of pyrite and pyrrhotite is presumed to be limonite.
ALTERATION TYPE: Pyrite Oxidation Silicific'n Sericitic Argillic
Epidote

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
COMMENTS: Alteration is partly fracture-related, the main sets striking north-northwest and west-northwest, and dipping moderately west and north, respectively.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous Mesozoic-Cenozoic	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex

LITHOLOGY: Granodiorite Porphyry
Hornblende Quartz Monzonite
Dacite Porphyry Dike
Dacitic Pyroclastic
Andesitic Pyroclastic
Basaltic Pyroclastic
Quartzite
Greywacke

HOSTROCK COMMENTS: Occurrence is situated in strongly altered and fractured stock(s) and volcanics on the northeastern margin of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks Gambier
COMMENTS: Occurrence situated on northeastern margin of Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock

YEAR: 1974

COMMODITY: Copper
GRADE: 0.1000 Per cent

COMMENTS: Most anomalous rock sample.
REFERENCE: Assessment Report 5498.

CAPSULE GEOLOGY

The K occurrence is outlined by a coincident copper-molybdenum geochemical anomaly, located 4.5 kilometres north of Middle Lake, and 30 kilometres south of Kleena Kleene.
The area lies in the Gambier overlap assemblage, in highly altered volcanics intruded by an intermediate stock(s), near the northeastern margin of the Jurassic to Tertiary Coast Plutonic

CAPSULE GEOLOGY

Complex (Geological Survey of Canada Open File 1163, Map 1713A). The main anomaly is about 500 metres across; it is suspected to result from the leaching of copper sulphides (Assessment Report 5498).

Most of the area is underlain by Lower Cretaceous dacitic, andesitic or basaltic agglomerates and tuffs; minor, very impure quartzite (possibly ash tuff) and greywacke also occur. These are intruded by stocks (possibly joined below the surface) of hornblende quartz monzonite and granodiorite porphyry, and by younger dacitic porphyry dykes. The dykes are up to 30 metres thick; their emplacement was probably fault controlled.

Two major fault systems are present, marked by dykes or by indurated gouge zones up to 6 metres thick. Respectively, they strike 340 and 290 degrees, and dip 70 degrees southwest and 65 degrees north.

The area is particularly well fractured and hydrothermally altered, and is marked by a large gossan. The volcanics and intrusives have been affected by strong silicification, sericitization, and pyritic and argillic alteration. The colour of the rocks becomes lighter with the degree of alteration and fracturing.

In more detail, zones of a number of secondary minerals have been outlined, including biotite, magnetite, sericite and epidote, as well as a zone of greater than 5 per cent pyrite and/or pyrrhotite in the northeastern half of the anomalous area. A zone of very intense quartz-magnetite-biotite-limonite-pyrite stockwork veining is present adjacent to the main anomaly.

The nature of mineralization is not specified, although the presence of chalcopyrite may be assumed from the most anomalous rock sample which assayed 0.1 per cent copper (Assessment Report 5498).

BIBLIOGRAPHY

EMPR EXPL 1975-E116
EMPR ASS RPT *5498
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1985/07/24
DATE REVISED: 1991/12/16

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

oldest rock is gneissic granite or granodiorite porphyry. This is intruded by biotite granite, the most abundant rock, and a 120 to 300- metre wide dyke-like body of coarse-grained biotite granite to granodiorite porphyry, which apparently emanates from a stock to the east. Several phases of dykes are also present, consisting of quartz-eye monzonite porphyry, andesite, aplite and monzonite.

Two main fault systems are present. A northwest-striking fault set, partly marked by dyke intrusion, generally separates the biotite granite from the granite-granodiorite porphyry to the northeast. A probably younger set of faults strikes north-northeast, and is also marked by dykes.

The main area of mineralization is at the intersection of these two fault systems, where there is much fracturing, dyke intrusion, and hydrothermal alteration. Alteration is primarily silicification, pyritization (usually about 3 per cent pyrite), oxidation, and leaching; there is also sporadic biotite, potassium feldspar and sericite. Oxidation has produced limonite and ferrimolybdenite.

Mineralization is mainly hosted in the granite-granodiorite porphyry, which is locally capped by iron oxide and moderate to strong clay-silica alteration, and in narrow, randomly-oriented aplitic dykes. Significant molybdenite is present with minor pyrite in numerous quartz veins, 10 to 90 centimetres thick, hairline fractures, and vugs or fracture-fillings associated with quartz, biotite and potassium feldspar. Chalcopyrite-bearing fracture-fillings are also reported (Assessment Report 5494). A quartz vein about 300 metres east of the main mineralization contains scheelite; assay values of 0.09 per cent (oxide of) tungsten and 0.2 per cent molybdenum are reported (Assessment Report 9158).

BIBLIOGRAPHY

EMPR EXPL 1975-E116; 1980-279
EMPR ASS RPT *5494, 9158
GSC OF 1163

DATE CODED: 1985/07/24
DATE REVISED: 1991/12/17

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 043**

NATIONAL MINERAL INVENTORY:

NAME(S): **STOWE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N08E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 21 04 N
LONGITUDE: 124 11 44 W
ELEVATION: 2100 Metres

NORTHING: 5689549
EASTING: 416744

LOCATION ACCURACY: Within 500M

COMMENTS: Located on a mercury-copper occurrence map symbol, 1.4 kilometres east of Mount Howard Stowe, 4 kilometres west of the centre of Chilko Lake (Bulletin 81, Figure 5).

COMMODITIES: Copper Mercury Gold Silver

MINERALS

SIGNIFICANT: Malachite Azurite Cinnabar
COMMENTS: These minerals are presumed to be present, although they are not specified in Bulletin 81.

ASSOCIATED: Carbonate
COMMENTS: Carbonate is presumed to be present.

ALTERATION: Carbonate
COMMENTS: Carbonate alteration is presumed to be present.

ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Epithermal Hydrothermal
TYPE: H05 Epithermal Au-Ag: low sulphidation
COMMENTS: The mineralization is part of the alteration zone in the northwest-striking Tchaikazan fault system.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Upper Cretaceous	Kingsvale	Undefined Formation	

LITHOLOGY: Rhyolitic Basaltic Pyroclastic
Rhyolitic Basaltic Volcanic Flow
Siltstone
Argillite
Greywacke
Conglomerate
Diorite

HOSTROCK COMMENTS: Hosted in a belt of Lower or Upper Cretaceous volcanic and sedimentary rocks in the Tchaikazan fault zone.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Overlap Assemblage Gambier
COMMENTS: In Tchaikazan fault zone, 25 kilometres from Coast Plutonic Complex.

INVENTORY

ORE ZONE: SHOWING REPORT ON: N

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

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	3.4000	Grams per tonne
Gold	0.4450	Grams per tonne
Copper	0.1200	Per cent
Mercury	0.1000	Per cent

COMMENTS: Geochemical analyses. Gold value is from a separate sample.
REFERENCE: Bulletin 81.

CAPSULE GEOLOGY

The Stowe occurrence is a copper-mercury showing, 4 kilometres west of the centre of Chilko Lake. It is 3 kilometres southeast of the similar and significant Alexis occurrence (092N 045) and is part of the same broad zone of alteration and mineralization, although it was not discovered until several years after the Alexis, and has not

CAPSULE GEOLOGY

been explored by industry to date (Bulletin 81). Although the Stowe is a minor showing, it is interesting because it extends the zone of known mineralization.

The area lies within the Tchaikazan fault zone, a regional northwest-striking strike-slip fault (Geological Survey of Canada Map 5-1968, Paper 68-33, Open File 1163). The rocks involved belong to a Cretaceous overlap assemblages, partly the Gambier assemblage, 25 kilometres northeast of the margin of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Map 1713A). The fault zone is a series of subparallel faults, several kilometres wide, and was probably active in the early Tertiary (Geological Survey of Canada Open File 1163). There are numerous smaller transverse, northeast-striking faults.

The Stowe occurrence is hosted in a narrow, fault-bounded belt of Cretaceous rocks within the Tchaikazan fault zone. To the southwest and northeast of this belt are sedimentary and volcanic rocks of Early and Late Cretaceous age, respectively; the latter belong to the Kingsvale Group. The actual age of the Stowe host rocks is ambivalent: they are assigned as either Lower or Upper Cretaceous (Kingsvale Group) by regional mapping (Bulletin 81, Geological Survey of Canada Open File 1163, respectively). The rocks comprise rhyolitic to basaltic pyroclastics and volcanic flows, siltstone, argillite, greywacke and conglomerate. The mineralized zone is adjacent to a small stock of diorite (Bulletin 81). Locally bedding strikes northwest and dips moderately southwest.

Little direct information on the Stowe occurrence is available, but it is reportedly similar to the Alexis occurrence, so it is presumably characterized by strong and pervasive carbonate alteration, brecciation and veining, and geochemical anomalies in several metals. These characteristics have been interpreted to fit the upper zone of the British Columbia epithermal model, related to fracturing and metal-rich hydrothermal activity in the Tchaikazan fault system (Bulletin 81; Assessment Reports 9535, 13892).

Copper and mercury mineralization is reported at the Stowe showing; although not specified, the minerals are probably malachite, azurite and cinnabar since these are prevalent at the Alexis occurrence. Lithogeochemical analyses from the Stowe include 3.4 grams per tonne silver, 0.12 per cent copper, and over 0.1 per cent mercury in one sample, and 0.445 grams per tonne gold in another sample (Bulletin 81). The latter is higher than any gold value reported to date from the Alexis.

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 231-243
EMPR BULL *81
EMPR ASS RPT 9535, 13892
EMPR OF 1987-12; 1987-14
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1985/07/24
DATE REVISED: 1992/02/03

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092N 044**

NATIONAL MINERAL INVENTORY:

NAME(S): **RUSTY**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N09W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 35 04 N
LONGITUDE: 124 29 11 W
ELEVATION: 1981 Metres

NORTHING: 5715867
EASTING: 397019

LOCATION ACCURACY: Within 5 KM

COMMENTS: Exact location of mineralization is not known; located from description, in the north-centre of the Rusty claim group, 7 kilometres south-southeast of Niut Mountain, 5 kilometres west of Tatlayoko Lake (Geology, Exploration and Mining in British Columbia 1972).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
COMMENTS: The host rocks generally strike northwest.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Upper Cretaceous	Kingsvale	Undefined Formation	

LITHOLOGY: Shale
Siltstone
Greywacke
Conglomerate
Andesitic Volcanic Flow
Basaltic Volcanic Flow
Felsic Volcanic Flow
Dike
Sill
Agglomerate

HOSTROCK COMMENTS: The occurrence is imprecisely located; it could be hosted in Lower or Upper Cretaceous rocks north or south of Tchaikazan fault respectively

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage Gambier
COMMENTS: Straddles the Tchaikazan fault, between it and the Niut fault.

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Rusty occurrence consists of copper mineralization in faulted sedimentary and volcanic rocks, 7 kilometres south-southeast of Niut Mountain, 5 kilometres west of Tatlayoko Lake.

Very little information on the occurrence is available (Geology, Exploration and Mining in British Columbia 1972). Some extra information may be gleaned from work on similar rocks in the Fly group of claims immediately to the north (Assessment Reports 10303, 17200).

The occurrence lies in a strongly faulted region underlain by Cretaceous overlap assemblages, partly the Gambier assemblage, between the Tchaikazan fault and a probable splay fault to the northeast, the Niut fault, northeast of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163, Map 1713A). These faults trend northwest and were probably active in the Late Cretaceous and Early Tertiary. Subsidiary faults and shear zones in the area have a variety of trends, commonly west-northwest and east-northeast.

The northern half of the Rusty claim group is underlain by fault-bounded panels of Lower Cretaceous rocks dominated by either sedimentary or volcanic lithologies. These include, respectively, shale, siltstone, greywacke and conglomerate, and andesitic, basaltic or felsic volcanic flows, agglomerate, breccia and tuff (Geological Survey of Canada Open File 1163; Assessment Reports 10303, 17200).

CAPSULE GEOLOGY

These rocks strike northwest. They may be intruded by numerous dykes and sills, many of which are probably related to a relatively large quartz diorite intrusion to the northwest.

The southern half of the claim group crosses the Tchaikazan fault into a block of Upper Cretaceous andesitic and basaltic volcanic rocks of the Kingsvale Group.

The mineralization consists of disseminated chalcopyrite in sedimentary rocks. Given the geology described above, it is more likely that the occurrence is hosted in the Lower Cretaceous rocks.

BIBLIOGRAPHY

EM GEOMAP 2002-03
EMPR ASS RPT 10303, 17200
EMPR EXPL 1981-257; 1988-C129
EMPR GEM 1972-309
GSC MAP 5-1968; 1713A
GSC OF 1163
GSC P 68-33

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/30

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 045**

NATIONAL MINERAL INVENTORY:

NAME(S): **ALEXIS, KNOB, RIDGE,**
ALX, SUNSHINE 1,2

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N08E
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 22 33 N
LONGITUDE: 124 13 00 W
ELEVATION: 2075 Metres

UTM ZONE: 10 (NAD 83)

LOCATION ACCURACY: Within 500M

NORTHING: 5692323
EASTING: 415320

COMMENTS: Located on diamond-drill hole 3, at the centre of the Knob showing, 4 kilometres west of the centre of Chilko Lake (Assessment Report 11661, Map 3).

COMMODITIES: Copper Mercury Silver Antimony Zinc
Gold

MINERALS

SIGNIFICANT: Malachite Azurite Cinnabar Tennantite Tetrahedrite
Realgar Barite Arsenopyrite Stibnite Pyrite
Pyrrhotite Hematite

COMMENTS: Malachite, azurite and cinnabar are predominant.

ASSOCIATED: Calcite Ankerite Quartz Barite

COMMENTS: Quartz is locally chalcedonic, or vuggy.

ALTERATION: Calcite Ankerite Limonite Quartz Epidote

Sericite Kaolinite

COMMENTS: Aragonite, dickite and alunite are also present.

ALTERATION TYPE: Carbonate Silicific'n Argillic Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia Stockwork Shear

CLASSIFICATION: Epithermal Replacement

TYPE: H05 Epithermal Au-Ag: low sulphidation

SHAPE: Bladed

COMMENTS: The mineralized and altered fault zone and most strata in the area generally strike northwest and dip moderately northeast. Individual veins mostly strike northwest and dip steeply, but orientations vary.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous Mesozoic-Cenozoic	Kingsvale	Undefined Formation	Coast Plutonic Complex

LITHOLOGY: Andesitic Pyroclastic Volcanic
Dacitic Pyroclastic Volcanic
Basaltic Pyroclastic Volcanic
Sandstone
Greywacke
Argillite
Hornblende Plagioclase Porphyry Dike
Diorite
Grit
Siltstone

HOSTROCK COMMENTS: The host Kingsvale Group forms a narrow fault-bounded belt within the northwest-striking Tchaikazan fault zone.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges

TERRANE: Overlap Assemblage Plutonic Rocks

COMMENTS: Tchaikazan fault is 25 kilometres northeast of Coast Plutonic Complex.

INVENTORY

ORE ZONE: KNOB

REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1990
SAMPLE TYPE: Chip	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	27.0000 Grams per tonne
Copper	0.8000 Per cent
Mercury	0.4500 Per cent
Antimony	0.2600 Per cent

COMMENTS: Geochemical analyses from a single sample.
 REFERENCE: Bulletin 81.

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1981
SAMPLE TYPE: Rock	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	16.5000 Grams per tonne
Copper	1.4700 Per cent
Antimony	0.3900 Per cent

REFERENCE: Assessment Report 9535.

CAPSULE GEOLOGY

The Alexis occurrence comprises copper-mercury mineralization in a broad alteration zone on a ridge 4 kilometres west of the centre of Chilko Lake. The mineralization was discovered in 1980, and was worked on intermittently in the 1980's, including 287 metres of diamond drilling over 3 holes.

The area lies within the Tchaikazan fault zone, a regional northwest-striking strike-slip fault (Geological Survey of Canada Map 5-1968, Paper 68-33, Open File 1163). It is located in a Cretaceous overlap assemblage, 25 kilometres northeast of the main margin of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163, Map 1713A). The fault zone is a series of subparallel faults, several kilometres wide, and was probably active in the early Tertiary (Geological Survey of Canada Open File 1163). The Alexis occurrence is hosted in a narrow, fault-bounded belt of Upper Cretaceous rocks of the Kingsvale Group within the zone, beyond which are Lower Cretaceous sedimentary and volcanic rocks. There are numerous smaller transverse, northeast-striking faults.

Locally the Kingsvale Group comprises dacitic, andesitic and basaltic volcanic breccia and tuffs, and sandstone, grit, greywacke, siltstone, mudstone, argillite and chert-pebble conglomerate (Assessment Reports 9535, 11661; Geological Survey of Canada Open File 1163). The rocks are intruded by hornblende-plagioclase porphyritic dykes and sills, and by small dioritic stocks, probably related to the Coast Plutonic Complex. Bedding strikes northwest and generally dips moderately northeast. Shear fractures are widespread.

The Alexis occurrence is marked by strong and pervasive alteration, brecciation, veining and mineralization; chalcedonic silica and vuggy vein textures are present in the vein breccias. These characteristics have been interpreted to fit the upper zone of the British Columbia epithermal model, related to fracturing and metal-rich hydrothermal activity in the Tchaikazan fault system (Bulletin 81; Assessment Reports 9535, 13892).

The alteration zone is discontinuous over an area about 1000 by 300 metres, centred on the Knob showing. Carbonate alteration is the most widespread and pervasive, and is associated with intense brecciation and veining of the host rocks, the disruption of which is so strong that they are described as "heterolithic breccias" (Assessment Report 9535). White calcite is dominant, although iron-bearing carbonate is common, giving rise to prominent limonitic or ankeritic areas of oxidation. At its most intense, carbonate has replaced the original mineralogy of the volcanic or sedimentary protoliths. Individual carbonate veins have a variety of orientations, but most strike northwest and dip steeply. Barite veins are also reported (Assessment Report 13892).

Silicification and quartz-calcite veins and stockworks are less common but are intensely developed in a 10 by 10 metre zone at the Knob showing, which contains most of the mineralization. Argillic alteration or "bleaching" of volcanic rocks is also present in the vicinity, with the production of kaolinite and calcite (Assessment Report 11661). Minor epidote and sericite alteration has been recorded in drill core (Assessment Report 13892).

Visible mineralization occurs mainly at the Knob showing and consists of cinnabar associated with calcite veins, malachite and azurite, and locally tennantite, tetrahedrite, realgar, hematite, aragonite, dickite and rarely stibnite (Bulletin 81; Assessment Reports 9535, 11661). Pyrite, pyrrhotite and arsenopyrite have been

CAPSULE GEOLOGY

recorded in drill core (Assessment Report 13892). Samples of the mineralization have yielded assay values of up to 1.47 per cent copper, 0.39 per cent antimony and 16.5 grams per tonne silver (Assessment Report 9535). Lithogeochemical analyses include 27 grams per tonne silver and 0.8 per cent copper from a single sample (Bulletin 81).

Another showing, the Ridge showing, occurs 500 metres west of the Knob showing and is defined mainly by an arsenic anomaly (Bulletin 81; Assessment Report 11661). It is similarly brecciated and carbonate-altered, and contains arsenopyrite and alunite, as well as malachite and cinnabar (Assessment Reports 10608, 11661).

Assay values and rock and soil geochemical analyses are anomalously high but erratic in the area of the Alexis occurrence, particularly in mercury, arsenic, antimony, copper and zinc (Bulletin 81; Assessment Report 9535). Gold is anomalous but not high. There is a positive correlation between mercury lithogeochemical values (up to 0.45 per cent) and the degree of mineralization (Bulletin 81); mercury is considered an important pathfinder element (Assessment Report 9535). The erratic values are not inconsistent with this type of high-level, highly permeable environment in which leaching processes have redistributed metals, resulting in secondary enrichment or dilution of values (Assessment Report 9535).

Past work has generally concluded that more exploration of the extent and vertical zonation of mineralization in this system, particularly by deeper diamond drilling, is warranted to properly ascertain its economic potential, especially in terms of gold and silver (Bulletin 81; Assessment Report 18162). Other, similar showings of mineralization are known along the strike of the Tchaikazan fault zone which have not been explored to date. For example, the copper-mercury Stowe showing (092N 043) is 3 kilometres southeast of the Alexis, and traces of mercury mineralization exist 1.5 kilometres to the northwest (Bulletin 81).

BIBLIOGRAPHY

EMPR EXPL 1981-57; 1982-235; 1983-339,340; 1985-C239; 1986-C282
EMPR FIELDWORK 1986, pp. 231-243
EMPR BULL *81
EMPR ASS RPT *9535, 10608, *11661, 11934, 13892, 15266, 18162
EMPR OF 1987-12; 1987-14
EMPR PF (Morton, J.W. (1982): Report)
GCNL #160, #192, 1981
N MINER Oct.15, 1981

DATE CODED: 1985/07/24
DATE REVISED: 1992/01/23

CODED BY: GSB
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092N 046**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN ROSE** GR-1

MINING DIVISION: Cariboo

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N15W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 46 43 N
LONGITUDE: 124 54 21 W
ELEVATION: 1707 Metres

NORTHING: 5738133
EASTING: 368525

LOCATION ACCURACY: Within 500M

COMMENTS: In a tributary creek of Klinaklini River, in the approximate centre of the Golden Rose 1-4 claims, 19 kilometres south-southwest of Kleena Kleene (Assessment Report 12349).

COMMODITIES: Gold Arsenic

MINERALS

SIGNIFICANT: Arsenopyrite
COMMENTS: Arsenopyrite is not specified, but may be assumed to be present from high arsenic content in chip samples.

ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
COMMENTS: Mineralized quartz vein strikes northwest and dips 40 degrees northeast.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Basalt
Andesite
Greywacke
Siltstone
Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Chilcotin Plateau

TERRANE: Stikine

COMMENTS: Occurrence is about 10 kilometres northeast of Coast Plutonic Complex.

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1983

SAMPLE TYPE: Chip

COMMODITY

GRADE

Arsenic

5.0000

Per cent

Gold

3.4000

Grams per tonne

COMMENTS: Geochemical analyses based on 2 chip samples across the vein. Arsenic value given is the maximum of a range between 1 and 5 per cent.

REFERENCE: Assessment Report 12349.

CAPSULE GEOLOGY

The Golden Rose occurrence is located on a mineralized quartz vein exposed in the bed of a northward flowing tributary creek of the Klinaklini River, 19 kilometres south-southwest of Kleena Kleene.

The area is apparently underlain by a unit of Upper Triassic (Norian) basaltic and andesitic volcanics, greywacke, siltstone and conglomerate of the Stikinia Terrane, between the Tchaikazan fault to the northeast and the Jurassic to Tertiary Coast Plutonic Complex to the southwest (Geological Survey of Canada Open File 1163, Paper 68-33, Map 1713A).

The quartz vein is 50 centimetres wide, and strikes northwest, dipping 40 degrees to the northeast. The quartz is vuggy and brecciated and contains unspecified sulphide minerals, although arsenopyrite may be assumed to be present from the reported high arsenic content (Assessment Report 12349). Two chip samples across the vein indicate a gold equivalent of approximately 3.4 grams per tonne, and between 1 and 5 per cent arsenic; the samples are also

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CAPSULE GEOLOGY

anomalous in antimony (Assessment Report 12349). Geochemical anomalies are reported in soils in the vicinity (Assessment Report 12349).

BIBLIOGRAPHY

EM EXPL 2001-23-31
EMPR ASS RPT *12349
EMPR EXPL 1983-342
GSC MAP 5-1968; 1713A
GSC OF 1163
GSC P 68-33

DATE CODED: 1985/08/29
DATE REVISED: 1991/12/16

CODED BY: AFW
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 047**

NATIONAL MINERAL INVENTORY:

NAME(S): **LORI**, LOOT 1-2

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N10E 092N10W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 33 04 N
LONGITUDE: 124 42 42 W
ELEVATION: 1719 Metres

NORTHING: 5712502
EASTING: 381325

LOCATION ACCURACY: Within 500M

COMMENTS: Located on outcrop sample 885F, on the east side of the headwaters of Ottarasko Creek, 40 kilometres south of the community of Tatla Lake (Assessment Report 13150, Map 4).

COMMODITIES: Gold Silver Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite Chalcopyrite Sphalerite
ASSOCIATED: Quartz Calcite Ankerite
ALTERATION: Quartz Pyrite Limonite Malachite Epidote

COMMENTS: The product of oxidation is presumed to be limonite.

ALTERATION TYPE: Pyrite Silicific'n Oxidation Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
COMMENTS: The mineralized veins generally strike northwest, with a subvertical or moderate dip to the west.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Lower Cretaceous	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Quartz Monzonite
Siltstone
Clastic Sediment/Sedimentary
Greenstone
Andesitic Volcanic Tuff
Fossiliferous Sandy Limestone
Feldspar Porphyry Dike
Mafic Porphyry Dike
Chert
Diorite

HOSTROCK COMMENTS: A quartz monzonite body intruded and hornfelsed thrust-imbricated Upper Triassic and Lower Cretaceous sedimentary and volcanic rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges

TERRANE: Stikine Plutonic Rocks

METAMORPHIC TYPE: Contact RELATIONSHIP: Pre-mineralization GRADE:

COMMENTS: In thrust and fold belt, northeast margin of Coast Plutonic Complex.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987

SAMPLE TYPE: Rock

COMMODITY: Copper GRADE: 0.4400 Per cent

COMMENTS: Maximum geochemical analysis.
REFERENCE: Assessment Report 17392.

INVENTORY

ORE ZONE: A

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1983

SAMPLE TYPE: Rock

COMMODITY

GRADE

Silver

3.8000

Grams per tonne

Gold

20.0000

Grams per tonne

COMMENTS: Maximum of a range of assays.

REFERENCE: Assessment Report 13150.

CAPSULE GEOLOGY

The Lori occurrence is located in mountainous terrain north of Ottarasko Mountain. Interest began with the discovery of highly anomalous gold and copper values in quartz-rich float and talus in the area (up to 89 grams per tonne gold, Assessment Report 13150). Overall, however, in situ mineralization may be high but is erratic. The Lori occurrence encroaches on similar occurrences covered by the AT 3-4 (092N 057), HW (092N 058) and Champagne (092N 059) occurrences.

The area lies in the Stikinia Terrane near the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex, within a complex belt of folds and imbricated, gently southwest-dipping thrust sheets which also involve the Gambier overlap assemblage (Geological Survey of Canada Open File 1163, Map 1713A). The northeast-directed thrusting placed Upper Triassic (Carnian) and Lower Cretaceous volcanic and sedimentary rocks over Lower Cretaceous (Hauterivian) sedimentary rocks (Geological Survey of Canada Open File 1163, Papers 88-1E, 89-1E; Geology 1991). The thrusting took place in the Late Cretaceous because the thrusts are cut by a quartz diorite intrusion dated at 68 million years by the uranium-lead method on zircon (Geological Survey of Canada Papers 88-1E, 91-2).

The area of economic interest probably lies within the imbricated Upper Triassic and Lower Cretaceous volcanic and sedimentary rocks. The local geology probably involves more than one thrust sheet, but as thrusts were not recognized as such in the pertinent data sources, a structural interpretation of the local stratigraphy is not attempted here.

Most of the area is underlain by locally hornfelsed and altered siltstone, mudstone and greywacke, with some fossiliferous sandy limestone, andesitic volcanic tuff or greenstone, volcanic breccia, and chert (Assessment Reports 13150, 17392). In one area, these rocks are intruded by a 15-metre thick, sill-like body of quartz monzonite, which is probably responsible for the hornfelsing; it is probably related to the Coast Plutonic Complex. The rocks are also intruded by fine-grained epidotized diorite and by dykes of feldspar porphyry, felsite, mafic porphyry, and hornblende lamprophyre.

Many of the rocks are well bedded, generally striking north and dipping gently to moderately west. No significant folding or shearing is reported. However, fracturing is common and locally intense, particularly in the quartz monzonite body; most fractures trend northwest, with some east-southeast, and dip steeply.

Most attention in the area has been given to a small grid called the "A zone". Mineralization here mainly occurs within the quartz monzonite intrusion, or around it in hornfelsed siltstone or greenstone (Assessment Report 13150). The intrusion is commonly fractured but virtually unaltered except for some oxidation. Sulphide mineralization in the intrusion and in the surrounding rocks is usually (but not always) associated with quartz or quartz-carbonate (calcite or ankerite) veins. It is also associated with zones of pyritic alteration or silicification. The quartz (+/- carbonate) veins are typically 5 to 10 centimetres thick, and may be traceable for a few metres; most trend northwest, with a subvertical or moderate dip to the west.

The sulphides occur as narrow veinlets, blebs or disseminations. Pyrite is generally present, locally accompanied by arsenopyrite or chalcopyrite; malachite and rare sphalerite are also reported (Assessment Reports 13150, 17392). Rock samples in the "A zone" generally contain less than 0.4 gram per tonne gold, but a few samples from a quartz-pyrite-arsenopyrite vein were assayed at between 1 and 20 grams per tonne gold, and at up to 3.8 grams per tonne silver (Assessment Report 13150). Copper analyses were up to 0.44 per cent in a malachite-bearing greenstone (Assessment Report 17392). Much higher values of gold and copper have been obtained from float blocks, which has sustained the interest in the area, but their source has not been identified.

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RUN TIME: 11:19:00

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BIBLIOGRAPHY

EMPR EXPL 1983-340; 1988-C129
EMPR ASS RPT *13150, *17392, 18250
EMPR PF (Berniolles, L.M. (1991): Letter)
GSC OF 1163
GSC P 68-33; 88-1E, pp. 185-190; 89-1E, pp. 163-167; 91-2, pp.
109-113
GSC MAP 5-1968; 1713A
GSA GEOLOGY 1991, pp. 941-944

DATE CODED: 1985/08/29
DATE REVISED: 1992/01/11

CODED BY: AFW
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 048**

NATIONAL MINERAL INVENTORY:

NAME(S): **AT 2**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N10E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 30 23 N
LONGITUDE: 124 43 03 W
ELEVATION: 2106 Metres

NORTHING: 5707538
EASTING: 380804

LOCATION ACCURACY: Within 500M

COMMENTS: Located on mineralized outcrop AT-87-15, 1.9 kilometres south of Ottarasko Mountain, Niut Range, 44 kilometres south of the community of Tatla Lake (Assessment Report 16688, Map 2).

COMMODITIES: Copper Silver Nickel Platinum Cobalt Palladium Mercury Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pentlandite Realgar
COMMENTS: Unspecified cobalt minerals occur with chalcopyrite and pentlandite. Realgar is in separate vein mineralization.

ASSOCIATED: Pyrite Pyrrhotite Quartz Calcite
COMMENTS: Pyrite and pyrrhotite are in massive sulphides. Quartz and calcite are in veins.

ALTERATION: Pyrite
ALTERATION TYPE: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Disseminated Vein
CLASSIFICATION: Magmatic Hydrothermal Epigenetic
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Lower Cretaceous	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Upper Cretaceous			Coast Plutonic Complex

ISOTOPIC AGE: 68 +/- 0.5 Ma
DATING METHOD: Uranium/Lead
MATERIAL DATED: Zircon

LITHOLOGY: Ultramafic Intrusive
Mafic Diorite
Andesitic Breccia
Andesitic Tuff
Andesitic Flow
Shale
Limestone
Quartz Diorite

HOSTROCK COMMENTS: Host rocks include a Late Cretaceous dioritic to ultramafic intrusion and Upper Triassic and/or Lower Cretaceous volcanics.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Stikine Plutonic Rocks
PHYSIOGRAPHIC AREA: Pacific Ranges
COMMENTS: In intrusion and volcanics, northeast margin of Coast Plutonic Complex

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Rock
COMMODITY GRADE
Cobalt 0.1000 Per cent
Copper 0.5000 Per cent
Nickel 0.4000 Per cent

COMMENTS: Maximum geochemical analyses.
REFERENCE: Assessment Report 16688.

CAPSULE GEOLOGY

The AT 2 occurrence comprises copper-nickel mineralization, and is located 2 kilometres south of Ottarasko Mountain, 44 kilometres

CAPSULE GEOLOGY

south of the community of Tatla Lake. Interest in the area began in 1983 with the discovery, during a regional geochemical survey, of an igneous boulder train containing disseminated copper-nickel-cobalt mineralization, including values of up to 1.5 per cent copper (Assessment Report 16688).

The area is underlain by a complex of imbricated thrusts involving volcanic and sedimentary rocks of Late Triassic and/or Early Cretaceous age, belonging to the Stikinia Terrane and possibly to the Gambier overlap assemblage (Geological Survey of Canada Open File 1163, Papers 88-1E, 89-1E, Map 1713A; Geology 1991). Rocks present include andesitic breccia, tuff and flows, and minor shale and limestone. These rocks and the thrusts are cut by a quartz diorite intrusion of the Jurassic to Tertiary Coast Plutonic Complex, dated at 68 million years (Late Cretaceous) by the uranium-lead method on zircon (Geological Survey of Canada Paper 88-1E).

Intrusive rocks occur mainly at lower elevations on the AT 2 claim and consist of mafic diorite and ultramafic rocks (Assessment Report 16688). Most pertinent to this occurrence are two zones of massive sulphide mineralization, each exposed over 5 to 10 square metres, comprising pyrite, pyrrhotite, chalcopyrite, pentlandite and unspecified associated cobalt minerals. These zones have been interpreted as magmatic segregations in the intrusive. Samples were analysed at up to 0.5 per cent copper, 0.4 per cent nickel and 0.1 per cent cobalt (Assessment Report 16688). Minor amounts of gold, silver, platinum and palladium were also recorded. However, these outcrops were thought not to be the source of the original boulder train of interest.

Near or at the contact with the volcanic rocks, there are zones or structures marked by pyritization, unspecified alteration and quartz or calcite veining. In particular, seven quartz-carbonate veins were located in the intrusive rocks, which are up to 150 by 40 metres, and which generally trend northwest and dip steeply. Mineralization is present but is not significant.

Other veins were located in volcanic rocks, one containing small amounts of sulphides and realgar and calcite. Up to 0.73 per cent copper occurs in one subcrop sample (Assessment Report 16688).

BIBLIOGRAPHY

EM GEOFILE 2000-2; 2000-5
EMPR ASS RPT *16688, 18022
EMPR EXPL 1987-C224; 1988-C129
EMPR PF (Berniolles, L.M. (1991): Letter)
GSC MAP 5-1968; 1713A
GSC OF 1163
GSC P 68-33; 88-1E, pp. 185-190; 89-1E, pp. 163-167
GSA GEOLOGY 1991, pp. 941-944

DATE CODED: 1988/03/23
DATE REVISED: 1991/11/28

CODED BY: GSA
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 049**

NATIONAL MINERAL INVENTORY:

NAME(S): **KOR 1,3,4,7, F & S, HO 1**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N07E
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 22 41 N
LONGITUDE: 124 37 05 W
ELEVATION: 1490 Metres

NORTHING: 5693110
EASTING: 387390

LOCATION ACCURACY: Within 500M

COMMENTS: Located on sample 66410, in the centre of an altered and mineralized zone, 1.5 kilometres south of Homathko River, 14 kilometres southwest of the southern end of Tatlayoko Lake (Assessment Report 18977, Figure 4).

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS

SIGNIFICANT: Arsenopyrite Pyrite Chalcopyrite Galena
ASSOCIATED: Quartz Ankerite Sericite
ALTERATION: Quartz Ankerite Sericite Pyrite Limonite
Epidote Chlorite

ALTERATION TYPE: Sericitic Carbonate Oxidation Epidote Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Concordant
CLASSIFICATION: Mesothermal
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: 900 x 15 Metres STRIKE/DIP:
COMMENTS: The alteration zone and quartz veins are concordant with the general layering and structural fabrics, striking east and dipping 50 degrees south.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex
Mesozoic-Cenozoic			

LITHOLOGY: Quartz Diorite Sill
Granitic Sill
Foliated Mafic Meta Volcanic
Sericitic Schist
Feldspar Porphyry
Andesitic Volcanic
Quartz Diorite
Shale
Siltstone
Lamprophyre Dike

HOSTROCK COMMENTS: Mineralization is hosted in a quartz diorite to granite sill related to the Coast Plutonic Complex, intruded into metamorphic rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Plutonic Rocks Stikine
METAMORPHIC TYPE: Regional RELATIONSHIP:
COMMENTS: In a metamorphic thrust sheet, northeastern Coast Plutonic Complex. GRADE:

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Rock
COMMODITY GRADE
Silver 17.1000 Grams per tonne
Copper 0.3900 Per cent
COMMENTS: Geochemical analysis; highest copper sample.
REFERENCE: Assessment Report 18977.

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1989

SAMPLE TYPE: Grab

COMMODITY

	GRADE	
Silver	10.1000	Grams per tonne
Gold	64.5000	Grams per tonne
Lead	0.1800	Per cent
Zinc	0.1200	Per cent

COMMENTS: Highest geochemical analysis, from a composite of grab samples taken over 10 metres.

REFERENCE: Assessment Report 18977.

CAPSULE GEOLOGY

The Kor occurrence is located 2 kilometres north of Homathko Peak, 14 kilometres southwest of the southern end of Tatlayoko Lake. It consists of gold-silver mineralization in an altered intrusion in a complex area of thrusting involving Triassic rocks of the Stikinia Terrane, and metamorphic and plutonic rocks of the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163, Map 1713A). Except where noted, all the information given here comes from Assessment Report 18977.

Mineralization and alteration are concentrated in the upper, more felsic part of a differentiated sill composed of quartz diorite to granite. The sill intrudes the upper plate of a thrust which placed metamorphosed volcanics on unmetamorphosed Upper Triassic volcanic and sedimentary rocks. Immediately to the south of all these rocks is a very large quartz diorite intrusion of the Coast Plutonic Complex, called the Tiedemann pluton (Geological Survey of Canada Open File 1163). The differentiated sill may be related to this pluton. Geological contacts and structures consistently strike east-northeast and dip south.

Describing the rocks in more detail, from south to north, the Tiedemann pluton has an Early Tertiary age of 63 million years, based on the potassium-argon method on biotite (Geological Survey of Canada Open File 1163). Epidote-chlorite alteration of mafic minerals increases towards its margin, which is finer grained. It contains at least one pendant of limestone.

The Tiedemann pluton borders to the north on metamorphic rocks probably related to Stikinia. Aphyric, foliated mafic metavolcanics predominate, with minor sericitic schist and bodies of feldspar porphyry. These rocks form a thrust sheet, which strikes east-northeast and dips moderately to steeply south. The thrust zone at the base is strongly sheared. This thrust sheet may be the metamorphic equivalent of rocks in its footwall, outcropping to the north, which consist of Upper Triassic(?) andesitic volcanics and platy shale and siltstone. Lamprophyric dykes occur locally; they are vertical and strike north, and post-date alteration and mineralization.

A quartz diorite to granite sill outcrops in the metamorphic thrust sheet, south of the Upper Triassic rocks. It appears to be differentiated, becoming more felsic (granitic) at the top (towards the south). This upper felsic portion is strongly and pervasively altered, comprising quartz, iron carbonate (presumed to be ankerite), sericite and fine, disseminated pyrite. Locally it is oxidized to limonite. Quartz-ankerite-pyrite veins and lenses are widespread; locally they form major veins 10 to 20 metres long and 1 metre thick. Veins also occur up to 700 metres away in otherwise unaltered parts of the sill and the country rocks.

The alteration zone and most of the veins within it are concordant with the layering and structural fabrics, striking east-northeast and dipping about 50 degrees south. It is about 900 metres long and 15 to 30 metres wide on the surface. The degree of alteration appears to be related to the composition of the sill (favoring the more felsic top) rather than to the intensity of structural conduits like fractures; this suggests that it results from late magmatic, carbonate-rich hydrothermal fluids, in a mesothermal environment (Assessment Report 18977).

The quartz-ankerite-pyrite veins locally contain minor arsenopyrite, chalcopyrite and trace galena. Significant gold and silver values are erratic, and are related to the presence of arsenopyrite. The highest value of gold recorded was 64.5 grams per tonne, from a composite of grab samples from a sulphide-bearing quartz vein 10 to 80 centimetres thick, taken over 10 metres (Assessment Report 18977). This vein also contained 10.1 grams per tonne silver, 0.12 per cent zinc and 0.18 per cent lead (Assessment Report 18977). Another quartz vein sample contained 17.1 grams per tonne silver and 0.39 per cent copper (Assessment Report 18977).

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CAPSULE GEOLOGY

There are geochemical variations in the alteration zone. Gold, silver and arsenic are higher in the east, while zinc is higher in the west, where a quartz-ankerite vein was analysed at 0.64 per cent zinc (Assessment Report 18977).

BIBLIOGRAPHY

EMPR EXPL 1983-339
EMPR ASS RPT 11770, *18977
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1992/01/16
DATE REVISED: 1992/04/09

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 050**

NATIONAL MINERAL INVENTORY:

NAME(S): **GIRD**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N08W 092N08E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 19 43 N
LONGITUDE: 124 15 08 W
ELEVATION: 2408 Metres

NORTHING: 5687113
EASTING: 412756

LOCATION ACCURACY: Within 500M

COMMENTS: Located on sample RC 12, 1.5 kilometres north-northwest of Girdwood Lake, 13 kilometres north-northwest of the west end of Franklyn Arm of Chilko Lake (Open File 1987-14, Map 1).

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Copper Tetrahedrite
ASSOCIATED: Quartz Epidote Carbonate Prehnite
COMMENTS: Prehnite occurs in vuggy cavities in the veins.
ALTERATION: Epidote Malachite
COMMENTS: Epidote alteration occurs in 2-metre wide zones.
ALTERATION TYPE: Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Andesitic Volcanic Breccia
Andesitic Volcanic Tuff
Andesitic Volcanic Flow
Greywacke
Conglomerate

HOSTROCK COMMENTS: The Lower Cretaceous volcanics form an open syncline between the Tchaikazan and Stikelan faults.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Gambier
COMMENTS: Located about 15 kilometres northeast of the Coast Plutonic Complex.

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Rock
COMMODITY:

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	3.6200	Grams per tonne
Copper	0.7340	Per cent

COMMENTS: Averages of analyses of 5 samples.
REFERENCE: Bulletin 81.

CAPSULE GEOLOGY

The Gird occurrence is a copper-silver showing, 1.5 kilometres north-northwest of Girdwood Lake, 13 kilometres north-northwest of the west end of Franklyn Arm of Chilko Lake. Copper-bearing talus is present north and south of Girdwood Lake, and the showing was found by prospecting upslope (Bulletin 81).

The showing is in a unit of Lower Cretaceous volcanics forming an open syncline bounded by the Tchaikazan fault to the northeast and the Stikelan fault to the southwest (Bulletin 81; Geological Survey of Canada Open File 1163). The area is part of the Gambier overlap assemblage, about 15 kilometres from the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Map 1713A).

The volcanics comprise purplish andesitic breccia and tuff, with minor flows. Some greywacke and conglomerate also occur in the unit. Bedding, the synclinal axial surface trace, and the bounding

CAPSULE GEOLOGY

Tchaikazan and Stikelan faults all strike or trend northwest.

The volcanic unit hosting the Gird occurrence is characterized by widespread fracturing and quartz-epidote veining (Bulletin 81; Fieldwork 1986). Locally there are zones of epidote alteration up to 2 metres in width, within which are quartz-carbonate veins and vein breccias containing small amounts of native copper, tetrahedrite and malachite mineralization. Prehnite is a common accessory mineral in vuggy cavities in the veins.

Five samples analyzed from the showing ranged between 0.9 and 7.5 grams per tonne (average 3.62) silver, and between 0.22 and 1.49 per cent (average 0.734) copper; they were also somewhat anomalous in mercury and antimony (Bulletin 81). An isolated sample in similar rocks 2.5 kilometres west of the Gird showing was analyzed at 7.5 grams per tonne silver and 1.1 per cent copper (Open File 1987-14; Bulletin 81).

BIBLIOGRAPHY

EMPR FIELDWORK 1986, p. 240
EMPR BULL *81, pp. 77-78
EMPR OF 1987-14
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1992/02/04
DATE REVISED: / /

CODED BY: CJR
REVISED BY:

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092N 051**

NATIONAL MINERAL INVENTORY:

NAME(S): **LANCERS MOUNTAIN**, HOODOO, HANNAH 1-2,
KLN, KLN 2-3, BHA,
FRANKLIN GLACIER

MINING DIVISION: Vancouver

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N06W 092N05E

UTM ZONE: 10 (NAD 83)

BC MAP:
LATITUDE: 51 19 55 N
LONGITUDE: 125 30 02 W

NORTHING: 5689708
EASTING: 325804

ELEVATION: 1520 Metres
LOCATION ACCURACY: Within 500M

COMMENTS: Located on gossan East No.1, at the approximate centre of the claim group, 1.8 kilometres northeast of Lancers Mountain, 28 kilometres north of the head of Knight Inlet (Assessment Report 9508, Appendix 4).

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS

SIGNIFICANT: Pyrrargyrite Chalcopyrite Sphalerite Galena

COMMENTS: Not all necessarily present in each mineralized zone.

ASSOCIATED: Quartz Pyrite Calcite Ankerite

ALTERATION: Quartz Pyrite Limonite Pyrolusite Epidote

Chlorite Malachite

COMMENTS: Main product of oxidation presumed to be limonite.

ALTERATION TYPE: Silicific'n Oxidation Argillic Propylitic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

COMMENTS: Mineralized quartz veins and stockwork zones typically strike northwest, with steep to vertical dips.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Quartz Monzonite Porphyry
Monzonitic Dike
Felsite Dike
Quartz Rhyodacite Dike
Heterolithic Intrusive Breccia
Foliated Quartz Diorite
Hornblende Biotite Gneiss
Agglomerate
Tuff
Volcanic Flow

HOSTROCK COMMENTS: Host is primarily dykes and intrusions of probable Tertiary intrusive-extrusive complex emplaced into the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Plutonic Rocks

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Pacific Ranges

Undivided Metamorphic Assembl.

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1981

SAMPLE TYPE: Rock

COMMODITY

GRADE

Copper

1.0000

Per cent

Zinc

1.0000

Per cent

COMMENTS: Geochemical analyses, highest values.
REFERENCE: Assessment Report 9710.

INVENTORY

ORE ZONE: TRENCH REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 9999.9999 Grams per tonne
Gold 56.6000 Grams per tonne
Lead 0.3900 Per cent
Zinc 1.2000 Per cent
COMMENTS: Select grab sample, not typical of grade. Silver assay was actually 35,513 grams per tonne.
REFERENCE: Assessment Report 18202.

ORE ZONE: NO. 2 REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 1521.0000 Grams per tonne
Gold 1.1000 Grams per tonne
COMMENTS: East #2 showing.
REFERENCE: Assessment Report 9508.

CAPSULE GEOLOGY

The Lancers Mountain occurrence, located between Hoodoo Creek and Confederation Glacier, is characterized by silver, gold, lead, zinc and copper mineralization associated with a variety of felsic to intermediate intrusions of the Jurassic to Tertiary Coast Plutonic Complex.

The area is underlain by gneisses and a younger, probably Tertiary intrusive-extrusive complex, all belonging to the Coast Plutonic Complex (Geological Survey of Canada Open File 1163). The oldest unit consists of foliated quartz diorite and hornblende-biotite gneiss. These rocks are intruded by a monzonite(?) to quartz monzonite porphyry, mainly in the west and northwest, dykes of which intrude the quartz diorite to the east.

Apparently related to the monzonitic porphyry is a heterolithic intrusive breccia; it is emplaced along a northeast-trending fault zone. The quartz monzonite, the breccia and the dykes are probably the subvolcanic equivalents of locally occurring agglomerate, tuff and volcanic flows. Numerous other dykes present are generally porphyritic and pyritic, and include fine-grained monzonitic dykes, felsite dykes, and bleached quartz-eye rhyodacite dykes. They typically strike northwest, less commonly north. Weak epidote and chlorite (propylitic) alteration is present, especially at dyke margins.

The youngest event, and the most economically significant, appears to be partly fracture-controlled quartz-pyrite, quartz-carbonate (calcite and/or ankerite), and pyrite veining, including stockworks. This is generally associated with silicification and pyritic and argillic hydrothermal alteration. The veins are typically 5 centimetres wide, and trend north to northwest, with steep to vertical dips. Some are larger (40 to 50 centimetres wide), and vuggy.

Oxidation has produced at least four major gossanous zones containing limonite and pyrolusite, hosted in various rock types but concentrated at lithological contacts; an average size would be 50 by 50 metres. Within the gossanous zones are areas of mineralized quartz-pyrite and pyrite veins and stockworks, locally containing minor amounts of disseminated chalcopyrite and, more rarely, sphalerite, galena and malachite. Copper and zinc values obtained from grab samples ranged up to 1.0 per cent for each (Assessment Report 9710). One zone (East No.2) contains two quartz stockwork zones up to 1 metre wide carrying significant silver mineralization, including pyrrargyrite, galena, sphalerite, chalcopyrite and pyrite (Assessment Report 9508). One grab sample from here assayed 1521 grams per tonne silver and 1.1 grams per tonne gold (Assessment Report 9508).

On the northeast flank of Lancers Mountain, a select grab sample from a trench cut in a silicified felsic dyke assayed 35,513 grams per tonne silver, 56.6 grams per tonne gold, 1.2 per cent zinc and 0.39 per cent lead (Assessment Report 18202).

Despite some very high, though sporadic geochemical results, most exploration efforts in the area failed to define significant widths of economic mineralization, although the potential at depth was not discounted.

Part of the property was staked as the KLN in 1996 by J.R.

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CAPSULE GEOLOGY

Deighton and F. Onucki, and prospected by Paul McDonald and Douglas Baker.

BIBLIOGRAPHY

EMPR ASS RPT *9508, 9710, *18202, 25067
EMPR EXPL 1980-278; 1981-97; 2002-29-40
GSC OF 1163
PR REL Saxony Explorations Ltd., Dec.18, 2002

DATE CODED: 1991/12/23
DATE REVISED: 1999/07/13

CODED BY: CJR
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 052**

NATIONAL MINERAL INVENTORY:

NAME(S): **STIK**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 21 19 N
LONGITUDE: 124 22 08 W
ELEVATION: 2275 Metres

NORTHING: 5690224
EASTING: 404683

LOCATION ACCURACY: Within 500M

COMMENTS: Located on a molybdenum occurrence map symbol, 11 kilometres south-southeast of the southern end of Tatlayoko Lake (Geological Survey of Canada Map 5-1968).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Shale
Sandstone
Pebble Conglomerate

HOSTROCK COMMENTS: Hosted in Upper Triassic sedimentary rocks in a complex, faulted area adjacent to the northeast margin of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Stikine
COMMENTS: In sedimentary rocks, northeast margin of the Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Stik occurrence is based on a map symbol indicating a molybdenite occurrence, in the rugged terrain south of the southern end of Tatlayoko Lake (Geological Survey of Canada Map 5-1968). Very little information is available. The showing consists of a small quartz veinlet containing molybdenite, in a unit of Upper Triassic shale, sandstone and pebble conglomerate (Geological Survey of Canada Map 5-1968, Paper 68-33, Open File 1163). These rocks belong to the Stikinia Terrane, and occur in a complex, faulted area 3 kilometres northeast of the early Tertiary Tiedemann pluton of the Jurassic to Cretaceous Coast Plutonic Complex (Geological Survey of Canada Open File 1163, Map 1713A).

BIBLIOGRAPHY

GSC OF 1163
GSC P 68-33, p. 87
GSC MAP 5-1968; 1713A

DATE CODED: 1992/01/21
DATE REVISED: 1992/02/19

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 053**

NATIONAL MINERAL INVENTORY:

NAME(S): **PIN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N14E
BC MAP:

MINING DIVISION: Cariboo

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 47 50 N
LONGITUDE: 125 01 43 W
ELEVATION: 2040 Metres

NORTHING: 5740431
EASTING: 360113

LOCATION ACCURACY: Within 500M

COMMENTS: Located on a zone of mineralization, 1.8 kilometres west of the junction of Chromium Creek and Klinaklini River, 30 kilometres southwest of the community of Tatla Lake (Assessment Report 4729, Map 3).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite

COMMENTS: In addition, bornite and chalcocite were noted in float.

ASSOCIATED: Quartz Carbonate Pyrite

ALTERATION: Sericite Quartz Pyrite Epidote Chlorite

Limonite Malachite

COMMENTS: The product of oxidation is presumed to be limonite.

ALTERATION TYPE: Sericitic Silicific'n Epidote Chloritic Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Andesitic Tuff
Andesitic Breccia
Basalt
Rhyolitic Dacitic Volcanic

HOSTROCK COMMENTS: Stratified rocks strike east-southeast and dip 30 degrees south. A shear zone strikes 070 degrees and dips moderately southeast.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Pacific Ranges

TERRANE: Gambier

METAMORPHIC TYPE: Contact

RELATIONSHIP:

GRADE:

COMMENTS: Located 5 kilometres from northeast margin of Coast Plutonic Complex.

CAPSULE GEOLOGY

The Pin occurrence consists of minor copper mineralization, 4 kilometres east-southeast of Perkins Peak, 30 kilometres southwest of the community of Tatla Lake. The area was staked to explore for the source of float mineralized with bornite, chalcopyrite, chalcocite and malachite.

The occurrence is in a unit of Lower Cretaceous pyroclastic volcanics and minor sedimentary rocks, in the Gambier overlap assemblage, about 5 kilometres from the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163, Map 1713A). Mostly the rocks comprise green or maroon andesitic tuff and breccia, with minor basalt and rhyolite-dacite. Some hornfelsing of the rocks is present although no intrusives have been mapped locally (Geological Survey of Canada Paper 68-33; Assessment Report 4729). Locally the rocks strike east-southeast and dip 30 degrees south.

A prominent shear zone traverses the area within the volcanic rocks, striking 070 degrees and dipping moderately southeast (Assessment Report 4729). It is marked by intense sericitic alteration with pyrite, and minor silicification. The shear zone is cut by a fault striking 300 degrees. Chlorite and epidote alteration is widespread in the area; rusty-weathering oxidation is present locally. Fracturing is common on the south side of Chromium Creek.

Malachite occurs locally in altered and epidotized andesitic rocks, especially in the centre and east of the area (Assessment Report 4729). It occurs in the shear zone but is not restricted to

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CAPSULE GEOLOGY

it. Mineralized rocks are commonly cut by fractures filled with quartz and carbonate, or with chlorite and epidote; locally the adjacent andesite contains disseminated chalcopyrite.

High copper values have been obtained from mineralized chip samples, although most rocks in the area are not strongly anomalous in copper or zinc (Assessment Report 4729).

BIBLIOGRAPHY

EMPR GEM 1973-264
EMPR EXPL 1975-E117
EMPR ASS RPT *4729, 5522
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1992/01/31
DATE REVISED: 1992/02/19

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 054**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAC, NEWMAC, COW TRAIL,
 GOAT TRAIL, ST. TERESA**

STATUS: Prospect
 REGIONS: British Columbia
 NTS MAP: 092N10E 092N15E
 BC MAP:
 LATITUDE: 51 44 30 N
 LONGITUDE: 124 40 18 W
 ELEVATION: 1713 Metres

MINING DIVISION: Clinton
 UTM ZONE: 10 (NAD 83)
 NORTHING: 5733629
 EASTING: 384584

LOCATION ACCURACY: Within 500M
 COMMENTS: Located on the Cow Trail vein, 3.5 kilometres east of the south end of Bluff Lake, 19 kilometres west-northwest of the community of Tatlayoko Lake (Assessment Report 17080, Figure 7).

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Sphalerite Galena Tetrahedrite
 ASSOCIATED: Quartz Pyrrhotite
 ALTERATION: Quartz Pyrite Sericite Epidote Chlorite
 Kaolinite Limonite
 ALTERATION TYPE: Propylitic Silicific'n Argillic Sericitic Oxidation
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
 CLASSIFICATION: Hydrothermal Epigenetic Epithermal
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
 DIMENSION: 200 x 1 Metres STRIKE/DIP: 080/70S TREND/PLUNGE:
 COMMENTS: Orientation of the main mineralized zone, the Cow Trail vein.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous Mesozoic-Cenozoic	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex

LITHOLOGY: Quartz Diorite
 Diorite
 Andesitic Tuff
 Rhyodacitic Flow
 Rhyodacitic Tuff
 Andesitic Breccia
 Porphyritic Andesitic Flow
 Quartz Feldspar Porphyry Dike
 Monzonite Porphyry Dike
 Sediment/Sedimentary

HOSTROCK COMMENTS: Lower Cretaceous volcanics and quartz diorite intrusions along the faulted northeastern margin of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
 TERRANE: Gambier Plutonic Rocks
 PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: COW TRAIL VEIN REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1984
 SAMPLE TYPE: Grab

COMMODITY	GRADE	
Silver	1138.0000	Grams per tonne
Gold	12.2000	Grams per tonne
Copper	0.2400	Per cent
Lead	2.0000	Per cent
Zinc	3.7400	Per cent

COMMENTS: Gold and silver assays are maxima. Base metals are maximum geochemical analyses from more than one sample.
 REFERENCE: Assessment Report 13780.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

GSC MAP 5-1968; 1713A

DATE CODED: 1991/12/28
DATE REVISED: 1992/02/19

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 055**

NATIONAL MINERAL INVENTORY:

NAME(S): **NEWMAC 1**, ROAD GOSSAN L.B. SHEAR

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N15E 092N10E
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 45 34 N
LONGITUDE: 124 40 08 W
ELEVATION: 1344 Metres

NORTHING: 5735601
EASTING: 384821

LOCATION ACCURACY: Within 500M

COMMENTS: Located on sample 79, 400 metres south of Butler Creek, 17 kilometres south-southwest of the community of Tatla Lake (Assessment Report 17080, Figure 11).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite
ASSOCIATED: Quartz
ALTERATION: Pyrite Quartz Sericite Kaolinite Goethite

COMMENTS: The product of argillic alteration is presumed to be kaolinite.

ALTERATION TYPE: Pyrite Silicific'n Sericitic Argillic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Shear
CLASSIFICATION: Hydrothermal Epithermal Epigenetic Placer
COMMENTS: Altered and mineralized fracture systems generally have a northerly trend.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE Lower Cretaceous Mesozoic-Cenozoic
GROUP Unnamed/Unknown Group
FORMATION Unnamed/Unknown Formation
IGNEOUS/METAMORPHIC/OTHER Coast Plutonic Complex

LITHOLOGY: Andesitic Tuff
Andesitic Breccia
Porphyritic Andesitic Flow
Rhyodacitic Tuff
Diorite
Quartz Diorite
Rhyodacitic Flow
Quartz Feldspar Porphyry Dike
Monzonite Porphyry Dike

HOSTROCK COMMENTS: Mineralization hosted in volcanics and in dioritic intrusions; latter are related to the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Gambier Plutonic Rocks
PHYSIOGRAPHIC AREA: Chilcotin Plateau
COMMENTS: Located along faulted northeastern margin of Coast Plutonic Complex.

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Rock
COMMODITY GRADE
Silver 58.0000 Grams per tonne
Gold 0.3700 Grams per tonne
COMMENTS: Maximum geochemical analyses.
REFERENCE: Assessment Report 17080.

ORE ZONE: SHEAR REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Rock
COMMODITY GRADE
Silver 1.3000 Grams per tonne
Gold 2.3500 Grams per tonne
COMMENTS: Geochemical analysis of a grab sample of high-grade vein material.
REFERENCE: Assessment Report 17080.

CAPSULE GEOLOGY

The Newmac 1 occurrence is located 17 kilometres south-southwest of the community of Tatla Lake. It combines mineral showings in the "C" Grid area with those about 1 kilometre to the east in the Lower Butler Creek area, both in the Newmac property (Assessment Reports 17080, 18036, 20860). These showings are somewhat subordinate in significance to other showings on the property, covered by the Bu (092N 030) and Mac (092N 054) occurrences.

The area around the Newmac 1 occurrence is underlain by Lower Cretaceous volcanics of the Gambier overlap assemblage, and by dioritic intrusions related to the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163, Map 1713A). The area lies between two major northwest-striking faults, the Yalakom and Tchaikazan faults, along the northeastern margin of the Coast Plutonic Complex. A splay of the latter, the Niut fault, occurs just south of the area of interest (Geological Survey of Canada Open File 1163).

The volcanics are mainly andesitic tuffs, with minor breccia and porphyritic flows. These are interbedded with rhyodacitic flows and tuffs. The quartz diorite and diorite intrusions are medium grained and porphyritic; one large body can be traced intermittently between the two areas of mineralization. The volcanics are also intruded by dykes, including monzonite porphyry and quartz-feldspar porphyry.

Fracturing, where present, has a predominantly northerly trend. Alteration is commonly associated with these structural zones, particularly silicification and pyritic (sericitic) alteration; it is locally intense and may extend for several metres.

The "C" Grid area consists of an oxidized (goethite) zone of silicified and pyritized volcanics and diorite. Rock and soil samples contain anomalous precious and base metal values over an area at least 600 by 200 metres, such as up to 0.37 gram per tonne gold and 58 grams per tonne silver (Assessment Report 17080).

Probably the most significant zone is a 6-metre wide, northeast-striking shear zone in andesite and diorite in the Lower Butler Creek area (L.B. Shear). It is marked by argillic and pyritic alteration and local silicification, and includes a quartz vein with pyrite and arsenopyrite, one grab sample of which was analyzed to contain 2.35 grams per tonne gold and 1.3 grams per tonne silver (Assessment Report 17080).

Placer gold has been found in Lower Butler Creek to the west (downstream) of this showing, consisting of fine gold and one nugget 6.5 millimetres across (Assessment Report 18036).

BIBLIOGRAPHY

EMPR EXPL 1988-C129,130
EMPR ASS RPT *17080, 18036, 20860
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1991/12/29
DATE REVISED: 1992/02/19

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 056**

NATIONAL MINERAL INVENTORY:

NAME(S): **FLY**, GOSSAN 1,2, RIDGE ZONE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N09W 092N10E
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 36 29 N
LONGITUDE: 124 29 30 W
ELEVATION: 2107 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5718500
EASTING: 396707

LOCATION ACCURACY: Within 500M

COMMENTS: Located on diamond-drill hole VF-3 in the main mineralized zone, 4 kilometres southeast of Niut Mountain, 35 kilometres south-southeast of the community of Tatla Lake (Assessment Report 17200, Figure 4).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Pyrite Epidote Carbonate
ALTERATION: Pyrite Epidote Chlorite Sericite Carbonate
Clinozoisite Hematite Serpentine

COMMENTS: Malachite and azurite are also present.

ALTERATION TYPE: Pyrite Propylitic Oxidation Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Shear
CLASSIFICATION: Hydrothermal Porphyry

TYPE: L04 Porphyry Cu ± Mo ± Au

COMMENTS: Copper mineralization is associated with dykes, fractures and shears that trend mostly west-northwest or east-northeast.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous Mesozoic-Cenozoic	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex

LITHOLOGY: Felsic Intermediate Mafic Volcanic
Felsic Intermediate Mafic Agglomerate
Felsic Intermediate Mafic Breccia
Felsic Intermediate Mafic Tuff
Porphyritic Quartz Diorite Dike
Quartz Diorite
Feldspar Quartz Porphyry Dike
Mafic Dike
Sediment/Sedimentary

HOSTROCK COMMENTS: Mineralization is hosted in altered, fractured and sheared porphyritic dykes and Lower Cretaceous volcanics, between two major faults.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Gambier Plutonic Rocks
COMMENTS: Near the Tchaikazan fault, northeast of the Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: RIDGE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Grab
COMMODITY
Copper GRADE 0.6800 Per cent
COMMENTS: Maximum assay value.
REFERENCE: Assessment Report 17200.

CAPSULE GEOLOGY

The Fly occurrence consists of copper mineralization in altered volcanic rocks and small intrusions, southeast of Niut Mountain, west of Tatlayoko Lake.

The occurrence lies in a strongly faulted region of the Gambier overlap assemblage between the Tchaikazan fault and a probable splay fault, the Niut fault, northeast of the Jurassic to Tertiary Coast Plutonic Complex (Geological Survey of Canada Open File 1163, Map 1713A). These faults trend northwest and were probably active in the

CAPSULE GEOLOGY

Late Cretaceous and Early Tertiary. Secondary faults and shear zones in the area have a variety of trends, commonly west-northwest and east-northeast.

The rocks present are mainly Lower Cretaceous felsic, intermediate and mafic volcanic flows, agglomerate, breccia and tuff, with minor sedimentary rocks (Geological Survey of Canada Open File 1163; Assessment Reports 10303, 17200). These rocks strike northwest. All rocks are intruded by numerous dykes and sills, many of which are probably related to a relatively large quartz diorite intrusion to the northwest. Dykes are composed of porphyritic quartz diorite and feldspar-quartz porphyry, or mafic rock; they trend mainly west-northwest or east-northeast, and dip steeply north.

The main showing of copper mineralization occurs at the Ridge zone, a zone of strong fracturing and shearing, quartz porphyry dyke intrusion and alteration (Assessment Reports 10303, 17200). Volcanic rocks in the vicinity are pyritized, and oxidation has produced a prominent hematite-rich gossan. Epidote-rich propylitic alteration is widespread, and locally intense around fracture systems, affecting the intrusions as well as the volcanics. Serpentine is also reported.

Chalcopyrite and pyrite, with secondary malachite and azurite, are widespread in this zone, being visible over a length of 200 metres. Most of the mineralization is disseminated in the host rocks, the remainder being concentrated as fracture-fillings in west-northwest-trending quartz-epidote-carbonate veinlets. Sporadic assay values of between 0.1 and 0.2 per cent copper have been obtained from rock samples; the highest value obtained was 0.68 per cent copper (Assessment Report 17200). A 1973 program of diamond drilling (5 holes) intersected broad copper mineralization, assaying up to 0.15 per cent copper over 3.0 metres (Assessment Report 17200).

Based on the association of copper mineralization, porphyritic intrusions and propylitic alteration, it has been inferred that the Fly occurrence represents porphyry copper-style mineralization (Assessment Report 10303).

Values of gold and molybdenum from pyritic quartz veins are low. However, high assays of gold (between 2 and 6 grams per tonne) are reported in quartz veins (possibly float) in adjacent areas (Assessment Report 17200).

BIBLIOGRAPHY

EM GEOMAP 2002-03
EMPR ASS RPT *10303, *17200
EMPR EXPL 1981-257; 1988-C129
EMPR GEM 1972-309
GSC MAP 5-1968; 1713A
GSC OF 1163
GSC P 68-33

DATE CODED: 1992/01/13
DATE REVISED: 1992/01/15

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 057**

NATIONAL MINERAL INVENTORY:

NAME(S): **AT 3-4, MAIN VALLEY , COPPER RIDGE**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N10E 092N10W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 31 11 N
LONGITUDE: 124 44 55 W
ELEVATION: 2134 Metres

NORTHING: 5709072
EASTING: 378681

LOCATION ACCURACY: Within 500M

COMMENTS: Located on outcrop sample AT34-88-50, 2.5 kilometres west of Otтарasko Mountain, Niut Range, 47 kilometres south of Kleena Kleene (Assessment Report 18022, Map No.2).

COMMODITIES: Silver Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Cuprite Galena
ASSOCIATED: Quartz Carbonate Pyrite
COMMENTS: Quartz and carbonate (probably calcite or ankerite) form veins which host mineralization.
ALTERATION: Limonite Malachite Azurite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
DIMENSION: STRIKE/DIP: 155/ TREND/PLUNGE:
COMMENTS: Mineralized quartz veins typically are subvertical and strike 155 degrees.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Lower Cretaceous	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Andesitic Tuff
Andesitic Breccia
Phyllite
Sericitic Schist
Siltstone
Limestone
Felsic Intermediate Porphyritic Dike

HOSTROCK COMMENTS: Host rocks comprise structurally interleaved Upper Triassic and/or Lower Cretaceous metavolcanic and metasedimentary units.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Stikine Gambier
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Greenschist
COMMENTS: In thrust belt along northeast margin of Coast Plutonic Complex.

INVENTORY

ORE ZONE: COPPER RIDGE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Rock
COMMODITY GRADE
Copper 0.7300 Per cent

COMMENTS: Maximum geochemical analysis.
REFERENCE: Property File - Berniolles, L.M., (1991).

ORE ZONE: VEIN REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Rock
COMMODITY GRADE
Silver 24.3000 Grams per tonne
Copper 0.1000 Per cent
Lead 0.1700 Per cent

COMMENTS: Maximum geochemical analyses from a single sample (AT34-88-50).
REFERENCE: Assessment Report 18022.

CAPSULE GEOLOGY

The AT 3-4 occurrence refers to several copper and silver-bearing quartz veins in the ridges west of Ottarasko Mountain (Assessment Report 18022). It is, in part, a continuation of mineralization at the AT 2 occurrence (092N 048), between 1 and 2 kilometres to the southeast.

The area lies in the Stikinia Terrane and Gambier overlap assemblage along the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex, within a complex stack of recumbent folds and gently southwest-dipping thrusts sheets (Geological Survey of Canada Open File 1163, Map 1713A). The northeast-directed thrusting placed an imbricated package of metamorphosed Lower Cretaceous and Upper Triassic (Carnian) volcanic and sedimentary rocks over Lower Cretaceous (Hauterivian) sedimentary rocks (Geological Survey of Canada Open File 1163, Papers 88-1E, 89-1E; Geology 1991). The thrusting took place in the Late Cretaceous because the thrusts are cut by a quartz diorite intrusion dated at 68 million years by the uranium-lead method on zircon (Geological Survey of Canada Papers 88-1E, 91-2).

The area of economic interest lies within the imbricated Lower Cretaceous and Upper Triassic rocks. The local geology probably involves more than one thrust sheet, but as thrusts were not recognized as such in the pertinent data sources, a structural interpretation of the local stratigraphy is not attempted here.

Most of the area of the occurrence is underlain by andesitic tuff and breccia, phyllite, sericitic schist, siltstone, and rarely limestone; all are metamorphosed to greenschist grade. The strata generally strike north to northeast and dip moderately to the west. The area is intruded by numerous felsic to intermediate porphyritic dykes; the dykes are generally steep, and strike northwest.

Mineral showings are associated with quartz or quartz-carbonate veins, fracture-fillings and stockworks. The veins strike predominantly northwest (about 155 degrees) and are subvertical, similar to the orientations of dykes and fault zones. Typically the veins are 10 to 20 centimetres thick, but some reach 1 metre in thickness, and may extend for over 5 metres in length. Disseminated pyrite is generally present in the veins, locally accompanied by minor amounts of chalcopryrite, malachite and galena. The quartz vein sample on which this occurrence is centred was analyzed at 24.3 grams per tonne silver, 0.1 per cent copper and 0.17 per cent lead (Assessment Report 18022). The host metavolcanics or metasediments may also contain disseminated sulphides and are commonly oxidized with limonite around the veins.

The Copper Ridge showing lies 1.6 kilometres to the southeast but is incorporated into this occurrence. It consists of quartz veins and sulphide bands in tuffaceous metavolcanics, bearing chalcopryrite, cuprite, malachite and azurite, with values up to 0.73 per cent copper (Property File - Berniolles, L.M., 1991; this source also reports significant gold and silver values in probably locally-derived float blocks).

BIBLIOGRAPHY

- EMPR EXPL 1987-C224; 1988-C129
- EMPR ASS RPT *18022, 16688
- EMPR PF (Berniolles, L.M. (1991): Letter)
- GSC OF 1163
- GSC P 68-33; 88-1E, pp. 185-190; 89-1E, pp. 163-167; 91-2, pp. 109-113
- GSC MAP 5-1968; 1713A
- GSA GEOLOGY 1991, pp. 941-944

DATE CODED: 1992/01/06
DATE REVISED: 1992/02/20

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 058**

NATIONAL MINERAL INVENTORY:

NAME(S): **HW, STACK, V5,**
RIDGE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N10W 092N10E
BC MAP:

LATITUDE: 51 32 32 N
LONGITUDE: 124 46 12 W
ELEVATION: 2195 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Located on "The Stack" showing, 4.5 kilometres northwest of Ottarasko Mountain, 45 kilometres south of Kleena Kleene (Property File - Berniolles, L.M., 1991).

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

NORTHING: 5711610
EASTING: 377257

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Arsenopyrite Pyrite
COMMENTS: Other, unspecified sulphide minerals may also be present.

ASSOCIATED: Quartz Calcite
COMMENTS: Significant minerals are generally but not always associated with quartz and calcite veining.

ALTERATION: Limonite
COMMENTS: The product of oxidation is presumed to be limonite.

ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Veins are generally steep and strike north-northwest or east.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Lower Cretaceous	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Andesitic Tuff
Andesitic Breccia
Limestone
Shale
Limy Shale
Greenstone
Felsic Intermediate Porphyritic Dike
Basaltic Dike
Greenstone

HOSTROCK COMMENTS: Host is a complex belt of folded and thrust-imbricated Upper Triassic and/or Lower Cretaceous low grade metavolcanics and metasediments.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Stikine

METAMORPHIC TYPE: Regional

COMMENTS: Within fold-thrust belt, northeast margin of Coast Plutonic Complex.

PHYSIOGRAPHIC AREA: Pacific Ranges

Gambier

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1989

SAMPLE TYPE: Rock

COMMODITY

GRADE

COMMODITY	GRADE	Units
Silver	7.2000	Grams per tonne
Gold	1.0000	Grams per tonne
Copper	0.5900	Per cent

COMMENTS: Geochemical analysis of a composite sample, from 2 kilometres southeast of the main HW showing.

REFERENCE: Assessment Report 19355.

MINFILE NUMBER: **092N 059**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHAMPAGNE**, HW 3, LORI 2

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N10E
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 33 23 N
LONGITUDE: 124 44 03 W
ELEVATION: 2225 Metres

NORTHING: 5713126
EASTING: 379779

LOCATION ACCURACY: Within 500M

COMMENTS: Located on a mineralized quartz vein, 5 kilometres southwest of Razorback Mountain, 40 kilometres south of the community of Tatla Lake (Property File - Berniolles, L.M., 1991).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Arsenopyrite Pyrite
COMMENTS: Gold is associated with arsenopyrite.
ASSOCIATED: Quartz
ALTERATION: Quartz Pyrite
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
DIMENSION: 150 x 1 Metres
COMMENTS: Quartz vein.

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic
Lower Cretaceous

GROUP

Unnamed/Unknown Group
Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Andesitic Volcanic
Siliceous Siltstone
Siliceous Mudstone
Dike

HOSTROCK COMMENTS: A mineralized quartz vein is hosted in volcanic rocks within thrust-imblicated Upper Triassic and Lower Cretaceous volcanics and sediments

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Pacific Ranges

TERRANE: Stikine

Gambier

COMMENTS: In a fold-thrust belt, on northeast margin of Coast Plutonic Complex.

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1991

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold

24.1000

Grams per tonne

COMMENTS: Highest assay value.

REFERENCE: Property File - Berniolles, L.M. (1991).

CAPSULE GEOLOGY

The Champagne occurrence is located in the rugged terrain southwest of Razorback Mountain. Interest began with the discovery of highly anomalous gold and copper values in quartz-rich float and talus in the area (up to 89 grams per tonne gold, Assessment Report 13150); overall, however, in situ mineralization may contain high assays but are erratic. The Champagne occurrence encroaches on similar showings covered by the Lori (092N 047) and HW (092N 058) occurrences.

The area lies in the Stikinia Terrane and Gambier overlap assemblage near the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex, within a complex belt of folds and imbricated, gently southwest-dipping thrust sheets (Geological Survey of Canada Open File 1163, 1713A). The northeast-directed thrusting placed Upper Triassic (Carnian) and Lower Cretaceous volcanic and sedimentary rocks over Lower Cretaceous (Hauterivian) sedimentary

CAPSULE GEOLOGY

rocks (Geological Survey of Canada Open File 1163, Papers 88-1E, 89-1E; Geology 1991). The thrusting took place in the Late Cretaceous because the thrusts are cut by a quartz diorite intrusion dated at 68 million years by the uranium-lead method on zircon (Geological Survey of Canada Papers 88-1E, 91-2).

The area of economic interest probably lies within the imbricated Upper Triassic and Lower Cretaceous volcanic and sedimentary rocks; a more precise setting is not possible because of the structural complexity.

Most of the area around the occurrence is covered by talus, snow or ice. Where exposed, bedrock consists of volcanics and, locally, silicified and strongly pyritic siltstone and mudstone (Property File - Berniolles, L.M., 1991; Assessment Reports 13150, 17392, 18250). Volcanics in the region are typically andesitic (Geological Survey of Canada Open File 1163). A large dyke of unspecified composition intrudes the volcanics. Bedding generally strikes north and dips gently to moderately west. Fracturing is common and locally intense; most fractures trend northwest, with some east-southeast, and dip steeply.

The Champagne showing consists of a gold-bearing, subhorizontal quartz vein in volcanic rocks. The vein is 0.3 to 1.0 metre thick and can be traced along strike for at least 150 metres. Gold is associated with arsenopyrite. The best assay value obtained is 24.1 grams per tonne gold (Property File - Berniolles, L.M., 1991).

BIBLIOGRAPHY

EMPR EXPL 1983-340; 1988-C129
EMPR ASS RPT 13150, 17392, 18250
EMPR PF (*Berniolles, L.M. (1991): Letter)
GSC OF 1163
GSC P 68-33; 88-1E, pp. 185-190; 89-1E, pp. 163-167; 91-2, pp. 109-113
GSC MAP 5-1968; 1713A
GSA GEOLOGY 1991, pp. 941-944

DATE CODED: 1992/01/11
DATE REVISED: 1992/04/10

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 060**

NATIONAL MINERAL INVENTORY:

NAME(S): **TRED**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N01W 092N08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 14 59 N
LONGITUDE: 124 15 58 W
ELEVATION: 2240 Metres

NORTHING: 5678357
EASTING: 411637

LOCATION ACCURACY: Within 500M

COMMENTS: Located from a mineral occurrence map symbol, 7 kilometres northwest of the head of Franklyn Arm, Chilko Lake (Bulletin 81, Figure 5).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcocite Tetrahedrite
ASSOCIATED: Quartz Epidote Pyrite
ALTERATION: Chlorite Sericite Limonite
COMMENTS: Limonitic alteration is associated with nearby fault zones.
ALTERATION TYPE: Chloritic Sericitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown
COMMENTS: The country rocks of the mineralized stock strike northwest and dip moderately southwest.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic Mesozoic-Cenozoic	Unnamed/Unknown Group	Unnamed/Unknown Formation	Coast Plutonic Complex

LITHOLOGY: Quartz Diorite
Mafic Diorite
Andesitic Volcanic
Sediment/Sedimentary

HOSTROCK COMMENTS: Mineralization is hosted in a post-Lower Cretaceous quartz diorite stock intruded into Upper Triassic volcanic and sedimentary rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Stikine
COMMENTS: Situated between the Stikelan fault and the Coast Plutonic Complex.

CAPSULE GEOLOGY

The Tred occurrence consists of copper mineralization in mountainous terrain southeast of the Tredcroft Glacier, 7 kilometres northwest of the head of Franklyn Arm of Chilko Lake. It was discovered during a mineral resource assessment project in the Chilko Lake area (Bulletin 81).

The occurrence lies within a quartz diorite stock, 3 kilometres southwest of an important northwest-striking fault, the Stikelan fault (Geological Survey of Canada Open File 1163). The stock was emplaced into a complex belt of Upper Triassic and Lower Cretaceous sedimentary and volcanic rocks, between the Stikelan fault and the early Tertiary Tiedemann pluton of the Jurassic to Tertiary Coast Plutonic Complex, 12 kilometres to the southwest.

The immediate country rocks are dominantly Upper Triassic andesitic volcanics and minor sedimentary rocks of the Stikinia Terrane (Bulletin 81; Geological Survey of Canada Map 1713A). The rocks strike northwest and dip moderately southwest.

The quartz diorite stock is probably related to the Coast Plutonic Complex. It is about 4 kilometres long and about 2 kilometres wide, elongate in a northwest direction, in common with the dominant structural trends in the area. The eastern side of the intrusion is cut by several northwest-striking faults, accompanied by limonitic alteration.

The Tred showing occurs on the south side of the stock and consists of disseminated, unspecified copper mineralization (Bulletin 81). Alteration of the quartz diorite and adjacent volcanics is minimal, with only minor chloritic and sericitic alteration present, and a few quartz-epidote veins.

CAPSULE GEOLOGY

Talus of a slightly more mafic diorite is presumed to be derived from the southern margin of the stock (Bulletin 81). It contains disseminated pyrite, chalcocite and tetrahedrite. Two rock samples yielded anomalously high values of silver, copper, lead, zinc and molybdenum (Bulletin 81).

The Tred showing is probably similar to copper mineralization present 2.5 kilometres away at the northwest end of the stock, covered by the Rum 66 occurrence (092N 008) (Assessment Report 2671).

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 231-243
EMPR BULL *81, p. 81
EMPR ASS RPT 2671
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1992/01/23
DATE REVISED: 1992/02/20

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092N 061**

NATIONAL MINERAL INVENTORY:

NAME(S): **BIG SLIDE**, MOUNT SKINNER, SKINNER 2

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092N09W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 42 12 N
LONGITUDE: 124 22 23 W
ELEVATION: 1509 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5728935
EASTING: 405119

LOCATION ACCURACY: Within 500M

COMMENTS: Located from location map, 600 metres west of Mount Skinner, 6.5 kilometres north-northeast of the northern end of Tatlayoko Lake (Property File - Berniolles, L.M., 1991).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Triassic
Mesozoic-Cenozoic

GROUP

Unnamed/Unknown Group

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Coast Plutonic Complex

LITHOLOGY: Quartz Diorite
Diorite
Sediment/Sedimentary

HOSTROCK COMMENTS: The quartz diorite host rock is probably related to the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Cadwallader

Plutonic Rocks

PHYSIOGRAPHIC AREA: Chilcotin Plateau

COMMENTS: The intrusion is 4 kilometres southwest of the Yalakom fault.

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1991

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold

55.0000

Grams per tonne

COMMENTS: Best assay, taken across a width of 15 centimetres.

REFERENCE: Property File - Berniolles, L.M., 1991.

CAPSULE GEOLOGY

The Big Slide occurrence comprises vein-hosted gold mineralization, 6.5 kilometres north of the northern end of Tatlayoko Lake. Work has been done in this area intermittently since the early 1900's. The Big Slide occurrence may be similar to another vein-hosted gold deposit 1.8 kilometres to the southwest, namely the Skinner occurrence (092N 039).

The occurrence is located 4 kilometres southwest of the northwest-striking Yalakom fault, in part of the Cadwallader Terrane (Geological Survey of Canada Map 1713A). The area is dominated by a quartz diorite to diorite intrusion of uncertain age, although it is probably related to the Jurassic to Tertiary Coast Plutonic Complex. The intrusion is hosted by Lower to Middle Jurassic sedimentary rocks to the south and west, partly in fault contact (Geological Survey of Canada Open File 1163). To the north of the intrusion are Upper Triassic sedimentary rocks.

Little information is available on the local geology. The mineralization is hosted in a system of subparallel, thin, sheeted quartz veins in the diorite (Property File - Berniolles, L.M., 1991). At least 12 veins have been located in the system, outcropping over several hectares. The best assay obtained was 55 grams per tonne gold, over a width of 15 centimetres (Property File - Berniolles,

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 803
REPORT: RGEN0100

CAPSULE GEOLOGY

L.M., 1991).

BIBLIOGRAPHY

EM GEOMAP 2002-03
EMPR PF (*Berniolles, L.M. (1991): Letter)
GSC MAP 5-1968; 1713A
GSC OF 1163
GSC P 68-33
WWW <http://www.infomine.com/>

DATE CODED: 1992/02/13
DATE REVISED: 1992/04/10

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 062**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOTUS**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N07E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 24 56 N
LONGITUDE: 124 39 06 W
ELEVATION: 1760 Metres

NORTHING: 5697332
EASTING: 385145

LOCATION ACCURACY: Within 500M

COMMENTS: Located on a mineralized shear zone, 7 kilometres north-northwest of Homathko Peak, 14 kilometres west-southwest of the southern end of Tatlayoko Lake.

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
COMMENTS: Gold content is proportional to pyrite content. Chalcopyrite is in trace amounts.

ASSOCIATED: Quartz

ALTERATION: Quartz Chlorite Sericite Limonite Siderite

COMMENTS: The products of alteration of pyrite are presumed to be limonite and siderite.

ALTERATION TYPE: Silicific'n Chloritic Sericitic Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Shear
CLASSIFICATION: Hydrothermal Epigenetic
DIMENSION: 10 x 1 Metres STRIKE/DIP: 114/68S

TREND/PLUNGE:

COMMENTS: Surface dimensions of the showing are given. Orientation of the shear zone hosting the mineralized quartz vein is given.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Unknown	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Lower Cretaceous	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Aphanitic Felsic Intrusive
Tonalite
Meta Volcanic
Siltstone
Greywacke
Conglomerate

HOSTROCK COMMENTS: The mineralized shear zone is hosted in a felsic intrusive along the Blackhorn thrust, separating metavolcanics from sedimentary rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Stikine Gambier
COMMENTS: In a thrust belt, northeast margin of the Coast Plutonic Complex.

CAPSULE GEOLOGY

The Lotus occurrence is a showing of gold and silver mineralization, located 14 kilometres west-southwest of the southern end of Tatlayoko Lake.

The occurrence is situated along the northeastern margin of the Jurassic to Tertiary Coast Plutonic Complex, in a region of strong thrusting involving rocks of the Stikinia Terrane and the Gambier overlap assemblage (Geological Survey of Canada Open File 1163, Map 1713A). These rocks, and the thrusts, are cut by a linear intrusion of tonalite, probably related to the Coast Plutonic Complex.

The mineralization at the Lotus showing is hosted in a quartz vein in a shear zone approximately coincident with the west-northwest-striking Blackhorn thrust. The hanging wall of the thrust to the southwest consists of metavolcanics of Stikinia, which have been thrust onto Lower Cretaceous siltstone, greywacke and conglomerate of the Gambier assemblage in the footwall to the northeast. The shear zone and quartz vein are localized at a point along the thrust where the east-northeast-trending tonalite intrusion crosses it. A fourth unit is present at this 'triple point', an aphanitic felsic intrusive(?) rock; the shear zone and quartz vein

CAPSULE GEOLOGY

are actually hosted in this felsic intrusive. This rock, and the subsequent hydrothermal activity responsible for the mineralization, may be related to the tonalite.

The shear zone at the Lotus showing consists of a quartz vein and weakly to intensely silicified grey and pink felsic intrusive rock. The zone and the vein at the showing are about 10 metres long and has a surface width of about 1.2 metres; it strikes 114 degrees and dips 68 degrees southwest. The quartz is rich in fine to coarse-grained disseminated pyrite, and there is a trace of chalcopyrite. Locally, oxidation has replaced the pyrite with cavities filled with iron oxide and iron carbonate. Chloritic and sericitic alteration are also present.

BIBLIOGRAPHY

EMPR ASS RPT *21876
GSC OF 1163
GSC P 68-33
GSC MAP 5-1968; 1713A

DATE CODED: 1992/02/13
DATE REVISED: 1992/04/10

CODED BY: CJR
REVISED BY: CJR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092N 063**

NATIONAL MINERAL INVENTORY:

NAME(S): **DARLENE**, DOROTHY, GLACIER,
SNOW

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N05E
BC MAP:

MINING DIVISION: Vancouver
UTM ZONE: 10 (NAD 83)

LATITUDE: 51 22 38 N
LONGITUDE: 125 35 17 W
ELEVATION: 1850 Metres

NORTHING: 5694954
EASTING: 319887

LOCATION ACCURACY: Within 500M

COMMENTS: The vein is located approximately 37 kilometres north of Knight Inlet and 5 kilometres east of the Klinaklini River on a north-flowing tributary of Dorothy Creek (Fieldwork 1992).

COMMODITIES: Lead Zinc Copper

MINERALS

SIGNIFICANT: Limonite Galena Sphalerite Chalcopyrite Pyrrhotite
COMMENTS: Galena, sphalerite and chalcopyrite are found in numerous angular clasts and cobbles of vein material found less than 50 metres away and downslope of the outcropping vein; no sulphides are visible in the outcropping vein.

ASSOCIATED: Limonite Quartz Feldspar Pyrite Chlorite
Epidote Garnet Diopside

COMMENTS: Vein material consists of heavily altered and silicified wallrock whose original textures have been destroyed; weathered open spaces of the vein are lined with limonitic material.

ALTERATION: Limonite Silica

COMMENTS: Weathered open spaces of the vein are lined with limonitic material; limonite and iron-manganese staining is also prevalent along fractures and weathered surfaces.

ALTERATION TYPE: Oxidation Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

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

SHAPE: Tabular

DIMENSION: 50 x 1 Metres STRIKE/DIP: 358/90 TREND/PLUNGE:

COMMENTS: Vein dimension is 50 metres long and 0.3 to 0.5 metre wide.

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Siliceous Granitoid Gneiss
Pyritic Schist

HOSTROCK COMMENTS: Hosted in the Granitoid Gneiss unit of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Pacific Ranges

TERRANE: Plutonic Rocks

Undivided Metamorphic Assembl.

METAMORPHIC TYPE: Regional

RELATIONSHIP:

GRADE: Amphibolite

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1992

SAMPLE TYPE: Grab

COMMODITY

GRADE

Lead

0.5000

Per cent

Zinc

0.1500

Per cent

REFERENCE: Fieldwork 1992, page 458.

CAPSULE GEOLOGY

Regional Geochemical Survey site 5125 is located approximately 37 kilometres north of Knight Inlet and 5 kilometres east of the Klinaklini River on a north-flowing tributary of Dorothy Creek. Access to the drainage is provided by helicopter.

The upper half of the watershed consists of a cirque drained by three tertiary tributaries. Much of the cirque is underlain by a

CAPSULE GEOLOGY

siliceous granitoid gneiss of the Cenozoic-Mesozoic Coast Plutonic Complex (Granitoid Gneiss unit). Exposed in the western ridge of the watershed is a unit of iron-stained black pyritic schist. These schists overlie the siliceous granitoid gneiss and are dissected by numerous barren quartz-feldspar veins which grade into the surrounding intrusive. Active glaciers ring the upper part of the drainage whereas a thick layer of boulder-rich talus and drift covers the cirque floor.

The Darlene showing was discovered on August 25, 1992 by Steve Sibbick of the EMPR Geological Survey Branch while following up a Regional Geochemistry Survey in the mapsheet. It consists of a 50 metres long, 0.3 to 0.5 metre wide vein striking 358 degrees and dipping vertically within a narrow ridge of siliceous granitoid gneiss near the contact with a unit of altered pyritic schist at an elevation of 1850 metres. Vein material (sample RX-09) consists of heavily altered and silicified wallrock whose original textures have been destroyed; no sulphides are visible. A grab sample of this vein contained 0.5 per cent lead and 0.15 per cent zinc (Fieldwork 1992, page 458). Weathered open spaces are lined with limonitic material. Limonite and iron-manganese staining is also prevalent along fractures and weathered surfaces.

Numerous angular clasts and cobbles of galena-sphalerite-chalcopryrite bearing vein material were found less than 50 metres away and immediately downslope of the vein at the foot of a small glacier (samples RX-07, RX-08, RX-10). These samples are characterized by veins or stringers of galena and/or sphalerite containing occasional grains of chalcopryrite. Assay of sample RX-10 at the Analytical Sciences Laboratory revealed that it contained 0.36 per cent copper, 4.58 per cent lead and 15.3 per cent zinc. Similar fragments were observed over a distance of several hundred metres down ice (north) of the glacier. A boulder of galena-bearing, brecciated vuggy quartz (sample RX-01) was found on the crest of a lateral moraine approximately two kilometres down ice of the vein. Samples of pyritic schist taken along the western ridge of the cirque contained from 1 (samples RX-03, RX-05) to 10 per cent (sample RX-04) pyrite and elevated concentrations of copper.

Stream sediment samples collected from four locations all reported anomalous values of lead, zinc and gold. Data from these samples compares very favourably with the results from the Regional Geochemical survey site located approximately two kilometres downstream. In this case, the Regional Geochemical Survey program has effectively detected a new area of mineralization. The proximity of mineralization at the Hoodoo North occurrence (092N 029) approximately 2.5 kilometres south, suggests that these occurrences may be related. Hoodoo North is a Tertiary age copper-molybdenum porphyry prospect with spatially associated chalcopryrite-sphalerite-galena bearing quartz veins hosted by Mesozoic gneisses.

Lead isotope values were calculated from galena acquired from samples RX-01 and RX-08. Unfortunately, these values can not be used to define a unique date (C. Godwin, personal communication, 1992); a Mesozoic age is obtained based on similarity to lead from the Iskut area (Fieldwork 1990, pages 235-243), whereas a Tertiary age is interpreted when compared to lead from the Silver Queen and Equity Silver lead isotope data (EMPR Paper 1988-4) or to Tertiary gold veins on Vancouver Island (Fieldwork 1988, pages 75-79).

In 1993 Teck Exploration staked the area as the Dorothy claim group, including the Glacier and Snow claims. They conducted a program of prospecting, geophysical and geochemical surveys, and rock (whole rock and assay) sampling. Galena, sphalerite, chalcopryrite, and pyrrotite, mineralization were confirmed at the showing. Mineralogy of samples includes chlorite-epidote, garnet and diopside, and indicates that the genesis of the mineralization is a retrograde zinc skarn. Results of fluid inclusion work were consistent with this interpretation. Five talus boulder samples with the highest zinc assays were analyzed for thallium, gallium and germanium. A high value for thallium is a strong indicator for Kuroko and other types of volcanogenic massive sulphide mineralization. The samples returned low values for thallium, indicating that they were unlikely to have formed in a VMS environment.

BIBLIOGRAPHY

- EM EXPL 2002-29-40
- EMPR ASS RPT 23051
- EMPR *FIELDWORK 1992, p. 458
- GSC OF 1163

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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PAGE: 808
REPORT: RGEN0100

BIBLIOGRAPHY

PR REL Saxony Explorations Ltd., Dec.18, 2002

DATE CODED: 1992/10/06
DATE REVISED: 1999/07/13

CODED BY: SS
REVISED BY: JMR

FIELD CHECK: Y
FIELD CHECK: Y

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 809
REPORT: RGEN0100

MINFILE NUMBER: **092N 064**

NATIONAL MINERAL INVENTORY:

NAME(S): **ANTHONY**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N09W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 34 20 N
LONGITUDE: 124 28 01 W
ELEVATION: 600 Metres

NORTHING: 5714481
EASTING: 398339

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Malachite Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

BIBLIOGRAPHY

EM GEOMAP 2002-03
EMPR OF 1995

DATE CODED: 1994/12/21
DATE REVISED: 1994/12/21

CODED BY: DM
REVISED BY: DM

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092N 064**

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 810
REPORT: RGEN0100

MINFILE NUMBER: **092N 065**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLIPBOARD**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N10E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 35 43 N
LONGITUDE: 124 32 28 W
ELEVATION: 2195 Metres

NORTHING: 5717151
EASTING: 393253

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Malachite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

BIBLIOGRAPHY

EM GEOMAP 2002-03
EMPR OF 1995

DATE CODED: 1994/12/21
DATE REVISED: / /

CODED BY: DM
REVISED BY:

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092N 065**

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 811
REPORT: RGEN0100

MINFILE NUMBER: **092N 066**

NATIONAL MINERAL INVENTORY:

NAME(S): **KAY**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092N09E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 43 48 N
LONGITUDE: 124 02 48 W
ELEVATION: 1292 Metres

NORTHING: 5731527
EASTING: 427715

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Malachite Azurite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal

HOST ROCK

DOMINANT HOSTROCK:

LITHOLOGY:

GEOLOGICAL SETTING

TECTONIC BELT:
TERRANE:

BIBLIOGRAPHY

EM GEOMAP 2002-03
EMPR OF 1995

DATE CODED: 1994/12/21
DATE REVISED: / /

CODED BY: DM
REVISED BY:

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092N 066**

MINFILE NUMBER: **092O 001**

NATIONAL MINERAL INVENTORY: 092O3 Au2

NAME(S): **MOHAWK**, MOTHERLODE, TASEKO,
GRANITE CREEK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092O03W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 05 41 N
LONGITUDE: 123 23 18 W
ELEVATION: 1980 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5660430
EASTING: 472806

LOCATION ACCURACY: Within 500M

COMMENTS: The Motherlode zone is apparently a fracture zone parallel to, and 150 metres higher in elevation than the Mohawk fracture zone; the two fracture zones are referred to collectively as the Mohawk prospect.

COMMODITIES: Copper Gold Silver Molybdenum Zinc
 Lead Uranium

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Molybdenite Galena Sphalerite
 Powellite

ASSOCIATED: Tourmaline Rutile Calcite Apatite
ALTERATION: Sericite Chlorite Hematite Clay Carbonate

ALTERATION TYPE: Sericitic Argillic Propylitic Silicific'n

MINERALIZATION AGE: Upper Cretaceous

ISOTOPIC AGE: 84.9 +/- 2.5 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Sericite

DEPOSIT

CHARACTER: Stockwork Breccia

CLASSIFICATION: Porphyry

TYPE: L04 Porphyry Cu ± Mo ± Au

SHAPE: Irregular

DIMENSION: Metres

STRIKE/DIP: 045/60E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous Coast Plutonic Complex

ISOTOPIC AGE: 86.7 +/- 2.6 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Biotite Equigranular Porphyritic Granodiorite
Quartz Monzonite

HOSTROCK COMMENTS: Dated by McMillan (Fieldwork 1976).

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

PHYSIOGRAPHIC AREA: Pacific Ranges

TERRANE: Plutonic Rocks

COMMENTS: Area straddles contact of Coast Plutonic Complex.

INVENTORY

ORE ZONE: OPENCUT

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1927

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver 22.2900 Grams per tonne

Gold 10.6300 Grams per tonne

Copper 4.5600 Per cent

COMMENTS: A 2.4-metre sample.

REFERENCE: Minister of Mines Annual Report 1927, page 207.

CAPSULE GEOLOGY

The Mohawk porphyry copper prospect, approximately 2 kilometres southeast of the junction of Granite Creek and Taseko River, is within Late Cretaceous biotite granodiorite of the Coast Plutonic Complex, 1.5 kilometres south of its contact with a belt of Upper Cretaceous volcanic rocks.

The Mohawk zone is a northeast striking, steeply southeast dipping breccia zone within variable equigranular to porphyritic biotite granodiorite to quartz monzonite. The breccia zone is approximately 25 metres at its maximum width. It narrows to the northeast and also narrows with depth; its extent to the southwest is

CAPSULE GEOLOGY

unknown due to lack of exposure. The host breccia is composed almost entirely of hematite-speckled, finely crystalline leucocratic aplite, an alteration product of the granodiorite. The breccia matrix is veined and filled with quartz, flaky sericite and sulphides. Chalcopyrite is the dominant sulphide mineral and is accompanied by significant gold and lesser silver. Accessory minerals include pyrite, molybdenite, galena, sphalerite, tourmaline, rutile, calcite-fluorapatite and powellite. The breccia body was explored by underground workings between 1928 and 1935.

In 1927, a sample taken from an opencut assayed 22.29 grams per tonne silver, 10.63 grams per tonne gold, and 4.56 per cent copper over 2.4 metres. A sample taken in 1982 assayed 0.85 percent copper, 0.013 percent molybdenum, 2.6 grams per tonne gold and 6.17 grams per tonne silver over 2.4 metres (Assessment Report 11073). A radioactive sample assayed 0.016 percent equivalent uranium oxide (Geological Survey of Canada Economic Geology Report 16).

BIBLIOGRAPHY

EMPR AR 1926-191; *1927-204-207; 1928-213; 1930-198; 1934-A30,F25;
*1935-F22-24; 1956-35; 1968-155
EMPR GEM 1969-181; 1970-213; 1975-119
EMPR FIELDWORK *1976, p. 50; 1986, pp. 157-169; 1988, pp. 153-158
EMPR ASS RPT 2226, 2364, 2874, *11073
EMPR PF (Report by E.E. Mason, 1935)
EMPR EXPL 1982-243
EMPR GEOL *1976, pp. 67-84
EMPR MAP 22; 44
EMPR OF 1987-3
GSC SUM RPT 1924A, p. 74; *1928A, pp. 90,91
GSC MAP 29-1963
GSC EC GEOL #16, p. 44; #16 (Rev.), p. 236
GSC OF 534; 551; 2207
EMR MP CORPFILE (Genoveva Resource Inc.)
GCNL #183(Sept.22), 1992
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/11

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 002**

NATIONAL MINERAL INVENTORY:

NAME(S): **KNIGHT**, KNOB, DIL

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092006W 092006E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 16 12 N
LONGITUDE: 123 15 18 W
ELEVATION: 2100 Metres

NORTHING: 5679881
EASTING: 482211

LOCATION ACCURACY: Within 500M

COMMENTS: Located near the northern end of the Dil-Dil plateau (Assessment Report 20428).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite Stibnite Chalcopyrite
ALTERATION: Silica Carbonate
ALTERATION TYPE: Silicific'n Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Lower Cretaceous
Cretaceous-Tertiary

GROUP

Taylor Creek

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Conglomerate
Greywacke
Argillaceous Siltstone
Hornfels
Hornblende Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage
COMMENTS: On Eastern boundary of the Coast Belt in Tyaughton Basin.

PHYSIOGRAPHIC AREA: Chilcotin Plateau

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1990

COMMODITY

Silver

GRADE

8.3000

Grams per tonne

Gold

54.4300

Grams per tonne

COMMENTS: From a panel chip sample over a 1.2 by 0.5 metre area.

REFERENCE: Assessment Report 20428.

CAPSULE GEOLOGY

The Knight property is primarily underlain by Lower Cretaceous Taylor Creek Group clastic sedimentary rocks cut by irregularly shaped dykes and stock-like bodies of Cretaceous to Tertiary hornblende feldspar porphyry. Well hornfelsed and fractured lithologies include dark grey argillaceous siltstone, brownish greywacke and chert-volcanic pebble conglomerate.

At the Knob showing, disseminated-type gold mineralization is indicated from the assays of several rock samples of pyritic, variably siliceous, hornfelsed and carbonatized conglomerate sediments. All sampling was concentrated within a 50 by 30 metre area of conglomerate outcroppings. One panel chip sample over a 1.2 by 0.5 metre assayed 54.43 grams per tonne gold and 8.3 grams per tonne silver (Assessment Report 20428).

Also on the property, boulders of vuggy, banded quartz vein material were sampled; the best of 7 grab samples graded 3.87 grams per tonne gold (Assessment Report 20428). Similar, more prominent northeast trending boulder trains are evident on the Dil claim adjacent to the south.

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ENERGY AND MINERALS DIVISION

PAGE: 815
REPORT: RGEN0100

BIBLIOGRAPHY

EM GEOMAP 2002-03
EMPR ASS RPT 16879, 18007, 19319, *20428, 20462
EMPR FIELDWORK 1986, pp. 157-169; 1992, pp. 37-52
EMPR OF 1987-3
GSC OF 534

DATE CODED: 1991/11/01
DATE REVISED: 1992/11/13

CODED BY: GJP
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **0920 003**

NATIONAL MINERAL INVENTORY: 09203 Cu1

NAME(S): **COPPER MOUNTAIN, TRIGGER LAKE**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092003E
BC MAP:
LATITUDE: 51 00 06 N
LONGITUDE: 123 08 23 W
ELEVATION: 2090 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location indicated is southwest breccia zone in granodiorite.

MINING DIVISION: Lillooet
UTM ZONE: 10 (NAD 83)
NORTHING: 5650020
EASTING: 490196

COMMODITIES: Copper Silver Molybdenum Zinc Lead

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Bornite Molybdenite Sphalerite

Galena

COMMENTS: Mainly pyrite and chalcopyrite with traces of others.

ASSOCIATED: Quartz Calcite Magnetite
ALTERATION: Epidote Sericite Silica Calcite Chlorite

COMMENTS: Alteration seen mainly in andesite.

ALTERATION TYPE: Propylitic Sericitic Silicific'n Quartz-Carb.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Breccia
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au
COMMENTS: Several mineralized zones of unknown shape.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous	Undefined Group	Powell Creek	
Upper Cretaceous			Coast Plutonic Complex

LITHOLOGY: Hornblende Biotite Granodiorite
Porphyritic Andesite
Diorite Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1967
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 0.2500 Grams per tonne
Copper 0.2800 Per cent
COMMENTS: Samples from a width of 10 metres.
REFERENCE: Property File - Report by L.J. Manning, 1967.

CAPSULE GEOLOGY

The Copper Mountain porphyry prospect, 2.5 kilometres southwest of Trigger Lake, is mainly within a Late Cretaceous pluton consisting of hornblende-biotite granodiorite of the Coast Plutonic Complex. The area to the north is underlain by Upper Cretaceous volcanics of the informally named Powell Creek Formation.

The main mineralized zone occurs within the granodiorite where it contacts a younger(?) diorite porphyry stock. Mineralization comprises pyrite, chalcopyrite, magnetite, quartz, calcite, and traces of bornite and molybdenite as fracture-fillings in brecciated and fractured granodiorite. Commonly, the granodiorite displays an orbicular structure comprising nodules (to more than 1 metre in size) of massive granodiorite separated by mineralized miarolitic granodiorite. Drilling indicates that mineralization also occurs within propylitic-altered andesite north of the granodiorite, where 2 to 7 per cent pyrite with minor chalcopyrite and traces of sphalerite and galena occur as disseminations, blebs, fracture fillings, and irregular massive seams.

A 10-metre chip sample assayed 0.25 gram per tonne silver and

CAPSULE GEOLOGY

0.28 per cent copper (Property File - Manning, 1967).

BIBLIOGRAPHY

EMPR ASS RPT 2553, 11411, 11420, 11437
EMPR AR 1917-F218-219; 1968-160,161
EMPR GEM 1970-223,224; 1971-328
EMPR PF (*Manning, L.J. (1967): Report on the M.T. Group of Claims)
EMPR FIELDWORK 1986, pp. 157-169
EMPR OF 1987-3
GSC MAP 29-1963
GSC OF 534; 2207
GSC P 67-54
GSC SUM RPT 1918B, pp. 25-28; 1928A, pp. 78-93

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/15

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092O 004**

NATIONAL MINERAL INVENTORY: 092O3 Cu2

NAME(S): **SPOKANE**, GRANITE CREEK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092O03W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 05 14 N
LONGITUDE: 123 26 59 W
ELEVATION: 2070 Metres

NORTHING: 5659621
EASTING: 468502

LOCATION ACCURACY: Within 500M

COMMENTS: The property is situated on Amazon creek, a northerly flowing tributary of the Taseko River located 10 kilometres upstream of Taseko Lakes (Assessment Report 20613).

COMMODITIES: Copper Gold Silver Tungsten

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Arsenopyrite Scheelite
ASSOCIATED: Quartz
ALTERATION: Sericite Chlorite Hematite Chrysocolla Malachite
ALTERATION TYPE: Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Porphyry Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous Coast Plutonic Complex

LITHOLOGY: Biotite Hornblende Granodiorite

HOSTROCK COMMENTS: See Mohawk (092O 001).

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1981
SAMPLE TYPE: Drill Core	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	0.5300 Grams per tonne
Gold	0.2130 Grams per tonne
Copper	2.5300 Per cent

COMMENTS: From approximately 4 metres of drill intersection.
REFERENCE: Property File - Report by A.M. de Quadroz, 1981.

CAPSULE GEOLOGY

The Spokane porphyry copper prospect, 2 kilometres northeast of Mount McClure, is within Late Cretaceous biotite-hornblende granodiorite of the Coast Plutonic Complex, about 0.5 kilometre south of the contact with Lower Cretaceous volcanic rocks of the Taylor Creek Group.

Mineralization is exposed over an area of about 125 metres by 160 metres, within which the granodiorite is heavily fractured; most fractures are steep and strike northeast or northwest. Pyrite is disseminated in the country rock; and pyrite and chalcopyrite with lesser arsenopyrite and minor scheelite also occur in quartz veins, and in pockets of quartz-sericite alteration along fractures. The granodiorite adjacent to mineralized veins and fractures is altered to a pink colour due to hematized plagioclase and chloritized mafic grains. Malachite and chrysocolla occur locally on weathered surfaces. The best gold values reportedly come from pyrite-rich rocks, rather than in association with chalcopyrite.

A 4-metre drill hole intersection assayed 0.53 gram per tonne silver, 0.213 gram per tonne gold and 2.53 per cent copper (de Quadroz, 1981).

BIBLIOGRAPHY

EMPR ASS RPT 2134, 2226, 2364, 2874, 19466, 20613

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

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REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1922-N134; 1926-A191; 1927-C207; 1928-C213; 1930-A198;
*1935-F25,F26; 1956-35; 1968-155
EMPR GEM 1969-181; 1970-213
EMPR PF (*Report by A.M. de Quadroz, 1981)
EMPR GEOL *1976, pp. 67-84
EMPR FIELDWORK *1976, pp. 47-53; 1986, pp. 157-169; 1988, pp. 153-158
EMPR OF 1987-3
GSC SUM RPT 1928A, pp. 78A-93A
GSC MAP 29-1963
GSC OF 534; 2207
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1991/11/01

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 004**

MINFILE NUMBER: **0920 005**

NATIONAL MINERAL INVENTORY: 09203 Fe2

NAME(S): **BATTLEMENT CREEK**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 12 N
LONGITUDE: 123 18 36 W
ELEVATION: 1990 Metres

NORTHING: 5663215
EASTING: 478304

LOCATION ACCURACY: Within 500M

COMMENTS: One kilometre north of Palisade Bluff.

COMMODITIES: Iron

MINERALS

SIGNIFICANT: Limonite
MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Sedimentary Residual
TYPE: B01 Laterite Fe
SHAPE: Tabular
COMMENTS: Surficial deposit.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Recent	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Pyritic Tuff
Limonite Tuff

HOSTROCK COMMENTS: Limonite-bog iron. Quaternary Alluvium

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

INVENTORY

ORE ZONE: BATTLEMENT CREEK

REPORT ON: Y

CATEGORY: Inferred	YEAR: 1921
QUANTITY: 12000 Tonnes	
COMMODITY: Iron	GRADE: 49.0000 Per cent

COMMENTS: Minimum estimate of reserves.
REFERENCE: Geological Survey of Canada Summary Report 1920 Part A.

CAPSULE GEOLOGY

Residual iron oxide deposits are common in the Taseko River region of the southwestern Chilcotin where conditions are suitable for the development of these deposits, i.e. a source of iron (usually pyritic sediments and volcanics) and relatively stable depositional conditions.

The Battlement Creek bog iron showing, 1 kilometre north of Palisade Bluff, consists of nine separate patches of limonite that overlie Pleistocene till along both sides of Battlement Creek. The limonite ranges up to 1 metre in thickness. The iron was probably leached from altered pyritic tuffs of the Upper Cretaceous Powell Creek Formation which occur along the ridges to the south and southeast of the deposit; it was transported downhill in sulphate solutions and deposited as bog iron near the break in slope.

A minimum estimate of the reserve in 1920 was 12000 tonnes grading 49 per cent iron (Geological Survey of Canada Summary Report 1920A, pages 42 to 70A).

BIBLIOGRAPHY

EMPR AR 1919-N241-N249; 1920-N175-N181
EMPR OF 1987-3
EMPR FIELDWORK 1986, pp. 157-169
GSC SUM RPT 1920A, pp. 42A-70A
GSC MAP 29-1963
GSC OF 534; 2207
Young, G.A. and Uglow, W.L. (1926): The Iron Ores of Canada, Vol. 1,

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 821
REPORT: RGEN0100

BIBLIOGRAPHY

pp. 106-108

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/15

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 006**

NATIONAL MINERAL INVENTORY: 09203 Fe5

NAME(S): **RAE CREEK**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 06 27 N
LONGITUDE: 123 17 29 W
ELEVATION: 2130 Metres

NORTHING: 5661820
EASTING: 479601

LOCATION ACCURACY: Within 500M

COMMENTS: Located 1.8 kilometres east-southeast of Palisade Bluff.

COMMODITIES: Iron

MINERALS

SIGNIFICANT: Limonite

MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Sedimentary Residual
TYPE: B01 Laterite Fe
SHAPE: Tabular
COMMENTS: Surficial deposit.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Alluvium

HOSTROCK COMMENTS: Quaternary alluvium.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

INVENTORY

ORE ZONE: RAE CREEK

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 9800 Tonnes
COMMODITY: Iron
GRADE: 49.0000 Per cent

YEAR: 1921

COMMENTS: Minimum estimate.

REFERENCE: Geological Survey of Canada Summary Report 1920 Part A.

CAPSULE GEOLOGY

Residual iron oxide deposits are common in the Taseko River region of southwestern Chilcotin where conditions are suitable for the development of these deposits, i.e. a source of iron (usually pyritic sediments and volcanics) and relatively stable depositional conditions.

The Rae Creek bog iron showing, 1.8 kilometres east-southeast of Palisade Bluff, consists of two elongate patches of limonite occurring along a small tributary on the north side of Rae Creek. The limonite ranges up to 60 centimetres thick and is much contaminated by pieces of talus and rock debris. Another elliptical patch of limonite, 60 centimetres thick, occurs 300 metres down the Rae valley. The iron was probably leached from silicified pyritic tuffs of the Upper Cretaceous Powell Creek Formation which outcrop along the ridges north and east of the showing.

A minimum estimate of inferred reserves are 9800 tonnes grading 49 per cent iron (Geological Survey of Canada Summary Report 1920A, pages 42A-70A).

BIBLIOGRAPHY

EMPR AR 1919-N241-N249; 1920-N175-N181
EMPR FIELDWORK 1986, pp. 157-169
EMPR OF 1987-3
GSC EC GEOL No.3, pp. 106-108
GSC MAP 29-1963
GSC OF 2207

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 823
REPORT: RGEN0100

BIBLIOGRAPHY

GSC SUM RPT *1920A, pp. 42A-70A

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/15

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 007**

NATIONAL MINERAL INVENTORY: 09203 Fe1

NAME(S): **FEO CREEK**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 06 01 N
LONGITUDE: 123 15 25 W
ELEVATION: 2200 Metres

NORTHING: 5661008
EASTING: 482009

LOCATION ACCURACY: Within 500M

COMMENTS: Located 3.5 kilometres southwest of Dorrie Peak.

COMMODITIES: Iron

MINERALS

SIGNIFICANT: Limonite
MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Sedimentary Residual
TYPE: B01 Laterite Fe
SHAPE: Tabular
COMMENTS: Surficial deposit.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Alluvium

HOSTROCK COMMENTS: Quaternary alluvium.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

INVENTORY

ORE ZONE: FEO CREEK REPORT ON: Y
CATEGORY: Inferred YEAR: 1921
QUANTITY: 15900 Tonnes
COMMODITY Iron GRADE 48.0000 Per cent
REFERENCE: Geological Survey of Canada Summary Report 1920 Part A.

CAPSULE GEOLOGY

Residual iron oxide deposits are common in the Taseko River region of southwestern Chilcotin where conditions are suitable for the development of these deposits, i.e. a source of iron (usually pyritic sediments and volcanics) and relatively stable depositional conditions.

The Feo Creek bog iron showing, 3.5 kilometres southwest of Dorrie Peak, consists of a thin, rectangular sheet of limonite on a flat glacially-carved bench on the north side of Feo Creek. The limonite ranges up to 1 metre in thickness and includes a large proportion of talus rock fragments. The iron was presumably leached from altered pyritic volcanic rocks of the Upper Cretaceous Powell Creek Formation that outcrop on the ridges to the north and east.

A minimum estimate of inferred reserves are 15,900 tonnes grading 48 per cent iron (Geological Survey of Canada Summary Report 1920A, pages 42A-70A).

BIBLIOGRAPHY

EMRP FIELDWORK 1986, pp. 157-169
EMPR AR 1919-N241-N249; 1920-N175-N181
EMPR OF 1987-3
GSC OF 534; 2207
GSC SUM RPT 1920A, pp. 42A-70A
GSC MAP 29-1963
GSC EC GEOL No. 3, Vol. 1, pp. 106-108

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/15

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 007**

MINFILE NUMBER: **0920 008**

NATIONAL MINERAL INVENTORY: 09203 Fe3

NAME(S): **DENAIN CREEK**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 04 11 N
LONGITUDE: 123 15 40 W
ELEVATION: 1980 Metres

NORTHING: 5657611
EASTING: 481705

LOCATION ACCURACY: Within 500M

COMMENTS: The showing occurs 3.7 kilometres west-southwest of Mount Warner.

COMMODITIES: Iron

MINERALS

SIGNIFICANT: Limonite

MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Sedimentary Residual
TYPE: B01 Laterite Fe
SHAPE: Tabular
COMMENTS: Surficial deposit.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Alluvium

HOSTROCK COMMENTS: Quaternary alluvium.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: DENAIN CREEK

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 20000 Tonnes
COMMODITY: Iron
GRADE: 47.0000 Per cent

REFERENCE: Geological Survey of Canada Summary Report 1920 Part A.

CAPSULE GEOLOGY

Residual iron oxide deposits are common in the Taseko River region of southwestern Chilcotin where conditions are suitable for the development of these deposits, i.e. a source of iron (usually pyritic sediments and volcanics) and relatively stable depositional conditions.

The Denain Creek bog iron showing, 3.7 kilometres west-southwest of Mount Warner, consists of four separate patches of limonite overlying till on the southwest side of Denain Creek. The limonite ranges up to 60 centimetres thick in the larger patches, and locally includes much angular rock debris. The iron was probably leached from altered pyritic tuffs of the Upper Cretaceous Powell Creek Formation which outcrop on Wilson Ridge to the west. An inferred reserve of 20,000 tonnes grading 47 per cent was estimated (Geological Survey of Canada Summary Report 1920A).

BIBLIOGRAPHY

EMPR AR 1919-N241-N249; 1920-N175-N181
EMPR OF 1987-3
EMPR FIELDWORK 1986, pp. 157-169
GSC EC GEOL 3, pp. 106-108
GSC SUM RPT 1920A, pp. 42A-70A
GSC MAP 29-1963
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/15

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 009**

NATIONAL MINERAL INVENTORY: 09203 Fe4

NAME(S): **FORREST**, WHALE MOUNTAIN

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 04 04 N
LONGITUDE: 123 17 54 W
ELEVATION: 1750 Metres

NORTHING: 5657404
EASTING: 479097

LOCATION ACCURACY: Within 500M

COMMENTS: Located 6.5 kilometres west of Mount Warner.

COMMODITIES: Iron

MINERALS

SIGNIFICANT: Limonite
MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Sedimentary Residual
TYPE: B01 Laterite Fe
SHAPE: Tabular
COMMENTS: Surficial deposit.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Recent	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Alluvium

HOSTROCK COMMENTS: Quaternary alluvium.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: FORREST

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 74000 Tonnes
COMMODITY: Iron
GRADE: 45.0000 Per cent

REFERENCE: Geological Survey of Canada Summary Report 1920 Part A.

CAPSULE GEOLOGY

Residual iron oxide deposits are common in the Taseko River region of the southwestern Chilcotin where conditions are suitable for the development of these deposits, i.e. a source of iron (i.e. usually pyritic sediments and volcanics) and relatively stable depositional conditions.

The Forrest bog iron showing, 6.5 kilometres west of Mount Warner, consists of a patch of limonite, locally up to 2.5 metres thick, that overlies glacial till east of the Taseko River. The iron was probably leached from altered pyritic tuffs of the Upper Cretaceous Powell River Formation which outcrop to the east on Wilson Ridge. It was transported down slope as sulphate solutions and deposited as bog iron near the break in slope. An inferred reserve of 74,000 tonnes of ore grading 45 per cent was estimated (Geological Survey of Canada Summary Report 1920A).

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 157-169
EMPR AR 1919-N241-N249; 1920-N175-N181
EMPR OF 1987-3
GSC EC GEOL 3, pp. 106-108
GSC SUM RPT 1920A, pp. 42A-70A
GSC MAP 29-1963
GSC OF 534; 2207

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

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 010**

NATIONAL MINERAL INVENTORY: 09203 Fe6

NAME(S): **LIMONITE** MCCLURE MOUNTAIN (WEST), CHILCOTIN NO. 1 (L.3140),
CHILCOTIN NO. 2 (L.3138), CHILCOTIN NO. 3 (L.3137)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 06 31 N
LONGITUDE: 123 27 56 W
ELEVATION: 1890 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5662006
EASTING: 467409

LOCATION ACCURACY: Within 500M

COMMENTS: Reverted Crown Grants Chilcotin No. 1-3 cover the MINFILE occurrence "Limonite" while the nearby Limonite Crown Grants cover the MINFILE occurrence "Chilcotin" (0920 011). This error, initiated as a result of some of the original 1920's documentation, may have led to further historical confusion between the two (Geological Survey of Canada Summary Report 1920A).

COMMODITIES: Iron

MINERALS

SIGNIFICANT: Limonite
MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Sedimentary Residual
TYPE: B01 Laterite Fe
SHAPE: Tabular
COMMENTS: Surficial deposit.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Alluvium

HOSTROCK COMMENTS: Quaternary alluvium.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: LIMONITE

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 348000 Tonnes
COMMODITY: Iron
GRADE: 50.0000 Per cent

REFERENCE: Geological Survey of Canada Summary Report 1920 Part A.

CAPSULE GEOLOGY

Residual iron oxide deposits are common in the Taseko River region of the southwestern Chilcotin where conditions are suitable for the development of these deposits, i.e. a source of iron (i.e. usually pyritic sediments and volcanics) and relatively stable depositional conditions.

The Limonite bog iron showing, 3 kilometres north-northeast of Mount McClure, consists of a strip of limonite, of varying width and orientation, that stretches from 1950 metres to 1675 metres elevation between Honduras and McClure creeks. The limonite is estimated to range up to 3 metres in thickness. The iron was leached from silicified pyritic tuffs, probably of the informally named Upper Cretaceous Powell Creek Formation, which outcrop upslope to the south. It was transported downhill as sulphate solutions and deposited as bog iron near the break in slope. An inferred ore reserve of 348,000 tonnes was estimated, grading 50 per cent iron (Geological Survey of Canada Summary Report 1920A).

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 157-169
EMPR AR 1919-N241-N249; 1920-N175-N181
EMPR OF 1987-3

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 828
REPORT: RGEN0100

BIBLIOGRAPHY

GSC EC GEOL 3, pp. 106-108
GSC SUM RPT 1920A, pp. 42A-70A
GSC OF 534; 2207
GSC MAP 29-1963
Bradford, J.A. (1985): Geology and Alteration in the Taseko River
Area, Southwest B.C., B.Sc. Thesis, University of British Columbia

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

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 011**

NATIONAL MINERAL INVENTORY: 09203 Fe7

NAME(S): **CHILCOTIN**, MCCLURE MOUNTAIN (EAST), LIMONITE NO. 1-3 (L.3132-34)

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 05 59 N
LONGITUDE: 123 26 34 W
ELEVATION: 1910 Metres

NORTHING: 5661008
EASTING: 468997

LOCATION ACCURACY: Within 500M

COMMENTS: Creek shown as McClure Creek by MacKenzie is Amazon Creek (Geological Survey of Canada Summary Report 1920A, Map 1847). Reverted Crown Grants Limonite No. 1-3 cover Chilcotin showing (see 0920 010).

COMMODITIES: Iron

MINERALS

SIGNIFICANT: Limonite
MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Sedimentary Residual
TYPE: B01 Laterite Fe
SHAPE: Tabular
COMMENTS: Shape of deposit is also bladed. Surficial deposit.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent	Undefined Group	Unnamed/Unknown Formation	

LITHOLOGY: Alluvium

HOSTROCK COMMENTS: Quaternary alluvium.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: CHILCOTIN

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 114000 Tonnes
COMMODITY: Iron
GRADE: 49.0000 Per cent

YEAR: 1921

REFERENCE: Geological Survey of Canada Summary Report 1920 Part A.

CAPSULE GEOLOGY

Residual iron oxide deposits are common in the Taseko River region of the southwestern Chilcotin where conditions are suitable for the development of these deposits, i.e. a source of iron (usually pyritic sediments and volcanics) and relatively stable depositional conditions.

The Chilcotin bog iron showing, 3 kilometres northeast of Mount McClure, consists of a rectangular patch of limonite, from which two long tongues extend downslope, on the west side of Amazon Creek. The limonite is inferred to average 1.5 metres thickness. The iron was leached from silicified Upper Cretaceous pyritic tuffs of the informally named Powell Creek Formation which outcrop upslope to the west. An inferred ore reserve of 114,000 tonnes grading 49 per cent iron is estimated (Geological Survey of Canada Summary Report 1920A).

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 157-169
EMPR AR 1919-N241-N249; 1920-N175-N181
EMPR OF 1987-3
GSC EC GEOL 3, pp. 106-108
GSC SUM RPT *1920A, pp. 42A-70A
GSC OF 534; 2207
GSC MAP 29-1963
Bradford, J.A. (1985): Geology and Alteration in the Taseko River

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 830
REPORT: RGEN0100

BIBLIOGRAPHY

Area, Southwest B.C., B.Sc. Thesis, University of British Columbia

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

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 012**

NATIONAL MINERAL INVENTORY: 09202 Au2

NAME(S): **ELIZABETH**, YALAKOM, YALAKOM NO. 1-4 (L.7408-7411)

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 092002E
BC MAP:

MINING DIVISION: Lillooet

LATITUDE: 51 01 53 N
LONGITUDE: 122 33 03 W
ELEVATION: 2333 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5653411
EASTING: 531497

LOCATION ACCURACY: Within 500M

COMMENTS: Located 6.7 kilometres west of the confluence of Blue Creek and the Yalakom River in the Shulaps Range.

COMMODITIES: Gold Silver Lead Zinc Copper
Molybdenum

MINERALS

SIGNIFICANT: Gold Arsenopyrite Pyrite Galena Sphalerite
Pyrrhotite Chalcopyrite Molybdenite
ASSOCIATED: Magnetite Ankerite Calcite
ALTERATION: Chlorite Malachite Azurite Sericite
ALTERATION TYPE: Chloritic Carbonate Albitic Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 245 x 1 Metres STRIKE/DIP: 360/70W TREND/PLUNGE:
COMMENTS: The No. 9 vein is 0.5 to 1.0 metre wide and continuous for 245 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleocene Unnamed/Unknown Informal

ISOTOPIC AGE: 58.4 +/- 2.0 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Whole Rock

Paleozoic-Mesozoic

Shulaps Ultramafic Complex

LITHOLOGY: Porphyritic Quartz Diorite
Diorite
Serpentinized Ultramafic
Harzburgite
Listwanite
Aplite

HOSTROCK COMMENTS: The prospect is hosted in porphyritic quartz diorite, known as the Blue Creek porphyry. Age from Fieldwork 1988 (1989), page 112.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Bridge River

INVENTORY

ORE ZONE: NO. 9 REPORT ON: Y
CATEGORY: Indicated YEAR: 1984
QUANTITY: 3853 Tonnes
COMMODITY Gold GRADE 41.1000 Grams per tonne
COMMENTS: Preliminary results.
REFERENCE: George Cross News Letter No.158, 1984.

CAPSULE GEOLOGY

The Elizabeth-Yalakom prospect, 6.7 kilometres west of the confluence of Blue Creek and the Yalakom River in the Shulaps Range, is within Paleocene porphyritic quartz diorite (recently dated at 58.4 million years and informally named the Blue Creek porphyry by Leech, 1953). One diorite body, within the Elizabeth 1 to 4 claims, hosts the No.'s 1, 2, 3, and 4 veins as well as the B and C veins. These veins are accessed through 2 portals, one on the Elizabeth 1 claim and the other on the adjacent Churn No. 1 claim. A second

CAPSULE GEOLOGY

diorite body to the west, within the Yalakom No. 2 claim, contains the No. 9 vein on which recent work has focused. The two diorite bodies are in serpentinized ultramafic rocks of the Permian and older Shulaps Ultramafic Complex and are adjacent to a ridge of quartz-carbonate altered rocks, or listwanite.

The No. 9 vein is strictly within porphyritic quartz diorite; alteration along vein margins is slight, consisting of sericite, albite, plus or minus carbonate, clay. The No. 9 vein is 0.5 to 1.0 metre wide and continuous for 245 metres. Vein quartz is milky white and contains native gold (visible), arsenopyrite, pyrite, galena, sphalerite, pyrrhotite, chalcopyrite, malachite, azurite, magnetite, molybdenite, chlorite, and carbonaceous material. Quartz veins are ribboned; partings consist of carbonaceous material and chlorite; metallic minerals are commonly along or within partings. These veins resemble those at the Bralorne (and Wayside) mine - mesothermal pluton-hosted gold veins.

In 1958, 8 tonnes of ore yielded 156 grams of silver, 156 grams of gold, 24 kilograms of lead and 8 kilograms of zinc. Work in 1984 resulted in an indicated ore reserve of 3853 tonnes grading 41.1 grams per tonne gold (George Cross News Letter No. 158, 1984).

J-Pacific Gold completed a 16 hole, 1682 metre diamond drill program in 2002. Hole 02-02 returned the best intercept of 7.74 grams per tonne gold over 3.3 metres (Press Release, December 18, 2002).

BIBLIOGRAPHY

EM EXPL 2002-41-50
EMPR AR 1941-A132; *1946-A98; 1947-A132; 1948-A95; 1949-A104; 1950-A107; 1951-A121; 1952-A111; 1953-A98; 1956-57; 1958-15
EMPR ASS RPT 20404
EMPR BC METAL MM00249
EMPR BULL *32
EMPR FIELDWORK 1974, p. 35; 1985, pp. 303-310; 1986, pp. 23-29; *1987, pp. 93-130, 329-333; 1988, pp. 105-152; 1989, pp. 45-72; 1990, pp. 75-83
EMPR OF 1987-11; 1988-3; 1989-4; 1988-9; 1990-10
EMPR PF (Underground geology maps and assay plan, 1948, 1953; Surface geology maps; Claim location map; Report on the Yalakom Property by R.R. Culbert and D.G. Leighton, 1987; Report on Gold Strike in Shulaps Mountains by M.S. Hedley, 1941; Geological notes on the Elizabeth-Yalakom Gold Prospect by R. Gaba)
GSC OF 534; 2207
GCNL *#158, 1984; #75 (Apr. 16), 1987
PR REL J-Pacific Gold Inc., Sept. 16, Nov. 4, Dec. 18, 2002
V STOCKWATCH Sept. 9, 10, 1987

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

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **0920 013**

NATIONAL MINERAL INVENTORY: 09203 Fe7

NAME(S): **BLUE CREEK**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092002E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 02 42 N
LONGITUDE: 122 30 47 W
ELEVATION: 1800 Metres

NORTHING: 5654942
EASTING: 534136

LOCATION ACCURACY: Within 500M

COMMENTS: Adjacent to Elizabeth-Yalakom prospect access road, approximately 2.5 kilometres east of the Elizabeth-Yalakom prospect.

COMMODITIES: Jade/Nephrite Gemstones

MINERALS

SIGNIFICANT: Nephrite
ASSOCIATED: Nephrite Serpentinite Amphibole Vesuvianite
ALTERATION: Serpentinite Grossularite Diopside Tremolite
ALTERATION TYPE: Serpentin'zn Rodingitiz'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Massive
CLASSIFICATION: Replacement Metamorphic Industrial Min.
TYPE: Q01 Jade
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 8 Metres STRIKE/DIP: 150/ TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic			Shulaps Ultramafic Complex

LITHOLOGY: Serpentinite
Rodingite

HOSTROCK COMMENTS: Nephrite occurs as irregular bodies associated with calc-silicate altered rocks within Shulaps Ultramafic Complex serpentinite melange.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Bridge River

CAPSULE GEOLOGY

The Blue Creek nephrite jade showing is 7.5 kilometres west-northwest of the confluence of Blue Creek and the Yalakom River. The showing is an irregular mass of nephrite up to 8 metres wide associated with a calc-silicate alteration zone within serpentinite melange of the Permian and older Shulaps Ultramafic Complex. The nephrite occurs as small pods with botryoidal morphology, together with minor clinoamphibole and vesuvianite. Contacts are not exposed and the extent of the mineralization is not known.

BIBLIOGRAPHY

EMPR BULL 32
EMPR FIELDWORK 1974, p. 35; 1985, pp. 303-310; 1986, pp. 23-29; 1987, pp. 93-130; 1988, pp. 105-152; 1989, pp. 45-72; 1990, pp. 75-83
EMPR OF 1987-11; 1988-3; 1989-4; 1990-10
GSC MEM 130
GSC P 72-53; *78-19, p. 27
GSC OF 2207

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

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 014**

NATIONAL MINERAL INVENTORY:

NAME(S): **SUNNY**, YALAKOM RIVER

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092001W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 02 44 N
LONGITUDE: 122 28 38 W
ELEVATION: 1615 Metres

NORTHING: 5655021
EASTING: 536647

LOCATION ACCURACY: Within 500M

COMMENTS: Located 3.5 kilometres northwest of the confluence of Blue Creek and Yalakom River on a northeast facing cliff/hillside.

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
ASSOCIATED: Calcite Quartz Mariposite
ALTERATION: Serpentine Magnesite Calcite Mariposite
ALTERATION TYPE: Carbonate Serpentin'zn Quartz-Carb.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Replacement Epithermal Epigenetic Industrial Min.
SHAPE: Tabular
MODIFIER: Faulted Sheared
DIMENSION: 915 x 4 Metres STRIKE/DIP: 130/90 TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic			Shulaps Ultramafic Complex

LITHOLOGY: Listwanite
Peridotite
Serpentinite
Magnesite
Quartz Carbonate Mariposite Rock

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Bridge River

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Sunny magnesite showing is 3.5 kilometres northwest of the confluence of Blue Creek with the Yalakom River. The showing is within quartz-carbonate altered serpentinite (listwanite) of the Permian and older Shulaps Ultramafic Complex.

The alteration zone is adjacent to (and southwest of) the Yalakom fault and is 30 to 100 metres wide and several kilometres long. Crystalline magnesite and quartz form banded veins and comb-textured intergrowths indicative of high level, low temperature hydrothermal alteration. Enclosing rocks vary from serpentinite to quartz carbonate mariposite rock (listwanite). The dimension of the most significant crystalline magnesite "vein" is 915 by 3.7 metres; the attitude of this "vein" is 130 degrees/vertical. Samples collected from this vein contain between 32 and 42.8 per cent MgO.

The style of alteration and textures of mineral assemblages suggests that hydrothermal alteration was rather intense and high level, probably similar to an epithermal environment. The Yalakom Fault undoubtedly played an important role in helping to focus hydrothermal fluids.

BIBLIOGRAPHY

EMPR AR 1946-101; 1947-129-132,219-220
EMPR BULL 32, pp. 35-36,54
EMPR FIELDWORK 1974, p. 35; 1985, pp. 303-310; 1986, pp. 23-29; 1987, pp. 93-130; 1988, pp. 105-152; 1989, pp. 45-72; 1990, pp. 75-83
EMPR OF 1987-11; 1987-13; 1988-3; 1989-4; 1990-10
GSC OF 534; 2207

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

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **0920 014**

MINFILE NUMBER: **0920 015**

NATIONAL MINERAL INVENTORY: 09202 Hg2

NAME(S): **APEX**, QUARTZ MOUNTAIN, BAR C

MINING DIVISION: Lillooet

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092002E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 28 N
LONGITUDE: 122 39 46 W
ELEVATION: 1798 Metres

NORTHING: 5663718
EASTING: 523599

LOCATION ACCURACY: Within 500M

COMMENTS: Accessible by rough road from the Poison Mountain road system, via either Mud Lakes road or Yalakom River road.

COMMODITIES: Mercury

MINERALS

SIGNIFICANT: Cinnabar
ASSOCIATED: Chalcedony Quartz Carbonate Ankerite Dolomite
Magnesite
ALTERATION: Quartz Carbonate Ankerite Dolomite Magnesite
Serpentine Mariposite
ALTERATION TYPE: Quartz-Carb. Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Breccia Disseminated
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: I08 Silica-Hg carbonate
SHAPE: Irregular
MODIFIER: Faulted
DIMENSION: 325 x 50 Metres STRIKE/DIP: 115/47S TREND/PLUNGE:
COMMENTS: Attitude of vein is north, with steep dips.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic Bridge River Unnamed/Unknown Formation
Paleozoic Shulaps Ultramafic Complex
Middle Jurassic Unnamed/Unknown Informal

LITHOLOGY: Serpentinite
Listwanite
Peridotite
Greenstone
Greywacke
Shale
Sandstone
Conglomerate
Augite Diorite
Plagioclase Porphyry

HOSTROCK COMMENTS: Bridge River Complex rocks are in fault contact with Middle Jurassic sandstone and shale.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Bridge River

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1968
SAMPLE TYPE: Rock
COMMODITY GRADE
Mercury 0.1400 Per cent
COMMENTS: Chalcedony breccia within listwanite; streaks and blebs of cinnabar.
REFERENCE: Assessment Report 1916.

CAPSULE GEOLOGY

The Apex mercury prospect is on the northeast slopes of Quartz Mountain and is accessible by a rough road from the nearby Poison Mountain road system. The Apex prospect is within carbonate and silica altered peridotite, serpentinite and greenstone of the Shulaps Ultramafic Complex. These rocks are now essentially listwanite and occupy an elongate zone up to 500 metres wide adjacent to the Yalakom

CAPSULE GEOLOGY

fault. To the southwest, these rocks are in fault contact with greenstone and clastic sedimentary rocks of the Permo-Triassic Bridge River Complex, and to the northeast are in fault contact with middle Jurassic turbiditic sandstone and shale. Sills, dykes and plugs of augite diorite and plagioclase porphyry occur within the altered and unaltered serpentinite.

Cinnabar as fine veinlets, specks, blebs and lenses is in and along walls of grey translucent banded chalcedony which comprises part of the listwanite. The chalcedony contains some breccia fragments of ankeritized volcanic rock. Chalcedony veins either trend north and dip steeply, or strike 115 degrees and dip 35 degrees to 60 degrees to the south. Cinnabar also occurs, to a lesser extent, as disseminations throughout the listwanite and ankeritized greenstone. However, some areas of intensely listwanite-altered rocks contain only a trace of mercury. Foliated serpentinite and ankeritized volcanic rocks cut by diorite and porphyry contain only a trace of mercury. A sample of chalcedony breccia in listwanite containing cinnabar assayed 0.14 per cent mercury (Assessment Report 1916).

Approximately 1 kilometre to the northwest, a sample of listwanite from this belt of rocks contains traces of arsenic, antimony, mercury and gold (Open File 1988-9).

BIBLIOGRAPHY

EMPR AR 1946-97, 1967-128, 1968-160
EMPR ASS RPT *1916
EMPR FIELDWORK 1974, p. 35; 1985, pp. 303-310; 1986, pp. 23-29; 1987, pp. 93-130; 1988, pp. 105-152; 1989, pp. 45-72; 1990, pp. 75-83
EMPR OF 1987-11; 1988-3; 1988-9; 1989-4; 1990-10
EMPR PF (Report By J.S. Stevenson, 1944)
EMR MP METALS FILE (HG-301.00)
GSC MAP 1963-29; 1882
GSC MEM 130
GSC OF 534; 2207
GCNL #155,1968
N MINER Mar.1, 1989

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/17

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 017**

NATIONAL MINERAL INVENTORY: 09202 Hg3

NAME(S): **SILVERQUICK MINE**, TYAUGHTON CREEK

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092002W
BC MAP:

Underground

MINING DIVISION: Lillooet

LATITUDE: 51 02 26 N
LONGITUDE: 122 49 05 W
ELEVATION: 1669 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5654351
EASTING: 512756

LOCATION ACCURACY: Within 500M

COMMENTS: Approximately 3 kilometres southwest of the confluence of Relay and Tyaughton creeks.

COMMODITIES: Mercury

MINERALS

SIGNIFICANT: Cinnabar							
ASSOCIATED: Quartz	Calcite	Limonite	Clay	Dickite			
ALTERATION: Calcite	Limonite	Clay	Quartz				
ALTERATION TYPE: Argillic		Silicific'n		Carbonate	Oxidation	Leaching	
MINERALIZATION AGE: Unknown							

DEPOSIT

CHARACTER: Stockwork	Breccia	Disseminated
CLASSIFICATION: Epithermal	Hydrothermal	Epigenetic
SHAPE: Irregular		
MODIFIER: Faulted	Fractured	

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Cretaceous	Undefined Group	Silverquick	

LITHOLOGY: Chert Pebble Conglomerate
Arenaceous Shale
Chert Lithic Quartz Arenite

HOSTROCK COMMENTS: The deposit is hosted in the informally named Silverquick Formation.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane		PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Cadwallader	Bridge River	

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1990
SAMPLE TYPE: Grab	
<u>COMMODITY</u>	<u>GRADE</u>
Mercury	2.0200 Per cent

COMMENTS: Sample taken by B.N. Church, also 0.096 grams per tonne gold, 0.006 per cent arsenic and 0.004 per cent antimony.

REFERENCE: Personal Communication - B.N. Church (1990).

CAPSULE GEOLOGY

The Silverquick mercury deposit, approximately 3.8 kilometres northeast of Eldorado Mountain, is within chert pebble conglomerate and interbedded sandstone-shale and chert lithic quartz arenite of the Upper Cretaceous Silverquick Formation (informal usage). The rocks are extremely fractured by joints and faults. The joints are multidirectional and are nearly vertical, spaced a few centimetres to a metre apart. Faults strike northwest, northeast and west, with moderate to steep dips.

Cinnabar is present as disseminated grains, streaks and small lenses within brecciated conglomerate, as smears on slickensided faults and in the mud of gouge seams. Cinnabar is accompanied by quartz, calcite, limonite and clay (dickite).

The area of the Silverquick mine has undergone large scale folding and associated thrust faulting, with subsequent (northwest trending) high angle strike slip faulting. Faulting seems to have taken place both before and after ore deposition. Cinnabar was most likely deposited at relatively shallow depth from low temperature hydrothermal solutions along fractures and faults that greatly enhanced the permeability of the host conglomerate and associated sedimentary rocks.

CAPSULE GEOLOGY

The mine, producing most of its ore in the early to mid 1960's, yielded about 3180 kilograms of mercury. About 34 kilograms of mercury were produced in 1955.

BIBLIOGRAPHY

EMPR AR 1943-77; 1955-33; 1962-23; 1963-42; *1964-81-83; 1965-144;
1966-137; 1967-129; 1968-161
EMPR BC METAL MM00256
EMPR GEM 1969-186; 1971-327
EMPR FIELDWORK 1974, p. 35; 1985, pp. 303-310; 1986, pp. 23-29; 1987,
pp. 93-130; 1988, pp. 105-152; 1989, pp. 45-72; 1990, pp. 75-83
EMPR OF 1987-11; 1988-3; 1988-9; 1989-3; 1989-4; 1990-10
EMPR PF (Property description by B.N. Church; Location map of
Silverquick workings)
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/17

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 018**

NATIONAL MINERAL INVENTORY: 09202 W1

NAME(S): **TUNGSTEN QUEEN**, PHILLIPS' TUNGSTEN, PHILLIPS' CINNABAR

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092002W
BC MAP:

Underground

MINING DIVISION: Lillooet

LATITUDE: 51 02 10 N
LONGITUDE: 122 45 17 W
ELEVATION: 1356 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5653869
EASTING: 517198

LOCATION ACCURACY: Within 500M

COMMENTS: The deposit is adjacent to the Mud Lake road, 2.5 kilometres south-east of the Tyaughton and Relay creeks confluence. The claims were originally known as the Phillips' Cinnabar showing.

COMMODITIES: Tungsten Antimony Mercury Gold

MINERALS

SIGNIFICANT: Scheelite Stibnite Cinnabar Realgar
ASSOCIATED: Quartz Carbonate Ankerite Chalcedony Dolomite
ALTERATION: Carbonate Ankerite Dolomite Mariposite Quartz
ALTERATION TYPE: Quartz-Carb. Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins I02 Intrusion-related Au pyrrhotite veins
SHAPE: Tabular
MODIFIER: Faulted
DIMENSION: 22 Metres STRIKE/DIP: 200/60E TREND/PLUNGE:
COMMENTS: Dimension and attitude of No. 6 vein which is the largest of at least eight veins.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic-Mesozoic Paleozoic	Bridge River	Undefined Formation	Shulaps Ultramafic Complex

LITHOLOGY: Listwanite
Serpentinite
Massive Amygdaloidal Greenstone
Chert
Feldspar Porphyry Dike
Carbonate Altered Feldspar Porphyry
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Bridge River

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Tungsten Queen deposit occurs near the south end of a large fault-bound body of quartz-carbonate altered serpentinite (quartz-carbonate-mariposite rock, or listwanite) assigned to the Shulaps Ultramafic Complex; these rock are within or adjacent to the steeply-dipping Relay Creek fault. Adjacent rocks are ribbon chert, argillite and massive to amygdaloidal greenstone of the Mississippian to Jurassic Bridge River Complex. All these rocks are cut by irregular bodies and dykes of (Tertiary ?) feldspar porphyry (brown-weathering and carbonate-altered).

The Tungsten Queen deposit consists of essentially eight scheelite-bearing veins of variable thickness and continuity. Almost all of the veins strike northeast with most terminated by faults and adjacent tectonically emplaced Bridge River rocks. The principal vein, number 6, which yielded most of the high grade ore, was up to 18 centimetres thick and continuous for 21 metres. Other scheelite-bearing veins are much smaller. The veins consist of massive, almost pure white scheelite, with stibnite, quartz and carbonate. Veins show a marked crustification (banding) wherein comb-textured scheelite is followed inward from both walls of the vein by chalcedony, then by coarsely crystalline comb-textured quartz, and then a central band of stibnite. The veins have a

CAPSULE GEOLOGY

branched structure with sharp vein borders and show no foliation. It is reported that between 1940 and 1953, 7,896 kilograms of tungsten trioxide W_2O_3 were recovered from 55 tonnes of ore; 41 tonnes had been mined by 1943 with the remainder being mined in 1952 and 1953. Virtually all scheelite-bearing material has been mined out.

Approximately 137 metres southeast of the Tungsten Queen, massive to amygdaloidal greenstone contains minor cinnabar as thin sheets along shear planes and as rims around 0.5-centimetre wide carbonate-quartz amygdules in greenstone; very rare realgar was also identified. Feldspar porphyry adjacent to the area of the Tungsten Queen contains an unexpectedly high lithium content. In addition, the scheelite contains a notable fluorine content. These values indicate a moderately lithophile environment and suggest that the porphyry may have been involved in the hydrothermal system responsible for the deposition of the scheelite-stibnite veins.

The textures and structures of the scheelite-stibnite veins suggest deposition was at low temperatures and at relatively shallow depth, possibly an epithermal-type environment. Scheelite-stibnite veins contain up to 0.48 gram per tonne gold (Assessment Report 6287) and adjacent rocks contain up to 0.013 per cent arsenic (Open File 1988-9). The association of tungsten, antimony, mercury, gold and arsenic with listwanite within and adjacent to a major steeply-dipping fault is thought to be a near surface expression of a motherlode-type gold deposit.

BIBLIOGRAPHY

- EM OF 1999-3
- EMPR AR 1941-81, 1942-78, 1952-114, 1953-100
- EMPR ASS RPT *6287, 8344, 9324, 9545, 10948, *12763
- EMPR BC METAL MM00260
- EMPR BULL *10 (Revised), pp. 101-104; 5, pp. 83-85
- EMPR FIELDWORK 1987, pp. 105-123; *1988, pp. 115-130
- EMPR GEM 1969-186; 1977-E176; 1980-281; 1982-239; 1984-250, 251
- EMPR OF 1988-9; *1989-4, 1999-3
- EMPR PF (Surface and underground geology maps; Traverse notes)
- GSC EC GEOL REPORT *32, p. 46; pp. 104-105
- GSC EC GEOL SERIES *17, pp. 72-73
- GSC OF 534; 2207
- GSC P 43-15, pp. 37-39

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/17

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 019**

NATIONAL MINERAL INVENTORY:

NAME(S): **FAME**, FORTUNE

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092010W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 30 07 N
LONGITUDE: 122 45 54 W
ELEVATION: 1555 Metres

NORTHING: 5705672
EASTING: 516311

LOCATION ACCURACY: Within 500M

COMMENTS: Discovery zone on Fame claim.

COMMODITIES: Gold

Copper

MINERALS

SIGNIFICANT: Arsenopyrite Pyrite Chalcopyrite
ASSOCIATED: Quartz Chalcedony Limonite Malachite
ALTERATION: Kaolinite Pyrite Quartz Sericite Magnetite
Calcite
ALTERATION TYPE: Argillic Silicific'n Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Breccia
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation
SHAPE: Bladed
MODIFIER: Faulted
DIMENSION: STRIKE/DIP: 156/60W TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Jurassic
Middle Jurassic

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Mount Alex Plutonic Complex

LITHOLOGY: Andesitic Flow
Pyroclastic Andesite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Chilcotin Plateau

RELATIONSHIP: Pre-mineralization

GRADE: Greenschist

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel

YEAR: 1988

COMMODITY

Gold

GRADE

1.5800

Grams per tonne

COMMENTS: Average of 30 samples with average width of 0.89 metre.

REFERENCE: Assessment Report 18386.

CAPSULE GEOLOGY

The Fame showing occurs within a region of poorly exposed Lower to Middle Jurassic volcanic rocks intruded by granodiorite of the Middle Jurassic Mount Alex Plutonic Complex, located around Gaspard Lake in the central Chilcotin.

The property encompasses several related showings comprising quartz vein breccias and stockworks associated with northwest and northeast trending lineaments in kaolinized, andesitic volcanics and granodiorite.

The Gas 1 showing comprises a 250 by 150 metre area of kaolinized granodiorite with disseminated pyrite and auriferous quartz veins. The Discovery showing is a 21-metre wide zone containing 12 quartz veins ranging from 0.5 to 20 centimetres wide. An average of 30 trench samples from this showing graded 1.58 grams per tonne gold (Assessment Report 18386). A grab sample containing over 1 per cent copper is also reported from the property. Chalcopyrite was reported in a quartz vein hosted by granodiorite.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 842
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR EXPL 1988-C135
EMPR ASS RPT 17638,*18386, *19251, 19884, 20413, 20798, 20910
GSC OF 534; 2207
GSC P 91-1A, pp. 207-217

DATE CODED: 1991/02/26
DATE REVISED: 1991/10/07

CODED BY: DGB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 020**

NATIONAL MINERAL INVENTORY: 09202 W2

NAME(S): **TUNGSTEN KING**, CINNABAR KING, LORNTZSEN

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092002W
BC MAP:

Underground

MINING DIVISION: Lillooet

LATITUDE: 51 02 44 N
LONGITUDE: 122 45 32 W
ELEVATION: 1340 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5654919
EASTING: 516902

LOCATION ACCURACY: Within 500M

COMMENTS: The deposit is uphill from the Mud Lakes road, 1.5 kilometres southeast of the confluence of Tyaughton and Relay creeks. The claims were originally known as the Cinnabar King or Lorntzsen showing.

COMMODITIES: Tungsten Antimony Mercury

MINERALS

SIGNIFICANT: Scheelite Stibnite Cinnabar
ASSOCIATED: Quartz Hematite
ALTERATION: Dolomite Quartz Mariposite Serpentine
ALTERATION TYPE: Carbonate Serpentin'zn Quartz-Carb.
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Discordant
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
SHAPE: Irregular
MODIFIER: Folded Fractured
DIMENSION: 2 Metres STRIKE/DIP:
COMMENTS: Mineralized veins occur within a northwest trending fracture zone, 2 metres wide, in dolomite. Stibnite also occurs in veins hosted in listwanite.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE

Paleozoic-Mesozoic
Paleozoic

GROUP

Bridge River

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Shulaps Ultramafic Complex

LITHOLOGY:

Listwanite
Dolomite
Serpentinite
Feldspar Porphyry Dike
Argillite
Chert
Tuff
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Bridge River

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Tungsten King deposit is within quartz-carbonate-mariposite rock, or listwanite and dolomite which is intensely brecciated, recrystallized and sheared. The dolomite seems to be a pod of carbonate alteration product associated with the more extensive quartz-carbonate-mariposite alteration, rather than a pod of sedimentary rock as suggested by some workers. Serpentinite and quartz-carbonate-mariposite alteration assemblages are within or adjacent to the steeply-dipping Relay Creek fault. Feldspar porphyry dykes intrude listwanite, although not immediately adjacent to the significant metal concentrations.

Quartz veins with scheelite and stibnite were first discovered within a two-metre wide fracture zone in brecciated recrystallized and sheared dolomite. Stibnite veins and disseminations occur within listwanite 75 metres to the north, northwest. Cinnabar (for which the area was first prospected) occurs as films along shear planes as well as disseminations within foliated greenstone (Bridge River Complex) and listwanite, peripheral to the main scheelite-stibnite showings. Original reports described a zone 30 metres wide and 230 metres long containing disseminated cinnabar; subsequent examinations outlined only traces of cinnabar. In 1942 and 1952 about 34 tonnes

CAPSULE GEOLOGY

of ore were mined grading about 5 per cent tungsten trioxide (W03) (National Mineral Inventory 0920 Aul; Geological Survey of Canada Economic Geology Series No. 17).

The scheelite-stibnite veins at the Tungsten King prospect were most likely deposited at low temperatures and at relatively shallow depth, possibly an epithermal-type environment (similar to that described for the Tungsten Queen prospect - 0920 018).

BIBLIOGRAPHY

EMPR AR *1929-234; 1930-203; 1931-113; 1942-79; 1952-114
EMPR ASS RPT 9324, 9545, 10948, *12763
EMPR BC METAL MM00261
EMPR BULL *10, p. 105 (Revised); *5, p. 85
EMPR FIELDWORK 1987, pp. 105-123; *1988, pp. 115-130
EMPR OF 1988-9; *1989-4
EMPR PF (Maps, Notes)
GSC EC GEOL SERIES 17, p. 73
GSC EC GEOL REPORT 32, pp. 46,104-105
GSC OF 534; 2207
GSC P 43-15, pp. 33-34, 38

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/17

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 022**

NATIONAL MINERAL INVENTORY:

NAME(S): **YHWH**, LORD RIVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092004E
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 05 00 N
LONGITUDE: 123 40 03 W
ELEVATION: 2515 Metres

NORTHING: 5659304
EASTING: 453246

LOCATION ACCURACY: Within 500M

COMMENTS: Located between Beehive Mountain and Falls River (Assessment Report 16919).

COMMODITIES: Copper Silver Molybdenum Gold

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Hydrothermal Epigenetic

SHAPE: Irregular

MODIFIER: Fractured Faulted

DIMENSION: 160 Metres

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE: Upper Cretaceous

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER: Coast Plutonic Complex

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Cadwallader

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

100.0000

Grams per tonne

Gold

0.8400

Grams per tonne

COMMENTS: Grab sample from sulphide rich shear zone; silver value is greater than 100 grams per tonne.

REFERENCE: Assessment Report 16919.

CAPSULE GEOLOGY

The YHWH showing occurs within the Jurassic to Tertiary Coast Plutonic Complex near its eastern margin, and just west of the northwest trending Tchaikazan fault. The property is underlain by massive Late Cretaceous holocrystalline granodiorite cut by numerous north striking lamprophyre dykes.

Sulphide mineralization is confined to a three-metre wide northwest trending shear zone and comprises pyrite, chalcopyrite and molybdenite which are exposed over a distance of 160 metres.

A grab sample of sulphide-bearing rock was found to contain 0.84 gram per tonne gold and greater than 100 grams per tonne silver (Assessment Report 16919). Surveys were conducted by Cathedral Gold Corp. and Lord River Gold Mines.

BIBLIOGRAPHY

EMPR ASS RPT *16919, 25726

EMPR EXPL 1988-C134

GSC OF 534; 2207

DATE CODED: 1991/02/26

CODED BY: CID

FIELD CHECK: N

DATE REVISED: 1991/02/26

REVISED BY: DGB

FIELD CHECK: N

MINFILE NUMBER: **0920 023**

NATIONAL MINERAL INVENTORY: 09202 Hg1

NAME(S): **MANITOU**, EMPIRE, ROSE GROUP

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092002W
BC MAP:

Underground

MINING DIVISION: Lillooet

LATITUDE: 51 03 36 N
LONGITUDE: 122 46 10 W
ELEVATION: 1234 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5656522
EASTING: 516157

LOCATION ACCURACY: Within 500M

COMMENTS: The mine is located on the northwest side of Mud Creek, 800 metres northeast of the confluence of Tyaughton and Relay creeks.

COMMODITIES: Mercury

MINERALS

SIGNIFICANT: Cinnabar Pyrite Mercury Metacinnabar Marcasite

ASSOCIATED: Calcite Quartz Hydrocarbon

COMMENTS: Tentative identification of marcasite.

ALTERATION: Calcite Quartz

ALTERATION TYPE: Carbonate Silicific'n Chloritic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Disseminated

CLASSIFICATION: Epithermal Hydrothermal Epigenetic

TYPE: I08 Silica-Hg carbonate

SHAPE: Irregular

MODIFIER: Fractured Sheared

COMMENTS: Principal cinnabar bearing shears trend east and north to northwest.

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Paleozoic-Mesozoic
Lower Cretaceous
Paleozoic

GROUP

Bridge River
Taylor Creek

FORMATION

Undefined Formation
Lizard

IGNEOUS/METAMORPHIC/OTHER

Shulaps Ultramafic Complex

LITHOLOGY: Massive Amygdaloidal Greenstone
Chert
Argillite
Tuffaceous Chloritic Sandstone
Pebble Conglomerate
Serpentinite
Flow Breccia
Felsite Intrusive
Porphyritic Andesite Dike
Arkosic Sandstone

HOSTROCK COMMENTS: The dominant host is Bridge River Complex greenstone.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Bridge River

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Manitou mercury deposit, 800 metres northeast of the confluence of Relay and Tyaughton creeks, is within foliated greenstone and along contacts between greenstone and ribboned chert of the Mississippian to Jurassic Bridge River Complex (Group). Adjacent rocks include flow breccia and argillite also assigned to the Bridge River Complex, tuffaceous chlorite sandstone, pebble conglomerate and arkosic sandstone of the Lower Cretaceous Lizard Formation, Taylor Creek Group and serpentinite assigned to the Permian and older Shulaps Ultramafic Complex. North to northwest trending dykes of felsite and porphyritic andesite crosscut most rock types; the distribution of dykes is not necessarily coincident with mineralization. The rocks are extremely faulted and principal shear zones trend north and northwest.

Mercury occurs as cinnabar, chiefly with foliated green and purple volcanic rocks (greenstone) along foliation and shear places, and less commonly as: 1) kidney shaped concentrations of cinnabar in calcite veins that cross cut greenstone; 2) discrete dissemination grains of cinnabar within greenstone; and 3) cinnabar in calcite-filled amygdules in amygdaloidal greenstone. Cinnabar is also found along contacts between ribbon chert and greenstone. Cinnabar is

CAPSULE GEOLOGY

commonly accompanied by calcite and less commonly by quartz and rare native mercury, finely crystalline pyrite, an unidentified hydrocarbon material and possibly metacinnabar. Marcasite has tentatively been identified. Recorded production, from 1938 to 1939, is 141.5 tonnes of ore which yielded 542.5 kilograms of mercury (National Mineral Inventory 09202 Hg1). The irregular distribution of cinnabar makes assessment of the property extremely difficult.

Cinnabar was most likely deposited at a relatively shallow depth from low temperature hydrothermal solutions, probably later than the pervasive calcite veining. Faulting and shearing enhanced the permeability of the greenstone (in particular) and facilitated movement of hydrothermal solutions. The role of igneous dykes in cinnabar deposition and distribution is not known.

BIBLIOGRAPHY

- EMPR AR 1931-113; *1936-F58-F61; 1937-F69; 1940-86; 1966-138
- EMPR ASS RPT 10676
- EMPR BC METAL MM00258
- EMPR BULL *5, pp. 70-81 (Figure 7)
- EMPR EXPL 1982-240-241
- EMPR FIELDWORK 1974, p. 35; 1985, pp. 303-310; 1986, pp. 23-29; 1987, pp. 93-130; 1988, pp. 105-152; 1989, pp. 45-72; 1990, pp. 75-83
- EMPR GEM 1969-185
- EMPR OF 1987-11; 1988-3; 1988-9; 1989-4; 1990-10
- EMPR PF (V. Dolmage, Reports; Underground and surface geology maps and assay plans, 1938)
- EMR MP RESFILE (Empire Mercury Mine)
- GSC MAP 42-15A
- GSC OF 534; 2207
- GSC P 43-15; pp. 35-37
- N MINER Nov.10, 1938, p. 21

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/18

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 024**

NATIONAL MINERAL INVENTORY:

NAME(S): **BJB, LORN**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092003E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 05 13 N
LONGITUDE: 123 11 29 W
ELEVATION: 2130 Metres

NORTHING: 5659511
EASTING: 486595

LOCATION ACCURACY: Within 500M

COMMENTS: The showing occurs 2 kilometres northeast of Mount Warner.

COMMODITIES: Copper

Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Malachite Sphalerite Galena
Magnetite

COMMENTS: Mainly chalcopyrite; local molybdenite; trace sphalerite and galena.

ASSOCIATED: Pyrite Pyrrhotite Quartz Magnetite

ALTERATION: Epidote Chlorite Calcite Sericite

ALTERATION TYPE: Propylitic Sericitic Silicific'n

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein Stockwork

CLASSIFICATION: Porphyry Hydrothermal

TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous	Undefined Group	Powell Creek	
Jurassic-Cretaceous	Relay Mountain	Undefined Formation	
Tertiary			Lorna Lake Stock

LITHOLOGY: Andesite
Volcanic Breccia
Tuff
Hornblende Biotite Quartz Monzonite
Hornblende Quartz Diorite

HOSTROCK COMMENTS: Minor mineralization also occurs within argillite and greywacke of the Jura-Cretaceous Relay Mountain Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

PHYSIOGRAPHIC AREA: Chilcotin Plateau

TERRANE: Overlap Assemblage

METAMORPHIC TYPE: Contact

RELATIONSHIP: Syn-mineralization

GRADE: Hornfels

CAPSULE GEOLOGY

The BJB porphyry copper showing, 2 kilometres northeast of Mount Warner, is within andesite, volcanic breccia and tuff of the Upper Cretaceous Powell Creek Formation. Hornblende-biotite quartz monzonite and quartz diorite of the Tertiary Lorna Lake stock crosscut the volcanic rocks. Minor mineralization also occurs within argillite and greywacke of the Middle Jurassic to Lower Cretaceous Relay Mountain Group.

Pyrite-pyrrhotite-chalcopyrite mineralization occurs in several places along the intrusive contact, and occurs within the plutonic rocks and the volcanic rocks. Malachite, azurite, chrysocolla, and bornite occur locally. At one location, chalcopyrite occurs within a seam of massive magnetite which cuts the intrusive/volcanic contact at a low angle. Molybdenite occurs locally, associated with quartz-sericite and quartz-amphibole veins. Trace amounts of galena and sphalerite occur locally with the chalcopyrite. Epidote, chlorite, and calcite alteration is common.

BIBLIOGRAPHY

EMPR ASS RPT 3850, 5183
EMPR FIELDWORK 1986, pp. 157-169; 1987, pp. 105-24
EMPR GEM 1969-182; 1972-313; 1973-267; 1974-221
EMPR OF 1987-3
EMPR PF (Report by F. Lee, 1969)
GSC MAP 29-1963

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 849
REPORT: RGEN0100

BIBLIOGRAPHY

GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/18

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 025**

NATIONAL MINERAL INVENTORY: 09203 Cu5

NAME(S): **COPPER ZONE**, BILL, NW,
ROWBOTTOM

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 02 23 N
LONGITUDE: 123 22 15 W
ELEVATION: 2310 Metres

UTM ZONE: 10 (NAD 83)

LOCATION ACCURACY: Within 500M

NORTHING: 5654308
EASTING: 474001

COMMENTS: This is not the "Rowbottom" referred to by McMillan (1977) in Fieldwork 1976 and Geology 1976. McMillan's "Rowbottom" is actually Phair (0920 029).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Molybdenite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Cretaceous	Undefined Group	Powell Creek	Coast Plutonic Complex

LITHOLOGY: Hornblende Quartz Diorite
Quartz Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1970
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Copper 0.2300 Per cent
Molybdenum 0.0110 Per cent

COMMENTS: Average grade for a 100-metre deep drill hole.
The molybdenum value is actually for MoS₂.

REFERENCE: Property File (Prospectus - Galveston Mines Ltd.).

CAPSULE GEOLOGY

The Copper Zone porphyry copper prospect, 8.7 kilometres southeast of Mount McClure, is within Late Cretaceous plutonic rocks of the Coast Plutonic Complex, approximately 7 kilometres southwest of the contact with Upper Cretaceous volcanic and volcanoclastic rocks of the Powell Creek Formation. The principal rock type in the mineralized area is hornblende quartz diorite; this is intruded by numerous feldspar porphyry and quartz-feldspar porphyry dykes, generally striking 340 degrees or 270 degrees, and by an oval-shaped quartz-feldspar porphyry stock measuring 300 metres (east-west) by 600 metres (north-south).

The quartz-feldspar porphyry stock appears to be the locus of the most intense sulphide mineralization, which consists of pyrite, chalcopyrite, and molybdenite. The sulphides occur as fracture-fillings and fine disseminations within the quartz diorite and the porphyry stock and dykes. One diamond-drill hole was reported to grade an average of 0.23 per cent copper and 0.011 per cent molybdenite over 100 metres (Galveston Mines Ltd., Prospectus, 1972 - Property File).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 851
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1966-134
EMPR ASS RPT 10455, *20721
EMPR EXPL 1981-297
EMPR FIELDWORK 1986, pp. 157-169; 1988, pp. 153-158
EMPR GEM 1969-181; 1970-214; 1971-329; 1972-313
EMPR OF 1987-3
EMPR PF *(Ramsay, E.A. (1969): Report on the Granite Creek Claims;
 Arscott, D. and Meyer, W. (1970): Report on Bill, GR, Mom and NW
 Claims; Meyer W. (1971): Bill and NW Claims; Galveston Mines Ltd.,
 Prospectus, May 1972)
GSC MAP 29-1963
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/09

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 026**

NATIONAL MINERAL INVENTORY: 09202 Au1

NAME(S): **ROBSON**, BONANZA, PEARSON

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092002W
BC MAP:

Underground

MINING DIVISION: Lillooet

LATITUDE: 51 01 23 N
LONGITUDE: 122 53 20 W
ELEVATION: 1737 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5652395
EASTING: 507793

LOCATION ACCURACY: Within 500M

COMMENTS: The Robson adit is 6 kilometres east of Spruce Lake, south of Tyughton Creek, 3.5 kilometres northwest from the summit of Eldorado Mountain (Assessment Report 6002).

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Arsenopyrite Pyrite Jamesonite Sphalerite Chalcopyrite
Stibnite Boulangerite Pyrargyrite Pyrrhotite

ASSOCIATED: Quartz

ALTERATION: Quartz Carbonate Chlorite

ALTERATION TYPE: Silicific'n Carbonate Chloritic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

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

SHAPE: Tabular

MODIFIER: Sheared

DIMENSION:

STRIKE/DIP: 070/36N

TREND/PLUNGE:

COMMENTS: Shear zone

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Triassic
Paleocene

GROUP

Cadwallader

FORMATION

Hurley

IGNEOUS/METAMORPHIC/OTHER

Eldorado Pluton

ISOTOPIC AGE: 63.7 +/- 2.2 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Hornfels Sediment/Sedimentary
Biotite Granodiorite
Calcareous Sandstone
Calcarenite
Shale
Porphyritic Dike

HOSTROCK COMMENTS: The Robson vein is hosted by Hurley Formation rocks along or very near the contact with the Eldorado pluton. Age date from Dawson of GSC.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Cadwallader

PHYSIOGRAPHIC AREA: Pacific Ranges

METAMORPHIC TYPE: Contact

RELATIONSHIP: Syn-mineralization

GRADE:

COMMENTS: The metamorphism is probably pre-mineralization.

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1986

SAMPLE TYPE: Drill Core

COMMODITY

Silver

GRADE

468.9500

Grams per tonne

Gold

45.2400

Grams per tonne

COMMENTS: Sample across 0.79 metre.

REFERENCE: Assessment Report 15119, page 8.

CAPSULE GEOLOGY

The Robson polymetallic vein prospect, 3.5 kilometres northwest of Eldorado Mountain, is within hornfelsed and altered sedimentary rocks (including calcarenite, sandstone and shale) of the Upper Triassic Hurley Formation occurring along the northwest margin of an apophysis of the Paleocene Eldorado granodiorite pluton.

CAPSULE GEOLOGY

The prospect consists of seams and veins of predominantly auriferous arsenopyrite along a southwest trending and steeply dipping shear zone that seems to be part of a set of fractures that radiate from the pluton. The vein seems to partly grade into the decomposed and altered granodiorite and related porphyritic dykes. Other metallic minerals present include pyrite, jamesonite, sphalerite, chalcopyrite, stibnite, boulangerite, pyrrhotite and pyrrargyrite. Silica, carbonate and chlorite alteration are associated with the mine.

The deposit was mined in 1939 and 1940 producing a total of 34 tonnes of ore which yielded 18 kilograms of silver, 2.2 kilograms of gold, 193 kilograms of copper and 2640 kilograms of lead. In 1986, a 0.79 metre diamond-drill interval assayed 468.95 grams per tonne silver and 45.24 grams per tonne gold (Assessment Report 15119).

BIBLIOGRAPHY

EMPR AR 1933-A269; 1940-A59; 1967-129; 1968-161
EMPR ASS RPT 5659, *6002, *9062, 14428, *15119
EMPR BC METAL MM00248
EMPR EXPL 1975-E118,E119; 1976-E130,E131; 1979-194; 1986-C283,C284
EMPR FIELDWORK *1988, pp. 115-130; 1987, pp. 105-123; 1986, pp. 23-29
EMPR GEM 1969-185,186
EMPR OF *1989-3; *1988-9; 1988-16
EMPR PF (Property description by B.N. Church, 1990)
EMR MP CORPFILE (International Space Modules Ltd.)
GSC MAP 29-1963
GSC MEM 130 (Map 1882)
GSC OF 534; 2207
GSC P 43-15, pp. 27,28
GSC SUM RPT 1912, pp. 206,207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/18

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 027**

NATIONAL MINERAL INVENTORY: 09205 Au1

NAME(S): **VICK, CASH, VIC**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092005E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 22 30 N
LONGITUDE: 123 38 59 W
ELEVATION: 2083 Metres

NORTHING: 5691728
EASTING: 454778

LOCATION ACCURACY: Within 500M

COMMENTS: On a mountain ridge at the northern end of Taseko Lakes.

COMMODITIES: Gold Copper Silver

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Malachite Quartz Specularite Azurite
ALTERATION TYPE: Silicific'n Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Mesothermal Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: STRIKE/DIP: 228/55E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous Undefined Group Powell Creek

LITHOLOGY: Feldspathic Andesite Breccia
Andesite Flow
Agglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Overlap Assemblage

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 86.0000 Grams per tonne
Gold 72.0000 Grams per tonne
Copper 0.2000 Per cent
REFERENCE: Bulletin 81.

CAPSULE GEOLOGY

The Vick is a polymetallic vein showing hosted by andesitic flow breccias and feldspar crystal tuffs of the Powell Creek Formation. It is located on a steep mountain directly west of the narrows at the north end of Lower Taseko Lake. Two exploration adits were drilled into the east side of the mountain at about 1700 metres (5500 feet) elevation in 1935. A four-wheel drive access road to the 2407 metre (7898 foot) peak around the south side of the mountain was made in the early 1980's.

Mineralization consists of gold, silver and copper-bearing quartz-sulphide veins within a northeast-striking shear zone that can be traced across the top of the peak on the east face. Diorite dykes roughly parallel the fault zone. The quartz veins contain iron carbonates, pyrite, and chalcopyrite concentrations parallel to the walls of the veins. Malachite and azurite are common. In upper parts of the vein shear system, specularite pseudomorphs pyrite. Significant precious metal assays are generally associated with the sulphide-rich sections of the veins (Assessment Report 16873).

A chip sample assayed 72 grams per tonne gold, 86 grams per tonne silver and 0.2 per cent copper (Bulletin 81).

BIBLIOGRAPHY

EM GEOMAP 2002-03

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 855
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR *1935-F26-28; 1937-F35
EMPR ASS RPT 12279, 13492, 13942, 14615, 15831, 16873
EMPR BULL 81
EMPR FIELDWORK 1992, pp. 37-52
EMPR PF (Dolmage, V. (1936): Report; *Kingsvale Resources Ltd.,
1987 Prospectus)
EMR MP CORPFILE (New Pyramid Gold Mines Inc.)
GSC OF 534; 2207
CMH 1940, p. 134

DATE CODED: 1985/07/24
DATE REVISED: 1992/07/18

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **0920 028**

NATIONAL MINERAL INVENTORY:

NAME(S): **TAYLOR-WINDFALL**, WINDFALL

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

Open Pit Underground

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 06 36 N
LONGITUDE: 123 20 55 W

NORTHING: 5662115
EASTING: 475596

ELEVATION: 1710 Metres
LOCATION ACCURACY: Within 500M

COMMENTS: On the southeast side of Battlement Creek, 1 kilometre above its confluence with Taseko River.

COMMODITIES: Gold Silver Copper Zinc Lead

MINERALS

SIGNIFICANT: Pyrite Tennantite Sphalerite Chalcopyrite Galena
 Tetradymite Enargite Gold Telluride
ASSOCIATED: Quartz Tourmaline
ALTERATION: Chlorite Sericite Dickite Kaolin Alunite
 Dumortierite Diaspore Gibbsite

COMMENTS: Veins also contain pyrophyllite, corundum and andalusite.
ALTERATION TYPE: Propylitic Argillic Silicific'n Chloritic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Concordant
CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au H04 Epithermal Au-Ag-Cu: high sulphidation
SHAPE: Tabular
MODIFIER: Fractured
DIMENSION: 130 x 110 x 1 Metres STRIKE/DIP: 060/85S TREND/PLUNGE:
COMMENTS: Main sulphide vein has been almost completely mined out. Vein width is 0.2 metre.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous Undefined Group Powell Creek

LITHOLOGY: Tuffaceous Vitric Andesite
 Dacite Andesite Tuff
 Lithic Tuff
 Feldspar Crystal Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Taylor-Windfall polymetallic vein prospect is on the southeast side of Battlement Creek 1 kilometre above its junction with Taseko River. The prospect is within dacitic and andesitic tuffs, and various volcanic sedimentary rocks and volcanic breccia's of the Upper Cretaceous Powell Creek Formation. Most tuffaceous lithic and vitric andesites are propylitically altered and silicified.

E.J. Taylor first discovered gold in eluvium on the bank of Battlement Creek in 1920. The gold was present as coarse angular crystalline fragments and sponge-like particles in a loose decomposed matrix which included detached crystals of quartz, tourmaline, rutile, pyrite and fragments of silicified tuff. Gold was removed by panning and the use of arrastre. Exploration beneath the surficial deposits failed to find mineralized bedrock.

Subsequent exploration in the area outlined two veins of interest: a tourmaline-rich vein and a sulphide-rich vein. The tourmaline vein is 10 to 20 centimetres wide along a strike length of at least 100 metres; the vein pinches, swells and bifurcates along its length. The vein consists of tourmaline, chlorite, pyrite, tennantite, sphalerite and chalcopyrite, with lesser galena, tetradymite, native gold and enargite. The main sulphide vein is 20 centimetres wide along a strike length of 20 metres (the vein has been mostly mined out). The sulphide vein mineralogy is similar to that of the tourmaline vein but contains a greater proportion of

CAPSULE GEOLOGY

sphalerite, tennantite, and contains coarse siderite.

Vein introduction was accompanied by a high temperature hydrothermal event which saw the formation of corundum andalusite quartz. Retrograde reactions are responsible for chloritization of tourmaline and alteration of most of the aluminosilicate mineral content to sericite. Later, advanced argillic alteration is marked by large volumes of sericite altered to an assemblage of mainly kaolinite and dickite, with lesser alunite, dumortierite, diaspore and gibbsite.

Both veins are accessed by the 1648 metre level of the underground workings. Production records show that 555 tonnes of ore were mined in 5 years between 1932 and 1953, inclusive; 454 tonnes of this were mined in 1935. Recovered from this ore were 14,525 grams of gold and 156 grams of silver.

BIBLIOGRAPHY

EMPR AR 1922-138; 1923-168; 1926-191; 1928-213; 1930-198; 1931-110;
1934-F24; *1935-17-21F; 1937-F35; 1938-F67; 1939-72; 1941-A57:
1945-82; 1946-96; 1953-42,97; 1954-47
EMPR ASS RPT 2803, 3270, 10191, *11696, 14629, 14901, 14902
EMPR BC METAL MM00263
EMPR FIELDWORK 1976, p. 53 ; 1986, pp. 157-169; 1987, pp. 105-127;
1988, pp. 153-158
EMPR OF 1987-3
EMR MP CORPFILE (Taylor-Windfall Gold Mining Company Ltd.)
GSC OF 534; 2207
WWW http://www.infomine.com/index/properties/TAYLOR_WINDFALL_MINE.html
*Price, G. (1986): Geology and Mineralization, Taylor-Windfall Gold
Prospect, B.C., M.Sc. Thesis, Oregon State University

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/21

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 029**

NATIONAL MINERAL INVENTORY: 09203 Cu3

NAME(S): **ROWBOTTOM**, PHAIR

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 04 42 N
LONGITUDE: 123 25 00 W
ELEVATION: 1890 Metres

NORTHING: 5658618
EASTING: 470812

LOCATION ACCURACY: Within 500M

COMMENTS: Referred to as "Rowbottom" in Fieldwork 1976 and Geology 1976.

COMMODITIES: Copper Molybdenum Silver

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Molybdenite
ASSOCIATED: Quartz Pyrrhotite
ALTERATION: Chlorite Epidote Carbonate Sericite
ALTERATION TYPE: Propylitic Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Shear Stockwork Disseminated
CLASSIFICATION: Porphyry Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au
DIMENSION: STRIKE/DIP: 025/80E TREND/PLUNGE:
COMMENTS: Attitude of 2 main shear zones containing the mineralization.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous	Undefined Group	Powell Creek	Coast Plutonic Complex
Upper Cretaceous			

LITHOLOGY: Hornblende Biotite Granodiorite
Volcanic
Volcaniclastic

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Plutonic Rocks

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1970
SAMPLE TYPE: Drill Core	
COMMODITY	GRADE
Copper	0.4100 Per cent
Molybdenum	0.0340 Per cent

COMMENTS: From a 45.7 metre intersection.
REFERENCE: Assessment Report 19565.

CAPSULE GEOLOGY

The Rowbottom porphyry copper showing, 4.2 kilometres east of Mount McClure, is within Late Cretaceous plutonic rocks of the Coast Plutonic Complex, 3 kilometres south of its contact with Upper Cretaceous volcanic and volcaniclastic rocks of the Powell Creek Formation.

The host rock is hornblende-biotite granodiorite which is locally cut by post-mineralization (?) hornblende-plagioclase porphyry dykes. Mineralization occurs in 2 shear zones, 5 to 6 metres wide and roughly 100 metres apart. The shear zones strike north-northeast and dip steeply east. Within the shear zones, the host rock is altered (propylitic and sericitic alteration) and cut by numerous parallel quartz stringers. The quartz and altered rock contain disseminated pyrite, chalcopyrite, molybdenite and minor pyrrhotite. A sample from the upper zone assayed trace gold, 4.8 grams per tonne silver, and 0.41 per cent copper (Geological Survey of Canada Summary Report 1928).

In 1970, Sumitomo Metals Mining is reported to have mapped copper-molybdenum mineralization in bedrock for 547 metres along Rowbottom Creek. In that year, the best intersection from 11 percussion holes graded 0.41 per cent copper and 0.034 per cent

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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PAGE: 859
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CAPSULE GEOLOGY

molybdenum (Assessment Report 19565).

BIBLIOGRAPHY

EMPR FIELDWORK *1976, pp. 47-53; 1986, pp. 157-169
EMPR GEOLOGY *1976, pp. 67-84
EMPR EXPL 1975-E119
EMPR ASS RPT 2226, 2364, 2874, 19350, *19567, 20721
EMPR OF 1987-3
GSC SUM RPT 1928A, pp. 91A-92A
GSC MAP 29-1963
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/08

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 030**

NATIONAL MINERAL INVENTORY:

NAME(S): **POISONMOUNT CREEK**, POISON MOUNTAIN CREEK

STATUS: Past Producer Open Pit

MINING DIVISION: Clinton

REGIONS: British Columbia

NTS MAP: 092002E

BC MAP:

LATITUDE: 51 09 40 N

LONGITUDE: 122 36 55 W

ELEVATION: 1707 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: The placer area is northeast of the confluence of Poisonmount (Poison Mountain) and Churn creeks.

UTM ZONE: 10 (NAD 83)

NORTHING: 5667812

EASTING: 526902

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold

COMMENTS: Small amounts of black sand accompany placer gold particles.

MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Unconsolidated

CLASSIFICATION: Placer Sedimentary

TYPE: C01 Surficial placers

SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Lower Cretaceous

Paleocene

GROUP

Jackass Mountain

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

ISOTOPIC AGE: 59.3 +/- 2.7 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Hornblende

Eocene

ISOTOPIC AGE: 57.3 +/- 2.0 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

Unnamed/Unknown Informal

LITHOLOGY: Arkosic Sandstone

Conglomerate

Siltstone

Shale

Granodiorite

Quartz Diorite

Biotite Hornblende Plagioclase Porphyry

HOSTROCK COMMENTS: Ages for Poison Mountain intrusion from McMillan (Fieldwork 1987, page 115). Bedrock is overlain by gravels composed of weathered material.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Poisonmount (Poison Mountain) Creek gold placer, near the confluence of Poisonmount Creek with Churn Creek, is within gravels derived exclusively from sandstone, conglomerate, siltstone and shale of the Lower Cretaceous Jackass Mountain Group and granodiorite to quartz diorite of the Paleocene to Eocene Poison Mountain intrusions. Glacial deposits are absent. The thickness of surficial deposits range from 1 to 6 metres and contains very little clay.

Placer gold occurs in gravels and in bedrock cracks of the present Poisonmount Creek stream bed. The gold particles recovered vary from the size of a pin head up to the size of a grain of wheat; there is little flour gold. The color is generally dark bronze-golden. The gold is generally rough, though on occasion some pieces are well worn and flattened. Most of the gold recovered seems to have travelled only a short distance, and was possibly derived from scattered narrow pyritic quartz veinlets in porphyry dykes related to the Poison Mountain intrusions.

The placer gold was discovered in 1932, and resulted in staking and working along most of Poison Mountain Creek. In 1982, Long Lac Resources Ltd. conducted a bulk sample testing of the stream gravels. Gold values were found to be very low.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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PAGE: 861
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BIBLIOGRAPHY

EMPR AR *1933-186-191
EMPR EXPL 1979-194
EMPR FIELDWORK 1974, p. 35; 1985, pp. 303-310; 1986, pp. 23-29; 1987,
pp. 93-130; 1988, pp. 105-152; 1989, pp. 45-72; 1990, pp. 75-83
EMPR OF 1987-3; 1987-11; 1988-3; 1988-9; 1989-4; 1990-10
EMPR BULL *28, pp. 32,33
EMPR ASS RPT 10660
GSC OF 534; 2207
GSC SUM RPT 1920, Pt. A, pp. 70-81
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/21

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 031**

NATIONAL MINERAL INVENTORY: 09207 Au1

NAME(S): **BORIN CREEK**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092007E
BC MAP:

Open Pit

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 21 48 N
LONGITUDE: 122 32 35 W
ELEVATION: 1570 Metres

NORTHING: 5690329
EASTING: 531812

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location is centred on the eastern end of the Borin Creek placer gold deposits.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Quaternary			Unnamed/Unknown Informal

LITHOLOGY: Unconsolidated Gravel

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Borin Creek placer deposits lie a few kilometres to the northwest of the gold-bearing veins of Blackdome Mountain, a possible source of the gold in the Borin Creek gravels. The underlying bedrock consists of Eocene volcanics and sediments which overlie altered granodiorite.

The Borin Creek gravels are probably of Quaternary age, representing, in part, reworked Pleistocene glacial and fluvio-glacial gravels which are regionally extensive. In 1968, a plant, including a three metre trommel, was established on the Borin Creek prospect. Production from this plant is not known.

BIBLIOGRAPHY

EMPR AR 1933-186; 1953-97; 1955-31; 1966-257; 1967-297; 1968-291;
1969-376; 1970-484
EMPR BULL *28, p. 33
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/07

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 032**

NATIONAL MINERAL INVENTORY: 09207 Au1

NAME(S): **FAIRLESS CREEK**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092007E
BC MAP:

Open Pit

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 20 12 N
LONGITUDE: 122 32 35 W
ELEVATION: 1450 Metres

NORTHING: 5687364
EASTING: 531831

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location is at centre of placer lease block.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
COMMENTS: Gold concentrate obtained from sluicing operations is reported to contain rare earths, mainly yttrium oxide

MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Quaternary			Unnamed/Unknown Informal

LITHOLOGY: Unconsolidated Gravel

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Fairless Creek placer deposits lie to the west of the gold-bearing veins of Blackdome Mountain, a possible source of the gold in Fairless Creek. The auriferous gravels of Fairless Creek were tested in conjunction with the Borin Creek placer showing (0920 031).

During the period 1931 to 1940 recorded production from Fairless Creek is reported to be 1770 grams of gold from an unknown quantity of gravel (Bulletin 28, page 33).

BIBLIOGRAPHY

EMPR AR 1933-186; 1953-97; 1955-31; 1966-257; 1967-297; 1968-291;
1969-376; 1970-484
EMPR BULL 28, p. 33
GSC OF 534; 2207
GCNL #58, #106, #161, 1980

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/14

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092O 033**

NATIONAL MINERAL INVENTORY: 092O3 Cu3

NAME(S): **TASEKO (EMPRESS)**, EMPRESS, GRANITE CREEK

STATUS: Developed Prospect
 REGIONS: British Columbia
 NTS MAP: 092O03W
 BC MAP:
 LATITUDE: 51 06 16 N
 LONGITUDE: 123 24 00 W
 ELEVATION: 1670 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: Up hill on the east side of Granite Creek, 800 metres above its junction with the Taseko River.

MINING DIVISION: Clinton
 UTM ZONE: 10 (NAD 83)
 NORTHING: 5661516
 EASTING: 471995

COMMODITIES: Copper Gold Molybdenum Silver Corundum
 Gemstones Sapphire

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Magnetite Molybdenite Pyrrhotite
 Specularite Bornite
 ALTERATION: Quartz Plagioclase Pyrophyllite Andalusite Chlorite
 COMMENTS: Alteration zones from the intrusive contact outwards are: quartz-magnetite, quartz, pyrophyllite-andalusite +/- quartz +/- plagioclase.
 ALTERATION TYPE: Argillic Silicific'n Sericitic
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stockwork
 CLASSIFICATION: Porphyry Epigenetic Industrial Min.
 TYPE: L04 Porphyry Cu ± Mo ± Au Q10 Gem corundum hosted by alkalic rocks
 SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous	Undefined Group	Powell Creek	Coast Plutonic Complex
Upper Cretaceous			

LITHOLOGY: Andesite Flow
 Porphyritic Flow
 Bedded Fragmental Andesite
 Quartz Diorite
 Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
 TERRANE: Overlap Assemblage
 COMMENTS: The area straddles the contact of the Coast Plutonic Complex.

INVENTORY

ORE ZONE: LOWER NORTH REPORT ON: Y
 CATEGORY: Combined YEAR: 1991
 QUANTITY: 6760500 Tonnes
 COMMODITY GRADE
 Silver 1.7100 Grams per tonne
 Gold 0.8200 Grams per tonne
 Copper 0.7300 Per cent
 COMMENTS: Reserves are for the Lower North zone and are described as 'probable and possible'.
 REFERENCE: Northern Miner - February 18, 1991.

ORE ZONE: EMPRESS REPORT ON: Y
 CATEGORY: Inferred YEAR: 1997
 QUANTITY: 10004000 Tonnes
 COMMODITY GRADE
 Copper 0.6100 Per cent
 Gold 0.7890 Grams per tonne
 COMMENTS: Using 0.4 per cent cutoff on copper.
 REFERENCE: Fieldwork 1997, p. 26-3.

INVENTORY

ORE ZONE: EMPRESS REPORT ON: Y

CATEGORY:	Indicated	YEAR:	1991
QUANTITY:	10048000 Tonnes		
COMMODITY		GRADE	
Gold		0.7900	Grams per tonne
Copper		0.6100	Per cent

COMMENTS: This mineral inventory is described as a 'preliminary pre-feasibility' calculation with a copper cutoff grade of 0.4 per cent.

REFERENCE: George Cross News Letter No.151 (August 7), 1991.

CAPSULE GEOLOGY

The Empress copper-gold porphyry deposit is on the east side of Granite Creek, 800 metres above its confluence with the Taseko River. A major strike-slip fault, the Tchaikazan fault is interpreted to underlie the Taseko River Valley to the north of the showing. The showing is in andesite, porphyry flows and bedded fragmental dacitic andesite of the Upper Cretaceous Powell Creek Formation adjacent to its contact with Late Cretaceous quartz diorite of the Jurassic to Tertiary Coast Plutonic Complex. The contact strikes to the west and dips moderately to the north. The host volcanic rocks are bleached, pyrophyllite altered (plus/minus sericite) and extremely silicic. Wallrock alteration of the volcanics roughly parallels the intrusive contact and comprise (from the contact upwards) quartz-magnetite, quartz, and pyrophyllite-andalusite plus/minus quartz plus/minus plagioclase.

Three zones of copper-gold mineralization have been defined, the Lower North, Upper North and 76. The latter two zones appear to be fault controlled whereas the Lower North zone appears to be related to the intrusive contact. The Lower North zone is the zone of strongest mineralization. Preliminary calculations indicate that over 5 million tonnes of greater than 1 per cent copper (plus gold) occur in a relatively flat-lying, disc-shaped pod. The pod is situated about 140 metres below surface and is open to the northwest, northeast and southwest. The Upper North zone is less well defined and consists of spotty mineralization occurring in a northeast linear trend from near surface to roughly 120 metres depth. The 76 zone appears to be vertical and trends in a northeast direction. The zone is open to the northeast, but appears to be cut off by the quartz diorite stock at depth.

Pyrite, chalcopyrite and magnetite are the most abundant metallic minerals, and are present as disseminations throughout the altered volcanic rocks, with minor amounts in fractures and as veinlets. Molybdenite and pyrrhotite are present in small amounts. Microscopic examinations of gravity concentrates of mineralized core indicates the additional presence of trace galena, sphalerite and free gold.

From the results of drilling in 1990 and earlier, a reserve estimate of 6,760,500 tonnes of 0.73 per cent copper, 0.82 gram per tonne gold and 1.71 grams per tonne silver within the Lower North zone was announced in 1991 (Northern Miner, February 18, 1991). A March 1991 "preliminary pre-feasibility" study of the Empress deposit has calculated 10,048,000 tonnes of 0.61 per cent copper and 0.79 gram per tonne gold at a 0.4 per cent copper cutoff grade (George Cross News Letter No.151, August 7, 1991).

In 1991 drilling, two potential new zones were discovered: the East zone and the Granite Creek zone. In the Granite Creek zone, located 243 metres north of the Empress, a drill hole intersected 88 metres grading 0.23 per cent copper and 0.27 grams per tonne gold (George Cross News Letter No.7, 1992).

In 1995, with Explore B.C. Program support, Westpine Metals Ltd. conducted a program of rock and soil sampling and 14.2 line kilometres of induced polarization survey on the Rowbottom and Buzzer zones. Three areas of elevated metal values were defined on the Rowbottom grid (Explore B.C. Program 95/96 - M114). In 1996 and 1997, the property was sampled for sapphires. The largest found was 20 by 3 millimetres (GCNL #155 (Aug.13), 1997).

In the Empress deposit area, corundum, in association with andalusite pyrophyllite rock is reported in several drill holes. It may be a geochemical pathfinder.

BIBLIOGRAPHY

- EM INF CIRC 1998-1, p. 24
- EMPR AR *1935-F24; 1956-35; 1968-155; 1969-181
- EMPR ASS RPT 2134, 2226A, 2226B, 2874, 5764, 6085, 17871, *19350, *20889
- EMPR Explore B.C. Program 95/96 - M114

BIBLIOGRAPHY

EMPR FIELDWORK *1976, pp. 47-53; 1986, pp. 157-169; 1988, pp. 153-158; 1991, p. 232; 1997, pp. 26-1-26-14
EMPR GEM 1975-E119; 1976-E132
EMPR GEOLOGY *1976, 67-84
EMPR OF 1987-3; 1992-1; 1998-8-F, pp. 1-60
EMPR PF (Montgomery, J.H. (1968): Report on the Taseko Mohawk, Empress, Granite Creek and Spokane Prospects Near Taseko Lakes; *Lambert, Ellen, (1989): Geology, Geochemistry and Mineralization of the Taseko Property; News Release, Westpine Metals Ltd., Jan. 1991)
EMR MIN BULL MR 223 B.C. 189
GSC OF 534; 2207
CIM Spec. Vol. *46, pp. 441-450
GCNL #35(Feb.20),#154(Aug.11),#171(Sept.6),#181(Sept.20),#192(Oct.5), #198(Oct.16),#219(Nov.15), 1989; #101(May 25),#121(Jun.22), #138(Jul.18),#143(Jul.25),#147(Jul.31),#155(Aug.13),#163(Aug.23), #175(Sept.11),#190(Oct.1), 1990; #97(May 21),#117(June 18), #131(Jul.9),#139(Jul.19),#142,#151(Aug.7),#158(Aug.16), #172(Sept.6),#179(Sept.17),#185(Sept.25),#191(Oct.3),#18(Jan.25), #24(Feb.4),#51(Mar.13),#60(Mar.26),#68(Apr.9), 1991; #7(Jan.10), #41(Feb.27), 1992; #155 (Aug.13), 1997
N MINER Aug.6,27, 1990; Feb.18, Mar.25, Apr.8, Sept.2,24, 1991
NW PROSP Sept./Oct. 1989
WWW <http://www.infomine.com/>
Placer Dome File
EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/27

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 034**

NATIONAL MINERAL INVENTORY: 09203 Au1

NAME(S): **TAYLOR MOUNTAIN**, MAD MAJOR

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 02 02 N
LONGITUDE: 123 15 34 W
ELEVATION: 2410 Metres

NORTHING: 5653625
EASTING: 481808

LOCATION ACCURACY: Within 500M

COMMENTS: Located 5.7 kilometres southwest of Mount Warner (Assessment Report 552).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite

COMMENTS: Mainly chalcopyrite.

ASSOCIATED: Quartz Pyrite

ALTERATION: Epidote Chlorite Calcite Malachite

ALTERATION TYPE: Propylitic Quartz-Carb. Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stockwork

CLASSIFICATION: Hydrothermal Porphyry

TYPE: L04 Porphyry Cu ± Mo ± Au

COMMENTS: Rock is highly fractured; commonly striking 020 to 030 degrees, and dipping 60 to 75 degrees east.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Upper Cretaceous

Coast Plutonic Complex

LITHOLOGY: Hornblende Biotite Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Grab

COMMODITY

GRADE

Copper

1.7100

Per cent

COMMENTS: Sample HO3: 0.0768 per cent molybdenum.

REFERENCE: Open File 1987-3.

CAPSULE GEOLOGY

The Taylor Mountain porphyry copper showing, 5.7 kilometres southwest of Mount Warner, is within Late Cretaceous hornblende-biotite quartz diorite of the Coast Plutonic Complex. Mineralization comprises pyrite, chalcopyrite, and molybdenite in quartz veins within fractured quartz diorite. Pyrite and chalcopyrite also occur as disseminations within the quartz diorite. Malachite occurs locally with the chalcopyrite. Chlorite-epidote alteration is common within the zone of mineralization. Carbonate alteration is reported to occur locally. Assays on grab samples, reported in the Minister of Mines Annual Report for 1919, range up to 2 per cent copper with trace gold and silver.

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 157-169; 1986, pp. 23-29
EMPR ASS RPT 552, 9550
EMPR AR 1919-N249,N250; 1920-N174; 1965-142
EMPR EXPL 1981-62
EMPR OF 1987-3
GSC MAP 29-1963

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
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PAGE: 868
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BIBLIOGRAPHY

GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/21

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092O 036**

NATIONAL MINERAL INVENTORY:

NAME(S): **CANYON**, MAD MAJOR, RH

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O03W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 02 40 N
LONGITUDE: 123 17 58 W
ELEVATION: 1790 Metres

NORTHING: 5654810
EASTING: 479008

LOCATION ACCURACY: Within 500M

COMMENTS: Located 7.5 kilometres west of Mount Warner (Assessment Report 552).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Epidote Chlorite
ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Cretaceous			Coast Plutonic Complex

LITHOLOGY: Hornblende Biotite Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Canyon porphyry copper showing, 7.5 kilometres southwest of Mount Warner, is within Late Cretaceous hornblende-biotite quartz diorite of the Coast Plutonic Complex. Pyrite and chalcopyrite occur along fracture planes and on disseminations within chlorite-epidote altered quartz diorite.

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 157-169, 1986, pp. 23-29
EMPR ASS RPT 552, 610, 1729
EMPR AR 1919-N250,N251; 1965-142; 1968-155
EMPR GEM 1969-181; 1970-214; 1971-328
EMPR OF 1987-3
GSC MAP 29-1963
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/21

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 037**

NATIONAL MINERAL INVENTORY:

NAME(S): **TOP**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 04 56 N
LONGITUDE: 123 21 04 W
ELEVATION: 2130 Metres

NORTHING: 5659027
EASTING: 475406

LOCATION ACCURACY: Within 500M

COMMENTS: The showing is 4 kilometres southwest of Palisade Bluff.

COMMODITIES: Molybdenum Copper Gold

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Pegmatite
COMMENTS: Mineralized pegmatite dykelet is parallel to joint set which strikes 130 degrees and dips 65 degrees south to 90 degrees.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous			Coast Plutonic Complex

LITHOLOGY: Pegmatite
Granodiorite

HOSTROCK COMMENTS: Mineralized pegmatitic dykelet cuts granodiorite.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel

YEAR: 1987

COMMODITY	GRADE	
Gold	0.3000	Grams per tonne
Copper	0.1600	Per cent
Molybdenum	0.6100	Per cent

COMMENTS: Over a 15-centimetre wide by 3-metre long mineralized interval.
REFERENCE: Open File 1987-3.

CAPSULE GEOLOGY

The Top molybdenum showing, 4 kilometres southwest of Palisade Bluff, is within Late Cretaceous plutonic rocks of the Coast Plutonic Complex. Molybdenite and chalcopyrite occur within a pegmatitic dykelet which cuts granodiorite. The dykelet is essentially parallel to a major joint set which strikes 130 degrees and dips steeply southeast; it averages 18 centimetres in thickness and was traced for 7.5 metres downdip. A 15-centimetre wide by 3-metre long mineralized channel sample assayed 0.3 gram per tonne gold, 0.16 per cent copper and 0.61 per cent molybdenum (Open File 1987-3).

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 157-169
EMPR ASS RPT 527
EMPR OF 1987-3
GSC MAP 29-1963
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/21

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 038**

NATIONAL MINERAL INVENTORY: 09203 Cu4

NAME(S): **BUZZER**, TASEKO

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 06 04 N
LONGITUDE: 123 21 10 W
ELEVATION: 1640 Metres

NORTHING: 5661128
EASTING: 475300

LOCATION ACCURACY: Within 500M

COMMENTS: On the south shore of the Taseko River, 800 metres above its confluence with Battlement Creek.

COMMODITIES: Copper Molybdenum Gold Silver

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Molybdenite

ASSOCIATED: Quartz

ALTERATION: Quartz Sericite Chlorite Pyrite Tremolite

Carbonate Malachite

ALTERATION TYPE: Sericitic Silicific'n Chloritic Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stockwork

CLASSIFICATION: Porphyry

TYPE: L04 Porphyry Cu ± Mo ± Au

SHAPE: Irregular

MODIFIER: Fractured

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Upper Cretaceous

Coast Plutonic Complex

ISOTOPIC AGE: 86.7 +/- Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite

LITHOLOGY: Porphyritic Quartz Diorite

HOSTROCK COMMENTS: Dated by McMillan (Geology in British Columbia 1976).

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Buzzer porphyry copper showing is on the south side of Taseko River, 800 metres above its confluence with Battlement Creek. The prospect is within intensely altered and vuggy Late Cretaceous porphyritic quartz diorite of the Jurassic to Tertiary Coast Plutonic Complex.

Alteration includes sericitization of feldspars, chloritization of hornblende and pervasive silicification. Vugs are commonly lined with crystalline quartz and pyrite, with flaky sericite and rare tremolite and carbonate. Chalcopyrite is the main metallic mineral of interest; molybdenite occurs locally, and less commonly, malachite. Assays reported in 1928 include from 0.6 to 0.9 per cent copper with trace gold and silver (Minister of Mines Annual Report 1928, page 213). Past drilling (1963-1970) has indicated that copper-molybdenum mineralization continues at depth.

In 1995, with Explore B.C. Program support, Westpine Metals Ltd. conducted a program of rock and soil sampling and 14.2 line kilometres of induced polarization survey on the Rowbottom and Buzzer zones. Three areas of elevated metal values were defined on the Rowbottom grid (Explore B.C. Program 95/96 - M114).

BIBLIOGRAPHY

EMPR ASS RPT 2226, 2874, 5764, 6085, *19350, 20889
EMPR AR 1928-213; 1930-110,198; 1931-110; 1935-F21; 1965-142; 1966-134; 1968-155; 1969-181
EMPR EXPL 1975-E119; 1976-E132
EMPR PF (*Lambert, Ellen, 1989: Geology, Geochemistry and Mineralization of the Taseko Property, Westpine Metals Ltd., Prospectus, July 6, 1989 (in 0920 033 - Empress))

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 873
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEOLOGY *1976, pp. 67-84
EMPR FIELDWORK 1974, p. 35; 1976, p. 47; 1985, pp. 303-310; 1986, pp.
23-29,157-169; 1987, pp. 93-130; 1988, pp. 105-152; 1989, pp.
45-72; 1990, pp. 75-83
EMPR OF 1987-3; 1987-11; 1988-3; 1988-9; 1989-4; 1990-10
EMPR Explore B.C. Program 95/96 - M114
GSC SUM RPT 1928A, p. 89
GSC OF 534; 2207
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1996/11/27

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 039**

NATIONAL MINERAL INVENTORY:

NAME(S): **BUR**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 06 20 N
LONGITUDE: 123 22 22 W
ELEVATION: 1670 Metres

NORTHING: 5661629
EASTING: 473902

LOCATION ACCURACY: Within 500M

COMMENTS: The occurrence is located 4.2 kilometres west-southwest of Palisade Bluff (Assessment Report 527).

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Molybdenite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Porphyry Hydrothermal

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Cretaceous
Upper Cretaceous

GROUP

Undefined Group

FORMATION

Powell Creek

IGNEOUS/METAMORPHIC/OTHER

Coast Plutonic Complex

LITHOLOGY: Granodiorite

HOSTROCK COMMENTS: Rocks dated at Mohawk showing (0920 001).

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Bur porphyry copper showing, 4.2 kilometres west-southwest of Palisade Bluff, is within Upper Cretaceous granodiorite of the Coast Plutonic Complex adjacent to volcanic rocks of the Upper Cretaceous Powell Creek Formation to the north. Minor chalcopyrite and molybdenite occur with pyrite as stockwork within rusty and weathered granodiorite.

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 157-169; 1986, pp. 23-29
EMPR ASS RPT 527, 2226, 2364, 2874, 5764
EMPR AR 1965-142,143; 1966-134,135; 1968-155
EMPR GEM 1970-213,214
EMPR EXPL 1975-E119
EMPR OF 1987-3
EMPR GEOLOGY 1976-67-84
GSC MAP 29-1963
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/22

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 040**

NATIONAL MINERAL INVENTORY:

NAME(S): **ML**, ML 144

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092010W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 35 06 N
LONGITUDE: 122 49 53 W
ELEVATION: 1833 Metres

NORTHING: 5714896
EASTING: 511682

LOCATION ACCURACY: Within 1 KM
COMMENTS: Approximate location of ML 144.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ALTERATION: Epidote Sericite K-Feldspar
ALTERATION TYPE: Propylitic Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Bladed

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Middle Jurassic			Mount Alex Plutonic Complex

LITHOLOGY: Granodiorite
Biotite Hornblende Granodiorite

HOSTROCK COMMENTS: Granodiorite forms part of the Mount Alex plutonic complex (Geological Survey of Canada Paper 91-1A).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The ML showing occurs with the Mount Alex plutonic complex consisting of granodiorite, quartz diorite, quartz monzonite and diorite of probable Middle Jurassic age and overlain by basalt of Miocene to Pleistocene age. The plutonic complex is interpreted to intrude older rocks of the Carboniferous to Jurassic Cache Creek Group which are exposed to the east of the complex.

The showing consists of coarse chalcopyrite grains in a narrow quartz vein (2 to 3 centimetres wide) near the contact of altered hornblende granodiorite with biotite granodiorite. Alteration minerals include epidote, sericite and potassium feldspar. Altered boulders of granodiorite containing disseminated chalcopyrite have also been found within the area covered by the ML claim group.

BIBLIOGRAPHY

EMPR ASS RPT 2127, 2174, *2823, 2824
EMPR GEM 1969-182; 1970-215; 1971-329; 1972-315
GSC P 91-1A, pp. 207-217
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/15

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092O 041**

NATIONAL MINERAL INVENTORY: 092O5 Cu1

NAME(S): **PROSPERITY, FISH LAKE, BB,
VICCAL, ALBERT, RENNER**

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 092O05E
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 27 49 N
LONGITUDE: 123 37 32 W
ELEVATION: 1463 Metres

NORTHING: 5701568
EASTING: 456544

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of the 0.25 per cent copper contour of the main deposit, 1 kilometre north of Fish Lake at the northern end of Upper Taseko Lakes, 138 kilometres north-northwest of Pemberton (Geology in British Columbia 1976).

COMMODITIES: Copper Gold Silver Molybdenum Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Molybdenite Bornite Sphalerite

ASSOCIATED: Biotite Quartz Magnetite Hematite Chlorite
Carbonate Sericite Gypsum

ALTERATION: Biotite Sericite Clay Quartz Carbonate
Chlorite Gypsum Pyrite

ALTERATION TYPE: Biotite Sericitic Argillic Propylitic

MINERALIZATION AGE: Upper Cretaceous

ISOTOPIC AGE: 77.2 +/- 2.8 Ma DATING METHOD: Whole Rock MATERIAL DATED: Biotite

DEPOSIT

CHARACTER: Stockwork Vein Disseminated

CLASSIFICATION: Porphyry Hydrothermal

TYPE: L04 Porphyry Cu ± Mo ± Au

SHAPE: Tabular

DIMENSION: 0450 x 0250 Metres STRIKE/DIP:

COMMENTS: The deposit is ovaloid with long and short axes about 450 metres and 250 metres respectively. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous	Unnamed/Unknown Group	Powell Creek	
Upper Cretaceous	Unnamed/Unknown Group	Silverquick	
Upper Cretaceous			Coast Plutonic Complex

LITHOLOGY: Porphyritic Quartz Diorite
Plagioclase Porphyry Dike
Quartz Plagioclase Porphyry Dike
Mafic Plagioclase Porphyry Dike
Biotite Hornfels
Volcanic
Volcaniclastic
Pyroclastic
Greywacke
Shale

HOSTROCK COMMENTS: Volcanic and sedimentary rocks are possibly correlative to the informally-named Powell Creek and Silverquick formations.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Plutonic Rocks

METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Chilcotin Plateau

Overlap Assemblage
RELATIONSHIP:

GRADE: Hornfels

INVENTORY

ORE ZONE: PROSPERITY

REPORT ON: Y

CATEGORY:	Combined	YEAR:	1998
QUANTITY:	63300000 Tonnes		
COMMODITY		GRADE	
Silver		0.5000	Grams per tonne
Gold		0.4660	Grams per tonne
Copper		0.2530	Per cent

COMMENTS: Silver grade is based on planned production levels. Based on 143,945 metres of drilling in 326 holes. The geometry and continuity of the mineable mineral reserve provides for efficient open pit mining with an overall life of mine waste to ore stripping ratio of 1.89 to 1. The mineral reserve includes 65 per cent measured, 30 per cent indicated and 5 per cent inferred.

REFERENCE: Taseko Mines Limited Press Release, March 16, 1998.

CAPSULE GEOLOGY

The Prosperity (formerly Fish Lake) deposit lies within an embayment in the north contact of a northwest elongated, fine-grained, porphyritic quartz diorite stock. The Late Cretaceous stock was emplaced into marine Lower Cretaceous shale and greywacke and marine to non-marine Lower to Upper Cretaceous andesitic pyroclastic rocks with intercalated massive to porphyritic flows (possibly correlative with the informally-named Powell Creek and Silverquick formations), which occupy the Tyaughton Trough. The Tyaughton Trough is a successor basin infilled by both marine and non-marine sedimentary and volcanic rocks. Swarms of east trending feldspar porphyry dykes north of the stock, and north to northwest trending faults north and south of it, disrupt the Cretaceous succession. One of these, the Yalakom fault, had significant transgressive movement during Late Cretaceous time accompanied by volcanism and continental sedimentation. Mineralization at Fish Lake may be genetically linked to later stages of this fault movement and volcanism. In the embayment of the contact of the quartz diorite stock where the Prosperity deposit lies, hornfelsed sedimentary, volcanic and pyroclastic country rocks are intruded by a complex of post-diorite dykes and small stocks. Subsequently, much of the area was covered by Miocene lavas or Pleistocene to Recent alluvial deposits. Erosion has opened windows in the Miocene lavas and the deposit is exposed in one of these.

The Prosperity porphyry system occurs in an area of volcanic, sedimentary and porphyritic intrusive rocks within a plication in the contact of the fine-grained porphyritic quartz diorite stock. As a result of contact metamorphism associated with the various intrusions, the country rocks are pervasively converted to biotite hornfels. The distribution of biotite is complicated both by a superimposed wave of hydrothermal biotite alteration and by later overprinting of argillic-propylitic alteration assemblages. The country rock is a mixed assemblage of massive to porphyritic volcanic and volcanoclastic rocks, greywackes and shales which dip about 20 degrees. Porphyries are grouped into pre-ore plagioclase porphyry and quartz-plagioclase porphyry and post-ore mafic plagioclase porphyry. Wolfhard (Canadian Institute of Mining and Metallurgy Special Volume 15) also describes two younger pre-mineral porphyry phases and one post-mineral phase. Texturally, the porphyries are all similar. Distinctions between them are made on the basis of alteration and relative percentages of quartz. Post-ore dykes appear to strike northeast and dip moderately northwest.

Rocks of the Prosperity property have a complex history of alteration. The volcanic to sedimentary country rock appear to have been subjected to at least two periods of pervasive biotite alteration; one resulted from intrusion of the large porphyritic quartz diorite stock, the other from intrusion of the "younger" plagioclase porphyry and quartz-plagioclase porphyry bodies. Matrices of "older" plagioclase porphyries were flooded with biotite during the latter event or events. Vein associations, formation in earlier intrusions, grade distribution, and the alteration zoning patterns indicate that some of the biotite alteration was of hydrothermal origin and was associated with metallization. The zone of best mineralization in the deposit has a core area of pervasive biotite alteration.

From thin section work it is evident that early biotite alteration was later partially, or in places, totally destroyed by younger alteration characterized by formation of sericite, quartz, carbonate, with lesser clay, hydromica, and some gypsum and actinolite. The distribution and relative intensity of the younger alteration have produced a zone of propylitic alteration which is apparently fringed by a propylitic zone. The younger alteration laps onto the biotite core and has pervasively altered large areas of hornfelsed rocks outside the 0.25 per cent copper contour of the

CAPSULE GEOLOGY

deposit. Despite the differing ages of alteration, there are coherent grade, alteration, and metal zoning patterns which appear to be controlled by the younger porphyries, particularly the quartz-plagioclase porphyries. It is in, and more commonly adjacent to, these porphyries that the best copper grades occur.

The earliest veining at Prosperity post-dates pervasive biotite alteration and consists of quartz, magnetite, hematite, sulphides and chlorite. With time, carbonate was added to the assemblage. During main stage mineralization, sulphides were deposited along with quartz, biotite, chlorite and sericite. The biotite and propy-argillic alteration associated with the porphyry system apparently also formed at this time. Late main stage veining comprise barren quartz, quartz with sulphides, carbonate and hematite, and gypsum with chlorite or pyrite. Gypsum with minor amounts of anhydrite followed by carbonate veining marked the collapse of the hydrothermal system.

Mineralization occurred in an area of ongoing igneous activity and this is reflected in the orientation of veins and mineralized fractures. Through time, dips of dominant fracture orientations varied from steep to moderate or low and back to steep. In part they probably reflect regional stresses but in part they are related to intrusive activity, evolution of magmatic fluids, and pressure generated by the hydrothermal system (Geology in British Columbia 1976).

Emplacement of porphyritic intrusive bodies at Prosperity was accompanied by extensive biotite hornfelsing of the volcanic country rocks. The earliest vein and fracture-filling minerals cut hornfelsed rocks but were probably deposited very shortly after their formation. These veins carry magnetite with quartz, hematite, some pyrite and chalcopryrite, and lesser chlorite. As the hydrothermal system became established and evolved, the mineralogy of fracture and vein fillings changed. For example, carbonate joined magnetite and its associated minerals prior to main stage mineralization. During main stage mineralization chalcopryrite, pyrite, and molybdenite along with quartz, biotite, chlorite and sericite were deposited. Pervasive country rock alteration of varying intensity also occurred during main stage mineralization. During this pervasive alteration, particularly in altered mafic minerals, disseminated magnetite, pyrite, chalcopryrite, and minor amounts of bornite were deposited. Magnetite in altered mafic minerals may be a simple byproduct of alteration but sulphides required addition of sulphur to the system. Sphalerite was observed in quartz veins and in quartz-specularite veins with pyrite halos in drill core. Arsenopyrite and tetrahedrite occurs with pyrite and chalcopryrite in another drill intersection. Typical vein and fracture assemblages include:

- 1) quartz + pyrite (often with quartz + flaky sericite envelopes)
 - 2) quartz +/- pyrite +/- chalcopryrite +/- molybdenite (mainly with quartz + flaky sericite envelopes)
 - 3) chalcopryrite +/- pyrite
 - 4) pyrite +/- chalcopryrite
 - 5) biotite + chlorite +/- pyrite +/- chalcopryrite
 - 6) sericite +/- chlorite +/- biotite +/- pyrite +/- chalcopryrite
 - 7) sericite + quartz +/- pyrite +/- chalcopryrite +/- carbonate
- Sulphide deposition decreased gradually. During the waning period barren quartz veins and quartz + sulphide +/- carbonate +/- hematite veins and fractures predominated. Minor amounts of gypsum + chlorite and gypsum + pyrite were also deposited. Formation of gypsum and anhydrite +/- carbonate and lesser carbonate-hematite veins was followed by deposition of carbonate and finally graphitic carbonate in veins and fractures. These mark the collapse of the hydrothermal system (Geology in British Columbia 1976).

A sample of hornfels containing 40 per cent secondary biotite was obtained from drill core for an age determination by J.E. Harakal at the University of British Columbia. A whole rock age of 77.2 Ma +/- 2.8 Ma was obtained. As there are biotite-sulphide veinlets present, as well as matrix biotite coexisting with quartz-sulphide veinlets, the radiometric age is considered to be the date of mineralization (Canadian Institute of Mining and Metallurgy Special Volume 15).

Orientations of mineralized fractures and veins were measured from vertical drill holes in the deposit. Most dip between 70 and 90 degrees and a less well-developed set of structures dips about 45 degrees. Fracture orientations changed slightly with time. Most of the oldest, magnetite-rich veins are subvertical, although there are lesser concentrations with dips near 65 and 15 degrees. Similarly, pyrite and chalcopryrite-bearing veins are also dominantly steeply inclined. Late-stage gypsum veinlets have dip maxima of 45 and 25 degrees. Carbonate, which is calcite in part, occurs in veins with minor amounts of chlorite. These have dip maxima of 75 and 45

CAPSULE GEOLOGY

degrees but a significant number also dip between 10 and 40 degrees. Younger carbonate + graphite(?) veins have steep orientations again (Geology in British Columbia 1976).

In summary, alteration at Prosperity is related to younger porphyritic intrusions which cut a country rock comprised of older porphyritic intrusions and hornfelsed volcanic and sedimentary rocks. The best mineralization is in zones of biotite alteration adjacent to, and in, bodies of this "young" quartz plagioclase porphyry. The hydrothermal system was maintained for some time after the younger porphyries and somewhat beyond the time when post-ore hornblende plagioclase porphyry dykes were emplaced. All have been subjected to carbonate-sericite dominated propy-argillic alteration.

While main phase veins and fractures are grouped and treated as a unit, in fact several ages of, for example, quartz + pyrite + chalcopyrite veins occurs in a single piece of drill core. Mineralization obviously took place over a significant time span which saw many episodes of fracturing, healing, and refracturing. The porphyry intrusions may have acted as a heat "engine" to drive a convective cell of metal-bearing hydrothermal fluids. Whether the metals in the system were scavenged from the country rock or supplied by the porphyries is open to speculation (Geology in British Columbia

Current dimensions of the deposit above a 0.40 per cent copper equivalent cutoff grade are 853 metres north-south, 1310 metres east-west and extending to 823 metres deep. The deposit remains open to extension north, west and southwest (George Cross News Letter No.180 (September 17, 1992).

Two higher grade zones (higher than 0.60 per cent copper equivalent) have been defined within the overall deposit. The large Main zone measures 503 metres north-south, 609 metres east-west and to 823 metres deep. A West zone measures 250 metres north-south, 183 metres east-west and to 183 metres deep (George Cross News Letter

Reserves in the combined drill indicated and inferred category as of July 1991 were as follows (George Cross News Letter No.142, July 1991):

TONNES	COPPER (%)	GOLD (g/t)	STRIP RATIO
526,429,000	0.20	0.38	0.7:1
449,232,000	0.21	0.41	1.0:1
361,770,000	0.23	0.45	1.5:1

By the end of October 1991, drilling had confirmed a block of 544,200,000 tonnes grading 0.32 per cent copper and 0.55 grams per tonne gold (0.86 per cent copper equivalent) (George Cross News Letter No.209, 1991). The grade continuity is reported to be good and reserves are open in all directions.

Taseko Mines Ltd. has reported a preliminary reserve estimate of 1,080,356,100 tonnes grading 0.23 per cent copper and 0.41 gram per tonne gold for a copper equivalent of 0.52 per cent (George Cross News Letter No. 197 (October 13), 1992).

Mineral Resources Development Inc. has calculated preliminary mineable reserves for the Prosperity deposit. Preliminary mineable reserves are reported for several progressively deeper pit designs (George Cross News Letter No. 50 (March 12), 1993).

Strip Ratio	Reserve		Grade	
	Million Tonnes		Cu %	Au g/t
Waste:Ore				
0.80:1	148		0.24	0.51
1.16:1	404		0.24	0.47
1.49:1	505		0.24	0.47
1.84:1	640		0.24	0.44
2.11:1	811		0.24	0.44

Note: In situ reserves are within preliminary 42 degree pit designs, no dilution, if any, included; block gold grades cut to 1.0 gram per tonne gold.

The property was first discovered by Phelps Dodge Corporation in 1963. In 1966, their claims lapsed and the area was restaked by Taseko Mines Limited. During the period from 1969 to 1990 a number of mining companies, including Bethlehem Copper and Cominco, completed exploration programs on the property. Early exploration drilling totalled 27,005 metres in 176 shallow holes which determined the potential for a large-scale disseminated gold-copper porphyry deposit. Many of these early drillholes bottomed in significant gold-copper mineralization.

A major multi-rig drilling program conducted from late 1991 to 1993 by Taseko resulted in the completion of 139 large diameter vertical core holes for a total of 77,392 metres. Throughout 1993, Taseko further advanced the project by undertaking a wide spectrum of detailed mine planning and environmental baseline studies, and in August of that year, Taseko commenced the mine permitting process with the province of British Columbia.

CAPSULE GEOLOGY

A detailed pre-feasibility study completed in 1995 was based on an open-pit reserve of 675 million tonnes grading 0.236 per cent copper and 0.435 gram per tonne gold at a stripping ratio of 1.57 to 1. The company (Taseko Mines Ltd.) has submitted an application for a Mine Development Certificate. The project was renamed Prosperity in 1995 (from Fish Lake) and was under review with respect to the Environmental Assessment Act (Information Circular 1996-1, page 10; 1997-1, page 18). In June 1997, Taseko completed a large diameter core drilling program totalling 49,462 metres in 107 holes.

During 1997, Taseko Mines Ltd. completed pilot plant metallurgical and process testing programs, including bulk sample testing of the Prosperity gold-copper deposit. All pilot plant program results were reported to compare favourably with the previously announced pre-feasibility metallurgical results. Results from a 50,000 kilogram test program averaged 90 per cent copper recovery and 75.6 per cent gold recovery producing a 25 per cent copper concentrate containing 38.9 grams per tonne gold. A detailed geological and gold-copper grade computer model of the deposit, based on 123,414 metres of drilling in 248 holes, is nearing completion and will lead to a new mineable reserve estimate and open pit design and production schedules. In addition, comprehensive environmental and socio-economic studies for presentation to the government Project Review Committee are continuing. The previously established mineable reserve for the deposit was 675,000,000 tonnes grading 0.236 per cent and 0.435 gram per tonne gold. At a projected 90,000-tonnes per day milling rate, the company forecasted annual production of 11,688 kilograms of gold, 16,485 kilograms of silver and 69,460 tonnes of copper, over a mine life of 21 years. The capital costs were estimated at US \$430 million. Between 1996 and 1997, Taseko completed a large (13.5 million), in-fill drilling program; this was the largest exploration program (\$5 million) in the province in 1997.

Based on 143,945 metres of drilling in 326 holes (including 92 angle drill holes completed during 1996 and 1997), Independent Mining Consultants calculated a new mineable mineral reserve of 633 million tonnes at an average grade of 0.253 per cent copper, 0.466 gram per tonne gold and 0.5 gram per tonne silver (silver grade is based on planned production levels). The geometry and continuity of the mineable mineral reserve provides for efficient open pit mining with an overall life of mine waste to ore stripping ratio of 1.89 to 1. The copper grade has increased by 7.2 per cent and the gold grade has increased by 7.4 per cent from the previously announced mineable mineral reserve which was based on 76,134 metres of drilling in 147 holes. The mineral reserve includes 65 per cent measured, 30 per cent indicated and 5 per cent inferred. (Taseko Mines Limited, Press Release, March 16, 1998). At a projected 90,000 tonnes per day milling rate, the company forecasts annual production of 12,940 kilograms of gold and 95,795 tonnes of copper, over the 25.3-year mine life.

BIBLIOGRAPHY

- EM EXPL 1996-D2; 1997-37; 1998-6-7,11,60-62
EM GEOMAP 2002-03
EMPR AR 1935-F28,F29; 1961-24,25; 1962-21; 1968-154
EMPR ASS RPT 369, 2483, 2702, 4966, 7979, 9103, 9216, 9932, 10615, 10909, 13044, 19378, 22060, 22065
EMPR BULL 81
EMPR FIELDWORK 1976, p. 53; 1988, pp. 153-158; 1992, pp. 37-52
EMPR GEM 1969-180; 1970-213; 1972-314; 1973-268; 1974-222
EMPR GEOLOGY *1976, pp. 84-104
EMPR INF CIRC 1993-13, p. 12; 1994-1, p. 12; 1994-19, p. 13; 1995-1, p. 13; 1995-9, pp. 10,11; 1996-1, p. 10; 1997-1, p. 18; 1998-1, pp. 18-19; 1999-1, pp. 6-7, 11; 2000-1, pp. 9, 16
EMPR MAP 65 (1989)
EMPR OF 1992-1; 1994-1; 1998-8-F, pp. 1-60; 1998-8-K, pp. 1-22; 1998-10
EMPR PF (*CIM Special Volume 15, Wolfhard, M.R. (1976): Fish Lake; *Information Brochure, 1995, Taseko Mines Limited; Taseko Mines Limited, Annual Report 1995; Taseko Mines Limited, Press Release, Sept.15, 1992, June 9, 1997; Photograph of Fish Lake; Drillhole location maps, sections, notes and logs; Geological notes of cross-cutting vein relationships from property visit, 1981; Report to Shareholders, Oct.-Dec. 1980, Bethlehem Copper Corporation; Thin section report, W.J. McMillan; Sketch map of Albert's zone; McMillan, W.J. (undated): Report on the Fish Lake Deposit; Petrographic report on thin sections, Geotex Consultants Limited, 1981; B.C. & Yukon Chamber of Mines Website (Dec. 1997): The Road to Prosperity, 4 p.; Taseko Mines Limited Website (May 1998, Nov. 1999): Prosperity Project, 10 p.)
EMR MIN BULL MR 223 B.C. 194

BIBLIOGRAPHY

EMR MP CORPFILE (Taseko Mines Limited; Quintana Minerals Corporation)
GSC MAP 29-1963; 2-1972; 1292A
GSC OF 534; 2207; 2800
GSC P 67-54
CIM Special Volume *15 (1976), pp. 317-322
GCNL #246, 1979; #115, 1980; #16,#141, 1981; #133, 1982; #16, 1983;
#25, 1985; #19(Feb.23), #46(Mar.6), #242(Dec.14), 1990; #44(Mar.4),
#50, #90(May 9), *#142(Jul.24), #144, #166(Aug.28), #179(Sept.17),
#184(Sept.24), #191(Oct.3), *#192(Oct.4), #203, #209(Oct.30), 1991;
#51(Mar.12), #61(Mar.26), #113(June 11), #139(July 20),
#180(Sept.17), #197(Oct.13), 1992; *#50(Mar.12), 1993;
*#28(Feb.10), #113(June 12), #147(July 31), #187(Sept.29), #223
(Nov.20), 1997; #54(Mar.18), #84(May 1), #113(June 12), #242
(Dec.17) 1998; #12(Jan.19), #19(Jan.28), 1999
N MINER Feb.12, 1981; Nov.25, 1982; Feb.10, 1983; June 17,25, 1990;
May 13, June 3,17, July 29, Sept.2,23, Oct.14,28, 1991; Feb.17,
Mar.16, June 15, July 27, *Oct.19, 1992; Jan.15, 1996; June 23,
1997; May 4, 1998; May 24, 1999
PR REL Taseko Mines Limited, June 9,29, Sept.24, Nov.17, 1997;
Mar.16, Apr.29, June 10, 1998; Jan.21, 1999; Dec.6, 2002; Jan.7,
2003
WWW <http://www.hdgold.com/tkofl.htm>
<http://www.eao.gov.bc.ca/PROJECT/projectlist.htm>;
<http://www.infomine.com/>
Falconbridge File
Mining Quarterly Vol.3, No.3, Winter 1997 (B.C. Mining Clipper
Feb. 1997)
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1997/04/30

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **0920 043**

NATIONAL MINERAL INVENTORY: 09204 Au2,Mo1

NAME(S): **CHARLIE, TCHAIKAZAN EGGS,
WARREN, CHARLIE NORTHWEST, NORTHWEST COPPER,
LORD RIVER, HUB**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092004E
BC MAP:
LATITUDE: 51 10 36 N
LONGITUDE: 123 40 17 W
ELEVATION: 1800 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: In the Tchaikazan Valley.

MINING DIVISION: Clinton
UTM ZONE: 10 (NAD 83)
NORTHING: 5669685
EASTING: 453068

COMMODITIES: Gold Silver Copper Molybdenum

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Molybdenite Gold Galena
Sphalerite Arsenopyrite Tetrahedrite Hessite Altaite
Copper
ASSOCIATED: Quartz
ALTERATION: Chlorite Clay Quartz Sericite Epidote
Azurite Malachite
ALTERATION TYPE: Silicific'n Propylitic Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Porphyry Epithermal Mesothermal Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Irregular
COMMENTS: Veins striking east-west. Dips 20-40 degrees north.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous Mesozoic-Cenozoic	Taylor Creek	Undefined Formation	Coast Plutonic Complex

LITHOLOGY: Pyroclastic Dacite
Pyroclastic Basalt
Basaltic Breccia
Volcanic Argillite
Volcanic Siltstone
Volcanic Sandstone
Volcanic Conglomerate
Basalt Flow
Porphyry Dike

HOSTROCK COMMENTS: Granodiorite dykes and stocks intrude Lower Cretaceous volcanic of the Taylor Creek Group.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Overlap Assemblage
COMMENTS: Taylor Ck. Gp. is an overlap assemblage, possibly grading to Gambier.

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1990
SAMPLE TYPE:	Chip		
COMMODITY	<u>GRADE</u>		
Silver	279.9000	Grams per tonne	
Gold	10.6000	Grams per tonne	
Copper	13.6800	Per cent	
REFERENCE:	Bulletin 81.		

CAPSULE GEOLOGY

A prospecting party exploring the Tchaikazan Valley in 1945, discovered quartz veins carrying gold-silver mineralization on a slope above the valley. Although only minor amounts of sulphide mineralization (predominantly pyrite) was observed in the veins, assays from a panned sulphide concentrate returned "many ounces of gold and more than 50 ounces of silver".

CAPSULE GEOLOGY

Later exploration in the area resulted in the discovery of chalcopyrite-molybdenite mineralization in the floor of the Tchaikazan Valley, within altered volcanic rocks cut by porphyritic stocks and dykes of mainly granodioritic composition.

Both the precious metal-bearing veins and disseminated sulphide mineralization are hosted by volcanic and sedimentary rocks of the Lower Cretaceous Taylor Creek Group, consisting of feldspar crystal tuffs, lithic fragmentals, and some flow rocks with chloritic amygdules. Argillaceous sediments are a minor component of the succession. A chip sample assayed 279.9 grams per tonne silver, 10.6 grams per tonne gold and 13.68 per cent copper (Bulletin 81).

Mineralogical compositions and textures of the vein mineralization suggest precipitation at a high structural level, above the disseminated chalcopyrite mineralization exposed in the valley floor. In other words, the vein mineralization was precipitated from the same hydrothermal system from which copper mineralization was deposited at a deeper level.

International Jaguar Equities Inc. discovered the Charlie Northwest occurrence in 1998. Showings occur over an area of 2.6 square kilometres. In May 1999, a subsidiary NWC Explorations Inc., was formed to hold the property.

BIBLIOGRAPHY

- EM EXPL 1999-33-39
- EM FIELDWORK 1999, pp. 157-172
- EMPR AR 1966-135; 1967-126; 1968-154
- EMPR ASS RPT 3131, 3507, 10330, 10774, 12105, 12106, 25726
- EMPR BULL *81
- EMPR EXPL 1988-C133; 1998-63
- EMPR FIELDWORK *1985, pp. 265-274; *1986, pp. 231-243; *1988, pp. 153-158
- EMPR GEM 1971-329; 1972-314; 1973-267
- EMPR OF 1986-4; 1986-6
- GSC MAP 29-1963
- GSC OF 534; 2207
- GCNL #137(July 17), #162(Aug.24), 1998
- PR REL International Jaguar Equities Inc., Aug.20, 1998; May 25, June 21, 1999
- WWW <http://www.int-jaguar.com>
- Falconbridge File
- Warren, Harry V. (1947): A New Type of Gold Deposit in British Columbia; Transactions of the Royal Society of Canada, Third Series, Section IV, Vol. XLI, Ottawa

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/18

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092O 044**

NATIONAL MINERAL INVENTORY: 092O4 Mo1

NAME(S): **ZEN**, ON, ZENON,
REX

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O04E
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 04 41 N
LONGITUDE: 123 42 17 W
ELEVATION: 2666 Metres

UTM ZONE: 10 (NAD 83)
NORTHING: 5658741
EASTING: 450633

LOCATION ACCURACY: Within 1 KM

COMMENTS: The showing is located 15 kilometres southwest of the southern end of Taseko Lake (Minister of Mines Annual Report 1965).

COMMODITIES: Copper

Molybdenum

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Molybdenite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous	Taylor Creek	Undefined Formation	Coast Plutonic Complex
Cretaceous-Tertiary			

LITHOLOGY: Granodiorite
Volcanic

HOSTROCK COMMENTS: Occurrence is near the eastern margin of the Coast Plutonic Complex. Lower Cretaceous volcanics of the Taylor Creek Group exposed to east.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Zen showing, located about 15 kilometres southwest of the southern end of Taseko lakes is underlain by rocks of the Jurassic to Tertiary Coast Plutonic Complex. The showing occurs near the eastern margin of a granodiorite stock, presumed to be of Late Cretaceous or Early Tertiary age, which has intruded volcanic rocks of the Lower Cretaceous Taylor Creek Group exposed to the east.

Mineralization comprises chalcopyrite, pyrite and molybdenite within porphyry dykes which have intruded the granodiorite.

BIBLIOGRAPHY

EMPR AR *1965-143
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/18

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 045**

NATIONAL MINERAL INVENTORY: 09204 Au1

NAME(S): **PELLAIRE**, HI DO, LORD RIVER,
NO. 5, NO. 3

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 092004E
BC MAP:

Underground

MINING DIVISION: Clinton

LATITUDE: 51 06 01 N
LONGITUDE: 123 36 15 W
ELEVATION: 2242 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5661150
EASTING: 457697

LOCATION ACCURACY: Within 500M

COMMENTS: The 731 adit is located on a ridge between Falls and Lord rivers, 6.5 kilometres south of Upper Taseko Lakes, 4 kilometres north of the summit of Mount McLeod, 106 kilometres north-northwest of Pemberton (Assessment Report 16864).

COMMODITIES: Gold Silver Copper Lead Zinc
Bismuth Antimony

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena Sphalerite Tetrahedrite
Hessite Altaite Bornite Gold Tetradymite
Cosalite Antimony Wehrlite
ASSOCIATED: Quartz Limonite Malachite Carbonate Arsenopyrite
Pyrrhotite Magnetite
ALTERATION: Sericite Silica
ALTERATION TYPE: Sericitic Silicific'n Oxidation
MINERALIZATION AGE: Unknown
ISOTOPIC AGE: Post 104 Ma. DATING METHOD: MATERIAL DATED:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Cylindrical
COMMENTS: Fieldwork 1998, p. 170.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous Taylor Creek Undefined Formation Coast Plutonic Complex
Mesozoic-Cenozoic

LITHOLOGY: Biotite Hornblende Granodiorite
Granodiorite
Volcanic Flow
Volcaniclastic
Siliceous Hornfels

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: PELLAIRE REPORT ON: Y
CATEGORY: Inferred YEAR: 1987
QUANTITY: 36284 Tonnes
COMMODITY GRADE
Silver 78.8000 Grams per tonne
Gold 22.9000 Grams per tonne
COMMENTS: Possible geological reserves.
REFERENCE: Property File - SMF 50/88, Lord River Gold Mines Ltd., June 1, 1988.

ORE ZONE: PELLAIRE REPORT ON: Y
CATEGORY: Indicated YEAR: 1987
QUANTITY: 30841 Tonnes
COMMODITY GRADE
Silver 78.8000 Grams per tonne
Gold 22.9000 Grams per tonne
COMMENTS: Probable geological reserves.
REFERENCE: Property File - SMF 50/88, Lord River Gold Mines Ltd., June 1, 1988.

CAPSULE GEOLOGY

In the Upper Taseko Lakes area, south of the Tchaikazan fault, strata are comprised of intimately interbedded volcanic, volcanoclastic and clastic sedimentary rocks of the Lower Cretaceous Taylor Creek Group. Intrusive rocks of the Jurassic to Tertiary Coast Plutonic Complex truncate the stratified rocks on the south and southwest.

The Pellaire occurrence area covers a contact zone between Coast Plutonic Complex biotite-hornblende granodiorite and volcanic and sedimentary rocks of the Taylor Creek Group. Auriferous quartz veins are primarily within a lobe of granodiorite extending northwards into both flows and pyroclastics that are well altered to a siliceous hornfels. Sedimentary lithologies are similarly hornfelsed but are not as extensive. The quartz veins extend beyond the volcanic/intrusive contact for only a short distance in the volcanics but their associated fault/shear structures extend a considerable distance. A total of eight veins have been discovered. The veins strike east or northeast with 30 to 60 degree dips to the north or northwest towards the volcanic/intrusive contact. On surface, vein widths vary from 0.3 to 7.5 metres and are exposed for up to 225 metres strike length. Drilling has indicated that some veins extend at least 182 metres downdip.

The quartz veins are found along steeply dipping, southeast verging reverse faults that juxtapose rocks of the Taylor Creek Group against the granodiorite. Extreme sericitic alteration of both the Taylor Group and the adjacent granodiorite occurs around the veins and is likely related to vein formation rather than to intrusion. Quartz veins are hosted by granodiorite. Basic dikes cut, and are cut by veins. Grade increases where veins or dikes intersect veins or dikes.

The veins are composed of limonite and occasionally malachite-stained friable quartz with voids of weathered-out sulphides, dominantly pyrite and lesser chalcopyrite. Fault gouge selvages are common as is gouge within the veins. Gouge most often appears to have been granodiorite but occasionally appears to have been quartz. As reported by Warren (1947), the veins carry less than 3 per cent metallic minerals which include in approximate order of abundance, pyrite, chalcopyrite, galena, sphalerite, arsenopyrite, tetrahedrite, hessite, altaite, pyrrhotite, magnetite, bornite, gold, tetradymite, cosalite, antimony and wehrlite. The hessite, which carries the bulk of the precious metal, occurs veining quartz, pyrite and chalcopyrite, and as disseminations in these minerals and in galena, tetradymite and wehrlite. Some of the gold is residual and has been left behind in veins and pockets after hessite.

Associated with each vein is a wide sericite alteration zone. Pervasive sericitization is very strong near veins with a decrease to weak sericite development in feldspars in the outer fringes of the zone. In places wallrocks are intensely silicified and carry pyrite. Carbonate is common in minor quartz veins but weathering has obscured whether it was present in the main veins.

Probable geological reserves are 30,841 tonnes grading 22.9 grams per tonne gold and 78.8 grams per tonne silver; possible geological reserves are 36,284 tonnes with the same grade respectively (Statement of Material Facts 50/88, Lord River Gold Mines Ltd., June 1, 1988).

Past work consisted of several adits and underground development.

In a 1996 bulk sampling program, International Jaguar Equities has delivered a bulk sample to the Trail smelter totalling 858.74 tonnes grading 35.92 grams per tonne gold, 115.07 grams per tonne silver and 87.7 per cent silica (T. Schroeter, personal communication, 1997).

International Jaguar Equities Inc. completed a bulk sampling and exploration program in 1997. The balance of 450 tonnes of the approximately 2000 tonnes of high-grade ore (e.g. 34.2 grams per tonne gold and 102.9 grams per tonne silver) mined during 1996 from two adits and raises on the No. 4 and 5 veins, was scheduled to be delivered to the Trail smelter during November 1997. During the year the company carried out a program of mapping, trenching and sampling on eight of the presently known veins on the property. Gold-silver mineralization occurs in veins along a 400-metre contact between granodiorite of the Coast Plutonic Complex and volcanic rocks of the lower Cretaceous Taylor Creek Group. The No. 3 vein (750 metres long by 3 metres wide) is the main structure; the No. 4 and No. 5 veins are splays off it. The company also completed an engineering report on the 1997 underground operation. A 2500-metre diamond-drilling program is planned for 1998, to establish a reserve base for year round mining. International Jaguar drilled 9 underground and 2 surface holes (600 metres) and conducted geochemistry and prospecting in 1998.

CAPSULE GEOLOGY

Results of 4 bulk samples (5 kilograms each) from No. 3 vein ranged from 40.47 to 386 grams per tonne gold and 184 to 1407 grams per tonne silver (Press Release, International Jaguar Equities Inc., July 8, 1999). About 800 tonnes of high grade ore was mined from the No. 3 vein.

Zelon Chemicals acquired the property in March 2000.

BIBLIOGRAPHY

EM EXPL 1996-D7; 1997-38; 1998-9,63; 1999-33-39; 2000-33-41
EMPR AR 1937-F6-F8; 1938-F67; 1944-A56; 1945-A83,A84; 1946-A95; 1947-A128
EMPR ASS RPT *16864, 25726
EMPR BULL 81
EMPR FIELDWORK 1988, pp. 153-158; 1999, pp. 157-172
EMPR GEM 1973-267
EMPR INF CIRC 1998-1, pp. 17, 22; 1999-1, p. 10
EMPR MAP 65 (1989)
EMPR OF 1992-1
EMPR PF (Statement of Material Facts, June 1, 1988 - Lord River Gold Mines Limited; Claim map (1970); Consolidated Silver Standard Mines Limited Annual Report 1988; Lord River Gold Mines Limited Annual Report 1989 (see 104B 116); Cathedral Gold Corporation Annual Report 1988 (see 103J 017))
EMR MIN BULL MR 223 B.C. 193
EMR MP CORPFILE (Pellaire Mines Limited; Quebec Gold Mining Corporation; Silver Standard Mines Limited)
GSC MAP 29-1963; 2-1972; 1292A
GSC OF 534; 2207
GSC P 67-54
GCNL #183, 1980; #6, 1988; #47(Mar.7), #83(Apr.30), #111(June 10), #142(Jul.24), #152(Aug.8), #171(Sept.5), #183(Sept.23), #207(Oct.28), #225(Nov.24), 1997; #137(July 17), #162(Aug.24), #179(Sept.17), #190(Oct.2), 1998
N MINER May 4, 1998
PR REL International Jaguar Equities Inc. Sept.15, Oct.1, 1998; Apr.20, June 29, July 8, 14, 1999
V STOCKWATCH Jan.11, 1988
Warren, H.V. (1947): A New Type of Gold Deposit in British Columbia; Transactions of the Royal Society of Canada, Third Series; Section IV, Vol. XLI, Ottawa
EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 2003/03/04

CODED BY: GSB
REVISED BY: MPS

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092O 046**

NATIONAL MINERAL INVENTORY: 092O2 Cu1

NAME(S): **POISON MOUNTAIN**, REX, COPPER CREEK,
FENTON CREEK

STATUS: Developed Prospect

MINING DIVISION: Clinton

REGIONS: British Columbia

NTS MAP: 092O02E

UTM ZONE: 10 (NAD 83)

BC MAP:

LATITUDE: 51 08 00 N

LONGITUDE: 122 36 51 W

ELEVATION: 1750 Metres

NORTHING: 5664723

EASTING: 526996

LOCATION ACCURACY: Within 500M

COMMENTS: The central part of the ore zone, on the southwest flank of Poison Mountain, 37 kilometres west of the Big Bar cable ferry on the Fraser River (Canadian Institute of Mining and Metallurgy Special Volume 15).

COMMODITIES: Copper

Gold

Molybdenum

Silver

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Molybdenite Bornite Chalcocite

Covellite

ASSOCIATED: Quartz

ALTERATION: Biotite

Gypsum

Calcite

Pyrite

Magnetite

Hematite

Chlorite

Epidote

ALTERATION TYPE: Biotite

Potassic

Propylitic

MINERALIZATION AGE: Tertiary

ISOTOPIC AGE: 56-59 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite/hornblende

DEPOSIT

CHARACTER: Disseminated

Stockwork

Vein

CLASSIFICATION: Porphyry

Hydrothermal

TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Cretaceous

Paleocene

GROUP

Jackass Mountain

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

ISOTOPIC AGE: 59.3 +/- 2.7 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Hornblende

LITHOLOGY: Biotite Hornfels Sediment/Sedimentary
Biotite Hornblende Plagioclase Porphyry
Granodiorite
Quartz Diorite
Arkosic Sandstone
Conglomerate Sandstone
Shale

HOSTROCK COMMENTS: Equigranular to porphyritic stock intrudes Jackass Mountain Group sediments. Isotopic age date from Fieldwork 1987, p. 120

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Methow

METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Chilcotin Plateau

Overlap Assemblage

RELATIONSHIP:

GRADE: Hornfels

INVENTORY

ORE ZONE: FENTON CREEK

REPORT ON: Y

CATEGORY: Inferred
QUANTITY: 18300000 Tonnes

YEAR: 1995

COMMODITY

Copper

Gold

GRADE

0.3100

0.1280

Per cent

Grams per tonne

REFERENCE: Imperial Metals Corporation, 1995 Annual Report.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 890
REPORT: RGEN0100

BIBLIOGRAPHY

Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/22

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **0920 047**

NATIONAL MINERAL INVENTORY:

NAME(S): **BIG SHEEP MOUNTAIN**

MINING DIVISION: Lillooet

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092002E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 01 48 N
LONGITUDE: 122 39 41 W
ELEVATION: 2438 Metres

NORTHING: 5653216
EASTING: 523745

LOCATION ACCURACY: Within 500M

COMMENTS: Location of tetrahedrite-bearing vein near summit of Big Sheep Mountain (Assessment Report 10925).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Tetrahedrite
ASSOCIATED: Pyrite Quartz Amethyst Pyrrhotite
ALTERATION: Limonite Clay Kaolin Chlorite Wad
ALTERATION TYPE: Argillic Silicific'n Chloritic Oxidation Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Taylor Creek	Lizard	
Permian-Triassic	Bridge River	Undefined Formation	
Cretaceous-Tertiary			Unnamed/Unknown Informal
Paleozoic-Mesozoic			Shulaps Ultramafic Complex

LITHOLOGY: Feldspar Hornblende Porphyry
Feldspar Porphyry
Feldspar Quartz Porphyry Rhyolite
Rhyolitic Tuff
Ignimbrite
Feldspar Porphyritic Diorite
Greenstone
Argillite
Conglomerate
Serpentinite

HOSTROCK COMMENTS: The Big Sheep Mountain prospect is within rhyolite porphyry which cap the main mass of feldspar porphyry and feldspar-hornblende porphyry.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Bridge River

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Big Sheep Mountain gold prospect is at the summit of Big Sheep Mountain within the Shulaps Range. The prospect is hosted by feldspar and quartz-porphyritic rhyolite that forms a 150 metre thick cap to a stock of feldspar porphyry and feldspar-hornblende porphyry. These rocks are thought to be Late Cretaceous to Early Tertiary in age. The stock intrudes sedimentary rocks of the Lizard Formation (part of the Lower Cretaceous Taylor Creek Group), and are bordered by minor greenstone of the Mississippian to Jurassic Bridge River Complex and minor serpentinite of the Permian and older Shulaps Ultramafic Complex.

The host rhyolite porphyry is argillic-altered (with a chalky appearance), fractured, and almost invariably limonite and manganese oxide stained. Pyrite is uncommon, and where present is generally very fine grained and weathered. Locally, the rocks are tuffaceous to breccia-textured, vuggy and traversed by fine-grained quartz veinlets, stockworks and cavities, and rare amethyst veinlets. Altered rhyolite porphyry, with minor quartz veinlets and limonite coating, contains as much as 19.2 grams per tonne gold and 541.9 grams per tonne silver (Assessment Report 9952). These rocks contain no visible sulphide minerals. A rare vein of vuggy crystalline quartz with disseminated to massive tetrahedrite contains 9.5 grams per tonne gold and 11.3 grams per tonne silver (Assessment Report

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 892
REPORT: RGEN0100

CAPSULE GEOLOGY

10925). The nature of the host rocks, alteration and mineral assemblages suggest a high level or epithermal environment of formation.

BIBLIOGRAPHY

EMPR ASS RPT 9254, *9952, *10925
EMPR EXPL 1980-282; 1982-238
EMPR FIELDWORK 1987, pp. 105-123; *1988, pp. 115-130, 145-151
EMPR OF 1988-9; *1989-4
GSC OF 534; 2207
PR REL Royal County Minerals, Jan.17, 2003; Viceroy Resources Corp., Mar.6, 2003
Placer Dome File

DATE CODED: 1990/12/14
DATE REVISED: / /

CODED BY: RGG
REVISED BY:

FIELD CHECK: Y
FIELD CHECK:

MINFILE NUMBER: **0920 048**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRASS TAGS #3**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092003E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 06 24 N
LONGITUDE: 123 04 27 W
ELEVATION: 1920 Metres

NORTHING: 5661689
EASTING: 494808

LOCATION ACCURACY: Within 500M

COMMENTS: Location of DDH 83-6 which intersected gold mineralization.

COMMODITIES: Gold

MINERALS

SIGNIFICANT:	Pyrite	Pyrrhotite	Arsenopyrite	Stibnite	
ASSOCIATED:	Quartz	Chalcedony			
ALTERATION:	Kaolinite	Sericite	Carbonate	Limonite	Pyrite
ALTERATION TYPE:	Pyrrhotite				
	Argillic		Sericitic		
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Irregular
COMMENTS: Gold occurs in quartz-pyrite altered fault breccia.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Jurassic-Cretaceous
Unknown

GROUP

Relay Mountain

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Argillaceous Calcareous Siltstone
Brecciated Siltstone
Porphyritic Latite
Aphanitic Rhyolite

HOSTROCK COMMENTS: Felsic dykes are probably of Eocene age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cadwallader

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1983

COMMODITY

Gold

GRADE

3.0000

Grams per tonne

COMMENTS: Gold mineralization intersected in a fault zone within argillaceous sedimentary rocks.

REFERENCE: Assessment Report 11847.

CAPSULE GEOLOGY

The Brass Tags showing is underlain by mainly sedimentary rocks of the Middle Jurassic to Lower Cretaceous Relay Mountain Group, intruded by a series of porphyritic latite and aphanitic rhyolite dykes. These dykes, which are probably of Eocene age, are northeast trending; their emplacement may be related to a steeply dipping fault recognized in the area.

Gold mineralization occurs within brecciated siltstone related to faulting. Alteration of the siltstone to a kaolinite-sericite-carbonate-pyrite- (pyrrhotite) assemblage is intense in places and is accompanied by a few chalcedonic veins. The felsic dykes are similarly altered but locally contain arsenopyrite.

There is a strong spatial correlation between the felsic dykes and anomalous gold in soil samples. In 1983, a 1.52-metre diamond-drill hole (83-7) interval graded 1.4 gram per tonne gold (Assessment Report 11847). Three metres below this another 1.52-metre intersection, within the fault, graded 3.0 grams per tonne gold.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 894
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 9552, *10257, *11847
EMPR FIELDWORK 1988, p. 135
GSC OF 534; 2207

DATE CODED: 1991/01/10
DATE REVISED: 1991/02/26

CODED BY: GLB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 049**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHITA**, BANNER

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092005E 092004E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 15 00 N
LONGITUDE: 123 32 08 W
ELEVATION: 2164 Metres

NORTHING: 5677763
EASTING: 462623

LOCATION ACCURACY: Within 500M

COMMENTS: The prospect is in the Chita Creek valley.

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Pyrite Molybdenite Bornite
ALTERATION: Calcite Clay Quartz
ALTERATION TYPE: Carbonate Argillic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia Vein Stockwork
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous	Undefined Group	Silverquick	

LITHOLOGY: Polymictic Conglomerate
Sandstone
Argillite
Andesitic Flow
Hornfels
Hornblende Diorite
Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Pacific Ranges

RELATIONSHIP: GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1980

COMMODITY
Copper
Molybdenum

GRADE	Per cent
0.2900	Per cent
0.0100	Per cent

REFERENCE: Assessment Report 8893.

CAPSULE GEOLOGY

The Chita (Banner) porphyry copper-molybdenum occurrence has been explored intermittently since the early 1960's. A prominent red mound overlooking the Chita Creek valley displays intense carbonate and argillic alteration with disseminated pyrrhotite and pyrite. This is hosted in a hornblende diorite and sediments and andesitic flows of the Upper Cretaceous Silverquick Formation. These rocks are extensively fractured and cut by quartz veins that carry minor chalcopyrite, molybdenite, and pyrite. Localized breccia zones and intensely silicified zones host the best chalcopyrite and molybdenite mineralization. The largest breccia zone, approximately 40 metres long and with an undetermined width, is composed of angular fragments of hornfelsed sediments and volcanics in a siliceous matrix; quartz veins cut both the matrix and fragments. Sulphide minerals occur interstitial to the fragments as streaks and large clots, along fracture planes and within the quartz veins. Local intensely silicified zones in the feldspar porphyry also contain copper and molybdenum mineralization. The best assay reported is 0.29 per cent copper, and 0.01 per cent molybdenum (Assessment Report 8893).

In 1998, International Jaguar Equities Inc. conducted an IP survey.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
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PAGE: 896
REPORT: RGEN0100

BIBLIOGRAPHY

EM EXPL 1998-57-64
EM FIELDWORK 1999, pp. 157-172
EM GEOMAP 2002-03
EMPR AR 1962-21; 1968-154
EMPR ASS RPT 473, 551, 1606, *8893, 22251
EMPR BULL 81
EMPR FIELDWORK 1988, pp. 153-158
EMPR GEM 1969-180; 1970-213
GSC MAP 1963-29
GSC OF 534; 2207
PR REL International Jaguar Equities Inc., Jan.20, 1999
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/23

CODED BY: GSB
REVISED BY: GS

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **0920 050**

NATIONAL MINERAL INVENTORY:

NAME(S): **NEWTON**, NEWTON HILL, SKI,
TI, SCUM LAKE

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092013E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 48 11 N
LONGITUDE: 123 38 07 W
ELEVATION: 1310 Metres

NORTHING: 5739325
EASTING: 456197

LOCATION ACCURACY: Within 500M
COMMENTS: Location is site of drill hole 72-6 (Assessment Report 11001).

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Molybdenite
ASSOCIATED: Quartz Magnetite
ALTERATION: Sericite Clay Chlorite Calcite
ALTERATION TYPE: Sericitic Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous Eocene	Kingsvale	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Andesitic Tuff
Altered Volcanic
Altered Sediment/Sedimentary
Biotite Hornblende Granodiorite
Quartz Diorite
Biotite Diorite
Porphyritic Granodiorite

HOSTROCK COMMENTS: Volcanic rocks of the Kingsvale Group are intruded by granodiorite and quartz diorite of Eocene age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine
PHYSIOGRAPHIC AREA: Chilcotin Plateau
Overlap Assemblage

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1972
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Silver 13.1000 Grams per tonne
Gold 2.8000 Grams per tonne
Copper 0.4900 Per cent

COMMENTS: Drill hole intersection of 3.05 metres.
REFERENCE: Assessment Report 11001.

CAPSULE GEOLOGY

The Newton showing, also known as Scum lake, occurs within the Intermontane belt close to the eastern margin of the Jurassic to Tertiary Coast Plutonic Complex. Intrusive rocks underlying the property are probably related to this complex. The area is underlain by volcanic rocks of the Upper Cretaceous Kingsvale Group (or its equivalent), comprising a succession of andesitic tuffs, intruded by granodiorite, diorite and quartz diorite of Eocene age. Chalcopyrite with minor amounts of molybdenite and anomalous gold and up to 10 per cent pyrite occurs as disseminations and in quartz veinlets within altered sedimentary rocks, and to some extent, with porphyritic granodiorite. Alteration envelopes associated with the quartz veinlets consist of sericite, clay and silica while minor amounts of calcite occurs along fractures.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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CAPSULE GEOLOGY

The best gold-copper intersection, 2.8 grams per tonne gold, 13.1 grams per tonne silver and 0.49 per cent copper over 3.05 metres, was obtained from within altered volcanic (sedimentary?) rocks between intervals of porphyritic granodiorite (Assessment Report 11001).

BIBLIOGRAPHY

EM EXPL 1998-57-64
EMPR ASS RPT *11001, 18081, 19170, 20585
GSC OF 534; 2207
GCNL #138,#198,#216 1991; #69(Apr.7),#76(Apr.16), 1992
N MINER Mar. 16, Apr. 27, 1992

DATE CODED: 1991/01/11
DATE REVISED: 1991/10/23

CODED BY: GLB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 051**

NATIONAL MINERAL INVENTORY:

NAME(S): **WATSON BAR, SECOND, ULCER,
ZONE V, SECOND CREEK, ZONE I**

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 092001E
BC MAP:
LATITUDE: 51 03 23 N
LONGITUDE: 122 03 45 W
ELEVATION: 1220 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: The location is for Zone V, about 750 metres west of Second Creek
(Assessment Report 19777, Map 3B).

MINING DIVISION: Clinton
UTM ZONE: 10 (NAD 83)
NORTHING: 5656514
EASTING: 565704

COMMODITIES: Gold Copper Lead Zinc Mercury
 Antimony

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite Gold Galena Chalcopyrite
 Sphalerite Cinnabar Realgar Stibnite
ASSOCIATED: Quartz Chalcedony Carbonate Barite
ALTERATION: Silica Carbonate Kaolinite Malachite Scorodite
ALTERATION TYPE: Carbonate Silicific'n Argillic
MINERALIZATION AGE: Unknown Propylitic Oxidation

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation
DIMENSION: 80 x 3 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous Jackass Mountain Undefined Formation

LITHOLOGY: Arkose
Greywacke
Siltstone
Granodiorite
Hornblende Diorite
Feldspar Porphyry
Quartz Porphyry

HOSTROCK COMMENTS: Sedimentary rocks of the Jackass Mountain Group are in fault contact to the east with Eocene volcanic rocks.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Pavilion Ranges
TERRANE: Methow Overlap Assemblage

INVENTORY

ORE ZONE: ZONE V REPORT ON: Y
CATEGORY: Indicated YEAR: 1997
QUANTITY: 282187 Tonnes
COMMODITY GRADE
Gold 8.1300 Grams per tonne
COMMENTS: Geologic reserve estimate for Zone V using a 1.7 grams per tonne gold cutoff grade. Also reported as 136,963 tonnes grading 14.33 grams per tonne gold (Exploration in BC 1998, page 63).
REFERENCE: Information Circular 1998-1, page 27.

ORE ZONE: DRILLHOLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1997
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Gold 7.7000 Grams per tonne
COMMENTS: Drillhole 97-03 intersected Zone V at a depth of 243 metres. Sample width of 4.66 metres.
REFERENCE: George Cross News Letter No.76 (April 21), 1997.

CAPSULE GEOLOGY

The Watson Bar prospect is located in the Camelsfoot Range, just

CAPSULE GEOLOGY

west of the Fraser fault. A north-northwest trending splay of the Fraser fault system transects the property bringing Lower Cretaceous Jackass Mountain Group arkose, greywacke and minor siltstone, on the west, into contact with Eocene volcanic rocks, on the east. Sedimentary rocks are intruded by a granodiorite stock and feldspar porphyry dikes of Late Cretaceous to Early Tertiary age. A "quartz eye" porphyry dike may be considerably younger.

Six zones of intense silicification have been identified on the property. In two instances, silicic zones are parallel to the greywacke-intrusive contacts. Quartz-carbonate-(barite) veins are drusy, banded and commonly chalcedonic and trend both northwest and northeast. Pyrite typically occurs as disseminations in the wallrock while chalcopryrite, stibnite and galena are restricted to quartz veins and fractures. Sphalerite, arsenopyrite, cinnabar, realgar, native gold and scorodite also occur.

Later work (Fieldwork 1997, 21-1-14) has suggested at least five different mineralization styles:

1. Widespread (500+ by 1000+ metres) reddish brown weathering zones marked by iron carbonate alteration with local development of chalcedony, sericite and clay alteration and anomalous arsenic, antimony, mercury and gold.
2. Thrust hosted quartz sulphide mineralization with tectoclasts of mineralized and unmineralized wall rock and veins incorporated in carbonaceous gouge matrix.
3. Intrusion hosted gold bearing quartz sulphide veins cut porphyry sills and adjacent sandstone.
4. Narrow, high angle, gold bearing pyrite and arsenopyrite quartz veins with sharp boundaries.
5. Weakly to moderately auriferous zones in hosting sandstone beds.

During an initial drilling programme, drillhole 89-1 intersected five metres grading 19.89 grams per tonne gold (Assessment Report 1977). This hole was drilled to evaluate the downdip extension of a surficial zone exposed by trenching that graded 6.17 grams per tonne over 40 metres.

A 90-tonne shipment with an average grade of 39.74 grams per tonne gold (bulk sample) from Zone V was processed at the Premier mill (104B 054) in 1993-94.

Logging in 1995-96, in an area east of Second Creek, has exposed a large area of pyritization and quartz veining with arsenopyrite, realgar and stibnite (T. Schroeter, personal communication, 1996).

In 1996, Stirrup Creek Gold Ltd. conducted further trenching and diamond drilling (14 holes totalling 1650.3 metres) on Zone V.

Drillhole 97-03 from diamond drilling in 1997 intersected Zone V at 243 metres depth. Assay results across 4.66 metres yielded 7.7 grams per tonne gold (George Cross News Letter No.76 (April 21), 1997).

Stirrup Creek Gold Ltd. announced a geologic reserve estimate for Zone V of 282,187 tonnes grading 8.13 grams per tonne gold at a 1.7 grams per tonne gold cutoff (Information Circular 1998-1, page 27). Drilling in 1997 has traced mineralization in Zone V 400 metres downdip; the zone has a strike length of 80 metres and a width of 3 metres. Geological reserves are also reported as 136,962 tonnes grading 14.33 grams per tonne gold (Exploration in BC 1998, page 63).

Stirrup drilled 12 holes, totalling 2119 metres in 1998.

See also 0920 092, 0920 055, 0920 054 and 0920 060.

BIBLIOGRAPHY

- EM FIELDWORK 1997, 21-1-14
EMPR ASS RPT 16666, *17473, *19777
EMPR EXPL 1988-C131; 1989-51; 1996-D5; 1997-39; 1998-63
EMPR INF CIRC 1997-1, p. 29; 1998-1, p. 27
EMPR OF 1989-29
EMPR PF (Press Release from 1997 Cordilleran Roundup; Drill sections, geochemistry and geology maps, 1997; Stirrup Creek Gold Limited Website (Mar. 1999): Watson Bay Property, 2 p.)
GSC OF 534; 2207
GCNL #57(Mar.21), #64(Apr.3), #76(Apr.21), #88(May 7), #101(May 27), #151(Aug.7), #197(Oct.14), 1997; #120(June 23), #140(July 22), #157(Aug.17), #191(Oct.5), #219(Nov.16), 1998
N MINER May 4, 1998
PR REL Stirrup Creek Gold Ltd., Oct.8, 1997; Oct.1, 1998
WWW <http://www.verdstonegroup.com/stirrup/>; <http://www.infomine.com/>

DATE CODED: 1991/01/21
DATE REVISED: 1997/05/07

CODED BY: CID
REVISED BY: TGS

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **0920 052**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIDAS 4**, MIDAS

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092008W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 21 11 N
LONGITUDE: 122 28 38 W
ELEVATION: 1920 Metres

NORTHING: 5689217
EASTING: 536404

LOCATION ACCURACY: Within 500M

COMMENTS: Trench 89-1 and 89-2 area, from which gold enriched samples 46255 and 46256 came from, respectively (Assessment Report 20238).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Gold
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Andesite
Dacite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

INVENTORY

ORE ZONE: TRENCH

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1989

COMMODITY	GRADE	
Silver	5.6600	Grams per tonne
Gold	3.4300	Grams per tonne

COMMENTS: From a 1-metre chip sample.
REFERENCE: Assessment Report 20238.

CAPSULE GEOLOGY

The Midas showing is underlain by andesite and dacite belonging to an unnamed Eocene volcanic sequence. Opaline quartz veinlets and coarse crystalline quartz veining are reported on the property. Trenching has revealed a gold-bearing structure (unspecified) that assayed 3.43 grams per tonne gold and 5.66 grams per tonne silver over 1 metre (Assessment Report 20238, page 17). Refer to the nearby Blackdome property (0920 053) for further details of area geology.

BIBLIOGRAPHY

EMPR ASS RPT 18483, 18835, *20238
GSC OF 534; 2207

DATE CODED: 1991/10/04
DATE REVISED: / /

CODED BY: GJP
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

ORE ZONE: BLACKDOME

REPORT ON: Y

CATEGORY:	Combined	YEAR:	1998
QUANTITY:	237881 Tonnes		
COMMODITY		GRADE	
Silver		37.1000	Grams per tonne
Gold		13.1000	Grams per tonne

COMMENTS: Total, fully diluted resource, including drill-indicated resources and 128627 tonnes grading 14.0 grams gold (Claimstaker Resources Ltd., May 27, 1998). Proven and probable reserves.

REFERENCE: Exploration in BC 1998, page 60.

CAPSULE GEOLOGY

The Blackdome property is underlain by a sequence of Early-Middle Tertiary volcanic rocks and associated volcanoclastic sediments cut by small intermediate to mafic dykes. Age dates obtained on the volcanic sequence range between 51.5 Ma from dacite to 24 Ma from plateau basalt (Exploration in British Columbia 1986). The rocks strike north-northeast with shallow, 10-20 degree dips to the southeast. Tension fractures are the locus of epithermal precious metal-bearing veins. These fractures have apparently been produced by doming. Minor normal faulting effects dislocations of some units and preserves some of the erosional remnants from younger rocks.

Miocene, fine-grained, porphyritic, dark brown to black basalt flows cap Black Dome Mountain and are the youngest rocks. Basaltic feeder dykes are present across the property. Underlying the basalt is a uniform, 150-metre thick sequence of porphyritic andesite flows. When unaltered, they are green-grey in colour with white plagioclase phenocrysts. Again, numerous feeder dykes for the andesite have been identified on the property. A thin, irregular and discontinuous clastic unit underlies the porphyritic andesite. The clastic unit varies from volcanoclastic sandstone to coarse agglomerate with mafic bombs up to 40 centimetres long. This unit can be 30 metres thick but mostly occurs as small, local erosional remnants. To the south, a chaotic "rhyolite" unit underlies the porphyritic andesite. This unit is actually a mixture of rhyolitic flows, tuffs and breccias as well as local lenses of volcanic wacke and ash beds. The unit is 60 metres thick and thickens to the south. Underlying the "rhyolite" and beneath the clastic horizon at the base of the andesite unit north and northeast of the "rhyolite", are a series of porphyritic dacite flows. They are typically fine-grained, dense, reddish brown to green-grey with 20 per cent white feldspar phenocrysts. This unit is up to 75 metres thick. Andesitic flows with propylitic alteration, tuffs and agglomerate underlie the dacite unit. These andesites are light to dark green with various amounts of chlorite and frequent stringers of epidote and calcite. This is the oldest unit on the property and may be over 180 metres thick.

The metamorphic facies of the volcanics is predominantly zeolite facies with possible lower greenschist facies implications.

Mineralized quartz veins have been found over an area measuring 4500 by 1500 metres at the Blackdome property and are part of an intense fracture system within the Tertiary volcanics. Two persistent vein systems, the No. 1 and No. 2, parallel the southwest spur of Black Dome Mountain and coalesce to the south. It is within the No. 1 and 2 vein systems that most of the production and reserves have been documented. A total of twelve quartz veins have been identified. Some vein names are Giant, Red Bird, No. 17, No. 18, Skiber, Ridge, Dawson and Watson. Veins have been traced over a strike length in excess of 2500 metres with widths averaging 1.5 to 2 metres.

The quartz vein systems are hosted by andesites and rhyolitic rocks which exhibit pervasive potassium metasomatism and propylitic alteration, with the development of a replacement association of epidote (variety pistacite) -chlorite-carbonate-adularia. The propylitic alteration appears to be a broader scale feature and is not limited to those areas invaded by metalliferous veins. The rocks of the rhyolitic unit also frequently exhibit strong, localized argillic alteration represented by montmorillonite and illite. The argillic alteration is not confined to the spatial extent of the ore zones. The ore veins are characterized by a distinct alteration halo which can extend 1-15 metres beyond the veins. The alteration is characterized by noticeable bleaching of the propylitized host volcanics and by the development of a replacive assemblage of quartz-adularia-sericite, including illite/smectite-montmorillonite-kaolinite, minor carbonate and minor chlorite.

The No. 1 vein system appears to have been formed by the infilling of dilatant tensional fractures by quartz, adularia, carbonate, sulphides and numerous other hydrothermal minerals. The infilling of these tensional fractures took place in three separate

CAPSULE GEOLOGY

stages, namely: the pre-ore stage, the ore stage, and the post-ore stage. The pre-ore stage signature is typified by quartz and sulphide minerals deposited on the vein walls. The ore stage is dominated by the deposition of quartz, adularia, and numerous other minor silicate phases, along with sulphide and precious metal minerals. During the post-ore stage, quartz, carbonate, zeolites and other hydrothermal minerals dominated as fracture-infillings, overgrowths and minor open-space fillings. The vein mineralogy may be broken down into four major categories - gangue minerals; gold-bearing minerals, including native gold; silver-bearing minerals, including native silver; and non-precious metal minerals.

Quartz is the most abundant and dominant gangue mineral in all stages of the Blackdome veins. In the pre-ore stage, quartz appears as massive crystalline quartz, lining veinlets and vein walls. It also occurs as euhedral, cockscomb quartz with clear to milky crystals up to a maximum of 10 centimetres length. Crustifications due to impurities and sulphides, are noted along the vein walls. Quartz deposited during the ore stage is predominantly a mosaic of massive milky and grey material commonly intergrown with adularia and minor carbonate and sulphides but may also be of euhedral form. The post-ore stage quartz appears as overgrowths and as vein infillings. Adularia is a major gangue phase of the ore and post-ore stages. In the ore stage, adularia is almost as common as quartz in some sections. It occurs as anhedral mosaics intergrown with quartz, as replacement textures in altered host and primarily as micro-veinlets within brecciated fragments in the fault zone. In the post-ore stage, adularia is much less abundant than in the ore-stage, and occurs as fracture infillings. Carbonate (identified as calcite) is a minor component in the ore stage. It occurs primarily as anhedral mosaics intergrown with the quartz and adularia. In the post-ore stage, calcite occurs as a major component and appears as anhedral mosaics intergrown with quartz and adularia. The clay minerals observed within the ore zone vary from being major to minor components of the vein-fill material. Pre-ore stage clay material consists of montmorillonite, mixed-layer illite/smectite and minor kaolinite. The ore stage is dominated by abundant illite, lesser amounts of mixed-layer illite/smectite and minor kaolinite. The post-ore stage clay minerals are dominated by illite. Chlorite occurs as trace amounts as a vein-fill material.

Ore mineralogy comprises native gold, electrum, acanthite, acanthite-aguilarite, native silver and silver sulphosalts. Native gold occurs as minute, isolated grains of different sizes in tiny veinlets of pyrite and primarily within acanthite-aguilarite grains. Gold also occurs as free gold in vugs and appears to be closely associated with illite and illite-smectite mixed-layer clays. Electrum (25 per cent or greater silver) is more common than native gold. It occurs within quartz, between quartz and adularia grains, within tiny veinlets cutting pyrite and chalcopyrite, as well as within the acanthite-aguilarite grains and masses. It is common to see electrum replacing silver sulphosalts and silver minerals. Acanthite may be the most important silver mineral along with minerals of the acanthite-aguilarite series. It commonly occurs as abundant fine-grained disseminations in the veins and veinlets of quartz-adularia-carbonate and clay minerals. It also occurs as inclusions in pyrite, associated with chalcopyrite, galena and sphalerite. The acanthite can contain up to 4.7 per cent selenium before it is referred to as acanthite-aguilarite. The acanthite-aguilarite series has the same appearance as acanthite and is the second most abundant silver mineral. It also occurs as fine-grained disseminated material. Native silver is interpreted to be present in acanthite and acanthite-aguilarite grains containing very high silver (up to 88 per cent). Microprobe analyses strongly suggest that native silver may be a mineral phase intergrown with the acanthite-aguilarite composition. Microprobe analyses has also determined that a greenish-grey material, included within inclusions of chalcopyrite and galena in pyrite, is a sulphosalt mineral such as tennantite-tetrahedrite, polybasite or stephanite.

Sulphide minerals within the vein systems includes pyrite, chalcopyrite, galena, sphalerite, marcasite, pyrrhotite, arsenopyrite, bornite, digenite, covellite and pyrolusite. The most abundant sulphide mineral in the No. 1 vein system is pyrite. It occurs primarily as minute disseminated cubes up to 1 millimetre across, intergrown with pre-ore stage quartz and as disseminated grains and veinlets, or is contained in masses associated with ore-stage quartz. In post-ore stage material, pyrite is generally disseminated and often shows alteration to goethite and limonite. The second most abundant sulphide is chalcopyrite and commonly occurs as anhedral grains and aggregates. It apparently is an exsolution phase in inclusions within pyrite. The chalcopyrite is commonly

CAPSULE GEOLOGY

associated with the silver sulphide minerals in the pyrite. Galena occurs as trace amounts in the veins and commonly occurs with chalcopyrite, sphalerite and silver sulphides as exsolution(?) phases within inclusions of pyrite. Sphalerite occurs in lower concentrations than galena and are found as inclusions, exsolution phases within pyrite, and associated with chalcopyrite, galena and silver sulphides. Marcasite occurs in trace amounts along with pyrrotite and arsenopyrite. Bornite, digenite and covellite also occur, but in very minor amounts. Pyrolusite occurs as fine-grained anhedral crystals associated with Fe-hydroxides and clay minerals within the vein zone.

Three idealized stages of vein formation have been outlined by mineralogy and morphology. The pre-ore stage involved initial fracturing, cataclasis and brecciation of the volcanic host rocks. Deposition of pre-ore material was slow in that the fault system was inactive for an extended period of time and the crystals grew relatively undisturbed into dilatant fractures. Potassium metasomatism is also a primary feature of the pre-ore stage. Mineralogy associated with pre-ore stage comprises quartz and adularia along with minor calcite, pyrite, clay minerals and possibly acanthite. The ore stage was characterized by the continuation of open-space filling of the vein zone by quartz, adularia, increased calcite and pyrite, along with the silver sulphosalts, acanthite, acanthite-aguilarite, electrum, gold and minor base metals. The clay minerals illite/smectite, illite and kaolinite were prominent during the ore stage as was the brecciation of host fragments, within the vein, and pre-ore breccias. The post-ore stage was dominated by the open-space filling of quartz with minor calcite and adularia. Minor copper, gold and silver mineralization occurred during the post-ore event along with the deposition of pyrite/marcasite. The post-ore clay minerals, illite and chlorite are a very minor component. It appears that all depositional stages were probably initiated by a period of volcanism but the pre-ore and ore stages most likely represent one long depositional sequence. The post-ore stage was likely deposited at a later time, after some hiatus (Vivian 1988).

The Eocene deposits of the Blackdome epithermal field were generated when Tertiary meteoric groundwaters penetrated tensional fracture systems in a cooling, calc-alkalic, emergent island-arc environment. This resultant geothermal field was most likely underlain by a recirculating plume of brine which encountered meteoric waters at paleodepths of 0.5-1.1 kilometres. The precipitation of a wide range of elements leached by the hydrothermal fluids occurred deep within the cooling volcanic edifice. This precipitation was accompanied by extreme local phyllosilicate plus potassium metasomatism and silicification of the walls of the geothermal reservoir. The metalliferous phases were most likely precipitated during episodic boiling of the fluids. The Blackdome deposits belong to the adularia-sericite-type group of volcanic-hosted epithermal precious metal deposits (Vivian, 1988).

Exploration and development of a new vein, named the No. 18, has resulted in inferred reserves of 28,120 tonnes grading 24.68 grams per tonne gold. Of the inferred reserves are measured geological reserves (proven) of 8662 tonnes grading 26.05 grams per tonne gold and 157.68 grams per tonne silver, and indicated reserves of 6485 tonnes grading 26.73 grams per tonne gold and 164.54 grams per tonne silver, all based on a 1.8 metre mining width. Indicated reserves of 62,590 tonnes grading 16.79 grams per tonne gold and 74.04 grams per tonne silver were reported for the rest of the mine in 1989 (Northern Miner, June 18, 1990).

Since the start of production in April 1986, until the end of July 1990, the underground mine had processed a total of 305,614 tonnes of ore which yielded 6303 kilograms of gold and 19,518 kilograms of silver (Northern Miner, August 20, 1990). Mining operations ceased in November 1990 and the last ore was milled in January 1991. In 1990, Blackdome Mining Corp. was the operator of the mine.

Prior to 1994, an independent study indicated a possible 70,800 tonnes grading 14.1 grams per tonne gold (Information Circular 1996-1, page 19).

In 1996, Claimstaker Resources Ltd. and partner Petro Plus Ltd. conducted a program of trenching, drilling and underground drifting and raising in search of new reserves on veins identified in previous work. Encouraging results have been reported. A recent study by the company has outlined a resource of 159,600 tonnes grading 16.11 grams per tonne gold and 37.0 grams per tonne silver (Information Circular 1997-1, page 22).

As of May 1, 1997 ore reserves stood at 155,933 tonnes grading 14.8 grams per tonne gold and 37 grams per tonne silver (T. Schroeter, personal communication, 1997).

CAPSULE GEOLOGY

A recent mineral inventory study has increased the fully diluted resources to 209,077 tonnes of 14.9 grams per tonne gold and 42.3 grams per tonne silver. Of this resource, a reserve of 177,000 tonnes at 17.6 grams per tonne gold and 49.8 grams per tonne silver is mineable from existing workings (GCNL #244, (Dec.19), 1997).

Claimstaker Resources reopened the mine on October 10, 1998. Reserves at startup were stated as 128,627 tonnes grading 14.0 grams per tonne gold in the proven and probable categories. The total, fully diluted resource, including drill-indicated resources, is 237,881 tonnes grading 13.1 grams per tonne gold and 37.1 grams per tonne silver (Exploration in BC 1998, page 60 (Claimstaker Resources Ltd., May 27, 1998)).

Claimstaker holds 65 per cent and Jipangu Inc. of Tokyo holds 35 per cent of the mine. The mine shut down May 14, 1999.

In early 1999, Claimstaker drilled 7 holes totalling 1060 metres targeting the No. 11 vein. Claimstaker changed its name to J-Pacific Gold Inc. in September 2001.

The Blackdome property is held 100 per cent by No 75 Corporate Ventures Ltd., owned equally by J-Pacific Gold Inc. (50%) and Jipangu Inc. (50%). In 1999 drill inferred resources were 124,120 tonnes averaging 12.8 grams of gold per tonne and 33.7 grams of silver per tonne (J-Pacific Gold Inc. website, March 2002).

BIBLIOGRAPHY

- EM EXPL 1999-33-39
EMPR AR 1948-A92-A95; 1949-A103; 1953-A97; 1954-A98-A100; 1955-31; 1960-20
EMPR ASS RPT 4549, 6692, 7161, 7512, 7910, 8346, 8990, 11046, *14301, 20755
EMPR ENG INSP Annual Report 1989, 1990
EMPR EXPL 1978-E185; 1979-196; *1986-B40-B49; 1996-D5; 1997-34; 1998-11,60
EMPR FIELDWORK 1979, pp. 52-54; 1981, pp. 106-108; 1985, pp. 107-109; *1986, pp. 17,18
EMPR GEM 1973-268; 1974-222,223
EMPR INF CIRC 1996-1, p. 19; 1997-1, p. 22; 1999-1, p. 11; 2000-1, p. 7
EMPR MAP 65 (1989)
EMPR MINING 1981-1985; 1986-1987; 1988
EMPR OF 1989-27; 1992-1
EMPR P 1991-4, pp. 202,203
EMPR PF (Schroeter, T. (1989): Abstract; MinVen Gold Corporation Annual Report 1988; Field visit notes, 1986; Property visit notes in Memorandum from E.L. Faulkner, 1986; Claimstaker Resources Ltd. Website (Feb. 1999): Blackdome, 2 p.; Price, B.J., and Ross Glanville & Associates Ltd., Geological Summary Report on Blackdome Gold-Silver Property, April 25, 2001, 75 pp.)
EMR MP CORPFILE (Silver Standard Mines Limited; Barrier Reef Resources Ltd; Blackdome Exploration Ltd.)
GSC BULL 540, p. 61
GSC MAP 29-1963; 2-1972; 1292A
GSC OF 534; 2207
GSC P 67-54
CIM Vol.79, No.891 (1986)
GCNL #227,#250,#137,#149,#168,#195,#134,#162,#189, 1979; #153,#177, #193,#209,#248, 1980; #153,#150,#203,#229,#29,#76,#101,#132,#177, 1981; #54,#21, 1982; #176,#152,#153,#55,#218, 1983; #99,#156,#153, #120,#125,#221,#183, 1984; #42,#89,#71, 1985; #69,#31,#93,#96,#101, #147,#142,#211,#210, 1986; #180,#81,#37, 1987; #3(Jan.5), #8(Jan.12),#146,#88,#89(May 9),#56(Mar.21), 1989; #106(Jun.1), #91(May 10),#82(Apr.27), 1990; #92(May 13), #161(Aug.21), #174(Sept.10), #244(Dec.19), 1997; #93(May 14), #102(May 28), 1998; #30(Feb.12), #55(Mar.19), 1999
MIN REV July/August 1983
N MINER Mar.5, Apr.2, June 4, Aug.13, Oct.1,29, Dec.10, 1981; July 8, Dec.16, 1982; Mar.24, Apr.14, May 3, Aug.16, Sept.22,27, Nov.24, 1984; Mar.7, May 2, July 11, Nov.4, Dec.23, 1985; Jan.27, Apr.21, June 9, July 16, Aug.4,18, Nov.10, 1986; Mar.16,30, Apr.27, May 4, Sept.28, 1987; May 15, July 31, 1989; Apr.27, May 7, June 18, Aug. 20, 1990; July 3, 1995; July 1, 1996; July 21, 1997
PR REL Claimstaker Resources Ltd., May 27, July 3, Sept.15, Oct.15, 1998; Mar.18, May 5, 1999
V STOCKWATCH Apr.16,29, Sept.17, 1987
WWW <http://www.jpgold.com>;
http://www.infomine.com/index/properties/BLACKDOME_MINE.html
Placer Dome File
Vancouver Sun, Sept.29, 1998
*Vivian, G.J. (1988): The Geology of the Blackdome Epithermal Deposit, B.C., M.Sc. Thesis, The University of Alberta

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RUN TIME: 11:19:00

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BIBLIOGRAPHY

EMPR OF 1998-10

DATE CODED: 1985/07/24
DATE REVISED: 1998/12/04

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **0920 054**

NATIONAL MINERAL INVENTORY:

NAME(S): **ASTONISHER, CONFIDENCE, MONTY,
CHISHOLM, BUSTER, STIRRUP CREEK,
SUNBEAM**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092001E

UTM ZONE: 10 (NAD 83)

BC MAP:
LATITUDE: 51 07 30 N
LONGITUDE: 122 13 05 W
ELEVATION: 2000 Metres

NORTHING: 5664016
EASTING: 554721

LOCATION ACCURACY: Within 500M

COMMENTS: Location is the approximate centre of the Astonisher Crown Grant.

COMMODITIES: Gold

MINERALS

SIGNIFICANT:	Stibnite	Realgar	Chalcopyrite	Pyrite	Arsenopyrite		
	Gold	Mercury					
ALTERATION:	Quartz	Carbonate	Limonite	Sericite			
ALTERATION TYPE:	Silicific'n		Sericitic	Argillic		Carbonate	Oxidation
MINERALIZATION AGE:	Unknown						

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation
SHAPE: Bladed

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Lower Cretaceous
Cretaceous-Tertiary

GROUP

Jackass Mountain

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Argillaceous Siltstone
Pebble Conglomerate
Shale
Feldspar Porphyry
Quartz Porphyry
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Gold

15.0000

Grams per tonne

COMMENTS: Diamond-Drill hole 88-5: 1.1 metres grading about 15 grams per tonne gold.

REFERENCE: Assessment Report 18352.

CAPSULE GEOLOGY

Marine sedimentary rocks of the Lower Cretaceous Jackass Mountain Group have been intruded by sills and dykes of feldspar porphyry and quartz porphyry (Tertiary to Cretaceous in age). The Jackass Mountain Group consists of conglomerate, siltstone and sandstone generally trending to the north or northeast and dipping to the west. The sandstone locally contains disseminated pyrite.

A number of epithermal veins occur in this area which has seen a long history of prospecting. However, because the mineralization is almost certainly deposited from one hydrothermal system, related probably to the intrusion of felsic dykes in the area, the mineral occurrences are grouped under the one MINFILE number.

Gold-bearing, vuggy, limonitic chalcedonic quartz veins and narrow limonitic fracture zones cut the sedimentary and intrusive rocks; in places these veins appear to be stratiform. The veins and fracture zones contain gold, stibnite, arsenopyrite, minor pyrite and anomalous mercury. A positive correlation exists between arsenic and

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CAPSULE GEOLOGY

gold in these veins. At the Chisholm showing, stibnite occurs along the margins of a quartz-feldspar porphyry dyke. Wallrock alteration varies from weakly to strongly sericitic (or argillic) while silicification along fault and fracture zone accompanies the sulphide and gold mineralization.

BIBLIOGRAPHY

EMPR AR 1926-190; 1930-198; 1933-192
EMPR ASS RPT 4743, 16303, 17336, 17811, *18352
EMPR PF (Prospectus, June 1988)
W. MINER, Oct. 1973, pp 124-134; June 1979, pp. 9-14
GSC 534; 2207
Chevron File

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/18

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 055**

NATIONAL MINERAL INVENTORY: 09201 Sb1

NAME(S): **BUSTER**, TRIMBLE

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092001E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 25 N
LONGITUDE: 122 14 05 W
ELEVATION: 1500 Metres

NORTHING: 5663850
EASTING: 553556

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location is on ridge between headwaters of Stirrup and Ward creeks.

COMMODITIES: Antimony Silver

MINERALS

SIGNIFICANT: Stibnite
ALTERATION: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
SHAPE: Bladed

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous	Jackass Mountain	Unnamed/Unknown Formation	

LITHOLOGY: Siltstone
Pebble Conglomerate
Quartz Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Buster showing occurs within siltstone and pebble conglomerate of the Lower Cretaceous Jackass Mountain Group on a ridge between the headwaters of Stirrup and Ward creeks. Host rock to the veins is fractured and broken suggesting faulting in the area. The veins have been exposed by trenching and comprise zones of quartz cemented breccia in which stibnite occurs as masses of considerable size, as irregular stringers and as coarse to fine needles and irregular grains.

BIBLIOGRAPHY

EMPR AR 1925-179; 1926-190; 1933-193
EMPR BULL 44
EMR MP CORPFILE *(Airnorth Mines Ltd.)
CANMET IR #728
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/23

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 056**

NATIONAL MINERAL INVENTORY:

NAME(S): **EVA, AVE, THULE**

MINING DIVISION: Lillooet

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092002W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 02 55 N
LONGITUDE: 122 55 35 W
ELEVATION: 1448 Metres

NORTHING: 5655233
EASTING: 505160

LOCATION ACCURACY: Within 500M

COMMENTS: Location of 1988 diamond drilling.

COMMODITIES: Gold Antimony Copper Bismuth

MINERALS

SIGNIFICANT: Stibnite Arsenopyrite Bismuthinite Chalcopyrite Pyrite
ASSOCIATED: Calcite Quartz Hematite
ALTERATION: Calcite Diopside Epidote Quartz Chlorite
Vesuvianite Pyrite Hematite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Hydrothermal Skarn
TYPE: H05 Epithermal Au-Ag: low sulphidation
DIMENSION:

STRIKE/DIP: 320/50E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Tyaughton	Unnamed/Unknown Formation	Coast Plutonic Complex
Mesozoic-Cenozoic			

LITHOLOGY: Conglomerate
Calcareous Siltstone
Tuffaceous Siltstone
Sandstone
Feldspar Porphyry
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Cadwallader
COMMENTS: Located near the eastern margin of the Coast Plutonic Complex.

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Chip
COMMODITY: Gold GRADE: 6.5100 Grams per tonne
COMMENTS: Surface vein sample over 0.23 metre.
REFERENCE: Assessment Report 18056.

CAPSULE GEOLOGY

The region in which the Eva prospect occurs is underlain by mainly sedimentary rocks of the Upper Triassic Tyaughton Group, intruded by felsic rocks of the Jurassic to Tertiary Coast Plutonic Complex.

The Eva showing itself occurs within a sequence of polymictic conglomerate, sandstone and siltstone cut by a swarm of feldspar porphyry dykes. The sedimentary rocks contain patchy skarn alteration consisting of the mineral assemblage calcite-diopside-epidote-quartz-chlorite-vesuvianite-pyrite-hematite associated with abundant calcite veinlets. The pyrite forms ubiquitous stringers, blebs and disseminations. The relationship between skarn alteration and gold-sulphide mineralization is unclear.

The main vein comprises calcite, quartz, pyrite, bismuthinite, stibnite, arsenopyrite, specular hematite and minor chalcopyrite, with the stibnite occurring as disseminations and massive bands. Outcrop of the vein contains up to 6.51 grams per tonne over 0.23 metre (Assessment Report 18056).

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CAPSULE GEOLOGY

One hundred and twenty metres to the northwest of the main vein, a 1986 drill hole intersected a 1.2-metre wide shear zone with quartz veinlets and disseminated pyrite, stibnite and arsenopyrite within a steeply dipping feldspar porphyry dyke striking at about 145 degrees. This zone contained 1.7 grams per tonne gold.

BIBLIOGRAPHY

EMPR EXPL 1988-C132; 1987-C226
EMPR FIELDWORK 1989, pp. 120, 133-134
EMPR ASS RPT *9526, 11671, 12496, 13709, 17331, *18056
GSC OF 534; 2207
GSC P 67-54
GSC MEM 213
Placer Dome File

DATE CODED: 1991/02/26
DATE REVISED: / /

CODED BY: DGB
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092O 057**

NATIONAL MINERAL INVENTORY: 092O11 Cu1

NAME(S): **MIKE**, NAT

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O11W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 36 48 N
LONGITUDE: 123 17 23 W
ELEVATION: 1666 Metres

NORTHING: 5718073
EASTING: 479940

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location is from Geological Survey of Canada Map 1963-29.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
COMMENTS: No information is available with respect to the mineralogy of this showing.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Tertiary
Mesozoic-Cenozoic

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Andesite
Felsic Intrusive

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Mike copper showing occurs on a tributary of Bambrick Creek, as shown on Geological Survey of Canada Map 1963-29. More recent mapping (Geological Survey of Canada Open File 534) indicates this area to be underlain by andesitic volcanic rocks of Oligocene-Miocene age and felsic intrusions of both Jurassic and Lower Tertiary age. The relationship of the copper occurrence to the geology of the area is not known.

BIBLIOGRAPHY

GSC MAP *1963-29
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/19

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 058**

NATIONAL MINERAL INVENTORY: 092016 Mn1

NAME(S): **J, LUKY, FORD,
LILLY M**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092016W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 57 45 N
LONGITUDE: 122 15 50 W
ELEVATION: 666 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5757123
EASTING: 550576

LOCATION ACCURACY: Within 500M

COMMENTS: The showing is located at Peavine Springs immediately east of the Fraser River, 3.5 kilometres downstream from the Chimney Creek bridge.

COMMODITIES: Manganese Rhodonite Gemstones

MINERALS

SIGNIFICANT: Pyrolusite Rhodonite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Metamorphic Sedimentary Epigenetic Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites Q02 Rhodonite
SHAPE: Bladed
COMMENTS: The pyrolusite-bearing lenses are reported to be up to 1.2 metres wide and traceable for over 150 metres along strike.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Cache Creek	Unnamed/Unknown Formation	

LITHOLOGY: Limestone
Chert
Argillite

HOSTROCK COMMENTS: The property is underlain mainly by limestone of the Cache Creek Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Chilcotin Plateau

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1941
SAMPLE TYPE: Bulk Sample
COMMODITY Manganese GRADE 39.8200 Per cent

COMMENTS: The assay is percent manganese dioxide in a 34 kilogram bulk sample.
REFERENCE: National Mineral Inventory 092016 Mn1.

CAPSULE GEOLOGY

The J (Lillie M) showing, located immediately to the east of the Fraser River about 20 km south southeast of Williams Lake, occurs within an area underlain mainly by Paleozoic limestone of the Cache Creek Group. The showing comprises pyrolusite in a number of discontinuous chert lenses within grey limestone and are exposed along an east trending zone over a distance of about 150 metres. Pyrolusite has been derived from the weathering of rhodonite of which minor amounts remain within the chert. The chert is thought to be the result of silicification of limestone.

In 1941, a 34-kilogram bulk sample was analysed by the Mines Branch, Ottawa, and found to contain 39.82 per cent manganese dioxide (National Mineral Inventory 092016 Mn1). Subsequent subsurface exploration failed to define a downward extension of the mineralization.

BIBLIOGRAPHY

EMPR COMM FILE (Manganese Occurrences in B.C., H. Sargent, Mexico,

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BIBLIOGRAPHY

1956)
EMPR PF (*Report by J.S. Stevenson, 1942)
EMR MP RESFILE (Chimney Creek)
GSC MAP 1963-29
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/19

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092O 059**

NATIONAL MINERAL INVENTORY: 092O2 Hg4

NAME(S): **MUGWUMP**, RELAY CREEK, BRALORNE MERCURY

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 092O02W
BC MAP:

MINING DIVISION: Lillooet

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 04 07 N
LONGITUDE: 122 48 21 W
ELEVATION: 1402 Metres

NORTHING: 5657473
EASTING: 513604

LOCATION ACCURACY: Within 500M

COMMENTS: Portal of main adit, 2.5 kilometres northwest of the junction of Relay and Tyaughton Creeks (Assessment Report 5016).

COMMODITIES: Mercury Antimony

MINERALS

SIGNIFICANT: Cinnabar Stibnite
ASSOCIATED: Quartz Carbonate
ALTERATION: Carbonate Quartz Hematite Limonite Clay
Serpentine Mariposite

ALTERATION TYPE: Silicific'n Carbonate Quartz-Carb. Argillic Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Disseminated
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
SHAPE: Irregular
MODIFIER: Fractured Sheared
DIMENSION: 457 Metres STRIKE/DIP:
COMMENTS: Mineralization occurs mainly within a shear zone trending 330 degrees, dipping northeast and traced for about 457 metres.

TREND/PLUNGE: 330/

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous	Taylor Creek	Dash	
Paleozoic-Mesozoic	Bridge River	Undefined Formation	
Paleozoic			Shulaps Ultramafic Complex

LITHOLOGY: Chert Pebble Conglomerate
Sandstone
Listwanite
Serpentinite
Mudstone

HOSTROCK COMMENTS: Dash Conglomerate forms the base of the Taylor Group (Fieldwork 1988, pages 131-143).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Bridge River

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Mugwump mercury prospect, 2.5 kilometers northwest of the confluence of Relay and Tyaughton creeks, is hosted in conglomerate of the informally named Dash Formation of the Cretaceous Taylor Creek Group, and adjacent quartz-carbonate altered serpentinite (listwanite). The serpentinite-listwanite occurs along a fault strand of a major northwest trending fault system and separates the Taylor Creek Group from rocks of the Mississippian to Jurassic Bridge River Complex (Group) to the east.

Cinnabar and stibnite occur as disseminated grains, smears on fractures, blebs, streaks and partly massive seams associated with quartz veinlets, calcite and hematite along fractures and joints within pebble conglomerate. Cinnabar is relatively abundant as disseminations within listwanite. Stibnite, as acicular needles, forms drusy clusters that occupy vugs, and also forms semimassive seams along quartz veinlets in conglomerate.

The main mineralized shear in the conglomerate trends 330 degrees and dips to the northeast, and has been traced for 457 meters. Faulting and shearing has enhanced permeability in the conglomerate. Cinnabar and stibnite were most likely deposited at relatively shallow depths from low temperature (or epithermal) hydrothermal solutions. The disseminated nature of deposition was coincident with quartz-carbonate alteration of the serpentinite.

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BIBLIOGRAPHY

EMPR AR 1942-A76; 1943-A77
EMPR GEM 1970-224; 1972-312; 1973-266; 1974-221
EMPR ASS RPT *5016
EMPR FIELDWORK 1974, p. 35; 1976, p. 47; 1985, pp. 303-310; 1986, pp.
23-29,157-169; 1987, pp. 93-130; 1988, pp. 105-152; 1989, pp.
45-72; 1990, pp. 75-83
EMPR OF 1987-3; 1987-11; 1988-3; 1988-9; 1989-4; 1990-10
GSC P 43-5, pp. 37-38
GSC OF 534; 2207

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

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 060**

NATIONAL MINERAL INVENTORY:

NAME(S): **GB**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092001E
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 08 30 N
LONGITUDE: 122 14 05 W
ELEVATION: 2166 Metres

NORTHING: 5665857
EASTING: 553535

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located on a ridge at the headwaters of Ward Creek.

COMMODITIES: Mercury Antimony Lead Zinc

MINERALS

SIGNIFICANT: Stibnite Realgar Sphalerite Galena Pyrite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epithermal Hydrothermal Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous	Jackass Mountain	Unnamed/Unknown Formation	Unnamed/Unknown Informal
Unknown			

LITHOLOGY: Argillite
Sandstone
Quartz Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The GB property occurs within the Stirrup Creek epithermal district, located about 35 kilometres to the southeast of the Blackdome epithermal deposits.

The GB showing is underlain by sedimentary rocks of the Lower Cretaceous Jackass Mountain Group comprising sandstone, argillite and, elsewhere in the area, conglomerate. Intruding the sedimentary succession is a quartz feldspar porphyry body containing disseminated pyrite, galena, sphalerite, stibnite and realgar.

BIBLIOGRAPHY

EMPR GEM 1970-216
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/19

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 063**

NATIONAL MINERAL INVENTORY:

NAME(S): **TEEK**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 05 48 N
LONGITUDE: 123 19 42 W
ELEVATION: 1690 Metres

NORTHING: 5660626
EASTING: 477009

LOCATION ACCURACY: Within 1 KM

COMMENTS: Mineralization reported in Assessment Report 3270 - but not well documented or located.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite

MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous	Undefined Group	Powell Creek	
Upper Cretaceous			Coast Plutonic Complex

LITHOLOGY: Granodiorite

HOSTROCK COMMENTS: Dated at Mohawk showing (0920 001).

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

Overlap Assemblage

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Teek porphyry copper showing, 2 kilometres south-southwest of Palisade Bluff, is within Late Cretaceous granodiorite of the Coast Plutonic Complex close to its contact with volcanic rocks of the Upper Cretaceous Powell Creek Formation. Mineralization consists of minor amounts of disseminated pyrite and chalcopyrite.

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 157-169
EMPR ASS RPT 2803, *3270
EMPR GEM 1970-214; 1971-328
EMPR PF (Report by F.L.C. Price, 1971: Prospectus, Haferno Resources Ltd., 1972)
EMPR OF 1987-3
GSC MAP 29-1963
GSC OF 534; 2207

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

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092O 064**

NATIONAL MINERAL INVENTORY:

NAME(S): **XYZ**, X, RELAY,
Y, Z

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092O02W
BC MAP:

LATITUDE: 51 11 07 N
LONGITUDE: 122 56 52 W
ELEVATION: 1844 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Located on the north slope of upper Relay Creek, 38 kilometres north of Goldbridge.

MINING DIVISION: Lillooet
Clinton
UTM ZONE: 10 (NAD 83)

NORTHING: 5670430
EASTING: 503650

COMMODITIES: Copper Molybdenum Gold

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Arsenopyrite Sphalerite Pyrite
Pyrrhotite

ASSOCIATED: Quartz Carbonate

ALTERATION: Carbonate Silica Chlorite Sericite Kaolinite

ALTERATION TYPE: Carbonate Silicific'n Chloritic Sericitic Argillic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Porphyry Hydrothermal Epigenetic
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Lower Cretaceous Taylor Creek
Upper Cretaceous Undefined Group

FORMATION

Undefined Formation
Powell Creek

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

ISOTOPIC AGE: 67.6 +/- 0.6 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Plagioclase

LITHOLOGY: Hornblende Feldspar Porphyry
Feldspar Porphyry
Tuff
Volcanic Breccia
Sandstone
Shale

HOSTROCK COMMENTS: Isotopic age date from Archibald et al. (Fieldwork 1988, page 145-151).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The XYZ porphyry copper prospect is on the north slope of upper Relay Creek, 38 kilometres north of Gold Bridge. It was first explored in 1970 for porphyry copper-molybdenum mineralization following the discovery of anomalous copper-molybdenum values by a regional soil and silt geochemical survey. More recent work, from 1980 to 1988, has concentrated on evaluating the potential for gold mineralization. This recent work has outlined several zones of anomalous gold in soils, along with corresponding elevated gold values in outcrop.

The occurrence is near the northwest end of a northwest trending zone of alteration and intrusive rocks which measures about 10 kilometres long by 2 kilometres wide. Within this zone sedimentary and volcanic rocks of the Taylor Creek Group and Powell Creek Formation (informal name) are intruded by a swarm of porphyry sills, dykes and small plugs. The intrusives in the area of the XYZ showing are mainly Cretaceous hornblende-feldspar and feldspar porphyries which locally grade to equigranular hornblende granodiorite. The stratified rocks strike northwest, dip steeply, and are delimited mainly by northwest trending faults. Northeast and east trending faults, and shear zones are also locally important.

Carbonate and carbonate-chlorite alteration is widespread within the porphyries and adjacent country rock. Silicification, sericitization and kaolinization (of feldspar) occur locally and are commonly

CAPSULE GEOLOGY

accompanied by pyrrhotite plus or minus pyrite alteration. Sphalerite, arsenopyrite, or traces of chalcopyrite plus molybdenite locally accompany pyrite in areas of silicification. Anomalous gold concentrations occur over broad zones within altered pyritic intrusive rock and within narrow chalcedonic veins, shear zones, and silicified zones within and adjacent to the intrusives.

BIBLIOGRAPHY

EMPR GEM 1971-327; 1972-312,313; 1973-266
EMPR ASS RPT 3830, *3179, 8243, 8866, 8888, 9876, *11037, 16467,
18740, *18780
EMPR FIELDWORK *1987, pp. 105-123; 1988, pp. 145-151
EMPR OF *1988-9
EMPR EXPL 1980, pp. 285,286; 1982-241
GSC OF 534; 2207

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

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **0920 065**

NATIONAL MINERAL INVENTORY:

NAME(S): **ABC**

MINING DIVISION: Lillooet

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092002W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 09 21 N
LONGITUDE: 122 53 09 W
ELEVATION: 1692 Metres

NORTHING: 5667161
EASTING: 507984

LOCATION ACCURACY: Within 500M

COMMENTS: The location indicated is the centre of a northwest trending zone of disseminated chalcopyrite mineralization (Assessment Report 4597).

COMMODITIES: Copper

MINERALS

SIGNIFICANT:	Chalcopyrite	Pyrite	Pyrrhotite
ALTERATION:	Carbonate	Silica	Kaolinite
ALTERATION TYPE:	Carbonate	Argillic	Silicific'n
MINERALIZATION AGE:	Unknown		

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Lower Cretaceous	Taylor Creek
Upper Cretaceous	Undefined Group
Cretaceous-Tertiary	

FORMATION

Unnamed/Unknown Formation
Powell Creek

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

ISOTOPIC AGE: 67.6 +/- 0.6 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Plagioclase

LITHOLOGY: Quartz Feldspar Porphyry
Hornblende Feldspar Porphyry
Sandstone
Shale

HOSTROCK COMMENTS: Age date from Archibald et al. (Fieldwork 1988, pages 145-151).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The ABC porphyry copper prospect is located on the slope north-east of upper Relay Creek, approximately 35 kilometres north of Gold Bridge. Anomalous copper and molybdenum values were discovered by a regional soil and silt geochemical survey carried out in 1970. Follow-up work outlined a zone of anomalous copper and molybdenum in soils, within which was discovered local weak disseminated chalcopyrite mineralization in bedrock.

The mineralization occurs near the southeast margin of a northwest trending zone of alteration, which measures about 10 kilometres long by 2 kilometres wide. The zone is coincident with a swarm of Cretaceous to Tertiary porphyry dykes, sills and small plugs, comprising mainly quartz-feldspar and hornblende-feldspar porphyries. The porphyries intrude sedimentary and volcanic rocks of the Lower Cretaceous Taylor Creek Group and Upper Cretaceous Powell Creek Formation (informal name). The zone of intrusion and alteration is approximately concordant with the northwest trending structural grain of the area, as defined by numerous steeply dipping faults. These comprise part of a complex fault system associated with the Yalakom fault, a major dextral fault displaying oblique displacement which occurs five kilometres northeast of the showing.

Rocks in the immediate area of the occurrence comprise altered sandstone and shale of the Taylor Creek Group, cut by altered quartz-feldspar and hornblende-feldspar porphyry intrusions. Hydrothermal alteration effects include widespread carbonate alteration and local zones of silicification and pyritization, as well as local kaolinization of feldspars. Pyrite occurs as disseminations and along fracture planes. It is locally accompanied by pyrrhotite, and rarely by traces of chalcopyrite. Copper content of analysed grab

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CAPSULE GEOLOGY

samples is less than 0.1 per cent.

BIBLIOGRAPHY

EMPR ASS RPT *3179, *3829, *4597, 8243, 8866
EMPR FIELDWORK *1987, pp. 105-123; 1988, pp. 145-151
EMPR OF *1988-9
EMPR GEM 1971-327; 1972-312; 1973-266
EMPR EXPL 1980-285,286
EMPR PF (Report by R. Wolfe, 1971)
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1990/08/17

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **0920 067**

NATIONAL MINERAL INVENTORY: 09203 Au3

NAME(S): **MASSENA**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 03 15 N
LONGITUDE: 123 23 02 W
ELEVATION: 2190 Metres

NORTHING: 5655919
EASTING: 473094

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location and description very vague - nothing reported since 1926.

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Cerussite
ASSOCIATED: Quartz
ALTERATION: Limonite Cerussite Clay
ALTERATION TYPE: Oxidation Leaching Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous			Coast Plutonic Complex

LITHOLOGY: Porphyry Dike
Quartz Diorite

HOSTROCK COMMENTS: Mineralized veins occur in porphyry dyke which cuts quartz diorite.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1922
SAMPLE TYPE:	Chip		
COMMODITY		GRADE	
Silver		157.0000	Grams per tonne
Gold		7.0000	Grams per tonne

COMMENTS: Across 41 centimetres of oxidized rock.
REFERENCE: Minister of Mines Annual Report 1922, page N139.

CAPSULE GEOLOGY

The Massena gold showing, 7.2 kilometres southeast of Mount McClure, is within Late Cretaceous quartz diorite of the Coast Plutonic Complex. The showing consists of small parallel quartz veins (that yield gold and silver) within a north trending porphyry dyke, 150 metres wide and 1500 metres in length, that cuts quartz diorite. The porphyry is iron-stained and oxidized, and in one area contains small nodules of cerussite in a 30 centimetre wide clay-altered part of the dyke.

A sample taken across 41 centimetres of oxidized rock assayed 157 grams per tonne silver and 7 grams per tonne gold (Minister of Mines Annual Report 1922).

BIBLIOGRAPHY

EMPR AR 1922-N139; 1923-A169; 1925-A179; 1926-A191
EMPR OF 1987-3
EMPR FIELDWORK 1986, pp. 157-169
GSC MAP 29-1963
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/22

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 068**

NATIONAL MINERAL INVENTORY:

NAME(S): **LLL, JIM, BF,**
LEN

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092015E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 45 30 N
LONGITUDE: 122 31 53 W
ELEVATION: 1080 Metres

NORTHING: 5734264
EASTING: 532343

LOCATION ACCURACY: Within 1 KM
COMMENTS: Located west of the Chilcotin River.

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite
ALTERATION: Sericite Clay
ALTERATION TYPE: Sericitic Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Discordant
CLASSIFICATION: Hydrothermal
SHAPE: Irregular
COMMENTS: Hydrothermal alteration and mineralization appears to be strongly fault controlled.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Cache Creek	Unnamed/Unknown Formation	

LITHOLOGY: Shale
Limestone
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The LLL showing occurs to the west of the Chilcotin River in an area underlain by rocks of the Carboniferous to Jurassic Cache Creek Group, overlain by mafic to intermediate volcanics of possibly Jurassic age. The Cache Creek Group has been subdivided into two belts, a western, mainly volcanic belt and an eastern belt dominated by sedimentary rocks. The showing occurs in the area underlain by eastern belt rocks. Intruding the Cache Creek Group to the west of the showing are granodiorite and quartz diorite of the Upper Paleozoic Farewell pluton, and to the north leucocratic quartz monzonite of Upper Paleozoic or Mesozoic age.

The LLL showing itself comprises pyrite and pyrrhotite in argillaceous sediments of the Cache Creek Group and minor disseminated chalcopyrite in fractured younger volcanic rocks. Abundant fracturing and faulting in the area is possibly related to movement on the McEwen fault, a major northwest striking structure to the north and east of the showing. Hydrothermal alteration is best developed within fracture zones and comprises sericitization and clay alteration. Limonitic zones are probably the result of the weathering of pyrite.

An assay of 368 grams per tonne silver was obtained from a sludge sample collected during diamond-drilling on the property carried out in 1969 or earlier (George Cross News Letter No.276, Dec. 16, 1969).

BIBLIOGRAPHY

EMPR GEM 1973-269
EMPR ASS RPT 4460
GSC OF 534; 2207
GCNL #276, 1969

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/19

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 068**

MINFILE NUMBER: **0920 070**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRAB**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 12 00 N
LONGITUDE: 123 17 10 W
ELEVATION: 2410 Metres

NORTHING: 5672105
EASTING: 480010

LOCATION ACCURACY: Within 500M

COMMENTS: Location indicated is area of highest copper concentration (Assessment Report 11488).

COMMODITIES: Copper Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Galena Sphalerite Molybdenite
Covellite Chrysocolla

COMMENTS: Mainly chalcopyrite, locally with minor malachite, azurite, covellite, and chrysocolla.

ASSOCIATED: Magnetite

ALTERATION: Epidote Chlorite Calcite Magnetite Malachite
Azurite Chrysocolla

ALTERATION TYPE: Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous	Taylor Creek	Undefined Formation	
Upper Cretaceous	Undefined Group	Powell Creek	

LITHOLOGY: Argillite
Sandstone
Conglomerate
Andesite
Heterolithic Volcanic Breccia
Rhyolite
Dacite
Feldspar Porphyry
Diorite

HOSTROCK COMMENTS: Mineralization occurs in dykes and in enclosing sediments and volcanics. Igneous rocks range from rhyolite to andesite and diorite.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Grab porphyry copper showing is 0.4 kilometre west-southwest of Vic Lake. In the area, andesite and heterolithic volcanic breccia of the Informally named Upper Cretaceous Powell Creek Formation unconformably overlies argillite, sandstone and conglomerate of the Lower Cretaceous Taylor Creek Group. The sedimentary and volcanic rocks are cut by a hornblende-feldspar porphyry stock, and numerous dykes ranging in composition from quartz-eye rhyolite to andesite and diorite. Most dykes strike northerly and dip steeply; northwest, northeast, and east striking dykes also occur. The volcanic and sedimentary rocks are fractured parallel to dyke walls.

Mineralization occurs as fracture-fillings and as disseminations within the dykes and enclosing volcanics and sediments. Mineralization consists of chalcopyrite with minor amounts of pyrrhotite, galena, sphalerite, and trace molybdenite. Malachite, azurite, chrysocolla, and covellite occur locally. Pyrite is scarce within the zone of chalcopyrite mineralization, but is common in the adjacent hornblende-feldspar porphyry stock.

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BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 157-169
EMPR ASS RPT 5159, *11488
EMPR GEM 1974-222
EMPR EXPL 1983-346
EMPR OF 1987-3
GSC MAP 29-1963
GSC OF 534; 2207
GSC P 67-54

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

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 071**

NATIONAL MINERAL INVENTORY:

NAME(S): **GC**, ABLE

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092010W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 38 12 N
LONGITUDE: 122 45 41 W
ELEVATION: 1167 Metres

NORTHING: 5720655
EASTING: 516513

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location of the mineralization is uncertain. The location given here is that of GC 60 claim.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Unknown

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Tertiary
Middle Jurassic

GROUP

Chilcotin

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Mount Alex Plutonic Complex

LITHOLOGY: Quartz Hornblende Monzonite
Diorite
Quartz Diorite
Basalt

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The GC showing occurs in an area of poor bedrock exposure on the Chilcotin Plateau and the geology of the area is imperfectly known. Recent mapping (Geological Survey of Canada 91-1A) indicates that the area is underlain by hornblende quartz monzonite, quartz diorite and diorite of the Middle Jurassic Mount Alex plutonic complex overlain to the east by mainly subaerial basalt flows of Miocene or Pliocene age (Chilcotin Group).

Mineralization of the showing is reported to comprise copper in an extensive pyrite zone; no additional information is available.

BIBLIOGRAPHY

EMPR ASS RPT *2705
EMPR GEM 1974-223
GSC P 91-1A, pp. 207-217
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/20

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 072**

NATIONAL MINERAL INVENTORY:

NAME(S): **FRENIER**, EMPIRE VALLEY

STATUS: Past Producer Open Pit

MINING DIVISION: Clinton

REGIONS: British Columbia

NTS MAP: 092008W

BC MAP:

LATITUDE: 51 20 43 N

LONGITUDE: 122 21 06 W

ELEVATION: 1295 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Open pit, 9 kilometres east of Black Dome Mountain and 7 kilometres west of the Fraser River, just north of Higginbottom Creek, 80 kilometres north-northwest from Lillooet (Fieldwork 1988).

UTM ZONE: 10 (NAD 83)

NORTHING: 5688422

EASTING: 545155

COMMODITIES: Perlite

Pozzolan

MINERALS

SIGNIFICANT: Perlite

COMMENTS: Silica is cherty and nodular.

ASSOCIATED: Silica

MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Massive Stratabound
CLASSIFICATION: Volcanogenic Syngenetic Industrial Min.

TYPE: R12 Volcanic glass - perlite

SHAPE: Tabular

DIMENSION: 30

Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: The deposit consists of a flat-lying flow of volcanic glass up to 30 metres thick.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Eocene

Kamloops

Undefined Formation

LITHOLOGY:

Perlite
Rhyolite Tuff
Rhyolite Flow
Rhyolite Crystal Tuff
Volcanic Breccia
Pitchstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

INVENTORY

ORE ZONE: FRENIER

REPORT ON: Y

CATEGORY: Inferred

YEAR: 1989

QUANTITY: 3800000 Tonnes

COMMODITY

GRADE

Perlite

100.0000

Per cent

COMMENTS: Reserves based on an average thickness of 30 metres and a specific gravity of 2.3.

REFERENCE: Fieldwork 1989, page 483.

CAPSULE GEOLOGY

Locally, volcanic and sedimentary rocks of the Eocene Kamloops Group unconformably overlie Middle and Upper Lower Cretaceous Spences Bridge Group volcanics west of the Fraser River and Fraser fault system.

Volcanic rocks at the Frenier open pit site are correlated with the Kamloops Group and consist of devitrified rhyolite tuff, vesicular rhyolite flows, rhyolite crystal tuff, perlite and volcanic breccia with clasts of varied composition. The lowest unit is a white to grey devitrified rhyolite tuff, approximately 20 metres thick, that contains abundant siliceous veinlets and layers of waxy, green volcanic glass (pitchstone). This tuff is overlain by 15 metres of grey, pink to purple vesicular rhyolite flows. Above the flows, and directly below the perlite, is a unit of pink to grey rhyolite crystal tuff approximately 50 metres thick which contains quartz phenocrysts up to 0.5 centimetre in size. Perlite flows,

CAPSULE GEOLOGY

approximately 25 metres thick, overlie the previously mentioned units in the vicinity of the open pit; however, immediately south of the pit, in Higginbottom Creek, it crosscuts the underlying lithologies. In outcrop the perlite is a homogeneous, light grey, glassy rock, crosscut by veins of opaline silica and pitchstone. Fine fractures are visible in hand sample which impart an onion skin texture to the perlite. A volcanic breccia, containing clasts of various composition and size in a light green, siliceous rhyolitic matrix, overlies the perlite and grades laterally and vertically into a welded pink rhyolite tuff.

The deposit consists of a flat-lying flow of volcanic glass with occasional shards of glass welded together to form tuff. Flow direction has not been established but the deposit is massive, appears domed, and exhibits perlitic (onion skin) textures. When heated using a hand-held propane torch, crushed perlite expands rapidly to many times the original size.

The deposit has been divided into "coarse" and "fine" perlite with inferred reserves calculated by Aurun Mines Limited of 3.8 million tonnes, using an average thickness of 30 metres and a specific gravity of 2.3 (Fieldwork 1989, page 483; Open File 1992-1). The same perlite horizon is reported to occur on the area of high relief about 1.5 kilometres to the east-northeast. These outcroppings are separated from the pit area by a south-flowing creek.

Six thousand tonnes of crude perlite was shipped by truck from 1983 through 1985. The mine has been inactive since 1986 because of transportation difficulties resulting from an old, low-capacity bridge across the Fraser River. The property was acquired by BBF Resources Inc. in June 2002.

BIBLIOGRAPHY

- EMPR AR 1949-A261,A262
- EMPR ASS RPT 7009, *11077, *12636
- EMPR BC METAL MM00131
- EMPR ENG INSP Annual Report 1990
- EMPR EXPL 1978-E289
- EMPR FIELDWORK *1988, pp. 519-523; *1989, pp. 481-483
- EMPR MAP 65, 1989
- EMPR MINING 1981-1985 p. 67-68; 1986-1987 p. 93-94; 1988 p. 92
- EMPR OF 1989-27; 1991-23; 1992-1; 1992-9
- EMPR PF (Aurun Mines Ltd., Annual Report, 1984 and 1987)
- GSC MAP 29-1963; 2-1972; 1292A
- GSC OF 534; 2207
- GSC P 67-54
- CANMET IR MSP/MSL 78-206
- CJES Vol.21, pp. 1132-1444
- IPDM March/April 1984
- N MINER Feb.2, Mar.22, Sept.6, 1984; Aug.25, 1986
- NW PROS Sept/Oct, 1986
- PR REL Aurun Mines Ltd. Oct.30, 1987; BBF Resources Inc., Nov.6, 2002 Mar.24, 2003
- W MINER Apr/1984

DATE CODED: 1985/07/24
DATE REVISED: 1990/10/12

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **0920 074**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHURN CREEK PLACER**, CHURN CREEK

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 28 30 N
LONGITUDE: 122 28 35 W
ELEVATION: 1167 Metres

NORTHING: 5702779
EASTING: 536365

LOCATION ACCURACY: Within 500M

COMMENTS: The northwestern end of the Churn Creek property located at the confluence of Churn and Little Churn Creek.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Unknown
ASSOCIATED: Garnet Magnetite
MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Quaternary			Glacial/Fluvial Gravels

LITHOLOGY: Unconsolidated Alluvium

HOSTROCK COMMENTS: The alluvium comprises a succession of layers of clay, mud or sand and gravel.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The area of the Churn Creek placer showing is underlain by Cretaceous volcanic and sedimentary rocks of the Upper Cretaceous Kingsvale Group, overlain by Eocene volcanic rocks. Glacial gravels of Pleistocene age and postglacial Quaternary fluvial deposits cover much of the area and exposures of bedrock are sparse.

The Churn Creek alluvial deposits comprise a basal clay layer resting directly on bedrock, overlain by a succession of gravel, sand and clay to a thickness of up to 30 metres. Alluvial gold concentrations have been determined in gravel layers. Random samples of the gravel indicate grades of 1.7 to 2.5 grams per cubic metre (Crescent Mines Ltd., 1977; Prospectus).

BIBLIOGRAPHY

EMPR BULL 28, p. 32
EMPR PF (Crescent Mines Ltd., Prospectus, May 10, 1976; *Crescent Mines Ltd., Prospectus, May 2, 1977)
GCNL #133(July 12), 1978; #58(Mar. 21), #160(June 2), #161(July 20), 1980
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/19

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 075**

NATIONAL MINERAL INVENTORY:

NAME(S): **WARNER CREEK**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092003E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 03 04 N
LONGITUDE: 123 12 55 W
ELEVATION: 1950 Metres

NORTHING: 5655531
EASTING: 484911

LOCATION ACCURACY: Within 500M

COMMENTS: Located 2.5 kilometres south-southwest of Mount Warner.

COMMODITIES: Silver Gold Zinc Copper

MINERALS

SIGNIFICANT:	Tetrahedrite	Sphalerite	Stibnite	Cinnabar	Malachite
ASSOCIATED:	Quartz	Carbonate	Pyrite		
ALTERATION:	Quartz	Carbonate	Sericite	Clay	
ALTERATION TYPE:	Silicific'n		Sericitic	Argillic	
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: Rocks are highly fractured and cut by north and east trending fault sets.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Cretaceous	Undefined Group	Powell Creek	

LITHOLOGY: Andesite
Feldspar Pyrite Andesite Flow

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The Warner Creek polymetallic vein prospect, 2.5 kilometres south-southwest of Mount Warner, consists of a quartz vein and adjacent alteration zone which cuts andesite of the informally named Upper Cretaceous Powell Creek Formation, 2 kilometres northeast of its contact with Upper Cretaceous granodiorite of the Coast Plutonic Complex. The quartz vein strikes 060 degrees and dips 30 to 45 degrees northwest. It outcrops over a strike length of 50 metres. Mineralization within the vein consists of tetrahedrite (friebergite) blebs and disseminations, along with minor amounts of sphalerite, stibnite, and cinnabar. Malachite staining occurs on the vein surface and along fractures within it. The host rock is highly fractured and altered for 20 to 30 metres on both sides of the vein. Alteration includes silica flooding, quartz-carbonate-sericite veining, and clay alteration of feldspar phenocrysts. Tetrahedrite, along with minor amounts of pyrite and sphalerite, occurs as disseminations, wisps, and semimassive veins and pods within this alteration zone. Samples of vein grade up to 356.7 grams per tonne silver, and up to 0.53 gram per tonne gold.

BIBLIOGRAPHY

EMPR ASS RPT 8472, 13742, 14936, 17358
EMPR EXPL 1980-286; 1985-C242; 1988-C133
EMPR FIELDWORK 1974, p. 35; 1976, p. 47; 1985, pp. 303-310; 1986, pp. 23-29, 157-169; 1987, pp. 93-130; 1988, pp. 105-152; 1989, pp. 45-72; 1990, pp. 75-83
EMPR OF 1987-3; 1987-11; 1988-3; 1988-9; 1989-4; 1990-10
GSC MAP 29-1963
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/25

CODED BY: GSB
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 076**

NATIONAL MINERAL INVENTORY:

NAME(S): **TASEKO MOUNTAIN, HIGH**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092003W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 14 15 N
LONGITUDE: 123 27 20 W
ELEVATION: 2591 Metres

NORTHING: 5676335
EASTING: 468197

LOCATION ACCURACY: Within 500M

COMMENTS: Located 1.5 kilometres east of Taseko Mountain.

COMMODITIES: Gold Silver Copper Zinc

MINERALS

SIGNIFICANT: Arsenopyrite Sphalerite Chalcopyrite Pyrite
ALTERATION: Limonite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork Disseminated
CLASSIFICATION: Igneous-contact Hydrothermal Epigenetic
SHAPE: Tabular
MODIFIER: Sheared

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Cretaceous
Cretaceous-Tertiary

GROUP

Undefined Group

FORMATION

Powell Creek

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Andesitic Breccia
Lapilli Tuff
Crystal Tuff
Ash Tuff
Andesitic Basalt Flow
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Pacific Ranges

RELATIONSHIP:

GRADE: Hornfels

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1982

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver	58.0000	Grams per tonne
Gold	7.3000	Grams per tonne
Copper	1.0000	Per cent
Zinc	1.0000	Per cent

COMMENTS: Copper and zinc values are reported to be "in excess of 1 per cent".

REFERENCE: Assessment Report 10674.

CAPSULE GEOLOGY

The Taseko Mountain polymetallic vein showing, 1.5 kilometres east of Taseko Mountain, is within andesite breccias, lapilli tuffs, crystal tuffs, ash tuffs and minor andesitic to basaltic flows of the informally named Upper Cretaceous Powell Creek Formation. A stock of Cretaceous to Tertiary diorite crosscuts these volcanic rocks and has produced extensive limonitic hornfelsed zones. The area of greatest interest is relatively inaccessible due to the steep terrain. Intermittent limonitic alteration is visible for more than one kilometre of cliff exposure. Boulders of altered and intensely silicified volcanic rocks immediately below a north-facing cliff contain disseminations, stockwork, and discrete veins up to 5 centimetres thick of arsenopyrite, sphalerite, chalcopyrite, and pyrite. This polymetallic mineralization contains as much as 7.3 grams per tonne gold, 58.0 grams per tonne silver, and copper and zinc in excess of one per cent (Assessment Report 10674).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 934
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT *10674
EMPR EXPL 1982-242
EMPR FIELDWORK 1974, p. 35; 1976, p. 47; 1985, pp. 303-310; 1986, pp.
23-29, 157-169; 1987, pp. 93-130; 1988, pp. 105-158; 1989, pp.
45-72; 1990, pp. 75-83
EMPR OF 1987-3; 1987-11; 1988-3; 1988-9; 1989-4; 1990-10
GSC OF 534; 2207
Placer Dome File

DATE CODED: 1989/04/28
DATE REVISED: 1991/10/25

CODED BY: GS
REVISED BY: RGG

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 077**

NATIONAL MINERAL INVENTORY:

NAME(S): **LITTLE BILLIE**, CHILCOTIN BAR

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O09W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 44 30 N
LONGITUDE: 122 23 59 W
ELEVATION: 1700 Metres

NORTHING: 5732477
EASTING: 541446

LOCATION ACCURACY: Within 500M

COMMENTS: Located at the confluence of the Chilcotin and Fraser Rivers.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
MINERALIZATION AGE: Quaternary

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

HOSTROCK COMMENTS: Auriferous gravels are being deposited as a result of postglacial evolution of the Fraser and Chilcotin rivers.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Little Billie placer gold showing occurs at the confluence of the Chilcotin and Fraser rivers where a bar has developed at the mouth of the Chilcotin River. As a result of low water velocity the gravels being deposited are generally not of large size, although occasional floods appear to have deposited larger boulders. The gravels have been deposited on clay-rich sediments.

In 1945 gold to a value of "50 cents per yard" (about 46 cents per metre) was reported to be present near the margins of the bar.

BIBLIOGRAPHY

EMPR PF (*Report, Map by A.J.Vernon 1945)
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/19

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092O 078**

NATIONAL MINERAL INVENTORY:

NAME(S): **HANCEVILLE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O15W 092O14E
BC MAP:

MINING DIVISION: Clinton
Cariboo
UTM ZONE: 10 (NAD 83)

LATITUDE: 51 52 50 N
LONGITUDE: 122 55 05 W
ELEVATION: 1067 Metres

NORTHING: 5747757
EASTING: 505640

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location centered on outcrop of limestone (Geological Survey of Canada Map 29-1963).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
MINERALIZATION AGE: Upper Triassic
ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Limestone

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: R09 Limestone

Massive
Industrial Min.

DIMENSION:
COMMENTS: Attitude of limestone near centre of outcrop. Dips southwest.
Deposit dimensions are 16000 by 5500 metres.

STRIKE/DIP: 147/45S

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Upper Triassic
GROUP: Undefined Group

FORMATION: Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

DATING METHOD: Fossil
MATERIAL DATED: Various fossils

LITHOLOGY: Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cadwallader

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

A body of massive grey limestone with minor conglomerate and shale of Upper Triassic age extends southeastward from Hanceville along the south side of the Chilcotin River for 16 kilometres with widths of up to 5.5 kilometres. The limestone is covered by Miocene to Pliocene plateau basalts to the southeast and bounded by Upper Triassic argillite, greywacke and andesitic to basaltic volcanics to the northwest. Bedding generally dips 20 to 70 degrees southwest to northeast.

The age of the limestone, Upper Triassic, and its distance from Upper Triassic strata of Quesnellia to the east, suggests that it is part of the Cadwallader Terrane.

BIBLIOGRAPHY

EMPR IND MIN FILE (*Limestone Occurrences In British Columbia by McCammon, J.W. 1973, p. 21 (in Ministry Library))
GSC MAP *29-1963; 1386A
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/21

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 080**

NATIONAL MINERAL INVENTORY:

NAME(S): **NEMAIA VALLEY**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O14W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 50 00 N
LONGITUDE: 123 20 05 W
ELEVATION: 1700 Metres

NORTHING: 5742554
EASTING: 476936

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location is at northwest end of Kliyul Lake system. Other, similar, occurrences at Tsun and Towydkin lakes to the north.

COMMODITIES: Sodium Carbonate Evaporites

MINERALS

SIGNIFICANT: Evaporite Carbonate
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F02 Bedded gypsum

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Unnamed/Unknown Informal

LITHOLOGY: Unconsolidated Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Evaporite deposits forming in playas are common on the Chilcotin Plateau owing to the semi-arid climate of much of the region. Most of the annual precipitation is in the form of snow, the summer months being relatively rain free.

The Nemaia Valley contains several small ephemeral lakes which occupy depressions with largely internal drainage. Several of these lakes, such as Towydkin, Tsun and Kliyul, contain evaporitic salt deposits composed mainly of sodium carbonate. The sodium carbonate occurs as relatively pure deposits within the central part of these depressions after water evaporation during summer months, surrounded by greyish carbonate-rich muds developed around the edges of the depressions.

BIBLIOGRAPHY

EMPR BULL *4
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/21

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **0920 081**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHURN CREEK BENTONITE** CHURN CREEK

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092009W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 31 30 N
LONGITUDE: 122 18 35 W
ELEVATION: 450 Metres

NORTHING: 5708435
EASTING: 547888

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location is at mouth of Churn Creek.

COMMODITIES: Bentonite

MINERALS

SIGNIFICANT: Montmorillonite Bentonite
COMMENTS: Bentonite and zeolite occur as hydrothermal alteration minerals in lenses of Eocene rhyolite tuff.

ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Industrial Min. Hydrothermal
TYPE: E06 Bentonite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene			Unnamed/Unknown Informal

LITHOLOGY: Rhyolitic Tuff
Andesitic Breccia
Dacitic Breccia
Sandstone
Siltstone

HOSTROCK COMMENTS: Age is defined as Early to Middle Eocene from palynomorphs (Canadian Journal of Earth Science 21, pages 1132-1144).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Methow

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Bentonite occurrences are common adjacent to the Fraser fault along the eastern margin of the Chilcotin Plateau. Bentonite occurs in Eocene volcanic rocks of dominantly rhyolitic composition which are correlative with the Kamloops Group east of the Fraser fault. The Fraser fault system itself was probably instrumental in the formation of the bentonite deposits in areas of Eocene volcanic rocks in that the movement of the fault system caused the development of basins in which the bentonite formed.

While the volcanic rocks of the region have been dated as Eocene in age by both radiometric and paleontological methods, the age of formation of bentonite by the hydrothermal alteration of tephra is not known. However, it is likely that bentonite formation occurred not long after volcanism had ceased.

The Churn Creek bentonite showings occur within Eocene volcanic and associated sedimentary rocks to the west of the Fraser fault and are exposed near the mouth of Churn Creek, east of the canyon. This bentonite occurrence is likely an eastward extension of the Churn Creek West showing (0920 112).

BIBLIOGRAPHY

EMPR FIELDWORK *1988, pp. 519-523
EMPR IND MIN FILE (Bentonite Occurrences in BC (in Ministry Library))
EMPR OF 1980-27
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/28

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 083**

NATIONAL MINERAL INVENTORY:

NAME(S): **EMPIRE VALLEY**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092008W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 23 17 N
LONGITUDE: 122 16 48 W
ELEVATION: 1000 Metres

NORTHING: 5693226
EASTING: 550099

LOCATION ACCURACY: Within 5 KM

COMMENTS: Located in the vicinity of the Empire Valley Ranch (Western Homes and Living, October 1961 - Industrial Minerals File).

COMMODITIES: Opal Agate Perlite Gemstones

MINERALS

SIGNIFICANT: Agate Opal Jasper Perlite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Industrial Min.
TYPE: R12 Volcanic glass - perlite

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Eocene	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Oligocene	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Volcanic Mafic Porphyry
Basalt
Andesite
Tuff
Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The area of the Empire showing is underlain mainly by Eocene and younger volcanics comprising rhyolitic and dacitic tuff, breccia and flows, and minor andesite and basalt. Also occurring in the area are Oligocene and Lower Miocene porphyritic and amygdaloidal andesite and basalt tuff, breccia and flows.

Agate, "thundereggs" and perlite occur on the property of Empire Valley ranch and beyond. Stringers and nodules of chalcedony are contained in a mafic volcanic porphyry underlying the perlite. The quality is apparently good. Opal and jasper are also reported to occur.

BIBLIOGRAPHY

GSC P *72-53, pp. 27,28
OPEN FILE 534; 2207
Western Homes & Living, Oct. 1961

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/29

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 084**

NATIONAL MINERAL INVENTORY:

NAME(S): **FLETCHER LAKE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092014E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 46 00 N
LONGITUDE: 123 05 05 W
ELEVATION: Metres

NORTHING: 5735090
EASTING: 494154

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Hydromagnesite Magnesite

MINERALS

SIGNIFICANT: Hydromagnesite
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform Unconsolidated
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Unnamed/Unknown Informal

LITHOLOGY: Unconsolidated Clay

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Hydromagnesite deposits are being formed today in many of the playas of the Chilcotin Plateau, a region characterized by a semi-arid climate, relatively mature topography and, in some areas, internal drainage systems.

The Fletcher Lake hydromagnesite showing occurs within Recent lacustrine sediments developed on older glacial gravels and Tertiary volcanic rocks. Like many of the small lakes of the area, Fletcher Lake becomes dry over summer months allowing the accumulation of hydromagnesite within its sediments during water evaporation.

There are 350 tons of hydromagnesite estimated.

BIBLIOGRAPHY

EMPR BULL 4, pp. 113-115
EMPR FIELDWORK 2000, pp. 327-336
EMPR OF 1987-13
GSC OF 534; 2207
*Logie (1929): Survey of Resources Report, Pacific Great Eastern Railway Lands Vol. II, part 2, 1929, unpublished manuscript

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/21

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 085**

NATIONAL MINERAL INVENTORY:

NAME(S): **GAY LAKE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092014W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 57 00 N
LONGITUDE: 123 29 05 W
ELEVATION: Metres

NORTHING: 5755588
EASTING: 466687

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Hydromagnesite Magnesite

MINERALS

SIGNIFICANT: Hydromagnesite
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Unnamed/Unknown Informal

LITHOLOGY: Unconsolidated Clay

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Hydromagnesite deposits are being formed today in many of the playas of the Chilcotin Plateau, a region characterized by a semi-arid climate, relatively mature topography and, in some areas, internal drainages systems.

Hydromagnesite of the Gay Lake showing is being deposited within Recent lacustrine sediments within a playa developed on older glacial gravels and Tertiary volcanic rocks. Through evaporation of the water of Gay Lake during the summer, hydromagnesite is being concentrated in the clays of the lake bottom and around its margins.

The deposit is estimated to contain about 100 tonnes of hydromagnesite.

BIBLIOGRAPHY

EMPR BULL 4, pp. 113-115
EMPR FIELDWORK 2000, pp. 327-336
EMPR OF 1987-13
GSC OF 534; 2207
*Logie (1929): Survey of Resources Report, Pacific Great Eastern Railway Lands Vol. II, part 2, 1929, unpublished manuscript

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/21

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 086**

NATIONAL MINERAL INVENTORY:

NAME(S): **TASEKO RIVER**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092005E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 23 00 N
LONGITUDE: 123 38 55 W
ELEVATION: 1370 Metres

NORTHING: 5692654
EASTING: 454863

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Hydromagnesite Magnesite

MINERALS

SIGNIFICANT: Hydromagnesite
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform Unconsolidated
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Unnamed/Unknown Informal

LITHOLOGY: Unconsolidated Clay

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Taseko Lake hydromagnesite occurrence is within Recent sediments deposited within an ephemeral lake system developed, possibly, as a result of meandering of the Taseko River. Hydromagnesite appears to be confined to lacustrine sediments in a small depression in the Taseko River valley at this locality. The showing is estimated to contain about 55 tonnes of hydromagnesite.

BIBLIOGRAPHY

EMPR BULL 4, pp. 113-115
EMPR FIELDWORK 2000, pp. 327-336
EMPR OF 1987-13
GSC OF 534; 2207
*Logie (1929): Survey of Resources Report, Pacific Great Eastern Railway Lands Vol. II, part 2, 1929, unpublished manuscript
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/21

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 087**

NATIONAL MINERAL INVENTORY:

NAME(S): **RISKE CREEK**

MINING DIVISION: Cariboo

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092015E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 58 25 N
LONGITUDE: 122 33 35 W
ELEVATION: 930 Metres

NORTHING: 5758195
EASTING: 530243

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Hydromagnesite Magnesite

MINERALS

SIGNIFICANT: Hydromagnesite
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform Unconsolidated
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Unnamed/Unknown Informal

LITHOLOGY: Unconsolidated Clay

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Deposits of hydromagnesite are contained within Recent sediments that occur on low swampy terrain along the Riske Creek drainage, south of the Chilcotin Road, centered on Lots 178 and 1188. The drainage system is partly dry annually.

The western deposit, within Lot 1188, is estimated to cover 0.65 hectares. White hydromagnesite 60 to 90 centimetres thick grades downwards to a brown clayey soil at a depth of about one metre.

The eastern deposit, in Lot 178, is estimated to be about 0.84 hectares. It is white to cream hydromagnesite to about 84 centimetres depth and grades into brown clay at 1.27 metres.

A composite sample from five drill holes from the western deposit graded 42.3 per cent MgO, 0.7 per cent CaO, 41.9 per cent CO₂, 4.4 per cent SiO₂, 1 per cent iron and alumina and 9.2 per cent water (Bulletin 4).

BIBLIOGRAPHY

EMPR BULL *4, pp. 110-112
EMPR FIELDWORK 2000, pp. 327-336
EMPR OF 1987-13
GSC MEM 118, pp. 25,48
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/21

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 088**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPRINGHOUSE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092016E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 56 30 N
LONGITUDE: 122 10 05 W
ELEVATION: 975 Metres

NORTHING: 5754877
EASTING: 557187

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Hydromagnesite Magnesite

MINERALS

SIGNIFICANT: Hydromagnesite
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform Unconsolidated
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Unnamed/Unknown Informal

LITHOLOGY: Clay

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Springhouse hydromagnesite showing, unlike most of the occurrences of the Chilcotin Plateau where hydromagnesite is being formed in modern lakes, is an older occurrence, having been buried during later soil development.

White, clay like material is reported to underlie 10 to 30 centimetres of soil in scattered locations. One occurrence close to the Williams Lake-Springhouse Road, near Boitano Lake was sampled and indicated 33.1 per cent MgO, 4.9 per cent CaO, 42 per cent CO₂ and H₂O, 4.3 per cent iron and alumina and 14.8 per cent insoluble (Bulletin 4).

BIBLIOGRAPHY

EMPR BULL *4, pp. 113-115
EMPR FIELDWORK 2000, pp. 327-336
EMPR OF 1987-13
GSC MEM 249, pp. 145-146
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/21

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 089**

NATIONAL MINERAL INVENTORY:

NAME(S): **BIG CREEK MAGNESITE** BIG CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092011E
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 42 00 N
LONGITUDE: 123 02 05 W
ELEVATION: 1125 Metres

NORTHING: 5727673
EASTING: 497600

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located about 6 kilometres south of Fletcher Lake in the same drainage as Fletcher Lake.

COMMODITIES: Hydromagnesite Magnesite

MINERALS

SIGNIFICANT: Hydromagnesite
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform Unconsolidated
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent			Unnamed/Unknown Informal

LITHOLOGY: Unconsolidated Clay

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Hydromagnesite deposits are being formed today in many of the playas of the Chilcotin Plateau, a region characterised by a semi-arid climate, relatively mature topography and, in some areas, internal drainage systems.

The Big Creek hydromagnesite showing occurs about six kilometres south of the Fletcher Lake showing (0920 084) in the same drainage system as Fletcher lake. It is estimated that about 500 tonnes of hydromagnesite are present with the composition of 64.2 per cent MgCO₃, 5.7 per cent CaCO₃, 0.60 per cent Al₂O₃, 1 per cent Fe₂O₃, 11 per cent water and 16 per cent insoluble material (Bulletin 4).

BIBLIOGRAPHY

EMPR BULL *4, pp. 113-115
EMPR FIELDWORK 2000, pp. 327-336
EMPR OF 1987-13
GSC MEM 249, pp. 145-146
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/22

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 090**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOR**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092004E 092J13E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 50 59 59 N
LONGITUDE: 123 38 05 W
ELEVATION: 1700 Metres

NORTHING: 5649986
EASTING: 455462

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located above treeline, west of Lord River.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Covellite Pyrite
ALTERATION: Biotite Tourmaline Quartz Malachite
ALTERATION TYPE: Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
SHAPE: Irregular

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mesozoic-Cenozoic			Coast Plutonic Complex

LITHOLOGY: Quartz Diorite
Granodiorite
Aplite

HOSTROCK COMMENTS: Host rocks are of the Coast Plutonic Complex.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Pacific Ranges

CAPSULE GEOLOGY

The region in which the Mor showing is located is underlain by the Jurassic to Tertiary Coast Plutonic Complex, near its eastern margin where Tertiary felsic intrusive rocks dominate over older intrusions. A number of porphyry-type occurrences have been located in this part of the Coast Plutonic Complex and the Mor showing is probably such a occurrence.

The showing occurs in an area of Eocene quartz diorite and granodiorite which has intruded an older Cretaceous stock. Late aplite dykes cut all other rock types. Sulphide mineralization consists of covellite, chalcopyrite and pyrite as blebs, smears and disseminations in quartz veins and granodiorite. Although the granodiorite in places contains primary biotite, secondary biotite, recognized by its felted texture, has been described in rocks containing sulphide mineralization.

BIBLIOGRAPHY

EMPR ASS RPT *9231
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/22

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 091**

NATIONAL MINERAL INVENTORY:

NAME(S): **BIG BAR**, SHEEP, EDGE

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092001E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 10 00 N
LONGITUDE: 122 08 05 W
ELEVATION: 800 Metres

NORTHING: 5668715
EASTING: 560498

LOCATION ACCURACY: Within 500M

COMMENTS: The location is for the centre of 1980 drilling (Assessment Report 16049).

COMMODITIES: Gold Silver Copper Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Sphalerite Arsenopyrite

ASSOCIATED: Quartz

ALTERATION: Hematite Calcite Kaolinite Limonite

COMMENTS: Alteration envelopes to quartz veins contain anomalous mercury.

ALTERATION TYPE: Argillic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Epithermal Hydrothermal Epigenetic

TYPE: H05 Epithermal Au-Ag: low sulphidation

SHAPE: Bladed

COMMENTS: Veins generally strike to the north with dips ranging from 54 degrees west to 40 degrees east.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous	Kingsvale	Undefined Formation	Unnamed/Unknown Informal
Eocene			

LITHOLOGY: Andesite
Andesite Flow
Basalt Flow
Basalt
Rhyolitic Tuff
Dacitic Tuff

HOSTROCK COMMENTS: Most veins occur in the Kingsvale Group.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Stikine

PHYSIOGRAPHIC AREA: Chilcotin Plateau

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Channel

COMMODITY

GRADE

Silver

3.8000

Grams per tonne

Gold

2.1700

Grams per tonne

COMMENTS: Sampled overed 1.4 metres.

REFERENCE: Assessment Report 17366.

CAPSULE GEOLOGY

The area of the Big Bar prospect is underlain by massive andesite of the Upper Cretaceous Kingsvale Group. To the east of the northwest striking Edge fault along Reynold's Creek are Eocene rhyolitic and dacitic tuffs which are possibly correlative with the Kamloops Group east of the Fraser fault. The region in which the property occurs is cut by two northwest trending splays of the Fraser fault.

Several epithermal quartz-carbonate vein systems occur, mainly within andesite but also near the contact of andesite with underlying basalt. The veins consist of brecciated and vuggy, limonite-stained quartz and contain disseminated pyrite, chalcopyrite, minor sphalerite and arsenopyrite. Most veins strike north and dip from 54 degrees west to 40 degrees east.

CAPSULE GEOLOGY

The No. 1 vein was followed along strike for 100 metres and is up to 1.5 metres wide. This vein, unlike most, strikes to the east and dips 23 degrees north. The best assay from the vein is 2.17 grams per tonne gold and 3.8 grams per tonne silver over 1.4 metres (Assessment Report 17366). The No. 2 vein strikes at 157 degrees and dips west. A grab sample from this vein assayed 0.9 grams per tonne gold and 3.0 grams per tonne silver. The No. 3 vein, the most extensive, is about 3 metres wide, extends over 150 metres along strike and to a depth of 65 metres. This vein/zone, tested by diamond-drilling in 1988, assayed up to 1 gram per tonne gold and 45.9 grams per tonne silver over a 3-metre interval (Assessment Report 18352).

BIBLIOGRAPHY

EMPR ASS RPT 8142, 16049, *17366, *18838, 19303
EMPR EXPL 1988-C130
EMPR PF (Prospectus, April 13, 1988)
GSC MEM 262
GSC OF 534; 2207

DATE CODED: 1985/07/24
DATE REVISED: 1991/10/29

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 092**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAD, WATERMELON**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092001E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 04 35 N
LONGITUDE: 122 06 05 W
ELEVATION: 1000 Metres

NORTHING: 5658704
EASTING: 562951

LOCATION ACCURACY: Within 500M
COMMENTS: Location is at adit.

COMMODITIES: Gold Silver Copper Lead Zinc
Antimony

MINERALS

SIGNIFICANT: Arsenopyrite Pyrite Pyrrhotite Chalcopyrite Sphalerite
Galena Cinnabar

ASSOCIATED: Quartz Calcite

ALTERATION: Silica Scorodite

ALTERATION TYPE: Silicific'n Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein Massive Disseminated

CLASSIFICATION: Epithermal Replacement
TYPE: H05 Epithermal Au-Ag: low sulphidation

DIMENSION: STRIKE/DIP: 180/47E TREND/PLUNGE:

COMMENTS: Attitude is of large quartz vein in the adit area.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous Jackass Mountain Unnamed/Unknown Formation

LITHOLOGY: Argillaceous Siltstone
Arkosic Sandstone
Quartz Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Stikine

METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Pavilion Ranges

RELATIONSHIP: Pre-mineralization

GRADE: Zeolite

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold

9.1200

Grams per tonne

COMMENTS: Sample is from vein in area of adit.

REFERENCE: Assessment Report 17781.

CAPSULE GEOLOGY

The Mad prospect occurs within a region underlain by mainly sedimentary rocks of the Lower Cretaceous Jackass Mountain Group, cut by several cross faults and splays of the Fraser fault. Intruding the Jackass Mountain Group are numerous dykes and small stocks of quartz feldspar porphyry.

Epithermal gold-silver mineralization occurs in:

- 1) stockwork quartz-carbonate veinlets with pyrite, arsenopyrite and chalcopyrite;
- 2) conformable quartz veins and replacements with arsenopyrite, chalcopyrite, sphalerite and galena;
- 3) crosscutting quartz veins with pyrite, chalcopyrite and sphalerite;
- 4) massive sulphide veins containing pyrrhotite, pyrite, arsenopyrite, sphalerite, chalcopyrite and galena;
- 5) finely banded or disseminated arsenopyrite in siltstone.

Anomalous levels of antimony and mercury are often associated with the mineralization.

A grab sample taken from an adit in 1987 assayed 9.12 grams per tonne gold (Assessment Report 17781).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 951
REPORT: RGEN0100

CAPSULE GEOLOGY

First Point Capital Corp. drilled the prospect in 1997.

BIBLIOGRAPHY

EMPR ASS RPT 11585, 13019, 13993, 16713, 16823, *17781
EMPR BULL 44, p. 109
EMPR EXPL 1988-C130-131; 1997-39
EMPR INF CIRC 1998-1, p. 27
EMPR OF 1988-29
GSC OF 534; 2207
GSC P 1967-54
CJES 1985, Vol. 22 pp. 155-174

DATE CODED: 1985/07/24
DATE REVISED: 1991/02/22

CODED BY: GSB
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 094**

NATIONAL MINERAL INVENTORY:

NAME(S): **BK**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092003E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 02 22 N
LONGITUDE: 123 12 55 W
ELEVATION: 2350 Metres

NORTHING: 5654233
EASTING: 484907

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Silver Zinc Lead Copper Gold

MINERALS

SIGNIFICANT: Sphalerite Galena Pyrite Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Clay Limonite Sericite
ALTERATION TYPE: Silicific'n Sericitic Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Cretaceous	Kingsvale	Undefined Formation	
Upper Cretaceous	Undefined Group	Powell Creek	

LITHOLOGY: Andesite Agglomerate
Hornblende Feldspar Porphyry

HOSTROCK COMMENTS: Mineralization occurs in porphyry intrusive and adjacent volcanics.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 11.2000 Grams per tonne
Gold 0.0100 Grams per tonne
Copper 0.1400 Per cent
Lead 0.1800 Per cent
Zinc 4.4600 Per cent

COMMENTS: A 0.9-metre sample of intense clay and sericite altered rocks, with quartz veinlets comprising 1% galena and 3% sphalerite.
REFERENCE: Assessment Report 17358, page 19.

CAPSULE GEOLOGY

The BK polymetallic vein showing, 3.6 kilometres south of Mount Warner, is within andesite agglomerate of the informally named Upper Cretaceous Powell Creek Formation approximately one kilometre north of the contact of Upper Cretaceous rocks of the Coast Plutonic Complex.

Galena, sphalerite and pyrite as disseminations are within silica flooded and sericitic shears that transect gouged and brecciated andesite agglomerate and hornblende feldspar porphyry. The shear zones strike north to east and are 10 centimetres to 20 metres wide.

A 0.9-metre sample of intense clay and sericite altered rocks with quartz veinlets assayed 11.2 grams per tonne silver, 0.01 gram per tonne gold, 4.46 per cent zinc, 0.18 per cent lead and 0.14 per cent copper (Assessment Report 17358, page 19).

BIBLIOGRAPHY

EMPR ASS RPT 13742, 14936, *17358
EMPR EXPL 1985-C242; 1986-C285,286; 1988-C133

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 953
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR OF 1987-3
EMPR FIELDWORK 1986, pp. 157-169
GSC MAP 29-1963
GSC OF 534; 2207

DATE CODED: 1986/11/21
DATE REVISED: 1990/08/17

CODED BY: AFW
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 095**

NATIONAL MINERAL INVENTORY:

NAME(S): **PORPHYRY**, WARNER 4

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092003E
BC MAP:

MINING DIVISION: Lillooet

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 02 02 N
LONGITUDE: 123 11 38 W
ELEVATION: 2270 Metres

NORTHING: 5653611
EASTING: 486405

LOCATION ACCURACY: Within 500M

COMMENTS: From Assessment Report 14936.

COMMODITIES: Copper Silver Gold Zinc

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Epidote Magnetite
ALTERATION: Quartz Chlorite Sericite
ALTERATION TYPE: Silicific'n Propylitic Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein Disseminated
CLASSIFICATION: Porphyry Hydrothermal
TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Cretaceous	Undefined Group	Powell Creek	Coast Plutonic Complex
Upper Cretaceous			

LITHOLOGY: Andesite Agglomerate
Feldspar Hornblende Porphyry

HOSTROCK COMMENTS: Mineralization occurs within feldspar-hornblende porphyry (Coast Plutonic Complex) and adjacent andesite agglomerates (Powell Creek).

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Overlap Assemblage

INVENTORY

ORE ZONE: VEINS REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 13.2000 Grams per tonne
Gold 0.0570 Grams per tonne
Copper 0.7600 Per cent
Zinc 0.0200 Per cent

COMMENTS: Grab sample of malachite stained quartz veins and slickensided rocks.

REFERENCE: Assessment Report 17358, page 24.

CAPSULE GEOLOGY

The "Porphyry" porphyry copper showing, 4.3 kilometres south of Mount Warner, is within feldspar-hornblende porphyry and adjacent andesite agglomerates of the Upper Cretaceous Powell Creek Formation. These rocks are approximately one kilometre north of the contact with Upper Cretaceous plutonic rocks of the Coast Plutonic Complex. Mineralization consists of disseminated chalcopyrite, massive chalcopyrite veins, up to 2 centimetres thick and quartz-epidote-magnetite-chalcopyrite veins. Mineralized porphyry is slightly sericitic and silicic, and adjacent andesite agglomerate is silicic and chloritic. A grab sample of malachite stained quartz veins and slickensided rocks assayed 13.2 grams per tonne silver, 0.057 gram per tonne gold, 0.76 per cent copper and 0.02 per cent zinc (Assessment Report 17358, page 24).

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 157-169
EMPR EXPL 1986-C285-286; 1988-C133
EMPR ASS RPT 14936, *17358

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 955
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR OF 1987-3
GSC MAP 29-1963
GSC OF 534; 2207

DATE CODED: 1986/11/21
DATE REVISED: 1990/08/17

CODED BY: AFW
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 096**

NATIONAL MINERAL INVENTORY:

NAME(S): **NOAXE CREEK**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092002E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 01 06 N
LONGITUDE: 122 44 36 W
ELEVATION: 1158 Metres

NORTHING: 5651895
EASTING: 518003

LOCATION ACCURACY: Within 500M

COMMENTS: Located 500 metres northeast of the confluence of Noaxe and Tyaughton creeks.

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite Dolomite Quartz
ASSOCIATED: Calcite Serpentine
ALTERATION: Magnesite Quartz Fuchsite
ALTERATION TYPE: Quartz-Carb. Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork
CLASSIFICATION: Epithermal Replacement Epigenetic Industrial Min.
TYPE: M07 Ultramafic-hosted talc-magnesite
SHAPE: Irregular
COMMENTS: Along a major fault strand adjacent to the Marshall Creek fault system.

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic			Shulaps Ultramafic Complex

LITHOLOGY: Listwanite
Serpentinite

HOSTROCK COMMENTS: Slices of serpentinite along faults adjacent to the Marshall Creek fault system are altered to listwanite.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Bridge River
METAMORPHIC TYPE: Regional RELATIONSHIP: Pre-mineralization GRADE: Greenschist

CAPSULE GEOLOGY

The Noaxe Creek magnesite showing is 0.5 kilometres northeast of the confluence of Noaxe and Tyaughton creeks. The exposure is quartz-carbonate-mariposite altered serpentinite (listwanite) within a fault strand adjacent to the Cretaceous to early Tertiary Marshall Creek fault system. The serpentinite is probably related to the Permian and older Shulaps Ultramafic Complex to the east. Magnesite (of unknown abundance) comprises part of the listwanite alteration assemblage. This listwanite alteration assemblage along a major high angle fault is evidence for the intense focussed hydrothermal activity that has taken place, probably near-surface and relatively low temperature (epithermal).

BIBLIOGRAPHY

EMPR FIELDWORK 1974, p. 35; 1976, p. 47; 1985, pp. 303-310; 1986, pp. 23-29, 157-169; 1987, pp. 93-130; *1988, pp. 105-152; 1989, pp. 45-72; 1990, pp. 75-83
EMPR OF 1987-3; 1987-11; 1988-3; *1988-9; 1989-4; 1990-10
EMPR PF (Correspondence from Chief Mining Engineer to M.S. Hedley and from J.A. Mitchell to Chief Mining Engineer)
GSC OF 534; 2207

DATE CODED: 1986/10/07
DATE REVISED: 1991/10/30

CODED BY: BG
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 097**

NATIONAL MINERAL INVENTORY:

NAME(S): **BIG CREEK**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092003E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 10 40 N
LONGITUDE: 123 09 31 W
ELEVATION: 2073 Metres

NORTHING: 5669607
EASTING: 488913

LOCATION ACCURACY: Within 500M

COMMENTS: Located 4.5 kilometres northwest of Elbow Mountain.

COMMODITIES: Gold Silver Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Sphalerite Arsenopyrite Chalcopyrite
ASSOCIATED: Carbonate
ALTERATION: Malachite Sericite Quartz Carbonate Pyrite
ALTERATION TYPE: Sericitic Silicific'n Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Cretaceous
Cretaceous-Tertiary

GROUP

Undefined Group

FORMATION

Powell Creek

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Andesitic Lapilli Tuff
Andesitic Breccia
Epiclastic Sediment/Sedimentary Rock
Hornblende Feldspar Porphyry
Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Plutonic Rocks

PHYSIOGRAPHIC AREA: Chilcotin Plateau

INVENTORY

ORE ZONE: VEIN

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1986

COMMODITY

GRADE

Silver	4.5200	Grams per tonne
Gold	2.0700	Grams per tonne
Copper	0.0800	Per cent
Zinc	4.6600	Per cent

COMMENTS: Sample of 0.5-centimetre wide sphalerite-arsenopyrite-pyrite-chalcopyrite stringers in altered volcanic rocks.

REFERENCE: Assessment Report 15486.

CAPSULE GEOLOGY

The Big Creek polymetallic vein showing, 4.5 kilometres northwest of Elbow Mountain, is within andesitic tuff and breccia and minor epiclastic rocks of the informally named Upper Cretaceous Powell Creek Formation. These rocks are crosscut by a stock of Late Cretaceous to Early Tertiary hornblende feldspar porphyry and feldspar porphyry. A zone of pervasive quartz-sericite-pyrite and carbonate-sericite-quartz-pyrite alteration exposed over 700 by 200 metres contains veins, stockwork and disseminations of pyrite, sphalerite, arsenopyrite, and chalcopyrite. These polymetallic veins do not exceed one centimetre in thickness.

BIBLIOGRAPHY

EMPR FIELDWORK 1986, pp. 157-169
EMPR OF 1987-3
EMPR ASS RPT 8890, 10089, *15486, 15755
GSC P 67-54; 81-1A, pp. 293-297
GSC OF *534; 2207

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 958
REPORT: RGEN0100

BIBLIOGRAPHY

CJES 1984, Vol. 22, pp. 154-174

DATE CODED: 1987/09/01
DATE REVISED: 1991/10/30

CODED BY: LLC
REVISED BY: RGG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092O 098**

NATIONAL MINERAL INVENTORY:

NAME(S): **CROW'S BAR**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O08E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 18 12 N
LONGITUDE: 122 11 38 W
ELEVATION: 640 Metres

NORTHING: 5683866
EASTING: 556194

LOCATION ACCURACY: Within 500M

COMMENTS: The location given is for an area which straddles Crow's Bar Creek.

COMMODITIES: Bentonite

MINERALS

SIGNIFICANT: Montmorillonite
ALTERATION: Montmorillonite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: E06 Bentonite
SHAPE: Tabular
COMMENTS: Within 1000 metres of Fraser fault.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Rhyolitic Tuff
Volcanic Conglomerate

HOSTROCK COMMENTS: Volcanic rocks are correlative with the Kamloops Group east of the Fraser fault.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Bentonite occurrences are common adjacent to the Fraser fault along the eastern margin of the Chilcotin Plateau. Bentonite occurs in Eocene volcanic rocks of dominantly rhyolitic composition which are correlative with the Kamloops Group east of the Fraser fault. The Fraser fault system itself was probably instrumental in the formation of the bentonite deposits in areas of Eocene volcanic rocks in that the movement of the fault system caused the development of basins in which the bentonite formed.

While the volcanic rocks of the region have been dated as Eocene in age by both radiometric and paleontological methods, the age of formation of bentonite by the hydrothermal alteration of tephra is not known. However, it is likely that bentonite formation occurred not long after volcanism had ceased.

The Crow's Bar bentonite occurrence is part of a poorly exposed bentonitic sequence beneath a thick volcanic conglomerate. Exchangeable cation analyses yield, expressed in milliequivalents per 100 grams: calcium, 28.75; magnesium, 15.50; sodium, 6.5; and potassium, 3.75. The cation exchange capacity (CEC) is 45.5.

BIBLIOGRAPHY

EMPR FIELDWORK *1987, pp. 411-415
EMPR OF 1988-29
GSC OF 534; 2207

DATE CODED: 1988/03/24
DATE REVISED: 1991/02/22

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 099**

NATIONAL MINERAL INVENTORY:

NAME(S): **FRENCH BAR**

MINING DIVISION: Lillooet

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092001E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 12 58 N
LONGITUDE: 122 07 56 W
ELEVATION: 747 Metres

NORTHING: 5674215
EASTING: 560608

LOCATION ACCURACY: Within 500M

COMMENTS: Located at the centre of an area of low rounded hummocks.

COMMODITIES: Bentonite

MINERALS

SIGNIFICANT: Montmorillonite
ALTERATION: Montmorillonite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: E06 Bentonite
SHAPE: Tabular
COMMENTS: Within 500 metres of Fraser fault.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Rhyolitic Tuff
Rhyolitic Tephra
Rhyolitic Breccia
Rhyolite

HOSTROCK COMMENTS: Eocene volcanic rocks are correlative with the Kamloops Group east of the Fraser fault.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Bentonite occurrences are common adjacent to the Fraser fault along the eastern margin of the Chilcotin Plateau. Bentonite occurs in Eocene volcanic rocks of dominantly rhyolitic composition which are correlative with the Kamloops Group east of the Fraser fault. The Fraser fault system itself was probably instrumental in the formation of the bentonite deposits in areas of Eocene volcanic rocks in that the movement of the fault system caused the development of basins in which the bentonite formed.

While the volcanic rocks of the region have been dated as Eocene in age by both radiometric and paleontological methods, the age of formation of bentonite by the hydrothermal alteration of tephra is not known. However, it is likely that bentonite formation occurred not long after volcanism had ceased.

The French Bar bentonite occurrence occurs within volcanic rocks of Eocene age to the west of the Fraser fault but east of the Fraser River. The showing is poorly exposed and consists of bentonitic fine volcanic breccias and intercalated acid breccias.

BIBLIOGRAPHY

EMPR FIELDWORK *1987, pp. 411-415
EMPR OF 1988-29
GSC OF 534; 2207

DATE CODED: 1988/03/24
DATE REVISED: 1991/02/22

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092O 100**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOT 3155**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O08E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 19 11 N
LONGITUDE: 122 13 35 W
ELEVATION: 579 Metres

NORTHING: 5685664
EASTING: 553910

LOCATION ACCURACY: Within 500M

COMMENTS: Location given is the northern end of a lens of zeolitized tephra.

COMMODITIES: Zeolite

MINERALS

SIGNIFICANT: Clinoptilolite Heulandite
COMMENTS: Intermediate compositions of the heulandite-clinoptilolite series.
ALTERATION: Clinoptilolite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: E06 Bentonite
SHAPE: Tabular
DIMENSION: 500 x 10 Metres
COMMENTS: Steep southeasterly dipping lens.

STRIKE/DIP: 030/72E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Rhyolitic Tuff
Zeolite Tephra
Rhyolite
Arkosic Sandstone
Volcanic Breccia

HOSTROCK COMMENTS: Volcanic rocks are correlative with the Kamloops Group east of the Fraser fault.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Zeolite occurrences are common in volcanic rocks of Eocene age in the Fraser River area. These rocks are correlative with the Kamloops Group east of the Fraser fault; to the west of the fault the volcanic strata have not been formally named.

Zeolite deposits, accompanied by the development of bentonite, are formed by hydrothermal alteration of Eocene volcanic and sedimentary rocks. The proximity of many of these occurrences to the Fraser fault suggests that this and associated faults provided channelways for the passage of hydrothermal solutions.

Samples were taken at the northeastern end of a zeolitized rhyolite tuff. Heating the samples for 16 hours at 525 degrees indicates that the zeolite is an intermediate composition in the heulandite-clinoptilolite series. Exchangeable cation analyses yield, expressed in milli-equivalent per 100 grams: calcium, 42.50; magnesium, 2.75; sodium, 29.25; and potassium, 8.50. The cation exchange capacity (CEC) is 82.1 (Open File 1988-29).

BIBLIOGRAPHY

EMPR FIELDWORK *1987, pp. 411-415
EMPR OF 1988-29
GSC OF 534; 2207

DATE CODED: 1988/03/24
DATE REVISED: 1991/03/03

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 101**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH WARD CREEK**, N. WARD CREEK

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092001E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 08 03 N
LONGITUDE: 122 06 29 W
ELEVATION: 1006 Metres

NORTHING: 5665123
EASTING: 562406

LOCATION ACCURACY: Within 500M

COMMENTS: Location given is the centre of a 1000 metre long area on the north side of Ward Creek.

COMMODITIES: Bentonite

MINERALS

SIGNIFICANT: Montmorillonite
ALTERATION: Montmorillonite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: E06 Bentonite
SHAPE: Tabular
DIMENSION:
COMMENTS: Sequence dipping moderately northward into the hill.

STRIKE/DIP: 102/36E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Eocene

Unnamed/Unknown Group

Unnamed/Unknown Formation

LITHOLOGY: Rhyolitic Tephra
Rhyolite
Rhyolitic Tuff
Volcanic Breccia
Quartz Sandstone
Arkosic Sandstone

HOSTROCK COMMENTS: Volcanic and sedimentary rocks are correlative with the Kamloops Group to the east of the Fraser fault.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Bentonite occurrences are common adjacent to the Fraser fault along the eastern margin of the Chilcotin Plateau. Bentonite occurs in Eocene volcanic rocks of dominantly rhyolitic composition which are correlative with the Kamloops Group east of the Fraser fault. The Fraser fault system itself was probably instrumental in the formation of the bentonite deposits in areas of Eocene volcanic rocks in that the movement of the fault system caused the development of basins in which the bentonite formed.

While the volcanic rocks of the region have been dated as Eocene in age by both radiometric and paleontological methods, the age of formation of bentonite by the hydrothermal alteration of tephra is not known. However, it is likely that bentonite formation occurred not long after volcanism had ceased.

The North Ward Creek bentonite showing is within a northward dipping sequence containing 5 per cent white quartz sandstone, 15 per cent bentonite-rich sediments, 20 per cent quartz-feldspar sandstone with bentonite, and 60 per cent maroon and buff volcanic breccia.

BIBLIOGRAPHY

EMPR FIELDWORK *1987, pp. 411-415
EMPR OF *1988-29
GSC OF 534; 2207

DATE CODED: 1988/03/24
DATE REVISED: 1991/03/01

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 101**

MINFILE NUMBER: **092O 102**

NATIONAL MINERAL INVENTORY:

NAME(S): **SOUTH WARD CREEK**, S. WARD CREEK

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O01E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 06 31 N
LONGITUDE: 122 04 53 W
ELEVATION: 1036 Metres

NORTHING: 5662304
EASTING: 564307

LOCATION ACCURACY: Within 500M

COMMENTS: Location given is the centre of an area about 800 metres long.

COMMODITIES: Bentonite

MINERALS

SIGNIFICANT: Montmorillonite
ALTERATION: Montmorillonite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: E06 Bentonite
SHAPE: Tabular

DIMENSION:
COMMENTS: The showing is within the core of an anticline.

STRIKE/DIP: 148/56W

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Eocene	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Rhyolitic Tephra
Rhyolitic Tuff
Rhyolite
Volcanic Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Bentonite occurrences are common adjacent to the Fraser fault along the eastern margin of the Chilcotin Plateau. Bentonite occurs in Eocene volcanic rocks of dominantly rhyolitic composition which are correlative with the Kamloops Group east of the Fraser fault. The Fraser fault system itself was probably instrumental in the formation of the bentonite deposits in areas of Eocene volcanic rocks in that the movement of the fault system caused the development of basins in which the bentonite formed.

While the volcanic rocks of the region have been dated as Eocene in age by both radiometric and paleontological methods, the age of formation of bentonite by the hydrothermal alteration of tephra is not known. However, it is likely that bentonite formation occurred not long after volcanism had ceased.

The South Ward Creek showing occurs in the core of a northerly trending anticline where maroon and brown weathering, fine volcanic breccia, rhyolite tuff and bentonite-rich lenses up to 1.5 metre thick are exposed.

BIBLIOGRAPHY

EMPR FIELDWORK *1987, pp. 411-415
EMPR OF *1988-29
GSC OF 534; 2207

DATE CODED: 1988/03/24
DATE REVISED: 1991/03/01

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 103**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOORE LAKE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092001E
BC MAP:

MINING DIVISION: Lillooet

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 09 43 N
LONGITUDE: 122 12 07 W
ELEVATION: 1554 Metres

NORTHING: 5668137
EASTING: 555804

LOCATION ACCURACY: Within 500M

COMMENTS: The location given is centrally located relative to three outcrops of volcanic glass at EM0556000mE, EM5667550mN; EM0555800mE, EM5668400mN; and EM0555850mE, EM5668300mN (Open File 1988-29).

COMMODITIES: Perlite Volcanic Glass

MINERALS

SIGNIFICANT: Perlite Volcanic Glass
ASSOCIATED: Plagioclase Biotite
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Volcanogenic Industrial Min.
TYPE: R12 Volcanic glass - perlite
SHAPE: Tabular
DIMENSION: 2000 x 1000 x 10 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Probably in the core of a northwesterly trending syncline.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE: Eocene GROUP: Unnamed/Unknown Group FORMATION: Unnamed/Unknown Formation IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Flow Banded Rhyolite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Chilcotin Plateau
TERRANE: Methow Overlap Assemblage

CAPSULE GEOLOGY

Within Eocene volcanic rocks on the eastern margin of the Chilcotin Plateau, equivalent to the Kamloops Group volcanics to the east, are deposits of volcanic glass which, in both hand specimen and thin section, have the characteristics of perlite. The Moore Lake showing consists of flow banded, slightly porphyritic (plagioclase, hornblende, biotite) flows containing about 9 per cent water but not expandable upon heating. Farther to the northwest along the sample zone one of the samples collected is expandable upon heating to about 50 per cent of that of Aurun Mines perlite deposit near Empire Valley (Open File 1988-29).

BIBLIOGRAPHY

EMPR FIELDWORK *1987, pp. 411-415
EMPR OF *1988-29
GSC OF 534; 2207

DATE CODED: 1988/03/24
DATE REVISED: 1991/03/01

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 104**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOONEY'S RANCH**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092001E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 08 30 N
LONGITUDE: 122 06 13 W
ELEVATION: 1082 Metres

NORTHING: 5665961
EASTING: 562707

LOCATION ACCURACY: Within 500M

COMMENTS: The showing occurs within a low roadcut and in the roadbed on a disused portion of the road down to Mooney's Ranch.

COMMODITIES: Volcanic Glass

MINERALS

SIGNIFICANT: Volcanic Glass
ASSOCIATED: Plagioclase Pyroxene
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Volcanogenic Industrial Min.
SHAPE: Tabular
DIMENSION: 20 x 10 x 5 Metres
COMMENTS: Minimum dimensions are given of the road exposures which are surrounded by drift for at least 1 kilometre in all directions.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Eocene	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Volcanic Glass
Volcanic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Eocene volcanic rocks near the eastern margin of the Chilcotin Plateau but west of the Fraser River are correlative with the Kamloops Group to the east of the river. Although most of the volcanic rocks comprise breccias and tuff, in some areas glassy volcanic flows are exposed. The volcanic glass, both in hand specimen and thin section has the characteristics of perlite. The Mooney's Farm occurrence is a road exposure of volcanic glass isolated by drift from another outcrop of volcanic glass (Ward Creek - 0920 105) with which it may connect under the drift cover. Chemical analysis shows that this glass contains about 9 per cent H2O but is not expandable upon heating.

BIBLIOGRAPHY

EMPR FIELDWORK *1987, pp. 411-415
EMPR OF *1988-29
GSC OF 534; 2207

DATE CODED: 1988/03/24
DATE REVISED: 1991/03/01

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 105**

NATIONAL MINERAL INVENTORY:

NAME(S): **WARD CREEK**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092001E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 56 N
LONGITUDE: 122 05 28 W
ELEVATION: 1052 Metres

NORTHING: 5664921
EASTING: 563594

LOCATION ACCURACY: Within 500M

COMMENTS: On the ridge top on the north side of Ward Creek.

COMMODITIES: Volcanic Glass

MINERALS

SIGNIFICANT: Volcanic Glass
ASSOCIATED: Plagioclase Pyroxene
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Volcanogenic Industrial Min.
TYPE: R12 Volcanic glass - perlite
SHAPE: Tabular
DIMENSION: 50 x 20 x 15 Metres
COMMENTS: A vertically oriented flow based on flow layering.

STRIKE/DIP: 315/90

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene			Unnamed/Unknown Informal

LITHOLOGY: Glass

HOSTROCK COMMENTS: The volcanic assemblage is correlative with the Kamloops Group to the east of the Fraser River.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Within Eocene volcanic rocks on the eastern margin of the Chilcotin Plateau are deposits of volcanic glass which, in both hand specimen and thin section has the characteristics of perlite. Most of the volcanic rocks of the region are breccias and tuffs but in some areas volcanic flows in which the matrix is mainly glass have been extruded.

The Ward Creek glass showing is a subvertical flow which yields about 9 per cent H₂O but is not expandable upon heating. To the northwest, there is no outcrop between this occurrence and that of Mooney's Ranch (0920 104). It is likely, however, that both occurrences are part of the same, mainly drift covered, flow.

BIBLIOGRAPHY

EMPR FIELDWORK *1987, pp. 411-415
EMPR OF 1988-29
GSC OF 534; 2207

DATE CODED: 1988/03/24
DATE REVISED: 1991/03/02

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092O 106**

NATIONAL MINERAL INVENTORY:

NAME(S): **FRENCH BAR CREEK**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O01E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 10 33 N
LONGITUDE: 122 13 16 W
ELEVATION: 1593 Metres

NORTHING: 5669667
EASTING: 554447

LOCATION ACCURACY: Within 500M

COMMENTS: On the ridge crest overlooking South French Bar Creek and Moore Lake.

COMMODITIES: Perlite

MINERALS

SIGNIFICANT: Perlite
ASSOCIATED: Biotite Hornblende Plagioclase
MINERALIZATION AGE: Eocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Volcanogenic Industrial Min.
TYPE: R12 Volcanic glass - perlite
SHAPE: Tabular
DIMENSION: 50 x 30 x 10 Metres

STRIKE/DIP: 315/32E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Porphyritic Flow Banded Dacite
Volcanic Glass

HOSTROCK COMMENTS: These rocks are probably correlative with the Kamloops Group east of the Fraser River.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Within Eocene volcanic rocks on the eastern margin of the Chilcotin Plateau are glassy volcanic flows in which the glass, both in hand specimen and thin section, has characteristics of perlite. These rocks are probably equivalent to the Eocene Kamloops Group to the east of the Fraser River.

Whereas most of the occurrences of volcanic glass do not expand upon heating and, hence, are not strictly perlite, the French Bar Creek showing contains about 9 per cent water and upon heating expands to about 50 per cent of the perlite mined by Aurun Mines near Empire Valley. The French Bar Creek showing is a single large outcrop of porphyritic flow banded dacite.

BIBLIOGRAPHY

EMPR FIELDWORK *1987, pp. 411-415
EMPR OF 1988-29
GSC OF 534; 2207

DATE CODED: 1988/03/24
DATE REVISED: 1991/03/02

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 107**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH MOONEY'S**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092001E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 09 18 N
LONGITUDE: 122 05 21 W
ELEVATION: 900 Metres

NORTHING: 5667456
EASTING: 563699

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Zeolite

MINERALS

SIGNIFICANT: Clinoptilolite
COMMENTS: Clinoptilolite-rich intermediate composition.
ALTERATION: Clinoptilolite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
SHAPE: Tabular
DIMENSION: 30 x 20 x 10 Metres STRIKE/DIP: 085/53S TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Rhyolitic Tuff

HOSTROCK COMMENTS: The volcanic assemblage is correlative with the Kamloops Group east of the Fraser River.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow Overlap Assemblage
PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The North Mooney's zeolite showing occurs within rhyolitic tuff considered to be of Eocene age and correlative with the Kamloops Group to the east of the Fraser River. Zeolite minerals in the tuff have formed by hydrothermal alteration of the rhyolite. There is a spatial relationship between alteration zones and faulting, suggesting that the Fraser and associated faults provided channelways for the hydrothermal solutions.

The showing is an isolated outcrop of layered rhyolitic tuff in generally drift covered terrain. Heating for 16 hours at 525 degrees celsius gave indication that the tuff contains an clinoptilolite-rich intermediate member of the heulandite-clinoptilolite series. Exchangeable cation analyses, expressed in milli-equivalents per 100 grams are: calcium, 28.25; magnesium, 1.13; sodium, 33.00 and potassium, 6.50. The cation exchange capacity (CEC) is 69.9.

BIBLIOGRAPHY

EMPR FIELDWORK *1987, pp. 411-415
EMPR OF 1988-29
GSC OF 534; 2207

DATE CODED: 1988/03/24
DATE REVISED: 1991/03/02

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092O 108**

NATIONAL MINERAL INVENTORY:

NAME(S): **SOUTH MOONEY'S**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O01E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 51 N
LONGITUDE: 122 05 12 W
ELEVATION: 1021 Metres

NORTHING: 5664771
EASTING: 563907

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Zeolite

MINERALS

SIGNIFICANT: Clinoptilolite
COMMENTS: Clinoptilolite-rich composition.
ALTERATION: Clinoptilolite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
SHAPE: Tabular
DIMENSION: 200 x 200 x 100 Metres STRIKE/DIP: 315/80E TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE: Eocene GROUP: Unnamed/Unknown Group FORMATION: Unnamed/Unknown Formation IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Felsic Tuff
Volcanic Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Chilcotin Plateau
TERRANE: Methow Overlap Assemblage

CAPSULE GEOLOGY

The South Mooney's zeolite showing is within volcanic rocks of Eocene age which are correlative with Kamloops Group to the east. These volcanics represent an overlap assemblage on Methow and, east of the Fraser Fault, Cache Creek terranes.

The showing is within a steeply dipping sequence of acid volcanic breccia, and locally layered tuffs. Heating samples at 525 degrees celsius, for 16 hours indicates that the clinoptilolite end member of the heulandite-clinoptilolite series is present. Exchangeable cation analyses expressed in milli-equivalents per 100 grams, is Ca 18.75, Mg 0.53, Na 23.75, and K 18.75. The cation exchange capacity (CEC) 58.5.

BIBLIOGRAPHY

EMPR FIELDWORK *1987, pp. 411-415
EMPR OF 1988-29
GSC OF 534; 2207

DATE CODED: 1988/03/24
DATE REVISED: 1991/03/02

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 109**

NATIONAL MINERAL INVENTORY:

NAME(S): **WARD CANYON**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092001E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 33 N
LONGITUDE: 122 05 18 W
ELEVATION: 892 Metres

NORTHING: 5664213
EASTING: 563798

LOCATION ACCURACY: Within 500M

COMMENTS: At the base of cliffs which extend to the ridge crest on the north side of Ward Creek.

COMMODITIES: Zeolite

MINERALS

SIGNIFICANT: Clinoptilolite
COMMENTS: Clinoptilolite-rich composition.

ALTERATION: Clinoptilolite

ALTERATION TYPE: Zeolitic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.

SHAPE: Tabular

COMMENTS: Probably north trending and steeply dipping. Dimension is about 20 metres thick.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Rhyolitic Tuff
Rhyolitic Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Ward Canyon zeolite showing occurs within rhyolitic volcanic rocks of Eocene age which are probably correlative with the Kamloops Group to the east of the Fraser River. The Eocene volcanic rocks on the eastern part of the Chilcotin Plateau are largely drift covered but good exposures occur in creeks draining from the Chilcotin Plateau down to the Fraser River.

In Ward Canyon, steeply dipping rhyolite breccia, which is probably variably zeolitized, is exposed in the canyon walls. Heating a rhyolite sample for 16 hours at 475 degrees celsius indicates that the composition is clinoptilolite-rich. Exchangeable cation analyses, expressed in milli-equivalents per 100 grams, yield: calcium, 29.25; magnesium, 2.75; sodium, 38.50; and potassium, 5.25. The cation exchange capacity (CEC) was 72.3.

BIBLIOGRAPHY

EMPR FIELDWORK *1987, pp. 411-415
EMPR OF 1988-29
GSC OF 534; 2207

DATE CODED: 1988/03/24
DATE REVISED: 1991/03/02

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 110**

NATIONAL MINERAL INVENTORY:

NAME(S): **WATSON BAR**

MINING DIVISION: Lillooet

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092001E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 05 52 N
LONGITUDE: 122 03 14 W
ELEVATION: 640 Metres

NORTHING: 5661124
EASTING: 566248

LOCATION ACCURACY: Within 500M

COMMENTS: In the first stream gully which enters the west side of the Fraser River north of Watson Bar Creek.

COMMODITIES: Zeolite

MINERALS

SIGNIFICANT: Clinoptilolite
COMMENTS: Clinoptilolite-rich composition.

ALTERATION: Clinoptilolite

ALTERATION TYPE: Zeolitic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Rhyolitic Tuff
Rhyolitic Breccia

HOSTROCK COMMENTS: Volcanic rocks are correlative with the Eocene Kamloops Group to the east of the Fraser River.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Watson Bar zeolite showing occurs within poorly exposed felsic volcanic rocks which may be correlated with the Kamloops Group of Eocene age, east of the Fraser River. These rocks form an overlap assemblage on both Methow and Cache Creek terranes. The close spatial relationship of zeolite occurrences and faults of the Fraser fault system suggests that these faults provided channelways for that hydrothermal solutions that caused zeolite alteration of the volcanics.

Heating of a sample, taken from the Watson Bar showing, at 475 degrees celsius for 16 hours indicates that the zeolite mineral is clinoptilolite-rich.

BIBLIOGRAPHY

EM EXPL 1998-57-64
EMPR FIELDWORK *1987, pp. 411-415
EMPR OF 1988-29
GSC OF 534; 2207

DATE CODED: 1988/03/24
DATE REVISED: 1991/03/02

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 111**

NATIONAL MINERAL INVENTORY:

NAME(S): **B1**, GANG RANCH B1, TABLE MOUNTAIN

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092009W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 31 44 N
LONGITUDE: 122 23 45 W
ELEVATION: 990 Metres

NORTHING: 5708815
EASTING: 541910

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the B1 showing (Open File 1989-27).

COMMODITIES: Bentonite

MINERALS

SIGNIFICANT: Montmorillonite
ALTERATION TYPE: Argillic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: E06 Bentonite
SHAPE: Tabular
DIMENSION: 750 x 100 Metres
COMMENTS: Area of bentonitic ash layers.

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

ISOTOPIC AGE: 42.6 +/- 1.5 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Hornblende

LITHOLOGY: Rhyolitic Tuff
Andesitic Breccia
Dacitic Breccia
Rhyolite

HOSTROCK COMMENTS: Radiometric date from the Canadian Journal of Earth Sciences 21, pages 1132 to 1144.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Table Mountain bentonite showing occurs within an assemblage of rhyolitic tuff of Eocene age west of the Fraser Fault, which are correlative with the Kamloops Group east of the fault. These volcanics comprise an overlap assemblage on the Methow Terrane of the Intermontane tectonic belt.

White bentonitic ash layers, recognised over an area of 100 metres by 750 metres, occur within a succession of pink to maroon andesitic to dacitic volcanic breccia.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 519-523
EMPR OF 1989-27
GSC OF 534; 2207
CJES 21, pp. 1132-1144

DATE CODED: 1990/05/09
DATE REVISED: 1991/02/27

CODED BY: KG
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 112**

NATIONAL MINERAL INVENTORY:

NAME(S): **B2**, GANG RANCH B2, CHURN CREEK WEST

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092009W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 31 23 N
LONGITUDE: 122 19 47 W
ELEVATION: 425 Metres

NORTHING: 5708206
EASTING: 546502

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the B2 showing (Open File 1989-27).

COMMODITIES: Bentonite

MINERALS

SIGNIFICANT: Montmorillonite
ALTERATION: Montmorillonite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: E06 Bentonite
SHAPE: Tabular
MODIFIER: Faulted

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

ISOTOPIC AGE: 42.6 +/- 1.5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Hornblende

LITHOLOGY: Rhyolitic Tuff
Andesitic Breccia
Dacitic Breccia

HOSTROCK COMMENTS: Age date from Canadian Journal of Earth Sciences 21, pages 1132-1144.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Churn Creek West bentonite showing is likely a faulted western extension of the Churn Creek showing (0920 081) located near the mouth of Churn Creek. The Churn Creek West occurrence is situated along the southern slopes of the Churn Creek valley.

The showing occurs within an assemblage of dominantly volcanic rocks of Eocene age which are correlative with those of the Kamloops Group east of the Fraser fault. At least two bentonitic ash layers, typically ten to twenty metres thick, occur within the accumulation of andesitic and dacitic volcanic breccias exposed along Churn Creek. Deformation along the Fraser fault has caused the bentonite layers to be structurally repeated on high angle, east-dipping reverse faults. This bentonite occurrence is the largest of the structurally repeated layers exposed along Churn Creek. It is likely that many of these layers extend both north and south beneath the Quaternary cover.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 519-523
EMPR OF *1989-27
GSC OF 534; 2207
CJES 21, pp. 1132-1144

DATE CODED: 1990/05/09
DATE REVISED: 1991/02/27

CODED BY: KG
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 113**

NATIONAL MINERAL INVENTORY:

NAME(S): **B3**, GANG RANCH B3, EMPIRE VALLEY ROAD

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092009W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 30 11 N
LONGITUDE: 122 17 54 W
ELEVATION: 502 Metres

NORTHING: 5706002
EASTING: 548701

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the B3 showing at the roadcut at the northern end of the Empire Valley road (Open File 1989-27).

COMMODITIES: Bentonite

MINERALS

SIGNIFICANT: Bentonite Montmorillonite
ALTERATION: Montmorillonite Zeolite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: E06 Bentonite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Eocene	Unnamed/Unknown Group	Unnamed/Unknown Formation	

ISOTOPIC AGE: 42.6 +/- 1.5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Hornblende

LITHOLOGY: Rhyolitic Tuff
Andesite Breccia

HOSTROCK COMMENTS: Age date from Canadian Journal of Earth Sciences 21, pages 1132-1144.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Empire Valley bentonite showing occurs within Eocene volcanic rocks to the west of the Fraser fault, correlative with the Kamloops Group volcanics east of the fault.

The showing is a five to ten metre wide, subvertical lens of bentonitic ash exposed in a roadcut at the northern end of the Empire Valley road. Movement along the Fraser fault, 300 metres to the east, has resulted in a complex geometry of high angle faulting exposed across the roadcut. The bentonite has been juxtaposed against Eocene conglomerate to the west and dark brown-weathering basalt to the east.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 519-523
EMPR OF *1989-27
GSC OF 534; 2207
CJES 21, pp. 1132-1144

DATE CODED: 1990/05/09
DATE REVISED: 1991/02/27

CODED BY: KG
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 114**

NATIONAL MINERAL INVENTORY:

NAME(S): **B4**, GANG RANCH B4, CENTRAL EMPIRE VALLEY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092008W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 28 13 N
LONGITUDE: 122 16 56 W
ELEVATION: 670 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5702368
EASTING: 549855

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the B4 showing (Open File 1989-27).

COMMODITIES: Bentonite

MINERALS

SIGNIFICANT: Montmorillonite
ALTERATION: Montmorillonite Zeolite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: E06 Bentonite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Rhyolitic Tuff
Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

PHYSIOGRAPHIC AREA: Chilcotin Plateau

Overlap Assemblage

CAPSULE GEOLOGY

The Central Empire Valley bentonite showing occurs within a faulted assemblage of Eocene rhyolitic tuff west of the Fraser fault, equivalent to the Kamloops Group east of the fault. These volcanics comprise an overlap assemblage on the Methow Terrane of the Intermontane belt.

The bentonite showing occurs in proximity to a brownish red basalt flow which can be traced northwards along strike for about two kilometres. Where the basalt is exposed to the north, it is overlain by rhyolitic crystal tuff with interbedded bentonite layers. It is probable that the bentonite at this locality is continuous along strike with the bentonite to the north at the Empire Valley Road showing (0920 113).

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 519-523
EMPR OF *1989-27
GSC OF 534; 2207

DATE CODED: 1990/05/09
DATE REVISED: 1991/02/27

CODED BY: KG
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 115**

NATIONAL MINERAL INVENTORY:

NAME(S): **B5**, GANG RANCH B5, GRINDER CREEK

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092008E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 23 16 N
LONGITUDE: 122 14 10 W
ELEVATION: 550 Metres

NORTHING: 5693226
EASTING: 553153

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the B5 showing (Open File 1989-27).

COMMODITIES: Bentonite

MINERALS

SIGNIFICANT: Montmorillonite
ALTERATION: Zeolite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: E06 Bentonite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene
Paleozoic-Mesozoic

GROUP

Unnamed/Unknown Group
Cache Creek

FORMATION

Unnamed/Unknown Formation
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Rhyolitic Tuff
Rhyolite
Basalt Flow
Basalt Breccia
Basalt
Chert
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

Methow

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Bentonite occurrences are common adjacent to the Fraser fault along the eastern margin of the Chilcotin Plateau. Bentonite occurs in Eocene volcanic rocks of dominantly rhyolitic composition which are correlative with the Kamloops Group east of the Fraser fault. The Fraser fault system itself was probably instrumental in the formation of the bentonite deposits in areas of Eocene volcanic rocks in that the movement of the fault system caused the development of basins in which the bentonite formed.

While the volcanic rocks of the region have been dated as Eocene in age by both radiometric and paleontological methods, the age of formation of bentonite by the hydrothermal alteration of tephra is not known. However, it is likely that bentonite formation occurred not long after volcanism had ceased.

The Grinder Creek bentonite showing occurs to the west of, and adjacent to, the Fraser fault. This fault has juxtaposed white bentonite-rich tuff layers with chert and argillite of the Cache Creek terrane. The bentonite layers are intercalated with maroon and brown basalt flows and breccia and stratigraphically underlie a well bedded sequence of Eocene sedimentary rocks.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 519-523
EMPR OF *1989-27
GSC OF 534

*Green, K.C. (1990): Structure, Stratigraphy and Alteration of the Cretaceous and Tertiary Strata in the Gang Ranch Area, M.Sc. Thesis, University of Calgary

DATE CODED: 1990/05/09
DATE REVISED: 1991/02/27

CODED BY: KG
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 115**

MINFILE NUMBER: **0920 116**

NATIONAL MINERAL INVENTORY:

NAME(S): **B6**, GANG RANCH B6, LONE CABIN CREEK

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092008W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 19 47 N
LONGITUDE: 122 18 06 W
ELEVATION: 700 Metres

NORTHING: 5686724
EASTING: 548653

LOCATION ACCURACY: Within 500M

COMMENTS: Location of B6 showing (Open File 1989-27).

COMMODITIES: Bentonite

MINERALS

SIGNIFICANT: Montmorillonite
ALTERATION: Zeolite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: E06 Bentonite
SHAPE: Tabular
DIMENSION: 750 x 20 Metres
COMMENTS: Maximum known dimensions of the deposit.

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Eocene	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Rhyolitic Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Methow

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Lone Cabin Creek bentonite showing occurs within an assemblage of Eocene volcanic and sedimentary rocks west of the Fraser fault, equivalent to the Kamloops Group east of the fault. This assemblage comprises an overlap assemblage which, in the region of the showing, rests unconformably on the Cretaceous Spences Bridge Group.

The showing comprises a 10 to 20 metre thick layer of bentonite exposed over a strike length of about 750 metres. Slumping has obscured the stratigraphic relations of the bentonite with adjacent strata.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, PP. 519-523
EMPR OF *1989-27
GSC OF 534; 2207
*Green K.C. (1990): Structure, Stratigraphy and Alteration of the Cretaceous and Tertiary Strata in the Gang Ranch Area, M.Sc. Thesis, University of Calgary

DATE CODED: 1990/05/09
DATE REVISED: 1991/02/27

CODED BY: KG
REVISED BY: DGB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **0920 117**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHURN CREEK ZEOLITE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092009W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 31 17 N
LONGITUDE: 122 19 55 W
ELEVATION: 365 Metres

NORTHING: 5708019
EASTING: 546350

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Zeolite

MINERALS

SIGNIFICANT: Zeolite Clinoptilolite Heulandite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Rhyolitic Crystal Tuff
Rhyolitic Lapilli Tuff
Andesitic Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Churn Creek zeolite occurrence occurs within Eocene volcanic rocks which form an overlap assemblage on older rocks. These volcanics are correlative with the Kamloops Group east of the Fraser fault.

The location is that of the westernmost occurrence of rhyolitic crystal and lapilli tuff in the Churn Creek area, approximately ten to twenty metres thick. Structurally overlying the rhyolite is red to pink andesitic breccia. X-ray diffraction analysis of samples from this exposure identified the presence of clinoptilolite-heulandite group zeolites.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 519-523
EMPR OF *1989-27
GSC OF 534; 2207

DATE CODED: 1990/05/09
DATE REVISED: 1991/03/03

CODED BY: KG
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 118**

NATIONAL MINERAL INVENTORY:

NAME(S): **2700 ROAD**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O09W 092O08W
BC MAP:

Open Pit

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 30 02 N
LONGITUDE: 122 18 30 W
ELEVATION: 640 Metres

NORTHING: 5705718
EASTING: 548010

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Zeolite

MINERALS

SIGNIFICANT: Clinoptilolite Heulandite
ALTERATION: Zeolite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: D01 Open-system zeolites
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Rhyolitic Crystal Tuff
Rhyolitic Lapilli Tuff
Rhyolitic Tephra
Rhyolite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The 2700 Road zeolite occurrence is within volcanic rocks of Eocene age which crop out to the west of the Fraser fault and which are correlative with similar rocks of the Kamloops Group to the east of the fault. These volcanics comprise an overlap assemblage within the Intermontane belt.

Rhyolitic tephra of the 2700 Road showing is northwest trending and is exposed over an area about 50 metres by 500 metres. The showing consists of bentonite-rich ash layers grading upwards into well bedded crystal and lapilli tuff. X-ray diffraction analysis of the tuff has identified clinoptilolite-heulandite group zeolites.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 519-523
EMPR OF *1989-27
GSC OF 534; 2207

DATE CODED: 1990/05/09
DATE REVISED: 1991/02/27

CODED BY: KG
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092O 119**

NATIONAL MINERAL INVENTORY:

NAME(S): **CENTRAL EMPIRE VALLEY ROAD**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 29 07 N
LONGITUDE: 122 17 45 W
ELEVATION: 730 Metres

NORTHING: 5704027
EASTING: 548894

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Zeolite

MINERALS

SIGNIFICANT: Clinoptilolite Heulandite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: D01 Open-system zeolites
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Eocene	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Rhyolitic Lapilli Tuff
Basaltic Breccia
Rhyolite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Central Empire Road zeolite showing occurs within Eocene volcanic rocks which, west of the Fraser fault, are correlative with those of the Kamloops Group to the east of the fault.

At the Central Empire valley showing ochre red to brown basaltic breccia is overlain by rhyolitic lapilli tuff with minor interbeds of bentonite-rich ash. This tephra unit attains a thickness of about 20 metres. Analysis by X-ray diffraction has identified clinoptilolite-heulandite group zeolites. Cation exchange analysis of this sample (C2) determined an exchange capacity of 87.0 milli-equivalent per 100 grams.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 519-523
EMPR OF *1989-27
GSC OF 534; 2207

DATE CODED: 1990/05/09
DATE REVISED: 1991/02/27

CODED BY: KG
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 120**

NATIONAL MINERAL INVENTORY:

NAME(S): **GRINDER CREEK ZEOLITE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O08E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 23 55 N
LONGITUDE: 122 14 35 W
ELEVATION: 760 Metres

NORTHING: 5694425
EASTING: 552658

LOCATION ACCURACY: Within 500M

COMMENTS: Zeolite location Z4 on Open File 1989-27 - Geology and Industrial Minerals in the Gang Ranch Area.

COMMODITIES: Zeolite

MINERALS

SIGNIFICANT: Clinoptilolite Heulandite
ALTERATION: Zeolite
ALTERATION TYPE: Zeolitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Hydrothermal Industrial Min.
TYPE: D01 Open-system zeolites
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Eocene

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Rhyolitic Lapilli Tuff
Rhyolite
Andesitic Breccia
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Methow

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Grinder Creek zeolite showing is within an assemblage of rhyolitic and andesitic rocks of Eocene age located west of the Fraser fault and which are correlative with those of the Kamloops Group east of the fault.

The location of the showing is the centre of a northwest elongate tephra layer approximately 20 metres by 300 metres. The tephra, interlayered with andesitic volcanic breccia, is composed mainly of green lapilli tuff. X-ray diffraction of the tuff has identified clinoptilolite-heulandite group zeolites. The cation exchange capacity for this sample (C5) is of 106.0 milli-equivalent per 100 grams.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 519-523
EMPR OF *1989-27
GSC OF 534; 2207

DATE CODED: 1990/05/09
DATE REVISED: 1991/02/27

CODED BY: KG
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 121**

NATIONAL MINERAL INVENTORY:

NAME(S): **TWIN CREEK**, ZAN 5, EAST TWIN CREEK,
LORD RIVER

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092004E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 19 N
LONGITUDE: 123 40 40 W
ELEVATION: 2140 Metres

NORTHING: 5663604
EASTING: 452566

LOCATION ACCURACY: Within 500M

COMMENTS: Location is that of the Main East Twin Creek showing, from Figures 6 and 7, Assessment Report 18059.

COMMODITIES: Arsenic Mercury Antimony Gold

MINERALS

SIGNIFICANT: Realgar Orpiment Cinnabar
ASSOCIATED: Quartz Carbonate
ALTERATION: Quartz Ankerite Siderite Kaolinite Chalcedony
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Epithermal Mesothermal Industrial Min. Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation
SHAPE: Tabular
MODIFIER: Fractured

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Cretaceous Taylor Creek Undefined Formation

LITHOLOGY: Andesitic Tuff
Andesitic Flow
Andesitic Breccia
Volcanic Argillite
Volcanic Siltstone
Volcanic Sandstone
Volcanic Conglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Overlap Assemblage

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1990
SAMPLE TYPE: Channel
COMMODITY GRADE PERCENT
Arsenic 0.2000 Per cent
REFERENCE: Bulletin 81.

CAPSULE GEOLOGY

A series of intensely silicified fracture zones, one of which carries considerable realgar mineralization occur on the banks of a creek in a broad drift-covered valley that drains northward into the Tchaikazan River. This valley, here referred to as Twin Creek, is underlain by volcanic tuffs and argillaceous sediments of the Lower Cretaceous Taylor Creek Group. A lobe of granodiorite of the Jurassic to Tertiary Coast Plutonic Complex forms the southwestern head of the valley, approximately 500 metres from the mineralization. Distinct orange-weathering zones of rubble and outcrop occur 35 metres apart on either side of the creek, and a third isolated zone is exposed 150 metres further upstream. Quartz-carbonate veining occurs within areas of quartz-ankerite and siderite-kaolinite alteration. Vein breccias contain moderately silicified volcanic fragments as well as banded chalcedonic vein material indicating silicified volcanic fragments as well as banded chalcedonic vein material indicating multiple episodes of brecciation and siliceous healing. Cavities lined with quartz and carbonate crystals are

CAPSULE GEOLOGY

common. Realgar, orpiment and traces of cinnabar occur as fine disseminations, in veinlets, and as crust on fracture planes in one zone approximately 4.5 metres in true width.

Assays of two channel samples across this zone graded an average of 0.2 per cent arsenic and selected samples contain up to 0.4 per cent arsenic; antimony values range from 0.007 to 0.011 per cent (Bulletin 81). Precious and base metal values are low in the zone of visible mineralization however 0.1 to 0.2 grams per tonne gold are present in samples taken from the other alteration zones.

The area is held as the Lord claims by International Jaguar Equities Inc.

BIBLIOGRAPHY

EMPR ASS RPT *18059
EMPR BULL 81
EMPR EXPL 1988, p. C134
EMPR FIELDWORK *1986, pp. 231-243; *1988, pp. 153-158
EMPR OF 1987-12
GSC OF 534; 2207

DATE CODED: 1989/04/24
DATE REVISED: 1991/02/22

CODED BY: GS
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 122**

NATIONAL MINERAL INVENTORY:

NAME(S): **DISCORD CREEK, ZAN 1**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092004W 092004E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 05 41 N
LONGITUDE: 123 45 08 W
ELEVATION: 2225 Metres

NORTHING: 5660628
EASTING: 447325

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Molybdenum Gold Silver Zinc

MINERALS

SIGNIFICANT:	Chalcopyrite	Molybdenite	Pyrite	Pyrrhotite
ASSOCIATED:	Pyrite	Malachite	Quartz	
ALTERATION:	Quartz	Calcite	Clay	Limonite Gypsum
	Selenite			
ALTERATION TYPE:	Argillic	Quartz-Carb.		Oxidation
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER:	Vein	Breccia	
CLASSIFICATION:	Epithermal	Hydrothermal	Epigenetic
TYPE:	I05	Polymetallic veins	Ag-Pb-Zn±Au
SHAPE:	Bladed		
MODIFIER:	Fractured		

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Lower Cretaceous Eocene	Taylor Creek	Undefined Formation	Coast Plutonic Complex

LITHOLOGY: Granodiorite
Diorite
Pyroclastic Rhyolite
Volcanic Sediment/Sedimentary
Siltstone
Greywacke
Dacite Tuff
Argillaceous Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline	PHYSIOGRAPHIC AREA: Pacific Ranges
TERRANE: Overlap Assemblage	

INVENTORY

ORE ZONE: SHOWING	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1988
SAMPLE TYPE: Grab	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	100.0000 Grams per tonne
Gold	4.9300 Grams per tonne
COMMENTS: Fractured and brecciated granodiorite.	
REFERENCE: Assessment Report 18059.	

CAPSULE GEOLOGY

The Discord Creek showing occurs in a region underlain by granodiorite of the Jurassic to Tertiary Coast Plutonic Complex in contact with volcanic and sedimentary rocks of the Lower Cretaceous Taylor Creek Group. The contact between the intrusive (Eocene granodiorite) and volcanic rocks is interpreted as a fault. Two related mineralized zones have been examined on the property, the Discord Creek zone and the Zan 1 zone. A small branching quartz vein carrying chalcopyrite and molybdenite located in Discord Creek follows a fracture system through both intrusive and volcanic lithologies. The rocks are brecciated and quartz-carbonate or clay alteration is common. Pyritic gossanous material with malachite can be found in the talus below. The vein was traced upslope for over 80 metres and was seen to extend above into steep slopes. Anomalous values in precious metals, precious metal

CAPSULE GEOLOGY

indicators (mercury, arsenic, antimony) and base metals (copper, 4.5 per cent and zinc, 0.16 per cent) were determined from this vein (Bulletin 81). This vein occurs within a zone of the intensely fractured and brecciated kaolinized granodiorite. Gypsum (selenite) also occurs along fractures and as a matrix material to the granodiorite fragments. The best grab sample from this zone contained 4.93 grams per tonne gold and 100 grams per tonne silver (Assessment Report 18059).

The Zan zone contains low amounts of gold and silver but much higher amounts of mercury.

BIBLIOGRAPHY

EMPR ASS RPT *18059
EMPR BULL *81
EMPR EXPL 1988-C134
EMPR FIELDWORK *1986, pp. 231-243; 1988, pp. 153-158; 1992, p. 458
EMPR OF 1986-6; 1987-12
GSC OF 534; 2207
GSC P 1986-1; 1987-1

DATE CODED: 1989/04/25
DATE REVISED: 1991/02/22

CODED BY: GS
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 124**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT GODDARD**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092004W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 12 41 N
LONGITUDE: 123 58 02 W
ELEVATION: 2133 Metres

NORTHING: 5673777
EASTING: 432440

LOCATION ACCURACY: Within 500M

COMMENTS: The showing occurs to the immediate east of Chilko Lake at the base of Mount Goddard (Bulletin 81).

COMMODITIES: Copper Silver Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Pyrrhotite

ASSOCIATED: Quartz

ALTERATION: Chlorite Epidote Carbonate Clay Limonite

Malachite Azurite

ALTERATION TYPE: Propylitic Argillic Oxidation Silicific'n

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated

CLASSIFICATION: Porphyry

TYPE: L04 Porphyry Cu ± Mo ± Au

SHAPE: Tabular

MODIFIER: Faulted

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Lower Cretaceous
Mesozoic-Cenozoic

GROUP

Taylor Creek

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Coast Plutonic Complex

LITHOLOGY: Pyroclastic Basalt
Andesitic Breccia
Volcanic Sandstone
Greywacke
Argillite
Dacitic Tuff
Porphyritic Granodiorite

HOSTROCK COMMENTS: Porphyritic granodiorite has intruded sedimentary and volcanic rocks of the Taylor Creek Group.

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline

TERRANE: Overlap Assemblage

METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Pacific Ranges

RELATIONSHIP:

GRADE: Hornfels

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1990

SAMPLE TYPE: Chip

COMMODITY

GRADE

Copper

1.7600

Per cent

REFERENCE: Bulletin 81.

CAPSULE GEOLOGY

Disseminated and veinlet copper mineralization is exposed adjacent to a granodiorite intrusion in an area of complex faulting at the base of Mount Goddard. Volcanic flows and tuffs of Lower Cretaceous age have been thrust over interbedded sediments and volcanics of older Lower Cretaceous Taylor Creek Group rocks. The Taylor Creek rocks consist of pyroclastic basalts, andesitic breccia, volcanic sandstone, greywacke, argillite and dacitic tuff. A porphyritic granodiorite stock and related dykes of the Jurassic to Tertiary Coast Plutonic Complex cut both rock units and appear to cut the thrust. Northwest-trending faults also cut across all lithologies.

Propylitic alteration is widespread and argillic alteration and intense silicification occur locally in the fault zones. Prominent

CAPSULE GEOLOGY

limonitic zones have developed over the fault zones and adjacent to the intrusions. Both disseminated copper mineralization in fractures and quartz veinlets related to the porphyritic intrusion, and pyrite-pyrrhotite mineralization in fault zones occur in the area. The pyrite-pyrrhotite zones in fault zones may be hornfels alteration related to the nearby intrusives. The highest copper values are up to 1.76 per cent with other samples containing anomalous silver (9 grams per tonne), molybdenum (0.003 per cent), and mercury (0.00034 per cent) (Bulletin 81).

BIBLIOGRAPHY

EMPR ASS RPT 12107
EMPR OF 1986-4
EMPR FIELDWORK *1985, pp. 265-274; *1986, pp. 231-243
EMPR BULL *81
GSC OF 534; 2207

DATE CODED: 1989/04/25
DATE REVISED: 1991/02/28

CODED BY: GS
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 125**

NATIONAL MINERAL INVENTORY:

NAME(S): **TARN CREEK**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092005W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 16 01 N
LONGITUDE: 123 51 26 W
ELEVATION: 2255 Metres

NORTHING: 5679860
EASTING: 440195

LOCATION ACCURACY: Within 500M

COMMENTS: The showing is located about 4 kilometres north-northwest of the west end of Yohetta Lake, located to the east of Chilko Lake.

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT:	Chalcopyrite	Bornite	Pyrrhotite	Pyrite
ASSOCIATED:	Quartz	Magnetite		
ALTERATION:	Chlorite	Epidote	Carbonate	Clay
ALTERATION TYPE:	Propylitic		Argillic	
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au
SHAPE: Irregular
MODIFIER: Fractured
DIMENSION: 400 x 150 Metres

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Cretaceous

GROUP

Undefined Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Andesitic Breccia
Volcanic Sandstone
Argillite
Greywacke
Hornblende Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Coast Crystalline
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Pacific Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1990

COMMODITY

Silver

Copper

GRADE

3.0000

0.4800

Grams per tonne

Per cent

REFERENCE: Bulletin 81.

CAPSULE GEOLOGY

A zone of stockwork copper mineralization is located approximately 4 kilometres north-northeast of the west end of Yohetta Lake. The valley at this location is referred to as Tarn Creek. The valley is largely underlain by volcanic lithologies of Upper Cretaceous volcanics dominated by feldspar-hornblende porphyry flows and associated volcanic lithic fragmental rocks. A variety of dykes and irregularly shaped bodies of hornblende diorite porphyry intrude the volcanics on both sides of the valley. Quartz and/or carbonate alteration zones are common adjacent to the intrusives. Propylitic alteration in the volcanics has produced carbonate, epidote and chlorite as complete replacements of, or irregular haloes around, feldspar and hornblende phenocrysts. Argillic alteration or silicification are locally present.

A discontinuously exposed gossanous zone, covering an area of approximately 400 by 150 metres, surrounds a strongly developed quartz stockwork zone. Within this zone chalcopyrite, bornite, pyrrhotite and pyrite mineralization occurs in veinlets, as fracture coating and as disseminations throughout all rock types. Magnetite

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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ENERGY AND MINERALS DIVISION

PAGE: 989
REPORT: RGEN0100

CAPSULE GEOLOGY

and chlorite are common accessory minerals. Selected rock-chip samples from this zone assayed from 0.02 to 0.05 per cent copper, some with anomalous silver values (3.0 grams per tonne) (Bulletin 81).

BIBLIOGRAPHY

EMPR FIELDWORK 1985, pp. 265-274
EMPR OF 1986-4
EMPR ASS RPT *15921
EMPR BULL 81
GSC OF 534; 2207

DATE CODED: 1989/04/24
DATE REVISED: 1991/02/28

CODED BY: GS
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 126**

NATIONAL MINERAL INVENTORY:

NAME(S): **GANG RANCH**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092009W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 32 22 N
LONGITUDE: 122 22 59 W
ELEVATION: 790 Metres

NORTHING: 5709996
EASTING: 542787

LOCATION ACCURACY: Within 500M

COMMENTS: Roadcut on the northside of an irrigation gully.

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Miocene	Chilcotin	Fraser Bend	

LITHOLOGY: Volcaniclastic Breccia
Rhyolite Ash

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

The Gang Ranch showing is located in a roadcut about five kilometres to the west of Gang Ranch. The region in which the showing occurs is underlain by mainly volcanic rocks of Eocene and Miocene ages which comprise an overlap assemblage on both Methow and Cache Creek terranes. During Miocene times diatomaceous earth formed in small synvolcanic basins. Thus, in this part of the Chilcotin Plateau there is a common association of diatomaceous earth deposits with volcanic strata.

The roadcut has exposed a Miocene lahar with clasts of both Eocene and Miocene volcanic rocks as well as clasts of diatomaceous earth. Because of poor bedrock exposure in this largely drift covered area, the source of the diatomaceous earth clasts is not known.

BIBLIOGRAPHY

EMPR OF 1989-27
EMPR FIELDWORK *1988, pp. 519-523
GSC OF 534; 2207
Green K.C. (1990): Structure, Stratigraphy and Alteration of the Cretaceous and Tertiary Strata in the Gang Ranch Area, M.Sc. Thesis, University of Calgary

DATE CODED: 1990/11/14
DATE REVISED: 1991/03/02

CODED BY: PBR
REVISED BY: DGB

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **0920 127**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRENTICE EAST**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092009W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 37 00 N
LONGITUDE: 122 19 53 W
ELEVATION: 655 Metres

NORTHING: 5718616
EASTING: 546291

LOCATION ACCURACY: Within 500M

COMMENTS: The location given is diatomaceous material that is probably in place. Another occurrence at N5718700, E546520 and 625 metres may be slumped (Geological Survey of Canada paper 91-1A).

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Miocene	Chilcotin	Fraser Bend	

LITHOLOGY: Rhyolite Ash
Bentonite Ash

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Diatomite occurrences in this part of the map sheet occur within strata of the Miocene Fraser Bend Formation of the Chilcotin Group, a dominantly volcanic assemblage which forms part of an overlap assemblage on older terranes.

The Prentice East showing is at the top of a steep bank, over a hundred metres high, composed of slumped outcrop of white-weathering rhyolite ash, bentonitic ash and diatomaceous earth, which occurs in the upper 20 metres. Microscopic examination shows that the material contains abundant diatoms.

BIBLIOGRAPHY

GSC P *91-1A, pp. 207-217
GSC OF 534; 2207

DATE CODED: 1990/11/14
DATE REVISED: / /

CODED BY: PBR
REVISED BY:

FIELD CHECK: Y
FIELD CHECK:

MINFILE NUMBER: **092O 128**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRENTICE SOUTH**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O09W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 36 33 N
LONGITUDE: 122 20 07 W
ELEVATION: 700 Metres

NORTHING: 5717779
EASTING: 546030

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Miocene	Chilcotin	Fraser Bend	

LITHOLOGY: Rhyolite Ash

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Diatomite occurrences in this part of the map sheet occur within strata of the Miocene Fraser Bend Formation of the Chilcotin Group, a dominantly volcanic assemblage which forms part of an overlap assemblage on older terranes.

The Prentice South showing consists of slumped outcrops of white-weathering rhyolite ash and diatomaceous earth. The diatomaceous earth is exposed at the top of a 100-metre high bank that ends in Prentice Gulch. Microscopic examination shows that it contains abundant diatoms.

BIBLIOGRAPHY

GSC P *91-1A, pp. 207-217
GSC OF 534; 2207

DATE CODED: 1990/11/14
DATE REVISED: / /

CODED BY: PBR
REVISED BY:

FIELD CHECK: Y
FIELD CHECK:

MINFILE NUMBER: **0920 129**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRENTICE WEST**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092009W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 37 08 N
LONGITUDE: 122 21 16 W
ELEVATION: 840 Metres

NORTHING: 5718849
EASTING: 544693

LOCATION ACCURACY: Within 500M

COMMENTS:

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Miocene	Chilcotin	Fraser Bend	

LITHOLOGY: Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Diatomite occurrences in this part of the map sheet occur within strata of the Miocene Fraser Bend Formation of the Chilcotin Group, a dominantly volcanic assemblage which forms part of an overlap assemblage on older terranes.

The Prentice West showing is a white-weathering disaggregated diatomaceous siltstone that is so slumped that dimensions of the occurrence can not be assessed. Microscopic examination shows that the material contains abundant diatoms.

BIBLIOGRAPHY

GSC P *91-1A, pp. 207-217
GSC OF 534; 2207

DATE CODED: 1990/11/14
DATE REVISED: / /

CODED BY: PBR
REVISED BY:

FIELD CHECK: Y
FIELD CHECK:

MINFILE NUMBER: **092O 130**

NATIONAL MINERAL INVENTORY:

NAME(S): **AIRFIELD**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092O09W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 37 23 N
LONGITUDE: 122 17 16 W
ELEVATION: 855 Metres

NORTHING: 5719355
EASTING: 549304

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
ASSOCIATED: Glass
COMMENTS: Refractives index of glass is 1.500 +/- 0.002.
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular
COMMENTS: Lens is about 6 metres thick.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Miocene	Chilcotin	Fraser Bend	

LITHOLOGY: Rhyolite Ash
Basalt

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

CAPSULE GEOLOGY

Diatomite occurrences in this part of the map sheet occur within strata of the Miocene Fraser Bend Formation of the Chilcotin Group, a dominantly volcanic assemblage which forms part of an overlap assemblage on older terranes. The Airfield occurrence consists of a six-metre thick layer of diatomaceous and bedded rhyolite ash immediately underlying basalt flows. Microscopic examination shows common diatoms.

BIBLIOGRAPHY

GSC P *91-1A, pp. 207-217
GSC OF 534; 2207

DATE CODED: 1990/11/14
DATE REVISED: / /

CODED BY: PBR
REVISED BY:

FIELD CHECK: Y
FIELD CHECK:

MINFILE NUMBER: **0920 131**

NATIONAL MINERAL INVENTORY:

NAME(S): **TASK**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092005E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 29 24 N
LONGITUDE: 123 39 29 W
ELEVATION: 1508 Metres

NORTHING: 5704522
EASTING: 454313

LOCATION ACCURACY: Within 500M

COMMENTS: Drillhole collar, 2 kilometres east of Taseko River and 3.5 kilometres north-northwest of the Fish Lake deposit (0920 041), about 130 kilometres southwest of the community of Williams Lake (Assessment Report 22091).

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Pyrite Magnetite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Lower Cretaceous
Cretaceous-Tertiary

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Quartz Diorite
Andesite
Conglomerate
Argillite
Quartz Feldspar Porphyry Diorite
Volcanic Breccia
Hornblende Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

Overlap Assemblage

PHYSIOGRAPHIC AREA: Chilcotin Plateau

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1994

COMMODITY	GRADE	
Silver	348.6000	Grams per tonne
Gold	1.0000	Grams per tonne
Copper	0.1700	Per cent

REFERENCE: Assessment Report 23505, page i.

CAPSULE GEOLOGY

Most the Task claims are covered by glacial overburden. The only outcrops observed were Lower Cretaceous pyritic conglomerate, andesite and argillite near the western border of the Task 9 claim.

One diamond-drillhole in 1991 intersected Upper Cretaceous-Lower Tertiary quartz diorite with local quartz veinlets mineralized with pyrite and chalcopyrite and occasionally magnetite. Very minor magnetite, pyrite and rare chalcopyrite were also observed disseminated in the quartz diorite.

A sample of a 1-centimetre wide quartz veinlet with up to 4 millimetre patches of chalcopyrite analysed 0.41 per cent copper (Assessment Report 22091).

Diamond drilling in 1994 intersected crowded quartz feldspar porphyry diorite (Fish Lake stock), hornblende feldspar porphyry diorite dikes, volcanic breccia and andesite flows. Ninety per cent of the rocks drilled were mineralized with more than 2 per cent pyrite and locally minor chalcopyrite. Assays yielded up to 0.17 per cent copper, 1 gram per tonne gold and 348.6 grams per tonne silver

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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CAPSULE GEOLOGY

(Assessment Report 23505, page i).

BIBLIOGRAPHY

EMPR ASS RPT 18295, 18297, 19607, 19608, 19621, 20896, 22090, *22091,
23219, 23505
EMPR BULL 81
GSC MAP 29-1963; 2-1972; 1292A
GSC OF 534; 2207
WWW <http://www.infomine.com/>

DATE CODED: 1994/12/11
DATE REVISED: 1994/12/11

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 001**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEACH 1**, OPHIR, ANN

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 57 50 N
LONGITUDE: 121 19 16 W
ELEVATION: 1341 Metres

NORTHING: 5758353
EASTING: 615345

LOCATION ACCURACY: Within 500M

COMMENTS: Location from figure 4, Assessment Report 3815.

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT:	Chalcopyrite	Bornite	Malachite	
ASSOCIATED:	Magnetite	Pyrite	Pyrrhotite	
ALTERATION:	K-Feldspar	Epidote	Biotite	Tourmaline
ALTERATION TYPE:	Potassic	Propylitic		
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER:	Stockwork	Vein	
CLASSIFICATION:	Porphyry	Hydrothermal	Epigenetic
TYPE:	L03 Alkalic porphyry	Cu-Au	

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic
Triassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Andesite
Monzonite
Intrusive Breccia

HOSTROCK COMMENTS: Monzonite intrusive host is part of the "synvolcanic" alkaline intrusive bodies informally called the "Spout Lake Intrusive Suite".

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Peach 1 copper showing is located 2 kilometres south of Peach Lake, approximately 20 kilometres northeast of Lac La Hache and is readily accessible from Highway 97 via a network of logging roads. Other names for the claims and showings have been the Ann and the Ophir. The Peach 1 showing is one of several copper showings on the current (as of February 2003) Ann 1 and 2 claims (see also 092P 002, 034, 035, 108, 115 and 153). All of these occurrences are part of the Spout Lake copper-gold district, a group of porphyry and skarn occurrences associated with Upper Triassic to Lower Jurassic alkaline intrusive rocks of the Spout Lake intrusive suite.

The Peach property is underlain by andesites, basalts, calcareous tuffs and argillites of the Upper Triassic Nicola Group (Assessment Report 25368). Nicola Group rocks are intruded by the Upper Triassic to Lower Jurassic Spout Lake Intrusive complex, an alkalic intrusive suite ranging in composition from pyroxenite through monzonite to syenite, and from batholithic size to small intrusive plugs, dikes and breccia bodies. Granodioritic rocks of the Triassic to Jurassic Takomkane Batholith intrude Nicola rocks east of the property. Outliers of alkaline plateau basalts of the Miocene to Pleistocene Chilcotin Group are present in the general area.

No good description of the Peach 1 showing is available, however Assessment Report 3815, states that metallic mineralization consists of magnetite, chalcopyrite, bornite, pyrite and pyrrhotite associated with veining and stockworks. Alteration and vein minerals include the aforementioned metallic minerals and k-feldspar, epidote, biotite and tourmaline. Primary copper minerals are commonly altered to malachite. The mineralization reportedly occurs (Assessment Report 3815) within a northeast-trending embayment in Nicola volcanic rocks at the western margin of a syenodiorite (monzonite) intrusive body.

CAPSULE GEOLOGY

Interest in the Spout Lake area was triggered in 1966 when the Geological Survey of Canada released the results of a regional airborne magnetic survey which outlined an annular magnetic anomaly 10 kilometres in diameter in the Spout Lake area and includes the area underlying the Peach 1 showing. Subsequently in 1966 and 1967, Coranex Limited obtained anomalous results in follow-up stream sediment geochemical surveys and soil geochemical surveys in the area south of Peach Lake. Programs of geological, soil geochemical, magnetometer, induced polarisation and prospecting surveys were undertaken in 1967 in the area south of Peach Lake, leading to the discovery of the Peach #1 and several other occurrences. Asarco Exploration Company of Canada Limited optioned the property in 1969. Amax Potash Limited optioned the property between 1971 and 1973 and completed programs of geological mapping, geophysics and percussion drilling. In 1983 and 1984, the Selco Division of BP Resources Canada Limited completed soil geochemical surveys on the Core group of claims which covered the property. G.W.R. Resources Incorporated acquired the property in 1988 and Asarco re-optioned the property and completed induced polarization surveys and percussion drilling in 1991. In 1993, G.W.R. Resources formed a joint venture with Regional Resources and have since completed programs of induced polarization and diamond drilling.

BIBLIOGRAPHY

EMPR AR 1966-126, 1967-126, *1968-155
EMPR GEM 1969-183, 1972-324, 1973-278
EMPR ASS RPT 1037, 1038, 1131, 1696, 1734, 2347, *3815, 3882,
4542, 11692, 13119, 17831, *21982, 23975, *25368
GSC MAP 1966-3, 1278A
GSC MEM 363
Whiteaker Robin (1966), The Geology, Geochronology and
Mineralization of the Ann Property: and Early Jurassic Alkalic
porphyry System near Lac La Hache, B.C., Honours B.Sc. Thesis,
U.B.C.
WWW <http://www.infomine.com/>; <http://www.gwrresources.com>

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/05

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 002**

NATIONAL MINERAL INVENTORY:

NAME(S): **ANN NORTH**, OPHIR, PEACH

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 58 27 N
LONGITUDE: 121 18 46 W
ELEVATION: 1130 Metres

NORTHING: 5759509
EASTING: 615891

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Compilation Map, G.W.R. Resources Incorporated Report, March 2001 (Property File 092P 115).

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Copper Chalcocite
ASSOCIATED: Pyrite Quartz Magnetite Hematite
ALTERATION: K-Feldspar Epidote
ALTERATION TYPE: Potassic Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Triassic
Triassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: K-Feldspar Porphyritic Monzonite
Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 2000

COMMODITY

Gold
Copper

GRADE

0.4300
0.3100

Grams per tonne
Per cent

COMMENTS: 44.0 metre sample width.

REFERENCE: George cross Newsletter #134, 2000.

CAPSULE GEOLOGY

The Ann North copper showing is located 1 kilometre south of Peach Lake approximately 22 kilometres northeast of Lac La Hache and is readily accessible from Highway 97 via a network of logging roads. Other names for the claims and showings have been the Peach and the Ophir. The Ann North showing is one of several copper showings on the current (as of February 2003) Ann 1 and 2 claims (see also 092P 001, 034, 035, 115 and 153). All of these occurrences are part of the Spout Lake copper-gold district, a group of porphyry and skarn deposits associated with Upper Triassic to Lower Jurassic alkaline intrusive rocks of the Spout Lake intrusive suite.

The Ann 1 and 2 claims are underlain by andesites, basalts, calcareous tuffs and argillites of the Upper Triassic Nicola Group (Assessment Report 25368). Nicola Group rocks are intruded by the Upper Triassic to Lower Jurassic Spout Lake Intrusive complex, an alkalic intrusive suite ranging in composition from pyroxenite through monzonite to syenite, and from batholithic size to small intrusive plugs, dikes and breccia bodies. Granodioritic rocks of the Triassic to Jurassic Takomkane Batholith intrude Nicola rocks east of the property. Outliers of alkaline plateau basalts of the Miocene to Pleistocene Chilcotin Group are present in the general area.

CAPSULE GEOLOGY

George Cross Newsletter #134 (2000) states that mineralisation in the Ann North zone is comprised of predominantly chalcopyrite, bornite and less than 0.3% pyrite, and is hosted by a k-feldspar porphyritic monzonite intrusion which intrudes monzonite. Native copper and chalcocite occur to a depth of about 50 metres. Quartz-magnetite-hematite and k-feldspar alteration are associated with the mineralisation. The showing is reflected as a magnetic and induced polarization depression or "low" about 1.0 by 0.8 kilometres in size. A drill hole intersected 44.0 metres of mineralization grading 0.31 per cent copper and 0.43 grams per tonne gold (G.W.R. Resources Incorporated report, March 2001).

Interest in the Spout Lake area was triggered in 1966 when the Geological Survey of Canada released the results of a regional airborne magnetic survey which outlined an annular magnetic anomaly 10 kilometres in diameter in the Spout Lake area and which included the area underlying the Peach 1 prospect. Subsequently in 1966 and 1967, Coranex Limited obtained anomalous results in follow-up stream sediment geochemical surveys and soil geochemical surveys in the area south of Peach Lake. Programs of geological, soil geochemical, magnetometer, induced polarization and prospecting surveys were undertaken in 1967 in the area south of Peach Lake, leading to the discovery of the Peach 1 and several other occurrences. Asarco Exploration Company of Canada Limited optioned the property in 1969. Amax Potash Limited optioned the property between 1971 and 1973 and completed programs of geological mapping, geophysics and percussion drilling. In 1983 and 1984, the Selco Division of BP Resources Canada Limited completed soil geochemical surveys on the Core group of claims which covered the property. G.W.R. Resources Incorporated acquired the property in 1988 and Asarco re-optioned the property and completed induced polarization surveys and percussion drilling in 1991. In 1993, G.W.R. Resources formed a joint venture with Regional Resources and have since completed programs of induced polarisation and diamond drilling. G.W.R. Resources has completed additional diamond drill programs in 1998, 1999, 2000, 2002 and 2003.

BIBLIOGRAPHY

EMPR AR 1966-126, 1967-126, *1968-155
EMPR GEM 1969-183, 1972-324, 1973-278
EMPR ASS RPT 1037, 1038, 1131, 1696, 1734, 2347, *3815, 3882,
4542, 11692, 13119, 17831, *21982, 23975, *25368, 23975
GSC MAP 1966-3, 1278A
GSC MEM 363
*EMPR PF (Lac la Hache Project, G.W.R. Resources Inc., March 2001)
Whiteaker, Robin (1966), The Geology, Geochronology and
Mineraliation of the Ann Property: and Early Jurassic Alkalic
Porphyry system near Lac La Hache, B.C. Honours B.Sc. Thesis,
U.B.C.
GCNL #134 (Jul.13), 2000
Stockwatch 2003-03-19
WWW <http://www.infomine.com/>, <http://www.gwrresources.com>

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/07

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 003**

NATIONAL MINERAL INVENTORY:

NAME(S): **NEMRUD, JESSE, LUKE,**
MIKE, RILEY, SS

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 58 56 N
LONGITUDE: 121 14 17 W
ELEVATION: 520 Metres

UTM ZONE: 10 (NAD 83)
NORTHING: 5760527
EASTING: 621002

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Figure 5, Assessment Report 23368.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Bornite Chalcopyrite Copper
ALTERATION: Garnet Epidote Calcite Diopside
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Skarn Porphyry Epigenetic
TYPE: K01 Cu skarn L03 Alkalic porphyry Cu-Au
SHAPE: Tabular
DIMENSION: 600 x 100 x 20 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Triassic	Nicola	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Garnet Skarn
Marble

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core
COMMODITY: Copper

YEAR: 1995

GRADE: 0.2500 Per cent

COMMENTS: 7.9 metre sample width.
REFERENCE: Assessment Report 24139.

CAPSULE GEOLOGY

The Nemrud bornite skarn is located 5 kilometres east of Peach Lake, approximately 24 kilometres northeast of Lac La Hache and is readily accessible from Highway 97 via a network of logging roads. The Nemrud showing is one of several copper showings which are part of the Spout Lake copper-gold district, a group of porphyry and skarn deposits associated with Upper Triassic to Lower Jurassic alkaline intrusive rocks of the Spout Lake intrusive suite.

The Nemrud grid is underlain by andesites, basalts, calcareous tuffs and argillites of the Upper Triassic Nicola Group (Assessment Report 25368). Nicola Group rocks are intruded by the Upper Triassic to Lower Jurassic Spout Lake Intrusive complex, an alkalic intrusive suite ranging in composition from pyroxenite through monzonite to syenite, and from batholithic size to small intrusive plugs, dikes and breccia bodies. Granodioritic rocks of the Triassic to Jurassic Takomkane Batholith intrude Nicola rocks east of the property. Outliers of alkaline plateau basalts of the Miocene to Pleistocene Chilcotin Group are present in the general area.

The skarn is developed near the east-dipping contact zone between volcanic rocks and overlying sedimentary/volcanic rocks, close to the contact with the Takomkane batholith. The skarn

CAPSULE GEOLOGY

horizon consists of intercalated lenses of garnet-calcite-epidote skarn, sometimes containing diopside, intercalated with impure marble, intermediate to mafic tuffs and flows, and siltstone/greywacke. The main copper mineral is bornite with minor chalcopyrite and native copper. The skarn assemblage is between 20 and 25 metres in thickness with an average grade of 0.1 per cent copper, 0.03 grams per tonne gold and 1 gram per tonne silver and is developed within a north-northwest trending zone approximately 600 metres long and 100 metres wide. The "thickest" intersection of mineralisation (Assessment Report 24139) assayed 0.25 per cent copper over a 7.9 metre core length, with maximum gold and silver values of 140 parts per billion and 5.5 parts per million respectively. Weak porphyry-style mineralisation is developed west of the skarn mineralization.

Interest in the Spout Lake area was triggered in 1966 when the Geological Survey of Canada released the results of a regional airborne magnetic survey which outlined an annular magnetic anomaly 10 kilometres in diameter in the Spout Lake area and which included the area underlying the Peach 1 occurrence. Subsequently in 1966 and 1967, Coranex Limited obtained anomalous results in follow-up stream sediment geochemical surveys and soil geochemical surveys in the area south of Peach Lake. Programs of geological, soil geochemical, magnetometer, induced polarization and prospecting surveys were undertaken in 1967 in the area south of Peach Lake, leading to the discovery of the Peach 1 and several other occurrences. Asarco Exploration Company of Canada Limited optioned the property in 1969. Amax Potash Limited optioned the property between 1971 and 1973 and completed programs of geological mapping, geophysics and percussion drilling. In 1983 and 1984, the Selco Division of BP Resources Canada Limited completed soil geochemical surveys on the Core group of claims which covered the property. G.W.R. Resources Incorporated acquired the property in 1988 and Asarco re-optioned the property and completed induced polarization surveys and percussion drilling in 1991. In 1993, G.W.R. Resources formed a joint venture with Regional Resources and have since completed programs of induced polarization and diamond drilling in 1994 and 1995.

There is no evidence of physical work at Nemrud prior to 1993 (Assessment Report 25368) other than a reference to work by Canadian Superior Exploration Limited on the RA claims located 3 to 10 kilometres east of Spout Lake, where "chalcopyrite and bornite occur disseminated in volcanic rocks" (Geology, Exploration and Mining in British Columbia 1971, page 335). Twenty diamond drill holes (1585 metres) were drilled in December/January 1994/95. Two additional holes totalling 392 metres were completed in August 1995.

BIBLIOGRAPHY

EMPR GEM 1971-335
EMPR ASS RPT *24139, *25368
GSC MAP 1966-3, 1278A
GSC MEM 363
<http://www.gwrresources.com>

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/10

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 004**

NATIONAL MINERAL INVENTORY:

NAME(S): **SS, SS 10, JE,**
JT

MINING DIVISION: Cariboo

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 59 52 N
LONGITUDE: 121 19 58 W
ELEVATION: 1190 Metres

NORTHING: 5762103
EASTING: 614457

LOCATION ACCURACY: Within 500M
COMMENTS: Centre of claim SS 10, Assessment Report 1704.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Pyrite Magnetite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

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

L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic			Takomkane Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The SS showings are located 1 kilometre east of Spout Lake and approximately 800 metres south of Bluff Lake. The area is 22 kilometres north-northeast of Lac La Hache and is accessible from Highway 97 and on old logging roads.

The area near the SS showings is underlain by hornblende biotite granodioritic rocks, which are probably part of the Triassic to Jurassic Takomkane Batholith which intrudes andesites, basalts, calcareous tuffs and argillites of the Upper Triassic Nicola Group. Nicola Group rocks are also intruded by the Upper Triassic to Lower Jurassic Spout Lake Intrusive complex, an alkalic intrusive suite ranging in composition from pyroxenite through monzonite to syenite, and from batholithic size to small intrusive plugs, dikes and breccia bodies. Outliers of alkaline plateau basalts of the Miocene to Pleistocene Chilcotin Group are present in the general area.

Assessment Report 1704 reports "copper mineralisation, associated with sheared and altered zones in the granodiorite, has been noted at several locations". Mineralisation consists of fracture-controlled chalcopyrite, bornite, malachite, magnetite and pyrite, with minor disseminated chalcopyrite and pyrite mineralization in brecciated altered granodiorite adjacent to the the fracture zones.

A soil geochemical survey utilizing the rubianic acid copper test was completed over the SS claims in 1968 (Assessment Report 1704). A magnetometer survey and some check soil geochemical sampling (69 samples analysed for copper) were completed over the SS and JE claims in 1969 (Assessment Report 2074).

BIBLIOGRAPHY

EMPR ASS RPT *1704, 2074
EMPR GEM 1969-178
GSC MEM 363

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1004
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/11

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 005**

NATIONAL MINERAL INVENTORY:

NAME(S): **RAYFIELD COPPER**, RAYFIELD RIVER, RAYFIELD FELDSPAR
DANSEY, BD, I.D.S.,
PAT, VB, WIN

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P06E

UTM ZONE: 10 (NAD 83)

BC MAP:
LATITUDE: 51 18 48 N
LONGITUDE: 121 05 20 W
ELEVATION: 0930 Metres

NORTHING: 5686404
EASTING: 633191

LOCATION ACCURACY: Within 500M

COMMENTS: Location of diamond drill hole 6, Assessment Report 19,927.

COMMODITIES: Copper

Feldspar

Nepheline Syenite

MINERALS

SIGNIFICANT: Bornite Chalcopyrite Chalcocite Copper Malachite
 Cuprite Feldspar Nepheline
ASSOCIATED: Feldspar
ALTERATION: Feldspar Epidote Chlorite Hematite
ALTERATION TYPE: Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Porphyry
TYPE: L03 Alkaline porphyry Cu-Au
DIMENSION: 2500 x 600 Metres

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic-Jurassic

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Leucocratic Syenite
Monzonite
Diorite
Amphibole Syenite
Syenitic Pegmatite
Aplite
Nepheline Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1990

SAMPLE TYPE: Drill Core

COMMODITY: Copper GRADE Per cent

Copper 0.1285

COMMENTS: Average of the total length of bedrock (164 metres) in diamond drill hole number 6.

REFERENCE: Assessment Report 19927.

CAPSULE GEOLOGY

The Rayfield Copper property straddles the Rayfield River, approximately 20 kilometres east of 70-Mile House between Crater Lake and the Bonaparte River. It is readily accessible by logging road. The property also has potential as a source of feldspar and has been written-up as such (see also Rayfield Feldspar - 092P 154).

The property is underlain by several phases of a concentrically zoned syenitic to monzonitic to dioritic plutonic complex probably of Late Triassic to Early Jurassic age. The complex occurs as a window through Miocene to Pleistocene alkaline plateau basalts of the Chilcotin Group which blanket much of the Cariboo Plateau. The core of the complex consists of leucosyenite composed almost entirely of alkali feldspars with 1 to 3 per cent amphibole and trace amounts of white mica, magnetite and quartz (Assessment Report 2135). Syenite

CAPSULE GEOLOGY

pegmatite dykes are common with feldspar comprising more than 95 per cent of the rock. Other less common syenite pegmatites contain minor amphibole minerals, less common nepheline and rare quartz. Visible low-grade copper mineralisation is widespread at a grade of between 0.05 per cent and 0.1 per cent copper over an area of approximately 600 by 2500 metres. It is mainly bornite and chalcopyrite, largely altered to malachite, and occurs in feldspar (alteration ?) veinlets and fracture fillings and as disseminations replacing mafic minerals. The most widespread veinlet set is sheeted, trending NNW, dipping 40 to 60 degrees west. Widespread low-grade sulphide and oxide mineralisation is comprised of chalcopyrite, bornite, chalcocite, cuprite, native copper, hematite and malachite, but no iron sulphides. Trace amounts of bornite are found disseminated as blebs up to 3 millimetres in size in some of the syenite pegmatite dikes.

The earliest recorded work on the property was by Kennco Explorations (Western) Limited in 1963 on the Pat Group of claims, when programs of geological mapping and geochemical sampling (soil and stream sediments) were completed (Assessment Report 528). In 1966, COMINCO Limited (Assessment Report 859) completed a program of soil geochemical sampling (800 samples with analyses for copper, lead and zinc) and magnetometer surveying on the I.D.S. 1 to 16 claims located adjacent to the Pat Group. Mr. C. Dansey restaked the property as the BD claims and undertook a program of bulldozer trenching, subsequently optioning the property to Amax Exploration Inc. Between 1968 and 1970, Amax Exploration Inc. completed programs of geological mapping, soil sampling (approximately 1230 samples), magnetometer and induced polarisation surveys and drilled 31 percussion drill holes (1749 metres), the best result being 0.42 per cent Cu across 6.1 metres. In 1989, the Rayfield 1 to 7 group of claims was staked by The Vernon Exploration Group and optioned to Brenda Mines Limited who completed a program of induced polarisation (36 kilometres) and diamond drilling (1140.9 metres in 8 holes). The highest results were from hole 6 which returned 1285 parts per million Cu and 35 parts per billion Au over 164 metres.

BIBLIOGRAPHY

EMPR AR 1966-135, 1967-127, 1968-159,
EMPR GEM 1969-184,367, *1970-218, 1972-316, 1973-271,
1972-316, 1973-271
EXPL 1990-53
EMPR OF 1991-10-81
EMPR ASS RPT 528, 859, 954, 1172, 1723, 1758, *2135,
*19927
GSC MAP 1966-3, 1278A
GSC MEM *363

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/14

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 006**

NATIONAL MINERAL INVENTORY:

NAME(S): **RO, SO, TC,**
RL, LO

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 35 30 N
LONGITUDE: 120 27 17 W
ELEVATION: 1450 Metres

NORTHING: 5718693
EASTING: 676307

LOCATION ACCURACY: Within 500M

COMMENTS: Location centred on trenches (Assessment Report 4025).

COMMODITIES: Copper Molybdenum Lead

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Galena Pyrite
ASSOCIATED: Antigorite Pyroxene Pyrite Calcite Chlorite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Nicola	Undefined Formation	

LITHOLOGY: Andesitic Rock
Andesite
Microdiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The RO occurrence is in the Friendly Lake area, about 25 kilometres west of Little Fort. Mineralization at the RO showing comprises disseminated galena, pyrite, chalcopyrite and molybdenite in fine-grained andesitic rock (microdiorite?) of the Upper Triassic Nicola Group, that is strongly altered to bluish antigorite, pyroxene, chlorite and calcite (Geology, Exploration and Mining in British Columbia 1970). Similar mineralization and alteration occurs to the east, near the eastern margin of the Triassic to Jurassic Friendly Lake Intrusive Complex, and to the northwest, between two monzonite stocks (Assessment Report 15221).

Exploration in the Friendly Lake area was initiated as a result of a regional geochemical survey carried out by Anaconda American Brass Limited during the summer of 1965. Anaconda commenced staking a large block of ground north of Friendly Lake based on anomalous results of the stream sediment survey, and prospecting led to the discovery of numerous showings, including the RO and FL (092P 134) showings. The Saskatchewan Mining Development Corporation (SMDC) optioned the claims in 1982 and carried out further geological, geochemical and geophysical work on them. Lornex drilled ten percussion-drill holes on the RO claims in 1983. Electrum Resource Corporation conducted exploration in 1994 to 1996. Midland Exploration Corporation continued work in 1997. The B.C. Geological Survey conducted a regional drift exploration program over NTS Mapsheets 092P08W and 09W in 1999 (Open File 2000-17).

BIBLIOGRAPHY

EM FIELDWORK *2000, p. 24
EM OF 2000-17
EMPR AR 1965-159; 1966-43; 1967-133; 1968-167
EMPR ASS RPT 788, 789, 952, 790, 791, 792, 753, 754, 1966, 4025,
4947, 10287, 10880, 11413, 15221, 23946, 24893, 25418
EMPR GEM *1970-304; 1974-225
EMPR OF 2002-15
EMPR PF (Claim map, 1971)

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1008
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 1966-3; 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/31

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 007**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOGG**, BOG, SO

MINING DIVISION: Kamloops

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 092P10E
 BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 37 00 N
 LONGITUDE: 120 31 17 W
 ELEVATION: 1600 Metres

NORTHING: 5721314
 EASTING: 671595

LOCATION ACCURACY: Within 500M
 COMMENTS:

COMMODITIES: Copper Lead Platinum Palladium Silver

MINERALS

SIGNIFICANT: Chalcopyrite Chalcocite Galena Bornite
 ASSOCIATED: Quartz Calcite Pyroxene Pyrite K-Feldspar
 ALTERATION: Quartz Carbonate
 ALTERATION TYPE: Silicific'n Carbonate
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Shear Vein
 CLASSIFICATION: Porphyry
 TYPE: L04 Porphyry Cu ± Mo ± Au
 COMMENTS: Disseminated and fracture-controlled pyrite mineralization occurs within a steeply dipping, northwest striking quartz-carbonate altered fault zone that is up to 300 metres wide.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic-Jurassic			Friendly Lake Intrusive Complex

LITHOLOGY: Syenite
 Greenstone
 Microdiorite
 Intrusive Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
 TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 2000
SAMPLE TYPE: Rock	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	25.0000 Grams per tonne
Copper	3.3754 Per cent
Palladium	0.1400 Grams per tonne
Platinum	0.2080 Grams per tonne

REFERENCE: Fieldwork 2000, page 26.

CAPSULE GEOLOGY

The Bogg property is located 50 kilometres east of 100 Mile House, and 35 kilometres northwest of Little Fort. The Bogg occurrence comprises porphyry-style copper mineralization within and along the northeast margin of the largest syenite stock within the Triassic to Jurassic Friendly Lake Intrusive Complex. Disseminated and fracture-controlled pyrite, chalcopyrite and bornite occur within both the syenitic rocks and adjacent greenstone, microdiorite and intrusion breccia. Edwards (Assessment Report 21776) reports that pyroxene-potassium feldspar-calcite veinlets, interpreted to have formed in the late stages of intrusion of the syenite body, locally contain chalcopyrite and galena. Disseminated and fracture-controlled pyrite-chalcopyrite mineralization also occurs farther west, within a steeply dipping, northwest striking quartz-carbonate altered fault zone that cuts through the southwestern part of the syenite stock. This zone is up to 300 metres wide and comprises silicified fragments of syenite, microdiorite, greenstone, and altered sedimentary rocks cut by several episodes of quartz and carbonate veins. A sample collected by the B.C. Geological Survey

CAPSULE GEOLOGY

(Fieldwork 2000) from a pyrite-chalcopyrite-bornite rich intrusion(?) breccia in the main mineralized area of the Bogg occurrence yielded values of 3.3 per cent copper, 25 grams per tonne silver, 0.208 gram per tonne platinum and 0.149 gram per tonne palladium.

Exploration work in the area began with a regional geochemical survey conducted by Anaconda American Brass in 1965. They followed up with geochemical and geophysical work, and trenching and percussion drilling until 1970. Gerry Rayner staked the area in 1971. Prism Resources mapped the property in 1972. Cities Services optioned the property from 1973 to 1975 and conducted geophysical and geochemical work, geological mapping, trenching, and diamond and percussion drilling. Further geochemical work and VLF-EM was done by Commonwealth Minerals in 1978. Stan Zastavnikovich initiated exploration for gold mineralization by a regional stream sediment survey in 1986. Geotech Capital Corporation optioned the property and conducted a geochemical survey, induced polarization, diamond drilling and road improvement, from 1987 to 1989. In 1990, Placer Dome Incorporated completed detailed mapping, soil geochemistry and geophysical work on the grid established by Geotech. In 1991, old trenches were resampled and tested for gold.

BIBLIOGRAPHY

EMPR AR 1965-159; 1966-143; 1967-133; 1968-167
EMPR ASS RPT 753, 952, 1966, 3900, 4836, 5137, 8147, 11289, 14948,
16244, 17968, 18405, 19257, 20618, 21776
EMPR EXPL 1975-E121; 1978-E188; 1987-C242; 1988-A45,C138
EM FIELDWORK *2000, p. 24
EMPR GEM 1970-304; 1972-321; 1973-277; 1974-226
EMPR MEIP (Montgomery, J.H. (1978): 78/79 Windy Mountain Copper
Prospect)
EMPR OF 2002-15
EMPR PF (Croome, N.C. (1987): Report on Geotech Capital Corporation
Bogg claims, Ta Hoola Lake area; Claim map)
GSC MAP 1966-3; 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/22

CODED BY: GSB
REVISED BY: PS

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092P 008**

NATIONAL MINERAL INVENTORY:

NAME(S): **SILVER**, SILVER LAKE, PGR

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 32 22 N
LONGITUDE: 120 23 25 W
ELEVATION: 1400 Metres

NORTHING: 5713044
EASTING: 680977

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Magnetite Pyrrhotite Chalcopyrite Pyrite Sphalerite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Massive
CLASSIFICATION: Skarn
TYPE: K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic
Triassic-Jurassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Friendly Lake Intrusive Complex

LITHOLOGY: Volcanic
Sediment/Sedimentary
Skarn

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Quesnel Highland

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

The Silver Lake occurrence is located about 300 metres south of the tiny Silver Lake, and about 2 kilometres north of the Lakeview skarn prospect (092P 010), about 22 kilometres west of Little Fort.

Massive magnetite and pyrrhotite occur in a skarn zone in Upper Triassic Nicola Group volcanic-sedimentary rocks. Disseminated pyrite, chalcopyrite and sphalerite occur in the skarn and along fault zones and fracture planes.

The occurrence and the surrounding Silver claim group was held by United Copper Corporation in the 1960s and 1970s. Working on behalf of United, Alrae Exploration Limited conducted geochemical soil sampling and magnetometer surveys on the Silver group in 1967 and 1968. The property was located in 1970 by Vic Preto of the B.C. Geological Survey Branch and appears on the map accompanying his article on the area (Geology, Exploration and Mining in British Columbia 1970). James Dodge conducted a reconnaissance geological mapping program on the claims in 1972 and 1973 for United Copper Corporation. The occurrence has been covered by various large claim blocks, including the Ta Hoola property in the 1980s, and the PGR group in the 1990s. Workers on those properties have reported being unable to locate the occurrence. The B.C. Geological Survey conducted a regional till geochemistry program over NTS map sheets 092P09W and 08W in 1999 (Open File 2000-17).

BIBLIOGRAPHY

EMPR AR 1966-144; 1967-133; 1968-166
EMPR ASS RPT 981, 1169, 1690, 4260, 4678, 15221, 24827
EMPR EXPL 1988-A45; 1990-53
EMPR FIELDWORK 2000, pp. 1-29
EMPR GEM *1970-312; 1971-374; 1972-320; 1973-275
EMPR OF 2000-17, 2002-15
EMPR PF (Rebagliati, C.M. (1988): Report on the Ta Hoola Gold Property; Claim map, no date)
GSC MAP 1966-3; 1278A

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1012
REPORT: RGEN0100

BIBLIOGRAPHY

PR REL Christopher James Gold Corporation, Mar.23, 1998; June 10, 1999

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/31

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 009**

NATIONAL MINERAL INVENTORY:

NAME(S): **PC**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 31 18 N
LONGITUDE: 120 29 11 W
ELEVATION: 1600 Metres

NORTHING: 5710834
EASTING: 674381

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrrhotite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Nicola	Undefined Formation	
Triassic-Jurassic			Dum Lake Intrusive Complex

LITHOLOGY: Diorite
Pyritic Hornfels
Metasedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The PC showing is located about 2 kilometres northwest of the west end of Long Island Lake (also known as Janice Lake), about 28 kilometres west of Little Fort.

Minor amounts of disseminated chalcopyrite, along with pyrite and pyrrhotite, occur within dioritic plugs, dikes and sills of the Triassic-Jurassic Dum Lake Intrusive Complex, or within adjacent pyritic hornfels of Upper Triassic Nicola Group metasedimentary rocks.

Anaconda American Brass Limited conducted geophysical surveys on the PC claim group in 1967, 1968 and 1969, and opened five trenches totalling 150 metres on the claims in 1970. The B.C. Geological Survey conducted a regional till geochemistry program over NTS 092P 08W and 09W in 1999 (Open File 2000-17).

BIBLIOGRAPHY

EMPR AR 1926-187; 1967-133; 1968-168
EMPR ASS RPT 1193, 1750, 2210
EMPR GEM 1969-232; 1970-312
EMPR FIELDWORK *2000, p. 25
EMPR OF 2000-17, OF 2002-15
EMPR PF (Claim map of PC Group is in Silver, 092P 008, no date)
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/31

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 010**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAKEVIEW, UNITED, TC,
FORT 9, DEER LAKE, FORT 7**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:
LATITUDE: 51 31 52 N
LONGITUDE: 120 23 02 W
ELEVATION: 1400 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location is at the adits on the United 2 claim (Assessment Report 3945).

Underground

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

NORTHING: 5712134
EASTING: 681454

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite Pyrrhotite Pyrite
ASSOCIATED: Garnet Pyroxene Arsenopyrite
ALTERATION TYPE: Skarn Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Disseminated Vein
CLASSIFICATION: Skarn
TYPE: K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Nicola	Undefined Formation	
Triassic-Jurassic			Dum Lake Intrusive Complex

LITHOLOGY: Limestone
Volcanic
Diorite
Skarn
Gabbro

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SHOWING REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1999
SAMPLE TYPE: Rock
COMMODITY GRADE
Gold 11.8700 Grams per tonne
Copper 3.8700 Per cent
REFERENCE: Assessment Report 26223.

ORE ZONE: ADIT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1983
SAMPLE TYPE: Chip
COMMODITY GRADE
Gold 6.6100 Grams per tonne
COMMENTS: Chip sample across 3.9 metres of silicified skarn zone from an opencut above the main adit.
REFERENCE: Assessment Report 16223.

CAPSULE GEOLOGY

Skarn mineralization in the Deer Lake area occurs where Upper Triassic limestone of the Nicola Group is cut by gabbro and diorite of the Triassic-Jurassic Dum Lake Intrusive Complex. Lakeview, the most significant of these showings, is located near the southwest corner of Deer Lake.

The skarn alteration and mineralization at the main Lakeview prospect is well exposed in a series of trenches, pits and small adits. The area contains very little natural bedrock exposure, but local outcrops and trenches indicate that similar alteration and mineralization occurs, at least locally, for several hundred metres

CAPSULE GEOLOGY

to the south and north, defining a northerly trending belt more than one kilometre long (Assessment Report 20014). At the Lakeview occurrence, garnet-pyroxene exoskarn and endoskarn are developed.

Mineralization associated with the skarn includes massive to semimassive lenses, pods and veins of magnetite or pyrrhotite, containing variable amounts of pyrite and chalcopyrite, and arsenopyrite. Westerman (Assessment Report 16223) reported high gold values in an old opencut above the main adit. The gold occurs within a silicified and pyritized skarn unit, 3.9 metres wide, located between two massive pyrrhotite units, each about one metre wide. Westerman chip sampled the entire 3.9 metre width of the silicified skarn zone and obtained an average value of 6.61 grams per tonne gold. Chip samples of the bounding pyrrhotite skarn units yielded assays of 2.84 grams per tonne gold and 2.20 grams per tonne gold respectively, across one metre widths. The Lakeview occurrence is bounded to the south by a large diorite stock. Limestone and skarn are also exposed at two locations along the southeastern margin of this stock. In one of these areas, 2 kilometres south of the Lakeview occurrence, Westerman reported that a pyritic zone between limestone and skarn near the diorite contact assayed 1.01 grams per tonne gold across one metre.

Mineralization was discovered on the Fort 7 claim adjacent to Deer Lake in 1930 (Minister of Mines Annual Report 1930) and continues to receive attention, in part because of its high gold content. This property has been explored intermittently by various companies since 1930. During the late 1960s and early 1970s the area was explored for porphyry copper mineralization by Anaconda American Brass, Rio Tinto and United Copper Company. Work included soil geochemistry, magnetometer, VLF-EM and induced polarization surveys, trenching and drilling. Anaconda completed six diamond-drill holes for about 610 metres in the Deer Lake, Nora Lake, and Laurel Lake areas during 1967 and 1968. Rio Tinto completed nine percussion holes for a total of 460 metres in the Goose Lake/Laurel Lake/Deer Lake area during 1974 and 1975, without intersecting significant copper mineralization. None of these programs did systematic gold analyses. In 1977, Meridian Resources completed soil geochemistry and magnetometer surveys around McLeod Lake, No Fish Lake and Deer Lake, and two percussion holes totalling 455 metres within the Fort 9 claim, west of Deer Lake. Tunkwa Copper Mines Limited conducted geochemical and geophysical surveys over the area in 1980, which outlined several linear coincident gold and arsenic anomalies. Tunkwa Copper also drilled seven diamond-drill holes close to the original Deer Lake showings. In 1988, Vital Pacific Resources Limited completed geophysical surveys over the Lakeview showing, followed by 1462.8 metres of diamond drilling in fourteen holes on geophysical anomalies on the Lakeview and nearby showings. Drilling on the Lakeview skarn intersected 3.60 grams per tonne gold over 4 metres in skarn at 16 metres depth (Assessment Report 20014). Teck Exploration completed geochemical, geological, geophysical, trenching and diamond drilling in the area in 1989 and 1990. The Deer Lake skarn prospect is an area of current active exploration.

The B.C. Geological Survey conducted a regional till geochemistry program over NTS map sheet 092P08W and 09W in 1999 (Open File 2000-17). Electrum Resources Corporation conducted a prospecting and stream sampling program in the Deer Lake area in the fall of 1999 and during 2000 followed up anomalous areas by stream sampling, prospecting and mapping. Sulphide-rich rock samples from the Lakeview showing contained up to 11.87 grams per tonne gold and 3.87 per cent copper.

BIBLIOGRAPHY

EM OF 2000-17
EM PF (Deer Lake Property Summary, Electrum Resource Corporation, 2000)
EMPR AR *1930-191; 1966-143; 1967-133
EMPR ASS RPT 905, 907, 910, 2712, 3349, 3945, 4278, 6586, 8880, 15221, *16223, 17733, 18078, 18796, *20014, 26223
EMPR BULL 1, p. 68
EMPR EXPL 1987-C241; 1988-A45,C139; 1990-53
EM FIELDWORK *2000, p. 23
EMPR GEM 1970-311; 1971-334; 1972-320; 1973-275; 1977-E177
EMPR OF 2002-15
GSC MAP 1966-3; 1278A
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/07

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092P 011**

NATIONAL MINERAL INVENTORY:

NAME(S): **EC 60, JAN, JANICE LAKE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5708754
EASTING: 678583

LATITUDE: 51 30 06 N
LONGITUDE: 120 25 37 W
ELEVATION: 1525 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Located about 900 metres north of Long Island Lake, about 6.5 kilometres west-southwest of Clearwater (Assessment Report 1055).

COMMODITIES: Lead Copper Zinc

MINERALS

SIGNIFICANT: Galena Pyrrhotite Pyrite Chalcopyrite Sphalerite
ALTERATION TYPE: Skarn
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Podiform Massive
CLASSIFICATION: Skarn Hydrothermal
TYPE: K02 Pb-Zn skarn I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Nicola	Undefined Formation	

LITHOLOGY: Calcareous Shale
Siltstone
Quartz Feldspar Porphyry
Skarn

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The EC 60 occurrences are located about 800 metres north of Long Island Lake (which is known locally and on some old maps as Janice Lake), which is about 15 kilometres northwest of Little Fort. The mineralization consists of small sulphide lenses in a 15 to 18 metre wide zone of skarny alteration that parallels the bedding in the enclosing dark grey calcareous shale and siltstone of the Upper Triassic Nicola Group. Bedding dips steeply to the west-southwest and is intruded by a 10 metre wide sill of sericitized and weakly mineralized quartz-feldspar porphyry directly east of the mineralized zone. The sulphides include pyrrhotite, pyrite and galena, locally accompanied by minor amounts of chalcopyrite and sphalerite (Fieldwork 2000). Another occurrence about two kilometres east-southeast consists of disseminated and fracture fillings of pyrite and chalcopyrite in sediments and volcanic rocks. In some reports this is treated as a separate occurrence called the Jan or the Janice Lake showing (Assessment Report 26223; Minister of Mines Annual Report 1967).

In 1967, Royal Canadian Ventures Limited conducted assessment work on the EC property, most of which existed south of the Long Island Lake property, which included 739 heavy mineral samples, 323 silt samples and 592 soil samples. Royal Canadian reported that some trenching and diamond drilling had been done on this showing prior to 1967 by different owners. A follow-up induced polarization survey was done by Royal Canadian on the EC claims in 1968. Teck Exploration conducted assessment work on the Haida property, (including the EC 60 showing on the Vit 4 claim) in 1989 and 1990. The area was included in the Deer Lake property by Electrum Resource Corporation when they conducted geochemical and geological work in 1999.

BIBLIOGRAPHY

EMPR AR 1967-132; 1968-166
EMPR ASS RPT *1055, 1639, 26223
EMPR EXPL 1990-53

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1017
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR FIELDWORK *2000, p. 25
EMPR GEM *1970-311
EMPR OF 2000-17, 2002-15
EMPR PF (Claim maps, 1970-71)
GSC MAP 1966-3; 1278A
GSC MEM 263

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

CODED BY: GSB
REVISED BY: GJP

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 012**

NATIONAL MINERAL INVENTORY:

NAME(S): **MILL**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 18 55 N
LONGITUDE: 120 11 55 W
ELEVATION: 563 Metres

NORTHING: 5688613
EASTING: 695220

LOCATION ACCURACY: Within 500M

COMMENTS: Location of sample GBR-166 on E-zone (Assessment Report 23913).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz
ALTERATION: Clay
ALTERATION TYPE: Argillic
MINERALIZATION AGE:
Chalcedony
Silica
Fluorite
Limonite
Silicific'n
Marcasite
Propylitic

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epithermal
TYPE: H05
Stockwork
Epigenetic
Hydrothermal
H03
Hot spring Au-Ag

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic-Jurassic

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Thuya Batholith

LITHOLOGY: Granodiorite
Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1994

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold

4.9600

Grams per tonne

REFERENCE: Assessment Report 23913.

CAPSULE GEOLOGY

The Mill showings are located 1.8 kilometres northwest of Darfield and 73 kilometres north of Kamloops, west of the North Thompson River and Highway 5. They are easily accessible on a secondary road and tertiary bush roads.

Five alteration zones containing epithermal vein quartz and silicified breccia have been mapped on the Mill claims (Assessment Report 23913). They are hosted in eastern marginal phases of the granodioritic Triassic to Jurassic Thuya batholith. The mineralized zones are generally crumbly, limonitic and variably propylitically or argillically altered. They trend north to north-northwest and appear to dip shallowly to moderately to the west. Individual quartz veins are up to 30 centimetres thick and vary in colour from translucent white to grey and flinty. Chalcedonic microveinlets, breccia and stockwork zones are also common. Needles of marcasite and fluorite are accessory minerals.

The five zones are numbered from A to E. The A zone is the easternmost and consists of a moderate stockwork of quartz veinlets and some grey chalcedonic quartz veins up to 25 centimetres thick. Fine pyrite is locally abundant in one of the quartz veins. The veins and stockworks occur within a zone of fractured, limonitic granodiorite that is at least 10 metres wide. The B zone is located 100 metres to the west and hosts a 65 centimetre grey, pyritic chalcedonic vein with a 30 degree dip to the northwest. The C zone is a further 100 metres to the west, consisting of grey chalcedonic, pyritic quartz and local silicified pyritic breccia. The D zone is a further 100 metres to the west and consists of light green silicified

CAPSULE GEOLOGY

breccia. It is about 40 metres wide, is relatively low in sulphide minerals and exhibits characteristics typical of a silicified cap or sinter. The E zone is a further 200 metres to the west and is a 150 metre wide zone of recessive, limonitic, fractured and altered granodiorite with scattered small veins of grey chalcedonic quartz. The highest gold assay obtained to date is a grab sample from the E zone which yielded a value of 4960 ppb (Assessment Report 23913). An outlier of basalt from the Eocene Skull Hill Formation (Kamloops Group) outcrops 100 metres east on A zone.

The Thuya batholith consists of granodiorite, diorite and monzodiorite. On its eastern margin it is in contact with dioritic and gabbroic rocks of the Triassic to Jurassic Dum Lake Intrusive Complex and metasedimentary rocks of the late Paleozoic Harper Ranch Group. The Dum Lake complex comprises mafic and ultramafic rocks believed to constitute an Alaskan-type intrusive complex. Thuya rocks are intrusive into the metasedimentary rocks of the Harper Ranch Group which include limestones, siltstones, shales, volcaniclastic sandstones and local volcanic rocks (Fieldwork 2000). Volcanic rocks of the Eocene Skull Hill Formation composed of dacite, trachyte, basalt, andesite, rhyolite and related breccias unconformably overlie the metasedimentary and intrusive rocks (Geological Survey of Canada Memoir 363).

No work is known to have been undertaken on the property until 1994, when Eighty-Eight Resources Limited (Assessment Report 23913) discovered the showings in a regional prospecting program and completed a program of linecutting (12.5 kilometres), VLF-EM surveying (11.7 kilometres), geological mapping and lithogeochemical sampling (66 samples).

BIBLIOGRAPHY

GSC SUM RPT 1921 Part A
GSC MEM *363
GSC MAP 1278A
EMPR FIELDWORK 2000, pp. 1-30
EMPR ASS RPT *23913

DATE CODED: 2001/02/28
DATE REVISED: 2001/02/28

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 013**

NATIONAL MINERAL INVENTORY:

NAME(S): **HIDDEN CREEK**, CANYON, NEST,
CLIFF

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:
LATITUDE: 51 26 46 N
LONGITUDE: 120 15 31 W
ELEVATION: 750 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of pits and adits (Assessment Report 18404).

Underground
MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5703001
EASTING: 690495

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Nicola	Undefined Formation	
Upper Paleozoic	Harper Ranch	Undefined Formation	
Triassic-Jurassic			Dum Lake Intrusive Complex

LITHOLOGY: Andesite
Altered Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
Harper Ranch
PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Hidden Creek copper occurrence is located in the bed of Eakin Creek, 5 (air) kilometres northwest of Little Fort. The showings consist of "iron and copper sulphides" hosted in "calc-silicate rocks" and are exposed in old pits (Assessment Report 18404, figure 3). Two old adits are also shown on figure 3. Hostrocks in the area are skarn-altered limestones and associated silicified sedimentary rocks of the late Paleozoic Harper Ranch Group (Fieldwork 2000, pages 1-30) in contact with diorite, monzonite and silicified greenstone of the Dum Lake Intrusive Complex. The calcareous units can be traced from Nehalliston Creek in the north to Eakin Creek and are sparsely mineralized with chalcopyrite and locally galena (Assessment Report 13519). Malachite staining was also noted along a length of approximately 500 metres on the west slope of the hill north of Eakin Creek (Assessment Report 24896). The Upper Triassic to Lower Jurassic Dum Lake complex is comprised of ultramafic and mafic plutonic rocks that could be part of an Alaskan-type intrusive body. The mafic portions of the Dum Lake complex are dominated by coarse to medium-grained gabbro and diorite but locally includes clinopyroxenite, monzogabbro, microdiorite and tonalite. The ultramafic portion of the Dum Lake complex includes an assemblage of variably serpentinized, locally talc and carbonate-altered rocks consisting of clinopyroxenite, wehrlite and dunite. The Dum Lake complex is truncated by granodioritic rocks of the Triassic to Jurassic Thuya batholith on its southeast side. On its eastward side, Dum Lake complex diorites and gabbros are in contact with massive andesites of the Upper Triassic Nicola Group and argillites, limestones and cherts of the late Paleozoic Harper Ranch Group (Fieldwork 2000). The earliest recorded work on the Hidden Creek (Canyon) property was pitting, trenching and 6.5 metres of diamond drilling in 1968, 1969 and 1970 (Geology, Exploration and Mining in British Columbia 1968, 1969 and 1970). Although old adits are present in the area (Assessment Report 18404, figure 3), there is no other information about them. In 1988, Explorex Development Corporation completed a 200 metre magnetic-radiometric-VLF-EM survey down Eakin Creek

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CAPSULE GEOLOGY

(Assessment Report 18404). Prospecting in 1996 by W.T. Hall detected malachite staining in "fractures of rock with andesitic or dioritic texture" on the Nest 4 and Cliff 1 claims (Assessment Report 24896).

BIBLIOGRAPHY

EMPR AR 1968-168
EMPR GEM 1969-232; 1970-313; 1971-332
EMPR ASS RPT 18404, 24896
EMPR FIELDWORK *2000, pp. 1-30
EMPR PF (Claim location map, 1970)
GSC MAP 1966-3; 1278A
GSC MEM 363
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/22

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 014**

NATIONAL MINERAL INVENTORY: 092P9 Mo1

NAME(S): **ANTICLIMAX A**, BLUE JAY, WHISKEY,
BUCKHORN, MD

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:
LATITUDE: 51 35 48 N
LONGITUDE: 120 18 05 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: At Tintlhohtan Lake, see also Anticlimax B and Anticlimax C
(092P 015, 16).

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5719630
EASTING: 686906

COMMODITIES: Molybdenum Tungsten Bismuth

MINERALS

SIGNIFICANT: Molybdenite Wolframite Bismuthinite
ASSOCIATED: Quartz Pyrite Fluorite
ALTERATION: Sericite
MINERALIZATION AGE: Cretaceous
ISOTOPIC AGE: 102 to 90.7 Ma DATING METHOD: Potassium/Argon MATERIAL DATED: Biotite and sericite

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous			Tintlhohtan Lake Stock

ISOTOPIC AGE: 102 +/- 5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Granite
Aplite
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Anticlimax showings are molybdenum-tungsten occurrences within the Cretaceous granitic stock northeast of Tintlhohtan Lake. The property is located between 1190 and 1370 metres elevation on a low hill about 2 kilometres south of the southeast end of Taweel Lake, some 100 kilometres north of Kamloops.

The exterior of the stock is mapped as aplite and the interior as quartz monzonite to granite in composition. Molybdenite mineralization at the Anticlimax A location occurs in thin to hairline quartz veinlets with some pyrite. Larger quartz veins 1 to 5 centimetres thick commonly contain pyrite which may be accompanied by molybdenite, wolframite, bismuthinite and fluorite. In a few places, narrow zones of finely disseminated molybdenite alongside mineralized quartz veinlets in granite are present, but appear to be of very limited extent and erratic distribution. Mineralization in both intrusive phases is widespread but erratic. Apart from the small high-grade discovery occurrence, all mineralization found to 1970 was well below economic grade.

A biotite separate from unaltered granite of the Tintlhohtan Lake stock yielded a potassium-argon date of 102 +/- 5 Ma (Geological Survey of Canada Paper 79-2). In the same study, sericite from an alteration envelope bordering a mineralized vein produced a date of 90.7 +/- 3.3 Ma, indicating that the alteration and associated molybdenum-tungsten mineralization was genetically related to the host stock. These dates suggest that the Tintlhohtan Lake stock is part of the mid-Cretaceous Bayonne suite of intrusions, which is widespread in southeastern British Columbia, and is the focus of a study to assess its potential for plutonic-related gold mineralization (Fieldwork 2000).

Three claims, the Blue Jay, Whiskey Jack and Buckhorn were staked on the showing in April 1938 by Messrs. Reid and Loveway.

CAPSULE GEOLOGY

These lapsed and the showing was restaked as the Anticlimax Group in May 1939 by C.A. Reid and Associates. During that summer, D.S. Tait and Associates of Vancouver optioned the claims, and some open cutting and stripping was done before the option was dropped later that year. In the fall of 1960, Gung Loy Jim and Associates staked 23 claims on the showings. Calder Molybdenum Company Limited optioned the property and staked an additional 117 claims. Work by the company in 1960-61 included trenching and diamond drilling in three holes; a new molybdenite showing was discovered about 1.5 kilometres south of the original discovery. On the basis of the drill results, Bralorne Pioneer Mines took a 60 day option on the property in September 1961. The option was dropped later in the year. Rio Tinto Canadian Exploration Limited held the property in 1965. Work included geological mapping, a geochemical soil survey, an induced polarization survey, and bulldozer trenching. In 1966, Falconbridge Nickel Mines Limited optioned 42 claims in the Mo and adjacent claim groups from Gung Loy Jim and K. Calder. Work that year included 619 metres of AX diamond drilling in five holes, electromagnetic and magnetometer surveys, and a geochemical soil survey over all claims, and a further 975 metres of diamond drilling (size unknown) in 9 holes. Imperial Oil Limited held an option on the property in 1972-73. Work included induced polarization and resistivity surveys over 13.0 line-kilometres, and 1183 metres of diamond drilling in 3 holes. Amax of Canada Limited held the property as the Hunch 1-5 claims (81 units) in 1980; work that year included a geochemical soil and silt survey (303 samples). The B.C. Geological Survey conducted a regional till geochemistry program over NTS mapsheets 092P08W and 09W in 1999 (Open File 2000-17).

BIBLIOGRAPHY

EM FIELDWORK *2000 pp. 25,193-206
EM OF 2000-17
EMPR AR 1939-100; *1961-49; 1965-160; 1966-143
EMPR ASS RPT 4137, 4139, 8492
EMPR BULL 9, p. 20
EMPR GEM 1969-231; 1970-312; 1972-321; 1973-176
EMPR OF 2002-15
EMPR PF (Workings plan 1939, 1"=100')
EMR MP CORPFILE (American Pacific Exploration Limited)
GSC MAP 1966-3; 1278A
GSC P 79-2, p. 17
CIM Special Volume 39 pp. 50-71

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/15

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 015**

NATIONAL MINERAL INVENTORY: 092P9 Mo1

NAME(S): **ANTICLIMAX B, MO**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:
LATITUDE: 51 35 48 N
LONGITUDE: 120 18 17 W
ELEVATION: 1600 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: At Tintlhohtan Lake, 28 kilometres northwest of Little Fort.

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5719622
EASTING: 686675

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
MINERALIZATION AGE: Cretaceous
ISOTOPIC AGE: 102 to 90.7 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite and sericite

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous			Tintlhohtan Lake Stock

ISOTOPIC AGE: 102 +/- 5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Aplite
Quartz Feldspar Pegmatite
Quartz Monzonite
Granite
Quartz Feldspar Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Anticlimax showings are molybdenum-tungsten occurrences within the Cretaceous granitic stock northeast of Tintlhohtan Lake. The property is located between 1190 and 1370 metres elevation on a low hill about 2 kilometres south of the southeast end of Taweel Lake, some 100 kilometres north of Kamloops. The exterior of the stock is mapped as aplite and the interior as quartz monzonite to granite in composition.

At the Anticlimax B location, Stevenson (Bulletin 9) reported high-grade molybdenum mineralization in a gently-dipping lens, measuring about 2.5 metres in diameter and 65 centimetres wide, near the western margin of the stock. The lens consisted of heavily disseminated molybdenite associated with patches of quartz-feldspar pegmatite within aplite and quartz-feldspar porphyry.

A biotite separate from unaltered granite of the Tintlhohtan Lake stock yielded a potassium-argon date of 102 +/- 5 Ma (Geological Survey of Canada Paper 79-2). In the same study, sericite from an alteration envelope bordering a mineralized vein produced a date of 90.7 +/- 3.3 Ma, indicating that the alteration and associated molybdenum-tungsten mineralization was genetically related to the host stock. These dates suggest that the Tintlhohtan Lake stock is part of the mid-Cretaceous Bayonne suite of intrusions, which is widespread in southeastern British Columbia, and is the focus of a study to assess its potential for plutonic-related gold mineralization (Fieldwork 2000). The B.C. Geological Survey conducted a regional till geochemistry program over NTS mapsheets 092P09W and 08W in 1999 (Open File 2000-17).

BIBLIOGRAPHY

EM FIELDWORK *2000, pp. 26,193-206
EM OF 2000-17
EMPR AR 1939-100; *1961-49; 1965-160; 1966-143

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

EMPR ASS RPT 8492
EMPR BULL 9, pp. 20,24,27
EMPR GEM 1969-231; 1970-304; 1972-321; 1973-276
EMPR OF 2002-15
EMPR PF (Photograph of outcrop, 1970)
EMR MP CORPFILE (American Pacific Explorations Limited)
GSC MAP 1966-3; 1278A
GSC P 79-2, p. 17
CIM Special Volume 39 pp. 50-71.

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/05

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 016**

NATIONAL MINERAL INVENTORY:

NAME(S): **ANTICLIMAX C, MO**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 35 06 N
LONGITUDE: 120 18 00 W
ELEVATION: 1600 Metres

NORTHING: 5718337
EASTING: 687050

LOCATION ACCURACY: Within 500M

COMMENTS: Location is 1.2 kilometres due east of the north end Tintlhohtan Lake, 28 kilometres northwest of Little Fort. Locations of the Anticlimax showings are clearly marked in Minister of Mines Annual Report 1961, page 50.

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz Pyrite
ALTERATION TYPE: Pyrite
MINERALIZATION AGE: Cretaceous
ISOTOPIC AGE: 102 to 90.7 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Biotite, sericite

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous			Tintlhohtan Lake Stock

ISOTOPIC AGE: 102 +/- 5 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Biotite

LITHOLOGY: Granite
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Anticlimax C showing is located in the bed of a small creek, 1.2 kilometres due east from the north end of Tintlhohtan Lake. The molybdenite is scattered in dark quartz veinlets and hairline seams in granite where it is in contact with greenstone to the south. The contact is exposed along an east-striking shear zone. Much brecciation and bleaching and some pyritization has taken place along the zone.

The Anticlimax C was found by Calder Molybdenum Company in 1960 or 1961 during work on Anticlimax showings A and B (092P 014, 15). Please see Anticlimax 092P 014 for more on the history of the property.

The three Anticlimax showings, A, B and C are molybdenite showings associated with the small Cretaceous Tintlhohtan Lake stock. A biotite separate from unaltered granite of the Tintlhohtan Lake stock yielded a potassium-argon date of 102 +/- 5 Ma (Geological Survey of Canada Paper 79-2). Sericite from an alteration envelope bordering a mineralized vein produced a date of 90.7 +/- 3.3 Ma, indicating that the alteration and associated molybdenum mineralization was genetically related to the host stock. These dates suggest that the Tintlhohtan Lake stock is part of the mid-Cretaceous Bayonne suite of intrusions, which is widespread in southeastern British Columbia, and is the focus of a study to assess its potential for plutonic-related gold mineralization (Fieldwork 2000). The B.C. Geological Survey conducted a regional till geochemistry program over NTS mapsheet 092P09W and 08W in 1999 (Open File 2000-17).

BIBLIOGRAPHY

EM FIELDWORK *2000, pp. 26,193-206

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BIBLIOGRAPHY

EM OF 2000-17
EMPR AR 1939-100; *1961-49; 1965-160; 1966-143
EMPR ASS RPT 4137, 4139, 8492
EMPR BULL 9, p. 20
EMPR GEM 1969-231; 1970-304; 1972-321; 1973-276
EMPR OF 2002-15
EMR MP CORPFILE (American Pacific Exploration Limited)
GSC MAP 1966-3; 1278A
GSC P 79-2, p. 17
CIM Special Volume 39, pp. 50-71

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/06

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 017**

NATIONAL MINERAL INVENTORY:

NAME(S): **MONA**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 16 19 N
LONGITUDE: 120 14 04 W
ELEVATION: 1100 Metres

NORTHING: 5683700
EASTING: 692905

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineral showings and trenches (Assessment Report 14566).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
SHAPE: Tabular
DIMENSION: Metres

STRIKE/DIP: 055/90 TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Upper Paleozoic

GROUP

Harper Ranch

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Siltstone
Shale
Volcanic Sandstone
Argillite
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1984

SAMPLE TYPE: Grab

COMMODITY

GRADE

Silver

13.9000

Grams per tonne

Gold

3.5000

Grams per tonne

REFERENCE: Assessment Report 14566.

CAPSULE GEOLOGY

The Mona showings are located 5 kilometres southwest of Darfield and 68 kilometres north of Kamloops, west of the North Thompson River and Highway 5. Logging and bush roads provide access to the property.

Mineralization consists of banded quartz veins with pyrite and rare pyrrhotite with minor chloritic alteration. One vein reaches 2 metres in width. The vein strikes 055 degrees with a vertical to steep west dip. A grab sample taken from dump material assayed 2500 ppb gold and 13.9 ppm silver (Assessment Report 14566).

The area of the Mona showings are underlain by metasedimentary rocks of the late Paleozoic Harper Ranch Group which include limestones, siltstones, shales, volcanoclastic sandstones and local volcanic rocks (Fieldwork 2000).

Numerous pits and trenches and some old adits are reported to be present on the property (Assessment Report 14566). In 1984, Lionheart Resource Corporation (Assessment Report 14566) completed a program of trenching (50 metres of vein was stripped and two trenches cut across it). They also completed a soil geochemical survey (498 samples analysed for gold and silver), VLF-EM survey and magnetometer survey.

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BIBLIOGRAPHY

GSC SUM RPT 1921 Part A
GSC MEM *363
GSC MAP 1278A
EMPR FIELDWORK 2000, pp. 1-30
EMPR ASS RPT *14566

DATE CODED: 2001/02/28
DATE REVISED: 2001/02/28

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 018**

NATIONAL MINERAL INVENTORY:

NAME(S): **ACE**, LEM, LEMIEUX CREEK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

Underground

MINING DIVISION: Kamloops

LATITUDE: 51 36 44 N
LONGITUDE: 120 18 16 W
ELEVATION: 1200 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5721352
EASTING: 686630

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Silver Lead Gold Copper Zinc

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Arsenopyrite Sphalerite Galena

MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Nicola Undefined Formation

LITHOLOGY: Phyllite
Siltstone
Quartzitic/Quartzose Sandstone
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1924
SAMPLE TYPE: Rock	
COMMODITY	GRADE
Silver	70.0000 Grams per tonne
Gold	1.3710 Grams per tonne
Copper	0.2000 Per cent
Lead	20.0000 Per cent

REFERENCE: Minister of Mines Annual Report 1924, page 152.

CAPSULE GEOLOGY

The Ace occurrence is along upper Lemieux Creek, a little more than 100 metres downstream from the outlet of Taweel Lake. The mineralization was briefly mentioned in the Minister of Mines Annual Report 1924, which reported that a sample submitted by a local prospector assayed 1.371 grams per tonne gold, 70 grams per tonne silver, 0.2 per cent copper and 20 per cent lead.

The Ace showing is hosted by metasedimentary rocks of the Nicola Group. The mineralization at the old shaft along Lemieux Creek consists of lenses of massive pyrrhotite-pyrite-arsenopyrite with minor chalcopyrite. Individual sulphide lenses are up to several tens of centimetres wide, and are hosted in dark grey phyllite containing contorted layers and fragments of lighter grey siltstone and fine grained quartzose metasandstone. Mineralization in the trench area is likewise hosted by sedimentary rocks, and consists of iron-rich sphalerite, galena, chalcopyrite and pyrite. Both zones are reported to have a "significant gold content" (Assessment Report 25939).

In the early to mid 1900s, work included the sinking of a shallow shaft on the southwest bank of Lemieux Creek, some trenching and some diamond drilling. Peppa Resources drilled three short diamond- drill holes during 1988. Forefront Ventures conducted rock sampling and reconnaissance work in 1994, and grid work and a magnetometer survey were conducted in 1996. Further grid work and a

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CAPSULE GEOLOGY

ground magnetic survey in November 1997, followed by geological mapping in September 1999, were conducted by Canadian Zeolite Limited. The B.C. Geological Survey conducted a regional till geochemistry program on NTS mapsheets 092P09W and 08W in 1999 (Open File 2000-17).

BIBLIOGRAPHY

EM FIELDWORK *2000, p. 25
EM OF 2000-17
EMPR AR 1922-146; 1924-152; 1925-170; 1930-197
EMPR ASS RPT 18219, 24471, 25582, *25939
EMPR OF 2002-15
GSC MAP 1966-3; 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/24

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 020**

NATIONAL MINERAL INVENTORY: 092P Mo3

NAME(S): **SANDS CREEK, MELL, RO,
ROACH, MORNING STAR**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09E
BC MAP:

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 39 58 N
LONGITUDE: 120 02 36 W
ELEVATION: 560 Metres

NORTHING: 5728043
EASTING: 704463

LOCATION ACCURACY: Within 500M

COMMENTS: Location from sketch map (Minister of Mines Annual Report 1961, page 52).

COMMODITIES: Molybdenum Copper

MINERALS

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

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic Cretaceous	Slide Mountain	Fennell	Raft Batholith

LITHOLOGY: Granodiorite
Pegmatite Dike
Micaceous Quartzite
Siliceous Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

Quesnel

PHYSIOGRAPHIC AREA: Shuswap Highland

CAPSULE GEOLOGY

The Sands Creek property is located near the mouth of Sands Creek, a small stream that flows westward into the Clearwater River 3 kilometres north of the village of Clearwater.

The oldest rocks on the property are thin bedded micaceous quartzites and siliceous argillites of the Devonian to Permian Fennell Formation of the Slide Mountain Group. They strike northwestward and dip vertically to steeply south. These rocks are intruded by coarse-grained granodiorite and pegmatite of the Cretaceous Raft batholith. The granodiorite is cut by quartz veins ranging in thickness from 5 to 46 centimetres and which strike easterly and dip vertically to steeply south. The veins pinch and swell and are strongly broken by faulting, and they are rarely continuous beyond three metres. A strong east-west shear zone extends down Sands Creek at the molybdenite showing. Molybdenite, pyrite and chalcopyrite occur in patches and hairline fractures in quartz veins and pegmatite dikes near the granodiorite-sedimentary contact. Disseminated molybdenite was observed in drill cores, but no extensive nor massive mineralization was noted.

The showings were described briefly by Walker in 1930. A limited amount of surface work had been done on the showings when they were examined by Stevenson in June 1938. Three claims were located on the showings in 1939, the Sands Creek 1 and 2 claims owned by Gordon and I.A. Bennett, and the Morning Star claim, owned by J.L. Carden. No work was reported at this time. The showings and surrounding area were covered by 77 claims located in 1959 and 1960 by Messrs. Wrixon, Fuller and Pearson. American Pacific Exploration Limited acquired the property, and in July 1960 formed Sandy Creek Mines Limited to carry out exploration work. Work during 1960-61 by Calder Molybdenum Company consisted of bulldozer trenching and 12 short diamond-drill holes. Bethlehem Copper did geological mapping and 3 percussion holes totalling 131 metres in 1972.

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BIBLIOGRAPHY

EMPR AR 1961-51
EMPR BULL 9, p. 33
EMPR GEM 1972-319
EMPR OF 2002-15
EMPR P 1987-2
EMPR PF (1972 property sketch 1"=1000'; American Pacific Exploration
Limited brochure)
GSC MAP 1966-3; 1278A
GSC SUM RPT 1930 Part A, p. 153A

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/16

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 021**

NATIONAL MINERAL INVENTORY: 092P9 Mo2

NAME(S): **POLLY ANN**, BETSY, LIZARD,
SOCK

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 44 00 N
LONGITUDE: 120 01 58 W
ELEVATION: 640 Metres

NORTHING: 5735547
EASTING: 704888

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au
COMMENTS: Molybdenite mineralization is associated with quartz veins that strike 300 to 310 degrees and dip 30 to 55 degrees southwest.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous			Raft Batholith

LITHOLOGY: Granite
Felsite Dike
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Shuswap Highland

CAPSULE GEOLOGY

Molybdenum showings occur on the steep west side of the Clearwater River, 9 kilometres north of Clearwater in granitic rocks near the eastern edge of the Cretaceous Raft batholith. Molybdenite occurs as sparse flakes in felsite dikes, small rosettes in granodiorite, smears along fracture planes, and are also associated with a set of quartz veins which strike north 300 to 310 degrees and dip 30 to 55 degrees southwest.

Southwestern Potash Corporation held 55 recorded claims, including the Polly Ann 1-13, Betsy 1-17 and Sock 7-12. During 1964 a program of geological mapping and geochemical sampling was carried out. Diamond drilling, totalling 431 metres, was completed in two holes.

BIBLIOGRAPHY

EMPR AR 1964-99
EMPR OF 2002-15
EMPR P 1987-2
EMPR PF (Godfrey, T. (1964): Report for Amax Potash; Sketch map of 1964 work, 1'=400"; Memoranda from J.T. Fyles and G. White)
GSC MAP 1966-3; 1278A
Falconbridge File

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/16

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 022**

NATIONAL MINERAL INVENTORY:

NAME(S): **DOUBLE LAKE**, MAD, MOLY

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P16W
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5740958
EASTING: 678042

LATITUDE: 51 47 28 N
LONGITUDE: 120 25 06 W
ELEVATION: 1260 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location is the centre of trench area. Showings are just east of Double Lake, which is about 2.2 kilometres west-northwest of Patricia Lake (Assessment Report 7920).

COMMODITIES: Molybdenum Copper

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite
ASSOCIATED: Pyrite Limonite Quartz Specularite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au
COMMENTS: Faults in trenches strike 200 degrees and dip east 35 to 90 degrees.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cretaceous			Raft Batholith

LITHOLOGY: Pegmatitic Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

Two showings of molybdenite with chalcopyrite occur as fracture plane fillings and disseminations within quartz monzonite of the Cretaceous Raft batholith, just east of Double Lake, which is about 2.2 kilometres west of Patricia Lake and 10 kilometres south of Mahood Lake. The claims were originally part of the Aku (092P 023), SL, Mad and Nod claim group, which were staked as a result of molybdenum anomalies from a stream sediment sampling program done by Noranda in 1966. In 1974, Amoco conducted geochemical and geophysical work over the Wap claims which included the Double Lake showings and the Aku showings. In 1978, the two showings were staked as the Moly property by Kaare Peterson and Magnus Bratlien. In December of that year the claims were optioned by the Lorado Mining Corporation. In 1979, Lorado conducted a trenching program on the hillside about 700 metres east of the north end of Double Lake. Molybdenite was found in the trenches. They also did four short x-ray drill holes, geological mapping and prospecting, geochemical surveys and 11 percussion holes for a total of 683 metres on the KM 1-4, Moly and Far claims. Lorado changed its name to Norsemont Mining Corporation in January 1980.

All of the rocks found in the trenches are pink pegmatitic quartz monzonite. The rocks have been fractured and faulted. The faults in the trenches strike 200 degrees and dip east 35 to 90 degrees. The fractures generally strike at 020 to 110 degrees, with vertical dips. The molybdenite and chalcopyrite are associated with pyrite and limonite. In the east-striking set of fractures, a few quartz stringers were found to contain some specularite (Assessment Report 1013).

BIBLIOGRAPHY

EMPR AR 1967-132
EMPR ASS RPT *1013, 5083, 5084, 5085, 6171, *7920
EMPR EXPL 1976-E133; 1979-202
EMPR GEM 1970-303; 1973-283; 1974-229
EMPR OF 2002-15
EMPR PF (Claim map, 1970)

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GSC MAP 1966-3; 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/26

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 023**

NATIONAL MINERAL INVENTORY:

NAME(S): **AKU**, DD, MOLY

MINING DIVISION: Kamloops

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P16W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 46 47 N
LONGITUDE: 120 22 11 W
ELEVATION: 1486 Metres

NORTHING: 5739812
EASTING: 681440

LOCATION ACCURACY: Within 500M

COMMENTS: Location given is one of two areas where molybdenite showings are exposed in trenches. The second area lies 600 metres southwest of the first.

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz Pyrite Ferrimolybdtite Limonite Manganite
Feldspar
ALTERATION: Saussurite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Porphyry
TYPE: L04 Porphyry Cu ± Mo ± Au
DIMENSION: Metres STRIKE/DIP: 108/55 TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous			Raft Batholith

LITHOLOGY: Biotite Quartz Monzonite
Aplite Dike
Biotite Hornblende Granodiorite
Aplite
Quartz Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Aku showings are located about 15 kilometres south of Mahood Lake, on a ridge about 1.6 kilometres east of the north end of Patricia Lake at an elevation of 1486 metres.

The showings are hosted entirely in granitic rocks of the Cretaceous Raft batholith, and occur in a unit of medium grained, leucocratic biotite-quartz monzonite which is surrounded by more mafic biotite-quartz monzonite that grades to the southwest into biotite-hornblende granodiorite. Both quartz monzonite phases are cut by dikes of quartz-feldspar porphyry which trend west to north-northwest. The granitic and dike rocks are all cut by aplite veins and dikes, which are cut by molybdenite-bearing quartz veins, which are, in turn, cut and offset by pyrite-quartz veins. The main molybdenite showings are confined to a fracture zone that strikes 108 degrees and dips 55 degrees to the north. Within the mineralized zone, vein spacing is about 8 veins per metre. Outside the main zone the fractures are much more randomly oriented and more widely spaced. Molybdenite occurs exclusively in quartz veins which range from hairline to two centimetres thick; the veins may or may not carry associated pyrite. Secondary minerals commonly found are ferrimolybdtite, limonite and manganese oxides. Rock alteration, even within the mineralized zones, is weak and is limited to saussurite alteration of feldspars.

The area was first staked by Falconbridge Nickel Mines Limited in 1966 when stream geochemistry indicated areas anomalous in molybdenum. In 1967, geological, geochemical and geophysical surveys were carried out, along with road construction and limited trenching. In 1968, five diamond-drill holes totalling 833 metres were drilled. In 1974, Amoco Canada Petroleum Limited staked the property and performed geochemical and geophysical surveys. In 1976, Vital Mines Limited staked the area and carried out an induced polarization

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CAPSULE GEOLOGY

survey. Kerr, Dawson and Associates Limited and Werner Gruenwald staked the area as the DD claims in 1979 and 1980.

BIBLIOGRAPHY

EMPR AR 1967-131; 1968-166
EMPR ASS RPT 1026, 5085, 6171, 7985, 8852
EMPR GEM *1970-303; 1976-E133
EMPR OF 2002-15
EMPR PF (Claim and location map)
GSC MAP 1966-3; 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/19

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 024**

NATIONAL MINERAL INVENTORY:

NAME(S): **GNOME** EPI, YARD,
VIDETTE #1, GALA, VID

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 09 26 N
LONGITUDE: 120 52 38 W
ELEVATION: 1090 Metres

UTM ZONE: 10 (NAD 83)
NORTHING: 5669451
EASTING: 648443

LOCATION ACCURACY: Within 500M

COMMENTS: Location of diamond-drill hole 72455 (Assessment Report 18492).

COMMODITIES: Gold Molybdenum Copper

MINERALS

SIGNIFICANT: Pyrite Molybdenite Chalcopyrite
ASSOCIATED: Quartz Calcite Carbonate
ALTERATION: Silica Calc-Silicate Chalcedony
ALTERATION TYPE: Silicific'n Chloritic Skarn Carbonate
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Epithermal Porphyry Skarn
TYPE: T02 Geothermal spring H05 Epithermal Au-Ag: low sulphidation
L08 Porphyry Mo (Climax-type) L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Nicola	Undefined Formation	Thuya Batholith
Triassic-Jurassic			

LITHOLOGY: Mafic Tuff
Garnet Diopside Actinolite Skarn

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Cariboo Plateau
TERRANE: Quesnel Overlap Assemblage
COMMENTS: ariboo

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1989
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Gold 4.6500 Grams per tonne
COMMENTS: A 55 centimetre intersection of Nicola tuff cut by numerous quartz and carbonate veinlets and up to 35 per cent fine pyrite.
REFERENCE: Assessment Report 18492.

CAPSULE GEOLOGY

The Gnome property is located 2 kilometres east of the Vidette mine (092P 086), northeast of Vidette Lake in the Deadman Valley. The area is approximately 50 (air) kilometres north of Savona and is accessible on a good-quality gravel road which leads north from the Trans-Canada Highway approximately 7.4 kilometres west of Savona. The Vidette Lake area is underlain by mafic volcanic rocks of the Upper Triassic Nicola Group exposed in a window eroded through flat lying Miocene sedimentary rocks and plateau basalts of the Chilcotin Group. The uppermost Chilcotin Group strata comprise an extensive layer of plateau basalts of the Chasm Formation, underlain by volcanic ash and fluvial and lacustrine sedimentary strata of the Deadman River Formation which occupy a northwest trending Miocene channel. In the southern parts of the Yard claims and the Gnome claim, the Nicola rocks are intruded by biotite-hornblende granodiorite plugs which are possibly related to the Triassic to Jurassic Thuya batholith. Nicola rocks are generally chlorite-rich or calcareous greenstones, however, contact metamorphism has developed garnet-diopside-actinolite skarn or tactite adjacent to the intrusive rocks. Locally a siliceous cap is developed near the paleosurface within and overlying the Nicola rocks. The siliceous

CAPSULE GEOLOGY

caprocks are varicoloured (white, red, buff, brown) and consist of cryptocrystalline massive and banded to vuggy silica. Some silica occurs as crosscutting veins within Nicola rocks, other thin delicately-layered material is interpreted as hot spring sinter (Assessment Report 17810). Carbonatization and chloritization are other alteration features common in the Nicola rocks.

Diamond drilling by Inco resulted in an intersection grading 739 ppb gold across 18 centimetres of calcsilicate skarn cut by a 2 centimetre black to colourless chalcedonic quartz veinlet within Nicola Group rocks (Assessment Report 19136) on the Yard claims. On the Gnome claim an intersection of 4650 ppb gold across 0.55 metre was obtained in fine grained Nicola tuff cut by a multitude of calcite and quartz veinlets with up to 35 per cent disseminated pyrite (Assessment Report 18492). Earlier work by Keda Resources Limited (Assessment Report 4257) identified molybdenite and chalcopyrite mineralization in a porphyry-style environment.

The Gnome property was staked as the VID group of claims in 1972 by Keda Resources Limited (Assessment Report 4257), who completed a soil geochemical survey (355 samples). Cominco Limited staked the property as a molybdenum prospect in 1981, and completed widely-spaced reconnaissance magnetic and induced polarization surveys on what was then called the Gala property (Assessment Report 9223). Chevron Canada Resources Limited re-staked the property as the Gnome claim and undertook magnetometer surveys, soil and silt geochemical surveys (377 samples) and lithochemical surveys (59 samples) during an exploration program for molybdenum in 1983 (Assessment Report 12021). Noranda Exploration Company completed a single NQ diamond-drill hole (312.4 metres) in 1986 under an option agreement with Chevron. The Canadian Nickel Company optioned the Gnome claim from Chevron and completed a program of geological mapping, lithochemistry (17 samples), soil geochemical sampling (933 samples) and diamond drilling (825 metres in 2 holes) in 1988 (Assessment Report 18492). Mr. M. Dickens staked the adjoining EPI group and optioned the claims to the Canadian Nickel Company, who in 1988 (Assessment Report 17810) completed a program of geological mapping, soil geochemical surveying (961 samples) and lithochemistry (17 samples). In 1989, Inco (Assessment Report 19136) completed 5 diamond-drill holes (1140 metres) on the Yard 1 and 2 claims (EPI group) immediately to the north of the Gnome claim. In 1995, Queenstake Resources Limited completed a three hole diamond drill program totalling 610 metres (Assessment Report 23971).

BIBLIOGRAPHY

EMPR ASS RPT *4257, 9223, 12946, 14569, 15120, *17810, *18492,
*19136, 23971
GSC MEM *179; *363
GSC MAP 1278A

DATE CODED: 2001/02/08
DATE REVISED: 2001/02/08

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 025**

NATIONAL MINERAL INVENTORY:

NAME(S): CL, OX, DL 1

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P16W
BC MAP:

LATITUDE: 51 48 22 N
LONGITUDE: 120 28 41 W
ELEVATION: 1400 Metres

LOCATION ACCURACY: Within 500M
COMMENTS:

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

NORTHING: 5742482
EASTING: 673867

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Pyrite Molybdenite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Cretaceous

Raft Batholith

LITHOLOGY: Quartz Monzonite
Aplite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The CL or Ox showing is about seven kilometres south of Mahood Lake, three kilometres west of Corsica Lake. The showing is hosted in the Cretaceous Raft batholith and reportedly consists of a trace of pyrite and some molybdenite in quartz monzonite cut by aplite dikes.

The CL showing was staked as the DL 1 claim and held by Anaconda Corporation from 1966 to 1969. This company carried out geochemical, magnetometer and induced polarization surveys, as well as drilling three diamond-drill holes totalling 93 metres. The drilling tested coincident molybdenum and induced polarization conductors in the northwest corner of the claim. In 1980, Sable Resources Limited conducted line-cutting, and geochemical and magnetometer surveys over claims covering the CL and the Hood showing (092P 107) 3.4 kilometres to the west. Phoenix Geophysics Limited conducted an induced polarization survey for Sable Resources that same year.

BIBLIOGRAPHY

EMPR AR 1967-131; 1968-165
EMPR ASS RPT 1092, 1664, 7920, 9019
EMPR GEM 1969-230
EMPR OF 2002-15
EMPR PF (Claim map, no date)
GSC MAP 1966-3; 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/19

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 026**

NATIONAL MINERAL INVENTORY:

NAME(S): **CEDAR SKARN**, G CLAIMS

MINING DIVISION: Kamloops

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 092P08W
 BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 29 31 N
 LONGITUDE: 120 17 31 W
 ELEVATION: 1100 Metres

NORTHING: 5708011
 EASTING: 687991

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Cedar showing (Map #1, Assessment Report 18597).

COMMODITIES: Copper Silver Gold Lead Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Galena Molybdenite
 ASSOCIATED: Pyrite Pyrrhotite
 ALTERATION: Garnet Silica
 ALTERATION TYPE: Skarn Silicific'n
 MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stratabound Vein Disseminated
 CLASSIFICATION: Skarn
 TYPE: K01 Cu skarn K08 Garnet skarn
 SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Harper Ranch	Undefined Formation	Dum Lake Intrusive Complex
Triassic-Jurassic			

LITHOLOGY: Limestone
 Garnetiferous Skarn
 Microdiorite
 Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
 TERRANE: Quesnel
 METAMORPHIC TYPE: Contact
 PHYSIOGRAPHIC AREA: Thompson Plateau
 RELATIONSHIP: Harper Ranch
 GRADE:

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1985
SAMPLE TYPE: Chip	
COMMODITY	GRADE
Silver	4.5000 Grams per tonne
Gold	0.5800 Grams per tonne
Copper	0.7328 Per cent
COMMENTS: One metre sample width.	
REFERENCE: Assessment Report 13519.	

CAPSULE GEOLOGY

The Cedar Skarn occurrence (Assessment Report 18597) is exposed in a roadcut on Highway 24, 10 (air) kilometres northwest of Little Fort. The showing is exposed in a roadcut where highly faulted and skarn-altered limestones and associated silicified sedimentary rocks of the late Paleozoic Harper Ranch Group (Fieldwork 2000) are in contact with diorite, microdiorite and silicified greenstone of the Dum Lake Intrusive Complex. Two separate sulphide zones, each approximately 1 metre wide, are enclosed within silicified microdiorite and greenstone. The two zones are estimated to contain approximately 20 to 35 percent sulphides respectively, comprising veins, lenses and disseminations of pyrite, pyrrhotite and chalcopyrite. A one metre sample across the most sulphide-rich zone analysed 7328 ppm copper, 4.5 ppm silver, 580 ppb gold; a sample of the same width across the other sulphide zone yielded 6154 ppm copper, 4.2 ppm silver and 160 ppb gold. A selected sample assayed 11,474 ppm copper, 9.1 ppm silver and 1460 ppb gold (Assessment Report 13519).

CAPSULE GEOLOGY

The altered limestone exposed in the Highway 24 roadcut contains local lenses of heavily disseminated pyrrhotite-pyrite, with traces of chalcopyrite and molybdenite (Assessment Report 18597), associated with garnetiferous skarn. The limestone can be traced from Nehalliston Creek in the north to Eakin Creek and is sparsely mineralized with chalcopyrite and locally galena (Assessment Report 13519).

The Upper Triassic to Lower Jurassic Dum Lake complex is comprised of ultramafic and mafic plutonic rocks that could be part of an Alaskan-type intrusive body. The mafic portions of the Dum Lake complex are dominated by coarse to medium-grained gabbro and diorite but locally includes clinopyroxenite, monzogabbro, microdiorite and tonalite. The ultramafic portion of the Dum Lake complex includes an assemblage of variably serpentized, locally talc and carbonate-altered rocks consisting of clinopyroxenite, wehrlite and dunite. The Dum Lake complex is truncated by granodioritic rocks of the Triassic to Jurassic Thuya batholith on its southeast side. On its eastward side, Dum Lake complex diorites and gabbros are in contact with massive andesites of the Upper Triassic Nicola Group and argillites, limestones and cherts of the late Paleozoic Harper Ranch Group (Fieldwork 2000).

The property was staked in 1985 by Craven Resources Incorporated. A program of geological mapping, soil geochemical sampling, panned stream sediment samples, lithogeochemical sampling, magnetic and VLF-EM surveying was carried out (Assessment Reports 13519 and 14477). In 1987, 21 kilometres of magnetic and VLF-EM surveying was completed by Craven Resources Incorporated. A prospecting program was completed by Pacific Comox Resources on the Cedar skarn in 1988 (Assessment Report 17709). Pacific Comox Resources completed 22 kilometres of magnetic and VLF-EM surveying in 1989 (Assessment Report 18612).

BIBLIOGRAPHY

EMPR ASS RPT 13519, 14477, 16362, 17709, 18612, *18597
EMPR FIELDWORK 2000, pp. 1-30
GSC MEM 363
GSC MAP 1278A

DATE CODED: 2001/02/21
DATE REVISED: 2001/02/21

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 027**

NATIONAL MINERAL INVENTORY:

NAME(S): **RED, DEER 20, ADD 22,
NORA MINE, AURORA**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

Underground

MINING DIVISION: Kamloops

LATITUDE: 51 31 54 N
LONGITUDE: 120 21 53 W
ELEVATION: 1400 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5712243
EASTING: 682781

LOCATION ACCURACY: Within 500M
COMMENTS: Location of adit (or shaft) from Assessment Report 3945.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Magnetite Chalcopyrite Pyrrhotite Pyrite
ALTERATION: Epidote Carbonate
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Skarn
TYPE: K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic
Triassic-Jurassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Dum Lake Intrusive Complex

LITHOLOGY: Volcanic
Fragmental Volcanic
Skarn
Pyroxene Microdiorite
Altered Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: FLOAT

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock

YEAR: 1991

COMMODITY

Copper

GRADE

0.7100 Per cent

REFERENCE: Assessment Report 20014.

CAPSULE GEOLOGY

The Red occurrence is located just east of the Lakeview gold skarn prospect (092P 010) about 22 kilometres west of Little Fort. The Red occurrence is within the eastern part of the diorite stock of the Triassic-Jurassic Dum Lake Intrusive Complex that bounds the Lakeview prospect to the northeast. The showing is an iron-rich skarn within Upper Triassic to Jurassic Nicola Group volcanic rocks near a pyroxene diorite. Assessment Report 3945 describes two old adits (origin unknown) that cut magnetite-pyrrhotite-chalcopyrite mineralization within fractured and epidote-carbonate altered diorite. Disseminated magnetite is common in the surrounding area. Assessment Report 20014 reports that samples of locally-derived pyrite-chalcopyrite altered dioritic float from near the south margin of the stock, directly south of the Red occurrence, yielded assay values of up to 0.71 per cent copper.

Hugh Naylor and L.G. White ran, on behalf of the Cariboo Syndicate, an exploration program of geological mapping and a magnetometer survey in July 1972 over an area around the south end of Deer Lake, that included the Lakeview prospect. They identified a magnetic anomaly, anomaly "B", that centred on the two old adits at the Red location. Ager, Berreta and Associates conducted ground magnetometer, VLF-EM and geochemical surveys over the area in 1980. P. Slominski cut a grid and ran ground VLF-EM over a part of the

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RUN TIME: 11:19:00

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ENERGY AND MINERALS DIVISION

PAGE: 1046
REPORT: RGEN0100

CAPSULE GEOLOGY

claims in 1986. The showing was looked at as a part of the Deer Lake property during a prospecting and stream sampling program by Electrum Resources Corporation in 1999. The B.C. Geological Survey conducted a regional till geochemistry program over NTS mapsheets 092P09W and 08W in 1999 (Open File 2000-17).

BIBLIOGRAPHY

EMPR AR 1967-132
EMPR ASS RPT *3945, 6586, 8880, 15931, 20014, 26223
EMPR FIELDWORK *2000, p. 24
EMPR GEM 1970-311; 1972-320; 1973-275; 1977-E177
EMPR OF 2000-17; 2002-15
EMPR PF (Claim maps - Aurora, 1966, Red 1-6, 1967)
GSC MAP 1966-3; 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/28

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 028**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAHOOD LAKE**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P16W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 53 54 N
LONGITUDE: 120 23 17 W
ELEVATION: 760 Metres

NORTHING: 5752955
EASTING: 679703

LOCATION ACCURACY: Within 5 KM
COMMENTS:

COMMODITIES: Gold Silver Copper

MINERALS

SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE: Paleozoic GROUP: Slide Mountain FORMATION: Fennell IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Quesnel Highland

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1924

COMMODITY	GRADE	
Silver	34.0000	Grams per tonne
Gold	20.6000	Grams per tonne
Copper	0.3000	Per cent

REFERENCE: Minister of Mines Annual Report 1924, page 153.

CAPSULE GEOLOGY

The Mahood Lake showing is located on the top of a bluff on the south shore of Mahood Lake, within greenstone of the Devonian-Permian Fennell Formation of the Slide Mountain Group. An assay of a sample that analysed 20.6 grams per tonne gold, 34 grams per tonne silver and 0.3 per cent copper was reported in the Minister of Mines Annual Report 1924. The claims around the "auriferous ledge" showing are mentioned in many of the Annual Reports of the late 1800s and early 1900s, but information on the history of work is not available.

BIBLIOGRAPHY

EMPR AR 1886-207; 1887-273; 1888-313; 1897-558; 1898-1100; 1900-910;
1905-209; 1907-146; *1924-153
EMPR OF 2002-15
GSC MAP 1966-3; 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/02

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 029**

NATIONAL MINERAL INVENTORY:

NAME(S): **MANN CREEK, X, BILLY,**
SUNNY CREEK 1-6

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09E
BC MAP:

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 35 00 N
LONGITUDE: 120 09 53 W
ELEVATION: 666 Metres

NORTHING: 5718506
EASTING: 696427

LOCATION ACCURACY: Within 500M

COMMENTS: Location is at the centre of the showing (Assessment Report 4777).

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena
ASSOCIATED: Quartz Calcite Pyrite Epidote Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic-Mesozoic	Slide Mountain	Fennell	

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Shuswap Highland

CAPSULE GEOLOGY

The Mann Creek showing is located at 666 metres elevation in the Mann Creek gully, about 1.4 kilometres upstream from Highway 5, 11 kilometres south of Clearwater. Mineralization is found within metamorphosed greenstones of the Devonian to Permian Fennell Formation of the Slide Mountain Group. Calcite-epidote veins contain pyrite and minor chalcopyrite; a quartz-carbonate vein carries galena.

The area was staked as the Sunny Creek claims before 1969. Golden Ears Mines Limited conducted a fieldwork program in November 1973 consisting of geological mapping, geochemical soil and rock sampling and linecutting over the X claims. Prospector J.M. Mirko prospected the property as the Billy claim on behalf of J.W. McLeod in 1980.

BIBLIOGRAPHY

EMPR ASS RPT *4777, 8266
EMPR GEM 1973-274
EMPR OF 2002-15
EMPR PF (Claim map, 1969)
GSC MAP 1278A
GSC SUM RPT 1921 Part A, p. 105

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/28

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 030**

NATIONAL MINERAL INVENTORY:

NAME(S): **LISA**, DA-II, LISA 4

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)

LATITUDE: 51 16 53 N
LONGITUDE: 120 11 37 W
ELEVATION: 600 Metres

NORTHING: 5684858
EASTING: 695713

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineral showings in Figure 3, Assessment Report 14292.

COMMODITIES: Gold Silver Lead Copper

MINERALS

SIGNIFICANT: Galena Chalcopyrite
ASSOCIATED: Quartz Pyrite Marcasite
ALTERATION: Malachite Limonite Wad
ALTERATION TYPE: Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic Eocene	Harper Ranch Kamloops	Undefined Formation Skull Hill	

LITHOLOGY: Siltstone
Shale
Volcanic Sandstone
Argillite
Siltstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1984
SAMPLE TYPE: Grab
COMMODITY
Silver 66.2000 Grams per tonne
Gold 8.8000 Grams per tonne

REFERENCE: Assessment Report 14292.

CAPSULE GEOLOGY

The Lisa showings are located 3 kilometres south-southwest of Darfield and 68 kilometres north of Kamloops, west of the North Thompson River and Highway 5. They are accessible on a secondary road and are about 200 metres north of a farmhouse on Ipsoot Creek (Figure 3, Assessment Report 14292).

Mineralization consists of northwest striking, steeply dipping quartz veins and siliceous zones within shear zones (Assessment Report 14292). Vein widths are reported to be in the 0.6 to 0.9 metre range with mineralized veins present over an area measuring 200 by 120 metres - the long dimension striking northwest. Minerals are reported to be galena, chalcopyrite, pyrite, marcasite and associated secondary malachite, limonite and manganese oxides. Grab samples taken in 1984 from a dump yielded low gold, silver and base metal values, the highest being 8.8 grams per tonne gold, 66.2 grams per tonne silver, 0.16 per cent lead and less than 0.01 per cent zinc (Assessment Report 14292).

The area of the Lisa showings are underlain by metasedimentary rocks of the late Paleozoic Harper Ranch Group which include limestones, siltstones, shales, volcanoclastic sandstones and local volcanic rocks, and volcanic rocks of the Eocene Skull Hill Formation (Kamloops Group). The Skull Hill Formation is composed of dacite,

CAPSULE GEOLOGY

trachyte, basalt, andesite, rhyolite and related breccias (Geological Survey of Canada Memoir 363). Felsite dikes are reported to be present in the area of the showings.

Numerous pits and trenches are evident on the property and are believed to date back to 1912 (Assessment Report 14292). Cosmos Resources Inc. carried out a soil geochemical survey (168 samples analysed for gold, silver and copper) in 1984. In 1986, a four hole diamond drill program (404 metres) was completed on the property (Assessment Report 15784) with disappointing results.

BIBLIOGRAPHY

GSC SUM RPT 1921 Part A
GSC MEM *363
GSC MAP 1278A
EMPR FIELDWORK 2000, pp. 1-30
EMPR ASS RPT *14292, *15784

DATE CODED: 2001/02/28
DATE REVISED: 2001/02/28

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 031**

NATIONAL MINERAL INVENTORY:

NAME(S): **X CLAIM GROUP**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P03E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 14 26 N
LONGITUDE: 121 05 00 W
ELEVATION: 1052 Metres

NORTHING: 5678321
EASTING: 633790

LOCATION ACCURACY: Within 500M

COMMENTS: Location of 2810 ppb gold analysis, figure 3, Assessment Report 21253.

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Calcite
ALTERATION: Chlorite
ALTERATION TYPE: Unknown
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE: Triassic-Jurassic
GROUP: Nicola

FORMATION: Undefined Formation

IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1991

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold

2.8100

Grams per tonne

Copper

2.0100

Per cent

REFERENCE: Assessment Report 21253.

CAPSULE GEOLOGY

The X Claim Group property is located 23 kilometres east-southeast of 70 Mile House, and south of the Bonaparte River. It is 2.8 kilometres northeast of Mount Grant and is readily accessible on logging roads.

According to Assessment Report 21253, the property is underlain by Nicola Group greenstones which are generally andesitic to basaltic volcanic rocks of Upper Triassic to Lower Jurassic age. The Nicola Group rocks are exposed in a window through Miocene to Pleistocene alkaline plateau basalts of the Chilcotin Group which blanket much of the Cariboo Plateau. Samples taken in a prospecting program (Assessment Report 21253) yielded assays of 2,010 parts per million Cu and 2,810 parts per billion Au. The samples are described (Assessment Report 21253) as being "greenstone" with some pyrite crystals and calcite veining and chlorite alteration. There are no detailed geological maps available which cover the property, nor are there descriptions of the mineralised material.

A prospecting program was completed on the X Group claims by Mr. Joel Thomlinson in 1991. 77 rock samples and 188 soil geochemical samples were analyzed by the multi-element ICP technique (Assessment Report 21253).

BIBLIOGRAPHY

EMPR ASS RPT 21253

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1052
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 363

DATE CODED: 2003/01/16
DATE REVISED: / /

CODED BY: RHM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 032**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAC, SKULL, STAN,
FIR, BRETT, SMS CLAIM GROUP**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P14E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 47 16 N
LONGITUDE: 121 10 42 W
ELEVATION: 975 Metres

NORTHING: 5739004
EASTING: 625644

LOCATION ACCURACY: Within 500M
COMMENTS: Legal Corner Post of Stan 1 to 4 claim Group, figure 3,
Assessment Report 24457.

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic-Jurassic			Takomkane Batholith

LITHOLOGY: Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The MAC (STAN or Skull) showings are located 20 kilometres north-northeast of 100 mile house, and are accesible via the Highway 97 and the 111 Mile Creek road (Assessment Report 24457).

The area is underlain by quartz dioritic intrusive rocks of the Triassic to Jurassic Takomkane Batholith which intrudes andesitic volcanic and sedimentary strata of the Upper Triassic Nicola Group. Chalcopyrite and molybdenite are reported (Assessment Reports 4993 and 24457) to occur associated with fractures in intrusive rock. However no location or specific information is available on the occurrences.

The earliest recorded work was in 1969, when Canway Explorations Limited completed soil geochemical sampling (310 samples) and induced polarization surveys (21.0 kilometres) on the Mac, Stan and Skull claims. In 1971, two or more trenches were excavated to test the induced polarization anomalies. In 1972 and 1973, nine percussion holes totalling 398 metres were drilled on the property (Geology Exploration and Mining 1972, page 324; Geology Exploration and Mining 1973, page 279). This was followed by more detailed induced polarization surveys in 1974. In 1996, Guardian Enterprises Limited completed a program of rock chip geochemical (15 samples) and soil sampling (5 samples) on the SMS claim group in the same area.

BIBLIOGRAPHY

EMPR ASS RPT 1883, 2303, 4993, 24457, 24464
EMPR GEM 1969-184, 1971-334, 1972-324, 1973-279, 1974-227
GSC MAP 1966-3, 1278A
GSC MEM 363

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 033**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIMOTHY CREEK**, YEP, WESTIM,
RAINBOW, FF, WD

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 54 06 N
LONGITUDE: 121 22 25 W
ELEVATION: 1280 Metres

UTM ZONE: 10 (NAD 83)
NORTHING: 5751351
EASTING: 611893

LOCATION ACCURACY: Within 500M

COMMENTS: Location of main showings, Baseline 100E, 100N, figure 2,
Assessment Report 7256.

COMMODITIES: Lead Copper Zinc Silver Gold

MINERALS

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

DEPOSIT

CHARACTER: Vein Shear Massive
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
SHAPE: Tabular
DIMENSION: 725 x 1 Metres STRIKE/DIP: 015/ TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Eocene Kamloops Skull Hill

LITHOLOGY: Andesite
Agglomerate
Clastic Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Quesnel Highland
TERRANE: Overlap Assemblage Quesnel

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1974
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 159.4000 Grams per tonne
Gold 1.3000 Grams per tonne
Copper 0.3000 Per cent
Lead 3.5100 Per cent
Zinc 6.0500 Per cent
COMMENTS: "Rock geochemical sample" from trench (Assessment Report 5067).
REFERENCE: Assessment Report 5067.

CAPSULE GEOLOGY

The YEP property is located 3 kilometres east of Highway 97 and 12 kilometres northeast of Lac La Hache. It is easily accessible on old logging roads. The property is underlain by flat-lying calc-alkaline volcanic rocks of the Eocene Skull Hill Formation (Kamloops Group) which consists of basalt, dacite and rhyolite, related breccias and agglomerates and intercalated non-marine clastic sedimentary rocks (Memoir 363). A system of parallel mineralised fracture zones strike 015 degrees, dipping steeply west. The main mineralised vein is less than 1 metre in thickness and contains galena, chalcopyrite, sphalerite, quartz and calcite and has been traced for a length of 725 metres (Assessment Report 7256). The highest assay from 8 surface chip samples was 0.3 per cent copper, 6.05 per cent zinc, 3.51 per cent lead, 159.4 grams per tonne silver and 1.3 grams per tonne gold (Assessment Report 5067). Other, less well developed veins are present on the property. Previous work in the area includes soil and stream sediment

CAPSULE GEOLOGY

geochemical surveys, an induced polarization survey (4.5 kilometres), bulldozer trenching and geological mapping by Anaconda American Brass Limited in 1966 and 1967 (Annual Report 1966 and 1967). Prospecting and hand pitting was undertaken by W.W. Deans in 1972 (Assessment Report 5067). Mr. C Gunn staked the Westim and Rainbow claims over the property in 1976 and 1978 and completed some prospecting, hand pitting and back-hoe trenching. Noranda Exploration company optioned the property in 1979 and drilled two angle holes totalling 318.4 metres. Several mineralized carbonate veins were intersected approximately where expected below the surface showings. The assay results indicated that the surface grades did not continue to depth.

BIBLIOGRAPHY

EMPR AR 1966-135; 1967-126
EMPR EXPL 1978-E188, 1979-201
EMPR ASS RPT 5067, 7256, 7454
GSC MAP 1966-3, 1278A
GSC MEM 363

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/03

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 034**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEACH 2**, OPHIR, ANN,
JODY

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 57 41 N
LONGITUDE: 121 18 18 W
ELEVATION: 1370 Metres

NORTHING: 5758101
EASTING: 616459

LOCATION ACCURACY: Within 500M

COMMENTS: Location from figure 4, Assessment Report 3815.

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Magnetite Pyrite Pyrrhotite
ALTERATION: K-Feldspar Epidote Biotite Tourmaline
ALTERATION TYPE: Potassic Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein Disseminated
CLASSIFICATION: Porphyry Hydrothermal Epigenetic
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic
Triassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Andesite
Monzonite

HOSTROCK COMMENTS: Monzonite intrusive host is part of the "synvolcanic" alkaline intrusive bodies informally called the "Spout Lake Intrusive Suite".

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Peach 2/Jody copper showing is located 3 kilometres south of Peach Lake, approximately 20 kilometres northeast of Lac La Hache and is readily accessible from Highway 97 via a network of logging roads. Other names for the claims and showings have been the Ann and the Ophir. The Peach #2/Jody showing is one of several copper showings on the current Ann 1 and 2 claims (see also 092P 001, 002, 034, 035, 108, 115 and 153). All of these occurrences are part of the Spout Lake copper-gold district, a group of porphyry and skarn deposits associated with Upper Triassic to Lower Jurassic alkaline intrusive rocks of the Spout Lake intrusive suite.

The Peach property is underlain by andesites, basalts, calcareous tuffs and argillites of the Upper Triassic Nicola Group (Assessment Report 25368). Nicola Group rocks are intruded by the Upper Triassic to Lower Jurassic Spout Lake Intrusive complex, an alkalic intrusive suite ranging in composition from pyroxenite through monzonite to syenite, and from batholithic size to small intrusive plugs, dykes and breccia bodies. Granodioritic rocks of the Triassic to Jurassic Takomkane Batholith intrude Nicola rocks east of the property. Outliers of alkaline plateau basalts of the Miocene to Pleistocene Chilcotin Group are present in the general area.

No good description of the Peach 2/Jody showing is available, however Assessment Report 3815, states that metallic mineralization consists of magnetite, chalcopyrite, bornite, pyrite and pyrrhotite disseminated and associated with veining and stockworks. Alteration and vein minerals include the aforementioned metallic minerals and k-feldspar, epidote, biotite and tourmaline. Primary copper minerals are commonly altered to malachite. The mineralization reportedly (Assessment Report 3815) occurs within an altered intrusive breccia in a northeast-trending zone along the eastern contact of a

CAPSULE GEOLOGY

syenodiorite (monzonite) intrusive with Nicola andesite. Interest in the Spout Lake area was triggered in 1966 when the Geological Survey of Canada released the results of a regional airborne magnetic survey which outlined an annular magnetic anomaly 10 kilometres in diameter in the Spout Lake area and which included the area underlying the Peach 1 prospect. Subsequently in 1966 and 1967, Coranex Limited obtained anomalous results in follow-up stream sediment geochemical surveys and soil geochemical surveys in the area south of Peach Lake. Programs of geological, soil geochemical, magnetometer, induced polarization and prospecting surveys were undertaken in 1967 in the area south of Peach Lake, leading to the discovery of the Peach 1 and several other occurrences. Asarco Exploration Company of Canada Limited optioned the property in 1969. Amax Potash Limited optioned the property between 1971 and 1973 and completed programs of geological mapping, geophysics and percussion drilling. Amax and Asarco reportedly (Assessment Report 25368) completed 10 percussion drill holes with results up to 6.1 metres grading 0.13% copper and 0.26 g/t gold. In 1983 and 1984, the Selco Division of BP Resources Canada Limited completed soil geochemical surveys on the Core group of claims which covered the property. G.W.R. Resources Incorporated acquired the property in 1988 and Asarco re-optioned the property and completed induced polarisation surveys and percussion drilling in 1991. In 1993, G.W.R. Resources formed a joint venture with Regional Resources and have since completed programs of induced polarization and diamond drilling.

BIBLIOGRAPHY

EMPR AR 1966-135, 1967-126, *1968-155
EMPR GEM 1969-183, 1972-324, 1973-278
EMPR ASS RPT 1037, 1038, 1131, 1668, 1696, 1734, 2347, *3815,
3882, 4542, 11692, 13119, 17831, *21982, 23975, *25368, 23975
EMPR MIN BULL MR 223 B.C. 199
GSC MAP 1966-3, 1278A
GSC MEM 363
Whiteaker, Robin (1966), The Geology, Geochronology and
Mineralization of the Ann Property: and Early Jurassic
Alkalic Porphyry system near Lac La Hache, B.C. Honours
B.Sc. Thesis, U.B.C.
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/05

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 035**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEACH 3**, OPHIR, ANN,
ROAD, PIT

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 57 38 N
LONGITUDE: 121 17 42 W
ELEVATION: 1415 Metres

NORTHING: 5758024
EASTING: 617148

LOCATION ACCURACY: Within 500M

COMMENTS: Location from figure 4, Assessment Report 3815.

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Magnetite Specularite Pyrite Calcite Quartz
ALTERATION: K-Feldspar Epidote
ALTERATION TYPE: Potassic Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Porphyry Hydrothermal Epigenetic
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic
Triassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Monzonite Volcaniclastic Breccia
Andesite

HOSTROCK COMMENTS: Monzonite volcanic breccia host is a "subvolcanic" intrusive body associated with Nicola volcanism.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1995

COMMODITY

GRADE

Gold 0.0700 Grams per tonne
Copper 1.0000 Per cent

COMMENTS: 1 metre intersection diamond drill hole A95-05.

REFERENCE: Assessment Report 25368.

CAPSULE GEOLOGY

The Peach 3 (or Road) copper showing is located 3 kilometres southeast of Peach Lake, approximately 20 kilometres northeast of Lac La Hache and is readily accessible from Highway 97 via a network of logging roads. Other names for the claims and showings have been the Ann and the Ophir. The Peach 3 showing is one of several copper showings on the current (February 2003) Ann 1 and 2 claims (see also 092P 001, 002, 108, 115, 153 and 174). All of these occurrences are part of the Spout Lake copper-gold district, a group of porphyry and skarn deposits associated with Upper Triassic to Lower Jurassic alkaline intrusive rocks of the Spout Lake intrusive suite.

The Peach property is underlain by andesites, basalts, calcareous tuffs and argillites of the Upper Triassic Nicola Group (Assessment Report 25368). Nicola Group rocks are intruded by the Upper Triassic to Lower Jurassic Spout Lake Intrusive complex, an alkalic intrusive suite ranging in composition from pyroxenite through monzonite to syenite, and from batholithic size to small intrusive plugs, dykes and breccia bodies. Granodioritic rocks of the Triassic to Jurassic Takomkane Batholith intrude Nicola rocks east of the property. Outliers

CAPSULE GEOLOGY

of alkaline plateau basalts of the Miocene to Pleistocene Chilcotin Group are present in the general area.

No good description of the Peach 3 showing is available, however Figure 4 in Assessment Report 3815, shows chalcopyrite and pyrite along fractures in syenodiorite (monzonite) volcanic breccia. Assessment Report 25368 describes the showing as a "malachite-chalcopyrite showing in k-feldspar, magnetite altered monzonite". Diamond drill hole 95-04 intersected a 1.0 metre section which assayed 1.31 per cent copper and 0.07 grams per tonne gold which included a 30 centimetre vein with calcite, quartz, specularite, chalcopyrite and bornite.

Interest in the Spout Lake area was triggered in 1966 when the Geological Survey of Canada released the results of a regional airborne magnetic survey which outlined an annular magnetic anomaly 10 kilometres in diameter in the Spout Lake area and which included the area underlying the Peach #1 prospect. Subsequently in 1966 and 1967, Coranex Limited obtained anomalous results in follow-up stream sediment geochemical surveys and soil geochemical surveys in the area south of Peach Lake. Programs of geological, soil geochemical, magnetometer, induced polarization and prospecting surveys were undertaken in 1967 in the area south of Peach Lake, leading to the discovery of the Peach 1 and several other occurrences. Asarco Exploration Company of Canada Limited optioned the property in 1969. Amax Potash Limited optioned the property between 1971 and 1973 and completed programs of geological mapping, geophysics and percussion drilling. In 1983 and 1984, the Selco Division of BP Resources Canada Limited completed soil geochemical surveys on the Core group of claims which covered the property. G.W.R. Resources Incorporated acquired the property in 1988 and Asarco re-optioned the property and completed induced polarization surveys and percussion drilling in 1991. In 1993, G.W.R. Resources formed a joint venture with Regional Resources and have since completed programs of induced polarization and diamond drilling. A single 244.8 metre diamond drill hole, 95-04, was drilled in 1995.

BIBLIOGRAPHY

- EMPR AR 1966-135, 1967-126, *1968-155
EMPR GEM 1969-183, 1972-324, 1973-278
EMPR ASS RPT 1037, 1038, 1131, 1696, 1734, 2347, *3815, 3882, 4542, 11692, 13119, 17831, 21982, 23975, 25368
GSC MAP 1966-3, 1278A
GSC MEM 363
Whiteaker, Robin (1996): The Geology, Geochronology and Mineraliation of the Ann Property: and Early Jurassic Alkalic Porphyry Ststem near Lac La Hache, B.C. Honours B.Sc. Thesis, U.B.C.
WWW <http://www.infomine.com/>; <http://www.gwrresources.com>

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/05

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 036**

NATIONAL MINERAL INVENTORY:

NAME(S): **JUDY 4, SS 19, CLIFF,
KOG 9**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:
LATITUDE: 51 28 42 N
LONGITUDE: 120 02 14 W
ELEVATION: 2133 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of showing from Figure 3, Assessment Report 21472.

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5707183
EASTING: 705732

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Slide Mountain	Fennell	
Cretaceous			Baldy Batholith

LITHOLOGY: Brecciated Quartzite
Diorite
Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Shuswap Highland

CAPSULE GEOLOGY

The Judy 4 showing is located on the upper north slopes of Mount Baldy, a few kilometres east of Little Fort. The property area covers the western contact of the Cretaceous Baldy batholith and volcanic and sedimentary rocks of the Devonian to Permian Fennell Formation of the Slide Mountain Group. The old Windpass mine (092P 039) is 3.5 kilometres to the southwest.

At the Judy 4, a stockwork of quartz-molybdenite mineralization is developed in brecciated, silicified quartzites. This zone occurs at the contact between Fennell Formation quartzites and a diorite which is probably related to Fennell Formation volcanic rocks. The molybdenite mineralization is likely related to the last felsic phases of the quartz monzonitic Baldy batholith.

The area was staked as the Judy Group of claims and was mapped in 1965 by Quebec Cartier Mines. Darkhawk Mines staked the area as the SS claims, and ran a geochemical soil survey of 555 samples in 1971. Cominco Limited conducted geological mapping and a soil geochemistry survey in the area in 1980. The area was staked as the Kog claims in 1990 by F.P. O'Grady and Peter Klewchuk. They ran a program of prospecting, geochemical sampling and geological evaluation that summer. O'Grady and Klewchuk renamed the Judy 4 showing as the "Cliff" showing and the nearby Line (092P 038) showing they renamed the "Lake" showing.

BIBLIOGRAPHY

EMPR ASS RPT 1047, 4267, 9156, *21472
EMPR GEM 1973-273
EMPR P 1987-2
EMPR PF (Claim map, 1970)
GSC MAP 1278A
GSC SUM RPT 1921 Part A, p. 72

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/22

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 036**

MINFILE NUMBER: **092P 037**

NATIONAL MINERAL INVENTORY:

NAME(S): **JUDY 11, SS 12**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 27 50 N
LONGITUDE: 120 02 09 W
ELEVATION: 2011 Metres

NORTHING: 5705581
EASTING: 705893

LOCATION ACCURACY: Within 500M

COMMENTS: Showing near the summit of Baldy Mountain about 13 kilometres northeast of the community of Little Fort (Assessment Report 1047).

COMMODITIES: Molybdenum Copper

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite

ASSOCIATED: Quartz Magnetite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Porphyry

TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Cretaceous

Baldy Batholith

LITHOLOGY: Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Shuswap Highland

CAPSULE GEOLOGY

The Judy 11 showing comprises quartz and intrusive rock rubble mineralized with molybdenite, chalcopyrite and magnetite in the vicinity of several old trenches. Hostrock is quartz monzonite of the Cretaceous Baldy batholith.

The area was staked as the Judy Group of claims and was mapped in 1965 by Quebec Cartier Mines. Darkhawk Mines staked the area as the SS claims and ran a geochemical soil survey of 555 samples in 1971. Cominco Limited conducted geological mapping and a soil geochemistry survey in the area in 1980.

BIBLIOGRAPHY

EMPR ASS RPT *1047, 4267, 9156
EMPR GEM 1973-273,274
GSC MAP 1966-3; 1278A
GSC SUM RPT 1921 Part A, p. 72

DATE CODED: 1985/07/24
DATE REVISED: 2001/04/09

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 038**

NATIONAL MINERAL INVENTORY:

NAME(S): LINE, SS 5, LAKE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5706043
EASTING: 705082

LATITUDE: 51 28 06 N
LONGITUDE: 120 02 50 W
ELEVATION: 1950 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Figure 3, Assessment Report 21472.

COMMODITIES: Copper Zinc Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena Sphalerite Pyrrhotite
ASSOCIATED: Quartz Carbonate
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Breccia
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
DIMENSION: Metres STRIKE/DIP: 010/80 TREND/PLUNGE:
COMMENTS: Mineralized vein and enclosing shear zone strikes north-northeast and dips steeply to the east.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic Cretaceous	Slide Mountain	Fennell	Baldy Batholith

LITHOLOGY: Quartzite
Aplite Dike

GEOLOGICAL SETTING

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

CAPSULE GEOLOGY

The Line showing is located on the shore of a tiny lake on the upper north slopes of Mount Baldy, a few kilometres east of Little Fort. The property area covers the western Cretaceous Baldy batholith and volcanic and sedimentary rocks of the Devonian to Permian Fennell Formation (Slide Mountain Group). The old Windpass mine (092P 039) is three kilometres to the southwest.

At the Line showing, galena, sphalerite, chalcopyrite and pyrrhotite occur within a narrow quartz vein within a north striking shear zone and is exposed in a trench. Coarse grained, patchy base metal sulphides occur, along with quartz, as matrix in a breccia. Pyrrhotite is disseminated and carbonate is present on fractures. Thin and medium bedded, bleached and silicified quartzites immediately east of the mineralization strike northeast and dip 45 degrees southeast. The mineralized quartz vein and enclosing shear zone strikes north-northeast and dips steeply to the east. An aplite dike crops out 15 metres east of the trench; it appears to be parallel to the mineralized zone.

The area was staked as the Judy Group of claims and was mapped in 1965 by Quebec Cartier Mines. Darkhawk Mines staked the area as the SS claims and ran a geochemical soil survey of 555 samples in 1971. Cominco Limited conducted geological mapping and a soil geochemistry survey in the area in 1980. The area was staked as the Kog claims in 1990 by F.P. O'Grady and Peter Klewchuk. They ran a program of prospecting, geochemical sampling and geological evaluation that summer. O'Grady and Klewchuk renamed the Line as the Lake showing, and they renamed the nearby Judy 4 (092P 036) as the Cliff.

BIBLIOGRAPHY

EMPR ASS RPT 1047, 4267, 9156, *21472
EMPR GEM 1973-273

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1063
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR P 1987-2
GSC MAP 1966-3; 1278A
GSC SUM RPT 1921 Part A, p. 72

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/22

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 039**

NATIONAL MINERAL INVENTORY: 092P8 Au1

NAME(S): **WINDPASS**, WINDPASS NO. 1 (L.3839), WINDPASS NO. 2 (L.3840),
WINDPASS NO. 3 (L.3841), SWEET HOME

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

Underground

MINING DIVISION: Kamloops

LATITUDE: 51 26 34 N
LONGITUDE: 120 05 14 W
ELEVATION: 1570 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5703090
EASTING: 702418

LOCATION ACCURACY: Within 500M

COMMENTS: Mine workings on Lot 3839 on the hillside east of Dunn Lake, about
8.5 kilometres east of the community of Little Fort (Assessment
Report 329).

COMMODITIES: Gold Copper Bismuth Silver

MINERALS

SIGNIFICANT: Chalcopyrite Gold Telluride
COMMENTS: Bismuth sulphide.
ASSOCIATED: Quartz Pyrite Magnetite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Slide Mountain	Fennell	

LITHOLOGY: Diorite Sill
Bedded Chert
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Shuswap Highland

INVENTORY

ORE ZONE: WINDPASS

REPORT ON: Y

CATEGORY: Indicated YEAR: 1973
QUANTITY: 32655 Tonnes
COMMODITY: Gold GRADE: 6.9900 Grams per tonne

COMMENTS: Windpass dump; drill indicated.
REFERENCE: SMF Aug.20, Dalton Development Ltd., Sookochoff, L., April 12, 1973.

CAPSULE GEOLOGY

The Windpass mine is located between Dunn Lake and Baldy Mountain, about eight kilometres east of Little Fort. Mineralization is in gold-bearing quartz veins which cut the Devonian to Permian Fennell Formation of the Slide Mountain Group. Both the Windpass and Sweethome (092P 040) veins dip at variable angles (35 degrees) to the north and cut the western margin of a steeply west-dipping diorite sill and an adjacent bedded chert horizon within the lower Fennell Formation, directly east of the upper Fennell contact. Uglow (Geological Survey of Canada Summary Report 1921) reported that the Windpass vein ranges from several centimetres to almost 1 metre in width and averages 38 to 46 centimetres. The vein contains variable amounts of pyrite, chalcopyrite, bismuth sulphide, free gold, magnetite and gold tellurides.

Most of the ore was produced between 1934 and 1939, and overall totalled 93,435 tonnes, yielding 1,071,684 grams of gold, 53,469 grams of silver and 78,906 kilograms of copper.

Drill indicated reserves for the Windpass dump are 32,655 tonnes at 6.99 grams per tonne gold and for the Sweet Home dump, 16,146 tonnes at 0.68 gram per tonne gold (Statement of Material Facts August 20, 1973 - Dalton Development Ltd., L. Sookochoff, April 12, 1973).

The Windpass showings were discovered and staked in 1916 by Olie

CAPSULE GEOLOGY

Johnson, T.H. Campbell and Oscar Hargen. During subsequent years small shipments of high-grade ore were made from shallow workings. The property was bonded late in 1922 to the Trites, Woods & Wilson interests of Fernie, who incorporated Windpass Gold Mining Company, Limited in January 1923. The Sweet Home vein (092P 040) was discovered and staked at about the same time. Development work to the end of 1924 failed to prove the continuity of the ore zones and the Windpass property closed. In 1925, Windpass bonded the property to B.N. Sharp for New York interests. Development work during the year included 82 metres of raising and sinking, over 30 metres of crosscutting and 152 metres of drifting. The bond was given up early in 1926 to Windpass for 18 claims, including the Windpass Nos. 1-3, and Sweet Home (Lots 3839-3841, 3844 respectively). In 1929, an additional 14 claims were Crown granted to the company. Windpass re-opened the mine in 1933. An aerial tramline 4 kilometres in length was installed between the Windpass workings and the north end of Dunn Lake, where a 50 ton-per-day mill was built; milling began in March 1934. Ore shipments from the Sweet Home workings began in 1935. Operations continued until early in 1939 when the mine closed. The company charter was surrendered in August 1939. Lessors apparently shipped small amounts of ore from the property during 1941, 1942 and 1944. The Windpass workings to 1939 included approximately 457 metres of drift and crosscuts in the main (200 level) adit. Two inclined shafts, the Pioneer and Telluride, were sunk from surface to the adit level. An internal shaft (Davis winze, on an incline averaging 25 degrees) was sunk to the 900 level and drifting carried out east and west on each level. The Sweet Home vein was developed by a 36 metre inclined shaft (30 degrees) which connects with a 106 metre crosscut adit, and 137 metres of drift in the footwall of the vein. In 1960, Fort Reliance Minerals Limited held 3 mineral leases (14 claims). Geological mapping and a detailed magnetometer survey were carried out. In 1969, Kamad Silver Co. Ltd. purchased a lease on the Windpass and Sweet Home claims from J.F.V. Millar, of Calgary. A magnetometer survey and limited trenching were carried out. In April 1972, Kamad optioned the property to Dalton Resources Ltd. Work during the year included magnetometer and VLF-EM surveys over 31.8 kilometres, stripping and about 152 metres of drilling. The company name was changed in 1973 to Dalton Developments Ltd. The option agreement with Kamad was terminated in February 1974. Surveying and sampling of the Windpass and Sweet Home dumps indicated 32,655 tonnes at 6.99 grams per tonne gold and 16,146 tonnes at 0.68 gram per tonne gold, respectively (Sookochoff, April 1973). Kamad Silver reported a geological review, surveying and sampling of the old workings in 1980 and diamond drilling in 1982-83. In May 1987, Kerr Addison Mines Limited optioned a 60 per cent interest from Kamad under a joint venture agreement; Texaco Canada Resources Ltd. held a royalty interest. Work by Kerr in 1987 included geological mapping, a magnetometer survey, trenching and 2010 metres of diamond drilling in 11 NQ holes.

BIBLIOGRAPHY

EMPR AR 1916-K266,K518; 1917-F219,F220; 1921-G197,G198; 1922-N146;
*1923-A151-A153; 1924-B153,B295; *1925-A167-A170,A362; 1926-A187,
A447; 1927-C191; 1929-C509; 1931-A107; 1933-A193,A194; 1934-D26,
D27; 1935-D14; 1937-D30; 1938-D35; 1939-A35,A74; 1940-A23; 1941-
A24; 1942-A26; 1944-A40; 1960-118; 1961-49
EMPR ASS RPT 329, 4261, *16764
EMPR BULL 1 (1932), p. 69; 20 Part III, pp. 26,27
EMPR GEM 1973-273
EMPR FIELDWORK 1980, pp. 159-164
EMPR METAL MM00417
EMPR P *1987-2, p. 63
EMPR MINE FICHE #61774-#61777 (Claim and underground plan; stope
assay plans - levels 1-7; section A-B, Davis winze)
CANMET IR 643 (1924), pp. 24-26
EMR MIN BULL MR 223 B.C. 198
EMR MP CORPFILE (Windpass Gold Mining Company, Limited; Fort Reliance
Minerals Limited; Kamad Silver Co. Ltd.; Dalton Developments Ltd.)
GCNL #138, 1985; #101,#140,#198, 1987; #19,#140, 1988
GSC EC GEOL 15, p. 18
GSC MAP 1966-3; 1278A
GSC SUM RPT 1921 Part A, pp. 99,100
GSC MEM 363, p. 86
The Miner January 1937, pp. 21-28

DATE CODED: 1985/07/24
DATE REVISED: 2001/04/10

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 040**

NATIONAL MINERAL INVENTORY: 092P8 Au1

NAME(S): **SWEET HOME (L.3844)**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

Underground

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 26 05 N
LONGITUDE: 120 05 25 W
ELEVATION: 1493 Metres

NORTHING: 5702186
EASTING: 702241

LOCATION ACCURACY: Within 500M

COMMENTS: Adit and dump on Lot 3844 on the hillside east of Dunn Lake, about 8 kilometres east of the community of Little Fort (Assessment Report 329).

COMMODITIES: Gold Copper Bismuth

MINERALS

SIGNIFICANT: Chalcopyrite Telluride
COMMENTS: Bismuth sulphide.
ASSOCIATED: Quartz Pyrite

MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Slide Mountain	Fennell	

LITHOLOGY: Diorite Sill
Diorite
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Shuswap Highland

INVENTORY

ORE ZONE: SWEET HOME REPORT ON: Y

CATEGORY: Indicated YEAR: 1973
QUANTITY: 16146 Tonnes
COMMODITY: Gold GRADE: 0.6800 Grams per tonne

COMMENTS: Sweet Home dump; drill indicated.
REFERENCE: SMF Aug.20, Dalton Development Ltd., Sookochoff, L., April 12, 1973.

CAPSULE GEOLOGY

The Sweet Home vein showing is similar to the Windpass deposit (092P 039) located 1000 metres to the north. Mineralization is in gold-bearing quartz veins which cut the Devonian to Permian Fennell Formation of the Slide Mountain Group. Both the Windpass and Sweet Home veins dip at variable angles (35 degrees) to the north and cut the western margin of a steeply west-dipping diorite sill and an adjacent bedded chert horizon within the lower Fennell Formation, directly east of the upper Fennell contact.

The Sweet Home vein strikes 290 degrees with varying dips from 10 to 50 degrees north but averages 30 degrees. Within the chert which forms the western wall of the diorite sill, the vein is only centimetres wide and has little sulphide and low gold values. From here, it extends 152 metres to the east where it is thought to be truncated by a northwest-trending fault. It is not known if an offset continuation exists. The Sweet Home vein is comprised of quartz with variable but minor amounts of pyrite and chalcopyrite, bismuth sulphide and telluride in small amounts.

The Windpass showings (092P 039) were discovered and staked in 1916 by Olie Johnson, T.H. Campbell and Oscar Hargen. During subsequent years small shipments of high-grade ore were made from shallow workings. The property was bonded late in 1922 to the Trites, Woods & Wilson interests of Fernie, who incorporated Windpass Gold Mining Company, Limited in January 1923. The Sweet Home vein

CAPSULE GEOLOGY

was discovered and staked at about the same time. Ore shipments from the Sweet Home workings began in 1935; production statistics are not available. The Sweet Home vein was developed by a 36 metre inclined shaft (30 degrees) which connects with a 106 metre crosscut adit, and 137 metres of drift in the footwall of the vein. In 1969, Kamad Silver Co. Ltd. purchased a lease on the Windpass and Sweet Home claims from J.F.V. Millar, of Calgary. A magnetometer survey and limited trenching were carried out. In April 1972, Kamad optioned the property to Dalton Resources Ltd. Work during the year included magnetometer and VLF-EM surveys over 31.8 kilometres, stripping and about 152 metres of drilling. Surveying and sampling of the Windpass and Sweet Home dumps indicated 32,655 tonnes at 6.99 grams per tonne gold and 16,146 tonnes at 0.68 gram per tonne gold, respectively (Sookochoff, April 1973, see Windpass, 092P 039).

BIBLIOGRAPHY

EMPR AR 1923-A152; 1926-A187; 1934-D26; 1935-D14; 1937-D30; 1938-D35, D36; 1961-49
EMPR ASS RPT 329, 4261, *16764
EMPR BULL 20 Part III, p. 27
EMPR GEM 1973-273
EMPR FIELDWORK 1980, pp. 159-164
EMPR MINE FICHE #61649 (Underground assay plan)
GSC MAP 1278A
GSC SUM RPT 1921 Part A, p. 100
GCNL Aug.30, 1973

DATE CODED: 1985/07/24
DATE REVISED: 2001/04/11

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 041**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLD HILL**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

Underground

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 24 43 N
LONGITUDE: 120 06 13 W
ELEVATION: 823 Metres

NORTHING: 5699617
EASTING: 701414

LOCATION ACCURACY: Within 500M

COMMENTS: Area of adits on the hillside just north of the confluence of Dunn and Coswell creeks, about 7 kilometres east of the community of Little Fort (Property File - Adamson, 1987).

COMMODITIES: Gold Silver Lead Copper Zinc

MINERALS

SIGNIFICANT: Galena Chalcopyrite Sphalerite Gold
ASSOCIATED: Quartz Arsenopyrite Pyrite
ALTERATION: Carbonate
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Slide Mountain	Fennell	

LITHOLOGY: Basalt
Gabbro

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Shuswap Highland
RELATIONSHIP:
GRADE: Greenschist

CAPSULE GEOLOGY

The Gold Hill property is mainly underlain by northerly striking, moderately dipping, massive dark green pillow basalts of the Devonian to Permian Fennell Formation (Slide Mountain Group). Easterly striking fault and shear structures, frequently mineralized, cut the Fennell rocks. A small gabbroic stock lies immediately south of and downhill of the vein occurrences.

At least four subparallel quartz vein zones occupy two easterly striking, steeply dipping fault-shear systems that cut massive pillow basalts. Disseminated galena, chalcopyrite, pyrite, sphalerite and arsenopyrite occur in quartz veins, veinlets and stringers over relatively narrow widths. Some native gold has been reported. The two systems, one of which has been traced to date (ca. 1987) over a strike length of 300 metres, are 40 metres apart and dip steeply north into the hillside. Carbonate alteration (ankerite?) envelopes the vein zones. These alteration zones can be up to six metres in width. Quartz veins are up to 1.3 metres in width but average in the order of 40 centimetres. Underground sampling by Minnova Inc. in 1986-87 yielded 3.9 grams per tonne gold and 14.7 grams per tonne silver over a 30 centimetre vein width and strike length of 20 metres in the No. 7 adit (Adamson, 1987).

A second order vein system strikes north to northeasterly and dips steeply. These structures do not appear to be as strong as the easterly striking set.

The Gold Hill property is believed to have been initially staked during the First World War. By 1923, two parallel vein structures had been identified. During the later 1920s, H. Skoning and M. Fennell developed a series of drifts on the Gold Hill property. The quartz vein and wallrock was transported to the creek where they crushed it and panned the free gold out. By 1929, evidently under the direction of Granby Mining and Smelting Company, some diamond drilling (11 X-ray holes) and approximately 52 metres of underground drifting and crosscutting had been undertaken. A total of 300 metres of drifting and crosscutting had been carried out from nine adits by

CAPSULE GEOLOGY

1930. Since then very little work has been reported. In 1972, G.G. Addie performed geological mapping on the Dan and Ran claims which covered the Gold Hill showing, on behalf of J.G. Murphy. In 1984, a soil geochemical survey (27 samples) was run by Rapid Canadian Resource Corp. on behalf of owner, M. Fennell. Late in 1986, Minnova Inc. made an agreement with M. Fennell to acquire the Dixie claim. The Dixie 2,3, and 5 claims were subsequently staked by Minnova around the main Dixie claim. During 1987, Minnova conducted an exploration programme of surface geological mapping combined with underground mapping and sampling of the old adits. A 1 kilometre long road was constructed to provide better access. In 1988, Minnova Inc. carried out diamond drilling totalling 839 metres in 6 holes.

BIBLIOGRAPHY

EMPR AR 1923-A152,A153; 1927-C192; 1928-C211,C212; 1929-C225,C226;
1930-A191
EMPR ASS RPT 3600, 12723, 14689, 18372
EMPR GEM 1972-318
EMPR MAP 53
EMPR FIELDWORK 1980, pp. 159-164
EMPR PF (*Adamson, R.S. (1987): Summary Report on the Gold Hill
Property in Prospectus, Montoro Resources Inc., 1988)
GSC SUM RPT 1921 Part A, p. 99
GSC MAP 1278A
GCNL #57, 1985

DATE CODED: 1985/07/24
DATE REVISED: 2001/04/09

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 042**

NATIONAL MINERAL INVENTORY: 092P9 Pb1

NAME(S): **QUEEN BESS, LONE PROSPECTOR (L.288), IRON CLAD (L.289),
FRAN, WALTER, RUDY, JANE,
CAMERON, BIGELOW**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092P09E
BC MAP:
LATITUDE: 51 33 06 N
LONGITUDE: 120 08 16 W
ELEVATION: 500 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5715058
EASTING: 698431

COMMODITIES: Lead Zinc Silver

MINERALS

SIGNIFICANT: Galena Sphalerite Tetrahedrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Ankerite
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear Podiform
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: The Cameron vein strikes northeast and dips 50 to 75 degrees northwest. The Bigelow vein strikes 020 to 030 degrees and dips vertically.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Slide Mountain	Fennell	

LITHOLOGY: Basalt
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Shuswap Highland

CAPSULE GEOLOGY

The Queen Bess property is located on the east side of the North Thompson River, about 21 kilometres north of Chu Chua.

Narrow quartz veins carrying galena, sphalerite and tetrahedrite occur in fissures in basalts of the Devonian to Permian Fennell Formation (Slide Mountain Group). Most of the mineralization occurs in two veins which range from 30 centimetres to more than 1 metre in width. The Cameron vein strikes northeast and dips 50 to 75 degrees northwest, while the Bigelow vein, intersected 50 metres farther east in the main adit crosscut, strikes 020 to 030 degrees and dips vertically to very steeply west. The veins are continuous and generally well defined throughout the workings, but good mineralization, comprising massive pods and lenses of sphalerite and galena, is erratically and commonly sparsely distributed through them. The greenstone along the fissures show ankeritic carbonate alteration; in places the alteration is widespread. Country rock is typical upper Fennell basalt, in places with good pillow structures preserved. The basalts are cut by a number of steeply dipping northeast to east striking shear zones containing rusty carbonate and quartz, which typically display rusty carbonate alteration envelopes.

The Lone Prospector (Lot 288) and Iron Clad (Lot 289) claims were Crown granted to J. O'Brien in 1895. The claims lay idle until about 1916 when they were bonded by B.T. Foote and J.L. Cardon. Additional claims, including the Queen Bess, were apparently located at this time. A Seattle syndicate optioned the 6 claim group in 1917, and in 1918, Queen Bess Mines Company took over the property. A concentrator was installed by the company in 1919, and was operated for short periods in 1919 and 1920. The mine was closed in 1920, then re-opened by the Queen Bess Mining Company in 1927. Additional machinery was installed at this time and further development was reported; however, the operation was abandoned later in the year. Development work to 1927 totalled some 550 metres of crosscuts and

CAPSULE GEOLOGY

drifts on two adit levels and a 31 metre winze. From 1917-1919, 73 tonnes of ore were shipped from this property, from which 52,222 grams of silver, 13,789 kilograms of lead and 12,503 kilograms of zinc were recovered. From 1981 to 1983, exploration work on the property (then the Rudy and Walter claims of the Fran claim group) included reconnaissance geological mapping and sampling in the vicinity of the old Queen Bess workings. In 1984, a VLF-EM survey was run over the same area. Mid-Centre Resources conducted detailed geochemical and VLF-EM surveys over the Jane 1 claim in 1989.

BIBLIOGRAPHY

EMPR AR 1895-665; 1896-561; 1916-267; 1917-236,450; 1918-234-236;
1919-179; 1927-191,403; 1933-195; 1951-125
EMPR ASS RPT 3112, 2443, 10500, 11885, 12505, 18982
EMPR FIELDWORK 1980, pp. 159-164
EMPR GEM 1971-333
EMPR MINE FICHE #61357,#61358 (Composite longitudinal section and
level plan)
EMPR METAL MM00410
EMPR OF 2002-15
EMPR P *1987-2
EMPR PF (Claim maps for Iron Clad and Lone Prospector claims, 1970)
GSC EC GEOL 8, p. 302
GSC MAP 1966-3; 1278A
GSC SUM RPT 1921 Part A, p. 102; 1930 Part A, p. 140-143
GCNL #71, 1987

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/14

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 043**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN LOON PLATINUM**, CLEARWATER PLATINUM

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5700077
EASTING: 691688

LATITUDE: 51 25 10 N
LONGITUDE: 120 14 35 W
ELEVATION: 870 Metres

LOCATION ACCURACY: Within 500M
COMMENTS: Location of Sample 165509, Assessment Report 16010.

COMMODITIES: Platinum Palladium Gold Chromium

MINERALS

SIGNIFICANT: Chromite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Magmatic Hydrothermal
TYPE: M ULTRAMAFIC/MAFIC ASSOCIATION
DIMENSION: Metres

STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Harper Ranch	Undefined Formation	
Triassic-Jurassic			Dum Lake Intrusive Complex
Triassic-Jurassic			Thuya Batholith

LITHOLOGY: Ultramafic
Peridotite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Quesnel Harper Ranch

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1999
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Gold	0.0023 Grams per tonne
Palladium	0.0025 Grams per tonne
Platinum	13.7980 Grams per tonne

REFERENCE: Assessment Report 16100.

CAPSULE GEOLOGY

The Golden Loon Platinum or Clearwater Platinum occurrence is located 2.5 kilometres west of Little Fort. Good-quality logging and bush roads provide access to the property.

A "football-sized" sample of highly oxidized ultramafic material cut by chromite stringers yielded an analysis of 13,798 ppb platinum, 25 ppb palladium and 23 ppb gold (sample 165509, Assessment Report 16100) at the location called the Clearwater Platinum Occurrence (Fieldwork 2000, page 22, figure 4). A second highly anomalous sample of dark peridotite with chromite veins (sample 165502), from about 1 kilometre to the north, yielded 483 ppb platinum, 10 ppb palladium and 2 ppb gold. These two samples were from a group of 150 samples collected in 1999 (Assessment report 16100) of ultramafic rocks from the Dum Lake Intrusive Complex.

Hostrocks are ultramafic intrusive rocks of the Triassic to Jurassic Dum Lake Intrusive Complex which consists of a mafic portion composed of diorite, gabbro, microdiorite and intrusion breccia, and an ultramafic portion composed of dunite, wehrlite, pyroxenite and serpentine. The Dum Lake Intrusive Complex is believed to be an Alaskan-type intrusive complex (Fieldwork 2000). It is in contact with granodioritic rocks of the Triassic to Jurassic Thuya batholith on the west. On its eastern side the Dum Lake intrusive rocks intrude siltstone, argillite, chert and limestone of the late Paleozoic Harper Ranch Group and mafic volcanic rocks, related volcaniclastic rocks, clastic sediment, chert and limestones of the

CAPSULE GEOLOGY

Upper Triassic Nicola Group.

The earliest record of prospecting in the area dates from the 1920s when placer gold was recovered from the Eakin Creek Placer (092P 055). In 1967, Noranda Exploration Company (Assessment Report 1051) completed a soil sampling survey over the Kira claims after obtaining anomalous results in a reconnaissance stream sediment sampling program. The program outlined zones of anomalous copper and nickel. In 1973, Rio Tinto Canadian Exploration Limited completed another soil geochemical sampling program on the Dum Claim Group (Assessment Report 4689), outlining copper, zinc and lead anomalies west of Dum Lake. Teck Corporation reportedly (Assessment Reports 14237, 15870) staked the Minerva Group in 1980-81 on the west side of the Golden Loon Property and undertook a magnetometer survey and a soil geochemical survey, obtaining several silver anomalies. In 1984, The Golden Loon Claims were staked by Barnes Creek Minerals and a prospecting program undertaken (Assessment Report 14237). In 1985, additional prospecting was undertaken and magnetometer, VLF-EM and soil geochemical surveys completed (Assessment Reports 14920 and 15937). In 1987, Mineta Resources completed a program (Assessment Report 17342) which included soil geochemical surveys (548 samples), linecutting (34.6 kilometres), lithochemistry (18 samples), and stream sediment geochemical sampling (70 samples) and located some high grade float boulders as well as outlined some gold-in-soil geochemical anomalies. In 1988, Mineta completed 78.2 kilometres of linecutting, 61.0 kilometres of VLF-EM and magnetometer surveying and collected 1571 soil geochemical samples (Assessment Reports 18802 and 21109). In 1989, Mineta completed 25.0 kilometres of VLF-EM and magnetometer surveying, as well as soil geochemical (556 samples) and lithochemical (20 samples) surveys (Assessment Report 20029). In 1990, the property was optioned to Corona Corporation and an extensive program (Assessment Report 21014) of prospecting, geological mapping, soil geochemical sampling (637 samples) and geophysical surveys (25 kilometres of magnetometer and VLF-EM), trenching and diamond drilling (691 metres in 7 holes) was carried out. In 1992, Placer Dome Limited optioned the property, focusing on the porphyry copper-gold potential of the western portion of the property (Assessment Report 22818) and completed 20.0 kilometres of grid preparation, geological mapping and soil geochemical surveying (1083 samples). In 1996, Meteor Minerals Incorporated completed a program of geochemical soil sampling to test the potential of the enzyme leach technique in tracing mineralized zones in areas of extensive overburden (Assessment Report 24883). In 1997, Meteor completed a three-hole (393 metres) diamond drill program on the Golden Loon High Grade Zone (092P 141). In 1999, Tilava Mining Corporation completed a program of lithochemical sampling (150 samples) on ultramafic rocks on the property and detected significant platinum values (Assessment Report 26100). In 2000, the property was optioned by Cusac Gold Mines Limited (George Cross News Letters #191, #216, 2000) and VLF-EM, magnetometer, induced polarization and soil geochemical (119 samples) surveys completed.

BIBLIOGRAPHY

EMPR ASS RPT 1051, 2418, 4689, 14237, 14920, 15870, 15937, 17342, 18802, 20029, 21109, 21014, 22818, 24315, 24883, 25431, *26100
EMPR FIELDWORK *2000, pp. 20-22
GSC MAP 1278A
GSC MEM 363
GCNL #234(Dec.7), 1999; #154(Aug.11), #191(Oct.5), #216(Nov.10), 2000

DATE CODED: 2001/02/23
DATE REVISED: 2001/02/23

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 044**

NATIONAL MINERAL INVENTORY: 092P1 Cu1

NAME(S): **FORTUNA (L.1591)**, FORTUNA NO. 1 (L.1592), FORTUNA NO. 2 (L.1593),
 FORTUNA NO. 3 (L.1594), FORTUNA NO. 4 FR. (L.2331), BX,
 PLATO (L.4463), SKOOKUM (L.4464), SKOOKUM BOY (L.4466)

STATUS: Prospect	Underground	MINING DIVISION: Kamloops
REGIONS: British Columbia		UTM ZONE: 10 (NAD 83)
NTS MAP: 092P01E		NORTHING: 5664555
BC MAP:		EASTING: 708739
LATITUDE: 51 05 40 N		
LONGITUDE: 120 01 08 W		
ELEVATION: 640 Metres		
LOCATION ACCURACY: Within 500M		
COMMENTS: Lower (main) adit on Lot 1591 just north of Fraser Creek, about 12 kilometres south-southeast of the community of Barriere (Assessment Report 15438).		

COMMODITIES: Copper Zinc Silver Lead Gold

MINERALS

SIGNIFICANT: Pyrite	Pyrrhotite	Chalcopyrite	Galena	
ASSOCIATED: Quartz				
ALTERATION: Silica	Sericite	Kaolinite	Gypsum	Pyrite
ALTERATION TYPE: Silicific'n		Sericitic	Argillic	
MINERALIZATION AGE: Unknown				

DEPOSIT

CHARACTER: Massive	Vein	Stockwork
CLASSIFICATION: Volcanogenic		
TYPE: G06	Noranda/Kuroko massive sulphide Cu-Pb-Zn	

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Undefined Group	Eagle Bay	

LITHOLOGY: Chloritoid Sericite Schist
 Chloritoid Schist
 Sericite Schist
 Quartzite
 Argillite
 Dolomitic Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Shuswap Highland
TERRANE: Kootenay	

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1986
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Silver	14.6000 Grams per tonne
Gold	0.4500 Grams per tonne
Copper	1.2000 Per cent
Lead	0.4700 Per cent
Zinc	0.3300 Per cent

COMMENTS: Best grab samples from several mineralized zones.
 REFERENCE: Assessment Report 15438.

CAPSULE GEOLOGY

The Fortuna property is located about 12 kilometres east of the community of Louis Creek and accessed by following the road along Louis Creek eastwards from Highway 5. The old Crown grants are just north of the road at the old site of Blucher Hall. Property geology consists of a northwest trending, northeast dipping section of chloritoid-sericite schist and metasediments (argillite, quartzose grit to conglomerate, quartzite and dolomitic limestone) of the Devonian to Mississippian Eagle Bay assemblage. A distinctive quartz-eye sericite schist occurs towards the east end of the property. The rocks possess a strong pervasive foliation which generally masks bedding and where discernable, bedding parallels the foliation.

Three large, very prominent alteration zones occur.

CAPSULE GEOLOGY

Characteristic alteration mineralogy in these zones consists of silica, sericite, kaolinite, gypsum and pyrite. The cores of the alteration zones are intensely sericitized and variably silicified. Silicification occurs in several forms: pervasive silicification of sericite schists, silicified pods which vary from tens of centimetres to tens of metres in size, and crosscutting quartz veins. The altered zones contain widespread disseminated pyrite and locally trace chalcopyrite; some galena has also been observed. Sulphide minerals are often weathered out, producing rusty yellow gossanous knobs and lenses. Generally, mineralization in the alteration zones consists of discontinuous, semimassive lenses and pods of pyrite-chalcopyrite conformable to the schistosity. Grab samples of the best mineralization analysed as high as 1.2 per cent copper, 0.33 per cent zinc, 14.6 grams per tonne silver, 0.45 gram per tonne gold and 0.47 per cent lead (Assessment Report 15438). Several zones of massive pyrite mineralization have been identified within the zones of alteration, and other zones up to 5 metres thick are reported from old adits, now caved.

Alteration and mineralization appear to be related to northwest trending faults. Northeast trending faults are also present and intersections may be important locations for concentration of mineralization.

A blasted trench and adit of unknown length is present at 1066 metres elevation about 800 metres north and above the Fortuna Crown grants and are probably the Skookum or Plato showings. Fracture controlled pyrite-chalcopyrite veins in bleached, silicified chloritoid schist appears to have been the target.

The Fortuna Nos. 2 and 3 claims (Lots 1593, 1594) were Crown granted to the Fraser River Copper Mining Co. in 1907. During 1907-8 about 143 metres of development work was carried out in 3 adits. One adit is 128 metres long and the others 9 and 6 metres, respectively. The main (lower) adit intersected 0.6 metre of massive pyrrhotite at the portal, 0.9 metre of pyrrhotite 27 metres in from the portal, and ended in a 4.8 metre wide body of pyrrhotite about 119 metres in. The property was subsequently acquired by G.N. Richmond of Philadelphia and in 1917 a contract was given to W.J. Smith to make a trial shipment of ore. The work was completed early in 1918 and two carloads were shipped to Republic, Washington; returns are not available for this shipment. The property was then acquired by W.J. Smith & associates and additional claims were staked, including the Plato (Lot 4463), Skookum (Lot 4464) and Skookum Boy (Lot 4466) which were Crown granted in 1925. H. Bendelin performed exploration work in 1927. In 1981, prospecting and a geological survey were carried out on behalf of L.E. Peckham. In 1986, BP Resources Canada Limited performed geological mapping and lithogeochemical sampling. In 1994, Discovery Consultants carried out a program of geological examination and evaluation on behalf of W.R. Gilmour.

BIBLIOGRAPHY

- EMPR AR 1907-L220; 1908-J123; 1913-K209,K210; 1914-K514; 1917-F236;
1918-K236; 1925-A448; 1927-C190
EMPR ASS RPT 8858, 10008, *15438, *23567
EMPR OF 1999-2
EMPR PF (Claim map, 1970; Allen, A.R. (1973): Report on the BX Group;
092P General File - Unpub. report by Campbell, p. 150)
GSC MAP 1278A
GSC SUM RPT 1921 Part A, pp. 72A,104A,105A

DATE CODED: 1985/07/24
DATE REVISED: 2001/04/02

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 045**

NATIONAL MINERAL INVENTORY:

NAME(S): **DIXON CREEK PLACER**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092P01E
BC MAP:

Open Pit

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 11 26 N
LONGITUDE: 120 06 25 W
ELEVATION: 457 Metres

NORTHING: 5674994
EASTING: 702154

LOCATION ACCURACY: Within 5 KM

COMMENTS: Dixon Creek, near its confluence with the Barriere River, about 1.5 kilometres east of the community of Barriere (Location taken from Figure 3, Bulletin 28).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
MINERALIZATION AGE:

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: Gravel

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

Slide Mountain

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

One lease was staked on Dixon Creek (ca. 1912) and "the initial work on this produced a very satisfactory result; the owner, after removing a few boulders, took out a pocket containing about 3/4 oz. of rather coarse gold, many pieces of which would be worth from 25 to 30 cents." (Minister of Mines Annual Report 1912). Paymore Mining Company (ca. 1930) carried out operations on Dixon Creek where a 4-inch monitor was used under a 320-foot head of water delivered by a flume 1200 feet long. Some coarse gold is found in the bed of this stream (Minister of Mines Annual Report 1930).

The area appears to be underlain by sedimentary and volcanic rocks of the Paleozoic Eagle Bay assemblage or Fennell Formation. Gold production from 1926 to 1935 was 2084 grams (Bulletin 28).

BIBLIOGRAPHY

EMPR AR *1912-K184; *1930-A197
EMPR BULL *28, pp. 38,39
GSC MAP 1278A

DATE CODED: 2001/03/29
DATE REVISED: / /

CODED BY: GO
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 046**

NATIONAL MINERAL INVENTORY:

NAME(S): **BARRIERE RIVER PLACER**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092P01E
BC MAP:

Open Pit

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 12 47 N
LONGITUDE: 120 02 52 W
ELEVATION: 457 Metres

NORTHING: 5677660
EASTING: 706187

LOCATION ACCURACY: Within 5 KM

COMMENTS: Barriere River, at a point 8 kilometres upstream from its confluence with the North Thompson River, east of the community of Barriere (Figure 3, Bulletin 28).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Quaternary			Glacial/Fluvial Gravels

LITHOLOGY: Gravel

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

Kootenay

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The area of the Barriere River placer showing appears to be underlain by sedimentary and volcanic rocks of the Paleozoic Eagle Bay assemblage or Fennell Formation.

From 1921-25 and 1941-45, a total of 1524 grams gold were obtained.

BIBLIOGRAPHY

EMPR BULL *28, pp. 38,39
GSC MAP 1278A

DATE CODED: 2001/03/29
DATE REVISED: 2001/03/29

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 047**

NATIONAL MINERAL INVENTORY:

NAME(S): **CENTRAL GOLDEN LOON VI AREA**, TH-4, GOLDEN LOON MONTIGNY WEST,
 GOLDEN LOON 6

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 092P08W
 BC MAP:
 LATITUDE: 51 25 55 N
 LONGITUDE: 120 20 00 W
 ELEVATION: 880 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: Location of sample 3808 (Assessment Report 22818).

MINING DIVISION: Kamloops
 UTM ZONE: 10 (NAD 83)
 NORTHING: 5701234
 EASTING: 685361

COMMODITIES: Gold Silver Lead Copper

MINERALS

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

DEPOSIT

CHARACTER: Stockwork Vein
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: L02 Porphyry-related Au
 DIMENSION: Metres
 STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Harper Ranch	Undefined Formation	Thuya Batholith
Triassic-Jurassic			

LITHOLOGY: Granodiorite
 Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
 TERRANE: Quesnel Harper Ranch
 PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE	REPORT ON: N
CATEGORY: Assay/analysis	YEAR: 1992
SAMPLE TYPE: Grab	
<u>COMMODITY</u>	<u>GRADE</u>
Silver	27.4000 Grams per tonne
Gold	2.0000 Grams per tonne
Copper	0.1106 Per cent
Lead	0.5600 Per cent

REFERENCE: Sample 3808, Assessment Report 22818.

CAPSULE GEOLOGY

The Central Golden Loon VI Area is located in the central part of the Golden Loon 6 claim, 9 kilometres west of Little Fort. Fieldwork 2000 (pages 21 and 25) refers to the occurrence as Location Th-4. Good quality logging and bush roads provide access to the property.

A zone of silicified and quartz-veined granodiorite to monzonite subcrop and float, covering an area of approximately 500 metres north-south by 400 metres east-west, yielded numerous gold values in the 100 to 600 ppb range (Assessment Report 22818). Sample 3808, a granodiorite cut by quartz veins with 30 centimetre alteration envelopes, yielded values of 2.0 grams per tonne gold, 27.4 grams per tonne silver, 0.56 per cent lead and 1106 ppm copper (Assessment Report 22818). The vein quartz contained significant pyrite, chalcopyrite and 1-2 per cent galena. Assessment Report 22818 recognizes similarities in the style of mineralization to the Golden Loon High Grade and Low Grade zones (092P 141 and 119) in the Dum Lake area - both areas are associated with a major northeast trending fracture zone which crosses the Golden Loon property.

Hostrocks are granodioritic to monzonitic rocks of the Triassic to Jurassic Thuya batholith, which consists of granodiorite, diorite

CAPSULE GEOLOGY

and monzodiorite. The occurrence is close to the contact with dioritic rocks of the Triassic to Jurassic Dum Lake Intrusive Complex which consists of a mafic portion composed of diorite, gabbro, microdiorite and intrusion breccia, and an ultramafic portion composed of dunite, wehrlite, pyroxenite and serpentine. The Dum Lake Intrusive Complex is believed to be an Alaskan-type intrusive complex (Fieldwork 2000).

The earliest record of prospecting in the area dates from the 1920s when placer gold was recovered from the Eakin Creek Placer (092P 055). In 1967, Noranda Exploration Company (Assessment Report 1051) completed a soil sampling survey over the Kira claims after obtaining anomalous results in a reconnaissance stream sediment sampling program. The program outlined zones of anomalous copper and nickel. In 1973, Rio Tinto Canadian Exploration Limited completed another soil geochemical sampling program on the Dum Claim Group (Assessment Report 4689), outlining copper, zinc and lead anomalies west of Dum Lake. Teck Corporation reportedly (Assessment Reports 14237, 15870) staked the Minerva Group in 1980-81 on the west side of the Golden Loon Property and undertook a magnetometer survey and a soil geochemical survey, obtaining several silver anomalies. In 1984, The Golden Loon Claims were staked by Barnes Creek Minerals and a prospecting program undertaken (Assessment Report 14237). In 1985, additional prospecting was undertaken and magnetometer, VLF-EM and soil geochemical surveys completed (Assessment Reports 14920 and 15937). In 1987, Mineta Resources completed a program (Assessment Report 17342) which included soil geochemical surveys (548 samples), linecutting (34.6 kilometres), lithochemistry (18 samples), and stream sediment geochemical sampling (70 samples) and located some high grade float boulders as well as outlined some gold-in-soil geochemical anomalies. In 1988, Mineta completed 78.2 kilometres of linecutting, 61.0 kilometres of VLF-EM and magnetometer surveying and collected 1571 soil geochemical samples (Assessment Reports 18802 and 21109). In 1989, Mineta completed 25.0 kilometres of VLF-EM and magnetometer surveying, as well as soil geochemical (556 samples) and lithochemical (20 samples) surveys (Assessment Report 20029). In 1990, the property was optioned to Corona Corporation and an extensive program (Assessment Report 21014) of prospecting, geological mapping, soil geochemical sampling (637 samples) and geophysical surveys (25 kilometres of magnetometer and VLF-EM), trenching and diamond drilling (691 metres in 7 holes) was carried out. In 1992, Placer Dome Limited optioned the property, focusing on the porphyry copper-gold potential of the western portion of the property (Assessment Report 22818) and completed 20.0 kilometres of grid preparation, geological mapping and soil geochemical surveying (1083 samples). In 1996, Meteor Minerals Incorporated completed a program of geochemical soil sampling to test the potential of the enzyme leach technique in tracing mineralized zones in areas of extensive overburden (Assessment Report 24883). In 1997, Meteor completed a three-hole (393 metres) diamond drill program on the Golden Loon High Grade Zone (092P 141). In 1999, Tilava Mining Corporation completed a program of lithochemical sampling (150 samples) on ultramafic rocks on the property and detected significant platinum values (Assessment Report 26100). In 2000, the property was optioned by Case Gold Mines Limited (George Cross News Letters #191, #216, 2000) and VLF-EM, magnetometer, induced polarization and soil geochemical (119 samples) surveys completed.

BIBLIOGRAPHY

EMPR ASS RPT 1051, 2418, 4689, 14237, 14920, 15870, 15937, 17342, 18802, 20029, 21109, 21014, *22818, 24315, 24883, 25431, 26100
EMPR FIELDWORK *2000, pp. 20-22
GSC MAP 1278A
GSC MEM 363
GCNL #234(Dec.7), 1999; #154(Aug.11), #191(Oct.5), #216(Nov.10), 2000
WWW <http://www.infomine.com/index/>

DATE CODED: 2001/02/23
DATE REVISED: 2001/02/23

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 048**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN LOON (MONTIGNY LAKE), TH-3**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 25 34 N
LONGITUDE: 120 18 57 W
ELEVATION: 1275 Metres

NORTHING: 5700630
EASTING: 686601

LOCATION ACCURACY: Within 500M

COMMENTS: Location of 1N,25E on Plate 1, Assessment Report 14926.

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Pyrite Galena

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
DIMENSION: Metres

STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic			Thuya Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1985

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold

3.5000

Grams per tonne

REFERENCE: Assessment Report 14920.

CAPSULE GEOLOGY

The Golden Loon - Montigny Lake occurrence is located on the southwest side of Montigny Lake, 8 (air) kilometres west of Little Fort. The occurrence is shown as Th-3 on Figure 4 (page 21) and described on page 24 in Fieldwork 2000. Good quality logging and bush roads provide access to the property.

In a 1985 prospecting program, a 10 centimetre quartz vein containing galena and pyrite yielded values of 3500 ppb gold, 23.2 ppm silver, 85 ppm copper and 495 ppm lead (Assessment Report 14920). The area is very poorly exposed (Assessment Report 17342).

Hostrocks are granodiorite, diorite and monzodiorite of the Triassic to Jurassic Thuya batholith. The occurrence is close to the contact with dioritic rocks of the Triassic to Jurassic Dum Lake Intrusive Complex which consists of a mafic portion composed of diorite, gabbro, microdiorite and intrusion breccia, and an ultramafic portion composed of dunite, wehrlite, pyroxenite and serpentine. The Dum Lake Intrusive Complex is believed to be an Alaskan-type intrusive complex (Fieldwork 2000).

The earliest record of prospecting in the area dates from the 1920s when placer gold was recovered from the Eakin Creek Placer (092P 055). In 1967, Noranda Exploration Company (Assessment Report 1051) completed a soil sampling survey over the Kira claims after obtaining anomalous results in a reconnaissance stream sediment sampling program. The program outlined zones of anomalous copper and nickel. In 1973, Rio Tinto Canadian Exploration Limited completed another soil geochemical sampling program on the Dum Claim Group (Assessment Report 4689), outlining copper, zinc and lead anomalies west of Dum Lake. Teck Corporation reportedly (Assessment Reports 14237, 15870) staked the Minerva Group in 1980-81 on the west side of

CAPSULE GEOLOGY

the Golden Loon Property and undertook a magnetometer survey and a soil geochemical survey, obtaining several silver anomalies. In 1984, The Golden Loon Claims were staked by Barnes Creek Minerals and a prospecting program undertaken (Assessment Report 14237). In 1985, additional prospecting was undertaken and magnetometer, VLF-EM and soil geochemical surveys completed (Assessment Reports 14920 and 15937). In 1987, Mineta Resources completed a program (Assessment Report 17342) which included soil geochemical surveys (548 samples), linecutting (34.6 kilometres), lithogeochemistry (18 samples), and stream sediment geochemical sampling (70 samples) and located some high grade float boulders as well as outlined some gold-in-soil geochemical anomalies. In 1988, Mineta completed 78.2 kilometres of linecutting, 61.0 kilometres of VLF-EM and magnetometer surveying and collected 1571 soil geochemical samples (Assessment Reports 18802 and 21109). In 1989, Mineta completed 25.0 kilometres of VLF-EM and magnetometer surveying, as well as soil geochemical (556 samples) and lithogeochemical (20 samples) surveys (Assessment Report 20029). In 1990, the property was optioned to Corona Corporation and an extensive program (Assessment Report 21014) of prospecting, geological mapping, soil geochemical sampling (637 samples) and geophysical surveys (25 kilometres of magnetometer and VLF-EM), trenching and diamond drilling (691 metres in 7 holes) was carried out. In 1992, Placer Dome Limited optioned the property, focusing on the porphyry copper-gold potential of the western portion of the property (Assessment Report 22818) and completed 20.0 kilometres of grid preparation, geological mapping and soil geochemical surveying (1083 samples). In 1996, Meteor Minerals Incorporated completed a program of geochemical soil sampling to test the potential of the enzyme leach technique in tracing mineralized zones in areas of extensive overburden (Assessment Report 24883). In 1997, Meteor completed a three-hole (393 metres) diamond drill program on the Golden Loon High Grade Zone (092P 141). In 1999, Tilava Mining Corporation completed a program of lithogeochemical sampling (150 samples) on ultramafic rocks on the property and detected significant platinum values (Assessment Report 26100). In 2000, the property was optioned by Case Gold Mines Limited (George Cross News Letters #191, #216, 2000) and VLF-EM, magnetometer, induced polarization and soil geochemical (119 samples) surveys completed.

BIBLIOGRAPHY

EMPR ASS RPT 1051, 2418, 4689, 14237, *14920, 15870, 15937, 17342, 18802, 20029, 21109, 21014, 22818, 24315, 24883, 25431, 26100
EMPR FIELDWORK *2000, pp. 20-22
GSC MAP 1278A
GSC MEM 363
GCNL #234(Dec.7), 1999; #154(Aug.11), #191(Oct.5), #216(Nov.10), 2000
WWW <http://www.infomine.com/index/>

DATE CODED: 2001/02/23
DATE REVISED: 2001/02/23

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 049**

NATIONAL MINERAL INVENTORY:

NAME(S): **SONJA**, LSD, VALENTINE,
WATER 9, JULIAN, WATERCLEAR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09E
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)

LATITUDE: 51 38 10 N
LONGITUDE: 120 01 20 W
ELEVATION: 488 Metres

NORTHING: 5724767
EASTING: 706058

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the centre of the LSD 1 claim, where bulldozer stripping and trenching was done in 1970.

COMMODITIES: Lead Silver Zinc Copper

MINERALS

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

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: The metasediments strike northwest and dip from 15 to 50 degrees to the northeast.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Mississippian	Undefined Group	Eagle Bay	

LITHOLOGY: Argillite
Phyllite
Greenstone
Hornblende Diorite
Biotite Lamprophyre
Greenschist
Diorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Shuswap Highland
RELATIONSHIP:
GRADE: Greenschist

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1970
SAMPLE TYPE: Channel
COMMODITY GRADE
Silver 908.6000 Grams per tonne
Lead 52.3000 Per cent
Zinc 1.2400 Per cent

COMMENTS: A 25.4 centimetre channel sample taken from a massive sulphide vein occurrence.

REFERENCE: Property File - Hodgson, 1970.

CAPSULE GEOLOGY

The Sonja showing is located at 488 metres elevation on the hill southeast and just across the North Thompson River from the town of Clearwater. Galena, sphalerite and chalcopyrite mineralization is associated with massive silica; the sulphides occurring as blebs, stringers and veinlets within the quartz. Fine grained disseminated sulphides follow the silicification into the metasedimentary rocks for distances of one or two metres.

The showing is hosted in metamorphosed sedimentary rocks of the Mississippian Eagle Bay assemblage. Argillite, phyllite, greenstone, and greenschists of the Eagle Bay are in contact with the Devonian to Permian Fennell Formation of the Slide Mountain Group along a northwest striking, southwest-side-up thrust fault to the west of the showing. On the southern boundary of the property, a small stock of hornblende diorite intrudes the metasedimentary rocks. Along the

CAPSULE GEOLOGY

northern border, dikes and sills of fine-grained diorite and biotite lamprophyre occur in widths of a few centimetres to a metre.

Bulldozer stripping and trenching was done on the Sonja (or Waterclear) and LSD claims in 1970 by Texal Development Corporation. A 25 centimetre channel sample taken from a massive sulphide vein occurrence yielded 908.6 grams per tonne silver, 52.3 per cent lead, and 1.24 per cent zinc (Hodgson, 1970). In 1978, the Sonja was optioned as the Julian claim from R.J. Franks by Craigmont Mines Limited and magnetic, VLF-EM and soil geochemical surveys were done, and five diamond-drill holes totalling 498 metres were drilled. The Water claims, covering the Sonja and a large area to the southeast, were staked in May 1984 and some geological and geochemical work was done by Newmont Exploration of Canada Limited. In 1985, Newmont ran ground magnetic and electromagnetic pulse surveys over the Water claims.

BIBLIOGRAPHY

EMPR ASS RPT 14485
EMPR EXPL 1975-121; 1976-132; 1978-E187; 1979-200
EMPR GEM 1969-230; 1972-318; 1974-224
EMPR OF 2002-15
EMPR PF (*Hodgson, F.P. (1970): Report on the Valentine Group of Mineral Claims; Claim map, no date; Assay report)
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/16

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 050**

NATIONAL MINERAL INVENTORY: O92P1 Au1

NAME(S): **BONAPARTE CROW, RAVEN,
FLICKER, CHICKADEE, GREY JAY,
WOODPECKER, OWL, NUTCRACKER**

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 092P01W
BC MAP:
LATITUDE: 51 00 31 N
LONGITUDE: 120 27 00 W
ELEVATION: 1699 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Crow vein, located between Wentworth and Bob lakes near the headwaters of a major north tributary of Wentworth Creek, 40 kilometres north of Kamloops (Assessment Report 18682).

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5653877
EASTING: 678887

COMMODITIES: Gold Copper Molybdenum

MINERALS

SIGNIFICANT: Telluride Gold Chalcopyrite Molybdenite
ASSOCIATED: Quartz Pyrrhotite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Harper Ranch	Undefined Formation	Thuya Batholith
Triassic-Jurassic			

LITHOLOGY: Quartz Diorite
Argillite
Argillaceous Siltstone
Phyllitic Shale

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Harper Ranch
METAMORPHIC TYPE: Regional
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Thompson Plateau
GRADE:

INVENTORY

ORE ZONE: CROW REPORT ON: Y
CATEGORY: Indicated YEAR: 1987
QUANTITY: 6400 Tonnes
COMMODITY: Gold GRADE: 25.4000 Grams per tonne

COMMENTS: Estimated reserves.
REFERENCE: Vancouver Stockwatch May 2, 1994.

CAPSULE GEOLOGY

The Bonaparte gold-quartz veins are located 30 kilometres north of Kamloops in the Bob/Wentworth creeks area. The property is accessible via the Jamieson Creek logging road.

Mapping (Geological Survey of Canada Map 42-1989 and Fieldwork 2000), north and south of the Bonaparte property indicates the area to be underlain by units of the late Paleozoic Harper Ranch Group comprised of argillite, phyllite, volcanic sandstone, chert pebble conglomerate and local carbonate. The strata are intruded by Triassic and/or Jurassic granodiorite, quartz monzonite and diorite which are believed to form part of the Thuya batholith. Miocene to Pliocene plateau basalts are extensive and consist of predominantly olivine basalt and andesite with minor ash and breccia.

The Bonaparte property covers an erosional window through Miocene plateau basalts in which older bedrock consisting of Triassic metasediments are intruded by Triassic and/or Jurassic quartz diorite. The plateau basalts occupy the higher ground and form prominent cliffs bounding the exposures of older rocks. Argillites are the oldest rocks exposed. They are commonly pyritic and vary in composition from phyllitic shale to argillaceous siltstone. The

CAPSULE GEOLOGY

phyllite unit hosts unmineralized (rare pyrite) quartz veins that generally do not exceed 20 centimetres in width. Hornfelsed argillaceous sedimentary rocks are found in contact with and adjacent to quartz diorite. Xenoliths of hornfels are also found within the quartz diorite body.

The quartz diorite intrusion is medium grained and weakly altered, with minor saussuritization of feldspars and chloritization of mafic minerals. Locally, up to 3 per cent disseminated pyrite and pyrrhotite is evident. Narrow quartz veins and stockwork sections, generally barren of sulphides and gold, are common in the intrusive rocks. Wider (up to 3 metres) north trending quartz veins are also hosted by the quartz diorite. Locally these veins are auriferous and may contain up to several per cent sulphides.

Mineralization primarily occurs in a series of north trending quartz veins hosted mainly by the quartz diorite intrusion. At least eight gold-bearing quartz veins are recognized from trenching and drilling and occur within an area 823 by 548 metres. From west to east these are the Grey Jay, Owl, Crow, Nutcracker, Raven, Chickadee, Flicker and Woodpecker veins. A number of drill intersections which may represent additional veins also occur. The veins generally dip moderately to steeply east and locally range up to 3 metres in width. Pinching and swelling is common along the length of the veins. Locally, the massive white quartz veins contain up to several per cent sulphides consisting of pyrite with lesser chalcopyrite, pyrrhotite and molybdenite. Native gold is also evident but generally is associated with silver-grey tellurides. Only very locally, anomalous gold values occur in shear zones or in the intrusive rock close to, but sometimes spatially unrelated to auriferous quartz veining.

The Grey Jay vein is, where exposed at surface, the westernmost member of the Crow vein system. The vein is a discrete vein, but appears to merge with the Crow vein at depth. It also intersects the Owl vein. The Grey Jay vein strikes 023 degrees and dips 45 degrees east. Drilling indicates a strike length of 130 metres with an average true width of 0.95 metre. Average gold grade is 29.13 grams per tonne (Assessment Report 18682).

The Crow vein system consists of three discrete segments termed the North, Central and South. The South segment strikes 027 degrees and dips 55 degrees east and is separated from the Central segment by a major fault. This fault displaces the South segment about 10 metres into the footwall relative to the Central segment. The Central segment strikes 012 degrees and dips 55 degrees east. A portion of this section of vein represents the region where the Nutcracker and Crow veins have merged along strike. The North segment of the Crow vein strikes 034 degrees and dips 55 degrees east. The Grey Jay and Owl veins intersect this segment. An average true width of the Crow vein system is 1.15 metres with a drill indicated strike length of 220 metres. Average gold grade is 14.39 grams per tonne (Assessment Report 18682). Measured geological (proven) reserves for the Crow vein are 5200 tonnes grading 21.08 grams per tonne gold. Indicated (probable) reserves are 5000 tonnes grading 20.56 grams per tonne gold (Property File - News Release, Inter-Pacific Resource Corp., January 14, 1987).

The Owl vein is part of the Crow vein system and strikes 032 degrees with 50 degree east dips. The Owl vein intersects the Crow and Grey Jay veins and drill data suggests that the Owl vein continues both along strike and downdip beyond these intersections. The width of the Owl vein appears to increase with depth to a maximum of 2.3 metres. Drilling has indicated a strike length of 100 metres. A drill intersection across 2.3 metres assayed 14.05 grams per tonne gold (Assessment Report 18682).

The Nutcracker vein is also part of the Crow vein system. It strikes 027 degrees and dips 48 degrees east with an average true width of 0.35 metre. Drill data suggests the Nutcracker vein continues south along strike beyond its point of merging with the Crow vein. Drilling has indicated a strike length of 110 metres. Average gold grade is 50.39 grams per tonne (Assessment Report 18682).

The Raven vein strikes 020 degrees and dips 48 degrees east with an average true width of 0.69 metre. Structure is complex with three faults truncating and displacing the vein. Drill data indicates a strike length of 35 metre. Average gold grade is 6.99 grams per tonne (Assessment Report 18682).

The Chickadee vein strikes 360 degrees and dips 50 degrees east with an average true width of 0.3 metres. Trenching has indicated a strike length of 20 metres. Gold grades up to 13.84 grams per tonne have been obtained from channel samples (Assessment Report 18682). The Flicker vein strikes 015 degrees and dips 72 degrees east with an average true width of 0.95 metre. Two low angle faults offset the

CAPSULE GEOLOGY

vein. Drill data indicates a 115 metre strike length. Average gold grade is 6.06 grams per tonne gold (Assessment Report 18682).

The presence of the two low angle faults suggests that the Woodpecker vein occurs in the hangingwall of the Flicker vein. Drill data indicates a strike length of 45 metres. A drill intersection across 1.67(?) metres assayed 9.25 grams per tonne gold (Assessment Report 18682).

Between 1969 and 1979 (Assessment Reports 4665 and 8500), the area of the property was prospected for molybdenum. In 1973, Amoco Canada Petroleum Ltd. carried out geological mapping, soil sampling, induced polarization/magnetic surveys and drilled two core holes totalling 299 metres (reported in Assessment Report 23722). In 1984, following regional heavy mineral silt surveys, MineQuest Exploration Associates Ltd., on behalf of the GoldQuest I Limited Partnership, discovered high grade gold-quartz float in four areas on the property. Following the discovery of the gold-quartz float, and financed by option agreements with Inter-Pacific Resources and the Hughes-Lang Group, MineQuest conducted detailed geological mapping, extensive soil sampling and both ground and airborne magnetic/VLF-EM surveys, as well as diamond drilling and trenching in 1985 and 1986 on the property. Inter-Pacific Resources acquired the property in 1985 and completed 7.1 kilometres of magnetic surveying, soil geochemistry (257 samples), litho-geochemistry (88 samples), trenching and 1129.9 metres of diamond drilling. Hole #6 intersected 0.92 metre grading 35.7 grams per tonne gold. The Hughes-Lang Group optioned a 50 per cent interest in the property in 1986 and completed 22 diamond-drill holes and 27 trenches on the property on 5 veins. Drilling and trenching has identified six closely spaced, narrow, en echelon auriferous quartz veins trending north to northeast. During June to September, 1994, Cleveland Capital Corporation carried out a pilot plant mining program in the Discovery area and removed approximately 9000 tonnes (10,000 tons) of bulk sample material for processing at the Trail smelter.

BIBLIOGRAPHY

EM FIELDWORK 1998, pp. 297-306
EMPR ASS RPT 4665, 8500, 13908, 15166, 15651, 15757, 16045, 16137, 17086, 17206, 17762, 17904, *18682, 23722
EMPR EXPL 1986-248
EMPR FIELDWORK 2000, pp. 1-30
EMPR GEM 1969-234; 1973-269
EMPR MAP 65 (1989)
EMPR MER 1986, pp. 21,62
EMPR OF 1992-1
EMPR PF (Press Release, Inter-Pacific Oct.15, Nov.20, Dec.12, 1986; Jan.14, May 5, Oct.23, Dec.8, 1987; Vancouver Venture Nov. 1986; Claim map, 1968)
EMR MIN BULL MR 223 B.C. 195
EMR MP CORPFILE (Inter-Pacific Resource Corp.)
GSC MAP 3-1966; 1293A; 1278A; 42-1989; 1278A
GSC MEM 363
GSC OF 11; 637
GCNL #205,#226,#228, 1985; #72,#82,#115,#200,#225,#241, 1986; #11, #88,#206, 1987; #69(Apr.11), 1989
N MINER Nov.11, 1985
V STOCKWATCH Dec.9, 1987
WWW <http://www.infomine.com/index/properties/BONAPARTE.html>

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/16

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 051**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT ARMOUR**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P01E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 09 36 N
LONGITUDE: 120 06 13 W
ELEVATION: 670 Metres

NORTHING: 5671606
EASTING: 702520

LOCATION ACCURACY: Within 1 KM

COMMENTS: Area of drilling on Mount Armour, at the community of Barriere (Assessment Report 16322).

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Massive
CLASSIFICATION: Volcanogenic
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn
DIMENSION: Metres
COMMENTS: Attitude of sulphide zone.

STRIKE/DIP: 270/30

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Devonian Undefined Group Eagle Bay

LITHOLOGY: Chert
Argillite
Sericite Tuff
Greywacke
Limestone
Basalt

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Drill Core
COMMODITY GRADE
Copper 0.7300 Per cent
Zinc 4.1000 Per cent

COMMENTS: The copper value was obtained over 1.44 metres; zinc over 1.04 metres.

REFERENCE: Assessment Report 16322.

CAPSULE GEOLOGY

The Mount Armour property is underlain by basalts, cherts, argillites, wackes, conglomerates and limestones of the Paleozoic Eagle Bay assemblage. Pyritic massive sulphides and sulphide stockworks are hosted by cherts and argillites, and sit conformably with surrounding strata. Chalcopyrite and sphalerite were observed in drill core with best values of 0.73 per cent copper over 1.44 metres and 4.1 per cent zinc over 1.04 metres; precious metal values were low (Assessment Report 16322).

Massive sulphide showings on Mount Armour have been known for some time with old prospect pits probably dating back to the early 1900s. Very limited diamond drilling was carried out by a local prospector, J.A. Fennell, in the late 1960s with inconclusive results. Craigmont Mines Ltd. carried out a soil, VLF-EM and magnetometer survey over the showings in 1979 and although anomalies were outlined, did not follow them up. In 1985, the partnership of Corporation Falconbridge Copper and Cutty Resources Inc. carried out linecutting and soil sampling over 10.3 kilometres of grid. In 1986, Minnova Inc. carried out diamond drilling totalling 410 metres in 5 holes.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
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PAGE: 1088
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 7855, 15248, *16322, 26436
EMPR OF 1999-2
GSC MAP 1278A

DATE CODED: 1987/11/17
DATE REVISED: 2001/04/02

CODED BY: GP
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 052**

NATIONAL MINERAL INVENTORY:

NAME(S): **PIPELINE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P03W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 33 N
LONGITUDE: 121 26 53 W
ELEVATION: 792 Metres

NORTHING: 5664963
EASTING: 608602

LOCATION ACCURACY: Within 500M

COMMENTS: Location given is a cutbank of pipeline right-of-way but float of diatomaceous earth also occurs at 0608350E, 5664400N, 754 metres elevation.

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
ASSOCIATED: Glass Feldspar Quartz Montmorillonite
ALTERATION: Montmorillonite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular
COMMENTS: Attitude is flat, dimension unknown.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Miocene	Chilcotin	Deadman River	

LITHOLOGY: Diatomite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Pipeline diatomite showing is located on the south bank of the Bonaparte River valley, 10 kilometres east of Clinton.

The occurrence is hosted in the north draining Mio-Bonaparte channel, a fluvial and lacustrine interlayer of the Miocene Deadman River Formation which is part of the Miocene to Pleistocene Chilcotin Group composed mainly of alkaline plateau basaltic flows. The Deadman River Formation (EMPR Open File 1989-21) is composed of rhyolite ash, tuffaceous sandstone, siltstone, shale, minor pebble conglomerate. The siltstones and shales are commonly carbonaceous and/or diatomaceous.

A two metre high cutbank on the pipeline right-of-way exposes diatomaceous earth, which is probably in place. The material is in the middle of the Deadman River Formation in the Mio-Bonaparte channel which is 2.5 kilometres wide and 450 metres deep.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 515-519
EMPR OF 1989-21
GSC MAP 1278A
GSC MEM 363

DATE CODED: 1990/04/05
DATE REVISED: 2003/02/19

CODED BY: PBR
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1091
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1892-558,563; 1893-1093,1102,1108; 1899-605; 1901-1092;
*1920-168,319-321; *1921-318-320; 1922-146,326-327; 1923-353;
1932-272; 1933-336; 1936-G19
EMPR MAP 53
EMPR SUM RPT *1921, Part A, pp. 92A-98A
GSC MEM 363
GSC MAP 1278A
GSC SUM RPT *1921, Part A, pp. 72-106
USGS Prof. Paper 85 (1914)
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 2001/05/11

CODED BY: GSB
REVISED BY: EVFK

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 054**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOUIS CREEK PLACER**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092P01E
BC MAP:

Open Pit

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 46 N
LONGITUDE: 120 06 15 W
ELEVATION: 426 Metres

NORTHING: 5668208
EASTING: 702615

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location of old placer workings (ca. 1913) in the canyon of Louis Creek, about 6 kilometres south of the community of Barriere.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unconsolidated
CLASSIFICATION: Placer
TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP
Quaternary

FORMATION

IGNEOUS/METAMORPHIC/OTHER
Glacial/Fluvial Gravels

LITHOLOGY: Gravel

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

Gold was possibly first reported from Louis Creek in Minister of Mines Annual Report 1886... "Louis Creek caused some excitement early in July, but after a few weeks trial the prospect did not continue. The next reference to Louis Creek is in Minister of Mines Annual Report 1912 which states "A slight excitement was caused during the autumn by the discovery of placer gold on Louis creek". In 1914, fifteen placer claims were staked on the creek and extended from a point about 800 metres above the mouth to the canyon, a distance of some 3200 metres. "Quite a little gold was taken out in sluice-boxes by individual miners" (Minister of Mines Annual Report 1913). In 1930, Noble Creek Prospecting and Development Company constructed a flume to a section of the creek about 400 metres above its mouth from the North Thompson River. Two 6-inch monitors were used in preparatory work and a drag-line scraper was also employed to excavate for a bedrock sluice. Numerous difficulties were encountered due to the uneven bedrock surface and after handling about 22,936 cubic metres of gravel, finances were exhausted and work was suspended. The company was reorganized and a new company formed, Paymore Mining Company, who continued working this upper section with heavier machinery but satisfactory results were not achieved due to repeated difficulties in connecting with the uneven nature of the channel (Minister of Mines Annual Report 1930).

The area of Louis Creek appears to be underlain by Paleozoic sedimentary and volcanic rocks of the Harper Ranch Group.

Gold production from 1921 to 1945 was 16,202 grams (Bulletin 28).

BIBLIOGRAPHY

EMPR AR 1886-212; 1912-K184; *1913-K207; *1930-A197,A198
EMPR BULL*28, pp. 37-39
GSC MAP 1278A
GSC SUM RPT 1921 Part A, p. 101

DATE CODED: 1885/07/24
DATE REVISED: 2001/03/29

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 055**

NATIONAL MINERAL INVENTORY:

NAME(S): **EAKIN CREEK PLACER**, EAKIN (THREE MILE) CREEK

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

Open Pit

MINING DIVISION: Kamloops

LATITUDE: 51 27 12 N
LONGITUDE: 120 13 29 W
ELEVATION: 450 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5703893
EASTING: 692820

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold
MINERALIZATION AGE: Recent

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: Gravel

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Eakin Creek placer gold property is located on the lower reaches of Eakin (Three Mile) creek, four kilometres north of Little Fort.

A total of 5.475 kilograms (176 ounces) of placer gold was reported to have been recovered from gravels in the lower reaches of Eakin Creek between the early 1920s and the late 1930s (Bulletin 28). Some of the gold was reportedly quite coarse (Minister of Mines Annual Report 1931), with good nuggets being obtained from the gravel/bedrock interface. In Geological Survey of Canada Summary Report 1921 Part A, it is suggested that the placer gold may have been derived from a resistant conglomerate member in the Eocene Chu Chua Formation, which formed a gorge directly above the original workings. Later authors (Minister of Mines Annual Report 1926; Fieldwork 2000, page 26) consider the more likely source to be the bedrock gold occurrences that are now known to be present in crystalline hostrocks higher in the Eakin Creek drainage basin.

Bedrock in the area (Fieldwork 2000) includes the Eocene Chu Chua Formation (Kamloops Group), composed of conglomerate, sandy shale, arkose and coal measures; the late Paleozoic Harper Ranch Group composed of siltstone, argillite, chert and limestone; the Upper Triassic Nicola Group composed of andesitic and basaltic volcanic rocks, clastic sediments, chert and limestone and the Triassic to Jurassic Dum Lake Intrusive Complex, composed of diorite, gabbro and ultramafic rocks.

BIBLIOGRAPHY

EMPR AR 1922-146; 1924-152; 1925-170; 1930-A197; 1931-108
EMPR BULL *28, pp. 38,39
EMPR FIELDWORK 2000, p. 26
GSC SUM RPT 1921 Part A, p. 102
GSC MEM 363
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/23

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 056**

NATIONAL MINERAL INVENTORY:

NAME(S): **EIGHTYTHREE MILE LAKE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P06W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 26 57 N
LONGITUDE: 121 22 41 W
ELEVATION: 1130 Metres

NORTHING: 5701024
EASTING: 612705

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Map 2, EMPR Bulletin #5 which states that "Eighty-three Mile Lake lies several hundred feet west of the Cariboo Highway near 83 Mile". This is not the same Eighty-three Mile Lake shown on modern topographic maps - this latter lake is much larger, is connected to an active surface drainage system and is probably not briney.

COMMODITIES: Sodium Carbonate

MINERALS

SIGNIFICANT: Brines
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Quaternary	Undefined Group	Unnamed/Unknown Formation	
Miocene	Chilcotin	Undefined Formation	

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Alkali Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

Eighty-three Mile Lake contains sodium carbonate-rich brine, and is located 500 metres west of Highway 97, 25 kilometres south of 100 Mile House.

The lake is a semi-evaporitic playa lake. It is located in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

Eighty-three Mile Lake in 1937 (EMPR Bulletin 4) covered an area of approximately 12 hectares and contained brine to a maximum depth of about 60 centimetres. At 16 degrees celsius, the brine had a density of 1.085 and contained 4.85 per cent solids. The solids were composed of 97.2 per cent sodium carbonate and 2.8 per cent sodium chloride. No "winter crystal" (crystalline sodium carbonate minerals) is known to precipitate in the brine.

BIBLIOGRAPHY

EMPR BULL 4-5
EMPR P 1991-1
EMPR ASS RPT 20080
GSC MEM 363
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 057**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOODENOUGH LAKE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P05W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 21 54 N
LONGITUDE: 121 47 41 W
ELEVATION: 1072 Metres

NORTHING: 5691105
EASTING: 583907

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Goodenough Lake EMPR Bulletin #4, Map 2.

COMMODITIES: Sodium Carbonate

MINERALS

SIGNIFICANT: Natron Brines
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Quaternary
Miocene

GROUP

Undefined Group
Chilcotin

FORMATION

Unnamed/Unknown Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Alkali Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

Goodenough Lake is located 160 metres south of the west end of Meadow Lake (EMPR Bulletin #4). Meadow Lake is 30 kilometres west-northwest of 70 Mile House.

The lake is a semi-evaporitic playa lake. It is located in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau and host to several playa lakes. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

Goodenough Lake contains sodium carbonate-rich brine and "Winter and Permanent Crystal" (natron or hydrated sodium carbonate). At the end of the dry season in 1937 (EMPR Bulletin 4) the lake was completely dry and the surface of the lake was covered with a white encrustation from 5 millimetres to 2.5 centimetres thick (EMPR Bulletin #4) approximately 6.5 hectares in size. The surface encrustation at Goodenough Lake is underlain by 20 centimetres of greenish muddy material containing 50 to 75 per cent natron crystals underlain by black oozy mud. An analysis of "fresh winter crystal" (EMPR Bulletin 4) yielded: 35.54 per cent sodium carbonate, 1.34 per cent sodium bicarbonate and 62.89 per cent water. Between 2700 and 4500 tonnes are estimated to be present on the surface of Goodenough Lake (EMPR Bulletin 4).

Between 1922 and 1923, a small evaporating and crystallizing plant was tested, but was unsuccessful. Canadian Occidental Petroleum staked the Soda 53 claim in 1989 and collected a water sample in 1989 and completed analyses for sodium carbonate and other alkalai salts (Assessment Report 20080). Canoxy also completed an airborne infrared survey to test for dissolved solids in the lakewaters.

BIBLIOGRAPHY

*EMPR BULL 4-6
EMPR P 1991-1

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
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ENERGY AND MINERALS DIVISION

PAGE: 1096
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR EXPL 1978-E186
GSC MEM 363, 118-61
GSC MAP 1278A
CANMET: DEPT OF MINES, MINES BR RPT 642 P86-88

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 058**

NATIONAL MINERAL INVENTORY:

NAME(S): **SAFETY LAKE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P05W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 21 37 N
LONGITUDE: 121 47 47 W

NORTHING: 5690578
EASTING: 583800

ELEVATION: 1072 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Safety Lake EMPR Bulletin #4, Map 2.

COMMODITIES: Sodium Carbonate

MINERALS

SIGNIFICANT: Natron Brines
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Quaternary
Miocene

GROUP

Unnamed/Unknown Group
Chilcotin

FORMATION

Unnamed/Unknown Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Alkali Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

Safety Lake is located 450 metres south of the west end of Meadow Lake (EMPR Bulletin #4). Meadow Lake is 30 kilometres west-northwest of 70 Mile House.

The lake is a semi-evaporitic playa lake. It is located in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau and host to several playa lakes. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

Safety Lake contains sodium carbonate-rich brine and "Winter and Permanent Crystal" (natron or hydrated sodium carbonate). At the end of the dry season in 1937 (EMPR Bulletin 4) the lake was completely dry and the surface of the lake was covered with a white encrustation from 5 millimetres to 2.5 centimetres thick (EMPR Bulletin #4) approximately 2.0 hectares in size. The surface encrustation at Safety Lake is similar to that at Goodenough Lake which is underlain by 20 centimetres of greenish muddy material containing 50 to 75 per cent natron crystals underlain by black oozy mud. Canadian Occidental Petroleum staked the Soda 53 claim in 1989, collected a water and a winter crystal sample and completed analyses for sodium carbonate and other alkalai salts (Assessment Report 20080). Canoxy also completed an airborne infrared survey to test for dissolved solids in the lakewaters.

BIBLIOGRAPHY

EMPR BULL *4-6
EMPR P 1991-1
EMPR AR 1947-222
GSC MEM 363, 118
GSC MAP 1278A
CANMET: DEPT OF MINES, MINES BR RPT 642 P86-88

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 058**

MINFILE NUMBER: **092P 059**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAKE NO. 6**, SODA 56, 57 AND 58

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P05E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 18 31 N
LONGITUDE: 121 43 03 W
ELEVATION: 1125 Metres

NORTHING: 5684925
EASTING: 589393

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Lake No. 6: EMPR Bulletin #4, Map 2.

COMMODITIES: Sodium Carbonate

MINERALS

SIGNIFICANT: Brines
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Miocene
Miocene

GROUP

Undefined Group
Chilcotin

FORMATION

Unnamed/Unknown Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Alkali Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

Lake No. 6 is located 3 kilometres east of Big Bar Lake (EMPR Bulletin #4), and 1.5 kilometres north of Liberty Lake. It is 22 kilometres west of 70 Mile House.

The lake is a semi-evaporitic playa lake. It is located in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau and host to several playa lakes. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

Lake No. 6 contains sodium carbonate-rich brine approximately 15 centimetres thick over an area of approximately 3.6 hectares (EMPR Bulletin 4, page 10). The brine is moderately dense with a specific gravity of 1.033. Evaporated solids consisted of 80.5% sodium carbonate and 14.0% sodium sulphate. No alkaline efflorescence or "winter crystal" is present in the lake. Canadian Occidental Petroleum staked the Soda 56, 57 and 58 claims in 1989, collected three water samples and completed analyses for sodium carbonate and other alkalai salts (Assessment Report 20080). Canoxy also completed an airborne infrared survey to test for dissolved solids in the lakewaters.

BIBLIOGRAPHY

*EMPR BULL 4-10
EMPR P 1991-1
EMPR ASS RPT 20080
GSC MEM 363, 118
GSC MAP 1278A
CANMET: DEPT OF MINES, MINES BR RPT 642 P86-88

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 060**

NATIONAL MINERAL INVENTORY:

NAME(S): **LIBERTY LAKE**, CROWN GRANTS 968, 7693, 7362

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P05E
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 17 22 N
LONGITUDE: 121 42 39 W
ELEVATION: 1130 Metres

NORTHING: 5682802
EASTING: 589895

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Liberty Lake EMPR Bulletin #4, Map 2.

COMMODITIES: Sodium Carbonate

MINERALS

SIGNIFICANT: Natron Brines
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Miocene	Undefined Group	Unnamed/Unknown Formation	
Miocene	Chilcotin	Undefined Formation	

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Alkali Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

Liberty Lake is located 1 kilometre west of Little White Lake (EMPR Bulletin #4) and 22 kilometres west of 70 Mile House. The lake is a semi-evaporitic playa lake. It is located in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau and host to several playa lakes. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

Liberty Lake contains sodium carbonate-rich brine and "winter crystal" (natron or hydrated sodium carbonate). At the end of the dry season in 1937 (EMPR Bulletin 4) brine covered approximately 5 hectares to a depth of 20 centimetres. A white encrustation approximately 2.5 centimetres thick (EMPR Bulletin #4) had accumulated on the northern shore of the lake. The mud surrounding the lake was heavily encrusted with white efflorescence and "winter crystal" was in the process of formation. The brine has a specific gravity of 1.1255 and contains 13.78 per cent total solids which were composed of 81.5 per cent sodium carbonate, 11.7 per cent sodium sulphate and 6.5 per cent sodium chloride (EMPR Bulletin 4). Canadian Occidental Petroleum collected two water and two winter crystal samples in 1989 and completed analyses for sodium carbonate and other alkalai salts (Assessment Report 20080). Canoxy also completed an airborne infrared survey to test for dissolved solids in the lakewaters.

BIBLIOGRAPHY

EMPR BULL *4-11
EMPR P 1991-1
EMPR AR 1967-222
EMPR ASS RPT 20080
EMPR EXPL 1978-E186
GSC MEM 363, 118

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1100
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 061**

NATIONAL MINERAL INVENTORY:

NAME(S): **SNOW WHITE LAKE**

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092P05E
BC MAP:

Open Pit

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 21 28 N
LONGITUDE: 121 41 12 W
ELEVATION: 1080 Metres

NORTHING: 5690431
EASTING: 591444

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Snow White Lake EMPR Bulletin #4, Map 2.

COMMODITIES: Sodium Carbonate

MINERALS

SIGNIFICANT: Natron Brines
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Quaternary
Miocene

GROUP

Unnamed/Unknown Group
Chilcotin

FORMATION

Unnamed/Unknown Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Alkali Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

Snow White Lake is located 1.6 kilometres west of the Meadow Lake road and 3 kilometres east of the east end of Meadow Lake (EMPR Bulletin #4). Meadow Lake is 30 kilometres west-northwest of 70 Mile House.

The lake is a semi-evaporitic playa lake. It is located in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau and host to several playa lakes. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

Snow White Lake is a small lake covering approximately 3.6 hectares (EMPR Bulletin 4, page 12) which contains approximately 20 centimetres of sodium carbonate-rich brine. The specific gravity of the brine in 1937 was 1.050, containing 4.88 per cent total dissolved solids of the following composition: 94.4 per cent sodium carbonate, 2.3 per cent sodium sulphate and 2.7 per cent sodium chloride. In 1937 (EMPR Bulletin 4, page 12) there was no "winter crystal" present but remnants of a stockpile were found on the east shore, and reportedly shipments had been made. The natron crystals in the stockpile assayed 99.36 per cent sodium carbonate.

BIBLIOGRAPHY

*EMPR BULL 4-12
EMPR P 1991-1
GSC MEM 363, 118
GSC MAP 1278A
CANMET: DEPT OF MINES, MINES BR RPT 642

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 062**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROB AND NAN LAKE**, GOODENOUGH LAKE, SODA 6 AND 7,
CSW 2 AND 3

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P05E
BC MAP:
LATITUDE: 51 19 52 N
LONGITUDE: 121 38 37 W
ELEVATION: 1080 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of Rob and Nan Lake EMPR Bulletin #4, Map 2.

MINING DIVISION: Clinton
UTM ZONE: 10 (NAD 83)
NORTHING: 5687520
EASTING: 594496

COMMODITIES: Sodium Carbonate

MINERALS

SIGNIFICANT: Natron Brines
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Miocene	Undefined Group	Unnamed/Unknown Formation	
Miocene	Chilcotin	Undefined Formation	

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Alkali Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

Rob and Nan Lake is located 100 metres east of the Meadow Lake road and 18 kilometres west of 70 Mile House. The lake is a semi-evaporitic playa lake. It is located in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau and host to several playa lakes. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1). Rob and Nan Lake covers approximately 10 hectares (EMPR Bulletin 4, page 13) which contains approximately 40 centimetres of sodium carbonate-rich brine. The specific gravity of the brine in 1937 was 1.065, containing 6.39 per cent total dissolved solids of the following composition: 86.5 per cent sodium carbonate, 6.5 per cent sodium sulphate and 7.5 per cent sodium chloride. There is no record of "winter crystal" having formed in the lake. Canadian Occidental Petroleum staked the Soda 6 and 7 claims in 1989, collected a water, a mud and a winter crystal sample and completed analyses for sodium carbonate and other alkalai salts (Assessment Report 20080). Canoxy also completed an airborne infrared survey to test for dissolved solids in the lakewaters. In 1993, the lake was re-staked as the CSW 2 and 3 claims by Mr. G.M. Rogers who collected five water samples to test for the presence of natron winter crystal. A trace was found.

BIBLIOGRAPHY

EMPR BULL *4-13
EMPR P 1991-1
EMPR AR 1929-230
EMPR EXPL 1978-E186
EMPR ASS RPT 20080, 23127
GSC MEM 363, 118-61
GSC MAP 1278A

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1103
REPORT: RGEN0100

BIBLIOGRAPHY

CANMET: DEPT OF MINES, MINES BR RPT 642 P90

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 063**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAST CHANCE LAKE**, SODA 5, CSW 1

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P05E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 19 42 N
LONGITUDE: 121 38 01 W
ELEVATION: 1080 Metres

NORTHING: 5687224
EASTING: 595199

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Last Chance Lake EMPR Bulletin #4, Map 2.

COMMODITIES: Sodium Carbonate

MINERALS

SIGNIFICANT: Natron Brines
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Quaternary
Miocene

GROUP

Unnamed/Unknown Group
Chilcotin

FORMATION

Unnamed/Unknown Formation
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Alkali Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

Last Chance Lake is located 1 kilometre east of the Meadow Lake road and 200 metres east of Rob and Nan Lake. It is 17 kilometres west of 70 Mile House.

The lake is a semi-evaporitic playa lake. It is located in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau and host to several playa lakes. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

Last Chance Lake covers approximately 12 hectares (EMPR Bulletin 4, page 14) and contains approximately 15 centimetres of sodium carbonate-rich brine. The brine almost disappears at the end of the summer. The lake covers a layer of natronite crystals which averages approximately 1 metre in thickness. Samples were found to contain (EMPR Bulletin #4, page 15) 92.5 per cent sodium carbonate, 4.0 per cent sodium sulphate and 1.5 per cent insoluble material. Canadian Occidental Petroleum staked the Soda 5 claim in 1989 and collected a winter crystal sample and completed analyses for sodium carbonate and other alkali salts (Assessment Report 20080). Canoxy also completed an airborne infrared survey to test for dissolved solids in the lakewaters. In 1993, the lake was re-staked as the CSW 1 claim by Mr. G.M. Rogers who collected four water samples to test for the presence of natron winter crystal (Assessment Report 23127). None was found.

BIBLIOGRAPHY

EMPR BULL *4-14
EMPR P 1991-1
EMPR AR 1929-230
EMPR EXPL 1978-E186
EMPR ASS RPT 20080, 23127
GSC MEM 363, 118-61
GSC MAP 1278A

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1105
REPORT: RGEN0100

BIBLIOGRAPHY

CANMET: DEPT OF MINES, MINES BR RPT 642 P88-89

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 064**

NATIONAL MINERAL INVENTORY:

NAME(S): **MARGARET LAKE**, MARGARET (L.326)

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P06W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 19 54 N
LONGITUDE: 121 28 06 W
ELEVATION: 1090 Metres

NORTHING: 5687822
EASTING: 606706

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Margaret Lake EMPR Bulletin #4, Map 2.

COMMODITIES: Sodium Carbonate

MINERALS

SIGNIFICANT: Natron Brines
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Quaternary
Miocene

GROUP

Unnamed/Unknown Group
Chilcotin

FORMATION

Unnamed/Unknown Formation
Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Alkali Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

Margaret Lake is located 6 kilometres northwest of 70 Mile House.

The lake is a semi-evaporitic playa lake. It is located in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau and host to several playa lakes. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

Margaret Lake contains sodium carbonate-rich brine and "winter crystal" (natron or hydrated sodium carbonate). At the end of the dry season in 1937 (EMPR Bulletin 4) the eastern part of the lake was covered with a 1 centimetre-thick layer of natron. The lake is composed of brine to a thickness of approximately 30 centimetres, over an area of approximately 1.8 hectares. The "winter crystal" had a composition of 98.3 per cent sodium carbonate and 1.7 per cent insoluble material (EMPR Bulletin #4, page 17).

BIBLIOGRAPHY

EMPR BULL *4-17
EMPR P 1991-1
EMPR EXPL 1978-E186
GSC MEM 363, 118
GSC MAP 1278A
CANMET: DEPT OF MINES, MINES BR RPT 642 P92-93

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1108
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR BULL *4-18
EMPR P 1991-1
EMPR ASS RPT 20080, 23127
EMPR AR 1918-228, 1924-158, 1929-230
EMPR EXPL 1978-E186
GSC MEM 363, 118
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 066**

NATIONAL MINERAL INVENTORY:

NAME(S): **WHITE ELEPHANT LAKE**, SODA 12 AND 13, WHITE ELEPHANT (L.2305)

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092P06W
BC MAP:

Open Pit

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 20 32 N
LONGITUDE: 121 21 22 W
ELEVATION: 1080 Metres

NORTHING: 5689165
EASTING: 614497

LOCATION ACCURACY: Within 500M

COMMENTS: Location of White Elephant Lake EMPR Bulletin #4, Map 2.

COMMODITIES: Sodium Carbonate

MINERALS

SIGNIFICANT: Natron Brines
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Quaternary
Miocene

GROUP

Unnamed/Unknown Group
Chilcotin

FORMATION

Unnamed/Unknown Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Alkali Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

White Elephant Lake is located 500 metres west of the BC Rail line, five kilometres northeast of 70 Mile House. The lake is a semi-evaporitic playa lake. It is located in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau and host to several playa lakes. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

White Elephant Lake contains sodium carbonate-rich brine and "winter crystal" (natron or hydrated sodium carbonate). It covers an area of approximately 6 hectares and is covered with brine to an average depth of approximately 50 centimetres. At the end of the dry season in 1937 (EMPR Bulletin 4) the muddy shoreline was heavily encrusted with natron. The brine had a density of 1.083 and contained 8.3 per cent dissolved solids composed of 97.5 per cent sodium carbonate, 2.1 per cent sodium chloride and 0.4 per cent sodium sulphate. "Winter Crystal" has been harvested and shipped early in the last century. Canadian Occidental Petroleum staked the Soda 12 and 13 claims in 1989, collected a water, a mud and a winter crystal sample and completed analyses for sodium carbonate and other alkalai salts (Assessment Report 20080). They also completed an airborne infrared survey.

BIBLIOGRAPHY

EMPR BULL *4-20
EMPR P 1991-1
EMPR ASS RPT 20080, 23127
EMPR EXPL 1978-E186
GSC MEM 363, 118
GSC MAP 1278A
CANMET: DEPT OF MINES, MINES BR RPT 642-94

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 066**

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1111
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 363, 118
GSC MAP 1278A
CANMET: DEPT OF MINES, MINES BR RPT 642 P93-94

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 068**

NATIONAL MINERAL INVENTORY:

NAME(S): **SODIUM LAKE**, HUTCHISON LAKE, SODA LAKE,
MARSDEN LAKE

STATUS: Showing Open Pit

MINING DIVISION: Clinton

REGIONS: British Columbia

NTS MAP: 092P06W

UTM ZONE: 10 (NAD 83)

BC MAP:

LATITUDE: 51 18 12 N

LONGITUDE: 121 16 48 W

ELEVATION: 1080 Metres

NORTHING: 5684962

EASTING: 619899

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Sodium Lake - this is different than the location of
Hutchison Lake in EMPR Bulletin #4, Map 2, however Soda Lake
better resembles the description in the text.

COMMODITIES: Sodium Carbonate

MINERALS

SIGNIFICANT: Natron Brines

MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform

CLASSIFICATION: Evaporite Industrial Min.

TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Quaternary
Miocene

GROUP

Undefined Group
Chilcotin

FORMATION

Unnamed/Unknown Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Alkali Basalt Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

Sodium Lake is located 8 kilometres east of 70 Mile House.

The lake is a semi-evaporitic playa lake. It is located in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau and host to several playa lakes. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

Soda Lake (Hutchison Lake in EMPR Bulletin 4, page 22) contains sodium carbonate-rich brine and the muddy shoreline is heavily encrusted with natron. Brine covered an area of approximately 6 hectares to a maximum depth of 3 metres in October of 1937. The specific gravity of the brine was 1.0685 and it contained 7 per cent solids composed of 96.3 per cent sodium carbonate, 3.3 per cent sodium chloride and 0.1 per cent sodium sulphate (EMPR Bulletin 4, page 23).

BIBLIOGRAPHY

*EMPR BULL 4-22
EMPR P 1991-1
GSC MEM 363, 118
GSC MAP 1278A
CANMET: DEPT OF MINES, MINES BR RPT 642 P95

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 070**

NATIONAL MINERAL INVENTORY:

NAME(S): **THREE MILE LAKE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P04E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 03 31 N
LONGITUDE: 121 33 52 W
ELEVATION: 915 Metres

NORTHING: 5657323
EASTING: 600603

LOCATION ACCURACY: Within 500M

COMMENTS: Small lake on the west side of highway 97, 4 kilometres south of Clinton (EMPR Bulletin 4, figure 2).

COMMODITIES: Magnesium Sulphate

MINERALS

SIGNIFICANT: Epsomite Brines
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Quaternary	Undefined Group	Undefined Formation	

LITHOLOGY: Unconsolidated Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

Three Mile Lake is located west of Highway 97, 4 kilometres south of Clinton. Physiographically it is located near the edge of the Cariboo Plateau. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

The lake is a semi-evaporitic playa lake located in the dry valley along the Ashcroft-Clinton road. Bedrock includes marine sedimentary (ribbon chert, limestone and argillite) and volcanic rocks (basic flows and tuffs) of the Permian to Upper Triassic Cache Creek Group; Jurassic sedimentary rocks (chert pebble conglomerate, greywacke, shale and grit); and non-marine sediments (shale, sandstone, tuff, diatomite, conglomerate and breccias) of the Miocene Deadman River Formation.

Three Mile Lake contains magnesium sulphate-rich brine which in earlier times was of much higher concentration than in 1937 (EMPR Bulletin 4, page 41). In 1937, the brine had a density of up to 1.008 and contained up to 0.66 per cent dissolved solids composed mainly of 74 per cent magnesium sulphate, 5 per cent sodium sulphate, 1.5 per cent sodium chloride, 7 per cent sodium carbonate and 12.5 per cent calcium sulphate.

BIBLIOGRAPHY

*EMPR BULL 4-41
EMPR P 1991-1
GSC MEM 118-53, 363
GSC MAP 1278A

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

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 071**

NATIONAL MINERAL INVENTORY:

NAME(S): **ANZAC**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P04E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 05 18 N
LONGITUDE: 121 34 25 W
ELEVATION: 915 Metres

NORTHING: 5660616
EASTING: 599897

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Quaternary	Undefined Group	Undefined Formation	
Miocene	Chilcotin	Unnamed/Unknown Formation	

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Magnesite
Alkalic Basic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Anzac magnesite showing is located 800 metres southeast of the town of Clinton. Physiographically it is located near the edge of the Cariboo Plateau. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

The occurrence is located on the slope on the east side of the Clinton Creek valley. Bedrock in the area includes marine sedimentary (ribbon chert, limestone and argillite) and volcanic rocks (basic flows and tuffs) of the Permian to Upper Triassic Cache Creek Group; Jurassic sedimentary rocks (chert pebble conglomerate, greywacke, shale and grit); and non-marine sediments (shale, sandstone, tuff, diatomite, conglomerate and breccias) of the Miocene Deadman River Formation.

"Small angular pieces of white and grey crystalline magnesite" (EMPR Annual Report 1918, page 229) were encountered in a "tunnel" driven in what is presumed to be overburden a "half mile" (800 metres) southeast of the town of Clinton. Small deposits of hydromagnesite (092P 072) occur in the valley bottom below the float occurrence.

BIBLIOGRAPHY

EMPR AR *1918-228-229
GSC MEM 363
GSC MAP 1278A, 3-1966
EMPR OF 1987-13

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/20

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 072**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLINTON HYDROMAGNESITE**

MINING DIVISION: Clinton

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 092P04E
 BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 05 37 N
 LONGITUDE: 121 34 15 W
 ELEVATION: 1070 Metres

NORTHING: 5661206
 EASTING: 600080

LOCATION ACCURACY: Within 500M

COMMENTS: Location is 1 kilometre east of Clinton (EMPR Bulletin 4, page 112).

COMMODITIES: Hydromagnesite

MINERALS

SIGNIFICANT: Hydromagnesite
 ASSOCIATED: Calcite Clay
 MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
 CLASSIFICATION: Evaporite Industrial Min.
 TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Quaternary
 Miocene

Unnamed/Unknown Group
 Chilcotin

Unnamed/Unknown Formation
 Unnamed/Unknown Formation

LITHOLOGY: Hydromagnesite
 Unconsolidated Sediment/Sedimentary
 Alkalic Basaltic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
 TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Clinton hydromagnesite deposits are located 1 kilometre east of the town of Clinton in the Clinton Creek valley.

The Clinton deposits are located in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau and host to several semi-evaporitic playa lakes. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Basement rocks are Permian to Upper Triassic ribbon chert, limestone, argillite and basic volcanic flows and tuffs of the Cache Creek complex. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

Three small areas of pure hydromagnesite occur within a larger area of impure hydromagnesite covering a combined area of about 0.28 hectare. The material is in the order of 0.6 to 1.4 metres thick and is underlain by a brown hydromagnesite to a depth of about 1.5 metres. Sand and clay underlie the deposit.

Sample No. 1 (Reinecke, 1920) was collected from 0 to 61 centimetres from one of the three hydromagnesite occurrences. Sample 2, 3 and 4 (Reinecke, 1920) were collected from the hillside above and to the southeast of the hydromagnesite and indicate the probable source for the mineral is within the actinolite schist and carbonaceous argillites of the Cache Creek Group of sediments and volcanics.

	MgO	CaO	CO2	SiO2	Al2O3	Fe2O3	SO2	H2O +105	H2O -105
#1	41.60	0.22	35.88	2.30	0.63	0.13	0.36	17.53	1.12
#2	2.49	23.04	14.64	42.0	1.75	2.25	6.29	3.73	3.62
#3	2.39	3.30	2.52	77.54	3.87	4.04	0.51	3.82	1.97
#4	3.33	13.84	10.44	60.10	2.62	2.69	1.37	3.07	1.76

#1 - Area 3, 0 to 61 centimetres; #2, 3, 4 - on hillside above hydromagnesite.

The total amount of magnesite is estimated to be about 2400

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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PAGE: 1117
REPORT: RGEN0100

CAPSULE GEOLOGY

tonnes, of which approximately 900 is of doubtful quality (GSC
Memoir 118, page 44).

BIBLIOGRAPHY

GSC MEM *118, pp. 26-44
EMPR BULL 4, pp. 112-113
EMPR AR 1922-155
EMPR OF 1987-13

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/20

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 073**

NATIONAL MINERAL INVENTORY:

NAME(S): **BRIGADE CREEK**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 06 14 N
LONGITUDE: 120 57 24 W
ELEVATION: 1160 Metres

NORTHING: 5663363
EASTING: 643053

LOCATION ACCURACY: Within 500M

COMMENTS: Location is an overgrown cutback on an old logging road.

COMMODITIES: Diatomite Pozzolan

MINERALS

SIGNIFICANT: Diatomite
ASSOCIATED: Glass Feldspar Quartz Montmorillonite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Miocene	Chilcotin	Deadman River	
Miocene	Chilcotin	Chasm	

LITHOLOGY: Diatomite
Rhyolitic Ash
Rhyolite
Basalt

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Brigade Creek rhyolite ash and bentonite occurrence is located on an old logging road on the west side of the Deadman River valley access road, approximately 5 kilometres west of Skookum Lake. The area is approximately 45 (air) kilometres north of Savona, and is accessible on a good-quality gravel road which leads north from the Trans-Canada Highway approximately 7.4 kilometres west of Savona. Access is also good on logging roads via Loon Lake to the northwest.

Basalts of the Miocene Chasm Formation (Chilcotin Group) mantle most of the area. However, beneath the basalts, massive rhyolite ash of the Miocene Deadman River Formation (Chilcotin Group) is exposed in cliffs in the Deadman Valley to the east for a length of several kilometres. The rhyolite ash is the predominant lithology in a Miocene channel filling of fluvial and lacustrine sediments occupying the northwest trending Mio-Snohoosh Channel (Open File 1989-21). The flat lying Mio-Snohoosh channel is more than 200 metres in thickness and the best exposures of the rhyolite ash sections are on the north side of Sherwood Creek (092P 093).

At the Brigade Creek showing, chips of rhyolite ash and diatomaceous earth occur in a cut bank which is underlain and overlain by basalt flows of the Chasm Formation. The distribution of basalt outcrops permits the presence of up to a 10 metre thick rhyolite ash and diatomaceous horizon which belong to unit Mcr of the Chasm Formation (Open File 1989-21).

BIBLIOGRAPHY

EMPR OF 1989-21
GSC MEM 363
GSC MAP 1278A

DATE CODED: 1990/05/05
DATE REVISED: 2001/02/15

CODED BY: PBR
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 074**

NATIONAL MINERAL INVENTORY:

NAME(S): **MEADOW LAKE**, LOT 4878, SODA 53

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P05E
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 21 40 N
LONGITUDE: 121 42 57 W
ELEVATION: 1070 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5690766
EASTING: 589407

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Deposit B, EMPR Bulletin 4, page 104.

COMMODITIES: Hydromagnesite

MINERALS

SIGNIFICANT: Hydromagnesite
ASSOCIATED: Calcite Clay
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Quaternary	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Hydromagnesite
Unconsolidated Sediment/Sedimentary
Alkalic Basaltic Lava
Unconsolidated Sediment/Sedimentary
Alkalic Basaltic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Meadow Lake hydromagnesite deposits are located immediately east of the east end of Meadow Lake, 25 kilometres west-northwest of 70 Mile House. The main deposits occur in swampy areas adjacent to two small lakes in a west-trending zone approximately 2 kilometres long.

The lakes are semi-evaporitic playa lakes. They are located in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau and host to several playa lakes. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

The deposits comprises two main occurrences with numerous smaller patches of pure hydromagnesite and impure hydromagnesite. The largest occurrence, Area B covers an area of approximately 12 hectares and the smaller deposit covers approximately 6 hectares. Area A is about 300 metres east of Meadow Lake, while Area A is an additional 1.5 kilometres east of that. All occurrences have irregular outlines and a typical cauliflower-like surface which is raised 10 to 60 centimetres above the surrounding swamp. The impure hydromagnesite occurrences have a flat, cracked surface of dense, grey material. They occur both east and west of Meadow Lake and the individual deposits vary widely in composition but generally contain elevated values for calcium and silica.

A sample (Sample No. 6) of "grey earth" was taken from the northeast end of Meadow Lake. It was collected 0 to 70 centimetres from the surface where impure hydromagnesite is about 70 centimetres thick (Geological Survey of Canada Memoir 118, pages 25-46).

The pure hydromagnesite consists of two or more distinct layers in overall sheet-like deposits. The surface horizon is usually white, massive and has a low calcium content. Usually a horizon of

CAPSULE GEOLOGY

creamy yellow, loosely granular hydromagnesite, which contains an increasing proportion of calcium toward the base, underlies the surface layer of 60 to 90 centimetres. This creamy hydromagnesite usually overlies a layer of impure hydromagnesite. One sample (Geological Survey of Canada Memoir 118, pp. 25-46, Sample No. 7) represents a composite of white hydromagnesite from a number of the Meadow Lake occurrences. Sample No. 8 is a similar composite, but is limited to white material from drill holes in area A and B as described below. The two main deposits and the numerous smaller occurrences of pure or white hydromagnesite are estimated to cover about 20 hectares.

Area A, the second largest occurrence, consists of white hydromagnesite covering about 6 hectares of swampy terrain, roughly 325 metres southeast of Area B, the main deposit. In Area A, the hydromagnesite is 30 to 90 centimetres thick with an average thickness of 41 centimetres.

Area B, on Lot 4878, is about 1.5 kilometres east of Meadow Lake. Drilling confirmed that the 12 hectares of white hydromagnesite has a thickness of 20 to 81 centimetres with an average of about 46 centimetres. Creamy yellow granular material underlies the white hydromagnesite in a layer which is in the order of 90 to 125 centimetres thick and is underlain in turn by impure hydromagnesite. Sample No. 1 is of material from 0 to 38 centimetres depth within the white hydromagnesite at the centre of the main deposit. Sample 2 is from 38 to 130 centimetres, below sample 1, and consists of cream coloured hydromagnesite. Sample 3 is cemented soil taken from 130 to 168 centimetres depth. Sample 4 was collected near Sample 1 and is from 0 to 99 centimetres but includes some yellow hydromagnesite. Sample 5, taken below sample 4, is from 99 to 153 centimetres and is entirely within yellow, granular hydromagnesite. The results are as follows:

Samp.	From	To	MgO	CaO	CO2	SiO2	Al2O3	Fe2O3	FeO	H2O	H2O
	cm	cm								+105	-105
1	0	38	41.38	1.32	37.67	4.00	1.36	0.14	0.23	12.12	1.80
2	38	130	35.68	6.38	36.63	11.33	2.88	0.24	0.20	4.15	2.29
3	130	168	20.34	25.55	-	7.60	-	-	0.22	-	-
4	0	99	36.63	2.86	35.64	13.10	1.34	0.11	0.17	7.00	2.58
5	99	153	24.32	20.12	38.64	10.32	1.35	0.49	-	2.93	1.45
6	0	30	20.14	9.20	20.24	36.78	1.54	0.84	0.59	6.80	3.52
7	composite		40.56	1.26	35.96	1.22	0.67	0.18	0.63	18.00	1.45
8	composite		38.80	0.80	38.70	7.40	->2.50<-	-	-	11.50	-

Energy Mines and Petroleum Resources Bulletin No. 4 (page 105) has estimated that 104,000 tonnes of white hydromagnesite is contained in the Meadow Lake deposits.

Canadian Occidental Petroleum staked the Soda 55 claim in 1989 and collected a water sample in 1989 and completed analyses for sodium carbonate and other alkalai salts (Assessment Report 20080). Canoxy also completed an airborne infrared survey to test for dissolved solids in the lakewaters.

BIBLIOGRAPHY

EMPR BULL 4, pp. 102-108
 EMPR AR 1921-G194; 1922-N155
 EMPR OF *1987-13, pp. 62-64
 EMPR FIELDWORK 1990, pp. 279-288
 EMPR ASS RPT 20080
 GSC MEM 118, pp. 25-46; 363
 GSC MAP 1278A

DATE CODED: 1985/07/24
 DATE REVISED: 2003/02/20

CODED BY: GSB
 REVISED BY: RHM

FIELD CHECK: N
 FIELD CHECK: N

MINFILE NUMBER: **092P 075**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOOSE CREEK (MOWICH LAKE)**, MOOSE CREEK SOUTH 1,2, MOWICH LAKE 1,2

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:
LATITUDE: 51 02 28 N
LONGITUDE: 120 54 47 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Location of diatomite occurrences (di) between Mowich Lake and Moose Creek on map in Open File 1989-21.

MINING DIVISION: Clinton
Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5656469
EASTING: 646304

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
ASSOCIATED: Glass Feldspar Quartz Montmorillonite
ALTERATION: Montmorillonite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular
COMMENTS: Attitude is flat, dimension unknown.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Miocene	Chilcotin	Chasm	
Miocene	Chilcotin	Deadman River	

LITHOLOGY: Diatomite
Rhyolite
Rhyolitic Tuff
Basalt

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Mowich Lake/Moose Creek diatomite showings are located between Mowich Lake and Moose Creek on the west side of Deadman River, 60 (air) kilometres northwest of Kamloops. Access is by secondary and old logging roads.

Read (Open File 1989-21) has described four occurrences of diatomite in a north-trending zone within 1 kilometre of each other. The occurrences are hosted within interlayers in Miocene flows of the Miocene Chilcotin Group plateau basalts. Comments on the individual occurrences follow: At the Moose Creek South 1 occurrence, blocks of diatomaceous earth occur in a ripped-up landing in a logged area. Oil immersion mounts were made of samples from blocks of diatomaceous earth to confirm the nature of the occurrence. The dimensions of the occurrence are not known, however, it is located between basalt flows of the Chasm Formation (Chilcotin Group).

The Moose Lake South 2 occurrence is also hosted by an interlayer within basalts of the Chasm Formation. It is exposed in a cut-bank about 13 metres high filled with diatomaceous chips. Chips of bedded rhyolite tuff and diatomaceous earth form a layer of bedded tuff and diatomaceous earth which is at least 15 metres thick.

The Mowich Lake 1 occurrence is located at the end of an old logging road, where the roadcut exposes the diatomaceous earth. The interflow layer lies within 10 metres of the top of the Deadman River Formation (Chilcotin Group). The thickness of the layer is unknown, but the same layer probably outcrops 300 metres distant at the Mowich Lake 2 occurrence.

The Mowich Lake 2 occurrence is also exposed in a roadcut in an old logging road. It also is hosted by the Deadman River Formation. The petrography of the showing was identified in oil immersion grain mounts. The thickness of the occurrence is not known.

No work is known to have been undertaken on the occurrences.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1122
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 1278A
GSC MEM 363
EMPR FIELDWORK 2000, pp. 1-30
EMPR OF *1989-21; 1990-23

DATE CODED: 1990/04/05
DATE REVISED: 2001/01/19

CODED BY: PBR
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 076**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN LOON 7, GL-7**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 25 13 N
LONGITUDE: 120 14 24 W
ELEVATION: 850 Metres

NORTHING: 5700177
EASTING: 691897

LOCATION ACCURACY: Within 500M

COMMENTS: Location of sample EDF 10 (Figure 5, Assessment Report 17342).

COMMODITIES: Gold Silver Copper Lead

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena
ASSOCIATED: Quartz
ALTERATION: Silica Carbonate Malachite
ALTERATION TYPE: Silicification Carbonate Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
SHAPE: Tabular
DIMENSION: Metres STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Harper Ranch	Undefined Formation	
Triassic-Jurassic			Dum Lake Intrusive Complex
Triassic-Jurassic			Thuya Batholith

LITHOLOGY: Ultramafic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel Harper Ranch
PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1988
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 26.0000 Grams per tonne
Gold 0.3550 Grams per tonne
Lead 0.2700 Per cent

REFERENCE: Assessment Report 17342.

CAPSULE GEOLOGY

The Golden Loon 7 (GL-7) occurrence is located 2.5 kilometres west of Little Fort. Good quality logging and bush roads provide access to the property.

The GL-7 occurrence is one of several showings associated with the Thuya Road fault (Fieldwork 2000, page 22). The fault follows a prominent topographic lineament marked by a creek valley for several kilometres (Assessment Report 17342). A number of copper showings (mainly malachite) are exposed along a logging road which follows this valley. Several small quartz veins, generally 1 to 5 centimetres in width, commonly carry chalcopyrite, galena and pyrite. The best assay from samples of these quartz veins was from EDF 10, which yielded 355 ppb gold, 25.3 ppm silver, 26 ppm copper and 2700 ppm lead (Assessment Report 17342). Sampling of carbonate-silica altered rock by Schiarizza and Israel (Fieldwork 2000, page 22) in 2000 did not yield significantly anomalous values in gold or silver, however, sample 00PSC-76 analysed 65 ppb platinum.

Hostrocks are believed to be ultramafic intrusive rocks of the Triassic to Jurassic Dum Lake Intrusive Complex which consists of a mafic portion composed of diorite, gabbro, microdiorite and intrusion breccia, and an ultramafic portion composed of dunite, wehrlite, pyroxenite and serpentine. The Dum Lake Intrusive Complex is

CAPSULE GEOLOGY

believed to be an Alaskan-type intrusive complex (Fieldwork 2000). It is in contact with granodioritic rocks of the Triassic to Jurassic Thuya batholith on the west. On its eastern side the Dum Lake intrusive rocks intrude siltstone, argillite, chert and limestone of the late Paleozoic Harper Ranch Group and mafic volcanic rocks, related volcanoclastic rocks, clastic sediment, chert and limestones of the Upper Triassic Nicola Group.

The earliest record of prospecting in the area dates from the 1920s when placer gold was recovered from the Eakin Creek Placer (092P 055). In 1967, Noranda Exploration Company (Assessment Report 1051) completed a soil sampling survey over the Kira claims after obtaining anomalous results in a reconnaissance stream sediment sampling program. The program outlined zones of anomalous copper and nickel. In 1973, Rio Tinto Canadian Exploration Limited completed another soil geochemical sampling program on the Dum Claim Group (Assessment Report 4689), outlining copper, zinc and lead anomalies west of Dum Lake. Teck Corporation reportedly (Assessment Reports 14237, 15870) staked the Minerva Group in 1980-81 on the west side of the Golden Loon Property and undertook a magnetometer survey and a soil geochemical survey, obtaining several silver anomalies. In 1984, The Golden Loon Claims were staked by Barnes Creek Minerals and a prospecting program undertaken (Assessment Report 14237). In 1985, additional prospecting was undertaken and magnetometer, VLF-EM and soil geochemical surveys completed (Assessment Reports 14920 and 15937). In 1987, Mineta Resources completed a program (Assessment Report 17342) which included soil geochemical surveys (548 samples), linecutting (34.6 kilometres), lithochemistry (18 samples), and stream sediment geochemical sampling (70 samples) and located some high grade float boulders as well as outlined some gold-in-soil geochemical anomalies. In 1988, Mineta completed 78.2 kilometres of linecutting, 61.0 kilometres of VLF-EM and magnetometer surveying and collected 1571 soil geochemical samples (Assessment Reports 18802 and 21109). In 1989, Mineta completed 25.0 kilometres of VLF-EM and magnetometer surveying, as well as soil geochemical (556 samples) and lithochemical (20 samples) surveys (Assessment Report 20029). In 1990, the property was optioned to Corona Corporation and an extensive program (Assessment Report 21014) of prospecting, geological mapping, soil geochemical sampling (637 samples) and geophysical surveys (25 kilometres of magnetometer and VLF-EM), trenching and diamond drilling (691 metres in 7 holes) was carried out. In 1992, Placer Dome Limited optioned the property, focusing on the porphyry copper-gold potential of the western portion of the property (Assessment Report 22818) and completed 20.0 kilometres of grid preparation, geological mapping and soil geochemical surveying (1083 samples). In 1996, Meteor Minerals Incorporated completed a program of geochemical soil sampling to test the potential of the enzyme leach technique in tracing mineralized zones in areas of extensive overburden (Assessment Report 24883). In 1997, Meteor completed a three-hole (393 metres) diamond drill program on the Golden Loon High Grade Zone (092P 141). In 1999, Tilava Mining Corporation completed a program of lithochemical sampling (150 samples) on ultramafic rocks on the property and detected significant platinum values (Assessment Report 26100). In 2000, the property was optioned by Case Gold Mines Limited (George Cross News Letters #191, #216, 2000) and VLF-EM, magnetometer, induced polarization and soil geochemical (119 samples) surveys completed.

BIBLIOGRAPHY

EMPR FIELDWORK *2000, pp. 20-22
EMPR ASS RPT 1051, 2418, 4689, 14237, 14920, 15870, 15937, *17342,
18802, 20029, 21109, 21014, 22818, 24315, 24883, 25431, 26100
GSC MEM 363
GSC MAP 1278A
GCNL #234(Dec.7), 1999; #154(Aug.11), #191(Oct.5), #216(Nov.10), 2000

DATE CODED: 2001/02/23
DATE REVISED: 2001/02/23

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 077**

NATIONAL MINERAL INVENTORY:

NAME(S): **WATSON LAKE**, EXETER, WHITE EMPRESS,
108 MILE HOUSE

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P11W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 42 15 N
LONGITUDE: 121 21 06 W
ELEVATION: 885 Metres

NORTHING: 5729422
EASTING: 613900

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Hydromagnesite

MINERALS

SIGNIFICANT: Hydromagnesite
ASSOCIATED: Calcite Clay
MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Miocene	Chilcotin	Undefined Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Hydromagnesite
Unconsolidated Sediment/Sedimentary
Alkalic Basaltic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Watson Lake hydromagnesite deposits are located about 500 metres southwest of Watson Lake and about 1.5 metres above the lake level. Watson Lake is a small lake covering about 1.2 hectares about 1.5 kilometres west of 105 Mile House on Highway 97.

Physiographically, it is in the Cariboo Plateau, a semi-arid plateau area averaging 1130 metres elevation which is host to several playa lakes. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

Several deposits of hydromagnesite, some associated with impure hydromagnesite are located in a swampy depression to the southwest of Watson Lake.

The larger area, to the west, is about 200 by 60 metres along a northeast trend. It has a variable depth, to an underlying dark grey mud, up to about 2.16 metres. The hydromagnesite has a white surficial layer which varies between 50 and 100 centimetres in thickness with an average of about 58 centimetres. Underlying the upper layer is a cream to brown hydromagnesite in the order of 1.5 metres thick but with a higher calcium content. Sample No. 1 (Reinecke, 1920) is of 66 centimetres of white hydromagnesite and part of the layer of cream colored hydromagnesite.

The second significant area is about 180 metres southeast of the first. The white surface layer of hydromagnesite is about one metre thick with fairly pure material to depths of 0.9 to 1.5 metres. Sample No. 2 is of white hydromagnesite collected from 0 to 92 centimetres from surface.

Sample No. 3 (Cummings, 1940) is a composite sample of white hydromagnesite collected from seven drill holes representing all deposits in the Watson Lake occurrence. Sample No. 4 (Reinecke, 1920) was collected from a small isolated patch of hydromagnesite located about 1.5 kilometres northeast of the

CAPSULE GEOLOGY

main occurrence. It is estimated that, in total, the Watson Lake deposits cover approximately two hectares and contain slightly more than 20,000 tonnes of hydromagnesite.

	MgO	CaO	CO2	SiO2	Al2O3	Fe2O3	H2O (+105)	H2O (-105)
1	41.06	1.62	38.04	6.36	0.20	0.12	11.25	1.32
2	43.17	1.14	43.64	4.62	0.16	0.16	5.26	1.42
3	39.40	2.10	50.5	5.70	-	1.30	-	-
4	36.70	1.54	31.08	8.62	0.33	0.57	14.86	2.21

BIBLIOGRAPHY

EMPR BULL *4, pp. 108-110
GSC MEM 118, pp. 29,31,46-48; 363
GSC MAP 1278A
EMPR AR 1918-K243; 1921-194; 1922-N155
EMPR OF 1987-13

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/20

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 078**

NATIONAL MINERAL INVENTORY:

NAME(S): **61 MILE CREEK**

MINING DIVISION: Clinton

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 092P05E
 BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 16 55 N
 LONGITUDE: 121 31 54 W
 ELEVATION: 1080 Metres

NORTHING: 5682203
 EASTING: 602404

LOCATION ACCURACY: Within 500M

COMMENTS: Location from EMPR Bulletin 4, page 112.

COMMODITIES: Hydromagnesite

MINERALS

SIGNIFICANT: Hydromagnesite
 COMMENTS: Hydromagnesite.
 ASSOCIATED: Calcite Clay
 MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Stratiform
 CLASSIFICATION: Evaporite Industrial Min.
 TYPE: F09 Playa and Alkaline Lake Evaporites

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Quaternary	Unnamed/Unknown Group	Unnamed/Unknown Formation	
Miocene	Chilcotin	Unnamed/Unknown Formation	
Unknown			Unnamed/Unknown Informal

LITHOLOGY: Hydromagnesite
 Unconsolidated Sediment/Sedimentary
 Alkali Basaltic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
 TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The 61 Mile Creek hydromagnesite deposits are located within a swampy area at the headwaters of 61 Mile Creek and about three kilometres east of Goose Lake and 1.6 kilometres northwest of the head of 61 Mile creek.

The general region contains numerous semi-evaporitic playa lakes that have been termed the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

Several hydromagnesite deposits are present in the area adjacent to a small swampy lake in a depression between low hills.

White hydromagnesite with what is described as a typical cauliflower-like surface texture covers about 1.1 hectares. The material has been pitted to a depth of 30 centimetres but no data is available to indicate total thickness of the hydromagnesite nor of the character of the underlying material.

Analysis of Three Surface samples:							
	MgO	CaO	Fe+Al	SiO2	H2O	CO2	H2O+CO2
1	38.00	1.6	1.7	9.80	16.0	32.9	-
2	34.4	1.76	0.69	11.60	-	-	48.16
3	32.75	3.32	0.67	12.40	-	-	47.74

BIBLIOGRAPHY

EMPR BULL *4, pp. 103, 113-114, 125
 EMPR OF 1987-13
 GSC MEM 363

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1128
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 1986/10/20

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 079**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLINTON TUFA**

STATUS: Past Producer Open Pit

MINING DIVISION: Clinton

REGIONS: British Columbia

NTS MAP: 092P04E

BC MAP:

LATITUDE: 51 04 29 N

LONGITUDE: 121 38 12 W

ELEVATION: 969 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5659018

EASTING: 595509

LOCATION ACCURACY: Within 500M

COMMENTS: Northern quarry (Industrial Mineral File - McCammon, J.W., 1958).

COMMODITIES: Travertine

Limestone

MINERALS

SIGNIFICANT: Calcite

ASSOCIATED: Silica

COMMENTS: As chert nodules.

MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Stratiform

Massive

CLASSIFICATION: Sedimentary

Industrial Min.

TYPE: H01 Travertine

SHAPE: Tabular

DIMENSION: 260 x 150 x 8 Metres

STRIKE/DIP:

TREND/PLUNGE:

COMMENTS: Deposit consists of a flat lying tufa mound.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Quaternary

Undefined Group

Undefined Formation

Permian

Cache Creek

Marble Canyon

DATING METHOD: Fossil

MATERIAL DATED: Fusulinids

LITHOLOGY: Limestone

Tufa

Chert

HOSTROCK COMMENTS: The Marble Canyon Formation is Middle to Upper Permian in age. The Cache Creek Group is Carboniferous to Triassic in age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Pavilion Ranges

INVENTORY

ORE ZONE: OUTCROP

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1958

SAMPLE TYPE: Chip

COMMODITY

GRADE

Limestone

54.3500 Per cent

COMMENTS: Sample taken across 122 metres. Grade given for CaO.

REFERENCE: Minister of Mines Annual Report 1958, page 92, Sample 2.

ORE ZONE: CLINTON TUFA

REPORT ON: Y

CATEGORY: Inferred

YEAR: 1960

QUANTITY: 726000 Tonnes

COMMODITY

GRADE

Travertine

99.0000 Per cent

COMMENTS: Estimated tufa reserves. Grade given for calcium carbonate.

REFERENCE: Property File - N.P. Lea & Associates, 1962, pages 3-7.

CAPSULE GEOLOGY

The Clinton tufa or travertine deposit is exposed along a railway cut for 180 metres, 4 kilometres southwest of Clinton. It constitutes a mound of tufa, up to 260 metres long, 150 metres wide and at least 7.6 metres thick.

The deposit consists mostly of pale buff to white, roughly bedded, porous tufa that becomes dense (massive) in a few places. Twigs, branches and lenses of mud and sand are incorporated in the tufa along the margins of the mound. Two chip samples, taken in

CAPSULE GEOLOGY

succession over a total width of 7.6 metres in the centre of the railway cut, averaged 54.66 per cent CaO, 0.69 per cent MgO, 0.50 per cent SiO₂, 0.18 per cent Al₂O₃, 0.08 per cent Fe₂O₃ and 0.055 per cent sulphur (CANMET Report 811, p. 225, Samples 107A, 107B). The deposit is estimated to contain 726,000 tonnes of tufa grading 99 per cent calcium carbonate (Property File - N.D. Lea & Associates Ltd., 1962, page 3-7). A second calculation places reserves at 300,000 tonnes (Assessment Report 8051, page 11).

A small amount, 1460 tonnes, of tufa was produced from two small quarries near the south end of the deposit by Clinton Lime Holdings between 1948 and 1953.

Northwest of the tufa quarries, 300 metres, light to dark grey, very fine-grained limestone, of the Middle to Upper Permian Marble Canyon Formation (Carboniferous to Jurassic Cache Creek Group), outcrops along a series of bluffs. The limestone is contaminated with small chert nodules. A chip sample taken across 122 metres of limestone contained 54.35 per cent CaO, 1.15 per cent MgO, 0.34 per cent insolubles, 0.08 per cent R₂O₃, 0.03 per cent Fe₂O₃, 0.025 per cent MnO, 0.022 per cent P₂O₅, trace of sulphur and 44.02 per cent ignition loss (Minister of Mines Annual Report 1958, page 92, Sample 2).

This limestone was quarried and burnt in an adjacent kiln to produce lime sometime previous to 1944 but no production figures are available.

BIBLIOGRAPHY

- EMPR AR 1947-218; 1948-188,189; 1949-256; 1953-191; *1958-90,92,93
- EMPR ASS RPT 8051
- EMPR BULL 44, pp. 13-19
- EMPR EXPL 1995 - 133
- EMPR PF (*N.D. Lea and Associates Ltd. (1962): Imperial Metals and Power Ltd., Lodestone (Iron Project, Princeton, British Columbia (see 092HSE034); Map by McCammon, J.W. 1958; Lindley, A.M. (1962): Imperial metals and Power Ltd. - Lodestone Iron and Steel Project (see 092HSE034))
- GSC MAP 3-1966; 1278A
- GSC MEM 363, pp. 25-29,92
- GSC P 66-1, pp. 94,98-100; 79-17, pp. 3-7
- CANMET RPT *811, Part 5, pp. 223-225
- GCNL #220, 1969

DATE CODED: 1985/07/24
DATE REVISED: 1989/08/09

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 080**

NATIONAL MINERAL INVENTORY:

NAME(S): **KELLY LAKE PLAYA**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P04W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 00 32 N
LONGITUDE: 121 46 32 W
ELEVATION: 1065 Metres

NORTHING: 5651527
EASTING: 585901

LOCATION ACCURACY: Within 500M
COMMENTS: Northeast edge of Kelly Lake.

COMMODITIES: Gypsum Hydromagnesite

MINERALS

SIGNIFICANT: Gypsum Hydromagnesite
ASSOCIATED: Calcite
MINERALIZATION AGE: Quaternary

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Evaporite Sedimentary Industrial Min.
TYPE: F02 Bedded gypsum
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Quaternary	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Calcareous Sediment/Sedimentary
Gypsum

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Pavilion Ranges

CAPSULE GEOLOGY

Kelly Lake is 13 kilometres southwest of Clinton in a valley in the Pavillion Ranges, west of the Interior Plateau. The lake is a semi-evaporitic playa lake located in the dry valley along the Lillooet-Clinton road. Bedrock is chert, argillite and siltstone with minor tuff and limestone (GSC Map 1278A) of the Permian to Triassic Cache Creek Group. Bedded deposits of calcite admixed with some gypsum and hydrous magnesium carbonate, are present in the shallow parts of Kelly Lake where they lie in a few centimetres of water (GSC Memoir 118, page 28). Samples taken from the northeast shore of the lake and from the mudflat west of the lake contained respectively: 83.5 per cent and 66.1 per cent calcite, 0.5 per cent and 0.5 per cent gypsum and anhydrite and 0.9 per cent and 1.9 per cent magnesium carbonate and hydroxide (GSC Memoir 118, page 32).

BIBLIOGRAPHY

EMPR AR 1913-275, 1921-195, 1922-154,195, 1923-169, 1929-231
EMPR ASS RPT 8051
GSC MIN BR RPT NO 714-70
GSC MEM *118-28,32,39; 363
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/21

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 081**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOUIS CREEK**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P01E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 08 52 N
LONGITUDE: 120 07 02 W
ELEVATION: 378 Metres

NORTHING: 5670210
EASTING: 701622

LOCATION ACCURACY: Within 5 KM

COMMENTS: Area of gypsite deposit on the east side of the North Thompson River near Louis Creek (Minister of Mines Annual Report 1922).

COMMODITIES: Gypsum

MINERALS

SIGNIFICANT: Gypsite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Evaporite Industrial Min.
TYPE: F02 Bedded gypsum

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic

GROUP

Harper Ranch

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Sediment/Sedimentary
Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Harper Ranch

Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

Minister of Mines Annual Report 1922 states that a gypsite deposit occurs on the east side of the North Thompson River near Louis Creek and practically adjoins the Canadian National Railway. The area of the deposit is not very large and the average depth of the pure material is only about 0.9 to 1.2 metres. A typical sample of the gypsite analysed: 89.7 per cent gypsum (CaSO₄ + 2H₂O), 0.9 per cent insoluble, 0.2 per cent organic matter, 9.1 per cent carbonate of lime and trace magnesia (Minister of Mines Annual Report 1922).

The area appears to be underlain by volcanic and sedimentary rocks of the Paleozoic Harper Ranch Group.

BIBLIOGRAPHY

EMPR AR *1922-N153,N154
GSC MAP 1278A
CANMET RPT 714, p. 70

DATE CODED: 1985/07/24
DATE REVISED: 2001/04/02

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 082**

NATIONAL MINERAL INVENTORY:

NAME(S): **BONAPARTE RIVER**, MOUND RANCH, JO,
VENUS, WINNIFRED, WHITE ROCK

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P03W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 07 46 N
LONGITUDE: 121 28 28 W
ELEVATION: 780 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5665326
EASTING: 606747

LOCATION ACCURACY: Within 500M

COMMENTS: Magnesite occurrence on the west slope of the Bonaparte River between Clinton and Fiftyseven creeks, about 9 kilometres northeast of Clinton (Open File 1987-13). See Also MINFILE 092P090 (Mika).

COMMODITIES: Magnesite Chromium Asbestos

MINERALS

SIGNIFICANT: Magnesite Chromite Asbestos
ASSOCIATED: Pyroxene Olivine
ALTERATION: Magnesite Ankerite Calcite
ALTERATION TYPE: Serpentin'zn Carbonate Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound Disseminated Podiform
CLASSIFICATION: Residual Magmatic Industrial Min.
TYPE: M07 Ultramafic-hosted talc-magnesite M03 Podiform chromite
 M06 Ultramafic-hosted asbestos
DIMENSION: 2500 x 600 Metres STRIKE/DIP: TREND/PLUNGE:
COMMENTS: Zone containing best developed magnesite.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Permian-Triassic Cache Creek Undefined Formation Mika Ultramafic Intrusion
Permian-Triassic

LITHOLOGY: Peridotite
Dunite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Cariboo Plateau
TERRANE: Cache Creek

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1931
SAMPLE TYPE: Grab
COMMODITY GRADE Per cent
Magnesite 97.8000
COMMENTS: From surface exposure.
REFERENCE: Geological Survey of Canada Summary Report 1932, pages 72-73.

ORE ZONE: SHAFT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1980
SAMPLE TYPE: Grab
COMMODITY GRADE Per cent
Chromium 38.7300
COMMENTS: Sample from 6 centimetres thick "vein" from the collar of the old shaft. Chromium assay as Cr2O3, Cr:Fe ratio 2.41.
REFERENCE: Assessment Report 8111.

CAPSULE GEOLOGY

The Bonaparte River magnesite prospect is located on the Mond Ranch, on the west slope of the Bonaparte River valley, nine kilometres northeast of Clinton between Clinton and Fiftyseven creeks.
Bedrock in the area is mainly basic volcanic flows, tuff, ribbon chert, limestone and argillite of the Permian to Triassic Cache Creek Group intruded by the Permian to Triassic Mika

CAPSULE GEOLOGY

Ultramafic intrusion, composed of altered dunite and peridotite. The older rocks are unconformably overlain by nonmarine sediments (shale, sandstone, tuff, diatomite, conglomerate and breccias) of the Miocene Deadman River Formation, which is in turn overlain by plateau basaltic flows of the Miocene to Pleistocene Chilcotin Group.

Magnesite occurs as a surface alteration zone, 1 to 1.5 metres thick, associated with the Permian to Triassic Mika Ultramafic Intrusion. Dunites and peridotites form a sill-like intrusive, trending 340 degrees, within the Lower Permian metavolcanics and metasediments of the Cache Creek Group. The ultramafic rocks are generally altered to serpentine, and locally to talc. Magnesium carbonate is best developed in a broad, northwest trending zone about 600 metres wide by 2500 metres, along the northeast margin of the intrusive where it has a change of slope. Although the main showing is to the west of the river, ultramafics with magnesite have also been identified (along strike?) east of the Bonaparte River.

The ultramafics are zoned dunites and peridotites which are highly serpentized and in places completely steatized. They are medium-grained, light to dark green on fresh surfaces and weather to a green or reddish green. Magnesium carbonate alteration occurs preferentially in the dunites but there is a gradation from serpentinization and steatization, with remnant pyroxene and olivine, to a compact, cryptocrystalline, bone-white magnesite with no cleavage and conchoidal fracture. In the early alteration stages, brown ankeritic carbonates, possibly hydrous iron oxides, grains of magnetite, small veinlets of asbestos and black streaks of what may be manganese, are common. Further alteration results in the appearance of small grains and masses of magnesite within the serpentized zones with associated ankeritic carbonates. In the most advanced alteration, usually near surface, magnesite replaces all serpentine and ankeritic carbonate and small, relatively pure veinlets of magnesite crosscut the alteration and parts of the less altered ultramafics.

Analysis of the Bonaparte River occurrence indicate 97.8 per cent $MgCO_3$, 1.8 per cent $CaCO_3$ and 0.4 per cent Fe_2O_3 with no alumina and only traces of insolubles. This sample was apparently collected from a surface exposure (Geological Survey of Canada Summary Report 1932).

In addition to magnesite, the same ultramafics are known to carry chromite as grains, small pods and veinlets within the dunitic units as well as locally within the magnesite. An area of about 150 by 450 metres immediately west of the magnesite showing, is host to variable amounts of chromite. Assessment Report 8111 states that the ultramafite contains seven known chromite occurrences along three bands with an apparent total strike length of 500 metres. All chromite is within a dunitic section of the ultramafite, with assayed grades of chromite ranging from 32% to 42.4% chrome oxide (Cr_2O_3).

In addition to the magnesite and chromite, "harsh" asbestos veinlets, less than 1.6 millimetres wide are abundant throughout the serpentine (EMPR Open File 1995, page 25).

The earliest known work on the property was minor trenching and underground testing of chromite occurrences by Mr. W.N.D. McKay on the Winnifred claims in 1932 (Assessment Report 8111). In 1932, the property was staked and optioned to Western Asbestos but no work was completed. In 1957, new claims were staked and optioned to New Jersey Zinc Exploratin Company Limited, who completed a program of geological mapping, magnetometer surveying and bulldozer trenching to test the asbestos potential of the property in 1957 and 1958. Kaiser Resources is reputed to have drilled a hole to test for magnesite, probably in the early 1960's, however there is no public record of this work. The property was subsequently staked as the Jo claims, again as an asbestos prospect and prospected, geologically mapped and a dip-needle magnetic survey completed in 1968 (Assessment Report 1146) by Riviera Mines Limited. The Mika claims were staked in 1979 and optioned to CCH Resources Limited (later Campbell Resources Limited) and prospected for chromite. They completed a program of geological mapping, geochemical surveying (194 soil samples, 18 rock chip samples and 12 "ore" samples - Assessment Report 8111) in 1979 and an additional 419 soil samples in 1980 (Assessment Report 8677).

BIBLIOGRAPHY

EMPR ASS RPT 197, 1146, *8111, 8677, 14977
EMPR AR 1941-78; 1960-130; 1932-154
EMPR PF (Correspondence 1932, 1941)

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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ENERGY AND MINERALS DIVISION

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REPORT: RGEN0100

BIBLIOGRAPHY

EMPR OF *1987-13; 1995-25
GSC SUM RPT 1932, Part A, pp. 72-73
GSC MAP 1278A
GSC MEM 363, p. 91

DATE CODED: 1985/07/24
DATE REVISED: 1986/10/15

CODED BY: GSB
REVISED BY: BG

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 083**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLINTON MANGANESE #1**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P04E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 08 54 N
LONGITUDE: 121 42 22 W
ELEVATION: 1650 Metres

NORTHING: 5667116
EASTING: 590500

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location from GSC Memoir 118, page 95 describing a manganese claim 10 miles northwest of Clinton on one of the foothills to the Marble Range mountains, about 2 miles north of Clinton Creek.

COMMODITIES: Manganese

MINERALS

SIGNIFICANT: Manganite Pyrolusite Psilomelane

MINERALIZATION AGE: Permian-Triassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Syngenetic Industrial Min.
TYPE: G02 Volcanogenic Mn

F01 Sedimentary Mn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Permian-Triassic

GROUP

Cache Creek

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Argillite
Quartzite
Chert
Limestone
Basaltic Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Pavilion Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1920

SAMPLE TYPE: Chip

COMMODITY

GRADE

Manganese

7.5700

Per cent

COMMENTS: Chip sample across 5.8 metres.

REFERENCE: GSC Memoir 118, page 95.

CAPSULE GEOLOGY

The Clinton Manganese #1 occurrence is located approximately 30 metres below one of the foothills to the Marble Range mountains. It is 3 kilometres north of Clinton Creek and about 16 kilometres northwest of Clinton.

The area is underlain by argillite, chert, basaltic flows, tuff, and limestone of the Permian to Triassic Cache Creek Complex.

GSC Memoir 118 (page 95) describes the "ores" as being exposed in an open cut 11.6 metres long, 1.2 metres wide and 2 metres deep, situated on a hill, some 30 metres below the summit. The "ore" occurs in a 6 metre thick layer consisting of "bulish-grey dense quartzite cut by quartz stringers and impregnated in an irregular manner with black manganese". Hostrocks are argillites and quartzites (chert ?) of the Cache Creek Complex. Bedding strikes at 305 degrees, dipping 40 to 70 degrees southwest. Psilomelane, manganite and pyrolusite were observed as "nodules and irregular masses of black ore". A 5.8 metre sample (GSC Memoir 118) assayed 7.57 per cent Mn, 82.57 per cent SiO₂.

The showing was trenched and sampled some time early in the last century, probably during the first world war. It was staked in 1984 as a potential indicator of epithermal gold-silver

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CAPSULE GEOLOGY

mineralisation and a soil geochemical survey (123 samples analysed for gold and silver) was undertaken.

BIBLIOGRAPHY

EMPR AR 1898-1099
EMPR ASS RPT 14690
GSC MEM *118-95, 363
GSC MAP 1278A
Manganese Occurrences IN B.C., H. Sargent, Unpublished Paper
given in Mexico, 1956

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 084**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLINTON NICKEL**, BELL

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P04E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 01 50 N
LONGITUDE: 121 33 27 W
ELEVATION: 1070 Metres

NORTHING: 5654213
EASTING: 601151

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location from GSC Memoir 118, page 96.

COMMODITIES: Nickel Chromium

MINERALS

SIGNIFICANT: Garnierite
ASSOCIATED: Quartz
MINERALIZATION AGE: Permian-Triassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Metamorphic Industrial Min.
TYPE: F01 Sedimentary Mn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE: Permian-Triassic GROUP: Cache Creek FORMATION: Undefined Formation IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Calcareous Quartz Rock
Chert
Argillite
Basic Volcanic Flow
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Pavilion Ranges

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1920
SAMPLE TYPE: Chip
COMMODITY: Chromium GRADE: 0.1700 Per cent
Nickel 0.1100 Per cent

COMMENTS: Chromium assayed as Cr2O3.
Chip sample taken across the 8 metre outcrop.
REFERENCE: GSC Memoir 110.

CAPSULE GEOLOGY

The Clinton Nickel occurrence is located approximately 7 kilometres southwest of Clinton. It is approximately 1 kilometre west of the Ashcroft road, and 150 metres (500 feet) above it.
GSC Map 1278A (Memoir 363) shows the area to be underlain by basic volcanic flows, tuff, ribbon chert, limestone and argillite of the Permian to Triassic Cache Creek Complex. Marble Canyon Formation (also part of the Permo-Triassic Cache Creek Complex) limestone, limestone breccia and chert with minor argillite, tuff, andesitic and basaltic flows outcrops west of the area. Cache Creek rocks are unconformably overlain by Cretaceous conglomerate and coarse clastic sedimentary rocks of the Miocene to Pleistocene Chilcotin Group.
GSC Memoir 110 (page 96) states that "an outcrop of calcareous quartz rock carries the green, nickeliferous silicate, garnierite". The outcrop is 8 metres by 3 metres and could be an "immense boulder". A chip sample assayed 0.11% nickel and 0.17% chromium oxide.

BIBLIOGRAPHY

EMPR ASS RPT 4027, 20310, 21977
EMPR UNPUB. CR BULL, J.S. STEVENSON, 1941

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

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REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 363, *110-96
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 085**

NATIONAL MINERAL INVENTORY:

NAME(S): **HAMILTON CREEK, DET**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:
LATITUDE: 51 10 22 N
LONGITUDE: 120 55 02 W
ELEVATION: 1000 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

NORTHING: 5671101
EASTING: 645597

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Carbonate
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: H05 Epithermal Au-Ag: low sulphidation I01 Au-quartz veins
SHAPE: Tabular
DIMENSION: Metres STRIKE/DIP: 280/63N TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Nicola	Undefined Formation	Thuya Batholith
Triassic-Jurassic			

LITHOLOGY: Augite Andesite
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Cariboo Plateau
TERRANE: Quesnel

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1936
SAMPLE TYPE: Chip
COMMODITY GRADE
Silver 130.0000 Grams per tonne
Gold 49.0000 Grams per tonne
COMMENTS: Chip sample of a 2 to 9 centimetre vein over a length of 6 metres.
REFERENCE: Special Report 17, 1936.

CAPSULE GEOLOGY

The Hamilton Creek gold mine is located at the north end of Vidette Lake, north of the Vidette mine (092P 086) on the west side of Hamilton Creek valley. The area is approximately 50 (air) kilometres north of Savona and is accessible on a good-quality gravel road which leads north from the Trans-Canada Highway approximately 7.4 kilometres west of Savona.

The Vidette Lake area is underlain by mafic volcanic rocks of Upper Triassic Nicola Group exposed in a window eroded through flat-lying Miocene sedimentary rocks and plateau basalts of the Chilcotin Group. The uppermost Chilcotin Group strata comprise an extensive layer of plateau basalts of the Chasm Formation, underlain by volcanic ash and fluvial and lacustrine sedimentary strata of the Deadman River Formation which occupy a northwest-trending Miocene channel. The Nicola rocks are intruded by biotite-hornblende granodiorite plugs which are possibly related to the Triassic to Jurassic Thuya batholith. Nicola rocks are generally augite andesites commonly altered to chlorite-rich or calcareous greenstones, however contact metamorphism has developed garnet-diopside-actinolite skarn or tactite adjacent to the intrusive rocks.

The Hamilton Creek mine is located 900 metres northwest of the

CAPSULE GEOLOGY

Vidette mine and along strike from the Tenford vein (092P 086). One or more northwest striking, east-dipping veins have been documented (Geological Survey of Canada Memoir 179). The veins are composed mainly of quartz and carbonate with minor pyrite rarely reach 30 centimetres in thickness. A sample taken along a 6 metre length of vein which ranged from 2 to 9 centimetres in thickness assayed 49 grams per tonne gold and 130 grams per tonne silver (Minister of Mines Special Report 17, 1936).

The first record of work was in the 1930s (Geological Survey of Canada Memoir 179; Minister of Mines Special Report 17, 1936) when the property was explored by several pits, three short adits and diamond drilling. In 1983, some of the underground workings were rehabilitated and washed, and nine samples taken in an underground sampling program (Assessment Report 12670). The highest assay was 0.9 gram per tonne gold and 3.1 grams per tonne silver in a quartz vein. A soil geochemical program (38 samples) was also undertaken (Assessment Report 12670).

BIBLIOGRAPHY

EMPR AR 1934-F22; 1935-F57; *1936-F41; 1940-60
EMPR ASS RPT 4257, 12670
EMPR GEM 1973-270
EMPR Special Report *17, 1936
EMPR PF (Claim and location maps; 092P General File - Unpub. report
by Campbell, pp. 150,151)
GSC MAP 1278A; 1966-3
GSC MEM 179, pp. 34,363

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/14

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

CAPSULE GEOLOGY

rocks.

The Vidette mine features several narrow north-northwest striking quartz veins which dip between 45 and 70 degrees northeast (Geological Survey of Canada Memoir 179). The veins average slightly less than 30 centimetres in width, however, where they were economic they averaged 38 centimetres in width. Mineralization consists of quartz and pyrite, with some chalcopyrite and rarely tellurides. The veins are commonly ribboned with graphite seams. Wallrocks are heavily altered to ankeritic carbonate and pyrite. Five vein systems have been developed at the mine: the Tenford, Bluff, Broken Ridge, 70 and Dexheimer. The strongest, the Tenford, was followed for 275 metres on the first level and made ore over a length of 150 metres (Assessment Report 11731).

The veins were known to prospectors as early as 1898. However, active development did not take place until 1931, and following 335 metres of underground exploration and development, the mine was put into production in 1933. Between 1933 and May 1939, underground development and exploration included 199 metres of three compartment inclined shaft, 289 metres of winzes, 4984 metres of drifts and crosscuts and 1478 metres of raises (Assessment Report 11731). The mine milled a total of 48,980 tonnes of ore, recovering 1449 kilograms of silver, 929 kilograms of gold, 43,825 kilograms of copper and 161 kilograms of lead. The Dexheimer vein, located at the southwest side of the lake, was originally explored by two short adits. During 1939-40, a tunnel was driven under the lake from the main workings and a small amount of drifting and raising done on the zone. In 1983, Consolidated Paymaster Resources Limited completed three NQ diamond-drill holes totalling 1017 metres (Assessment Report 11731). In 1984, Tugold Resources Incorporated (Assessment Report 13453) completed a program of geophysical surveying (magnetometer and VLF-EM), soil geochemical surveying (203 samples) and geological evaluation. In 1995, Discovery Consultants (Assessment Report 24060) completed a program of soil geochemical surveying (35 samples), heavy mineral stream sediment analyses (3 samples) and litho geochemistry (11 samples).

Probable reserves remaining in the old workings in the Bluff and Dexheimer veins were estimated to total 10,160 tonnes grading 19.1 grams per tonne gold and 29.8 grams per tonne silver (Assessment Report 13453). Production between 1933 and 1940 totalled 49,980 tonnes, from which 1449 kilograms of silver, 929 kilograms of gold and 43.8 tonnes of copper were recovered.

BIBLIOGRAPHY

- EMPR AR 1931-114; 1932-148; 1933-181; 1934-F20; *1936-F36-F41; 1937-F35; 1938-F67; 1939-74; 1940-60
EMPR BULL 20, part IV, p. 38
EMPR ASS RPT 4257, 7164, 10103, 10240, *11731, 12670, *13453, 15536, 18641, 24060
EMPR PF (Underground mine plans, geological maps, photographs; Prospectus, Booker Gold Explorations Limited, 1987; Claim location map; see Adelphi, 082LSW052 - Prospectus, Keda Resources Limited, 1977; 092P General File - Unpub. report by Campbell, pp. 150,151)
EMPR EXPL 1979-197; 1983-358; 1984-255
EMPR METAL MM00264
EMPR MINE FICHE #61749-#61751 (Plans and section of 3 level, composite surface and underground plans)
GSC MEM *179, pp. 26-34; 363, p. 87
GSC MAP 1966-3; 2390; 1278A
GSC ECON GEOL 15, p. 19
EMR MP CORPFILE (Vidette Gold Mines, Limited; Glen Copper Mines Limited; Hobo Creek Coppermines Ltd.; Tugold Resources Inc.)
EMR MIN BILL MR 223 B.C. 196
CANMET IR 728 (1931), pp. 103-107; 744 (1933), pp. 145-148
GCNL #48, 1981; #136, #148, #153, 1983; #20, 1986
MIN REV MAG Vol.3 No.5 Sept/Oct, 1983
The Miner June 1934, pp. 237, 238 (The Vidette Mine and Mill); Dec. 1937, pp. 24-27 (Milling at the Vidette Mine)
NW PROSP Winter 1985, p. 10

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/13

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 087**

NATIONAL MINERAL INVENTORY: 092P2 Au1

NAME(S): **SAVONA GOLD**, LAST CHANCE, VID

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

Underground

MINING DIVISION: Clinton

LATITUDE: 51 10 25 N
LONGITUDE: 120 54 46 W
ELEVATION: 1000 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5671202
EASTING: 645905

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Last Chance claim.

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Galena
ASSOCIATED: Quartz Pyrite Carbonate
ALTERATION: Carbonate
ALTERATION TYPE: Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic Epithermal
TYPE: H05 Epithermal Au-Ag: low sulphidation I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Augite Andesite
Greenstone
Feldspar Porphyry Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1983

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

2.1000

Grams per tonne

Gold

0.9000

Grams per tonne

REFERENCE: Assessment Report 12670.

CAPSULE GEOLOGY

The Savona gold mine is located at the north end of Vidette Lake, north of the Vidette mine (092P 086) in Hamilton Creek valley. The area is approximately 50 (air) kilometres north of Savona and is accessible on a good-quality gravel road which leads north from the Trans-Canada Highway approximately 7.4 kilometres west of Savona.

The Vidette Lake area is underlain by mafic volcanic rocks of the Upper Triassic Nicola Group exposed in a window eroded through flat-lying Miocene sedimentary rocks and plateau basalts of the Chilcotin Group. The uppermost Chilcotin Group strata comprise an extensive layer of plateau basalts of the Chasm Formation, underlain by volcanic ash and fluvial and lacustrine sedimentary strata of the Deadman River Formation which occupy a northwest trending Miocene channel. The Nicola rocks are intruded by biotite-hornblende granodiorite plugs which are possibly related to the Triassic to Jurassic Thuya batholith. Nicola rocks are generally augite andesites commonly altered to chlorite-rich or calcareous greenstones, however, contact metamorphism has developed garnet-diopside-actinolite skarn or tectite adjacent to the intrusive rocks. Feldspar porphyry dikes are common at the Savona mine.

The Savona mine is located 800 metres north of the Vidette mine and along the same general trend. Three northwest striking, east-dipping veins (Sylvanite, Jarvi and Argentite) have been documented (Geological Survey of Canada Memoir 179). The veins are composed mainly of quartz and carbonate with minor pyrite and galena

CAPSULE GEOLOGY

and rarely reach 60 centimetres in thickness.
The first record of work was in the 1930s when the property was explored by several pits, short adits and diamond drilling. In 1983, some of the underground workings were rehabilitated and washed, and nine samples taken in an underground sampling program (Assessment Report 12670). The highest assay was 0.9 gram per tonne gold and 2.1 grams per tonne silver in a calcite vein. A soil geochemical program (38 samples) was also undertaken (Assessment Report 12670).

BIBLIOGRAPHY

EMPR AR 1933-182; 1934-F21; *1936-F36,F41; 1940-60
EMPR ASS RPT 4257, 8955, 10103, 11731, *12670, 15536, 18641
EMPR BULL 20, Part IV, p. 39
EMPR GEM 1973
EMPR PF (Workings plan, 1936; Savona Gold Mines Ltd. Prospectus;
092P General File - Unpub. report by Campbell, pp. 150,151)
GSC MEM *179, p. 34; 363
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/13

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 088**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHELLEY**, MISSING LINK, COVER

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

Underground

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 09 40 N
LONGITUDE: 120 53 11 W
ELEVATION: 1000 Metres

NORTHING: 5669865
EASTING: 647790

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the Cover claim (GSC Memoir 179).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Augite Porphyry
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Shelley group of claims, which included the Cover and Missing Link claims, were located on the east side of Vidette Lake, southeast of the Vidette mine (092P 086). They have all lapsed. The area is approximately 50 (air) kilometres north of Savona and is accessible on a good-quality gravel road which leads north from the Trans-Canada Highway about 7.4 kilometres west of Savona.

The Vidette Lake area is underlain by mafic volcanic rocks of the Upper Triassic Nicola Group exposed in a window eroded through flat lying Miocene sedimentary rocks and plateau basalts of the Chilcotin Group. The uppermost Chilcotin Group strata comprise an extensive layer of plateau basalts of the Chasm Formation, underlain by volcanic ash and fluviatile and lacustrine sedimentary strata of the Deadman River Formation which occupy a northwest trending Miocene channel. The Nicola rocks are intruded by biotite-hornblende granodiorite plugs which are possibly related to the Triassic to Jurassic Thuya batholith. Nicola rocks are generally augite andesites commonly altered to chlorite-rich or calcareous greenstones, however, contact metamorphism has developed garnet-diopside-actinolite skarn or tectite adjacent to the intrusive rocks.

The Shelley claims are located 1500 metres southeast of the Vidette mine (092P 086). Geological Survey of Canada Memoir 179 describes two "shear zones" carrying abundant disseminated pyrite in greenstone and approximately 3 metres apart. Elsewhere, a short adit has been driven on narrow quartz and calcite stringers in a "shear zone" in greenstone.

The first record of work was in the 1930s when the property was explored by several pits and an adit. More recently the property has been covered by several soil geochemical and geophysical surveys (Assessment Reports 4257, 12021, 17810, 18492, 19136).

BIBLIOGRAPHY

EMPR AR 1934-F22
EMPR ASS RPT *4257, 12021, 17810, 18492, 19136
GSC MEM *179, p. 35; 363

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1147
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/14

CODED BY: GSC
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 089**

NATIONAL MINERAL INVENTORY:

NAME(S): **TELLURIC, CURTIS**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P02E
BC MAP:

Underground

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 09 31 N
LONGITUDE: 120 43 24 W
ELEVATION: 1310 Metres

NORTHING: 5669927
EASTING: 659199

LOCATION ACCURACY: Within 500M

COMMENTS: Minister of Mines Special Report 24 (1936) describes the Telluric Camp and workings as being located at the west end of Willow Lake, a small lake at an elevation of 4300 feet (1310 metres) 15 1/2 miles (25 kilometres) east by road from the Vidette mine (092P 086). Willow Lake has apparently been renamed Tuleric Lake and the location of the old shaft is well located on Drawing 6, Assessment Report 18960.

COMMODITIES: Gold Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite Tetrahedrite
ASSOCIATED: Quartz Pyrite
ALTERATION: Biotite Carbonate
ALTERATION TYPE: Biotite Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Shear
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins
SHAPE: Tabular
DIMENSION: Metres

STRIKE/DIP: 295/70E

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE: Upper Triassic
GROUP: Nicola
FORMATION: Undefined Formation
IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Amphibolite
Mafic Volcanic

HOSTROCK COMMENTS: Hostrocks are described as amphibolites (Minister of Mines Special Report 24, 1936).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

INVENTORY

ORE ZONE: DRIFT

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY: Gold
GRADE: 10.3000 Grams per tonne

YEAR: 1936

COMMENTS: Chip sample of 20 centimetre quartz vein 17 metres north of the face.
REFERENCE: Minister of Mines Special Report 24 (1936).

CAPSULE GEOLOGY

The Telluric gold-quartz vein and workings are located approximately 50 kilometres northeast of Savona, in the upper reaches of the Deadman River east of the Vidette mine. The precise location of the Telluric workings is not known, however, Minister of Mines Special Report 24 (1936) describes them as being at the west end of Willow Lake, a small lake at an elevation of 4300 feet (1310 metres), 15 1/2 miles (25 kilometres) eastward by road from the Vidette mine (092P 086). A small lake called Tuleric Lake shown on recent maps is assumed to be Willow Lake. The Vidette mine is located at the north end of Vidette Lake and is accessible on a good-quality gravel road north from the Trans-Canada Highway, 7.4 kilometres west of Savona. Special Report 24 (1936) describes the underground workings as following a quartz vein hosted by amphibolite. The workings consist of a 15-metre shaft with a 7.3 metre-crosscut and drift which follows the vein for 40 metres to the face. The vein strikes 295 degrees,

CAPSULE GEOLOGY

dipping 65 to 70 degrees northeast. The vein is 1.2 metres in width and contains small amounts of pyrite, sphalerite and tetrahedrite, with some disseminated pyrite in the walls. One 20 centimetre sample assayed 10.3 grams per tonne gold. On surface, 16 pits and trenches have traced the vein discontinuously for 160 metres. On surface, the host amphibolites are buff weathering, and biotite and carbonate alteration are evident. Hostrocks are mafic volcanic rocks of the Upper Triassic Nicola Group. The Nicola rocks are intruded by granitic rocks (quartz diorite and granodiorite) of the Triassic to Jurassic Thuya batholith (Geological Survey of Canada Memoir 363).

Work completed prior to 1936 is described in Special Report 24 (1936). The property was staked and prospected by Mr. Michael Dickens in 1987 (Assessment Report 16207). This was followed in 1989 by preparation of 2.7 kilometres of grid and a magnetic and VLF-EM survey (Assessment Report 19051).

BIBLIOGRAPHY

EMPR AR 1935-F57; 1936-F61; 1940-60
EMPR Special Report *24, 1936
EMPR ASS RPT *16207, *19051, 18247, 18960
GSC MEM 363
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/02

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 090**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIKA**, WINNIFRED, MCKAY,
MIKA 1-4, JO, MOND RANCH

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P03W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 07 42 N
LONGITUDE: 121 28 18 W
ELEVATION: 760 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5665207
EASTING: 606944

LOCATION ACCURACY: Within 500M

COMMENTS: Location of main trench and dump (Assessment Report 8111).
See also MINFILE 092P0823 (Bonaparte River).

COMMODITIES: Chromium

MINERALS

SIGNIFICANT: Chromite
ASSOCIATED: Olivine Orthopyroxene
COMMENTS: Sparse remnant grains.
ALTERATION: Serpentinite Bastite
ALTERATION TYPE: Serpentin'zn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Podiform Disseminated Stratabound
CLASSIFICATION: Magmatic Industrial Min.
TYPE: M03 Podiform chromite
SHAPE: Irregular
MODIFIER: Sheared

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic-Mesozoic	Cache Creek	Undefined Formation	Ultramafic Intrusions
Upper Paleozoic			

LITHOLOGY: Dunite
Serpentinized Ultramafic
Chert
Basalt
Argillite
Limestone
Harzburgite
Conglomerate
Flow Basalt

HOSTROCK COMMENTS: Ultramafics (serpentinized) are melange blocks and/or thrust blocks.
The Cache Creek Group is Carboniferous to Jurassic in age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Cariboo Plateau
RELATIONSHIP: Post-mineralization
GRADE: Greenschist

INVENTORY

ORE ZONE: SHAFT

REPORT ON: N

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

COMMODITY: Chromium
GRADE: 38.7300 Per cent

COMMENTS: Sample from 6 centimetre thick "vein" from the collar of the old shaft. Chromium assay as Cr2O3, Cr:Fe ratio = 2.41.

REFERENCE: Assessment Report 8111.

CAPSULE GEOLOGY

The Mika claims are located 8 kilometres northeast of Clinton on the Mond Ranch. The showings are on the west bank of the Bonaparte River, just south of its confluence with Fiftyseven Creek.

The host rock for the chromite prospect is serpentinite of the eastern facies of the Cache Creek terrane (Carboniferous to Triassic Cache Creek Complex). This consists of a Late Triassic accretionary prism/subduction complex associated with the Nicola volcanic arc. The melange contains Pennsylvanian and Early Permian limestones,

CAPSULE GEOLOGY

chert, basalt, argillite and ultramafic rocks in a matrix of Permo-Jurassic chert and argillite. Locally, Tertiary flood basalts form hill cappings. A thick mantle of till and alluvium covers the area.

A large serpentinite body with dunitic and harzburgitic zones has been mapped on the property (Assessment Report 8111). The serpentinite is massive, sheared and is locally quite friable. Late, thin chrysotile veinlets, up to 2 millimetres wide, locally web the serpentinite. Talc is locally intensely developed. Dunite and harzburgite zones have been identified but these are of nominal areal extent. Where exposed, serpentinite is in contact with metasediments and the contact trends 160 to 165 degrees with an undetermined dip. Regional mapping information indicates that serpentinite outcrops northwest and southeast of the claims. Within the area there is a conglomerate, with 1 to 20 centimetre clasts of harzburgite, dunite and serpentinite in a calcareous matrix. It has been suggested by Wilson (Assessment Report 8111, 1980) that this represents a late, covering conglomerate that remains as small relict patches.

Chromite mineralization is restricted to the dunitic phase of the serpentinite. Chromite occurs as disseminations, small pods and lenses. Stevenson (1941) identified two pods of 1.5 to 2 square metres in area. A sample of the chromitite yielded (in per cent) (Bulletin, unpublished, 1941):

Cr2O3	52.8
Al2O3	12.1
CaO	0.20
MgO	13.2
MnO	0.17
TiO2	1.44
SiO2	3.48
NiO	0.12
FeO	13.9

The old workings are mostly caved, including the adit and shaft, and little chromite is seen in outcrop. Platinum and gold geochemical surveys have provided poor results, although this may be due to the amount of cover material (Assessment Reports 8111, 8677, 14977). A sample from the collar of the old shaft, in 1979, assayed 38.73 per cent chromium (Assessment Report 8111).

Exploration on the Mika showings has been sporadic over many years. The chromite showings were staked before 1932 as the Winnifred claims and the majority of the trenches, open cuts, shafts and the adit were put in. By 1938, when J.S. Stevenson examined the showings, the claims had lapsed and no work had been done for years. In 1952, the area was staked for asbestos potential but no work was done. The area was restaked in 1957 for the New Jersey Zinc Exploration Co. Ltd. Between 1957 and 1959, a magnetometer survey and some trenches were made to evaluate asbestos potential. In 1967, the Jo claims were staked and a small amount of geological mapping was done. Then in 1979 the Mika 1-4 claims were staked and a series of geological and geochemical surveys were done to examine the chromite potential of the area. The Mika 2-4 claims were dropped after this work. In 1986, a geochemical survey for platinum and gold was run with poor results. In the same year, the Mika 1 claim was sold to Corona Corp. No work has been recorded since 1986.

BIBLIOGRAPHY

EMPR ASS PRT 197, 1146, *8111, 8677, 14977
EMPR AR 1932-154, 1960-130
EMPR BULL (unpublished) *Stevenson, J.S. (1941)
EMPR OF *1990-27, 1995-25
GSC MEM 363
GSC MAP 1278A

DATE CODED: 1989/11/28
DATE REVISED: 1991/02/19

CODED BY: KDH
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 091**

NATIONAL MINERAL INVENTORY:

NAME(S): **BULL MOOSE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

Underground

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 14 N
LONGITUDE: 120 45 55 W
ELEVATION: 1240 Metres

NORTHING: 5665606
EASTING: 656394

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location from Special Report 1 (1936).

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Pyrite Ankerite Pyrrhotite
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Unnamed/Unknown Group

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Feldspar Porphyry
 Volcanic
 Schist

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Bull Moose gold-quartz vein and workings are located approximately 50 kilometres northeast of Savona, in the upper reaches of the Deadman River east of the Vidette mine (092P 086). The precise location of the workings is not known, however, Minister of Mines Special Report 1 (1936) describes them as being 4800 feet (1460 metres) southeast of Mister William Uren's ranch house 10 miles (25 kilometres) eastward by road from the Vidette mine. The Vidette mine is located at the north end of Vidette Lake and is accessible on a good-quality gravel road north from the Trans-Canada Highway, 7.4 kilometres west of Savona.

Special Report 1 (1936) describes the occurrence as a 2.5 foot (0.76 metre) wide milky quartz vein hosted by highly silicified feldspar porphyry. The workings consist of a shaft 4 metres in depth and 8 trenches within an area of approximately 100 metres. The vein strikes 340 degrees, dipping 65 degrees west. The vein contains small amounts of pyrite, chalcopyrite and ankerite, with some pyrrhotite and pyrite in the wallrock. A selected sample assayed 0.7 grams per tonne gold. Northwest of the shaft, the feldspar porphyry has been sheared and altered to a buff coloured, paper-thin schist.

No recent descriptions of the occurrence are available and because of the uncertainty of the location the geological setting is uncertain.

BIBLIOGRAPHY

EMPR Special Report 1, 1936
EMPR AR *1936-F61
GSC MEM 363
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/05

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 092**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOON**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 08 36 N
LONGITUDE: 120 43 58 W
ELEVATION: 1300 Metres

NORTHING: 5668208
EASTING: 658591

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location is from Minister of Mines Special Reports 24 and 25 (1936) and Assessment Report 18960. See Telluric (092P 089) for more information.

COMMODITIES: Gold Zinc

MINERALS

SIGNIFICANT: Sphalerite Tetrahedrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic

TYPE: I01 Au-quartz veins

SHAPE: Tabular

DIMENSION: Metres

STRIKE/DIP: 070/90

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Metamorphic

STRATIGRAPHIC AGE GROUP
Pennsylvan.-Permian Nicola

FORMATION
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Hornblendite
Mafic Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

INVENTORY

ORE ZONE: TRENCH

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1936

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold

0.7000

Grams per tonne

REFERENCE: Minister of Mines Special Report 25 (1936).

CAPSULE GEOLOGY

The Moon gold-quartz vein is located approximately 50 kilometres northeast of Savona in the upper reaches of the Deadman River, east of the Vidette mine (092P 086). The precise location of the occurrence is not known, however, Minister of Mines Special Report 25 (1936) describes it as being 3 kilometres southwest of the Telluric showing (092P 089). The Vidette mine is located at the north end of Vidette Lake and is accessible on a good-quality gravel road north from the Trans-Canada Highway, 7.4 kilometres west of Savona.

The showing is exposed in a single blasted pit and is a narrow quartz vein 5 centimetres in width cutting a hard, green hornblendite. The vein strikes 070 degrees, with a vertical dip. It contains small amounts of sphalerite and tetrahedrite. A sample of the vein assayed 0.7 gram per tonne gold (Special Report 25, 1936).

The property was staked and owned by Mr. William Uren in 1934. No recent descriptions of the occurrence are available and because of the uncertainty of the location the geological setting is uncertain. However, the hostrocks could be mafic volcanic rocks of the Upper Triassic Nicola Group.

BIBLIOGRAPHY

EMPR AR *1936-F61
EMPR Special Report 25, 1936
GSC MEM 363

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1154
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/05

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 093**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHERWOOD CREEK VOLCANIC ASH**, LAST CHANCE, B,
POZ GROUP

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 04 59 N
LONGITUDE: 120 52 11 W
ELEVATION: 915 Metres

NORTHING: 5661220
EASTING: 649206

LOCATION ACCURACY: Within 500M

COMMENTS: Located in Deadman River valley, east of Snohoosh Lake and north of Sherwood Creek (Open File 1989-21). Other occurrences are at Skookum Lake (092P 095) and at Snohoosh Lake (092P 094) (Open File 1989-1; Minister of Mines Annual Report 1959, page 182).

COMMODITIES: Volcanic Ash Pozzolan

MINERALS

SIGNIFICANT: Montmorillonite
ASSOCIATED: Glass Feldspar Quartz
ALTERATION: Montmorillonite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R11 Volcanic ash - pumice
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Miocene	Chilcotin	Deadman River	

LITHOLOGY: Rhyolite Volcanic Ash
Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Sherwood Creek volcanic ash occurrence is located on the north side of Sherwood Creek, east of Snohoosh Lake in the Deadman River valley. The area is accessible on a good-quality gravel road north from the Trans-Canada Highway, 7.4 kilometres west of Savona, 40 (air) kilometres to the south.

Basalts of the Miocene Chasm Formation (Chilcotin Group) mantle most of the area, however, beneath the basalts, massive rhyolite ash of the Miocene Deadman River Formation (Chilcotin Group) is exposed in cliffs on the east side of the Deadman Valley for a length of 6.5 kilometres. The rhyolite ash is the predominant lithology in a Miocene channel filling of fluvial and lacustrine sediments occupying the northwest trending Mio-Snohoosh Channel (Open File 1989-21). The flat-lying channel is more than 200 metres in thickness. The best exposures of the rhyolite ash sections are on the north side of Sherwood Creek. At Sherwood Creek, the lowest exposed beds are buff to grey ash followed by a 3 metre thick bed of chalky white ash, then 30 metres of buff to yellow beds overlain by 2 metres of white ash topped by mixed buff beds. The white beds are uniform very fine ash.

One kilometre south of Sherwood Creek, on the east side of the road, ash is exposed along a length of 120 metres in a 20-metre cliff. At the north end of Skookum Lake, 4 kilometres north of Sherwood Creek, cliffs of ash are again exposed east of the road. Several less well-exposed outcrops of what is clearly a continuous formation are present from south of the south end of Snohoosh Lake to Skookum Lake (McCammon 1960, Minister of Mines Annual Report 1959, page 181).

The occurrence has been known for many years and sporadic attempts have been made to exploit it. Prior to 1927, approximately 1 ton (900 kilograms) was removed. It was later staked by T.C. McAlpine and examined in 1959 by C. Riley for Industrial Minerals Limited, a private company. Preliminary estimates suggested the size

MINFILE NUMBER: **092P 093**

CAPSULE GEOLOGY

of the deposit at approximately 14 million tonnes. McCammon (1960) tested the ash for pozzolanic properties. This work indicates that it meets ASTM specifications, and could be used as a pozzolan. It also has possibilities as a cream glaze on ceramic ware (McCammon, 1960) or as an abrasive (Eardley-Wilmot, 1927). Michael Dickens (Assessment reports 22221 and 22546) staked claims in the area in 1991 and submitted samples for chemical analyses which showed the ash to be composed of approximately 35 percent montmorillonite clay. He also undertook experiments which demonstrated that the material was an effective absorbent which effectively absorbed oil spills and offensive odours.

BIBLIOGRAPHY

EMPR AR 1947-223; *1959-181
EMPR ASS RPT 8430, 9136, 22221, 22546, 22830, 23053
EMPR FIELDWORK 1987, p. 419; 1988, pp. 515-518
EMPR OF 1989-21
EMPR PF (Claim location map)
GSC MEM 363, p. 92
GSC MAP 1278A
CANMET RPT 673, pp. 87-89
W MINER June 1959, p. 52

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/21

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 094**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN LOON 6**, GL-6, SNOHOOSH LAKE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5699118
EASTING: 691685

LATITUDE: 51 24 39 N
LONGITUDE: 120 14 37 W
ELEVATION: 1040 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of occurrence on Figure 5, Assessment Report 15870.

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Pyrite Galena
ASSOCIATED: Chalcedony
ALTERATION: Silica Carbonate Chlorite
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
DIMENSION: Metres STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Harper Ranch	Undefined Formation	Dum Lake Intrusive Complex
Triassic-Jurassic			Thuya Batholith

LITHOLOGY: Brecciated Ultramafic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel Harper Ranch PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1986
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 2.5000 Grams per tonne
Gold 0.2700 Grams per tonne

REFERENCE: Assessment Report 15870.

CAPSULE GEOLOGY

The Golden Loon 6 (GL-6) occurrence is located 2.5 (air) kilometres southwest of Little Fort. Good quality logging and bush roads provide access to the property.

The GL-6 occurrence is an area of brecciated, silicified and chalcedony-veined ultramafic rock with some pyrite and galena (Assessment Report 15870; Fieldwork 2000, page 22) exposed in some old trenches. A sample of mineralized material yielded 270 ppb gold and 2.5 ppm silver (Assessment Report 15870).

Hostrocks are ultramafic intrusive rocks of the Triassic to Jurassic Dum Lake Intrusive Complex which consists of a mafic portion composed of diorite, gabbro, microdiorite and intrusion breccia, and an ultramafic portion composed of dunite, wehrlite, pyroxenite and serpentine. The Dum Lake Intrusive Complex is believed to be an Alaskan-type intrusive complex (Fieldwork 2000). It is in contact with granodioritic rocks of the Triassic to Jurassic Thuya batholith on the west. On its eastern side the Dum Lake intrusive rocks intrude siltstone, argillite, chert and limestone of the late Paleozoic Harper Ranch Group and mafic volcanic rocks, related volcaniclastic rocks, clastic sediment, chert and limestones of the Upper Triassic Nicola Group.

The earliest record of prospecting in the area dates from the 1920s when placer gold was recovered from the Eakin Creek Placer (092P 055). In 1967, Noranda Exploration Company (Assessment Report

CAPSULE GEOLOGY

1051) completed a soil sampling survey over the Kira claims after obtaining anomalous results in a reconnaissance stream sediment sampling program. The program outlined zones of anomalous copper and nickel. In 1973, Rio Tinto Canadian Exploration Limited completed another soil geochemical sampling program on the Dum Claim Group (Assessment Report 4689), outlining copper, zinc and lead anomalies west of Dum Lake. Teck Corporation reportedly (Assessment Reports 14237, 15870) staked the Minerva Group in 1980-81 on the west side of the Golden Loon Property and undertook a magnetometer survey and a soil geochemical survey, obtaining several silver anomalies. In 1984, The Golden Loon Claims were staked by Barnes Creek Minerals and a prospecting program undertaken (Assessment Report 14237). In 1985, additional prospecting was undertaken and magnetometer, VLF-EM and soil geochemical surveys completed (Assessment Reports 14920 and 15937). In 1987, Mineta Resources completed a program (Assessment Report 17342) which included soil geochemical surveys (548 samples), linecutting (34.6 kilometres), lithochemistry (18 samples), and stream sediment geochemical sampling (70 samples) and located some high grade float boulders as well as outlined some gold-in-soil geochemical anomalies. In 1988, Mineta completed 78.2 kilometres of linecutting, 61.0 kilometres of VLF-EM and magnetometer surveying and collected 1571 soil geochemical samples (Assessment Reports 18802 and 21109). In 1989, Mineta completed 25.0 kilometres of VLF-EM and magnetometer surveying, as well as soil geochemical (556 samples) and lithochemical (20 samples) surveys (Assessment Report 20029). In 1990, the property was optioned to Corona Corporation and an extensive program (Assessment Report 21014) of prospecting, geological mapping, soil geochemical sampling (637 samples) and geophysical surveys (25 kilometres of magnetometer and VLF-EM), trenching and diamond drilling (691 metres in 7 holes) was carried out. In 1992, Placer Dome Limited optioned the property, focusing on the porphyry copper-gold potential of the western portion of the property (Assessment Report 22818) and completed 20.0 kilometres of grid preparation, geological mapping and soil geochemical surveying (1083 samples). In 1996, Meteor Minerals Incorporated completed a program of geochemical soil sampling to test the potential of the enzyme leach technique in tracing mineralized zones in areas of extensive overburden (Assessment Report 24883). In 1997, Meteor completed a three-hole (393 metres) diamond drill program on the Golden Loon High Grade Zone (092P 141). In 1999, Tilava Mining Corporation completed a program of lithochemical sampling (150 samples) on ultramafic rocks on the property and detected significant platinum values (Assessment Report 26100). In 2000, the property was optioned by Case Gold Mines Limited (George Cross News Letters #191, #216, 2000) and VLF-EM, magnetometer, induced polarization and soil geochemical (119 samples) surveys completed.

BIBLIOGRAPHY

EMPR FIELDWORK *2000, pp. 20-22
EMPR ASS RPT 1051, 2418, 4689, 14237, 14920, *15870, 15937, 17342,
18802, 20029, 21109, 21014, 22818, 24315, 24883, 25431, 26100
GSC MEM 363
GSC MAP 1278A
GCNL #234(Dec.7), 1999; #154(Aug.11), #191(Oct.5), #216(Nov.10), 2000

DATE CODED: 2001/02/23
DATE REVISED: 2001/02/23

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 095**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN LOON 5**, GL-5, ZED-4

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5700606
EASTING: 689290

LATITUDE: 51 25 30 N
LONGITUDE: 120 16 38 W
ELEVATION: 1175 Metres

LOCATION ACCURACY: Within 500M
COMMENTS: Location of sample Z4 (Plate #1, Assessment Report 14920).

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Quartz
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
SHAPE: Tabular
DIMENSION: Metres

STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Harper Ranch	Undefined Formation	
Triassic-Jurassic			Dum Lake Intrusive Complex
Triassic-Jurassic			Thuya Batholith

LITHOLOGY: Ultramafic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1985
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 29.1000 Grams per tonne
Gold 2.8500 Grams per tonne
Lead 0.3764 Per cent

REFERENCE: Assessment Report 14920.

CAPSULE GEOLOGY

The Golden Loon 5 (GL-5) occurrence is located 3 kilometres southeast of Dum Lake and 4.5 (air) kilometres west of Little Fort. Good quality logging and bush roads provide access to the property. The occurrence is a 10 centimetre-wide quartz vein hosted within the ultramafic portion of the Dum Lake Intrusive Complex. A sample (Assessment Report 15810) yielded 2850 ppb gold, 29.1 ppm silver and 3764 ppm lead.

Hostrocks are ultramafic intrusive rocks of the Triassic to Jurassic Dum Lake Intrusive Complex which consists of a mafic portion composed of diorite, gabbro, microdiorite and intrusion breccia, and an ultramafic portion composed of dunite, wehrlite, pyroxenite and serpentine. The Dum Lake Intrusive Complex is believed to be an Alaskan-type intrusive complex (Fieldwork 2000). It is in contact with granodioritic rocks of the Triassic to Jurassic Thuya batholith on the west. On its eastern side the Dum Lake intrusive rocks intrude siltstone, argillite, chert and limestone of the late Paleozoic Harper Ranch Group and mafic volcanic rocks, related volcaniclastic rocks, clastic sediment, chert and limestones of the Upper Triassic Nicola Group.

The earliest record of prospecting in the area dates from the 1920s when placer gold was recovered from the Eakin Creek Placer (092P 055). In 1967, Noranda Exploration Company (Assessment Report 1051) completed a soil sampling survey over the Kira claims after obtaining anomalous results in a reconnaissance stream sediment

CAPSULE GEOLOGY

sampling program. The program outlined zones of anomalous copper and nickel. In 1973, Rio Tinto Canadian Exploration Limited completed another soil geochemical sampling program on the Dum Claim Group (Assessment Report 4689), outlining copper, zinc and lead anomalies west of Dum Lake. Teck Corporation reportedly (Assessment Reports 14237, 15870) staked the Minerva Group in 1980-81 on the west side of the Golden Loon Property and undertook a magnetometer survey and a soil geochemical survey, obtaining several silver anomalies. In 1984, The Golden Loon Claims were staked by Barnes Creek Minerals and a prospecting program undertaken (Assessment Report 14237). In 1985, additional prospecting was undertaken and magnetometer, VLF-EM and soil geochemical surveys completed (Assessment Reports 14920 and 15937). In 1987, Mineta Resources completed a program (Assessment Report 17342) which included soil geochemical surveys (548 samples), linecutting (34.6 kilometres), lithochemistry (18 samples), and stream sediment geochemical sampling (70 samples) and located some high grade float boulders as well as outlined some gold-in-soil geochemical anomalies. In 1988, Mineta completed 78.2 kilometres of linecutting, 61.0 kilometres of VLF-EM and magnetometer surveying and collected 1571 soil geochemical samples (Assessment Reports 18802 and 21109). In 1989, Mineta completed 25.0 kilometres of VLF-EM and magnetometer surveying, as well as soil geochemical (556 samples) and lithochemical (20 samples) surveys (Assessment Report 20029). In 1990, the property was optioned to Corona Corporation and an extensive program (Assessment Report 21014) of prospecting, geological mapping, soil geochemical sampling (637 samples) and geophysical surveys (25 kilometres of magnetometer and VLF-EM), trenching and diamond drilling (691 metres in 7 holes) was carried out. In 1992, Placer Dome Limited optioned the property, focusing on the porphyry copper-gold potential of the western portion of the property (Assessment Report 22818) and completed 20.0 kilometres of grid preparation, geological mapping and soil geochemical surveying (1083 samples). In 1996, Meteor Minerals Incorporated completed a program of geochemical soil sampling to test the potential of the enzyme leach technique in tracing mineralized zones in areas of extensive overburden (Assessment Report 24883). In 1997, Meteor completed a three-hole (393 metres) diamond drill program on the Golden Loon High Grade Zone (092P 141).

BIBLIOGRAPHY

EMPR ASS RPT 1051, 2418, 4689, 14237, *14920, 15870, 15937, 17342, 18802, 20029, 21109, 21014, 22818, 24315, 24883, 25431, 26100
EMPR FIELDWORK *2000, pp. 20-22
GSC MAP 1278A
GSC MEM 363
GCNL #234(Dec.7), 1999; #154(Aug.11), #191(Oct.5), #216(Nov.10), 2000
WWW <http://www.infomine.com/index/>

DATE CODED: 2001/02/23
DATE REVISED: 2001/02/23

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 096**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN LOON 4, GL-4**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5704965
EASTING: 686751

LATITUDE: 51 27 54 N
LONGITUDE: 120 18 41 W
ELEVATION: 1150 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of sample #11940 (Plate 10.0, Assessment Report 22818).

COMMODITIES: Zinc Copper Lead

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Galena
ASSOCIATED: Pyrite Pyrrhotite
ALTERATION: Chlorite Epidote Malachite
ALTERATION TYPE: Skarn Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Epigenetic Hydrothermal Skarn
TYPE: K SKARN
DIMENSION: Metres STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Harper Ranch	Undefined Formation	Dum Lake Intrusive Complex
Triassic-Jurassic			Thuya Batholith
Triassic-Jurassic			

LITHOLOGY: Fine Grained Hornfels
Skarn
Gabbro

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel Harper Ranch
PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1993
SAMPLE TYPE: Grab
COMMODITY GRADE
Copper 0.0476 Per cent
Lead 0.0544 Per cent
Zinc 0.8870 Per cent

REFERENCE: Assessment Report 22818.

CAPSULE GEOLOGY

The Golden Loon 4 (GL-4) occurrence is located 2 kilometres west of Dum Lake and 7 (air) kilometres northwest of Little Fort. Good quality logging and bush roads provide access to the property.

The occurrence comprises strongly sheared fine-grained hornfels and skarn containing galena, sphalerite, pyrite and chalcopyrite in northwest-trending fractures. A sample (sample #11940, Assessment Report 22818) yielded 476 ppm copper, 544 ppm lead, 8870 ppm zinc and 3195 ppm arsenic. Nearby, chlorite-epidote altered gabbro contains erratic disseminated pyrrhotite and chalcopyrite with small splotches of malachite stain (Assessment Report 22818; Fieldwork 2000, page 22).

Hostrocks are skarnified metasedimentary rocks of the late Paleozoic Harper Ranch Group and gabbroic intrusive rocks of the Triassic to Jurassic Dum Lake Intrusive Complex which consists of a mafic portion composed of diorite, gabbro, microdiorite and intrusion breccia, and an ultramafic portion composed of dunite, wehrlite, pyroxenite and serpentine. The Dum Lake Intrusive Complex is believed to be an Alaskan-type intrusive complex (Fieldwork 2000). It is in contact with granodioritic rocks of the Triassic to Jurassic Thuya batholith on the west. On its eastern side the Dum Lake

CAPSULE GEOLOGY

intrusive rocks intrude siltstone, argillite, chert and limestone of the Harper Ranch Group and mafic volcanic rocks, related volcaniclastic rocks, clastic sediment, chert and limestones of the Upper Triassic Nicola Group.

The earliest record of prospecting in the area dates from the 1920s when placer gold was recovered from the Eakin Creek Placer (092P 055). In 1967, Noranda Exploration Company (Assessment Report 1051) completed a soil sampling survey over the Kira claims after obtaining anomalous results in a reconnaissance stream sediment sampling program. The program outlined zones of anomalous copper and nickel. In 1973, Rio Tinto Canadian Exploration Limited completed another soil geochemical sampling program on the Dum Claim Group (Assessment Report 4689), outlining copper, zinc and lead anomalies west of Dum Lake. Teck Corporation reportedly (Assessment Reports 14237, 15870) staked the Minerva Group in 1980-81 on the west side of the Golden Loon Property and undertook a magnetometer survey and a soil geochemical survey, obtaining several silver anomalies. In 1984, The Golden Loon Claims were staked by Barnes Creek Minerals and a prospecting program undertaken (Assessment Report 14237). In 1985, additional prospecting was undertaken and magnetometer, VLF-EM and soil geochemical surveys completed (Assessment Reports 14920 and 15937). In 1987, Mineta Resources completed a program (Assessment Report 17342) which included soil geochemical surveys (548 samples), linecutting (34.6 kilometres), lithochemistry (18 samples), and stream sediment geochemical sampling (70 samples) and located some high grade float boulders as well as outlined some gold-in-soil geochemical anomalies. In 1988, Mineta completed 78.2 kilometres of linecutting, 61.0 kilometres of VLF-EM and magnetometer surveying and collected 1571 soil geochemical samples (Assessment Reports 18802 and 21109). In 1989, Mineta completed 25.0 kilometres of VLF-EM and magnetometer surveying, as well as soil geochemical (556 samples) and lithochemical (20 samples) surveys (Assessment Report 20029). In 1990, the property was optioned to Corona Corporation and an extensive program (Assessment Report 21014) of prospecting, geological mapping, soil geochemical sampling (637 samples) and geophysical surveys (25 kilometres of magnetometer and VLF-EM), trenching and diamond drilling (691 metres in 7 holes) was carried out. In 1992, Placer Dome Limited optioned the property, focusing on the porphyry copper-gold potential of the western portion of the property (Assessment Report 22818) and completed 20.0 kilometres of grid preparation, geological mapping and soil geochemical surveying (1083 samples). In 1996, Meteor Minerals Incorporated completed a program of geochemical soil sampling to test the potential of the enzyme leach technique in tracing mineralized zones in areas of extensive overburden (Assessment Report 24883). In 1997, Meteor completed a three-hole (393 metres) diamond drill program on the Golden Loon High Grade Zone (092P 141). In 1999, Tilava Mining Corporation completed a program of lithochemical sampling (150 samples) on ultramafic rocks on the property and detected significant platinum values (Assessment Report 26100). In 2000, the property was optioned by Case Gold Mines Limited (George Cross News Letters #191, #216, 2000) and VLF-EM, magnetometer, induced polarization and soil geochemical (119 samples) surveys completed.

BIBLIOGRAPHY

EMPR FIELDWORK *2000, pp. 20-22
EMPR ASS RPT 1051, 2418, 4689, 14237, 14920, 15870, 15937, 17342,
18802, 20029, 21109, 21014, *22818, 24315, 24883, 25431, 26100
GSC MEM 363
GSC MAP 1278A
GCNL #234(Dec.7), 1999; #154(Aug.11), #191(Oct.5), #216(Nov.10), 2000

DATE CODED: 2001/02/23
DATE REVISED: 2001/02/23

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 097**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN LOON 3, GL-3**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5704159
EASTING: 685854

LATITUDE: 51 27 29 N
LONGITUDE: 120 19 29 W
ELEVATION: 1200 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Sample #11941 (Figure 10.0, Assessment Report 22818).

COMMODITIES: Gold Silver

MINERALS

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

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
DIMENSION: Metres

STRIKE/DIP: /W TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Paleozoic
Triassic-Jurassic
Triassic-Jurassic

GROUP

Harper Ranch

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Dum Lake Intrusive Complex
Thuya Batholith

LITHOLOGY: Diorite Breccia
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1993

SAMPLE TYPE: Grab

COMMODITY

Gold

GRADE

0.7360

Grams per tonne

REFERENCE: Assessment Report 22818.

CAPSULE GEOLOGY

The Golden Loon 3 (GL-3) occurrence is located 2.2 kilometres west-northwest of Dum Lake and 8 (air) kilometres west of Little Fort. Good quality logging and bush roads provide access to the property.

The occurrence is a quartz vein stockwork hosted in silicified diorite breccia with 5 per cent pyrite. Sample #11941 yielded an assay of 735 ppb gold (Assessment Report 22818; Fieldwork 2000, page 22).

Hostrocks are dioritic intrusive rocks of the Triassic to Jurassic Dum Lake Intrusive Complex which consists of a mafic portion composed of diorite, gabbro, microdiorite and intrusion breccia, and an ultramafic portion composed of dunite, wehrlite, pyroxenite and serpentine. The Dum Lake Intrusive Complex is believed to be an Alaskan-type intrusive complex (Fieldwork 2000, pages 1-30). It is in contact with granodioritic rocks of the Triassic to Jurassic Thuya batholith on the west. On its eastern side the Dum Lake intrusive rocks intrude siltstone, argillite, chert and limestone of the late Paleozoic Harper Ranch Group and mafic volcanic rocks, related volcaniclastic rocks, clastic sediment, chert and limestones of the Upper Triassic Nicola Group.

The earliest record of prospecting in the area dates from the 1920s when placer gold was recovered from the Eakin Creek Placer (092P 055). In 1967, Noranda Exploration Company (Assessment Report

CAPSULE GEOLOGY

1051) completed a soil sampling survey over the Kira claims after obtaining anomalous results in a reconnaissance stream sediment sampling program. The program outlined zones of anomalous copper and nickel. In 1973, Rio Tinto Canadian Exploration Limited completed another soil geochemical sampling program on the Dum Claim Group (Assessment Report 4689), outlining copper, zinc and lead anomalies west of Dum Lake. Teck Corporation reportedly (Assessment Reports 14237, 15870) staked the Minerva Group in 1980-81 on the west side of the Golden Loon Property and undertook a magnetometer survey and a soil geochemical survey, obtaining several silver anomalies. In 1984, The Golden Loon Claims were staked by Barnes Creek Minerals and a prospecting program undertaken (Assessment Report 14237). In 1985, additional prospecting was undertaken and magnetometer, VLF-EM and soil geochemical surveys completed (Assessment Reports 14920 and 15937). In 1987, Mineta Resources completed a program (Assessment Report 17342) which included soil geochemical surveys (548 samples), linecutting (34.6 kilometres), lithochemistry (18 samples), and stream sediment geochemical sampling (70 samples) and located some high grade float boulders as well as outlined some gold-in-soil geochemical anomalies. In 1988, Mineta completed 78.2 kilometres of linecutting, 61.0 kilometres of VLF-EM and magnetometer surveying and collected 1571 soil geochemical samples (Assessment Reports 18802 and 21109). In 1989, Mineta completed 25.0 kilometres of VLF-EM and magnetometer surveying, as well as soil geochemical (556 samples) and lithochemical (20 samples) surveys (Assessment Report 20029). In 1990, the property was optioned to Corona Corporation and an extensive program (Assessment Report 21014) of prospecting, geological mapping, soil geochemical sampling (637 samples) and geophysical surveys (25 kilometres of magnetometer and VLF-EM), trenching and diamond drilling (691 metres in 7 holes) was carried out. In 1992, Placer Dome Limited optioned the property, focusing on the porphyry copper-gold potential of the western portion of the property (Assessment Report 22818) and completed 20.0 kilometres of grid preparation, geological mapping and soil geochemical surveying (1083 samples). In 1996, Meteor Minerals Incorporated completed a program of geochemical soil sampling to test the potential of the enzyme leach technique in tracing mineralized zones in areas of extensive overburden (Assessment Report 24883). In 1997, Meteor completed a three-hole (393 metres) diamond drill program on the Golden Loon High Grade Zone (092P 141). In 1999, Tilava Mining Corporation completed a program of lithochemical sampling (150 samples) on ultramafic rocks on the property and detected significant platinum values (Assessment Report 26100). In 2000, the property was optioned by Case Gold Mines Limited (George Cross News Letters #191, #216, 2000) and VLF-EM, magnetometer, induced polarization and soil geochemical (119 samples) surveys completed.

BIBLIOGRAPHY

EMPR FIELDWORK *2000, pp. 20-22
EMPR ASS RPT 1051, 2418, 4689, 14237, 14920, 15870, 15937, 17342,
18802, 20029, 21109, 21014, *22818, 24315, 24883, *25431, 26100
GSC MEM 363
GSC MAP 1278A
GCNL #234(Dec.7), 1999; #154(Aug.11), #191(Oct.5), #216(Nov.10), 2000

DATE CODED: 2001/02/23
DATE REVISED: 2001/02/23

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 098**

NATIONAL MINERAL INVENTORY:

NAME(S): **DEADMAN LAKE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 51 N
LONGITUDE: 120 52 40 W
ELEVATION: 885 Metres

NORTHING: 5666516
EASTING: 648489

LOCATION ACCURACY: Within 500M

COMMENTS: Location of a roadcut on the east side of Deadman River valley,
300 metres north of the north end of Deadman Lake (Minister of Mines
Annual Report 1959, pages 182 and 184).

COMMODITIES: Diatomite Volcanic Ash Pozzolan

MINERALS

SIGNIFICANT: Diatomite
ASSOCIATED: Glass Feldspar Quartz Montmorillonite
ALTERATION: Montmorillonite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular
COMMENTS: Attitude is flat, dimension unknown.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Miocene	Chilcotin	Deadman River	

LITHOLOGY: Diatomite
Fluvial Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Deadman Lake diatomite/volcanic ash occurrence is located on the east side of the Vidette access road, approximately 45 (air) kilometres north of Savona. The area is accessible on a good-quality gravel road which leads north from the Trans-Canada Highway approximately 7.4 kilometres west of Savona.

Basalts of the Miocene Chasm Formation (Chilcotin Group) mantle most of the area, however beneath the basalts, massive rhyolite ash of the Miocene Deadman River Formation (Chilcotin Group) is exposed in cliffs on the east side of the Deadman Valley for a length of 8 kilometres. The rhyolite ash is the predominant lithology in a Miocene channel filling of fluvial and lacustrine sediments occupying the northwest-trending Mio-Snohoosh Channel (Open File 1989-21). The flat-lying channel is more than 200 metres in thickness and the best exposures of the rhyolite ash sections are on the north side of Sherwood Creek (092P 093). At the Deadman Lake volcanic ash/diatomite occurrence, a roadcut 225 metres long exposes a bank of earthy light grey material overlain by brownish material (McCammon 1960, Minister of Mines Annual Report 1959, page 184). Microscopic examination (McCammon, 1960) showed the material to be mainly diatomite with only minor amounts of ash and silt.

Outcrops of what is clearly a continuous formation are present on the east side of Deadman Valley from south of the south end of Snohoosh Lake for 8 kilometres to Deadman Lake (McCammon, 1960). The lacustrine diatomite beds occur near the base of the volcanic ash section which is 112 metres thick in a measured section east of Snohoosh Lake (Geological Survey of Canada Memoir 363, page 58). The base of the Deadman River Formation ash/lake bed section is not exposed. McCammon (1960) tested the ash for pozzolanic properties. This work indicates that it meets ASTM specifications, and could be used as a pozzolan. It also has possibilities as a cream glaze on ceramic ware (McCammon, 1960), or as an abrasive (Eardley-Wilmot, 1927).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1166
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR *1959-181-184
EMPR FIELDWORK 1988, pp. 515-519
EMPR OF 1989-21
CANMET RPT 691, p. 81
GSC MAP 1278A
GSC MEM 363

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/31

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 099**

NATIONAL MINERAL INVENTORY:

NAME(S): **LOON CREEK**, LOON LAKE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P03W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 02 45 N
LONGITUDE: 121 25 02 W
ELEVATION: 700 Metres

NORTHING: 5656114
EASTING: 610950

LOCATION ACCURACY: Within 500M

COMMENTS: The cutbank is on Tomlin Road within 100 metres of its junction with Loon Lake Road (EMPR OF 1989-21).

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
ASSOCIATED: Glass Feldspar Quartz Montmorillonite
ALTERATION: Montmorillonite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Miocene	Chilcotin	Deadman River	

LITHOLOGY: Diatomite
Fluvial Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Quesnel
PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Loon Creek diatomite showing is located in Loon Creek valley 5 kilometres southwest of Loon Lake and 13 kilometres east-southeast of Clinton.

The occurrence is hosted in the north draining Mio-Bonaparte channel, a fluvial and lacustrine interlayer of the Miocene Deadman River Formation which is part of the Miocene to Pleistocene Chilcotin Group composed mainly of alkaline plateau basaltic flows. The Deadman River Formation (EMPR Open File 1989-21) is composed of rhyolite ash, tuffaceous sandstone, siltstone, shale, minor pebble conglomerate. The siltstones and shales are commonly carbonaceous and/or diatomaceous.

The Loon Creek diatomaceous earth showing is exposed in a 2 metre high roadcut near the base of a Miocene channel filling of fluvial and lacustrine sediments occupying the Mio-Bonaparte Channel which is over 5 kilometres wide and 400 metres deep. A 3 metre thickness of fairly pure diatomite is exposed for 60 metres along a cut on Loon Lake Road.

BIBLIOGRAPHY

EMPR FIELDWORK *1988, pp. 515-519
EMPR OF 1989-21
GSC MAP 1278A
GSC MEM 363

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/19

CODED BY: GSB
REVISED BY: PBR

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092P 100**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHASM CREEK**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P03W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 08 51 N
LONGITUDE: 121 27 50 W
ELEVATION: 740 Metres

NORTHING: 5667349
EASTING: 607443

LOCATION ACCURACY: Within 500M

COMMENTS: On the north slope of Bonaparte River valley 0.5 kilometre downstream from Chasm Creek exposed in an old slumped bulldozer cut (EMPR Open File 1989-21).

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
ASSOCIATED: Glass Feldspar Quartz Montmorillonite
ALTERATION: Montmorillonite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular
COMMENTS: Present in flat-lying beds.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Miocene	Chilcotin	Deadman River	

LITHOLOGY: Diatomite
Conglomerate
Fluvial Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Quesnel
PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Chasm Creek diatomite showing is located in Chasm Creek valley 500 metres north of its confluence with the Bonaparte River, nine kilometres northeast of Clinton. The occurrence is hosted in the north draining Mio-Bonaparte channel, a fluvial and lacustrine interlayer of the Miocene Deadman River Formation which is part of the Miocene to Pleistocene Chilcotin Group composed mainly of alkaline plateau basaltic flows. The Deadman River Formation (EMPR Open File 1989-21) is composed of rhyolite ash, tuffaceous sandstone, siltstone, shale, minor pebble conglomerate. The siltstones and shales are commonly carbonaceous and/or diatomaceous. A 4.0 metre thick bed of impure diatomaceous earth is exposed for 60.0 metres near the base of a Miocene channel filling of the Mio-Bonaparte channel. The poor exposures are within 20 metres vertically of the top of Deadman River Formation (Chilcotin Group) immediately beneath an unusual quartzite pebble and cobble-rich conglomerate.

BIBLIOGRAPHY

EMPR FIELDWORK 1988, pp. 515-518
EMPR OF 1989-21
GSC MAP 1278A
GSC MEM 363

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/19

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092P 101**

NATIONAL MINERAL INVENTORY:

NAME(S): **CM, L,K, K AND L,
K & L, NEWHYKULSTON CREEK**

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)

LATITUDE: 51 18 32 N
LONGITUDE: 120 06 54 W
ELEVATION: 1000 Metres

NORTHING: 5688128
EASTING: 701074

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Upper and Lower showings, just south of Newhykulston Creek on the northerly slopes of Chinook Mountain, about 14 kilometres south of Little Fort (Assessment Report 24180).

COMMODITIES: Copper Zinc Gold Silver

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Sphalerite
ASSOCIATED: Magnetite Quartz Calcite
ALTERATION: Silica Dolomite Chlorite
ALTERATION TYPE: Silicific'n Carbonate Chloritic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Disseminated Vein
CLASSIFICATION: Volcanogenic
TYPE: G05 Cyprus massive sulphide Cu (Zn)

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Paleozoic Slide Mountain Fennell

LITHOLOGY: Argillite
Chert
Basalt
Gabbro Sill

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Shuswap Highland

RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: LOWER

REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1993
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 30.0000 Grams per tonne
Gold 4.2300 Grams per tonne
Copper 8.6000 Per cent
Zinc 0.3900 Per cent

COMMENTS: Sample taken over 2 metres of massive sulphides at the Lower showing.
REFERENCE: Assessment Report 23155.

CAPSULE GEOLOGY

The CM property is underlain by oceanic, mafic volcanic and sedimentary rocks of the Devonian to Permian Fennell Formation (Slide Mountain Group). Copper, zinc and precious metals mineralization has been identified at the Upper and Lower showings, where it is hosted in a chert/argillite horizon within tholeiitic basaltic rocks. Delineation of the mineralized horizon by diamond drilling has been difficult due to intense faulting and fracturing of the rock near the showings. High-grade copper has also been identified at the Gold zone, located about 600 metres south of the Upper/Lower showings, but it has been difficult to trace and its genesis is not fully understood.

The mafic volcanic rocks are pervasively weakly chloritized with local epidote and silica alteration indicating regional greenschist facies metamorphism. Rare, patchy dolomitization of the mafic volcanic rocks is observed as an orange-brown discolouration at scattered locations on the property, especially in the Gold zone. A

CAPSULE GEOLOGY

zone of intense quartz +/- calcite veining with variable chlorite alteration and silicification occurs over a strike length of 1.7 kilometres and a width of approximately 150 metres. It occurs in pillowed and variolitic basalt in the stratigraphic footwall to the chert/argillite horizon that hosts the Lower and Upper showings. Examination of drill core from the Upper and Lower showings revealed the basalt in the vicinity of the mineralized zone to be intensely silicified.

Sulphides at the Lower showing consist of semimassive to disseminated pyrite with lesser chalcopyrite and sphalerite in a chert/argillite unit. Surface trenching by previous workers yielded up to 5.7 per cent copper, 29.7 grams per tonne silver and 2.95 grams per tonne gold over 3.4 metres. In 1994, a grab sample across 2 metres of massive sulphides at the Lower showing analysed 8.6 per cent copper, 0.39 per cent zinc, 4.23 grams per tonne gold and 30 grams per tonne silver (Assessment Report 23155). The Upper showing consists of massive magnetite with up to 10 per cent disseminated pyrite and chalcopyrite in chert. Previous trenching of the massive magnetite yielded 0.4 per cent copper and 2 grams per tonne gold over 3 metres (Assessment Report 24180).

The Gold zone is characterized by vuggy quartz-carbonate fracture-filling which is anomalous in gold and may represent a late stage epithermal event. The mafic volcanic rocks have patchy dolomitization. Mineralization in drillhole 87-2 from the Gold zone consists of semimassive pyrite and chalcopyrite in a silica-rich sediment. The intersection grades 4.8 per cent copper, 0.2 per cent zinc, 14.1 grams per tonne silver and 0.12 gram per tonne gold over 2.9 metres. Numerous subsequent drillholes in the area were unsuccessful at expanding this intersection (Assessment Report 23653).

The Fennell brothers of Barriere and Chu Chua indicated to R.A. Buckley (1972) that they first staked the showing after a bulldozer had uncovered rust during the construction of logging roads in the 1950s. The river showing, however, had been known for some time before this and had been blasted and sampled by the Fennell brothers in the 1950s during their initial exploration efforts. A short adit and ladders to Newhykulston Creek, dating before the Fennell brothers' work, were observed by Buckley (1972). Dr. Lees in his report states that the property was acquired by Warner Holdings Ltd. (no date). Some packsack diamond drilling (6 holes) to a depth of less than 3 metres was done by Warner Holdings field manager, Mr. P. Connell. Core recovery was very low. Kel-Glen held the claims since early 1970. Rio Tinto Canadian Exploration Ltd. optioned the claims from Kel-Glen mid-1970, and drilled a total of 458 metres of "B" type core. Rio Tinto also conducted a limited geochemical, self-potential and magnetometer survey. Kel-Glen attempted to core the prospect in early Spring 1972. A total of 7 holes were collared, 121 metres were drilled and 31 metres of highly broken core was recovered. Recovery was extremely low and the results inconclusive. Dekalb Mining Corporation, in 1972, re-evaluated the Rio Tinto core (still available on the property), and conducted trenching, limited geological mapping and 552 metres of diamond drilling in 10 holes. In 1978, the BM and Nook claims were staked on behalf of Marston Fennell and in 1979 Noranda Exploration Company Limited established a control grid and conducted soil sampling (1021 samples), airborne VLF-EM survey, and vertical shootback electromagnetic and magnetometer surveys (48 kilometres). In 1979, Craigmont flew a Dighem III survey (2274 kilometres of magnetic and electromagnetic data collection) covering all of the Fennell Formation between Barriere and Clearwater. In 1985, BP Resources Canada Limited staked the CM claims which covered the original showings and established four small grids (22 kilometres) and conducted a Max/Min II electromagnetic and magnetometer survey. During 1986-87, BP carried out linecutting (7.3 kilometres), geological mapping, diamond drilling of two holes totalling 243 metres, soil geochemical survey (563 samples), Max/Min II electromagnetic survey (6.6 kilometres), induced polarization survey, trenching and magnetometer survey. In 1988, geological mapping, Max/Min II electromagnetic survey (3 kilometres), diamond drilling of 17 holes totalling 1985 metres, soil sampling (150 samples) and 9 trenches totalling 355 metres was carried out by Skylark Resources Ltd. on behalf of BP Resources Canada Limited. In 1989, Minnova Inc. carried out 25.7 kilometres of grid work, geological mapping, rock (204) and soil (992) sampling, 26 kilometres of Max/Min II electromagnetic and magnetic survey, minor trenching and 5 diamond-drill holes totalling 594 metres. In 1993, Inco Exploration and Technical Services Limited performed geological mapping and lithochemical sampling (35 rocks) on behalf of owner, S.J. Hoffman. In 1994, Inco Exploration and Technical Services Inc. carried out geological mapping, lithochemical sampling (140

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1171
REPORT: RGEN0100

CAPSULE GEOLOGY

rocks), linecutting (28.6 kilometres) and Max/Min II electromagnetic and magnetic surveys (38 kilometres). In 1995, Inco Limited carried out diamond drilling totalling 1180 metres in 7 holes.

BIBLIOGRAPHY

EMPR ASS RPT 7555, 15180, 16596, 18039, 23155, *23653, *24180
EMPR EXPL 1977-E176, E177; 1979-198, 199
EMPR GEM 1970-313; 1972-316, 317
EMPR PF (Buckley, R.A. (1972): Evaluation of Diamond Drilling Program
on K & L Claims)
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/04/06

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 102**

NATIONAL MINERAL INVENTORY: 092P1

NAME(S): **FISHTRAP CREEK**, CP, PC,
C.P.

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P01E 092P01W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 09 40 N
LONGITUDE: 120 16 05 W
ELEVATION: 1210 Metres

NORTHING: 5671290
EASTING: 691019

LOCATION ACCURACY: Within 5 KM
COMMENTS: Centre of CP claim group, about 4.5 kilometres northwest of the confluence of Skull and Fishtrap creeks (Assessment Report 3816).

COMMODITIES: Copper Nickel

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Pyrite Pentlandite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Magmatic
TYPE: M01 Flood Basalt-Associated Ni-Cu
DIMENSION: Metres

STRIKE/DIP: TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic Triassic-Jurassic	Harper Ranch	Undefined Formation	Thuya Batholith

LITHOLOGY: Pyroxenite
Greenstone
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks Harper Ranch
PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1970
SAMPLE TYPE: Chip
COMMODITY GRADE
Copper 0.2200 Per cent
REFERENCE: National Mineral Inventory description, NTS 092P/1.

CAPSULE GEOLOGY

The Fishtrap Creek showing is located on the north side of Mount Hagen and east of Fishtrap Creek, eight kilometres west of Barriere. It is accessible on secondary roads.

Chalcopyrite, pyrite, magnetite and possibly some sulphide nickel mineralization occur in small plugs of pyroxenite (Geology, Exploration and Mining in British Columbia 1972, page 315) which intrude "greenstones" and diorites. Trenching exposed mineralization in a southwest-trending "shear zone" about 21 metres wide within a narrow band of ultramafic rock. Preliminary chip samples in the trenches gave an average of about 0.22 per cent copper over 22 metres and a strike length of 30 metres. The age of the pyroxenite plugs is not known, however the dioritic rocks are probably part of the Upper Triassic to Lower Jurassic Thuya batholith. The "greenstones" are possibly part of the late Paleozoic Harper Ranch Group.

Pyramid Mining Company Limited undertook geological mapping and soil and silt geochemical surveys (535 samples) in 1970. In 1970, Cambridge Mines Limited staked the C.P. group of 32 claims after obtaining some evidence of copper mineralization in random geochemical drainage sampling. In 1972, Cambridge completed soil geochemical surveys (720 samples) as well as ground magnetic and electromagnetic surveys.

BIBLIOGRAPHY

EMPR ASS RPT *3816

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
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ENERGY AND MINERALS DIVISION

PAGE: 1173
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR FIELDWORK 2000, pp. 1-30
EMPR GEM 1970-316; 1972-315
GSC MAP 1278A
GSC MEM 363

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/19

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 103**

NATIONAL MINERAL INVENTORY:

NAME(S): **G, G CLAIMS, DISCOVERY ZONE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5707621
EASTING: 686654

LATITUDE: 51 29 20 N
LONGITUDE: 120 18 41 W
ELEVATION: 1250 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of "Discovery Showing" (Area 1, Map #1, Assessment Report 18597).

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Pyrite Galena
ASSOCIATED: Chlorite Calcite Quartz
ALTERATION TYPE: Propylitic
MINERALIZATION AGE:

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic-Jurassic
Triassic-Jurassic

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Dum Lake Intrusive Complex
Thuya Batholith

LITHOLOGY: Diorite
Gabbro

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1988

COMMODITY

GRADE

COMMODITY	GRADE	UNIT
Silver	36.9000	Grams per tonne
Gold	3.1500	Grams per tonne

COMMENTS: Sample width of 3.0 metres.

REFERENCE: Assessment Report 18597.

CAPSULE GEOLOGY

The G occurrence, also referred to as the "Discovery Zone" or Area 1 (Assessment Report 18597), is exposed in a roadcut on Highway 24, 10 (air) kilometres northwest of Little Fort.

The showing consists of a zone of variably oriented chlorite-calcite quartz veins, 1 to 3 centimetres wide, within faulted diorite and gabbro of the Dum Lake Intrusive Complex, near the contact with the Thuya batholith. The veins are mineralized with pyrite and traces of galena. They were explored for their precious metal content (Assessment Report 18597) and yielded assays of up to 3.15 grams per tonne gold and 36.9 grams per tonne silver across 3.0 metres.

The Upper Triassic to Lower Jurassic Dum Lake complex is comprised of ultramafic and mafic plutonic rocks that could be part of an Alaskan-type intrusive body. The mafic portions of the Dum Lake complex are dominated by coarse to medium-grained gabbro and diorite but locally includes clinopyroxenite, monzogabbro, microdiorite and tonalite (Fieldwork 2000). The ultramafic portion of the Dum Lake complex includes an assemblage of variably serpentinized, locally talc and carbonate-altered rocks consisting of clinopyroxenite, wehrlite and dunite. The Dum Lake complex is truncated by granodioritic rocks of the Triassic to Jurassic Thuya batholith on its southeast side. On its eastward side, Dum Lake complex diorites and gabbros are in contact with massive andesites of

CAPSULE GEOLOGY

the Upper Triassic Nicola Group and argillites, limestones and cherts of the late Paleozoic Harper Ranch Group (Fieldwork 2000).

A portion of the G Claim property was staked in 1985 by Craven Resources Incorporated to cover potential skarn and shear-hosted mineralization at the Cedar occurrences (092P 172, 170) located 1.5 kilometres east of the "Discovery Zone". A program of geological mapping, soil geochemical sampling, panned stream sediment samples, lithochemical sampling, magnetic and VLF-EM surveying was completed by Pamicon Developments Limited (Assessment Reports 13519 and 14477). In February 1988, George Wolanski identified the "Discovery Zone" along a road outcrop on Highway 24 and staked the G Claims. Esso Minerals Canada Limited optioned the property and in 1988 (Assessment Report 18597) completed a program of soil sampling (364 samples), silt sampling (25 samples), heavy mineral silt sampling (13 samples) and lithochemistry (124 samples). In 1991, Huntington Resources Inc. investigated geochemical anomalies south of the Discovery Zone and found float fragments with up to 4.15 grams per tonne gold and 89.1 grams per tonne silver and completed 5.7 kilometres of magnetometer and VLF-EM surveying, soil geochemical surveys (535 samples) and lithochemical surveys (81 samples).

BIBLIOGRAPHY

EMPR ASS RPT 13519, 14477, 16362, 17709, *18597, 186121, *22183
EMPR FIELDWORK 2000, pp. 1-30
GSC MEM 363
GSC MAP 1278A

DATE CODED: 2001/02/20
DATE REVISED: 2001/02/21

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 104**

NATIONAL MINERAL INVENTORY:

NAME(S): **LUCKY**, LUCKY 1-14, K.O. 1-14,
KIT 1-24

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P04E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 03 20 N
LONGITUDE: 121 32 15 W
ELEVATION: 1280 Metres

NORTHING: 5657020
EASTING: 602498

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Lucky 1-14 group of claims (Assessment Repote 3330).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE

Paleozoic-Mesozoic

GROUP

Cache Creek

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Basic Volcanic
Metasedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Pavilion Ranges

CAPSULE GEOLOGY

The Lucky claims were located 5 kilometres south of Clinton, east of Highway 97 and southeast of Three Mile Lake.

The northeastern portion of the claims is underlain by Permian to Triassic rocks of the Cache Creek Complex consisting of marine sedimentary and volcanic rocks (basic volcanic flows, tuff, ribbon chert, limestone and argillite). GSC Map 1278A (Memoir 363) shows the rest of the claims to be underlain by Jurassic sedimentary rocks (shale and grit).

Geology Exploration and Mining (1971, page 331) reports that "chalcopyrite occurs in Cache Creek metamorphic rocks".

Assessment report 3330 describes assessment work by Imperial Oil Enterprises Limited which included a soil sampling survey on the claims (1696 samples analysed for copper and molybdenum).

BIBLIOGRAPHY

EMPR ASS RPT 3330
EMPR GEM 1971-330
GSC MEM 363
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 105**

NATIONAL MINERAL INVENTORY:

NAME(S): **TEEPEE**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P07E
BC MAP:

Underground

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 27 14 N
LONGITUDE: 120 38 54 W

NORTHING: 5702924
EASTING: 663390

ELEVATION: 1240 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of "Main Showing", 1400 metres south of east end of Whitley Lake.

COMMODITIES: Molybdenum Copper

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite
ALTERATION: K-Feldspar
ALTERATION TYPE: Potassic
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP
Upper Triassic Nicola
Triassic-Jurassic

FORMATION
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER
Thuya Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Teepee showing is located 1600 metres south of the east end of Whitley Lake, and about 5 kilometres southeast of Bridge Lake. The area is approximately 90 kilometres north of Kamloops. A good secondary road leads to within 500 metres of the showing.

The showing consists of molybdenite-chalcopyrite mineralization accompanied by strong K-feldspar alteration in a northwest striking fault zone cutting granodiorite of the Triassic-Jurassic Thuya batholith (Assessment Report 3601). The showing is located immediately to the south of the contact between the batholith and Upper Triassic Nicola Group volcanic rocks. Nicola volcanic rocks are mainly augite andesite flows and breccias and tuff (Geological Survey of Canada Memoir 363).

The Teepee claims were staked by T. Gordon of Little Fort and the showing area trenched by Mr. Gordon in 1970. A short adit, now caved, was driven into the cliffside several years prior to this. Royal Canadian Ventures optioned the property, and in 1972 (Assessment Report 3601) undertook soil geochemical surveys (800 samples analysed for copper and molybdenum), magnetometer and VLF-EM surveys (48 kilometres).

BIBLIOGRAPHY

GSC MEM 363
GSC MAP 1278A
EMPR FIELDWORK 2000, pp.1-30
EMPR ASS RPT *3601
EMPR PF (Claim map, 1971)

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/16

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 106**

NATIONAL MINERAL INVENTORY:

NAME(S): **THUYA**, TH-1, SUNSHINE

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 26 46 N
LONGITUDE: 120 22 31 W
ELEVATION: 900 Metres

NORTHING: 5702704
EASTING: 682390

LOCATION ACCURACY: Within 500M

COMMENTS: Location of "copper occurrences north of Thuya Lake" (Geology, Exploration and Mining in British Columbia 1970, page 312, figure 44).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Saussurite
MINERALIZATION AGE:

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic			Thuya Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Thuya copper occurrences, also called the Sunshine claims, are located 12 (air) kilometres west of Little Fort, on the south side of Eakin Creek. The showings are exposed in a logging road (Geology, Exploration and Mining in British Columbia 1970, page 312, figure 44).

Two showings are shown on figure 44 (Geology, Exploration and Mining in British Columbia 1970) and on figure 4 (Occurrence Th-1 in Fieldwork 2000, pages 21 and 25). They are described as "sparse occurrences of chalcopyrite" in strongly fractured and saussuritized granodiorite of the Thuya batholith. Chalcopyrite is described as occurring in leached quartz veins that cut granodiorite of the Triassic to Jurassic Thuya batholith. Mineralization can be found along most roadcuts along the first 3 kilometres of the logging road. Similar alteration and traces of chalcopyrite were observed in a small isolated exposure of granitic rock on the same road 2800 metres south of Eakin Creek.

In 1971, Nippon Mining Company of Canada completed a program (Geology, Exploration and Mining in British Columbia 1971) of reconnaissance geological mapping and a geochemical soil survey (140 samples). There is no record of physical work on the occurrence.

BIBLIOGRAPHY

EMPR GEM *1970-307-312, Fig. 44; 1971-332
EMPR FIELDWORK 2000, pp. 1-30
GSC MEM 363
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/27

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 107**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOOD**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P15E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 49 00 N
LONGITUDE: 120 31 35 W
ELEVATION: 1370 Metres

NORTHING: 5743541
EASTING: 670495

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite
ASSOCIATED: Pyrrhotite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Cretaceous			Raft Batholith

LITHOLOGY: Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Hood showing is 6.5 kilometres south of the western end of Mahood Lake. Disseminated pyrrhotite, pyrite, chalcopyrite and molybdenite occur in a dioritic border phase of the Cretaceous Raft batholith.

Kennco conducted reconnaissance geological mapping, soil geochemistry and induced polarization surveys around the showing in 1971. The property, which included the CL showing (092P 025) was acquired by Sable Resources Limited in 1979 and named the DL 3 claim. In 1980, Sable Resources conducted line cutting and geochemical and magnetometer surveys over the area. Phoenix Geophysics Limited conducted an induced polarization survey for Sable Resources that same year.

BIBLIOGRAPHY

EMPR ASS RPT *9019
EMPR OF 2002-15
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/19

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 108**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEACH-MELBA**, PEACH LAKE, EAST ZONE (PEACH LAKE CLAIMS),
NORTHWEST ZONE (OPHIR CLAIM), PYRITE ZONE

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:
LATITUDE: 51 58 51 N
LONGITUDE: 121 20 14 W
ELEVATION: 1150 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location from figure 5, Assessment Report 253685.

MINING DIVISION: Clinton
UTM ZONE: 10 (NAD 83)
NORTHING: 5760212
EASTING: 614195

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Magnetite Pyrite
ALTERATION: K-Feldspar Epidote Diopside Garnet
ALTERATION TYPE: Potassic Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein Stratabound
CLASSIFICATION: Porphyry Hydrothermal Epigenetic Skarn
TYPE: L03 Alkalic porphyry Cu-Au K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic
Triassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Andesite
Monzonite

HOSTROCK COMMENTS: Monzonite intrusive host is part of the "synvolcanic" alkaline
intrusive bodies informally called the "Spout Lake Intrusive Suite".

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1995

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Gold

0.2300

Grams per tonne

Copper

0.2300

Per cent

COMMENTS: 77.4 metres in drill hole PL95-02.

REFERENCE: Assessment Report 25369.

CAPSULE GEOLOGY

The Peach-Melba showing is located on the west side of Peach Lake, approximately 21 kilometres northeast of Lac La Hache and is readily accessible from Highway 97 via a network of logging roads. The Peach-Melba showing is one of several copper showings on the current (February 2003) Ann and Dora claims (see also 092P 001, 002, 035, 115 and 153). All of these occurrences are part of the Spout Lake copper-gold district, a group of porphyry and skarn deposits associated with Upper Triassic to Lower Jurassic alkaline intrusive rocks of the Spout Lake intrusive suite.

The Peach-Melba showing is underlain by andesites, basalts, calcareous tuffs and argillites of the Upper Triassic Nicola Group (Assessment Report 25368). Nicola Group rocks are intruded by the Upper Triassic to Lower Jurassic Spout Lake Intrusive complex, an alkalic intrusive suite ranging in composition from pyroxenite through monzonite to syenite, and from batholithic size to small intrusive plugs, dykes and breccia bodies. Granodioritic rocks of the Triassic to Jurassic Takomkane Batholith intrude Nicola rocks east of the property. Outliers of alkaline plateau basalts of the Miocene to Pleistocene

CAPSULE GEOLOGY

Chilcotin Group are present in the general area.

No good description of the Peach-Melba showing is available, however Assessment Report 25368, states that "East Zone" (Peach-Melba showing) is an alkalic porphyry copper-gold system with fracture-controlled and disseminated pyrite-chalcopyrite mineralisation in potassic/propylitic altered andesitic flows and tuffs and monzonitic intrusive rocks. Diamond drill hole PL95-02 intersected porphyry-style disseminated mineralization over 77.4 metres grading 0.23 per cent copper and 0.23 grams per tonne gold. The intersection is part of a strong chargeability (induced polarization) anomaly which extends for 800 metres to the south to what has been called the "Northwest Zone" on the adjacent Ann #2 claim. The Peach-Melba showing also contains a moderately east-dipping 10 to 20 metre thick diopside-garnet skarn with minor magnetite and chalcopyrite.

Interest in the Spout Lake area was triggered in 1966 when the Geological Survey of Canada released the results of a regional airborne magnetic survey which outlined an annular magnetic anomaly 10 kilometres in diameter in the Spout Lake area and which included the area underlying the Peach #1 prospect. Subsequently in 1966 and 1967, Coranex Limited obtained anomalous results in follow-up stream sediment geochemical surveys and soil geochemical surveys in the area south of Peach Lake. Programs of geological, soil geochemical, magnetometer, induced polarization and prospecting surveys were undertaken in 1967 in the area south of Peach Lake, leading to the discovery of the Peach 1 and several other occurrences. Asarco Exploration Company of Canada Limited optioned the property in 1969. Amax Potash Limited optioned the property between 1971 and 1973 and completed programs of geological mapping, geophysics and percussion drilling. G.W.R. Resources Incorporated acquired the property, and optioned the property to Asarco Exploration Company of Canada Limited in 1991. In 1993, G.W.R. Resources formed a joint venture with Regional Resources. Percussion and diamond drilling has been undertaken by Amax (1972), Asarco (1991) and the G.W.R./Regional Resources joint venture in 1994 and 1995. Induced polarization surveys by Amax (1972), Asarco (1991), and the G.W.R./Regional joint venture outlined a 1.5 kilometres long and 800 metres wide chargeability anomaly that has been drilled by Amax (2 holes in 1972) and Asarco (6 holes in 1991). The G.W.R./Regional joint venture drilled 7 holes in 1994 and 1995 in three separate campaigns. Additional drilling was completed by G.W.R. Resources in the winter season of 2002/3 (Stockwatch 2003-03-19).

BIBLIOGRAPHY

EMPR AR 1966-126, 1967-126, *1968-155
EMPR GEM 1969-183, 1972-324, 1973-278
EMPR ASS RPT 1037, 1038, 1131, 1696, 1734, *3815, 3882, 4542,
11692, 13119, 17831, *21982, 23966, 23975, 24663, *253685
GSC MAP 1966-3, 1278A
GSC MEM 363
Whiteaker Robin (1966), The Geology, Geochronology and
Mineralization of the Ann Property: and Early Jurassic
Alkalic Porphyry System near Lac La Hache, B.C., Honours
B.Sc. Thesis, U.B.C.
Stockwatch 2003-03-19
WWW <http://www.infomine.com/>, <http://www.gwrresources.com>

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/05

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 110**

NATIONAL MINERAL INVENTORY:

NAME(S): **CHRISTMAS**, RK, LISA

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P15W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 53 16 N
LONGITUDE: 120 47 00 W
ELEVATION: 1070 Metres

NORTHING: 5750879
EASTING: 652547

LOCATION ACCURACY: Within 500M

COMMENTS: Location is the centre of the main showing (Assessment Report 16170).

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Arsenopyrite Pyrrhotite
ASSOCIATED: Ankerite Gypsum Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated Stockwork
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Andesite
Tuff
Hornblende Basalt Flow
Hornfels
Hornblende Diorite
Volcaniclastic Sediment/Sedimentary
Rhyodacite Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock

YEAR: 1987

COMMODITY

Gold

GRADE

4.0270

Grams per tonne

COMMENTS: Assay from Lisa showing, west of Christmas Lake.
REFERENCE: Assessment Report 16170.

ORE ZONE: MAIN SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock

YEAR: 1987

COMMODITY

Gold

GRADE

5.9100

Grams per tonne

REFERENCE: Assessment Report 16170.

CAPSULE GEOLOGY

The Christmas claim group is located on the north shore of Canim Lake, about 55 kilometres northeast of 100 Mile House. Chalcopyrite, pyrite and pyrrhotite occur in andesites, tuffs and sedimentary rocks that are hornfelsed adjacent to a diorite plug. High gold values have been obtained from these sulphide-rich hornfels areas.

The claims are underlain by a succession of interbedded hornblende basalt flows, fine grained, banded volcaniclastic sediments, and aphanitic rhyodacite tuffs of the Upper Triassic Nicola Group. The bedded rocks strike from 188 to 285 degrees and dip from 38 to 85 degrees to the northwest. The entire assemblage is intruded by fine to medium-grained hornblende diorite.

Alteration in the country rock is generally restricted to weak to moderate silicification accompanied by 2 to 3 per cent

CAPSULE GEOLOGY

disseminated pyrite. Pyrite is commonly concentrated along fractures. Gypsum was noted locally associated with pyrite on fractures. Minor quartz stockwork veining was also noted in several locations.

There are three target areas on the property: the Main showing just 2 kilometres north of the lakeshore; the Lisa target area, which lies across the main road from the main showing, about 400 metres west of Christmas Lake; and the North Grid target area, 2.5 kilometres north-northeast of the main showing. A rock sample from the main showing assayed 5.910 grams per tonne gold (Assessment Report 16170). Rubble of arsenopyrite-mineralized quartz-ankerite veining was uncovered at the Lisa Target area. The best assay from the Lisa showing yielded 4.027 grams per tonne gold (Assessment Report 16170).

In 1970, most of the ground between the road beside Christmas Lake and the north shore of Canim Lake was held as the Merv Group by Troy Silver Mines. Rokon Mines Limited held the 22 claim RK property southeast of the Troy Silver ground, directly south of the wedge-shaped lake east of Christmas Lake. Drilling was done on the Troy Silver ground sometime before 1970. E & B Explorations Incorporated conducted rock and soil geochemical surveys and reconnaissance geological mapping in 1983. In the spring of 1985 they continued the soil sampling program and ran magnetic and VLF-EM surveys over the main and northeast areas. Ming Mines optioned the ground from E & B Explorations during 1985. Fill-in soil sampling was carried out by E & B in the fall of 1986. Continued work the following spring resulted in the discovery of the Lisa target area.

Access road rehabilitation, trenching and sampling within a 2,600 feet X 500 feet X 1000 feet area was carried out by Nustar Resources Inc. in 2002.

BIBLIOGRAPHY

EMPR ASS RPT *12138, 14239, 14452, 15699, *16170
EMPR EXPL 1987-C243
EMPR OF 2002-15
EMPR PF (Hogan, J.W. (1970): Report on the R.K. claims - Canim Lake, B.C.)
GSC MAP 1278A
PR REL Nustar Resources Inc., Aug.6, 22, Oct.16, Nov. 1, 28, 2002
WWW <http://www.nustarresources.com/>; <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/02

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 111**

NATIONAL MINERAL INVENTORY:

NAME(S): **OWEN, ALAN**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P06E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 17 10 N
LONGITUDE: 121 03 51 W

NORTHING: 5683422
EASTING: 634994

ELEVATION: 1050 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of bornite-chalcopryrite mineralisation east of small lake, figures 2, Assessment Reports 3478 and 3479.

COMMODITIES: Copper

Zinc

MINERALS

SIGNIFICANT: Bornite Chalcopyrite Sphalerite

ALTERATION: Malachite

ALTERATION TYPE: Potassic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated

CLASSIFICATION: Porphyry

TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Triassic-Jurassic

Unnamed/Unknown Informal

LITHOLOGY: Fine Grained Leucocratic Syenite
Hornblende Biotite Syenite
Pegmatite Dike
Aplite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Owen copper property is located east of the Rayfield River, approximately 20 kilometres east of 70-Mile House between Crater Lake and the Bonaparte River. It is adjacent to and located east of the Rayfield copper property (MINFILE 092P 005), and is probably part of the same large mineralized alkaline intrusive complex. It is readily accessible by logging road.

The property is underlain by several phases of a syenitic to monzonitic to dioritic plutonic complex probably of late Triassic to Early Jurassic age. The complex occurs as a window through the extensive Miocene plateau basalts which blanket much of the Cariboo Plateau. The main lithologies are a fine grained leucosyenite and hornblende biotite syenite of varying texture and granularity (Assessment Report 3478). Numerous pegmatite and aplite dykes intrude the syenites, and are usually mineralised with bornite, chalcopryrite, chalcocite and pyrite as disseminations and along joint surfaces.

The earliest recorded work in the area was west of the property, when Kennco Explorations (Western) Limited in 1963 completed work on the Pat Group of claims. The work consisted of geological mapping and soil and stream sediment geochemical sampling (Assessment Report 528). In 1966, COMINCO Limited (Assessment Report 859) completed a program of soil geochemical sampling (800 samples with analyses for copper, lead and zinc) and magnetometer surveying on the I.D.S. 1 to 16 claims which covered part of the Owen property. In 1971, G.V. Lloyd Exploration Ltd. completed programs of prospecting, magnetometer surveying (80.1 kilometres), and rock chip and soil geochemical surveying (1500 samples analysed for total heavy metals) on the Owen Group I and Owen Group II mineral claims which covered the property (Assessment Reports 3478, 3479 and 3618).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1186
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM 1970-218
EMPR ASS RPT 528, 859, 3478, 3479, 3618, 19927
GSC MAP 1278A
GSC MEM 363

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/16

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 112**

NATIONAL MINERAL INVENTORY:

NAME(S): **JULY**, RL, NOD

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P15W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 54 17 N
LONGITUDE: 120 54 44 W
ELEVATION: 945 Metres

NORTHING: 5752501
EASTING: 643624

LOCATION ACCURACY: Within 500M

COMMENTS: Location of drillhole (Assessment Report 4496).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Magnetite Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Triassic
Triassic-Jurassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Takomkane Batholith

LITHOLOGY: Syenite
Syenite Dike
Granite
Meta Volcanic
Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The July property is 5.5 kilometres northwest of the village of Eagle Creek on Canim Lake. The main showing is about 500 metres north of the east end of Roger Lake. The Beer showing (092P 125) is also on the July claims. Pyrite, chalcopyrite and bornite mineralization occurs as clots and as disseminated and impregnated grains in syenitic dikes which intrude a contact breccia zone between Triassic to Jurassic Takomkane batholith granite and Upper Triassic Nicola Group metavolcanics. Magnetite is present in all but the most leucocratic of the intrusive phases on the property, and occurs as pods, veinlets and disseminations.

F.R. Gatchalian staked the July claims in July 1972 and conducted geological mapping, soil geochemical sampling and a ground magnetic survey. During this work, claim posts and flagging were found that indicated that the area had been staked and worked as the RL group in 1969 by Royal Canadian Ventures, and as the Nod group by Texas Gulf Sulfur in 1971. The Beer showing had been covered by a number of claims and trenched by Aragon Exploration Limited in 1970. In 1990, Princeton Mining Corporation extended their grid northwards from the Clay property (092P 155), then called the Robby Group. The extension included the Ski 1 claim, which included the July property. The extension was subsequently dropped.

BIBLIOGRAPHY

EMPR ASS RPT *4496, 20469
EMPR GEM 1971-336; 1972-325; 1973-281
EMPR OF 2002-15
EMPR PF (Claim map, 1972)
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/28

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 113**

NATIONAL MINERAL INVENTORY:

NAME(S): **SUSAN LAKE**, SHERI 31, JUDY,
BEV 1

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P15W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 56 01 N
LONGITUDE: 120 54 25 W
ELEVATION: 913 Metres

NORTHING: 5755724
EASTING: 643894

LOCATION ACCURACY: Within 500M

COMMENTS: Location is from the corner post of the Canim 4 claim on the north shore of Susan Lake (Assessment Report 19322).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Quartz Carbonate Pyrrhotite Magnetite Pyrite
ALTERATION: Chlorite Epidote Silica Malachite
ALTERATION TYPE: Propylitic Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic-Jurassic
Triassic-Jurassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Takomkane Batholith

LITHOLOGY: Quartz Diorite
Hornblende Biotite Granodiorite
Hornfels
Andesitic Volcanic
Mafic Intrusive
Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Susan Lake occurrences are located near Susan Lake, which is about nine kilometres north-northwest of the village of Eagle Creek, at the west end of Canim Lake. The claim area lies along the northeast trending contact between hornblende biotite granodiorite and quartz diorite of the Triassic to Jurassic Takomkane batholith and andesitic volcanics and sedimentary rocks of the Triassic-Jurassic Nicola Group.

Minor occurrences of bornite and chalcopyrite, along with pyrite and pyrrhotite, in narrow quartz-carbonate or carbonate veins, are locally abundant to the south of Susan and Bev lakes. Mineralized veins are uncommon, ranging in width from 1 to 15 centimetres, are stained with malachite and occur mainly to the south and southwest of Judy Lake. Magnetite occurs locally throughout the area as granular masses, in seams, and as fine-grained disseminations. In the vicinity of Bev and Judy lakes the rocks are weakly to moderately propylitically altered. The alteration is characterized by chlorite, epidote, minor silica, pyrite and pyrrhotite. Hornfelsing is developed in the vicinity of some of the more mafic intrusions.

In October 1972, Pickand, Mather and Company staked the Sheri claims in order to evaluate the area for copper porphyry potential. The southern border of the Sheri claims ran from the north shore of Susan Lake to the north shore of Beverly Lake, and the block spread to the north, encompassing Iron, Island and Horse lakes. From 1972 to 1974, Pickand Mather conducted an exploration program including magnetometer, induced polarization and soil surveys, a mercury vapour survey, geological mapping and eight BQ diamond-drill holes for a total of 694 metres. H.J. Wahl gained ownership of the Sheri property, and in 1976 undertook a program on the claims including linecutting, prospecting, geological mapping, soil sampling and

CAPSULE GEOLOGY

trenching. In 1981, Boville Resources Limited conducted a pulse electromagnetic survey and a limited soil sampling program, which identified several narrow, weak near-surface conductors and anomalous copper values to the south and southwest of Beverly Lake. But most of the work on the old Sheri claims during the 1980s was on the northern part of the claim, as the Canim 1-4 and Horse claims (092P 132). In 1989, Rio Algom staked the Judy property (Bev 1-5 claims) which covers the area south of the old Sheri claims, and spreads north to the east of the Canim 1 and Horse claims. Rio carried out a program which included airborne magnetic and VLF-EM surveys, soil sampling and geological mapping. During 1990, Rio Algom followed up with detailed prospecting, soil pitting and rock sampling. Results of gold or copper geochemistry were disappointing and the property was dropped.

BIBLIOGRAPHY

EMPR ASS RPT 4265, 4266, 9465, 19322, 21462
EMPR GEM 1973-282; 1974-229
EMPR OF 2002-15
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/10

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 114**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPRING LAKE, SL GROUP, TY1,
SPRING GROUP**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 47 43 N
LONGITUDE: 121 15 29 W
ELEVATION: 915 Metres

UTM ZONE: 10 (NAD 83)
NORTHING: 5739704
EASTING: 620126

LOCATION ACCURACY: Within 500M

COMMENTS: Location of diamond drill hole S-59-3, 1.5 kilometres southwest of Spring Lake, figure 7, Assessment Report 23965.

COMMODITIES: Copper Gold Silver

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Covellite Copper
ASSOCIATED: Pyrite Magnetite
ALTERATION: K-Feldspar Epidote
ALTERATION TYPE: Potassic Propylitic Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Porphyry
TYPE: L PORPHYRY K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic	Nicola	Undefined Formation	Takomkane Batholith

LITHOLOGY: Quartz Diorite
Porphyritic Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1995
SAMPLE TYPE: Drill Core
COMMODITY: Copper 0.1840 Per cent
COMMENTS: 21 metre interval assayed 0.184% Cu, 0.03 g/t Au and 1.0 g/t Ag.
REFERENCE: Assessment Report 23965.

CAPSULE GEOLOGY

The Spring Lake copper prospect is located 15 kilometres east-southeast of Lac La Hache, and is accessible via the Highway 97 and the 111 Mile Creek road (Assessment Report 23965). The area is underlain by porphyritic quartz monzonitic to dioritic intrusive rocks of the Triassic to Jurassic Takomkane Batholith which intrudes andesitic to basaltic volcanic and sedimentary strata of the Upper Triassic Nicola Group. Pyrite, chalcopyrite, bornite, covellite and native copper are reported (Assessment Report 23965) to occur over a large area between Spring, Chub and Kelly Lakes, with the best copper values near a north-trending contact zone between Takomkane granodiorite and Nicola volcanic rocks. Local garnet-epidote skarn is present in some of the calcareous Nicola rocks. The copper mineralisation is associated with moderate to intense propylitic to potassic alteration, and locally skarnification in the calcareous Nicola rocks. Diamond drill hole S-95-3 intersected 21 metres grading 0.184 per cent copper, 0.03 grams per tonne gold and 1.0 grams per tonne silver in strongly magnetic quartz monzonite. Diamond drill hole S-95-4 intersected 15 metres grading 0.151 per cent copper, 0.08 grams per tonne gold and 1.0 grams per tonne silver in magnetite-bearing andesitic agglomerate.

CAPSULE GEOLOGY

The earliest recorded work resulted from the Geological Survey of Canada airborne magnetic survey in 1966, when a circular anomaly was detected over the area. In 1969, Royal Canadian Ventures Limited (Assessment Report 1834) staked the SL Group of claims, prepared 19 kilometres of grid and completed a soil geochemical survey (300 samples analysed for copper, silver, zinc and nickel), a ground magnetic and a VLF-EM survey over the property. In 1970, they completed a mercury vapour soil geochemical survey (Assessment Report 2378) and drilled one diamond drill hole totalling 67.1 metres (Geology Exploration and Mining 1971). In 1982, Guichon Explorco Limited, staked the TY1 claims and collected 72 soil samples from a flagged grid, and analysed them for copper, gold, zinc, silver and mercury. In 1983, they completed two induced polarization surveys - 2.35 line kilometres by Peter E. Walcott and Associates and 2.0 line kilometres by Phoenix Geophysics Limited. In 1994, GWR Resources Incorporated staked the the spring claims over property and completed a program of geological mapping, induced polarization surveying (18 line kilometres), magnetic surveying (12 kilometres), soil sampling (100 samples analysed for copper an gold) and a diamond drill program (12 holes totalling 1549 metres).

BIBLIOGRAPHY

EMPR ASS RPT 1834, 2378, 10667, 11982, 23965
EMPR GEM 1971-335
GSC MAP 1966-3, 1278A
GSC MEM 363

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/20

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 115**

NATIONAL MINERAL INVENTORY:

NAME(S): **PEACH 5, NK, ZONE 1, ANN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:

LATITUDE: 51 58 10 N
LONGITUDE: 121 18 41 W
ELEVATION: 1220 Metres

LOCATION ACCURACY: Within 500M
COMMENTS: Location from Map #4, Assessment Report 3815.

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

NORTHING: 5758986
EASTING: 615999

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Malachite
ASSOCIATED: Pyrite
ALTERATION: K-Feldspar Epidote
ALTERATION TYPE: Potassic Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Triassic
Triassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Monzonite
Monzonite Porphyry

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 2000

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Gold

0.2300

Grams per tonne

Copper

0.1900

Per cent

COMMENTS: Sample width 89.3 metres in drill hole NK00-1.
REFERENCE: G.W.R. Resources Inc. private report, March 2001.

CAPSULE GEOLOGY

The Peach 5 (or NK) copper showing is located 2 kilometres south of Peach Lake, approximately 20 kilometres northeast of Lac La Hache and is readily accessible from Highway 97 via a network of logging roads. Other names for the claims and showings have been the Ann, Peach and the Ophir. The Peach #5 showing is one of several copper showings on the current Ann 1 and 2 claims (see also 092P001, 002, 034, 035 and 153). All of these occurrences are part of the Spout Lake copper-gold district, a group of porphyry and skarn deposits associated with Late Triassic to Early Jurassic alkaline intrusive rocks of the Spout Lake intrusive suite.

The Ann 1 and 2 claims are underlain by andesites, basalts, calcareous tuffs and argillites of the Late Triassic Nicola Group (Assessment Report 23976). Nicola Group rocks are intruded by the Upper Triassic to Early Jurassic Spout Lake Intrusive complex, an alkalic intrusive suite ranging in composition from pyroxenite through monzonite to syenite, and from batholithic size to small intrusive plugs, dykes and breccia bodies. Granodioritic rocks of the Triassic to Jurassic Takomkane Batholith intrude Nicola rocks east of the property. Outliers of alkaline plateau basalts of the Miocene to Pleistocene Chilcotin Group are present in the general area.

CAPSULE GEOLOGY

No good description of the Peach 5 deposit is available, however Assessment Report 3815, states that "chalcopyrite mainly occurs in veined syenodiorite (monzonite) at the contacts of monzonite porphyry. Also minor disseminated chalcopyrite occurs in monzonite and minor malachite" is present. K-feldspar and epidote are noted as alteration minerals. A drill hole intersected 89.3 metres of mineralisation grading 0.19 per cent copper and 0.23 grams per tonne gold (Property File, G.W.R. Resources Incorporated report, March 2001).

Interest in the Spout Lake area was triggered in 1966 when the Geological Survey of Canada released the results of a regional airborne magnetic survey which outlined an annular magnetic anomaly 10 kilometres in diameter in the Spout Lake area and which included the area underlying the Peach #1 prospect. Subsequently in 1966 and 1967, Coranex Limited obtained anomalous results in follow-up stream sediment geochemical surveys and soil geochemical surveys in the area south of Peach Lake. Programs of geological, soil geochemical, magnetometer, induced polarization and prospecting surveys were undertaken in 1967 in the area south of Peach Lake, leading to the discovery of the Peach 1 and several other occurrences. Asarco Exploration Company of Canada Limited optioned the property in 1969. Amax Potash Limited optioned the property between 1971 and 1973 and completed programs of geological mapping, geophysics and percussion drilling. In 1983 and 1984, the Selco Division of BP Resources Canada Limited completed soil geochemical surveys on the Core group of claims which covered the property. G.W.R. Resources Incorporated acquired the property in 1988 and Asarco re-optioned the property and completed induced polarisation surveys and percussion drilling in 1991. In 1993, G.W.R. Resources formed a joint venture with Regional Resources and have since completed programs of induced polarization and diamond drilling. G.W.R. Resources has conducted additional diamond drill programs in 1999 and 2000.

BIBLIOGRAPHY

EMPR AR 1966-126, 1967-126, *1968-155
EMPR GEM 1969-183, 1972-324, 1973-278
EMPR ASS RPT 1037, 1038, 1131, 1696, 1734, 2347, *3815, 3882,
4542, 11692, 13119, 17831, *21982, 23975, *25368, 23975
GSC MAP 1966-3, 1278A
GSC MEM 363
*EMPR PF (Lac la Hache Project, G.W.R. Resources Inc., March 2001)
Whiteaker, Robin (1966), The Geology, Geochronology and
Mineraliation of the Ann Property: and Early Jurassic Alkalic
Porphyry system near Lac La Hache, B.C. Honours B.Sc. Thesis,
University of British Columbia.
GCNL #134 (July 13), 2000
WWW <http://www.infomine.com/>, <http://www.gwrresources.com>

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/07

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 116**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLEARWATER PEAK 53**, CP 53

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09E
BC MAP:

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 40 24 N
LONGITUDE: 120 15 00 W
ELEVATION: 1460 Metres

NORTHING: 5728287
EASTING: 690143

LOCATION ACCURACY: Within 500M

COMMENTS: Location from geological map (Assessment Report 3885).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Pyrite Pyrrhotite
ALTERATION: Epidote
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Slide Mountain	Fennell	

LITHOLOGY: Fine Grained Andesite
Pillow Flow

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Clearwater Peak showings are located on the southwest-facing slope below Clearwater Peak, which is about 12.5 kilometres west-northwest of the town of Clearwater. Scattered chalcopyrite within narrow quartz veins occurs along with pyrite and pyrrhotite at three locations on the property. At Clearwater Peak 53, the chalcopyrite-bearing veins occur in fine-grained andesite of the Devonian to Permian Fennell Formation of the Slide Mountain Group. Pillowed flows with epidote-rich interstices were mapped on the claim.

The CP claim block was prospected, mapped and soil sampled by Kerr, Dawson and Associates for Pan Ocean Oil Limited in 1972.

BIBLIOGRAPHY

EMPR ASS RPT *3885
EMPR GEM 1972-319
EMPR OF 2002-15
GSC MAP 1278A
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/01

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 117**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLEARWATER PEAK 17, CP 17**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 39 14 N
LONGITUDE: 120 13 07 W
ELEVATION: 1350 Metres

NORTHING: 5726208
EASTING: 692396

LOCATION ACCURACY: Within 500M

COMMENTS: Location from geological map (Assessment Report 3885).

COMMODITIES: Copper

MINERALS

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

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Slide Mountain	Fennell	

LITHOLOGY: Fine Grained Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Clearwater Peak showings are located on the southwest-facing slope below Clearwater Peak, which is about 12.5 kilometres west-northwest of the town of Clearwater. Scattered chalcopyrite within narrow quartz veins occurs along with pyrite and pyrrhotite at three locations on the property. At Clearwater Peak 17, the chalcopyrite veins occur in fine-grained andesite of the Devonian to Permian Fennell Formation of the Slide Mountain Group.

The CP claim block was prospected, mapped and soil sampled by Kerr, Dawson and Associates for Pan Ocean Oil Limited in 1972.

BIBLIOGRAPHY

EMPR ASS RPT *3885
EMPR GEM 1972-319
EMPR OF 2002-15
GSC MAP 1278A
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/01

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 118**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLEARWATER PEAK 34**, CP 34

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5726020
EASTING: 689902

LATITUDE: 51 39 11 N
LONGITUDE: 120 15 17 W
ELEVATION: 990 Metres

LOCATION ACCURACY: Within 500M
COMMENTS: Location from geological map (Assessment Report 3885).

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena
ASSOCIATED: Quartz Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Slide Mountain	Fennell	

LITHOLOGY: Phyllite
Slate

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Clearwater Peak showings are located on the southwest facing slope below Clearwater Peak, above Mann Creek, about 14 kilometres west of Clearwater. Scattered chalcopyrite within narrow quartz veins occurs at three locations on the property. At Clearwater Peak 34, the chalcopyrite-bearing veins occur in a slate-phyllite sequence of the Devonian to Permian Fennell Formation of the Slide Mountain Group in Mann Creek at the west end of the CP property. A trace of galena was also found in a quartz-carbonate vein.
The CP claim block was prospected, mapped and soil sampled by Kerr, Dawson and Associates for Pan Ocean Oil Limited in 1972.

BIBLIOGRAPHY

EMPR ASS RPT *3885
EMPR GEM 1972-319
EMPR OF 2002-15
GSC MAP 1278A
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/01

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 119**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN LOON LOW GRADE ZONE**, GL-2, GOLDEN LOON 2

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5702729
EASTING: 687336

LATITUDE: 51 26 41 N
LONGITUDE: 120 18 15 W
ELEVATION: 1190 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of "Low Grade Zone" (Drawing 588-4A, Assessment Report 25431).

COMMODITIES: Gold Silver

MINERALS

SIGNIFICANT: Pyrite Specularite
ASSOCIATED: Quartz
ALTERATION: Silica Carbonate
ALTERATION TYPE: Silicific'n Carbonate
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Shear Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
SHAPE: Tabular
DIMENSION: Metres STRIKE/DIP: 330/ TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic	Harper Ranch	Undefined Formation	Dum Lake Intrusive Complex
Triassic-Jurassic			Thuya Batholith

LITHOLOGY: Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel Harper Ranch
PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1997
SAMPLE TYPE: Drill Core
COMMODITY: Gold GRADE: 2.6700 Grams per tonne
COMMENTS: A 10.4 metre sample width.
REFERENCE: Assessment Report 25431.

CAPSULE GEOLOGY

The Golden Loon Low Grade Zone, also called the Golden Loon 2 or GL-2 deposit is located 500 metres southwest of Dum Lake and 6 (air) kilometres west of Little Fort. Good quality logging and bush roads provide access to the property.

The deposit is a northwest trending, carbonate-silica altered shear zone that is exposed along strike for about 150 metres (Assessment Report 25432; Fieldwork 2000). A trench exposed more than 6 metres of pervasive silicification containing disseminated and fracture-controlled specularite and pyrite. Assessment Report 25434 quotes a private Corona Corporation report by R.C. Wells and J.R. Bellamy which states that "gold values in the 0.5 to 2.5 grams per tonne range occur throughout the trench and average 1.17 grams per tonne for all samples." This report also mentions that gold values were encountered in six shallow drillholes bored beneath the "Low Grade Zone" with the best intersection being 2.67 grams per tonne gold over 10.4 metres. About 100 metres along strike to the southeast of the trenched and drilled area, a north-trending vein up to 70 centimetres in width contains up to 8.3 grams per tonne gold and 66.7 grams per tonne silver. The bleached and silicified wallrocks yielded values of up to 2.0 grams per tonne gold (Assessment Report 25431).

CAPSULE GEOLOGY

Hostrocks are dioritic intrusive rocks of the Triassic to Jurassic Dum Lake Intrusive Complex which consists of a mafic portion composed of diorite, gabbro, microdiorite and intrusion breccia, and an ultramafic portion composed of dunite, wehrlite, pyroxenite and serpentine. The Dum Lake Intrusive Complex is believed to be an Alaskan-type intrusive complex (Fieldwork 2000). It is in contact with granodioritic rocks of the Triassic to Jurassic Thuya batholith on the west. On its eastern side the Dum Lake intrusive rocks intrude siltstone, argillite, chert and limestone of the late Paleozoic Harper Ranch Group and mafic volcanic rocks, related volcanoclastic rocks, clastic sediment, chert and limestones of the Upper Triassic Nicola Group.

The earliest record of prospecting in the area dates from the 1920s when placer gold was recovered from the Eakin Creek Placer (092P 055). In 1967, Noranda Exploration Company (Assessment Report 1051) completed a soil sampling survey over the Kira claims after obtaining anomalous results in a reconnaissance stream sediment sampling program. The program outlined zones of anomalous copper and nickel. In 1973, Rio Tinto Canadian Exploration Limited completed another soil geochemical sampling program on the Dum Claim Group (Assessment Report 4689), outlining copper, zinc and lead anomalies west of Dum Lake. Teck Corporation reportedly (Assessment Reports 14237, 15870) staked the Minerva Group in 1980-81 on the west side of the Golden Loon Property and undertook a magnetometer survey and a soil geochemical survey, obtaining several silver anomalies. In 1984, The Golden Loon Claims were staked by Barnes Creek Minerals and a prospecting program undertaken (Assessment Report 14237). In 1985, additional prospecting was undertaken and magnetometer, VLF-EM and soil geochemical surveys completed (Assessment Reports 14920 and 15937). In 1987, Mineta Resources completed a program (Assessment Report 17342) which included soil geochemical surveys (548 samples), linecutting (34.6 kilometres), lithochemistry (18 samples), and stream sediment geochemical sampling (70 samples) and located some high grade float boulders as well as outlined some gold-in-soil geochemical anomalies. In 1988, Mineta completed 78.2 kilometres of linecutting, 61.0 kilometres of VLF-EM and magnetometer surveying and collected 1571 soil geochemical samples (Assessment Reports 18802 and 21109). In 1989, Mineta completed 25.0 kilometres of VLF-EM and magnetometer surveying, as well as soil geochemical (556 samples) and lithochemical (20 samples) surveys (Assessment Report 20029). In 1990, the property was optioned to Corona Corporation and an extensive program (Assessment Report 21014) of prospecting, geological mapping, soil geochemical sampling (637 samples) and geophysical surveys (25 kilometres of magnetometer and VLF-EM), trenching and diamond drilling (691 metres in 7 holes) was carried out. In 1992, Placer Dome Limited optioned the property, focusing on the porphyry copper-gold potential of the western portion of the property (Assessment Report 22818) and completed 20.0 kilometres of grid preparation, geological mapping and soil geochemical surveying (1083 samples). In 1996, Meteor Minerals Incorporated completed a program of geochemical soil sampling to test the potential of the enzyme leach technique in tracing mineralized zones in areas of extensive overburden (Assessment Report 24883). In 1997, Meteor completed a three-hole (393 metres) diamond drill program on the Golden Loon High Grade Zone (092P 141). In 1999, Tilava Mining Corporation completed a program of lithochemical sampling (150 samples) on ultramafic rocks on the property and detected significant platinum values (Assessment Report 26100). In 2000, the property was optioned by Case Gold Mines Limited (George Cross News Letters #191, #216, 2000) and VLF-EM, magnetometer, induced polarization and soil geochemical (119 samples) surveys completed.

BIBLIOGRAPHY

EMPR ASS RPT 1051, 2418, 4689, 14237, 14920, 15870, 15937, 17342, 18802, 20029, 21109, 21014, 22818, 24315, 24883, *25431, 26100
EMPR FIELDWORK *2000, pp. 20-22
GSC MAP 1278A
GSC MEM 363
GCNL #234(Dec.7), 1999; #154(Aug.11), #191(Oct.5), #216(Nov.10), 2000
WWW <http://www.infomine.com/index/>

DATE CODED: 2001/02/23
DATE REVISED: 2001/02/23

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 120**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPOUT LAKE**, WC, W.C.,
PEACH LAKE

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:

MINING DIVISION: Clinton
Cariboo
UTM ZONE: 10 (NAD 83)

LATITUDE: 51 59 25 N
LONGITUDE: 121 22 18 W
ELEVATION: 1120 Metres

NORTHING: 5761209
EASTING: 611807

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of the North zone, about 300 metres south of the shoreline of Spout Lake, 20.5 kilometres north-northeast of Lac la Hache (Figure 5, Assessment Report 25368).

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite
ASSOCIATED: Pyrite Garnet Epidote Feldspar Scapolite
Tourmaline Hematite
COMMENTS: Rare specular hematite.
ALTERATION: Garnet Epidote Feldspar Scapolite Tourmaline
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Massive
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn
DIMENSION: 365 x 90 x 50 Metres STRIKE/DIP:
COMMENTS: The North zone is vertical and 1.2 to 50 metres wide, 365 metres long and at least 90 metres deep. TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Nicola	Undefined Formation	

LITHOLOGY: Augite Porphyry Andesite
Plagioclase Porphyry Andesite
Andesite
Limy Andesite Breccia
Limestone Breccia
Polymictic Volcanic Breccia
Conglomerate
Microdiorite Dike
Porphyritic Monzonite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Quesnel Highland
TERRANE: Quesnel

INVENTORY

ORE ZONE: TOTAL REPORT ON: Y
CATEGORY: Indicated YEAR: 1993
QUANTITY: 554200 Tonnes
COMMODITY GRADE
Gold 0.1700 Grams per tonne
Copper 1.8000 Per cent
REFERENCE: Vancouver Stockwatch - March 4, 1993, Regional Resources Inc.

CAPSULE GEOLOGY

The Spout Lake (WC) copper-magnetite skarn deposits are located 300 metres south of Spout Lake, about 20 kilometres north-northeast of Lac La Hache. It is 6 kilometres east of Highway 97 and is easily accessible on secondary roads. The Spout Lake deposit is one of several copper showings in the Spout and Peach Lakes area (see also 092P 001, 002, 035, 109, 153 and 174). All of these occurrences are part of the Spout Lake copper-gold district, a group of porphyry and skarn deposits associated with Upper Triassic to Lower Jurassic alkaline intrusive rocks of the Spout Lake intrusive suite.

CAPSULE GEOLOGY

The Spout Lake property is underlain by andesites, basalts, calcareous tuffs and argillites of the Late Triassic Nicola Group. Nicola Group rocks are intruded by the Late Triassic to Early Jurassic Spout Lake Intrusive complex, an alkalic intrusive suite ranging in composition from pyroxenite through monzonite to syenite, and from batholithic size to small intrusive plugs, dykes and breccia bodies. Granodioritic rocks of the Triassic to Jurassic Takomkane Batholith intrude Nicola rocks east of the property. Outliers of alkaline plateau basalts of the Miocene to Pleistocene Chilcotin Group are present in the general area.

The Spout Lake property is underlain by a generally moderate to steeply northeast dipping sequence of Upper Triassic Nicola Group volcanic flows and volcanoclastic sedimentary rocks. A predominant set of north to northeast trending faults and a subordinate east to west trending fault set slightly complicates the geology. The Nicola volcanic flows comprise augite porphyry andesite, plagioclase porphyry andesite and fine-grained andesite. The volcanoclastic sediments include limestone breccia, limy andesite breccia, polymictic volcanic breccia and conglomerate. Intrusive rocks consist of microdiorite and porphyritic monzonite dikes.

Skarn occurs in two distinct zones. The North zone is a vertical zone 1.2 to 50 metres wide, 365 metres long and at least 90 metres deep. Drilling extended the strike length to 660 metres and indicated the possibility of a parallel zone. The South zone, 150 to 200 metres south to southwest of the North zone, is 245 by 300 metres by 60 metres thick and dips gently (15 degrees) to the southeast. Both zones are underlain by the same stratigraphy which exhibits variable skarn alteration. The northwest orientation of intrusive dikes and sills is the dominant control for alteration and mineralization. At the North and South zones, alteration and mineralization is parallel to or at a slight angle to this northwest trend.

Skarn mineralization consists of chalcopyrite associated with massive magnetite, pyrite and rarely specular hematite. Chalcopyrite occurs as disseminated coarse blebs in skarn and in the magnetite. Pyrite is subordinate to chalcopyrite. Skarn alteration of the volcanic flows is limited to garnet-epidote development in amygdules while in the volcanic sediments it is much more intense. In limestone breccia, beige grossular garnet is the most dominant silicate mineral, which in the South zone is associated with chalcopyrite. In limy andesite breccia, the matrix is altered to a mixture of epidote, pink feldspar, garnet, scapolite and tourmaline. The polymictic volcanic conglomerate is similarly altered and where alteration is intense, it is difficult to distinguish between rock types.

Estimated "reserves" (mineral inventory) at the Spout Lake property are 541,000 tonnes grading 1.8 per cent copper and 0.12 gram per tonne gold (Assessment Report 23251).

Interest in the Spout Lake area was triggered in 1966 when the Geological Survey of Canada released the results of a regional airborne magnetic survey which outlined an annular magnetic anomaly 10 kilometres in diameter in the Spout Lake area which included the area underlying the Peach 1 prospect. Subsequently in 1966 and 1967, Coranex Limited obtained anomalous results in follow-up stream sediment geochemical surveys and soil geochemical surveys in the area south of Peach Lake. Programs of geological, soil geochemical, magnetometer, induced polarization and prospecting surveys were undertaken in 1967 in the area south of Peach Lake, leading to the discovery of the Peach 1 and several other occurrences. Asarco Exploration Company of Canada Limited optioned the property in 1969. According to Assessment Report 20621, Amax Potash Limited learned of the Coranex discoveries south of Peach Lake and completed geological and geochemical work over the parts of the airborne magnetic anomaly not held by Coranex. This work discovered magnetite-chalcopyrite veins and skarn mineralization south of Spout Lake and Amax immediately staked the WC claims. Between 1971 and 1973, Amax carried out exploratory programs at Spout Lake which included geological mapping, airborne and ground magnetometer surveys, induced polarization and geochemical surveys and bulldozer trenching. Drilling included 6 packsack holes (136 metres), 10 percussion holes and 7 diamond drill holes (843 metres). In 1974, Craigmont Mines Limited optioned the property and drilled six diamond drill holes (1210 metres) into the north zone. The property was allowed to lapse and Peach Lake Resources re-staked it in 1987, and completed soil VLF-EM and magnetic surveys and

CAPSULE GEOLOGY

excavator trenching. G.W.R. Resources subsequently acquired the property and formed a joint venture with Regional Resources Limited in 1993. The joint venture completed some drilling (15 holes totalling 6712 metres) in 1993, 1994 and 1995.

BIBLIOGRAPHY

EMPR ASS RPT 3690, *3815, 3881, 3882, 3883, 4029, 4490, 5010, 5488, 9935, 18148, 18589, *20621, 21913, 22203, *23251, 23310, 23966, 24391
EMPR GEM 1971-335; 1972-323,324; 1973-279; 1974-227
EMPR PF (Property description by G. White, Nov.14, 1974; see 092P 108 for claim location maps; 92P General File - Takomkane Project, Report on Mineral Exploration, UMEX, Jan. 1974)
EMPR INF CIRC 1993-13
EMPR OF 1994-1
GSC MAP 3-1966; 1278A
GSC MEM 363
GSC OF 735; 775
V STOCKWATCH GWR Resources Inc./Regional Resources Inc., March 4, 1993)
Winfield, W.D.B. (1975): Volcanic, Plutonic and Cu-Fe Skarn Rocks, Spout Lake, B.C., M.Sc. Thesis, University of Western Ontario
WWW <http://www.infomine.com/>, <http://www.gwrresources.com>

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/12

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 121**

NATIONAL MINERAL INVENTORY:

NAME(S): **CYAN**, BEAR GROUP, BO,
MAX

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 55 52 N
LONGITUDE: 121 17 35 W
ELEVATION: 1375 Metres

NORTHING: 5754753
EASTING: 617358

LOCATION ACCURACY: Within 500M

COMMENTS: Location of native copper occurrence, map 1, Assessment Report 23517.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Copper Chalcopyrite
ASSOCIATED: Specularite Chalcedony
ALTERATION: Malachite Chlorite
ALTERATION TYPE: Silicific'n Propylitic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Hydrothermal
TYPE: D03 Volcanic redbed Cu

L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Tertiary	Chilcotin	Unnamed/Unknown Formation	

LITHOLOGY: Alkali Basalt
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Overlap Assemblage

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Cyan property is located approximately 17 kilometres north-northeast of Lac La Hache. It is readily accessible by way of logging roads from Highway 97 which runs north from Lac La Hache.

The Cyan property is underlain by andesites, basalts, calcareous tuffs and argillites of the Late Triassic Nicola Group (Assessment Report 23517 and 25650). Nicola Group rocks are intruded by the Late Triassic to Early Jurassic Spout Lake Intrusive complex, an alkalic intrusive suite ranging in composition from pyroxenite through monzonite to syenite, and from batholithic size to small intrusive plugs, dykes and breccia bodies. Granodioritic rocks of the Triassic to Jurassic Takomkane Batholith intrude Nicola rocks east of the property. Alkaline plateau basalts of the Miocene to Pleistocene Chilcotin Group.

Native copper mineralisation has been found in two locations on the property (Assessment Report 23517). It occurs as blebs in chalcedonic quartz amygdules associated with specular hematite in chloritised amygdaloidal basalts of the Chilcotin Group, and also in Nicola Group andesitic flows. Chalcopyrite and malachite mineralisation are also reported to occur in Chilcotin and Nicola rocks (Assessment Report 23517).

Interest in the Spout Lake area was triggered in 1966 when the Geological Survey of Canada released the results of a regional airborne magnetic survey which outlined an annular magnetic anomaly 10 kilometres in diameter in the Spout Lake area and which included the area underlying the Cyan prospect. Subsequently, in 1966 and 1967, Coranex Limited obtained anomalous results in follow-up stream sediment geochemical surveys and soil geochemical surveys in the area south of Peach Lake. Programs of geological, soil geochemical, magnetometer, induced polarization and prospecting surveys were undertaken in 1967 in the area south of Peach Lake, but mainly north of the Cyan prospect. This work resulted in discovery of

CAPSULE GEOLOGY

the Peach (MINFILE 092P 002), Tim (MINFILE 092P 122) and other porphyry copper-gold occurrences north and east of the Cyan occurrence. Exploration work was dormant from 1973 and 1982, when Guichon Explorco Limited carried out a soil geochemical survey over portions of the area. In 1986, mineralisation was uncovered on a logging road at the Miracle Property (MINFILE 092P124) immediately to the north of the Cyan property. In 1993, the GWR Resources/Regional Resources Limited joint venture carried out an induced polarisation survey centred to the north of the Cyan property, and outlined a chargeability anomaly which extended onto the Cyan property (Assessment Report 23517). Mapping and prospecting by PMA Resources Incorporated (Assessment Report 23517) and Norian Resources Corporation (Assessment Report 25650) outlined copper mineralisation on the property.

BIBLIOGRAPHY

ASS RPT 3815, 3882, 23517, 25368, *25650
GSC MEM 363
GSC MAP 1278A

DATE CODED: 2003/01/23
DATE REVISED: 2003/02/03

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 122**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIM #1, #2 AND #3**, STALLION, RIP,
TAM

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P14E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 56 13 N
LONGITUDE: 121 14 57 W
ELEVATION: 1400 Metres

NORTHING: 5755473
EASTING: 620360

LOCATION ACCURACY: Within 500M
COMMENTS: Location of Tim #3 showing, map 4, Assessment Report 8831.

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT:	Chalcopyrite	Bornite	Malachite	Copper
ASSOCIATED:	Magnetite	Pyrite		
ALTERATION:	K-Feldspar	Epidote	Calcite	Quartz
ALTERATION TYPE:	Potassic		Propylitic	
MINERALIZATION AGE:	Unknown			

DEPOSIT

CHARACTER: Disseminated Vein Stockwork
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Triassic	Nicola	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Andesite
Syenite
Syenite Breccia
Monzonite

HOSTROCK COMMENTS: Undersaturated intrusive rocks are informally called the Spout Lake
Intrusive Suite (assessment Report 25670).

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

INVENTORY

ORE ZONE:	SAMPLE	REPORT ON:	N
CATEGORY:	Assay/analysis	YEAR:	1983
SAMPLE TYPE:	Drill Core		
COMMODITY		GRADE	
Gold		0.6000	Grams per tonne
Copper		2.7600	Per cent
COMMENTS:	Sample width 42.7 metres.		
REFERENCE:	Assessment Report 12192.		

CAPSULE GEOLOGY

The Tim (Tim #1, #2 and #3 or Stallion) copper showings are located north of Timothy mountain in the Westman Creek area, approximately 21 kilometres northeast of Lac La Hache and are readily accessible from Highway 97 via the Timothy lake road and thence on a network of logging roads. The Tim showings are part of the Spout Lake copper-gold district, a group of porphyry and skarn deposits associated with Upper Triassic to Lower Jurassic alkaline intrusive rocks of the Spout Lake intrusive suite.

The Tim property is underlain by andesites, basalts, tuffs and argillites of the Late Triassic Nicola Group (Assessment Report 25670). Nicola Group rocks are intruded by the Late Triassic to Early Jurassic Spout Lake Intrusions which vary in size from plutons and batholiths composed of granodiorite and quartz diorite to small alkali stocks ranging in composition from syenite to pyroxenite. Granodioritic rocks of the Triassic to Jurassic Takomkane Batholith intrude Nicola rocks east of the property. Portions of the area are obscured by alkaline basaltic plateau basalts of the Miocene to

CAPSULE GEOLOGY

Pleistocene Chilcotin Formation.

Mineralization on the property (Assessment Reports 8831, 12192, 25670) consists of fracture-controlled and disseminated malachite, chalcopyrite and minor bornite and native copper associated with magnetite and pyrite in intensely altered Nicola Group andesite and in dykes and small intrusive bodies of monzonite, syenite and syenite breccia of the Spout Lake Intrusions. Alteration and associated accessory minerals includes quartz, epidote, K-feldspar and calcite. Three showings, Tim #1, #2 and #3, have been trenched over a northwest-trending zone for a distance of approximately 500 metres on the property.

Anomalous results obtained in stream sediment geochemical surveys by Coranex Ltd in the area south of Peach Lake in 1966 resulted in the staking of the Tim claims which covered a large area south of Peach Lake, but including the as yet un-discovered Tim showings. A program of geological, soil geochemical, magnetometer, induced polarisation and prospecting surveys were undertaken in 1967 mainly in the area northwest of the Tim showings, however three induced polarisation anomalies designated "M", "N" and "O" were detected. The anomalies were tested by trenching and a "minor amount of disseminated chalcopyrite and bornite with pyrite was exposed" (Assessment Report 8831) over what are now termed the Tim #1, #2 and #3 showings. The property was geologically mapped by Amax Exploration Inc. (Assessment Report 4030) in 1972, and subsequently dropped. The area was re-staked by Stallion Resources Limited in 1979 and soil geochemical sampling, trenching and diamond drilling was undertaken, mainly in areas where the work by Coranex had outlined induced polarisation anomalies in 1969 (Assessment Report 8831). In 1983, Stallion diamond drilled six short holes (Assessment Report 12192) totalling 312 metres on the Tim #1 showing. Diamond drill hole #1 intersected 42.7 metres grading 2.76% Cu, 25.4 g/t Ag and 0.6 g/t Au from surface to 42.7 metres. None of the other holes showed near as much encouragement. The George Cross Newsletter (1983 #236) reported that Stallion Resources Ltd. stated that "drill indicated reserves" were 75150 tonnes grading 2.14% copper. In 1988, Liberty Gold Corporation optioned the claims and between 1988 and 1990 (Assessment Report 17960 and 20095), completed VLF-EM, magnetometer, soil geochemical and induced polarization surveys as well as geological mapping, percussion drilling (736 metres in seven holes) and 1245 metres of diamond drilling in 12 holes. In 1998, the Tam and Mat claims were staked by Mr. Paul Reynolds, who completed a program of geological mapping (Assessment Report 25670).

BIBLIOGRAPHY

EMPR ASS RPT 1131, 3815, 3882, 4030, *4030, *8831, 11280,
*12192, 17960, 20095, *25670
EMPR GEM 1969-183, 1972-322
George Cross Newsletter 1983, #197, #236
EMR MIN BULL MR 223 B.C. 199
GSC MAP 1278A
GSC MEM 363

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/23

CODED BY: GSB
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 123**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOE, DUNN CREEK, LEN**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 24 48 N
LONGITUDE: 120 00 16 W
ELEVATION: 1932 Metres

NORTHING: 5700049
EASTING: 708303

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located near the headwaters of the south fork of Dunn Creek, about 13 kilometres east of Little Fort.

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite
ASSOCIATED: Quartz
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Cretaceous			Baldy Batholith

LITHOLOGY: Biotite Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Plutonic Rocks

PHYSIOGRAPHIC AREA: Shuswap Highland

CAPSULE GEOLOGY

The Moe showing is located near the headwaters of the south fork of Dunn Creek, about 13 kilometres east of the community of Little Fort. Molybdenite occurs in widely spaced, northwesterly trending quartz veins in porphyritic biotite quartz monzonite of the Cretaceous Baldy batholith.

In 1972, Noranda Exploration Company conducted geological mapping, a soil geochemical survey (546 samples) and 143 cubic metres of trenching. The Dunn Creek property was staked in early 1980 and covered the Moe showing; J.M.T. Services Corp. conducted a geochemical survey (119 samples).

BIBLIOGRAPHY

EMPR GEM *1972-317,318
EMPR ASS RPT 9020, *9328
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/04/06

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 124**

NATIONAL MINERAL INVENTORY:

NAME(S): **MIRACLE CENTRAL ZONE, MURPHY CLAIMS,
DISCOVERY ZONE**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P14E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 56 50 N
LONGITUDE: 121 18 39 W
ELEVATION: 1400 Metres

NORTHING: 5756516
EASTING: 616095

LOCATION ACCURACY: Within 500M
COMMENTS: Location of diamond drill hole 94-06, figure 5, Assessment Report 23976.

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Tetrahedrite
ASSOCIATED: Magnetite Pyrite
ALTERATION: K-Feldspar Epidote Calcite Quartz
ALTERATION TYPE: Potassic Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein Stockwork
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au
SHAPE: Tabular
DIMENSION: 800 x 50 Metres STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE: Upper Triassic Triassic
GROUP: Nicola
FORMATION: Undefined Formation
IGNEOUS/METAMORPHIC/OTHER: Unnamed/Unknown Informal

LITHOLOGY: Porphyritic Monzonite
Intrusive Breccia
Andesite

HOSTROCK COMMENTS: Undersaturated intrusive hostrocks are informally called the Spout La Lake Intrusive Suite.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
PHYSIOGRAPHIC AREA: Quesnel Highland

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1996
SAMPLE TYPE: Drill Core
COMMODITY: Gold GRADE: 5.1000 Grams per tonne
Copper 1.3800 Per cent
COMMENTS: Sample width 6.0 metres in diamond drill hole 94-6.
REFERENCE: Assessment Report 23976.

CAPSULE GEOLOGY

The Miracle copper showing is located near the headwaters of Timothy Creek, approximately 18 kilometres northeast of Lac La Hache and is readily accessible from Highway 97 via a network of logging roads. The Miracle showing is part of the Spout Lake copper-gold district, a group of porphyry and skarn deposits associated with Upper Triassic to Lower Jurassic alkaline intrusive rocks of the Spout Lake intrusive suite.

The Miracle property is underlain by andesites, basalts, calcareous tuffs and argillites of the Late Triassic Nicola Group (Assessment Report 23976). Nicola Group rocks are intruded by the Late Triassic to Early Jurassic Spout Lake Intrusive complex, an alkalic intrusive suite ranging in composition from pyroxenite through monzonite to syenite, and from batholithic size to small intrusive plugs, dykes and breccia bodies. Granodioritic rocks of the Triassic to Jurassic Takomkane Batholith intrude Nicola rocks east of the property. Portions

CAPSULE GEOLOGY

of the area are obscured by alkaline plateau basalts of the Miocene to Pleistocene Chilcotin Group.

Gold-copper mineralisation at the Miracle deposit occurs within a 1.2 by 1.4 kilometre area outlined by an induced polarisation (chargeability) anomaly. Volcanic and intrusive rocks show varying degrees of propylitic to potassic alteration (Assessment Report 23976), with fracture-controlled and disseminated pyrite-chalcopyrite +/- bornite mineralisation. Tetrahedrite and galena have also been identified. Mineralisation is associated with a quartz-sericite-potassium feldspar altered porphyritic monzonite intrusion and intrusion breccia, and has been traced by drilling for approximately 800 metres in a 50 metres wide northeast-trending, northwest-dipping zone. The best grade intersected in the 1994 drill program was in hole 94-6 where 6.0 metres assayed 1.38 per cent copper and 5.1 grams per tonne gold (Assessment Report 23976). Assessment Report 25368 states that hole 94-6 intersected centimetre thick magnetite-chalcopyrite veins cutting monzonite oriented subparallel to the core axis. Fracture-controlled carbonate, chlorite, epidote, magnetite occur in volcanic rocks adjacent to the monzonitic intrusive rock associated with the mineralization.

Interest in the Spout Lake area was triggered in 1966 when the Geological Survey of Canada released the results of a regional airborne magnetic survey which outlined an annular magnetic anomaly 10 kilometres in diameter in the Spout Lake area and which included the area underlying the Miracle prospect. Subsequently in 1966 and 1967, Coranex Limited obtained anomalous results in follow-up stream sediment geochemical surveys and soil geochemical surveys in the area south of Peach Lake in 1966 resulted in the discovery of the Peach 1 and other showings on the then Peach and current Ann (as of February 2003) claims. Programs of geological, soil geochemical, magnetometer, induced polarisation and prospecting surveys were undertaken in 1967 in the area south of the Peach and Spout lakes. Amax Potash Limited optioned the properties in the Spout Lake area between 1971 and 1973 and their work led to the discovery of the WC (Spout Lake) magnetite-copper skarn (MINFILE 092P 120) and the staking of a large area south of Spout Lake. Exploration work was dormant from 1973 and 1982, when Guichon Explorco Limited carried out soil geochemical survey over portions of the area. Asarco completed induced polarisation surveys and percussion drilling north of the Miracle prospect in 1991. Diamond drilling on the WC (Spout Lake) deposit eventually delineated approximately 550,000 tonnes of mineralization grading 1.79 per cent Cu and 55 per cent magnetite (Assessment Report 23976). In 1993, Regional Resources Limited discovered the Nemrud bornite skarn 6.5 kilometres northeast of the Miracle prospect and performed systematic induced polarization surveys over several areas south of Spout Lake including the Miracle prospect.

As stated above, Coranex syndicate completed soil sampling in the area of the Miracle showing in 1966 and 1967, and Guichon Explorco Limited in 1982 to 1983. The first discovery of mineralisation on the Miracle property was in 1986, when a logging road exposed chlorite-epidote-potash feldspar altered volcanic rocks with syenite dykelets and a fracture-controlled quartz, sericite, pyrite and chalcopyrite at the "Discovery Zone", located north of the "Central Zone". The property was staked by Nils Kriberg and Donald Fuller and optioned to GWR Resources Incorporated in 1987. Selected samples returned assays of 37.1 grams per tonne gold, 67.9 grams per tonne silver and 12.6 per cent copper (Assessment Report 23976). Work by GWR on the prospect included soil geochemical, magnetometer, VLF-EM and magnetometer surveys with limited induced polarisation surveys between 1987 and 1993. Trenching and diamond drilling (2242 metres in 13 holes) were completed between 1989 and 1992 in the area north of the "Central Zone". In 1993 the Lac La Hache Joint Venture (GWR Resources Incorporated and Regional Resources Limited) completed a comprehensive induced polarisation survey, outlining a 1.2 by 1.4 kilometre chargeability anomaly ranging from 10 to 50 milliseconds south and west of previous work. In 1994, GWR Resources Incorporated completed 2691 metres of diamond drilling in 12 holes to test the induced polarisation anomaly. The "Central Zone" was discovered, the best result being 6.0 metres grading 1.38% copper and 5.1 g/t Au in diamond drill hole 94-6 (Assessment Report 23976). Two additional holes were drilled on the south side of the prospect in 1995 by Regional Resources Limited with

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CAPSULE GEOLOGY

discouraging results (Assessment Report 25368).

BIBLIOGRAPHY

EMPR ASS RPT 2347, 3882, *16586, *22603, *23976, *25386
GSC MAP 1278A
GSC MEM 363
<http://www.gwrresources.com>

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/23

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 125**

NATIONAL MINERAL INVENTORY:

NAME(S): **BEER**, RUM, STRAW,
AFTER

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P15W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 54 38 N
LONGITUDE: 120 53 23 W
ELEVATION: 975 Metres

NORTHING: 5753194
EASTING: 645152

LOCATION ACCURACY: Within 500M

COMMENTS: Location from geological map in Assessment Report 4496.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite
ASSOCIATED: Pyrite Pyrrhotite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP
Upper Triassic	Nicola
Triassic-Jurassic	

FORMATION
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER
Takomkane Batholith

LITHOLOGY: Andesite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Beer showing is located near Canim Lake. Two kilometres northeast of Roger Lake, the showing is exposed on the west side of the road between Roger Lake and Judy Lake. Pyrite, pyrrhotite, chalcopyrite and bornite occurring as disseminations, blebs and small irregular stringers are reported at the main showing and elsewhere on the Beer claims. The claim area is underlain by Upper Triassic Nicola Group andesitic volcanics intruded by and in contact with the dioritic Triassic to Jurassic Takomkane batholith to the west. The rocks are highly sheared, fractured and locally brecciated.

The area was staked in 1969 but no work was done. In 1970, D. Martin and C. Turner staked the 40 Beer claims and Aragon Exploration Limited performed some preliminary exploration work. The Rum claims were added to cover areas highlighted as "potentially favourable" by a Federal regional aeromagnetic survey. In 1971 and 1972, Aragon Exploration conducted geological mapping, soil sampling for copper and zinc, and trenching over copper anomalies. Induced polarization and magnetometer surveys were run on the property in November 1972. In 1990, Princeton Mining Corporation optioned the Clay property (092P 155) to the south of Roger Lake, and extended the property to the north. The Beer showing was included in what was called the After claim (Assessment Report 20469). The extension was subsequently dropped, and Dave Ridley staked the area as the Straw claims. In 1993, Ridley, along with D. Dunn of Pioneer Metals Corporation mapped and prospected for mineralization and alteration, and carried out some soil, rock and silt sampling (Assessment Report 23279).

BIBLIOGRAPHY

EMPR ASS RPT 3547, 4265, 4266, 4496, 20469, 23279
EMPR GEM 1972-325; 1973-281
EMPR OF 2002-15
EMPR PF (*Aikins, H.S. and Cukor, V. (1971): Report on the Beer claims; Aragon Explorations Limited Prospectus, July 21, 1971)

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RUN TIME: 11:19:00

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GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/15

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 126**

NATIONAL MINERAL INVENTORY:

NAME(S): **VID 4**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 10 08 N
LONGITUDE: 120 53 20 W
ELEVATION: 1100 Metres

NORTHING: 5670725
EASTING: 647590

LOCATION ACCURACY: Within 500M

COMMENTS: Location from Map #2 (Assessment Report 4257).

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein

CLASSIFICATION: Hydrothermal Epigenetic

TYPE: L05 Porphyry Mo (Low F- type)

SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP
Upper Triassic	Nicola
Triassic-Jurassic	

FORMATION
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER
Thuya Batholith

LITHOLOGY: Granodiorite
Greenstone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Vid 4 occurrence is located on the east side of Vidette Lake, about 1 kilometre east of the Vidette mine (092P 086). The area is accessible on a good-quality gravel road which leads north from the Trans-Canada Highway approximately 7.4 kilometres west of Savona.

The Vidette Lake area is underlain by mafic volcanic rocks of the Upper Triassic Nicola Group exposed in a window eroded through flat-lying Miocene sedimentary rocks and plateau basalts of the Chilcotin Group. The uppermost Chilcotin Group strata comprise an extensive layer of plateau basalts of the Chasm Formation, underlain by volcanic ash and fluvial and lacustrine sedimentary strata of the Deadman River Formation which occupy a northwest trending Miocene channel. The Nicola rocks are intruded by biotite-hornblende granodiorite plugs which are possibly related to the Triassic to Jurassic Thuya batholith. Nicola rocks are generally augite andesites commonly altered to chlorite-rich or calcareous greenstones, however contact metamorphism has developed garnet-diopside-actinolite skarn or tactite adjacent to the intrusive rocks.

The Vid 4 occurrence is located 1000 metres east of the Vidette mine (092P 086). Assessment Report 4257 (page 9) states that "molybdenite was noted in two places on the Vid #4 claim. Near the mutual boundary of Vid #3 and Vid #4, two long trenches have been cut in greenstone. Traces of fine-grained molybdenite were found in a narrow quartz vein in one of these trenches. About 700 feet (225 metres) northeast of these trenches, disseminated flakes of molybdenite are found in two narrow quartz veins in a slightly porphyritic granodiorite".

The first record of work (Geological Survey of Canada Memoir 179) was in the 1930s on the Shelley property (092P 088) when the property was explored by several pits and an adit. More recently the property has been covered by several soil geochemical and geophysical surveys (Assessment Reports 4257, 12021, 17810, 18492, 19136).

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RUN TIME: 11:19:00

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BIBLIOGRAPHY

EMPR AR 1934-F22
EMPR ASS RPT *4257, 12021, 17810, 18492, 19136
GSC MEM *179, p. 35; 363
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/13

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 127**

NATIONAL MINERAL INVENTORY:

NAME(S): **VID 27, SHELLEY**

MINING DIVISION: Clinton

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 092P02W
 BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 09 08 N
 LONGITUDE: 120 53 07 W
 ELEVATION: 1200 Metres

NORTHING: 5668879
 EASTING: 647896

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Vid 27 claim (Assessment Report 4257).

COMMODITIES: Gold Silver Copper

MINERALS

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

DEPOSIT

CHARACTER: Vein
 CLASSIFICATION: Hydrothermal Epigenetic
 TYPE: L04 Porphyry Cu ± Mo ± Au
 SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Nicola	Undefined Formation	Thuya Batholith
Triassic-Jurassic			

LITHOLOGY: Greenstone
 Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
 TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1972
SAMPLE TYPE:	Grab		
COMMODITY		GRADE	
Silver		8.9000	Grams per tonne
Gold		4.8000	Grams per tonne
Copper		0.3500	Per cent

REFERENCE: Assessment Report 4257.

CAPSULE GEOLOGY

The Vid 27 occurrence is located on the east side of Vidette Lake, southeast of the Vidette mine (092P 086). The area is about 50 (air) kilometres north of Savona and is accessible on a good-quality gravel road which leads north from the Trans-Canada Highway approximately 7.4 kilometres west of Savona.

The Vidette Lake area is underlain by mafic volcanic rocks of the Upper Triassic Nicola Group exposed in a window eroded through flat-lying Miocene sedimentary rocks and plateau basalts of the Chilcotin Group. The uppermost Chilcotin Group strata comprise an extensive layer of plateau basalts of the Chasm Formation, underlain by volcanic ash and fluvial and lacustrine sedimentary strata of the Deadman River Formation which occupy a northwest trending Miocene channel. The Nicola rocks are intruded by biotite-hornblende granodiorite plugs which are possibly related to the Triassic to Jurassic Thuya batholith. Nicola rocks are generally augite andesites commonly altered to chlorite-rich or calcareous greenstones, however contact metamorphism has developed garnet-diopside-actinolite skarn or tactite adjacent to the intrusive rocks.

The Vid 27 occurrence is located 1500 metres southeast of the Vidette mine (092P 086). Assessment Report 4257 (page 8) states that there are a large number of prospect pits, most of which are now sloughed in. However, pyrite and chalcopyrite were noted in several spots where bedrock is visible. On the boundary between Vid #27 and

CAPSULE GEOLOGY

Vid #28, a small pit was cut on an 8 inch (20 centimetre) quartz-carbonate vein which carries abundant pyrite and minor chalcopyrite. A selected sample from the vein assayed 0.14 ounce per ton gold (4.8 grams per tonne), 0.26 ounce per ton silver (8.9 grams per tonne) and 0.35 per cent copper (Assessment Report 4257).

The first record of work (Geological Survey of Canada Memoir 179) was in the 1930s on the Shelley property (092P 088) when the property was explored by several pits and an adit. More recently the property has been covered by several soil geochemical and geophysical surveys (Assessment Reports 4257, 12021, 17810, 18492, 19136).

BIBLIOGRAPHY

EMPR AR 1934-F22
EMPR ASS RPT *4257, 12021, 17810, 18492, 19136
GSC MEM *179, p. 35; 363
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/02/13

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 128**

NATIONAL MINERAL INVENTORY:

NAME(S): **SLEEPING GIANT**, RM, KIM,
PAT LAKE

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P15W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 49 54 N
LONGITUDE: 120 47 17 W
ELEVATION: 945 Metres

NORTHING: 5744629
EASTING: 652411

LOCATION ACCURACY: Within 500M

COMMENTS: Location is the approximate centre of the Sleeping Giant claim block
(Assessment Report 23280).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Bornite
ASSOCIATED: Pyrite Pyrrhotite
ALTERATION: K-Feldspar Epidote Chlorite Magnetite Malachite
Limonite

ALTERATION TYPE: Oxidation Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stockwork
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Triassic
Cretaceous

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Raft Batholith

LITHOLOGY: Syenite
Volcanic
Intrusive Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Sleeping Giant property covers most of the area between the south shore of Canim Lake and Howard Lake. There are a number of pyrite, chalcopyrite and pyrrhotite showings. The Pat Lake showing is fine grained disseminated pyrite and chalcopyrite in fresh unweathered syenite exposed along an old logging road west of Pat Lake; fracture fillings of pyrite and chalcopyrite also occur but these are extensively oxidized leaving coatings of limonite and malachite. The Breccia showing is about 150 metres south of the Pat Lake showing, and consists of small amounts of disseminated pyrite, chalcopyrite and bornite associated with an intrusive breccia. The breccia is highly fractured and altered to pink feldspar, epidote, chlorite and magnetite. The sulphide-rich zone is about 335 by 300 metres in area. There are other scattered occurrences of disseminated chalcopyrite and bornite on the property. Angular float containing stibnite was found in the west part of the property, near the base of a low west-facing cliff about 300 metres east of the main Canim Lake South road (Assessment Report 20452). The property area is mapped as Upper Triassic Nicola Group volcanics, intruded by felsic plutonic rocks associated with a small stock located on the east shore of the south end of Canim Lake. The stock may be a satellite of the Cretaceous Raft batholith.

In 1968, Cominco Limited found low grade copper mineralization related to the small stock on the east side of the south end of Canim Lake. Cominco staked the Kim claims, mapped the geology and conducted soil and silt sampling. In 1972, Dome Petroleum staked 250 units as the RM property and conducted an extensive program of mapping, soil, silt and rock sampling, bulldozer trenching and ground magnetometer and induced polarization surveys. Fifteen percussion holes totalling 993 metres were drilled on the breccia zone and three holes were drilled near Pellicker Lake (also known as the Potlicker Lake zone) by Neoconex Canadian Exploration Limited in 1974. Cominco

MINFILE NUMBER: **092P 128**

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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CAPSULE GEOLOGY

restaked part of the old Kim claims in 1976. In 1989, the Sleeping Giant property, which also includes the Canim occurrences (092P 158) was staked by D.W. Ridley and A. Harvey. A work program in 1990 consisted of gridwork, prospecting, soil and rock sampling. In 1993, Ridley and Pioneer Metals Corporation drilled three BQ holes for a total of 63 metres.

BIBLIOGRAPHY

EMPR ASS RPT 4259, 4366, *20452, 23280
EMPR GEM 1973-280; 1974-228
EMPR OF 2002-15
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/05

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 129**

NATIONAL MINERAL INVENTORY:

NAME(S): **ELLEN**, GIZELLE

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P10E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 31 34 N
LONGITUDE: 120 34 15 W
ELEVATION: 1280 Metres

NORTHING: 5711130
EASTING: 668507

LOCATION ACCURACY: Within 500M

COMMENTS: The Ellen-Gizelle claim group straddles the Kamloops and Clinton Mining Divisions.

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite

ASSOCIATED: Pyrite Pyrrhotite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated

CLASSIFICATION: Porphyry

TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP
Upper Triassic	Nicola
Triassic-Jurassic	

FORMATION
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER
Thuya Batholith

LITHOLOGY: Diorite
Pyritic Hornfels
Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Ellen-Gizelle claim group is located 9.5 kilometres east of Bridge Lake, northwest of Little Fort.

Minor amounts of disseminated chalcopyrite and molybdenite, along with pyrite and pyrrhotite occur within dioritic plugs, dikes and sills that are spatially associated with the Triassic-Jurassic Thuya batholith, and within adjacent pyritic hornfels of Upper Triassic Nicola Group sedimentary rocks.

Orequest staked the claims and conducted geological mapping, geochemical and geophysical work over the area in 1972.

BIBLIOGRAPHY

EM FIELDWORK 2000, p. 25
EMPR ASS RPT *4365
EMPR GEM 1973-277
EMPR OF 2002-15
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/12

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 130**

NATIONAL MINERAL INVENTORY:

NAME(S): **DECEPTION CREEK**, CHRIS 17, CHRIS 50,
W CLAIMS, C CLAIMS

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P15E
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 54 47 N
LONGITUDE: 120 36 04 W
ELEVATION: 975 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5754087
EASTING: 664992

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the legal corner post for the W 1-4 claims (Assessment Report 15142).

COMMODITIES: Copper Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Sphalerite
ASSOCIATED: Pyrite Pyrrhotite Quartz Calcite
ALTERATION: Chlorite Quartz Calcite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Nicola	Undefined Formation	

LITHOLOGY: Dacitic Pyroclastic
Argillite
Andesitic Pyroclastic
Dacite
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Deception Creek property is located about four kilometres north of the east end of Canim Lake, and about 500 metres north of Christopher Lake.

The property is underlain by Upper Triassic Nicola Group volcanic and sedimentary rocks. The volcanic package includes dacitic pyroclastic rocks interbedded with locally graphitic black argillite. Under the dacitic package is a more andesitic package of pyroclastic rocks. Disseminated pyrite and pyrrhotite are common. Pyrite, pyrrhotite and minor chalcopyrite occur in chloritized veins within the dacitic volcanic rocks. Trace amounts of sphalerite were found in quartz-calcite stringers in one drillhole, but zinc soil anomalies were found to be mainly associated with the unmineralized black argillite.

Pickands Mather and Company held the area as the Chris claims in 1973, and conducted a program of geological mapping and soil sampling in the search for porphyry copper and molybdenum mineralization. The W claims were staked in 1981 on the basis of anomalous copper reported in soil samples collected by Pickands Mather. Archean Engineering conducted exploration programs in 1982-1984 including reconnaissance geological mapping, stream sediment sampling, heavy mineral concentrate sampling and a VLF-EM survey. In 1985, follow-up mapping and sampling was done over VLF-EM conductors from the previous work. Archean Engineering drilled two diamond-drill holes over coincident elongate VLF-EM conductors and zinc soil anomalies. The property was subsequently dropped.

BIBLIOGRAPHY

EMPR ASS RPT 4733, 10635, 11733, 12820, 13796, *15142
EMPR GEM 1973-282
EMPR OF 2002-15

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BIBLIOGRAPHY

GSC MAP 1278A

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DATE REVISED: 2001/03/12

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 131**

NATIONAL MINERAL INVENTORY:

NAME(S): **EPI 2**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 09 02 N
LONGITUDE: 120 52 31 W
ELEVATION: 920 Metres

NORTHING: 5668714
EASTING: 648601

LOCATION ACCURACY: Within 500M

COMMENTS: Location of grid point 125S/400W (Assessment Report 16286).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Quartz
ALTERATION: Silica Chalcedony
ALTERATION TYPE: Silicific'n Chloritic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epithermal
TYPE: H05 Epithermal Au-Ag: low sulphidation

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Nicola	Undefined Formation	Thuya Batholith
Triassic-Jurassic			

LITHOLOGY: Augite Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Chip

YEAR: 1988

COMMODITY: Gold
GRADE: 1.5300 Grams per tonne

COMMENTS: Random chips from a 2 by 3 metre area of reddish brown weathering rocks containing fine disseminated pyrite and cut by microveinlets of chalcedonic quartz and calcite.

REFERENCE: Assessment Report 162866.

CAPSULE GEOLOGY

The Epi 2 claim is located 500 metres east of the south end Vidette Lake in the Deadman Valley. The area is approximately 50 (air) kilometres north of Savona and is accessible on a good-quality gravel road which leads north from the Trans-Canada Highway approximately 7.4 kilometres west of Savona.

The Vidette Lake area is underlain by mafic volcanic rocks of the Upper Triassic Nicola Group exposed in a window eroded through flat-lying Miocene sedimentary rocks and plateau basalts of the Chilcotin Group. The uppermost Chilcotin Group strata comprise an extensive layer of plateau basalts of the Chasm Formation, underlain by volcanic ash and fluvial and lacustrine sedimentary strata of the Deadman River Formation which occupy a northwest trending Miocene channel. Nicola mafic volcanic rocks are generally augite andesites, and commonly show alteration to epidote, chlorite, calcite and disseminated pyrite. Argillite layers are intercalated with the mafic volcanic rocks and are commonly silicified and brecciated (Assessment Report 16286). Silicification, carbonatization and chloritization are other alteration features common in the Nicola rocks. A zone of silicified and carbonate-altered Nicola andesite cut by veinlets of chalcedonic quartz, calcite and disseminated fine pyrite yielded an assay of 1530 ppb gold (Assessment Report 16286).

The area must have been heavily prospected during the heyday of the Vidette mine in the 1930s but there is no published record of this work. Mr. M. Dickens staked the property and prospected it in

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CAPSULE GEOLOGY

1987 (Assessment Report 16286). It was optioned by the Canadian Nickel Company, who in 1988 completed soil geochemical surveys and geological mapping over the area (Assessment Report 17810).

BIBLIOGRAPHY

EMPR ASS RPT *16286, *17810
GSC MEM 363
GSC MAP 1278A

DATE CODED: 2001/02/08
DATE REVISED: 2001/02/08

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 132**

NATIONAL MINERAL INVENTORY:

NAME(S): **ISLAND LAKE, SHERI 95, IRON HORSE,**
CANIM 1-4, HORSE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P15W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 57 08 N
LONGITUDE: 120 53 00 W
ELEVATION: 1005 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5757841
EASTING: 645457

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the legal corner post for the Horse and the Canim 1
claims, on the main hauling road where it nears the shore of Island
Lake (Assessment Report 19322).

COMMODITIES: Copper Platinum Palladium Gold Cobalt

MINERALS

SIGNIFICANT: Chalcopyrite Pyrrhotite Magnetite Pyrite
ASSOCIATED: Quartz Carbonate
ALTERATION: Quartz Carbonate
ALTERATION TYPE: Silicific'n Carbonate
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Shear
CLASSIFICATION: Magmatic
TYPE: M02 Tholeiitic intrusion-hosted Ni-Cu

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic Takomkane Batholith

LITHOLOGY: Pyroxenite
Mafic Intrusive
Ultramafic Intrusive
Mafic Diorite
Hornblendite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Island Lake area is located 10.5 kilometres north-northwest of the village of Eagle Creek on the shore of the west end of Canim Lake. The area is underlain by a mafic and ultramafic intrusive complex related to the Triassic to Jurassic Takomkane batholith.

The area covers a strong positive regional aeromagnetic anomaly which is reflected on the ground by mafic alkalic intrusive rocks; pyroxenite, hornblendite and mafic diorite. Widespread disseminated chalcopyrite, magnetite, pyrite and pyrrhotite occur. Copper-rich sections in the pyroxenite were found in which chalcopyrite occurs with magnetite crystals within east striking, quartz-carbonate material that contains bands of massive pyrite. The shear system material is rich in gold and cobalt (Assessment Report 11088). Interest in the property in the late 1980s and early 1990s was concentrated on anomalous platinum, gold and palladium values associated with the quartz-carbonate material (Assessment Reports 17672 and 19322).

In October 1972, Pickands Mather and Company staked the Sheri claims in order to evaluate the area for copper porphyry potential. From 1972 to 1974, Pickands Mather conducted an exploration program including magnetometer, induced polarization and soil surveys, a mercury vapour survey, geological mapping and eight BQ diamond-drill holes for a total of 694 metres. H.J. Wahl gained ownership of the Sheri property, and in 1976 undertook a program on the claims including prospecting, geological mapping, soil sampling and trenching. In 1983, J.W. Morton staked the Ironhorse claims to cover the old Pickands Mather copper anomalies, and ran ground electromagnetic and limited rock chip sampling. In 1984, R.M. Durfeld examined the property for Reliant Resources. In 1985, J.W. Morton relogged and sampled core from the Pickands Mather 1974 drilling program, re-analysed it using multi-element methods, and

CAPSULE GEOLOGY

found some anomalous values for gold and platinum. The Horse claim was staked in June 1987 by G.L. Garratt, and optioned to Relay Creek Resources. In 1988, Canavex Resources Limited completed a soil and rock geochemistry program. G.R. Peatfield examined the property and found an anomalous platinum value in a quartz-carbonate alteration zone. In 1989, Cepeda Minerals Incorporated, under option with Canavex Resources Limited, conducted a program of soil sampling and continued resampling core from the 1974 drill program. Canavex Resources Limited ran induced polarization and magnetometer surveys over geochemical and geological features located during the 1989 program.

Prospecting during 2001 near the centre of an area anomalous in platinum from soil sampling resulted in the discovery of several angular mineralized boulders in the glacial till. The mineralized olivine-pyroxenite boulders routinely grade 0.50 to 0.75 per cent copper, 0.40 to 0.75 gram per tonne gold and 0.30 to 0.60 gram per tonne platinum group metals (PR REL Eastfield Resources Ltd., July 18, 2002).

BIBLIOGRAPHY

EMPR ASS RPT 4734, 4821, 6122, *11088, 14949, *17672, 19322, 21583
EMPR GEM 1973-282; 1974-229; 1976-E133
EMPR OF 2002-15
GSC MAP 1278A
PR REL Eastfield Resources Ltd., July 18, 2002
WWW <http://www.eastfieldgroup.com>; <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/10

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 133**

NATIONAL MINERAL INVENTORY:

NAME(S): **MATH**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P14E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 51 10 N
LONGITUDE: 121 08 11 W
ELEVATION: 945 Metres

NORTHING: 5746306
EASTING: 628352

LOCATION ACCURACY: Within 500M

COMMENTS: Location of molybdenite in test pits 1 and 9, Map 4A, Assessment Report 4647.

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite Pyrite

ASSOCIATED: Quartz

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork

CLASSIFICATION: Porphyry

TYPE: L05 Porphyry Mo (Low F- type)

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Triassic-Jurassic

Takomkane Batholith

LITHOLOGY: Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Math property is located 24 kilometres east-northeast of Lac La Hache and is readily accessible by secondary and logging roads.

The area is underlain by intrusive rocks of quartz dioritic to quartz monzonitic composition which are part of the Triassic to Jurassic Takomkane Batholith. The batholith intrudes andesitic volcanic and sedimentary rocks of the Upper Triassic Nicola Group. The quartz monzonite is cut by narrow granite and rhyolite dykes. Low-grade molybdenum mineralisation as molybdenite associated with pyrite are present in altered quartz monzonite in two pits (Assessment Report 4647). The molybdenite is fine grained and occurs in quartz veins and on fracture surfaces. Minor copper staining is evident at one location.

The area was first staked by Pickands Mather and Company in 1972, following-up anomalous molybdenum values from samples obtained in a lake bottom sediment survey. In 1973, Pickands Mather (Assessment Reports 4647, 4822) completed a program which included geological mapping, 149 kilometres of linecutting, soil sampling (3882 samples), magnetometer and induced polarisation surveying, a mercury vapour survey, test pitting and some diamond drilling (590 metres in 9 holes). The area was re-staked by Denison Mines Limited in 1980 (Assessment Report 8648) who completed soil geochemical and biogeochemical surveys. In 1984, the property was re-staked by Herb Wahl and associates Limited and a small linecutting (2 kilometres) and geochemical sampling program (19 humus samples, 6 silt samples, 30 till samples and 12 rock samples) was completed. In 1996, Guardian Enterprises Limited, (Assessment Report 24463) collected 25 rock and 9 soil samples on the property and analysed them for 30 elements utilizing the inductively coupled plasma and fire assay techniques.

BIBLIOGRAPHY

EMPR ASS RPT 4647, 4822, 8648, 13086, 13254, 24463
EMPR GEM 1973-280, 1974-228
GSC MEM 363

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GSC MAP 1278A

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DATE REVISED: 2003/01/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 134**

NATIONAL MINERAL INVENTORY:

NAME(S): **FL**, FRIENDLY LAKE, FRI,
RO

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 34 52 N
LONGITUDE: 120 26 00 W
ELEVATION: 1435 Metres

NORTHING: 5717572
EASTING: 677829

LOCATION ACCURACY: Within 500M

COMMENTS: Location of trench (Assessment Report 4025).

COMMODITIES: Copper Molybdenum Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Molybdenite Galena Pyrite Sphalerite

Arsenopyrite

ALTERATION: Carbonate Sericite Chlorite

ALTERATION TYPE: Propylitic

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated

CLASSIFICATION: Porphyry

TYPE: L04 Porphyry Cu ± Mo ± Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic
Triassic-Jurassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Friendly Lake Intrusive Complex

LITHOLOGY: Biotite Hornfels
Mafic Volcanic
Sediment/Sedimentary
Granite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The FL occurrence is located on the north side of Friendly Lake, near its east end, along the eastern margin of the Triassic-Jurassic Friendly Lake Intrusive Complex (Fieldwork 2000). The mineralization is hosted by brecciated and carbonate-sericite-chlorite altered biotite hornfels derived from a mafic volcanic protolith probably of the Upper Triassic Nicola Group (Assessment Report 16462). It comprises disseminated fine-grained pyrite, with trace amounts of chalcopyrite, galena, sphalerite, molybdenite and arsenopyrite, within the breccia fragments and, to a lesser degree, the matrix.

Mineralization in the Friendly Lake area was located as a result of a regional geochemical survey carried out by Anaconda American Brass Limited during the summer of 1965. Anaconda commenced staking a large block of ground north of Friendly Lake based on the results of stream sediment geochemical anomalies. Their follow-up prospecting led to the discovery of fracture controlled copper-molybdenum porphyry-style mineralization in stockwork/breccia rocks north of Friendly Lake. Anaconda carried out geophysical work followed by trenching and drilling in 1966-1968. Imperial Oil and Vangulf Exploration, in a joint venture, conducted geological, geophysical and geochemical surveys, followed-up with trenching, on the FL 1-149 claims in 1972. The Saskatchewan Mining Development Corporation (SMDC) optioned the Anaconda claims in 1982 and carried out further geological, geochemical and geophysical work on them. In 1983, Lornex Mining Corporation optioned the claims and drilled 17 short percussion holes. Electrum Resource Corporation staked the Fri claims in 1994 and carried out a rock and stream sediment survey. In 1996, Electrum conducted VLF-EM geophysical surveys, rock geochemistry, photogeology and geological reconnaissance work. In 1997, Midland Exploration Corporation continued this work. The B.C. Geological Survey conducted a regional till geochemistry program over NTS mapsheet 92P08W and 09W in 1999 (Open File 2000-17).

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BIBLIOGRAPHY

EM FIELDWORK *2000, p. 24
EM OF 2000-17
EMPR ASS RPT 952, *4025, 4702, 4817, 5264, 11413, *15221, 16462,
23946, 24893, *25418
EMPR EXPL 1987-C240
EMPR GEM 1970-304,311; 1972-320; 1973-276; 1974-225
EMPR OF 2002-15
EMPR PF (Claim map, 1973)
GSC 1278A
Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/20

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 135**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOOP**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P01W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 11 50 N
LONGITUDE: 120 26 53 W
ELEVATION: 1465 Metres

NORTHING: 5674852
EASTING: 678296

LOCATION ACCURACY: Within 500M

COMMENTS: Location of malachite stain at station 22E, NTL, Assessment Report 4634.

COMMODITIES: Copper Molybdenum

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite
ASSOCIATED: Pyrite
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic			Thuya Batholith

LITHOLOGY: Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Hoop claims were located a few hundred metres east of Hoopatatkwa Lake and approximately 50 kilometres north of Kamloops. Access in the 1980s was by helicopter or float plane.

The known mineral occurrence is limited to a "trace of malachite stain" in granodioritic rocks of the Late Triassic to Early Jurassic Thuya batholith. Small flecks of molybdenite and possible chalcopyrite were also noted on the claims in the generally unaltered granodioritic rocks which underlie the claims.

In 1982, Pickands Mather & Company completed a sediment sampling program and detected copper and molybdenum anomalies. Follow-up soil sampling in 1972 and 1973 outlined several copper and molybdenum anomalies. One hundred and eighteen claims were staked and in 1973 were subjected to a program of linecutting (115.7 kilometres), magnetometer surveying (104.7 kilometres), soil sampling (992 samples) with analyses for copper, molybdenum and silver and geological mapping.

BIBLIOGRAPHY

GSC MAP 1278A
GSC MEM 363
EMPR ASS RPT *4633, 4634, 7899
EMPR GEM 1973-269
EMPR FIELDWORK 2000, pp. 1-30
EMPR PF (White, G.P. (1976): Preliminary Geologic Report on the Bonaparte Moratorium Study Area)

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/17

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 136**

NATIONAL MINERAL INVENTORY:

NAME(S): **PYCU, LV, FORT 9**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 32 00 N
LONGITUDE: 120 23 29 W
ELEVATION: 1450 Metres

NORTHING: 5712362
EASTING: 680925

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Trench 1 (Assessment Report 16134).

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Chalcopyrite

ALTERATION: Diopside

ALTERATION TYPE: Skarn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Massive

CLASSIFICATION: Skarn

TYPE: K03 Fe skarn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

GROUP

Upper Triassic

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Triassic-Jurassic

Dum Lake Intrusive Complex

LITHOLOGY: Volcanic
Sediment/Sedimentary
Siliceous Diopside Skarn

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: TRENCH

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1987

SAMPLE TYPE: Chip

COMMODITY

GRADE

Gold

4.2000

Grams per tonne

COMMENTS: Best result of 19 chip samples from trenches. Sample is from trench #1.

REFERENCE: Assessment Report 16134.

CAPSULE GEOLOGY

The PYCU occurrence is a skarn showing, just 400 metres west of the Deer Lake skarn prospect (092P 010), about 20 kilometres northwest of Little Fort. The skarn formed in Nicola Group volcanic rocks that are intruded by mafic rocks of the Triassic-Jurassic Dum Lake Intrusive Complex.

The skarn is on the old Fort 9 claim. The claim is underlain by sedimentary and volcanic rocks of the Upper Triassic to Lower Jurassic Nicola Group. Medium to coarse grained siliceous diopside skarn contains heavily disseminated, medium to fine-grained pyrrhotite which is locally massive. Minor chalcopyrite is present as medium grained interstitial blebs in some parts of the skarn. Pyrite is common. The best of 19 chip samples taken from trenches in 1987 analysed 4.2 grams per tonne gold (Assessment Report 16134).

Skarn mineralization near Deer Lake was discovered at the nearby Lakeview showing (092P 010) in 1930. Several old trenches date from that period. In the late 1960s and early 1970s, the area was explored for porphyry copper-style mineralization by Anaconda, United Copper Company and Rio Tinto. During that time, the Fort 9 claim was explored by soil geochemical (not including gold) and magnetometer surveys. Meridian Resources conducted some work, including two percussion holes for 455 metres in 1977. In 1980, Tunkwa Copper Mines Limited conducted geochemical soil sampling (including gold), magnetometer and VLF-EM surveys on the claim area. C.J. Westerman

CAPSULE GEOLOGY

conducted geological, geochemical and geophysical work, and excavated two trenches and took 19 chip samples (including the gold result cited above) from the property in 1987, on behalf of Electrum Resources Limited. In late 1988, Vital Pacific Resources Limited cut a new grid, which ran across the south edge of the Fort 7 claim, on part of their Haida property. They ran ground geophysical surveys over the new grid that fall. The showing was looked at as a part of the Deer Lake property during a prospecting and stream sampling program by Electrum Resources Corporation in 1999. The B.C. Geological Survey conducted a regional till geochemistry program over NTS mapsheets 092P09W and 08W in 1999 (Open File 2000-17).

BIBLIOGRAPHY

EMPR ASS RPT 4028, 4262, 4264, 4835, 6586, 8880, *16134, 16223,
17733, 18078, 18796, 20014, 26223
EMPR EXPL 1987-C241; 1988-A45,C139; 1990-53
EMPR FIELDWORK *2000, p. 24
EMPR GEM 1972-320; 1973-320; 1977-E177
EMPR OF 2000-17, 2002-15
EMPR PF (Sullivan, J. (1974): Report on the PYCU and LV Claims in
Prospectus, Deer Lake Mines Ltd., Aug.29, 1974; Claim maps,
1973-74)
GCNL #40(Feb.27), 1981
GSC MAP 1278A
N MINER April 23, 1981

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/26

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 137**

NATIONAL MINERAL INVENTORY:

NAME(S): **PGR, TA HOOLA 9, TA HOOLA 12, AA, ROAD**

MINING DIVISION: Kamloops
 UTM ZONE: 10 (NAD 83)
 NORTHING: 5716429
 EASTING: 681377

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 092P09W
 BC MAP:
 LATITUDE: 51 34 11 N
 LONGITUDE: 120 22 58 W
 ELEVATION: 1440 Metres
 LOCATION ACCURACY: Within 500M
 COMMENTS: Location of Zone A (Assessment Report 24827).

COMMODITIES: Gold Silver Lead Zinc Copper

MINERALS

SIGNIFICANT: Pyrite Galena Sphalerite Chalcopyrite Tetrahedrite
 ASSOCIATED: Quartz Carbonate
 ALTERATION: Silica Carbonate Malachite
 ALTERATION TYPE: Silicific'n Oxidation
 MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Vein Stockwork
 CLASSIFICATION: Porphyry Hydrothermal Epigenetic
 TYPE: L03 Alkalic porphyry Cu-Au I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE: Upper Triassic GROUP: Nicola FORMATION: Undefined Formation IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Sediment/Sedimentary
 Volcanic
 Breccia

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Quesnel Highland
 TERRANE: Quesnel

INVENTORY

ORE ZONE: ROCK REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 2000
 SAMPLE TYPE: Rock
 COMMODITY GRADE
 Silver 18.8500 Grams per tonne
 Gold 1.4580 Grams per tonne
 COMMENTS: Sample #00SIS-226.
 REFERENCE: Fieldwork 2000, page 24.

ORE ZONE: TRENCH REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1997
 SAMPLE TYPE: Grab
 COMMODITY GRADE
 Silver 183.0000 Grams per tonne
 Gold 62.8000 Grams per tonne
 COMMENTS: Grab sample is from the Road zone of the PGR property.
 REFERENCE: Assessment Report 24827.

CAPSULE GEOLOGY

The PGR property is located about 22 kilometres northwest of Little Fort, about 6.5 kilometres southwest of Taweel Lake. The property covers numerous mineralized veins and alteration zones that have received attention because of their gold content. Three significant showings were identified and labelled Zones A, B and the Road zone in Assessment Report 24827. The Road zone and Zone A occurrences are near the south and north ends, respectively, of an area containing several north-northwest trending quartz-carbonate vein systems and silicified stockwork/breccia zones cutting volcanic and sedimentary rocks of the Upper Triassic Nicola Group. The vein systems are reported to have weak to moderately strong gold-silver-molybdenum-lead-zinc-copper mineralization. A

CAPSULE GEOLOGY

narrow, pyritic, 0.5 metre wide zone located about 5 metres south of the main vein of the Road zone assayed 62.8 grams per tonne gold and 183 grams per tonne silver (Assessment Report 24827). A vuggy, pyritic quartz vein containing traces of chalcopryrite and malachite, and the silicified and pyritized wallrock were sampled by the B.C. Geological Survey (Fieldwork 2000); these yielded only moderately anomalous copper and silver values, but were very high in antimony and mercury. Zone B comprises a system of northerly striking, polymetallic quartz-carbonate veins that contain up to 10 per cent sulphides as blebs, stringers, disseminations and massive pods (Assessment Report 24827) and are located just west of a small lake between Zone A and the Road zone. The sulphide minerals include pyrite, galena, sphalerite, tetrahedrite and chalcopryrite. Belik (Assessment Report 24827) states that the veins commonly yield high silver values, but generally contain less gold than the vein and stockwork systems directly to the west. The veins occur mainly in sedimentary rocks of the Nicola Group, but cut volcanic rocks in the southern part of the system. A sample of silicified rock cut by quartz stockwork and containing heavily disseminated pyrite with traces of chalcopryrite and malachite was collected by the B.C. Geological Survey Branch (Sample 00SIS-226, Fieldwork 2000, page 24) in 2000, and analysed 18.85 grams per tonne silver and 1.458 grams per tonne gold, in addition to high base metal values.

Parts of the PGR property have been explored since the mid-1960s as parts of various larger properties. Anaconda and Imperial Oil explored for copper-gold porphyry mineralization in the 1960s and early 1970s. The Saskatchewan Mining and Development Corporation, Lornex Mining and BP-Selco focused on alkaline copper-gold porphyries and included more geophysics, additional soil sampling, detailed mapping, trenching and drilling. In 1983, Lornex Mining drilled 33 percussion holes. BP Resources Canada conducted an extensive project on the Ta Hoola property (Assessment Report 15221), which includes the PGR area (as the Ta Hoola 9 and 12 claims), as well as the Friendly Lake (093P 134) and the Ro (092P 006) occurrences. Rat Resources drilled four holes on claims Ta Hoola 9 and 12 in 1988, and followed up with trenching on Ta Hoola 9 in 1989. The PGR claims were staked in 1990 by Paul Watt and Ron Wells. Cambridge Minerals Limited drilled on the PGR claims in 1996. Christopher James Gold Corporation optioned the PGR claims in 1998. The B.C. Geological Survey conducted a regional till geochemistry program over NTS mapsheets 092P09W and 08W in 1999 (Open File 2000-17).

BIBLIOGRAPHY

EMPR ASS RPT 5191, 11413, 12101, 15221, 16973, 17737, 19443, 22180,
22819, 23571, 23716, 24827
EMPR EXPL 1988-C139; 1996-D4
EMPR FIELDWORK 2000, p. 24
EMPR OF 2000-17, 2002-15
EMPR GEM 1974-225
GSC MAP 1278A
PR REL Christopher James Gold Corporation, Mar.23, 1998; June 10, 1999

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/27

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 138**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLINTON MANGANESE #2**, JUNCTION CREEK MANGANESE, OLSON

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P04E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 04 22 N
LONGITUDE: 121 37 08 W
ELEVATION: 1030 Metres

NORTHING: 5658825
EASTING: 596758

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location from Dolmage (1944).

COMMODITIES: Manganese

MINERALS

SIGNIFICANT: Pyrolusite
MINERALIZATION AGE: Permian-Triassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Syngenetic Industrial Min.
TYPE: F01 Sedimentary Mn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Permian-Triassic

GROUP

Cache Creek

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Cherty Quartzite
Chert
Shale

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Pavilion Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 1944

COMMODITY

Manganese

GRADE

33.4000 Per cent

REFERENCE: Dolmage (1944).

CAPSULE GEOLOGY

The Clinton Manganese #2 occurrence is located approximately 3 kilometres southwest of Clinton on the northwest side of Junction Valley (Dolmage, 1944). It is about 0.8 kilometre east of the B.C. Rail track.

GSC Map 1278A (Memoir 363) shows the area to be underlain by basic volcanic flows, tuff, ribbon chert, limestone and argillite of the Permian to Triassic Cache Creek Complex. Marble Canyon Formation (also part of the Permo-Triassic Cache Creek Complex) limestone, limestone breccia and chert with minor argillite, tuff, andesitic and basaltic flows also outcrops in the area.

Dolmage (1944) states that the deposit is hosted in "quartzite" (chert ?) and a bright red shale unit and minor green shale. The "quartzites" (cherts ?) are intensely fractured and impregnated with black manganese oxides and hydroxides and are traceable for a hundred metres or so over widths of 15 or so metres. A sample taken by Mr. Olson assayed 33.4% manganese.

BIBLIOGRAPHY

EMPR PF (Report by V. Dolmage in 1944 in 092P 138)
Manganese Occurrences IN B.C., H. Sargent, Unpublished Paper given in Mexico, 1956
GSC MEM 363
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 138**

MINFILE NUMBER: **092P 139**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLINTON MANGANESE #3**, OLSON

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P04E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 03 58 N
LONGITUDE: 121 30 52 W
ELEVATION: 1340 Metres

NORTHING: 5658227
EASTING: 604090

LOCATION ACCURACY: Within 5 KM
COMMENTS: Location from Dolmage (1944).

COMMODITIES: Manganese

MINERALS

SIGNIFICANT: Pyrolusite
MINERALIZATION AGE: Permian-Triassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Syngenetic Industrial Min.
TYPE: F01 Sedimentary Mn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Permian-Triassic

GROUP

Cache Creek

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Cherty Quartzite
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Pavilion Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1944

SAMPLE TYPE: Chip

COMMODITY

GRADE

Manganese

22.8000 Per cent

COMMENTS: Sample width 1.07 metres.

REFERENCE: Dolmage (1944).

CAPSULE GEOLOGY

The Clinton Manganese #3 occurrence is located approximately 6.4 kilometres southeast of Clinton on the southeast side near the summit of Hart Ridge (Dolmage, 1944).

GSC Map 1278A (Memoir 363) shows the area to be underlain by basic volcanic flows, tuff, ribbon chert, limestone and argillite of the Permian to Triassic Cache Creek Complex.

Dolmage (1944) states that the deposit is hosted in "cherty quartzite" (chert ?) interbedded with thin layers of argillaceous material. The manganese minerals are black to steel grey, hard and crystalline, occurring as streaks and thin lenses to 1 centimetre in thickness parallel to bedding and also as fracture fillings up to 1 centimetre in thickness. Three outcrops expose the showings along a trend of 320 degrees over a strike length of 55 metres. A sample taken over a width of 1.07 metres assayed 22.8% manganese.

BIBLIOGRAPHY

EMPR PF (Report by V. Dolmage in 1944 in 092P 138)
Manganese Occurrences IN B.C., H. Sargent, Unpublished Paper
given in Mexico, 1956
GSC MEM 363
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 140**

NATIONAL MINERAL INVENTORY: 092P8 Cu1

NAME(S): **CHU CHUA, CC**

STATUS: Developed Prospect

MINING DIVISION: Kamloops

REGIONS: British Columbia

NTS MAP: 092P08E

UTM ZONE: 10 (NAD 83)

BC MAP:

LATITUDE: 51 22 51 N

NORTHING: 5696274

LONGITUDE: 120 03 42 W

EASTING: 704469

ELEVATION: 1800 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of deposit on a ridge 1 kilometre east of the summit of Chu Chua Mountain, between Chu Chua and Cowell creeks, 11 kilometres east-southeast from the community of Little Fort (Assessment Report 18818).

COMMODITIES: Copper
Talc

Zinc
Magnetite

Silver
Lead

Gold
Molybdenum

Cobalt

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Sphalerite Magnetite Talc

Cubanite Stannite Galena Molybdenite

ASSOCIATED: Magnetite Talc Pyrite Quartz Calcite

Pyrrhotite

ALTERATION: Talc Carbonate Chlorite Silica Epidote

Zoisite

ALTERATION TYPE: Talc Silicific'n Serpentin'zn

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Stratiform Podiform

CLASSIFICATION: Volcanogenic Exhalative Industrial Min.

TYPE: G05 Cyprus massive sulphide Cu (Zn)

SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Paleozoic

GROUP

Slide Mountain

FORMATION

Fennell

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY:

Basalt
Pillow Basalt
Pyritic Cherty Rock
Cherty Tuff
Greywacke
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Slide Mountain

METAMORPHIC TYPE: Regional

COMMENTS: Lower greenschist facies.

PHYSIOGRAPHIC AREA: Shuswap Highland

RELATIONSHIP:

GRADE: Greenschist

INVENTORY

ORE ZONE: CHU CHUA

REPORT ON: Y

CATEGORY: Indicated
 QUANTITY: 1043165 Tonnes

YEAR: 1992

COMMODITY	GRADE	
Silver	10.2000	Grams per tonne
Gold	0.5400	Grams per tonne
Copper	2.9800	Per cent
Zinc	0.3000	Per cent

COMMENTS: Open-pit reserves.

REFERENCE: Canadian Mines Handbook 1992-93, page 203.

CAPSULE GEOLOGY

The area is underlain mainly by Paleozoic rocks of the Eagle Bay assemblage and Fennell Formation. The Eagle Bay assemblage comprises Early Cambrian to Mississippian metasedimentary and metavolcanic rocks that are locally intruded by Devonian orthogneiss. The Fennell Formation (Slide Mountain Group) comprises Devonian to Permian oceanic rocks which were tectonically emplaced over Mississippian rocks of the Eagle Bay assemblage. The Fennell and Eagle Bay rocks were deformed and metamorphosed together; the metamorphic grade is lower greenschist through most of the area, but increases sharply to

CAPSULE GEOLOGY

amphibolite facies in places. The Fennell and Eagle Bay successions are cut by mid-Cretaceous granitic rocks of the Raft and Baldy batholiths, and by Early Tertiary quartz feldspar porphyry, basalt and lamprophyre dikes. They are locally overlain by Eocene sedimentary and volcanic rocks of the Kamloops Group and by Miocene plateau lavas.

A thick pile of massive to pillowed basalts with local pods and layers of cherty tuff and greywacke comprise the lower part of the Fennell Formation in the Chu Chua area. Stratigraphically upward these give way to massive basalt, then through a transitional zone of basalt, chert, phyllite, quartz feldspar porphyry and intraformational chert conglomerate into overlying phyllites and turbiditic sandstones of the Eagle Bay assemblage. Rocks of the Fennell Formation are generally not highly foliated. The schistosity, where developed, is axial planar to early, generally northeast plunging isoclinal folds. The schistosity is itself folded about two generations of later folds with generally east and northwest trends. The Chu Chua deposit apparently lies just below the base of the transitional zone (Fieldwork 1979).

The Chu Chua massive cupriferous pyrite deposit occurs within upper Fennell Formation basalts a short distance east of Chu Chua Mountain. The deposit consists of two major and several minor stratiform massive sulphide lenses associated with pyritic cherty rock and lenses of magnetite and magnetite-talc. The two large massive sulphide pods are termed the North and Main lenses, and a smaller pod known as the South lens. The Main and North lenses are within 100 metres of surface. Locally, a lens of massive fine-grained talc underlies one of the main sulphide lenses. The mineralized zone strikes north, dips vertically to steeply west, and is enclosed within pillowed and massive basalts. In general, the deposits plunge steeply to the south and are thickest at surface (up to 50 metres in the Main lens) narrowing with depth.

Recent drilling indicates that mineralization in the Main lens is concentrated in two main areas known as the Footwall zone and the Hanging Wall zone. The Footwall zone is continuous and well developed along the footwall contact of the lens, but is highly variable in thickness. This zone has an average width of approximately 7.2 metres and contains the highest grade mineralization in the deposit. The Hanging Wall zone is thinner, less continuous and lower grade, and averages 4.5 metres in width. The near-surface parts of the deposit are open to the north and south.

The basalts directly east of the mineralized zones are hydrothermally altered to assemblages of mainly talc, carbonate and chlorite, and are locally bleached, silicified and sparsely mineralized; those on the west side are unaltered. The width of the alteration zone in the east ranges from 5 to 25 metres. The alteration pattern suggests that the deposit is proximal and faces west; this facing direction is consistent with top indicators (usually pillows) throughout the Fennell belt of rocks.

The massive sulphide lenses consist predominantly of pyrite with several per cent chalcopyrite and minor amounts of sphalerite. Cubanite, stannite, quartz and calcite are also evident in minor amounts. Chalcopyrite and sphalerite occur within and interstitial to pyrite grains in the massive sulphide sections. The associated magnetite lenses typically contain discrete bodies of pyrite-chalcopyrite but, except near the contacts with massive sulphide bodies, copper grades are usually low. The massive sulphides are also cut by quartz-talc veins, and in one drillhole, by molybdenite stringers. The pyritic cherty rocks which are closely associated with the massive sulphides are generally massive and often brecciated; locally they are finely laminated. These may be chemical precipitates of volcanic exhalative origin. They appear to persist downdip and along strike from the massive sulphides and may, in part, be distal equivalents of the proximal sulphides. Locally, the cherty rocks are cut by pyritic fractures and veinlets carrying chalcopyrite, carbonate-sphalerite-chalcopyrite veinlets, quartz-chalcopyrite-galena veins, and carbonate veins with pockets of pyrrhotite, pyrite and sphalerite. The areas of talc deposition are interpreted to represent the exhalative vents of the mineralizing solutions (Paper 1987-2).

Drilling in 1978 and 1979 outlined indicated reserves of 2 million tonnes grading 2 per cent copper, 0.4 per cent zinc, 0.1 per cent cobalt, 8 grams per tonne silver and 0.4 gram per tonne gold (Paper 1987-2). In the past, Craigmont Mines calculated potential, near-surface indicated reserves of 186,000 tonnes of talc and 476,000 tonnes of magnetite (Property File - International Vestor Resources Ltd., 1988).

Open-pit reserves at Chu Chua are 1,043,165 tonnes grading 2.98

CAPSULE GEOLOGY

per cent copper, 0.3 per cent zinc, 0.54 gram per tonne gold and 10.2 grams per tonne silver (Canadian Mines Handbook 1992-93, page 203).

In 1977, a regional geochemical survey in the Chu Chua Mountain area under a joint venture agreement between Vestor Explorations Ltd., Seaforth Mines Ltd. and Pacific Cassiar Mines Ltd. (changed Oct. 1978 to Pacific Cassiar Limited) resulted in the discovery of a large anomalous copper gossan. The gossan was subsequently interpreted to be transported and prospecting up the slope eventually located a small gossan with lower but anomalous copper values adjacent to a northerly striking massive magnetite body. The showings were staked as the CC 1-3 claims; subsequent staking was done in the CC 4-11 claims to a total of 150 units. By an August 30, 1978 agreement an 80 per cent interest in the property was optioned to Craigmont Mines Limited. Work by Craigmont during 1978 included a geochemical survey (20 samples) over CC 1, electromagnetic and magnetometer surveys over 25 kilometres covering CC 1-4, and diamond drilling in 23 holes totalling 2843 metres on CC 1 and 4. This work indicated about 2,000,000 tonnes grading 2.0 per cent copper, 0.44 gram per tonne gold, 8.57 grams per tonne silver and 0.4 per cent zinc (Northern Miner - March 15, 1979). In 1979, an additional 2932 metres of drilling was done in 17 holes to further delineate the deposit. Reserve estimates varied from 2 to 4 million tons averaging 2 per cent copper, 0.5 gram per tonne gold, 8 grams per tonne silver, 0.03 per cent cobalt and 0.5 per cent zinc (Pacific Cassiar Limited, Filing Statement 248/80). Further work by Craigmont in 1980-82 included a magnetometer survey over 12 kilometres, electromagnetic surveys over 20 kilometres, a geochemical soil survey (263 samples) and diamond drilling (50 holes to date). In 1982, part-owner Seaforth Mines amalgamated with Quintaine Resources Inc. under the name Quintera Resources Inc. In 1983, Craigmont attempted to drill several deep holes to test the mineralization at depth but the project was abandoned far short of target depth. In late 1984, Craigmont gave up its option and the property reverted in full to Vestor, Pacific Cassiar and Quintera (one-third interest each). Reserves in the upper 200 metres of the deposit are an indicated 2,500,000 tonnes at 2 per cent copper, 0.5 per cent zinc, 0.5 gram per tonne gold, 9 grams per tonne silver, 0.05 per cent cobalt together with 180,000 tonnes of talc and 450,000 tonnes of magnetite (George Cross News Letter No.234, 1984). In 1985, Corporation Falconbridge Copper optioned a 50 per cent interest in the property. Extensive geochemical and geophysical surveys outlined several anomalies in an area to the east of the known deposit. The geophysical, geochemical and drilling program begun in 1985 was continued through 1986-87, testing targets in a rhyolite interval separate from the existing reserve. Corporation Falconbridge changed its name in April 1987 to Minnova Inc. In 1988, Minnova tested the open pit potential with 13 short fill-in holes between earlier grid holes. This work outlined an open pit reserve of 712,073 tonnes at 3.1 per cent copper to a depth of 99 metres, 2 per cent copper cutoff and minimum 1.98 metres width. An estimated 471,692 tonnes of magnetite and 149,671 tonnes of talc are potentially available from a shallow pit (George Cross News Letter December 12, 1988). In 1989, Minnova Inc. performed geological mapping, litho-geochemical sampling, 21 holes drilled totalling 1662 metres, 42 kilometres of cut grid and transient electromagnetic surveying. In 1990, Minnova Inc. carried out diamond drilling totalling 1732 metres in 8 holes. In 1991, Minnova Inc. conducted 4240 metres of diamond drilling in 8 holes and also carried out downhole pulse electromagnetic surveys to test the extent of the Chu Chua horizon at depth to the north and south of previous drilling. This drilling intersected a new hangingwall sulphide zone (drillhole CCF-69: 0.97 per cent copper, 0.84 gram per tonne gold over 14.85 metres; and 0.75 per cent copper, 1.37 grams per tonne gold over 4.65 metres). This mineralization occurs at a vertical depth of 365 metres below the surface.

BIBLIOGRAPHY

- EMPR AR 1966-144,145
EMPR ASS RPT 7110, 7443, 7499, 7659, 8496, 9623, 10940, 10957, 10958, 12884, 14186, 14187, 15385, 15717, 16812, 18275, *18818, 19540, 20670, 22039
EMPR EXPL 1978-E187; 1979-199,200; 1980-297; 1981-75; 1984-257; 1984-257; 1986-C293,C294
EMPR FIELDWORK *1979, pp. 37-48
EMPR MAP 53; 56; 65
EMPR OF 1988-19; 1992-1; 1992-9; 1999-2
EMPR P *1987-2, pp. 63,64; 1991-4, pp. 101-105
EMPR PF (White, G.E. (1978): Geophysical Responses of the Chu Chua Massive Sulphide Deposit, Barriere Area, B.C.; Rights Offering Circular - International Vestor Resources Ltd., Nov. 1, 1988;

BIBLIOGRAPHY

Excerpt from Goutier, F.M. (1986): M.Sc. Thesis, University of British Columbia; Vollo, N. (1981): Geology and Regional Setting of the Chu Chua Copper Deposit; Canadian Superior Exploration Limited - Surveys of the CC Property (1978) \

EMR MIN BULL MR 223 B.C. 197

EMR MP CORPFILE (Pacific Cassiar Limited; Vestor Explorations Limited; Seaforth Mines Ltd.; Craigmont Mines Limited)

GSC MAP 3-1966; 1293A; 1278A

GSC MEM 363

GSC OF 11; 637

ECON GEOL Vol.79 (1984), pp. 815-825 - Geology and Geochemistry of the Chu Chua Massive Sulfide Deposit by P.K. Aggarwal and B.E. Nesbitt

GCNL #240,#216,#215,#194,#195, 1978; #187,#45,#25,#24,#11, 1979; #171,#170,#105, 1980; #188,#23, 1981; #158,#180,#217, 1982; #123, #158, 1983; #234,#63,#62, 1984; #55,#208, 1985; #227,#232,#238, #243, 1988; #225,#204,#139 #103, 1989

N MINER Oct.12, 1978; Jan.25, 1979; Feb.19, Apr.9, 1981; Nov.18, 1982; June 30, 1983; Feb.2, Apr.12, Dec.27, 1984; June 12, Aug.7, Oct.30, 1989; Sept.10, 1990

W MINER February 1979

WWW http://www.infomine.com/index/properties/CHU_CHUA.html

Aggarwal, P.K. (1983): Geochemistry of the Chu Chua Massive Sulphide Deposit, British Columbia, M.Sc. Thesis, University of Alberta Chevron File

Goutier, F.M. (1986): Galena-Lead Isotope Study of Mineral Deposits in the Eagle Bay Formation, Southeastern British Columbia, M.Sc. Thesis, University of British Columbia Placer Dome File

DATE CODED: 1985/07/24
DATE REVISED: 2001/04/06

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: Y

MINFILE NUMBER: **092P 141**

NATIONAL MINERAL INVENTORY:

NAME(S): **GOLDEN LOON HIGH GRADE ZONE**, GL-1, GOLDEN LOON 1

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5702072
EASTING: 687979

LATITUDE: 51 26 19 N
LONGITUDE: 120 17 43 W
ELEVATION: 1250 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of diamond-drill hole GL-97-01 (Drawing 588-4A, Assessment Report 25431).

COMMODITIES: Gold Silver Zinc Lead

MINERALS

SIGNIFICANT: Pyrite Sphalerite Chalcocopyrite Galena
ASSOCIATED: Quartz
ALTERATION: Silica Carbonate Chlorite
ALTERATION TYPE: Silicific'n Chloritic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins
SHAPE: Tabular
DIMENSION: Metres STRIKE/DIP: 360/50W TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u> Upper Paleozoic Triassic-Jurassic Triassic-Jurassic	<u>GROUP</u> Harper Ranch	<u>FORMATION</u> Undefined Formation	<u>IGNEOUS/METAMORPHIC/OTHER</u> Dum Lake Intrusive Complex Thuya Batholith
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LITHOLOGY: Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel Harper Ranch
PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1997
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 75.6000 Grams per tonne
Gold 5.6000 Grams per tonne
REFERENCE: Assessment Report 25431.

CAPSULE GEOLOGY

The Golden Loon High Grade Zone, also called the Golden Loon 1 or GL-1 deposit, is located 900 metres south of Dum Lake and 6 (air) kilometres west of Little Fort. Good quality logging and bush roads provide access to the property.

The deposit is a narrow quartz vein carrying scattered pyrite, sphalerite, chalcocopyrite and galena (Assessment Reports 24883 and 25431; Fieldwork 2000, page 22). The vein strikes north, dipping 50 degrees west. The vein quartz is milky white in colour, and wallrocks are silicified, chloritized and cut by carbonate veinlets. The vein has been traced on surface for approximately 50 metres. Drilling beneath the structure (Assessment Report 25431) provided disappointing results, the highest assay being 3.28 grams per tonne gold and 13.7 grams per tonne silver across 20 centimetres. Four hundred metres to the north, another vein, but probably the same one, is exposed in a trench. The northern vein ranges between 10 and 40 centimetres in width and samples assayed as high as 5.6 grams per tonne gold and 75.6 grams per tonne silver.

Hostrocks are dioritic intrusive rocks of the Triassic to Jurassic Dum Lake Intrusive Complex which consists of a mafic portion composed of diorite, gabbro, microdiorite and intrusion breccia and an ultramafic portion composed of dunite, wehrlite, pyroxenite and

CAPSULE GEOLOGY

serpentine. The Dum Lake Intrusive Complex is believed to be an Alaskan-type intrusive complex (Fieldwork 2000). It is in contact with granodioritic rocks of the Triassic to Jurassic Thuya batholith on the west. On its eastern side the Dum Lake intrusive rocks intrude siltstone, argillite, chert and limestone of the late Paleozoic Harper Ranch Group and mafic volcanic rocks, related volcaniclastic rocks, clastic sediment, chert and limestones of the Upper Triassic Nicola Group.

The earliest record of prospecting in the area dates from the 1920s when placer gold was recovered from the Eakin Creek Placer (092P 055). In 1967, Noranda Exploration Company (Assessment Report 1051) completed a soil sampling survey over the Kira claims after obtaining anomalous results in a reconnaissance stream sediment sampling program. The program outlined zones of anomalous copper and nickel. In 1973, Rio Tinto Canadian Exploration Limited completed another soil geochemical sampling program on the Dum Claim Group (Assessment Report 4689), outlining copper, zinc and lead anomalies west of Dum Lake. Teck Corporation reportedly (Assessment Reports 14237, 15870) staked the Minerva Group in 1980-81 on the west side of the Golden Loon Property and undertook a magnetometer survey and a soil geochemical survey, obtaining several silver anomalies. In 1984, The Golden Loon Claims were staked by Barnes Creek Minerals and a prospecting program undertaken (Assessment Report 14237). In 1985, additional prospecting was undertaken and magnetometer, VLF-EM and soil geochemical surveys completed (Assessment Reports 14920 and 15937). In 1987, Mineta Resources completed a program (Assessment Report 17342) which included soil geochemical surveys (548 samples), linecutting (34.6 kilometres), litho geochemistry (18 samples), and stream sediment geochemical sampling (70 samples) and located some high grade float boulders as well as outlined some gold-in-soil geochemical anomalies. In 1988, Mineta completed 78.2 kilometres of linecutting, 61.0 kilometres of VLF-EM and magnetometer surveying and collected 1571 soil geochemical samples (Assessment Reports 18802 and 21109). In 1989, Mineta completed 25.0 kilometres of VLF-EM and magnetometer surveying, as well as soil geochemical (556 samples) and litho geochemical (20 samples) surveys (Assessment Report 20029). In 1990, the property was optioned to Corona Corporation and an extensive program (Assessment Report 21014) of prospecting, geological mapping, soil geochemical sampling (637 samples) and geophysical surveys (25 kilometres of magnetometer and VLF-EM), trenching and diamond drilling (691 metres in 7 holes) was carried out. In 1992, Placer Dome Limited optioned the property, focusing on the porphyry copper-gold potential of the western portion of the property (Assessment Report 22818) and completed 20.0 kilometres of grid preparation, geological mapping and soil geochemical surveying (1083 samples). In 1996, Meteor Minerals Incorporated completed a program of geochemical soil sampling to test the potential of the enzyme leach technique in tracing mineralized zones in areas of extensive overburden (Assessment Report 24883). In 1997, Meteor completed a three-hole (393 metres) diamond drill program on the Golden Loon High Grade Zone. In 1999, Tilava Mining Corporation completed a program of litho geochemical sampling (150 samples) on ultramafic rocks on the property and detected significant platinum values (Assessment Report 26100). In 2000, the property was optioned by Case Gold Mines Limited (George Cross News Letters #191, #216, 2000) and VLF-EM, magnetometer, induced polarization and soil geochemical (119 samples) surveys completed.

BIBLIOGRAPHY

EMPR FIELDWORK *2000, pp. 20-22
EMPR ASS RPT 1051, 2418, 4689, 14237, 14920, 15870, 15937, 17342,
18802, 20029, 21109, 21014, 22818, 24315, 24883, *25431, 26100
GSC MEM 363
GSC MAP 1278A
GCNL #234(Dec.7), 1999; #154(Aug.11), #191(Oct.5), #216(Nov.10), 2000

DATE CODED: 2001/02/23
DATE REVISED: 2001/02/23

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 142**

NATIONAL MINERAL INVENTORY:

NAME(S): **JESMOND LIMESTONE**, RAMSHEAD QUARRIES, LOT 1284

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 092P04W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 15 N
LONGITUDE: 121 51 36 W
ELEVATION: 1737 Metres

NORTHING: 5663880
EASTING: 579784

LOCATION ACCURACY: Within 500M

COMMENTS: Quarry on zone A, located on Lot 1284 (Industrial Mineral File - Rourke, T.A., 1971, Figure 3).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
ASSOCIATED: Quartz Dolomite
MINERALIZATION AGE: Upper Permian
ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Fusulinids

DEPOSIT

CHARACTER: Stratiform Massive
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: R09 Limestone
SHAPE: Irregular
MODIFIER: Folded Faulted
DIMENSION: 200 Metres
COMMENTS: Folded into a pair of northwest trending anticlines. The limestone unit is 200 metres thick.

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Permian	Cache Creek	Marble Canyon	

DATING METHOD: Fossil
MATERIAL DATED: Fusulinids

LITHOLOGY: Limestone
Argillite
Chert
Siltstone
Mafic Flow
Conglomerate

HOSTROCK COMMENTS: The Marble Canyon Formation is Middle to Upper Permian in age and the Cache Creek Group is Carboniferous to Jurassic.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Pavilion Ranges

INVENTORY

ORE ZONE: A

REPORT ON: Y

CATEGORY: Unclassified
QUANTITY: 3600000 Tonnes
COMMODITY: Limestone
GRADE: 55.1700 Per cent
YEAR: 1970

COMMENTS: Grade given for CaO.

REFERENCE: Industrial Mineral File - Rourke, T.A. 1971, page 7.

CAPSULE GEOLOGY

The Jesmond limestone deposit is located 19 kilometres west-northwest of Clinton and is easily accessible by road. A 150 metre long quarry face has been developed on Lot 1284 along the east side of the Kosterling Creek-Porcupine Creek valley, 14 kilometres northwest of Kelly Lake. The Kelly Lake limestone occurrence (092P 171) is situated 5 kilometres to the southeast.

The deposit lies on the western margin of a, 10 to 15 kilometre wide, belt of folded and faulted carbonates of the Middle to Upper Permian Marble Canyon Formation (Carboniferous to Jurassic Cache Creek Group). This belt extends north-northwest from Marble Canyon for 65 kilometres.

CAPSULE GEOLOGY

The quarry is developed in the fourth member of the formation (Geological Survey of Canada Paper 79-17), consisting of 200 metres of massive limestone with minor interbedded chert and argillite. The unit is locally folded into a pair of anticlines that form two parallel, closely spaced ridges extending northwest, from Two Mile Creek, for 14 to 15 kilometres. An overlying sequence of argillite, chert and mafic flows is preserved in the valley between the two ridges along an intervening syncline. A similar succession underlying the limestone outcrops to the east. At the quarry, the limestone is cut by several vertical faults striking 150 to 160 degrees. One of these, brings the limestone in contact with a sequence of argillite and conglomerate to the west.

The deposit is generally comprised of massive, light grey to dark greyish-brown limestone in alternating lighter and darker layers. The quarry exposes massive, fine grained, light grey to white and grey, mottled limestone containing scattered crinoid remains. The rock is contaminated with some thin quartz veinlets and dark chert inclusions just above the quarry face. In thin section, the limestone is comprised mostly of calcite with some grains and veinlets of quartz. Five chip samples collected in succession over a total length of 150.0 metres averaged 54.79 per cent CaO, 0.45 per cent MgO, 0.88 per cent insolubles, 0.40 per cent R2O3, 0.11 per cent Fe2O3, 0.0038 per cent MnO, 0.068 per cent P2O5, 0.0026 per cent sulphur and 43.42 per cent ignition loss (Geology, Exploration and Mining in B.C. 1970, page 502, Samples 1 to 5).

Reserves (in tonnes) with average grades (in per cent) have been estimated for the following three zones (Industrial Mineral File - Rourke, T.A., 1971, pages 7-9);

	Reserves	CaO	MgO	SiO2	Al2O3	Fe2O3	Sulphur	Ig. Loss
Zone A	3,600,000	55.17	0.27	0.35	0.23	0.08	-	-
Zone B	270,000	55.44	-	0.10	-	0.02	-	44.10
Zone C	270,000	53.17	0.97	0.96	0.54	0.40	0.05	43.90

The quarry site (zone A) lies on the west flank of the eastern anticline (the west slope of the eastern ridge). Zones B and C lie along the axial trace of the western anticline (the crest of the western ridge). Zone B is situated 700 metres southwest of zone A and zone C is 1200 metres south of Zone A. The ridge crest containing zones B and C is estimated to contain a total potential of 36 million tonnes of limestone over a strike length of 600 metres (Industrial Mineral File - Rourke, T.A., 1971, page 9).

The property was initially explored by Jesmond Limestone Corp. and Ramshead Quarries, in 1970. Malibu Metals Ltd. conducted detailed mapping, sampling and 305 metres of diamond drilling in 1971.

BIBLIOGRAPHY

EMPR AR 1958, pp. 90-93
 EMPR BULL 44, pp. 13-19
 EMPR GEM *1970-501,502; 1973-550
 EMPR IND MIN FILE (McCammon, J.W. (1970): Map of Sample Location; Rourke, T.A. (1971): *Reports on Jesmond Limestone Project)
 GSC MAP 3-1966; 1278A
 GSC MEM 363, pp. 25-29
 GSC P 66-1, pp. 94,98-101; *79-17, pp. 6,7

DATE CODED: 1985/07/24
 DATE REVISED: 1989/08/09

CODED BY: GSB
 REVISED BY: PSF

FIELD CHECK: N
 FIELD CHECK: N

MINFILE NUMBER: **092P 143**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOUNT SOUES**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P04E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 01 47 N
LONGITUDE: 121 43 20 W
ELEVATION: 1250 Metres

NORTHING: 5653907
EASTING: 589602

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location from GSC Annual Report 1896, page 345.

COMMODITIES: Asbestos

MINERALS

SIGNIFICANT: Chrysotile
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Metamorphic Industrial Min.
TYPE: M06 Ultramafic-hosted asbestos

HOST ROCK

DOMINANT HOSTROCK: Metaplutonic

STRATIGRAPHIC AGE

Permian-Triassic

GROUP

Cache Creek

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Serpentinite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Pavilion Ranges

CAPSULE GEOLOGY

The Mount Soues chrysotile (asbestos) occurrence is located "in the southern base of Mount Soues, near Junction Valley" (GSC Annual Report 1894, page 345). The location appears to be about 11 kilometres southwest of Clinton, above the B.C. Rail tracks.

At this location, bedrock is mapped (GSC Map 1278A) as argillite, basaltic flows, tuff, chert and limestone of the Permian to Triassic Cache Creek Complex. Serpentine and other ultramafic rocks are known to be associated with the Cache Creek Complex at other locations, and could be present in this area.

There is no information on the deposit other than "small veins of chrysotile or serpentine asbestos have been observed in or near some of the deposits of serpentine in ... the Cache Creek rocks" (GSC Annual Report 1896, page 345).

BIBLIOGRAPHY

EMPR OF 1995-25
GSC ANN RPT 1894-345
GSC MEM 363-89
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 144**

NATIONAL MINERAL INVENTORY:

NAME(S): **WELL**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P15E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 53 44 N
LONGITUDE: 120 43 42 W
ELEVATION: 948 Metres

NORTHING: 5751861
EASTING: 656304

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the north-central part of the Well claim block
(Assessment Report 5807).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite

ASSOCIATED: Pyrite

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated

CLASSIFICATION: Porphyry

TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP
Upper Triassic Nicola

FORMATION
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Andesitic Tuff
Syenite
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Well property is about 2.5 kilometres north of Canim Lake. There are a number of small chalcopyrite occurrences within pyrite-rich Upper Triassic Nicola Group andesitic tuffs in the north-central part of the claim block. The mineralization may be related to a small syenite stock that intrudes the tuffs. Du Pont of Canada Exploration Limited conducted geochemical sampling and prospecting on the Well claims in 1975.

BIBLIOGRAPHY

EMPR ASS RPT *5807
EMPR GEM 1975-E122
EMPR OF 2002-15
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/02

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 145**

NATIONAL MINERAL INVENTORY:

NAME(S): **WORLDSTOCK**, SILVER LAKE

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5712379
EASTING: 688196

LATITUDE: 51 31 52 N
LONGITUDE: 120 17 12 W
ELEVATION: 1325 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Located on the Worldstock 1-2 claims, about 2 kilometres southeast of Rock Island Lake, about 22 kilometres south-southwest of the community of Clearwater.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ALTERATION: Carbonate Chlorite Pyrite Silica
ALTERATION TYPE: Propylitic Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Nicola	Undefined Formation	

LITHOLOGY: Altered Volcanic
Altered Diorite
Pyroxene Porphyry
Breccia
Feldspar Phyrlic Intrusive

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
PHYSIOGRAPHIC AREA: Quesnel Highland

INVENTORY

ORE ZONE: MAIN SHOWING
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY: Copper
GRADE: 0.7800 Per cent
REFERENCE: Assessment Report 25503.

CAPSULE GEOLOGY

The Worldstock showing is an isolated outcrop of iron carbonate-chlorite-pyrite-silica altered rock with traces of chalcopyrite. It was discovered during an exploration program by Christopher James Gold Corporation in 1997-98, that covered the Deer Lake (092P 010), PGR (092P 137) and the Crater and Woodstock claims (Assessment Reports 25503, 26180). Strongly altered volcanics of the Upper Triassic Nicola Group yielded 0.78 per cent copper from a 4 by 3 metre panel sample (Assessment Report 25503). The showing is located along or near the contact between pyroxene porphyry and breccia of the volcanic member of Nicola Group, and overlying conglomerate of the mixed sedimentary-volcanic unit (uTrNsv of Fieldwork 2000), although the actual protolith to the altered rock is uncertain. Altered dioritic intrusions occur in nearby outcrops (Press Release - Christopher James Gold Corporation, 1998). A pyrite-silica altered rock exposed about 800 metres to the northwest, however, appears to have been derived from a feldspar phyrlic intrusive rock, consistent with the suggestion that the Worldstock showing may represent part of a porphyry system.

Staking of the Worldstock claim followed the discovery of the showing in 1997 by prospector Paul Watt. Christopher James Gold Corporation conducted a soil geochemical survey in 1999. The B.C. Geological Survey conducted a regional till geochemistry program over

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1247
REPORT: RGEN0100

CAPSULE GEOLOGY

NTS mapsheets 092P09W and 08W in 1999 (Open File 2000-17).

BIBLIOGRAPHY

EM FIELDWORK *2000, p. 26
EM OF 2000-17
EMPR ASS RPT *25503, 26180
EMPR OF 2002-15
GSC MAP 1278A
PR REL Christopher James Gold Corporation, *Mar.23, 1998; June 10,
1999
WWW <http://www.infomine.com/>

DATE CODED: 1999/06/21
DATE REVISED: 2001/01/24

CODED BY: GO
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 146**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLINTON**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 09 20 N
LONGITUDE: 120 53 50 W
ELEVATION: 915 Metres

NORTHING: 5669226
EASTING: 647050

LOCATION ACCURACY: Within 500M

COMMENTS: Location of drillhole 87-3 (figure 6, Assessment Report 17179).

COMMODITIES: Gold Copper

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite
ASSOCIATED: Quartz
ALTERATION: Epidote Chlorite Malachite Pyrite
ALTERATION TYPE: Propylitic Silicific'n Pyrite Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epithermal
TYPE: H05 Epithermal Au-Ag: low sulphidation I VEIN, BRECCIA AND STOCKWORK
I01 Au-quartz veins
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Nicola	Undefined Formation	

LITHOLOGY: Augite Andesite
Volcanic Breccia
Porphyritic Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1987
SAMPLE TYPE: Drill Core
COMMODITY: Gold GRADE: 4.4000 Grams per tonne
COMMENTS: Drillhole 87-3, 0.3 metre from 229.5 to 229.8 metres.
REFERENCE: Assessment report 17179.

CAPSULE GEOLOGY

The Clinton prospect is located on the west side of Vidette Lake south of the Vidette mine property (092P 086). The area is approximately 50 (air) kilometres north of Savona and is accessible on a good-quality gravel road which leads north from the Trans-Canada Highway approximately 7.4 kilometres west of Savona.

The Vidette Lake area is underlain mainly by plateau basalts of the Miocene Chasm Formation (Chilcotin Group). In the Deadman River-Vidette Lake area, these basalts are eroded and Upper Triassic Nicola Group volcanic, sedimentary and related intrusive rocks (mainly dikes and plugs of feldspar porphyry) are exposed in a window. Nicola Group rocks on the Clinton claims are mainly augite andesite and volcanic breccia (Assessment Reports 11854 and 17179) intruded by porphyritic monzonite dikes with plagioclase phenocrysts. The Nicola and dike rocks have been moderately to intensely propylitized and pyritized with up to 7 per cent pyrite. Chalcopyrite and malachite occur as minor constituents in fractures. Steeply dipping quartz veins up to 20 centimetres in width trend northwest, some containing pyrite. The highest assay was 4375 ppb gold across 0.3 metre in drillhole 87-3 (Assessment Report 17179).

There is no record of the early history of the property which lies southwest of the past-producing Vidette mine property. The Clinton claims were staked in 1982 by Mr. C. Boitard. They were

CAPSULE GEOLOGY

optioned to Lakewood Mining Company who completed an induced polarization survey (6.0 kilometres) and soil (475 samples) and lithogeochemical (13 samples) surveys (Assessment Report 10893). In 1984 (Assessment Report 11854), Lakewood completed 8 kilometres of road construction and four diamond-drill holes (468 metres). In 1987, an additional three holes (686 metres) were completed on the property (Assessment Report 17179). In 1990, prospecting and 1.8 kilometres of induced polarization surveying were carried out (Assessment Reports 21184, 22235, 22728).

BIBLIOGRAPHY

EMPR ASS RPT 10893, *11854, *17179, 21184, 22235, 22728
EMPR AR 1936-36-43; 1939-41,42,74; 1940-27,60
GSC MEM 179, pp. 26-34; *363
GSC MAP 1278A

DATE CODED: 2001/02/07
DATE REVISED: 2001/03/27

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 147**

NATIONAL MINERAL INVENTORY:

NAME(S): **JANICE CREEK**, EAGLE CREEK, JAN-LYN,
TH-2

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 29 57 N
LONGITUDE: 120 26 57 W
ELEVATION: 1300 Metres

NORTHING: 5708422
EASTING: 677050

LOCATION ACCURACY: Within 500M

COMMENTS: Location of copper showing west of Long Island (Janice) Lake (Figure 44, Minister of Mines Annual Report 1970).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrrhotite Pyrite
ALTERATION: Epidote Garnet Quartz Carbonate
ALTERATION TYPE: Skarn
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stratabound Disseminated
CLASSIFICATION: Skarn Porphyry
TYPE: K01 Cu skarn L PORPHYRY

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Nicola	Undefined Formation	Thuya Batholith
Triassic-Jurassic			

LITHOLOGY: Fragmental Andesite
Tuff
Biotite Hornfels
Pyroxene Hornfels
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane PHYSIOGRAPHIC AREA: Thompson Plateau
TERRANE: Quesnel
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels

CAPSULE GEOLOGY

The Eagle Creek (Janice Creek) copper occurrence is located 20 (air) kilometres west-northwest of Little Fort and 1 kilometre west-northwest of the west end of Long Island (Janice) Lake. Access is by the Eakin Creek logging road to Eagle (Janice) Creek and then on a bush road.

Geology, Exploration and Mining in British Columbia 1970 describes "copper occurrences on Phinetta Creek and northwest of Long Island Lake". The showings are hosted by massive and fragmental andesite and tuff of the Upper Triassic Nicola Group which are commonly altered to biotite or pyroxene hornfels close to the contact with granodioritic rocks of the Triassic to Jurassic Thuya Batholith between Long Island Lake and Upper Phinetta (Eagle or Janice) Creek. Locally, light grey veinlets of epidote, quartz, carbonate and garnet lace the hornfels. Fieldwork 2000 (pages 21 and 25) refer to the showing as the Th-2 occurrence.

The earliest recorded work was by Royal Canadian Ventures in 1967 (Assessment Report 1055) on the Eagle Creek claim group. Geological mapping, stream sediment and soil sampling were completed. In 1969, induced polarization surveys were completed over the property (Assessment Report 1639). In 1989, J.P. Sorbara staked the property as the Long Island Minerals Claim Group and completed lithochemical (7 samples), soil (35 samples) and silt (12 samples) geochemical surveys (Assessment Report 18750). In 1990, J.P. Sorbara completed additional lithochemical (49 samples), soil (10 samples) and silt (14 samples) geochemical surveys (Assessment Report 18750).

BIBLIOGRAPHY

EMPR ASS RPT 1055, 1639, 18750, 20239

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1251
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR GEM *1970-307-312, Fig. 44
EMPR FIELDWORK 2000, pp. 1-30
GSC MEM 363
GSC MAP 1278A

DATE CODED: 2001/02/19
DATE REVISED: 2001/02/19

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 148**

NATIONAL MINERAL INVENTORY:

NAME(S): **JOSEPH CREEK**, BOULDER CREEK

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 27 48 N
LONGITUDE: 120 09 34 W
ELEVATION: 411 Metres

NORTHING: 5705179
EASTING: 697311

LOCATION ACCURACY: Within 500M

COMMENTS: A large fan at the mouth of Joseph Creek is a favoured collecting locality (Geological Survey of Canada Paper 72-53).

COMMODITIES: Agate Gemstones

MINERALS

SIGNIFICANT: Jasper Chalcedony

COMMENTS: Jasper and chert boulders.

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Unconsolidated

CLASSIFICATION: Placer

TYPE: Q05 Jasper

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Quaternary			Glacial/Fluvial Gravels

LITHOLOGY: Gravel

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

An enormous fan covering 202 to 243 hectares lies at the mouth of Joseph (Boulder) Creek where it empties into the North Thompson River, about 5 kilometres north of Little Fort. This is a collecting locality for boulders of jasper and red and green banded chert (Geological Survey of Canada Paper 72-53).

The area is probably underlain by Devonian to Permian Fennell Formation (Slide Mountain Group) pillow basalts, chert and argillite.

BIBLIOGRAPHY

GSC MAP 1278A
GSC P *72-53, pp. 61,62

DATE CODED: 1985/07/24
DATE REVISED: 2001/04/06

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 149**

NATIONAL MINERAL INVENTORY:

NAME(S): **BARRIERE RIVER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P01E
BC MAP:

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 12 33 N
LONGITUDE: 120 04 16 W
ELEVATION: 442 Metres

NORTHING: 5677163
EASTING: 704574

LOCATION ACCURACY: Within 5 KM

COMMENTS: The best part of the river for collecting, about 6 kilometres upstream from the bridge over Highway 5 at Barriere (Geological Survey of Canada Paper 72-53).

COMMODITIES: Rhodonite Gemstones

MINERALS

SIGNIFICANT: Rhodonite Jasper
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unconsolidated Massive
CLASSIFICATION: Placer
TYPE: C01 Surficial placers Q02 Rhodonite
Q05 Jasper

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Paleozoic	Slide Mountain	Fennell	

LITHOLOGY: Chert
Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

Joseph (Boulder) Creek (092P 148) and Barriere River are collecting localities for boulders of jasper, rhodonite, and green and red banded chert which are presumably associated with metasedimentary rocks of the Paleozoic Fennell Formation (Slide Mountain Group).

"Barriere River is a more productive stream for rhodonite. The best part of the river seems to be about 4 miles upstream from the bridge over Highway 5. In times of low water, the stream bed is the best source of material but some boulders may be found along the bank" (Geological Survey of Canada Paper 72-53).

BIBLIOGRAPHY

GSC P *72-53, pp. 61,62
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2001/03/30

CODED BY: GSB
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 150**

NATIONAL MINERAL INVENTORY:

NAME(S): **BOWDEN CREEK**, SHARAN QUARRY

STATUS: Past Producer
REGIONS: British Columbia
NTS MAP: 092P04E
BC MAP:
LATITUDE: 51 02 47 N
LONGITUDE: 121 41 14 W
ELEVATION: 1128 Metres
LOCATION ACCURACY: Within 1 KM
COMMENTS: Quarry (Minister of Mines Annual Report 1967, page 309).

Open Pit

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

NORTHING: 5655803
EASTING: 592024

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite
MINERALIZATION AGE: Permian

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: R09 Limestone
SHAPE: Regular
MODIFIER: Folded
DIMENSION: 660 x 170
COMMENTS: Limestone bed.

Massive
Industrial Min.

Faulted
Metres

STRIKE/DIP: 017/90

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Permian

GROUP

Cache Creek

FORMATION

Marble Canyon

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Limestone
Mafic Flow
Tuff
Chert
Argillite

HOSTROCK COMMENTS: The Cache Creek Group ranges from Carboniferous to Triassic in age.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Pavilion Ranges

INVENTORY

ORE ZONE: BOWDEN CREEK

REPORT ON: Y

CATEGORY: Unclassified
QUANTITY: 900000 Tonnes

YEAR: 1969

COMMODITY: Limestone
GRADE: 55.2400 Per cent

COMMENTS: Grade is for CaO from a sample taken across a 60 metre wide quarry face (Minister of Mines Annual Report 1958, page 92).

REFERENCE: George Cross News Letter No.220, 1969.

CAPSULE GEOLOGY

The Bowden Creek deposit is located on the west side of the Cutoff Valley, 400 metres west of Highway 12 and 8.5 kilometres southwest of Clinton.

The deposit consists of a limestone bed hosted in a 460 metre thick Permian(?) sequence of mafic flows, tuff, chert and argillite of the Carboniferous to Jurassic Cache Creek Group. This sequence is overlain by massive Middle to Upper Permian limestones of the Marble Canyon Formation (Cache Creek Group). The strata have been folded into the Fortytwo Creek anticlinorium, a broad north west trending structure complicated by faulting and smaller scale folding.

The limestone bed strikes 017 degrees over an exposed length of 660 metres and dips vertically. The unit varies up to 170 metres in exposed width. Several vertical faults cut the deposit.

The bed is comprised of fine grained, bluish grey and white mottled limestone. A chip sample, taken across a 60-metre wide quarry face, assayed 55.24 per cent CaO, 0.30 per cent MgO, 0.46 per cent insolubles, 0.30 per cent R2O3, 0.04 per cent Fe2O3, 0.030 per cent MnO, 0.071 per cent P2O5, trace of sulphur and 43.57 per cent ignition loss (Minister of Mines Annual Report 1958, p. 92, Sample

CAPSULE GEOLOGY

2). A second, 46 metre long, chip sample assayed 55.63 per cent CaO, 0.19 per cent MgO, 0.48 per cent SiO₂, 0.14 per cent Al₂O₃, 0.07 per cent Fe₂O₃ and nil sulphur (CANMET Report 811, p. 225, Sample 105).

The deposit is estimated to contain reserves in excess 900,000 tonnes of high purity limestone (George Cross Newsletter #220, 1969).

A small quarry was opened up on this deposit sometime prior to 1958 but no production figures are available. Mutual Mining & Refining Ltd. was considering putting the property back into production in 1969.

BIBLIOGRAPHY

EMPR AR 1958-90-93; *1967-309
EMPR BULL 44, p. 12
GSC P 66-1, pp. 94,98-101; 79-17, pp. 2,3
GSC MEM 363, pp. 25-29
GSC MAP 3-1966; 1278A
CANMET RPT *811, Part 5, pp. 224,225
GCNL #220, 1969

DATE CODED: 1985/07/24
DATE REVISED: 1989/08/09

CODED BY: GSB
REVISED BY: PSF

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 151**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLINTON MANGANESE #4, OLSON**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P04E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 04 09 N
LONGITUDE: 121 39 20 W
ELEVATION: 1075 Metres

NORTHING: 5658376
EASTING: 594197

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location from EMPR Ministry of Mines Annual Report 1948, page A91.

COMMODITIES: Manganese

MINERALS

SIGNIFICANT: Pyrolusite
MINERALIZATION AGE: Permian-Triassic

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Syngenetic Industrial Min.
TYPE: F01 Sedimentary Mn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Permian-Triassic

GROUP

Cache Creek

FORMATION

Marble Canyon

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Quartzitic/Quartzose Schist
Cherty Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Pavilion Ranges

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1948

SAMPLE TYPE: Chip

COMMODITY

GRADE

Manganese

15.8000

Per cent

COMMENTS: 3.1 metre sample width.

REFERENCE: EMPR Annual Report 1948, page A91.

CAPSULE GEOLOGY

The Clinton Manganese #4 occurrence is located approximately 5.6 kilometres southwest of Clinton. It is just west of the B.C. Rail track on a small ridge that trends about 350 degrees. The showings trend along the ridge for about 100 metres, about 125 metres above the track.

GSC Map 1278A (Memoir 363) shows the area to be underlain by massive limestone, limestone breccia and chert with minor argillite, tuff, and andesitic and basaltic flows of the Marble Canyon Formation of the Permian to Triassic Cache Creek Complex.

EMPR Minister of Mines Annual Report (1948, page A91) states that lithologies in the vicinity are largely grey and grey-green quartzose schists with interlayers of white, pink and red cherty layers. The strata strike 335 degrees, dipping 45 degrees southwest. A stratigraphic thickness of about 15 metres is exposed on the ridge, with secondary manganese oxides deposited on fracture surfaces. Although it could not be positively identified, rhodonite was suspected as the primary manganese mineral. Although most of the ridge is estimated to assay about 0.75% manganese, a 3 metre open-cut at the north end of the exposure containing "well mineralised" rock, with pyrolusite in vertical stringers to 2 centimetres wide. A 3.1 metre sample assayed 15.8% manganese.

BIBLIOGRAPHY

EMPR AR 1948-A91
Manganese Occurrences IN B.C., H. Sargent, Unpublished Paper
given in Mexico, 1956

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1257
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 363
GSC MAP 1278A

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/24

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 152**

NATIONAL MINERAL INVENTORY:

NAME(S): **SODA LAKE**, SODA 51 TO 54, BRIDGET

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:

MINING DIVISION: Clinton

LATITUDE: 51 47 25 N
LONGITUDE: 121 20 39 W
ELEVATION: 920 Metres

UTM ZONE: 10 (NAD 83)

NORTHING: 5739010
EASTING: 614201

LOCATION ACCURACY: Within 500M

COMMENTS: Location of common post Soda 51 to 54 claims (figure 3, Assessment Report 10572).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite
ALTERATION: Chlorite Epidote Calcite
ALTERATION TYPE: Propylitic Carbonate
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Unknown
TYPE: I06 Cu±Ag quartz veins

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Nicola	Unnamed/Unknown Formation	

LITHOLOGY: Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Soda Lake copper occurrence is located one kilometre north of Soda Lake and nine kilometres southeast of the village of Lac La Hache. It is 2 kilometres east of Highway 97. There is little information on the geology of the claims, however Geological Survey of Canada Map 1278A shows the area to be underlain by the Upper triassic to Lower Jurassic Nicola Group which consists of altered andesitic volcanic rocks and sedimentary rocks. Alkaline plateau basalts of the Miocene to Pleistocene Chilcotin Group are exposed immediately west of the claims. There is little information about the occurrence, however Assessment Report 10572 reports that fine grained volcanic flows and breccias of the Nicola Group are locally flooded with epidote and cut by calcite veining and that some of the altered outcrops contains "fine grained pyrite and chalcopyrite which locally become Massive". Assessment Report 11390 describes propylitic (chlorite) and carbonate alteration of the Nicola volcanic rocks and pyrite and chalcopyrite as veins and disseminations in propylitically altered rock.

The earliest recorded work on the property was by Anaconda American Brass in 1970 (Assessment report 2684) on the Soda Group of claims when induced polarisation surveys were completed. Anaconda allowed all but the Soda 51 ot 54 claims to lapse and the Bridget 1 claim (20 units) was staked over the Soda claims by Mr. Rudolf M. Durfield. In 1982, Mr. Durfield completed a program of prospecting and soil geochemical sampling (89 samples analysed for copper, lead, zinc, silver, arsenic, gold and antimony - Assessment Report 10572). In 1983, Mr. Durfield collected additional soil samples (Assessment Report 11390).

BIBLIOGRAPHY

EMPR ASS RPT 2684, 10572, 11390
GSC MEM 363

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1259
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 1278A

DATE CODED: 2003/01/20
DATE REVISED: / /

CODED BY: RHM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 153**

NATIONAL MINERAL INVENTORY:

NAME(S): **AURIZON GOLD ZONE**, OPHIR, ANN,
ZONE 3 ANOMALY

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:
LATITUDE: 51 57 28 N
LONGITUDE: 121 17 08 W
ELEVATION: 1370 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location from figure 5, Assessment Report 25368.

MINING DIVISION: Clinton
UTM ZONE: 10 (NAD 83)
NORTHING: 5757730
EASTING: 617804

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Malachite Tetrahedrite Copper
ASSOCIATED: Magnetite Pyrite
ALTERATION: K-Feldspar Epidote
ALTERATION TYPE: Potassic Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Vein
CLASSIFICATION: Porphyry Hydrothermal Epigenetic
TYPE: L03 Alkalic porphyry Cu-Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Triassic	Nicola	Undefined Formation	Unnamed/Unknown Informal

LITHOLOGY: Andesite
Monzonite
Intrusive Breccia

HOSTROCK COMMENTS: Monzonite intrusive host is part of the "synvolcanic" alkaline intrusive bodies informally called the "Spout Lake Intrusive Suite".

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1994

COMMODITY	GRADE	
Gold	11.4000	Grams per tonne
Copper	0.2200	Per cent

COMMENTS: Sample width 3.8 metres.
REFERENCE: Assessment Report 23975.

CAPSULE GEOLOGY

The "Aurizon Gold Zone (or Zone 3 Anomaly)" on the Ann 1 Claim is located 4 kilometres southeast of Peach Lake, approximately 21 kilometres northeast of Lac La Hache and is readily accessible from Highway 97 via a network of logging roads. Other names for the Ann claims and showings have been the Peach and the Ophir. The Aurizon showing is one of several copper showings on the current Ann 1 and 2 claims (see also 092P 002, 035, 109, 153 and 174). All of these occurrences are part of the Spout Lake copper-gold district, a group of porphyry and skarn deposits associated with Later Triassic to Early Jurassic alkaline intrusive rocks of the Spout Lake intrusive suite.

The Ann (Peach) property is underlain by andesites, basalts, calcareous tuffs and argillites of the Upper Triassic Nicola Group (Assessment Report 25368). Nicola Group rocks are intruded by the Late Triassic to Early Jurassic Spout Lake Intrusive complex, an alkalic intrusive suite ranging in composition from pyroxenite through monzonite to syenite, and from batholithic size to small intrusive plugs, dykes and breccia bodies.

CAPSULE GEOLOGY

Granodioritic rocks of the Triassic to Jurassic Takomkane Batholith intrude Nicola rocks east of the property. Outliers of alkaline plateau basalts of the Miocene to Pleistocene Chilcotin Group are present in the general area.

No good description of the Aurizon Gold Zone is available, however Assessment Report 23975, states that the area contains pyrite, chalcopyrite, magnetite and traces of bornite, native copper and tetrahedrite as disseminations and in veinlets and stockworks. K-feldspar, silica, epidote (propylitic) and clay alteration are associated with the mineralisation which occurs along fracture zones and is hosted in hydrothermal breccias cutting monzodiorite. Drill hole A94-01 intersected a high grade intersection adjacent to a porphyry dike. A 3.8 metre section grading 0.22 per cent copper and 11.4 grams per tonne gold (Assessment Report 23975).

Interest in the Spout Lake area was triggered in 1966 when the Geological Survey of Canada released the results of a regional airborne magnetic survey which outlined an annular magnetic anomaly 10 kilometres in diameter in the Spout Lake area and which included the area underlying the Peach #1 prospect. Subsequently in 1966 and 1967, Coranex Limited obtained anomalous results in follow-up stream sediment geochemical surveys and soil geochemical surveys in the area south of Peach Lake. Programs of geological, soil geochemical, magnetometer, induced polarization and prospecting surveys were undertaken in 1967 in the area south of Peach Lake, leading to the discovery of the Peach 1 and several other occurrences. Asarco Exploration Company of Canada Limited optioned the property in 1969. Amax Potash Limited optioned the property between 1971 and 1973 and completed programs of geological mapping, geophysics and percussion drilling. In 1983 and 1984, the Selco Division of BP Resources Canada Limited completed soil geochemical surveys on the Core group of claims which covered the property. G.W.R. Resources Incorporated acquired the property in 1988 and Asarco re-optioned the property and completed induced polarization surveys and percussion drilling in 1991. In 1993, G.W.R. Resources formed a joint venture with Regional Resources and have since completed programs of induced polarization and diamond drilling. Two diamond drill holes totalling 406.3 metres were completed in 1994, and an additional 4 totalling 686.5 metres in 1995.

BIBLIOGRAPHY

EMPR AR 1966-126, 1967-126, *1968-155
EMPR GEM 1969-183, 1972-324, 1973-278
EMPR ASS RPT 1037, 1038, 1131, 1696, 1734, 2347, *3815, 3882,
4542, 11692, 13119, 17831, *21982, *23368, 23975
GSC MAP 1966-3, 1278A
GSC MEM 363
Whiteaker Robin (1966), The Geology, Geochronology and
Mineralization of the Ann Property: and Early Jurassic
Alkalic porphyry System near Lac La Hache, B.C., Honours
B.Sc. Thesis, U.B.C.
WWW <http://www.infomine.com/>, <http://www.gwrresources.com>

DATE CODED: 1985/07/24
DATE REVISED: 2003/02/05

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 154**

NATIONAL MINERAL INVENTORY:

NAME(S): **RAYFIELD FELDSPAR**, RAYFIELD RIVER, RAYFIELD COPPER,
DANSEY, BD, IDS,
POT, VB, WIN

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P06E

UTM ZONE: 10 (NAD 83)

BC MAP:
LATITUDE: 51 18 09 N
LONGITUDE: 121 06 03 W

NORTHING: 5685178
EASTING: 632390

ELEVATION: 0915 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of outcrop of pegmatitic syenite: figure 4, Assessment Report 19,927.

COMMODITIES: Feldspar Copper Nepheline Syenite

MINERALS

SIGNIFICANT:	Bornite	Chalcopyrite	Chalcocite	Copper	Malachite
	Cuprite	Feldspar	Nepheline		
ASSOCIATED:	Feldspar				
ALTERATION:	Feldspar	Epidote	Chlorite	Hematite	
ALTERATION TYPE:	Potassic				
MINERALIZATION AGE:	Unknown				

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Porphyry
TYPE: L03 Alkalic porphyry Cu-Au
DIMENSION: 2500 x 600 Metres

STRIKE/DIP:

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Triassic-Jurassic

Unnamed/Unknown Informal

LITHOLOGY: Leucocratic Syenite
Monzonite
Diorite
Amphibole Syenite
Syenitic Pegmatite
Aplite
Nepheline Syenite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1990

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Copper

0.1285

Per cent

COMMENTS: Average of the total length of bedrock (164 metres) in diamond drill hole number 6.

REFERENCE: Assessment Report 19927.

CAPSULE GEOLOGY

The Rayfield copper property straddles the Rayfield River, approximately 20 kilometres east of 70-Mile House between Crater Lake and the Bonaparte River. It is readily accessible by logging road. The property also has potential as a copper prospect and has been written-up as such (see also Rayfield Copper 092P 005).

The property is underlain by several phases of a concentrically zoned syenitic to monzonitic to dioritic plutonic complex probably of Late Triassic to Early Jurassic age. The complex occurs as a window through Miocene to Pleistocene alkaline plateau basalts of the Chilcotin Group which blanket much of the Cariboo Plateau. The core of the complex consists of leucosyenite composed almost entirely of alkali feldspars with 1 to 3 per cent amphibole and trace amounts of white mica,

CAPSULE GEOLOGY

magnetite and quartz (Assessment Report 2135). Syenite pegmatite dykes are common with feldspar comprising more than 95 per cent of the rock. Other less common syenite pegmatites contain minor amphibole minerals, less common nepheline and rare quartz. Visible low-grade copper mineralisation is widespread at a grade of between 0.05 per cent and 0.1 per cent copper over an area of approximately 600 by 2500 metres. It is mainly bornite and chalcopyrite, largely altered to malachite, and occurs in feldspar (alteration ?) veinlets and fracture fillings and as disseminations replacing mafic minerals. The most widespread veinlet set is sheeted, trending NNW, dipping 40 to 60 degrees west. Widespread low-grade sulphide and oxide mineralisation is comprised of chalcopyrite, bornite, chalcocite, cuprite, native copper, hematite and malachite, but no iron sulphides. Trace amounts of bornite are found disseminated as blebs up to 3 millimetres in size in some of the syenite pegmatite dikes.

The earliest recorded work on the property was by Kennco Explorations (Western) Limited in 1963 on the Pat Group of claims, when programs of geological mapping and geochemical sampling (soil and stream sediments) were completed (Assessment Report 528). In 1966, COMINCO Limited (Assessment Report 859) completed a program of soil geochemical sampling (800 samples with analyses for copper, lead and zinc) and magnetometer surveying on the I.D.S. 1 to 16 claims located adjacent to the Pat Group. Mr. C. Dansey restaked the property as the BD claims and undertook a program of bulldozer trenching, subsequently optioning the property to Amax Exploration Inc. Between 1968 and 1970, Amax Exploration Inc. completed programs of geological mapping, soil sampling (approximately 1230 samples), magnetometer and induced polarisation surveys and drilled 31 percussion drill holes (1749 metres), the best result being 0.42% Cu across 6.1 metres. In 1989, the Rayfield 1 to 7 group of claims were staked by The Vernon Exploration Group and optioned to Brenda Mines Limited who completed a program of induced polarisation (36 kilometres) and diamond drilling (1140.9 metres in 8 holes). The highest results were from hole 6 which returned 1285 ppm Cu and 35 ppb Au over 164 metres.

BIBLIOGRAPHY

EMPR AR 1966-135, 1967-127, 1968-159,
EMPR GEM 1969-184,367, *1970-218, 1972-316, 1973-271,
1972-316, 1973-271
EXPL 1990-53
EMPR OF 1991-10-81
EMPR ASS RPT 528, 859, 954, 1172, 1723, 1758, *2135,
*19927
GSC MAP 1966-3, 1278A
GSC MEM *363

DATE CODED: 1985/07/24
DATE REVISED: 2003/01/14

CODED BY: GSB
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 155**

NATIONAL MINERAL INVENTORY:

NAME(S): **CLAY, HAWKINS LAKE, KNOB,
ROBBY, SOUTH**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P15W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 52 49 N
LONGITUDE: 120 55 18 W
ELEVATION: 1100 Metres

NORTHING: 5749764
EASTING: 643052

LOCATION ACCURACY: Within 500M
COMMENTS:

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT:	Bornite	Chalcopyrite	Gold	Covellite	Chalcocite
	Digenite	Hessite	Coloradoite		
ASSOCIATED:	Calcite				
ALTERATION:	Epidote	Pyroxene	Amphibole	Malachite	
ALTERATION TYPE:	Propylitic		Oxidation		
MINERALIZATION AGE:	Unknown				

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Nicola	Undefined Formation	
Triassic-Jurassic			Takomkane Batholith

LITHOLOGY: Hornblende Augite Basalt Breccia
Basalt
Limestone
Quartz Feldspar Chlorite Schist
Monzonite
Granodiorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Clay property is located approximately 40 kilometres northeast of 100 Mile House, on a hill that rises to the west of the village of Eagle Creek, on the north shore of Canim Lake.

The property is underlain by greenstone, andesitic tuffs, breccias and limestones of the Upper Triassic Nicola Group. These rocks generally strike northerly with near vertical dips. The volcanic pile is intruded by dikes and stocks of varying composition, including granodiorite to diorite, monzonite, syenite and hornblendite. Noranda's mappers concluded that the gold-copper mineralization is mainly located proximal to the main diorite-monzonite stock and the limestone lenses, and that the mineralization appears to die out in the eastern portion of the property. Just west of the property the volcanic rocks are intruded by granodiorite of the Triassic to Jurassic Takomkane batholith. The mineralization on the property consists of bornite, chalcocite, minor chalcopyrite and malachite, and occurs as blebs and fracture coatings commonly associated with pink calcite veining, hosted predominantly in hornblende-augite basalt breccia. This unit is proximal to a monzonite stock and is in contact with skarnified limestone and quartz-feldspar chlorite schist.

Study of thin and polished sections identified the minerals bornite, chalcocite, digenite, covellite replacing bornite, chalcopyrite, malachite and gold. Most of the gold was observed on grain boundaries between silicate-carbonate gangue minerals. Only 2.2 per cent of the gold is in contact with a copper mineral (digenite). Trace amounts of silver and mercury tellurides (hessite and coloradoite) are locally associated with bornite. Intimately associated with the sulphide mineralization is a zone of propylitic alteration related to the monzonite stock. Gangue minerals in the

CAPSULE GEOLOGY

banded dark to light green rocks are abundant pyroxene, epidote and amphibole.

In 1978, prospectors Alfred and Clay Robinson discovered bornite-chalcopyrite bearing, epidote-altered volcanic breccia that locally assayed up to 102.9 grams per tonne gold and 25 per cent copper at the Knob showing, and staked the Clay property. Following trenching and prospecting by the original owners, Alclare Resources Incorporated was formed to manage and explore the area. In 1982, following rock sampling and limited geophysical work, Alclare completed 11 diamond-drill holes totalling 424 metres. In 1984, Noranda optioned the Clay property, renamed it the Hawkins Lake property, and conducted soil geochemistry, geological mapping, geophysical surveys, machine trenching and drilled four diamond-drill holes totalling 397 metres on and around the Knob showing. In 1990, the property was optioned by Princeton Mining, who extended the Noranda soil grid. By 1993, the Clay property had been reduced to eight units centred on the Knob showing. Soil geochemistry was done on the property in 1994 by D.W. Ridley, but no new mineralization was discovered.

BIBLIOGRAPHY

EMPR ASS RPT 8410, 10183, 11055, *13751, 14798, 20469, 23484
EMPR OF 2002-15
GSC MAP 1278A
GCNL #140, 1982; #16, 1983; #74,#96, 1985
N MINER May 23, 1985

DATE CODED: 1985/07/24
DATE REVISED: 2001/01/22

CODED BY: GSB
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 156**

NATIONAL MINERAL INVENTORY:

NAME(S): **PRECISELY**, LAKE, DEPRESSION,
BRIDGE

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 32 N
LONGITUDE: 120 49 46 W
ELEVATION: 1100 Metres

NORTHING: 5666028
EASTING: 651888

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Lake showing (Figure 6, Assessment Report 14101).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Quartz Pyrite
ASSOCIATED: Carbonate
ALTERATION: Silica
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Breccia Stockwork
CLASSIFICATION: Epigenetic Hydrothermal Epithermal
TYPE: H05 Epithermal Au-Ag: low sulphidation I VEIN, BRECCIA AND STOCKWORK
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Nicola	Undefined Formation	Thuya Batholith
Triassic-Jurassic			

LITHOLOGY: Brecciated Argillite
Andesite
Andesitic Tuff
Quartz Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
PHYSIOGRAPHIC AREA: Cariboo Plateau

INVENTORY

ORE ZONE: SAMPLE
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY: Gold
YEAR: 1985
GRADE: 1.8000 Grams per tonne
REFERENCE: Assessment Report 14101.

CAPSULE GEOLOGY

The Precisely gold property is located 7 kilometres southeast of the Vidette gold mine (092P 086) in the Deadman Valley. The area is approximately 50 kilometres north of Savona and is accessible on a good-quality gravel road north from the Trans-Canada Highway, 7.4 kilometres west of Savona.

The Precisely claims are underlain by argillite and andesite of the Upper Triassic Nicola Group that are exposed in a window through the Miocene plateau basalts which blanket most of the surrounding area. The argillite is interbedded with andesitic tuffs, augite porphyry and minor agglomerate (Assessment Report 14101). Nicola Group rocks are intruded by biotite quartz diorite which are probably part of the Triassic to Jurassic Thuya batholith (Geological Survey of Canada Memoir 363). The Nicola rocks are unconformably overlain by lacustrine and fluvial sediments and volcanic ash of the Miocene Deadman River Formation to the west in the Deadman Valley. The youngest bedrock formations are Miocene olivine basalt flows of the Chasm Formation (Chilcotin Group).

Two styles of mineralization are present on the property. At the Depression and Lake zones, mineralization consists of a chalcedonic quartz stockwork and calcite veining within an argillite breccia and a quartz vein hosted in andesite tuff (Assessment Report 15143).

CAPSULE GEOLOGY

Locally disseminated pyrite is found in tuff at the Lake zone. At the Bridge zone, a vein system is hosted by quartz diorite (Assessment Report 15987). An assay of 1800 ppb gold was obtained in a rock chip sample from an outcrop or old trench on the Lake zone (Assessment Report 14101).

The earliest work on the property dates from the 1930s or possibly earlier when prospecting pits were excavated on some of the showings. The property was staked by Mr. M. Dickens in 1983 following his discovery of gold-bearing quartz stockworks. The property was optioned by Inter Pacific Resource Corporation (Assessment Reports 13253 and 14101) and in 1984 a program of geological mapping, prospecting, rock chip sampling (79 samples), soil sampling (1286 samples), linecutting (14.4 kilometres), magnetometer surveying (7.95 kilometres) and VLF-EM surveying (2.95 kilometres) was completed. In 1985, a program of rock chip sampling (32 samples), soil sampling (1260 samples), linecutting, induced polarization surveying (14.3 kilometres), magnetometer surveying (28 kilometres), VLF-EM surveying (28 kilometres), reverse circulation percussion drilling (9005 metres in 20 holes) and diamond drilling (183 metres in 4 holes) was carried out. Placer Development Limited optioned the property from Inter Pacific Resources Limited and in 1986 (Assessment Report 15987) completed additional induced polarization surveys (12 kilometres) and four diamond-drill holes (526 metres). In 1987, Placer Development completed additional rock chip and soil geochemical surveys, geological mapping, magnetometer and VLF-EM surveys (Assessment Report 16617).

BIBLIOGRAPHY

EMPR ASS RPT 13253, *14101, *15143, 15987, *16617
GSC MEM 363
GSC MAP 1278A

DATE CODED: 2001/02/16
DATE REVISED: 2001/02/07

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 157**

NATIONAL MINERAL INVENTORY:

NAME(S): **LAC LA HACHE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P14W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 47 18 N
LONGITUDE: 121 27 47 W
ELEVATION: 850 Metres

NORTHING: 5738614
EASTING: 606006

LOCATION ACCURACY: Within 1 KM
COMMENTS:

COMMODITIES: Magnesite

MINERALS

SIGNIFICANT: Magnesite
MINERALIZATION AGE: Tertiary

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Residual Sedimentary Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Tertiary
Triassic

GROUP
Chilcotin

FORMATION

Unnamed/Unknown Formation

IGNEOUS/METAMORPHIC/OTHER

Unnamed/Unknown Informal

LITHOLOGY: Unconsolidated Sediment/Sedimentary
Magnesite
Olivine Basalt

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

Magnesite occurs in outcrop and as float in overburden at several locations in railway cuts along the southwest side of Lac La Hache.

The Lac La Hache area is underlain by alkaline olivine basalt plateau lavas of the Miocene to Pleistocene Chilcotin Group overlain by till and glaciofluvial deposits of Pleistocene age. The magnesite is exposed as highly weathered sedimentary material immediately underlying the plateau basalts and it also occurs as short, narrow veinlets cutting the basalts.

Samples of magnesite are dense, fine-grained and white. Material associated with the contact zone is yellowish and highly decomposed but effervesces in cold dilute acid and is quite plastic when wet. The largest observed vein was 30 centimetres thick.

A sample submitted to the Ministry of Energy, Mines and Petroleum Resources in 1917 contained 70 per cent MgCO₃, 27 per cent CaCO₃ and 2 per cent iron.

BIBLIOGRAPHY

GSC SUM RPT 1917, Part B, pp. 25b-26b
GSC MEM 363
GSC MAP 1278A; 1386A
GSC PRELIM MAP 3-1966
EMPR OF 1987-13

DATE CODED: 1986/10/14
DATE REVISED: 2003/02/25

CODED BY: BG
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 158**

NATIONAL MINERAL INVENTORY:

NAME(S): **CANIM**, MIK, SLEEPING GIANT 8

MINING DIVISION: Clinton

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 092P15W
 BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 48 13 N
 LONGITUDE: 120 51 06 W
 ELEVATION: 855 Metres

NORTHING: 5741378
 EASTING: 648121

LOCATION ACCURACY: Within 500M

COMMENTS: Location is the legal corner post for the Canim 1 claim (Assessment Report 14924).

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite Pyrite Magnetite Bornite
 ASSOCIATED: Quartz Hematite
 ALTERATION: Epidote Chlorite Limonite Malachite Kaolin
 ALTERATION TYPE: Chloritic Oxidation
 MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic	Nicola	Undefined Formation	
Cretaceous			Raft Batholith

LITHOLOGY: Syenite
 Orthoclase Syenite Porphyry
 Volcanic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
 TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: MAIN SHOWING REPORT ON: N
 CATEGORY: Assay/analysis YEAR: 1985
 SAMPLE TYPE: Chip

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	28.1000	Grams per tonne
Gold	1.4200	Grams per tonne
Copper	2.7000	Per cent

COMMENTS: Copper assay is the best of three chip samples from the main showing that range between 1.6 to 2.7 per cent copper.

REFERENCE: Assessment Report 14924.

CAPSULE GEOLOGY

The Canim claim is located on the hill east of the south end of Canim Lake. The area is underlain by the Canim stock, a small felsic intrusive body that is probably related to the Cretaceous Raft batholith. The stock intrudes Upper Triassic Nicola Group volcanics. Three mineralized zones were described by David Ridley (Assessment Report 14924). The main showing covers an area of about 50 by 120 metres. The mineralization is massive and disseminated pyrite, chalcopyrite and magnetite in quartz-filled fractures, with epidote-chlorite alteration of the wallrocks. Limonite and malachite are common and minor hematite and bornite occur locally. Disseminations of sulphides into the syenite wallrock occur in stockwork-style veinlets perpendicular to the main fractures, and many are mineralized. One chip sample assayed 1.42 grams per tonne gold and 28.1 grams per tonne silver. Three other chip samples yielded copper values ranging between 1.6 to 2.7 per cent copper (Assessment Report 14924). The "North showings" are two small occurrences of stockwork-style veinlets in pink orthoclase syenite porphyry which carry pyrite, chalcopyrite and magnetite. The "Northernmost" showings occur in a zone of intense

CAPSULE GEOLOGY

epidote-chlorite-kaolin alteration. Stockwork-style veinlets, mineralized with pyrite, chalcopyrite and magnetite, are exposed for a length of 20 metres.

The Canim property was staked by Cominco as part of the Kim property (092P 128) in 1968 to cover copper mineralization related to the Canim Lake stock. In 1977, Cominco conducted a percussion drilling program, totalling 800 metres in ten holes, on what was then called the Mik claim. Dave Ridley staked the Canim #1 claim in May 1985 and conducted prospecting traverses in 1985 and 1986. The area was looked at again as the Sleeping Giant 8 claim, by Ridley in 1990, as part of a larger program on the entire Sleeping Giant property.

BIBLIOGRAPHY

EMPR ASS RPT 6353, *14924, 20452
EMPR OF 2002-15
EMPR PF (Rebagliati, C.M. (1974): Report on the Canim Lake Copper Prospect for Neoconex Canadian Exploration Limited)
GSC MAP 1278A

DATE CODED: 1986/11/26
DATE REVISED: 2001/03/06

CODED BY: AFW
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 159**

NATIONAL MINERAL INVENTORY:

NAME(S): **BARRIERE**, GORMAN LAKE, G,
MOUNT HAGEN, G6

STATUS: Developed Prospect
REGIONS: British Columbia
NTS MAP: 092P01E 092P01W
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)

LATITUDE: 51 11 50 N
LONGITUDE: 120 14 54 W
ELEVATION: 1179 Metres

NORTHING: 5675356
EASTING: 692248

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of the G6 claim on the north slope of Mount Hagen, 9 kilometres west of the North Thompson River and the town of Barriere (Property File - Claim map).

COMMODITIES: Feldspar

MINERALS

SIGNIFICANT: K-Feldspar
ASSOCIATED: Calcite Sulphide
COMMENTS: Iron oxide staining.
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive
CLASSIFICATION: Pegmatite Magmatic Industrial Min.
TYPE: O04 Feldspar-quartz pegmatite
DIMENSION: 1600 Metres STRIKE/DIP: TREND/PLUNGE: 360/
COMMENTS: Pegmatite trends north for up to 1600 metres.

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Triassic-Jurassic	Harper Ranch	Undefined Formation	Thuya Batholith

LITHOLOGY: Pegmatitic Syenite
Porphyritic Syenite
Porphyritic Monzonite
Andesitic Basaltic Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Plutonic Rocks Harper Ranch PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: QUARRY REPORT ON: Y
CATEGORY: Inferred YEAR: 1989
QUANTITY: 3600000 Tonnes
COMMODITY: Feldspar GRADE: 99.0000 Per cent

COMMENTS: Drilling indicates potential for 3.6 million tonnes of feldspar-bearing material of unknown grade for a proposed quarry on the G6 claim.

REFERENCE: Press Release, Michael Resources Ltd., 1989.

CAPSULE GEOLOGY

The Barriere feldspar prospect is located (on the G claims) about 16 kilometres west of Barriere.

A north trending body of syenite and monzonite related to the Late Triassic to Lower Jurassic Thuya batholith intrudes greenstone, sandstone, argillite and phyllite of the late Paleozoic Harper Ranch Group. The intrusive body is medium grained, creamy buff in colour and is locally coarsely porphyritic. The intrusion is 10 kilometres long and up to 2.5 kilometres wide.

At the prospect, a pegmatitic syenite zone trends northward for up to 1.6 kilometres within the intrusive hostrocks. Trench exposures reveal coarse grained, pinkish grey syenite displaying iron oxide staining on weathering surfaces. A 3-metre wide basaltic to andesitic dike cuts the syenite.

The syenite is comprised of potassium feldspar crystals up to 6 centimetres in diameter with interstitial calcite and iron sulphides.

CAPSULE GEOLOGY

Iron oxides can be seen corroding feldspar grains in thin section. An average assay from the proposed quarry area on the G6 claim analysed: 61.21 per cent SiO₂, 19.1 per cent Al₂O₃, 8.96 per cent K₂O, 4.44 per cent Na₂O, 1.3 per cent Fe₂O₃, 1.96 per cent CaO and 0.38 per cent MgO. The Al₂O₃ and K₂O levels are within the range of commercial glass grade or ceramic material; the iron content however, is excessive for such material. Initial testing by Ore Sorters (North America) was unsuccessful in reducing the iron content to less than 0.1 per cent Fe₂O₃ by magnetic separation.

Michael Resources Ltd. carried out trenching, bulk sampling and 582 metres of diamond drilling in 1989 in order to assess the feldspar potential of the deposit. Drilling indicates a potential for 3.6 million tonnes of feldspar-bearing material at the proposed quarry site (Industrial Mineral File - Press Release, Michael Resources Ltd., October 5, 1989; Open File 1992-1).

BIBLIOGRAPHY

- EMPR ASS RPT *21897
- EMPR MAP 65 (1989)
- EMPR OF *1991-10; 1992-1; 1992-9
- EMPR PF (Claim map, 1989; Michael Resources Ltd., Press Release, June 22, 1989; Kamloops News - July 2, 1989)
- EMPR FIELDWORK 2000, pp. 1-30
- GSC MAP 3-1966; 1293A; 1278A
- GSC MEM 363
- GSC OF 11; 637
- GCNL #104, 1989
- *Press Release, Michael Resources Ltd., Oct.5, 1989

DATE CODED: 1990/10/29
DATE REVISED: 2001/01/19

CODED BY: GO
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 160**

NATIONAL MINERAL INVENTORY:

NAME(S): **SC, SC 3, BAR,
KB**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08E 082M05W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 17 40 N
LONGITUDE: 120 00 14 W
ELEVATION: 1576 Metres

NORTHING: 5686833
EASTING: 708882

LOCATION ACCURACY: Within 500M
COMMENTS: Drillhole Bar No.3, north of Sprague Creek, about 16 kilometres north-northeast of Barriere (Figures 2 and 5, Assessment Report 15856).

COMMODITIES: Silver Gold

MINERALS

SIGNIFICANT: Pyrite
ASSOCIATED: Quartz Silica Pyrite
ALTERATION: Sericite
ALTERATION TYPE: Silicific'n Sericitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stockwork
CLASSIFICATION: Volcanogenic
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metavolcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Paleozoic	Slide Mountain	Fennell	

LITHOLOGY: Quartz Feldspar Porphyry Rhyolite
Rhyolite Tuff
Rhyolite Breccia
Rhyolite Flow
Argillite
Chert

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Shuswap Highland

RELATIONSHIP: GRADE:

INVENTORY

ORE ZONE: DRILLHOLE REPORT ON: N

CATEGORY:	Assay/analysis	YEAR:	1986
SAMPLE TYPE:	Drill Core		
COMMODITY		GRADE	
Silver		134.0000	Grams per tonne
Gold		18.0000	Grams per tonne

COMMENTS: A sample of 30 centimetres of massive pyrite.
REFERENCE: Assessment Report 15856.

CAPSULE GEOLOGY

The SC property area is underlain by a distinctive, relatively fresh, north trending sequence of rhyolite lavas and felsic tuffs with interfingering lenses of argillite and chert. The felsic volcanics contain two intrusive/extrusive flow domes located about 2 kilometres apart. The domes consist of relatively coarse felsic breccia, debris flows and porphyritic felsic flows. The rocks belong to the Devonian to Permian Fennell Formation (Slide Mountain Group).

Gold-silver mineralization was identified by drilling in the south rhyolite dome where silicified and sericitized quartz feldspar porphyry rhyolite contains extensive quartz-pyrite stockworks. A drillhole (Bar No. 3) intersected complex rhyolite flows and tuffs. A 2.52 metre section analysed 4.45 grams per tonne gold and contained 30 centimetres of massive pyrite which assayed 134 grams per tonne silver and 18 grams per tonne gold (Assessment Report 15856).

In 1984, Corporation Falconbridge Copper conducted geological mapping and lithogeochemical sampling on the Anna and SC group of claims. Diamond drilling totalling 518 metres in four holes was

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1274
REPORT: RGEN0100

CAPSULE GEOLOGY

carried out in 1986 on the SC group of claims by Corporation Falconbridge Copper. In 1994, the KB claims were staked over part of the expired SC claims and a program of soil and rock sampling and geological mapping was carried out by Eighty-Eight Resources Ltd.

BIBLIOGRAPHY

EMPR ASS RPT 14243, *15856, *23816
EMPR OF 53
GSC MAP 1278A

DATE CODED: 1987/11/09
DATE REVISED: 2001/04/05

CODED BY: LDJ
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 161**

NATIONAL MINERAL INVENTORY:

NAME(S): **WOHLLEBEN CREEK**, WOH CLAIM

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P03W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 05 05 N
LONGITUDE: 121 23 50 W
ELEVATION: 1037 Metres

NORTHING: 5660468
EASTING: 612258

LOCATION ACCURACY: Within 500M

COMMENTS: In roadcuts between 1030 and 1045 metres elevation on an old logging road passing 1.6 kilometres east of Wohlleben Lakes (EMPR Open File 1989-21).

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
ASSOCIATED: Glass Feldspar Quartz Montmorillonite
ALTERATION: Montmorillonite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Miocene	Chilcotin	Deadman River	

LITHOLOGY: Diatomite
Fluvial Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Wohlleben Creek diatomite showing is located in Wohlleben Creek valley 5 kilometres above its confluence with the Loon Creek, twelve kilometres east of Clinton.

The occurrence is hosted in the north draining Mio-Bonaparte channel, a fluvial and lacustrine interlayer of the Miocene Deadman River Formation which is part of the Miocene to Pleistocene Chilcotin Group composed mainly of alkaline plateau basaltic flows. The Deadman River Formation (EMPR Open File 1989-21) is composed of rhyolite ash, tuffaceous sandstone, siltstone, shale, minor pebble conglomerate. The siltstones and shales are commonly carbonaceous and/or diatomaceous. Overlying the Deadman River Formation are extensive alkaline olivine basalt flows of the Chasm Formation which are also part of the Miocene to Pleistocene Chilcotin Group.

The Wohlleben Creek diatomaceous earth showing lies within 30 metres of the top of a Miocene channel filling of fluvial and lacustrine sediments occupying the Mio-Bonaparte Channel which is over 5 kilometres wide and 400 metres deep.

The property was staked by Western Industrial Clay Products Limited in 1994, and four diamond drill holes bored (a total of 332.9 metres) to test the property (Assessment Report 23876). A 97.5 metre thickness of Deadman River Formation sedimentary material was encountered in diamond drill hole WOH#3. The drilling encountered an Upper and a Lower Diatomite section, each respectively an average of 2.6 and 5.0 metres in thickness.

BIBLIOGRAPHY

EMPR FIELDWORK *1988, pp. 515-519
EMPR OF 1989-21
EMPR ASS RPT *23876
GSC MAP 1278A

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1276
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 363

DATE CODED: 1989/02/03
DATE REVISED: 2003/02/19

CODED BY: PBR
REVISED BY: RHM

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092P 162**

NATIONAL MINERAL INVENTORY:

NAME(S): **COAL CREEK**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 11 33 N
LONGITUDE: 120 55 43 W
ELEVATION: 1060 Metres

NORTHING: 5673271
EASTING: 644740

LOCATION ACCURACY: Within 500M

COMMENTS: The occurrence is located in a roadcut on an old road which cuts down to the mouth of Coal Creek.

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite Montmorillonite
ASSOCIATED: Glass Feldspar Quartz Montmorillonite
ALTERATION: Montmorillonite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Miocene	Chilcotin	Deadman River	

LITHOLOGY: Diatomite
Fluvial Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Quesnel

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Coal Creek diatomite/bentonite occurrence is located on the east side of the Vidette access road, approximately 50 (air) kilometres north of Savona. The area is accessible on a good-quality gravel road which leads north from the Trans-Canada Highway approximately 7.4 kilometres west of Savona. Access is also good on logging roads via Loon Lake to the northwest.

Basalts of the Miocene Chasm Formation (Chilcotin Group) mantle most of the area, however, beneath the basalts, massive rhyolite ash of the Miocene Deadman River Formation (Chilcotin Group) is exposed in cliffs in the Deadman Valley to the south for a length of several kilometres. The rhyolite ash is the predominant lithology in a Miocene channel filling of fluvial and lacustrine sediments occupying the northwest trending Mio-Snohoosh/Mio-Hamilton Channel (Open File 1989-21). The flat lying Mio-Snohoosh channel is more than 200 metres in thickness and the best exposures of the rhyolite ash sections are on the north side of Sherwood Creek (092P 093).

The Coal Creek diatomaceous earth showing (Open File 1989-21) is along trend from and north of the Mio-Snohoosh channel and lies within 5 metres of the top of a Miocene channel filling of fluvial and lacustrine sediments occupying the south trending Mio-Hamilton Channel which is over 500 metres wide and 150 metres deep. The unit lies within the Deadman River Formation of the Chilcotin Group.

The Coal Creek property and a considerable area to the north was staked and prospected in 1995 (Assessment Report 23785). Nine chip samples representing a stratigraphic thickness of 28 metres and analysed by x-ray diffraction, for oil and water retention specific gravity, pH and cation exchange capacity.

BIBLIOGRAPHY

EMPR OF *1989-21
EMPR FIELDWORK 1988, pp. 515-519
EMPR ASS RPT *23785
GSC MAP 1278A

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1278
REPORT: RGEN0100

BIBLIOGRAPHY

GSC MEM 363

DATE CODED: 1989/02/03
DATE REVISED: 2001/02/15

CODED BY: PBR
REVISED BY: RHM

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092P 163**

NATIONAL MINERAL INVENTORY:

NAME(S): **SHERWOOD CREEK DIATOMITE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 05 05 N
LONGITUDE: 120 52 16 W
ELEVATION: 855 Metres

NORTHING: 5661402
EASTING: 649104

LOCATION ACCURACY: Within 1 KM

COMMENTS: Located in Deadman River valley, east of Snohoosh Lake and north of Sherwood Creek (Open File 1989-21).

COMMODITIES: Diatomite Pozzolan

MINERALS

SIGNIFICANT: Diatomite
ASSOCIATED: Glass Feldspar Quartz Montmorillonite
ALTERATION: Montmorillonite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular
COMMENTS: Present in two flat-lying beds, 1.5 and 3 metres thick respectively.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Miocene	Chilcotin	Deadman River	

LITHOLOGY: Diatomite
Fluvial Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage Quesnel PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Sherwood Creek diatomite occurrence is located on the north side of Sherwood Creek, east of Snohoosh Lake in the Deadman River valley. The area is accessible on a good-quality gravel road north from the Trans-Canada Highway west of Savona, 40 (air) kilometres to the south.

The Sherwood Creek diatomaceous earth showing lies near the base of a Miocene channel filling of fluvial and lacustrine sediments occupying the northwest trending Mio-Snohoosh Channel. A section measured by Campbell and Tipper contained a minimum aggregate thickness of 4.3 metres of diatomaceous earth in two beds lying within 41.5 metres of the base of the section (GSC Memoir 363). The unit lies within the Deadman River Formation of the Chilcotin Group.

Mr. Michael Dickens staked the property as a potential source of volcanic ash (pozzolan) in 1991 (see also Sherwood Creek Volcanic Ash, 092P 093). The Tertiary stratigraphic section was measured by Campbell and Tipper in 1971 (Geological Survey of Canada Memoir 363, page 58).

BIBLIOGRAPHY

GSC MEM *363, p. 59
GSC MAP 1278A
EMPR FIELDWORK *1988, pp. 515-519
EMPR OF 1989-21
EMPR ASS RPT 22221

DATE CODED: 1989/02/03
DATE REVISED: 2001/01/22

CODED BY: PBR
REVISED BY: RHM

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092P 164**

NATIONAL MINERAL INVENTORY:

NAME(S): **SKOOKUM LAKE DIATOMITE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 06 46 N
LONGITUDE: 120 52 37 W
ELEVATION: 875 Metres

NORTHING: 5664510
EASTING: 648605

LOCATION ACCURACY: Within 500M

COMMENTS: Located on the east side of Deadman River valley, on the north side of Skookum Lake (Open File 1989-21).

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
ASSOCIATED: Glass Feldspar Quartz Montmorillonite
ALTERATION: Montmorillonite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular
COMMENTS: Two flat-lying layers each 2 metres thick of diatomaceous earth. Attitude is flat, dimension unknown.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Miocene	Chilcotin	Deadman River	

LITHOLOGY: Diatomite
Fluvial Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The Skookum Lake diatomite occurrence is located on the east side of the Deadman Valley/Vidette Lake access road, on the east side on Skookum Lake. The area is accessible on a good-quality gravel road north from the Trans-Canada Highway 7.4 kilometres west of Savona, 43 (air) kilometres to the south.

Basalts of the Miocene Chasm Formation (Chilcotin Group) mantle most of the area, however, beneath the basalts, massive rhyolite ash of the Miocene Deadman River Formation (Chilcotin Group) is exposed in cliffs on the east side of the Deadman Valley for a length of 6.5 kilometres east of Snohoosh and Skookum lakes. The rhyolite ash is the predominant lithology in a Miocene channel filling of fluvial and lacustrine sediments occupying the northwest trending Mio-Snohoosh Channel (Open File 1989-21). The flat-lying channel is more than 200 metres in thickness.

The Skookum Lake diatomaceous earth showing lies near the base of a Miocene channel filling of fluvial and lacustrine sediments occupying the northwesterly flowing Mio-Snohoosh Channel. A section measured by Campbell and Tipper contained a minimum aggregate thickness of 3.8 metres of diatomaceous earth in two beds lying within 50.9 metres of the base of the section (Geological Survey of Canada Memoir 363, pages 58 and 59). The unit lies within the Deadman River Formation of the Chilcotin Group.

Economic interest in the area has been directed mainly towards the volcanic ash/pozzolan potential of the Miocene section immediately overlying the lacustrine diatomite (see Sherwood Creek Volcanic Ash, 092P 093).

BIBLIOGRAPHY

GSC MEM *363, pp. 57-58
GSC MAP 1278A
EMPR FIELDWORK 1987, p. 419; *1988, pp. 515-519
EMPR OF 1989-21

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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PAGE: 1281
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 22221
EMPR AR 1959-181-184

DATE CODED: 1989/02/03
DATE REVISED: 2001/02/01

CODED BY: PBR
REVISED BY: RHM

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092P 165**

NATIONAL MINERAL INVENTORY:

NAME(S): **OLIE**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 27 50 N
LONGITUDE: 120 14 55 W
ELEVATION: 670 Metres

NORTHING: 5705000
EASTING: 691117

LOCATION ACCURACY: Within 500M

COMMENTS: Location of sample 00PSC-14-2 (Fieldwork 2000).

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz
ALTERATION: Chlorite Carbonate Malachite Azurite
ALTERATION TYPE: Propylitic Oxidation
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins L PORPHYRY
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE: Upper Triassic
GROUP: Nicola
FORMATION: Undefined Formation
IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Microdiorite Sill
Sediment/Sedimentary

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
CATEGORY: Assay/analysis YEAR: 2000
SAMPLE TYPE: Grab
COMMODITY
Gold 0.7080 Grams per tonne
Copper 0.1826 Per cent
COMMENTS: Sample OOPSC-14-2.
REFERENCE: Fieldwork 2000.

CAPSULE GEOLOGY

The Olie quartz vein is exposed along Highway 24, about 5 kilometres north-northwest of Little Fort.
A ribboned quartz vein contains selvages of chlorite and rusty carbonate and local malachite and azurite together with tiny grains of chalcopyrite and a grey sulphide mineral of uncertain identification. The vein is 1 metre wide, dips approximately 60 degrees west and was traced for 10 metres. A sample of mineralized vein material (00PSC-14-2) yielded values of 1826 ppm copper, 569 ppm lead, 15 ppm silver and 704 ppb gold (Fieldwork 2000). Similar quartz veins elsewhere on the outcrop did not appear to contain metallic mineralization. The vein cuts a microdiorite sill that intrudes fine grained sedimentary rocks of the Mixed Volcanic-Sedimentary Unit of the Upper Triassic Nicola Group. The unit is composed of siltstone, sandstone, basalt, tuff, conglomerate, volcanic breccia, chert and dacite (Fieldwork 2000).
There is no record of work on the occurrence.

BIBLIOGRAPHY

EMPR FIELDWORK 2000, pp. 1-30
GSC MEM 363

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REPORT: RGEN0100

BIBLIOGRAPHY

GSC MAP 1278A

DATE CODED: 2001/02/22
DATE REVISED: 2001/02/22

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 166**

NATIONAL MINERAL INVENTORY:

NAME(S): **LATREMOUILLE**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 29 54 N
LONGITUDE: 120 20 29 W
ELEVATION: 1250 Metres

NORTHING: 5708580
EASTING: 684525

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Sample 00SIS-17, Fieldwork 2000, pages 1-30.

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Pyrite
ALTERATION: Epidote
ALTERATION TYPE: Propylitic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Porphyry
TYPE: L02 Porphyry-related Au L PORPHYRY

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Triassic-Jurassic

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Thuya Batholith

LITHOLOGY: Hornblende Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Grab

YEAR: 2000

COMMODITY

GRADE

Silver

2.2000

Grams per tonne

Gold

0.8920

Grams per tonne

COMMENTS: Sample 00SIS-17.
REFERENCE: Fieldwork 2000.

CAPSULE GEOLOGY

The Latremouille copper occurrence is located on Highway 24, approximately 500 metres northeast of Latremouille Lake, 17 (air) kilometres northwest of Little Fort.

Fieldwork 2000 (pages 21 and 25) describes an outcrop of epidote-altered hornblende diorite along the northeast margin of the Triassic to Jurassic Thuya batholith cut by a narrow, mineralized quartz vein that dips gently to the west. A sample of mineralized vein material (00SIS-17), which contains pyrite and traces of chalcopyrite, yielded 2.2 ppm silver and 892 ppb gold.

This showing is one of several disseminated copper occurrences which occur within and along the margins of the Thuya batholith which is composed mainly of granodiorite, diorite and monzodiorite. On its east side, the Thuya batholith contacts diorites and gabbros of the Triassic-Jurassic Dum Lake Intrusive Complex.

No work is known to have been completed on the occurrence.

BIBLIOGRAPHY

EMPR FIELDWORK 2000, pp. 1-30
GSC MEM 363
GSC MAP 1278A

DATE CODED: 2001/02/22
DATE REVISED: / /

CODED BY: RHM
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 167**

NATIONAL MINERAL INVENTORY:

NAME(S): **WEST ESCARPMENT**, MOOSE CREEK NORTH 1, MOOSE CREEK NORTH 2

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:
LATITUDE: 51 05 18 N
LONGITUDE: 120 53 23 W
ELEVATION: 1100 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Located at the base of the western basalt escarpment on Deadman Valley.

MINING DIVISION: Clinton
UTM ZONE: 10 (NAD 83)
NORTHING: 5661766
EASTING: 647789

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
ASSOCIATED: Glass Feldspar Quartz Montmorillonite
ALTERATION: Montmorillonite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular
COMMENTS: Attitude is flat, dimension unknown.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Miocene	Chilcotin	Chasm	

LITHOLOGY: Diatomite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The West Escarpment diatomite occurrence is located on the west side of the Deadman Valley west of Snohoosh Lake, below the basalt escarpment. The area is accessible on a good-quality gravel road north from the Trans-Canada Highway, 7.4 kilometres west of Savona, 43 (air) kilometres to the south.

Basalts of the Miocene Chasm Formation (Chilcotin Group) mantle most of the area, however, beneath the basalts, massive rhyolite ash of the Miocene Deadman River Formation (Chilcotin Group) forms a section more than 200 metres in thickness on the east side of the valley. The rhyolite ash is the predominant lithology in a Miocene channel filling of fluvial and lacustrine sediments occupying the northwest trending Mio-Snohoosh Channel (Open File 1989-21). A section measured by Campbell and Tipper contained a minimum aggregate thickness of 3.8 metres of diatomaceous earth in two beds lying within 50.9 metres of the base of the section (Geological Survey of Canada Memoir 363, pages 58 and 59).

Economic interest in the Miocene section in the Deadman Valley has been directed mainly towards the volcanic ash/pozzolan potential of the Miocene section immediately overlying the lacustrine diatomite (see Sherwood Creek Volcanic Ash, 092P 093).

One bedrock and two float occurrences of diatomite have been documented (Read, 1990) in the area: The "West Escarpment" showing (5661550mN, 647890mE) is a bedrock occurrence located at the base of the western basalt escarpment. A three metre thick flat lying rhyolite ash and a 0.7 metre thick diatomaceous earth bed occur immediately between basalt flows of the Chasm Formation. The Moose Creek North 1 occurrence (5662525mN, 646400mE) consists of float found on an old logging road in an area of no outcrop and appears to have come from an interflow unit between basalt flows. Abundant diatoms were identified in oil immersion mounts of samples of the material. The Moose Creek North 2 occurrence (5661570mN, 646570mE) is a "slumped outcrop" exposed in an old roadcut. It appears to have come from an interflow unit between basalt flows. Abundant diatoms were identified in oil immersion mounts of samples of the material.

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EMPR OF 1989-21
EMPR AR *1959-181-184
GSC MEM 363
GSC MAP 1278A

DATE CODED: 1990/04/05
DATE REVISED: 2001/02/01

CODED BY: PBR
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 168**

NATIONAL MINERAL INVENTORY:

NAME(S): **SOUTH SNOHOOSH**, DEADMAN RIVER, KNIGHT LAKE ROAD 1,
KNIGHT LAKE ROAD 2, POLAR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

LATITUDE: 51 03 58 N
LONGITUDE: 120 52 45 W
ELEVATION: 930 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Located in slumped outcrop on the old Knight Lake logging road.

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

NORTHING: 5659317
EASTING: 648599

COMMODITIES: Diatomite

MINERALS

SIGNIFICANT: Diatomite
ASSOCIATED: Glass Feldspar Quartz Montmorillonite
ALTERATION: Montmorillonite
MINERALIZATION AGE: Miocene

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary Industrial Min.
TYPE: F06 Lacustrine diatomite
SHAPE: Tabular
COMMENTS: Attitude is flat, dimension unknown.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Miocene	Chilcotin	Deadman River	

LITHOLOGY: Diatomite
Rhyolitic Ash
Rhyolite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

The South Snohoosh diatomite occurrence is located on the east side of the Deadman Valley/Vidette Lake access road, on the east side on Snohoosh Lake. The area is accessible on a good-quality gravel road north from the Trans-Canada Highway, 7.4 kilometres west of Savona, 41 (air) kilometres to the south.

Basalts of the Miocene Chasm Formation (Chilcotin Group) mantle most of the area, however, beneath the basalts, massive rhyolite ash of the Miocene Deadman River Formation (Chilcotin Group) is exposed in cliffs on the east side of the Deadman Valley for a length of 6.5 kilometres east of Snohoosh and Skookum Lakes. The rhyolite ash is the predominant lithology in a Miocene channel filling of fluvial and lacustrine sediments occupying the northwest trending Mio-Snohoosh Channel (Open File 1989-21). The flat-lying channel is more than 200 metres in thickness. A section measured by Campbell and Tipper contained a minimum aggregate thickness of 3.8 metres of diatomaceous earth in two beds lying within 50.9 metres of the base of the section (Geological Survey of Canada Memoir 363, pages 58 and 59). The unit lies within the Deadman River Formation of the Chilcotin Group. Economic interest in the area has been directed mainly towards the volcanic ash/pozzolan potential of the Miocene section immediately overlying the lacustrine diatomite (see Sherwood Creek Volcanic Ash, 092P 093).

The South Snohoosh showing (Read, 1990) is based on a slumped roadcut from which samples yield numerous diatoms in oil immersion mounts. The showing is in the Deadman River Formation near the western edge of the northwestward-draining Mio-Snohoosh channel. Nearby at 5659540mN, 649780mE, Read (1990) has described the Knight Lake Road 1 diatomite occurrence, which is exposed in a roadcut on the old Knight Lake logging road, as "bedded rhyolite tuff and diatomaceous earth which was verified by oil immersion grain mounts." Read (1990) also described a third occurrence at 5659200mN, 649430mE, in the area that he termed the Knight Lake Road 2 diatomite occurrence which is also exposed in a roadcut on the old Knight Lake

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CAPSULE GEOLOGY

logging road. It is described as "bedded rhyolite tuff and
A fourth diatomite occurrence called the Deadman River showing is
exposed in a cut 0.8 kilometre south of Snohoosh Lake (5658500mN,
648700mE), where a 2 metre thick bed of diatomaceous earth is exposed
for a length of 15 metres. Read (1990) was not able to locate the
showing - it is shown as diatomite occurrence D9 in Open File
1989-21.

BIBLIOGRAPHY

EMPR OF *1989-21
EMPR AR 1959-181-184
EMPR ASS RPT 22546
GSC MEM 363
GSC MAP 1278A

DATE CODED: 1990/04/05
DATE REVISED: 2001/02/01

CODED BY: PBR
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 169**

NATIONAL MINERAL INVENTORY:

NAME(S): **BILL**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 28 02 N
LONGITUDE: 120 16 29 W
ELEVATION: 1000 Metres

NORTHING: 5705307
EASTING: 689289

LOCATION ACCURACY: Within 500M

COMMENTS: Location of sample S9 (Figure 4, Assessment Report 24896).

COMMODITIES: Gold Lead

MINERALS

SIGNIFICANT: Galena

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal

TYPE: I01 Au-quartz veins

SHAPE: Tabular

DIMENSION: Metres

STRIKE/DIP: 320/90

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Paleozoic
Upper Triassic
Triassic-Jurassic

GROUP

Harper Ranch
Nicola

FORMATION

Undefined Formation
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Dum Lake Intrusive Complex

LITHOLOGY: Altered Andesitic Rock
Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1996

SAMPLE TYPE: Grab

COMMODITY

GRADE

Gold

4.5200

Grams per tonne

REFERENCE: Assessment Report 24896.

CAPSULE GEOLOGY

The Bill gold occurrence is located in on the cliffs above Highway 24, 7 (air) kilometres northwest of Little Fort.

According to Assessment Report 24896, "numerous quartz veins up to 10 centimetres occur along the cliffs above old Highway 24, on the east side of the fault in altered andesitic rock. The majority of the veins are near vertical and strike parallel to the main fault (320 degrees)." Assays of up to 4520 ppb gold have been obtained from samples containing fine-grained galena (Assessment Report 24896).

Hostrocks in the area are skarn-altered limestones and associated silicified sedimentary rocks of the late Paleozoic Harper Ranch Group (Fieldwork 2000) in contact with diorite, monzonite and silicified greenstone of the Dum Lake Intrusive Complex. The calcareous units can be traced from Nehalliston Creek in the north to Eakin Creek and are sparsely mineralized with chalcopyrite and locally galena (Assessment Report 13519).

The Upper Triassic to Lower Jurassic Dum Lake complex is comprised of ultramafic and mafic plutonic rocks that could be part of an Alaskan-type intrusive body. The mafic portions of the Dum Lake complex are dominated by coarse to medium-grained gabbro and diorite but locally includes clinopyroxenite, monzogabbro, microdiorite and tonalite. The ultramafic portion of the Dum Lake complex includes an assemblage of variably serpentized, locally talc and carbonate-altered rocks consisting of clinopyroxenite, wehrlite and dunite. The Dum Lake complex is truncated by

CAPSULE GEOLOGY

granodioritic rocks of the Triassic to Jurassic Thuya batholith on its southeast side. On its eastward side, Dum Lake complex diorites and gabbros are in contact with massive andesites of the Upper Triassic Nicola Group and argillites, limestones and cherts of the late Paleozoic Harper Ranch Group (Fieldwork 2000).

In 1996, W.T. Hall, G. Wolanski and D. Duguay prospected and sampled the Bill claim group, collecting 60 rock and 9 soil samples (Assessment Report 24896).

BIBLIOGRAPHY

EMPR ASS RPT 13519, *24896
EMPR FIELDWORK 2000, pp. 1-30
GSC MEM 363
GSC MAP 1278A

DATE CODED: 2001/02/22
DATE REVISED: 2001/03/28

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 170**

NATIONAL MINERAL INVENTORY:

NAME(S): **EAKIN CREEK COPPER**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 27 36 N
LONGITUDE: 120 15 57 W
ELEVATION: 825 Metres

NORTHING: 5704511
EASTING: 689932

LOCATION ACCURACY: Within 500M

COMMENTS: Location of sample 00SIS-29 (Fieldwork 2000, figure 4).

COMMODITIES: Copper Silver Lead

MINERALS

SIGNIFICANT: Chalcopyrite Galena
ASSOCIATED: Pyrite
ALTERATION: Malachite

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Shear Stratabound
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: K01 Cu skarn J01 Polymetallic manto Ag-Pb-Zn
SHAPE: Tabular

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Paleozoic
Triassic-Jurassic

GROUP

Harper Ranch

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

Dum Lake Intrusive Complex

LITHOLOGY: Limestone
Diorite
Gabbro

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
METAMORPHIC TYPE: Contact

Harper Ranch
RELATIONSHIP:

PHYSIOGRAPHIC AREA: Thompson Plateau

GRADE:

INVENTORY

ORE ZONE: SAMPLE

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 2000

SAMPLE TYPE: Chip

COMMODITY

GRADE

Silver

12.6000

Grams per tonne

Copper

1.3463

Per cent

COMMENTS: Sample from a narrow shear zone.

REFERENCE: Fieldwork 2000.

CAPSULE GEOLOGY

The Eakin Creek copper occurrence is located on the south side of Eakin Creek, 7 (air) kilometres northwest of Little Fort.

A narrow shear zone containing pyrite, chalcopyrite and malachite near the eastern edge of a Harper Ranch Group limestone unit was found to contain 13,463 ppm copper, 12.6 ppm silver, 72 ppb gold, 13 ppb platinum and 62 ppb palladium (Sample 00SIS-29, Fieldwork 2000). The limestone can be traced from Nehalliston Creek in the north to Eakin Creek and is sparsely mineralized with chalcopyrite and locally galena (Assessment Report 13519).

The Upper Triassic to Lower Jurassic Dum Lake complex is comprised of ultramafic and mafic plutonic rocks that could be part of an Alaskan-type intrusive body. The mafic portions of the Dum Lake complex are dominated by coarse to medium-grained gabbro and diorite but locally includes clinopyroxenite, monzogabbro, microdiorite and tonalite. The ultramafic portion of the Dum Lake complex includes an assemblage of variably serpentized, locally talc and carbonate-altered rocks consisting of clinopyroxenite, wehrlite and dunite. The Dum Lake complex is truncated by granodioritic rocks of the Triassic to Jurassic Thuya batholith on its southeast side. On its eastward side, Dum Lake complex diorites and gabbros are in contact with massive andesites of the Upper

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CAPSULE GEOLOGY

Triassic Nicola Group and argillites, limestones and cherts of the late Paleozoic Harper Ranch Group (Fieldwork 2000).

The showing was discovered during a geological mapping program (Fieldwork 2000). No work has been documented on the showing.

BIBLIOGRAPHY

EMPR FIELDWORK 2000, pp. 1-30
GSC MEM 363
GSC MAP 1278A

DATE CODED: 2001/02/21
DATE REVISED: 2001/02/21

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 171**

NATIONAL MINERAL INVENTORY:

NAME(S): **KELLY LAKE**, COLUMBIA LIME, PORCUPINE CREEK,
KELLEY LAKE, STAG 2

STATUS: Developed Prospect

MINING DIVISION: Clinton

REGIONS: British Columbia

NTS MAP: 092P04W

UTM ZONE: 10 (NAD 83)

BC MAP:

LATITUDE: 51 04 52 N

LONGITUDE: 121 49 12 W

ELEVATION: 1631 Metres

NORTHING: 5659507

EASTING: 582654

LOCATION ACCURACY: Within 500M

COMMENTS: Drill hole #2, 8.35 kilometres north-northwest of the north end of
Kelly Lake (Industrial Mineral File - Wahl, W.G., 1973).

COMMODITIES: Limestone

MINERALS

SIGNIFICANT: Calcite

MINERALIZATION AGE: Permian

ISOTOPIC AGE:

DATING METHOD: Fossil

MATERIAL DATED: Fusulinids

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary
TYPE: R09 Limestone

Massive
Industrial Min.

SHAPE: Tabular

MODIFIER: Folded

DIMENSION:

Fractured
Metres

STRIKE/DIP: 145/65S

TREND/PLUNGE:

COMMENTS: Folded into two parallel, closely spaced, northwest trending
anticlines.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Permian

GROUP

Cache Creek

FORMATION

Marble Canyon

IGNEOUS/METAMORPHIC/OTHER

DATING METHOD: Fossil

MATERIAL DATED: Fusulinids

LITHOLOGY: Limestone

Argillite

Chert

Mafic Flow

HOSTROCK COMMENTS: The Marble Canyon Formation is Middle to Upper Permian in age and the
Cache Creek Group is Carboniferous to Triassic.

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Cache Creek

PHYSIOGRAPHIC AREA: Pavilion Ranges

INVENTORY

ORE ZONE: A - NORTHWEST

REPORT ON: Y

CATEGORY: Inferred

YEAR: 1973

QUANTITY: 24500000 Tonnes

COMMODITY

GRADE

Limestone

55.3400

Per cent

COMMENTS: Grade given for CaO; possible reserves.

REFERENCE: Industrial Mineral File - Wahl, W.G., 1973, page 61.

ORE ZONE: B

REPORT ON: Y

CATEGORY: Indicated

YEAR: 1973

QUANTITY: 4000000 Tonnes

COMMODITY

GRADE

Limestone

54.7700

Per cent

COMMENTS: Grade given for CaO; probable reserves.

REFERENCE: Industrial Mineral File - Wahl, W.G., 1973, pages 62-63.

MINFILE NUMBER: **092P 172**

NATIONAL MINERAL INVENTORY:

NAME(S): **CEDAR SHEETED VEINS, G CLAIMS**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P08W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 29 38 N
LONGITUDE: 120 18 07 W
ELEVATION: 1030 Metres

NORTHING: 5708201
EASTING: 687289

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Area 2 (Map #1, Assessment Report 18597).

COMMODITIES: Gold Silver Lead

MINERALS

SIGNIFICANT: Pyrite Galena
ASSOCIATED: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic Hydrothermal
TYPE: I01 Au-quartz veins

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Paleozoic Triassic-Jurassic	Harper Ranch	Undefined Formation	Dum Lake Intrusive Complex

LITHOLOGY: Fine Grained Porphyry
Diorite
Gabbro

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
METAMORPHIC TYPE: Contact
PHYSIOGRAPHIC AREA: Thompson Plateau
RELATIONSHIP: Harper Ranch
GRADE:

INVENTORY

ORE ZONE: SAMPLE REPORT ON: N
YEAR: 1985
CATEGORY: Assay/analysis
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 13.7000 Grams per tonne
Gold 0.4500 Grams per tonne
REFERENCE: Assessment Report 18597.

CAPSULE GEOLOGY

The Cedar sheeted vein occurrence (Assessment Report 18597) outcrops in Nehalliston Creek below Highway 24, 10 (air) kilometres northwest of Little Fort.

The exposure consists of six, subparallel, milky white quartz veins trending 010 degrees and dipping 50 degrees west (Assessment Report 18597). The veins contain approximately 2 per cent pyrite and traces of galena. They pinch and swell, average 20 centimetres in width and are exposed in a moss-covered area of approximately 25 square metres. The highest assay was 450 ppb gold and 13.7 ppm silver (Assessment Report 18597). The veins are hosted in a fine-grained microporphyry which is probably a late and relatively felsic phase of the Triassic-Jurassic Dum Lake Intrusive Complex.

The Upper Triassic to Lower Jurassic Dum Lake complex is comprised of ultramafic and mafic plutonic rocks that could be part of an Alaskan-type intrusive body. The mafic portions of the Dum Lake complex are dominated by coarse to medium-grained gabbro and diorite but locally includes clinopyroxenite, monzogabbro, microdiorite and tonalite. The ultramafic portion of the Dum Lake complex includes an assemblage of variably serpentinized, locally talc and carbonate-altered rocks consisting of clinopyroxenite, wehrlite and dunite. The Dum Lake complex is truncated by granodioritic rocks of the Triassic to Jurassic Thuya batholith on its southeast side. On its eastward side, Dum Lake complex diorites

CAPSULE GEOLOGY

and gabbros are in contact with massive andesites of the Upper Triassic Nicola Group and argillites, limestones and cherts of the late Paleozoic Harper Ranch Group (Fieldwork 2000).

The property was staked in 1985 by Craven Resources Incorporated. A program of geological mapping, soil geochemical sampling, panned stream sediment samples, lithogeochemical sampling, magnetic and VLF-EM surveying was carried out (Assessment Reports 13519 and 14477). In 1987, 21 kilometres of magnetic and VLF-EM surveying was completed by Craven Resources Incorporated. A prospecting program was completed by Pacific Comox Resources on the Cedar skarn (092P 026) in 1988 (Assessment Report 17709). Pacific Comox Resources completed 22 kilometres of magnetic and VLF-EM surveying in 1989 (Assessment Report 18612).

BIBLIOGRAPHY

EMPR ASS RPT 13519, 14477, 16362, 17709, 18612, *18597
EMPR FIELDWORK 2000, pp. 1-30
GSC MEM 363
GSC MAP 1278A

DATE CODED: 2001/02/21
DATE REVISED: 2001/02/21

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 173**

NATIONAL MINERAL INVENTORY:

NAME(S): **MILK LAKE**

MINING DIVISION: Clinton

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P05E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 21 12 N
LONGITUDE: 121 39 36 W
ELEVATION: 1094 Metres

NORTHING: 5689970
EASTING: 593309

LOCATION ACCURACY: Within 500M

COMMENTS: Centre of Milk Lake, 31 kilometres due north of Clinton (Open File 1987-13).

COMMODITIES: Magnesite Hydromagnesite

MINERALS

SIGNIFICANT: Magnesite Hydromagnesite

ASSOCIATED: Dolomite Clay

MINERALIZATION AGE: Recent

DEPOSIT

CHARACTER: Unconsolidated Layered
CLASSIFICATION: Sedimentary Replacement Residual Industrial Min.

TYPE: F09 Playa and Alkaline Lake Evaporites

SHAPE: Tabular

COMMENTS: Flat lying mudflat covering 300 square metres underlain by magnesite and hydromagnesite to a depth of at least 1 metre.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Recent	Unnamed/Unknown Group	Unnamed/Unknown Formation	

LITHOLOGY: Unconsolidated Mudstone
Clay
Magnesite
Hydromagnesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

CAPSULE GEOLOGY

Milk Lake, a small carbonate playa covering some 300 square metres, is located 31 kilometres due north of Clinton and 19 kilometres west-northwest of Seventy-mile House.

The lake is one of several semi-evaporitic playa lakes in the "Green Timber Plateau" area (EMPR Bulletin 4), a semi-arid plateau area averaging 1130 metres elevation which is part of the Cariboo Plateau. The area is underlain by alkaline plateau basalt flows of the Miocene to Pleistocene Chilcotin Group, mantled by a thin cover of glacial till and glaciofluvial sediments. Annual precipitation averages between 300 and 400 millimetres (EMPR Paper 1991-1).

This ephemeral lake is largely underlain by a central mudflat forming a hard flat surface of pale grey carbonate mud, comprised mostly of hydromagnesite. A shallow pit dug near the center of the playa encountered 80 centimetres of massive grey mud comprising magnesite and hydromagnesite underlain by cream coloured magnesite mud. The central mudflat is rimmed by a peripheral mudflat, a few metres to 20 metres in width, containing a mixture of massive to crudely bedded siliciclastic detritus, precipitated magnesium carbonates (magnesite, hydromagnesite and dolomite) and organic matter. The peripheral mudflat is bounded by glacial deposits that rise abruptly from the shoreline on all sides of the lake.

In general, the magnesite content increases downward at the expense of hydromagnesite. In two instances, hydromagnesite forms 25 to 30 per cent of the total carbonate, 10 to 20 centimetres below the central playa surface. Dolomite occurs in the southern peripheral mudflats in association with magnesite, 40 to 80 centimetres below surface. The carbonates of the central mudflat are relatively pure. Four samples contained 1.2 to 5.4 per cent acid insoluble matter comprised of clay, plagioclase silt, diatom debris and organic detritus. Non-carbonate content was found to be higher in the peripheral muds and consisted of plagioclase, quartz and clay

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CAPSULE GEOLOGY

minerals.

BIBLIOGRAPHY

EMPR FIELDWORK *1990, pp. 279-288; 2000, p.335
EMPR OF 1987-13
GSC MEM 363
GSC MAP 3-1966, 1278A

DATE CODED: 1991/05/24
DATE REVISED: 2003/02/24

CODED BY: PSF
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 174**

NATIONAL MINERAL INVENTORY:

NAME(S): **HONEYMOON**

MINING DIVISION: Kamloops

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P09E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 32 00 N
LONGITUDE: 120 03 04 W
ELEVATION: 1675 Metres

NORTHING: 5713259
EASTING: 704521

LOCATION ACCURACY: Within 500M

COMMENTS: Initial showings occur at 1675 metres and new discoveries were made lower down between forks of Joseph Creek.

COMMODITIES: Gold Silver Copper Lead Zinc

MINERALS

SIGNIFICANT: Chalcopyrite Galena Sphalerite Pyrite Bornite
Gold

ASSOCIATED: Quartz Carbonate Pyrrhotite

COMMENTS: Mineralization is contained in veins made up of quartz +/- carbonate gangue.

ALTERATION: Carbonate

COMMENTS: Carbonate-altered wallrock envelopes up to a metre wide locally and contains disseminated chalcopyrite and pyrite.

ALTERATION TYPE: Carbonate

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated

CLASSIFICATION: Mesothermal

TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au

SHAPE: Bladed

MODIFIER: Faulted

COMMENTS: Veins are variable in width of two centimetres up to 6 metres. Veins strike north and dip 90 degrees.

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

STRATIGRAPHIC AGE

Paleozoic
Mississippian
Cretaceous

GROUP

Slide Mountain
Undefined Group

FORMATION

Fennell
Eagle Bay

IGNEOUS/METAMORPHIC/OTHER

Baldy Batholith

LITHOLOGY:

Chert
Cherty Argillite
Slate
Phyllite
Mafic Intrusive
Biotite Granodiorite
Mafic Flow
Breccia
Tuff

GEOLOGICAL SETTING

TECTONIC BELT: Omineca

TERRANE: Slide Mountain

PHYSIOGRAPHIC AREA: Adams Plateau

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Rock

COMMODITY

Silver

GRADE

20.8000

Grams per tonne

Gold

2.9000

Grams per tonne

COMMENTS: Best assay from "Area 2".

REFERENCE: Assessment Report 18582.

INVENTORY

ORE ZONE: MAIN SHOWING

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1988

SAMPLE TYPE: Rock

COMMODITY

GRADE

Silver	200.0000	Grams per tonne
Gold	0.9400	Grams per tonne
Copper	1.0000	Per cent
Lead	1.0000	Per cent
Zinc	0.8130	Per cent

COMMENTS: Best assay from "Area 1".
REFERENCE: Assessment Report 18582.

CAPSULE GEOLOGY

The Honeymoon property is underlain by cherts, cherty argillites, slates, phyllites, mafic intrusions and mafic flows with breccias and tuffs of the Devonian to Permian Fennell Formation of the Slide Mountain Group. The southeast region of the property is underlain by a biotite granodiorite stock, an offshoot of the much larger Cretaceous Baldy batholith to the southeast. Quartz veins, ranging in thickness from about two centimetres to greater than six metres, contain chalcopryrite, pyrite, galena, sphalerite, some bornite and locally coarse native gold. The veins strike north and have vertical dips.

The veins are considered to be mesothermal and are parallel to and controlled by the north trending structural fabric of the enclosing volcanic and sedimentary rocks of the Fennell Formation. There are numerous showings on the property; the Kerr Addison Mines report describes the three most important. "Area 1" contains numerous quartz veins, varying from 2.5 centimetres to over 6 metres in width, which contain pyrite, chalcopryrite and galena and abundant carbonate wallrock alteration. The best assay from "Area 1" yielded 0.94 gram per tonne gold, greater than 200 grams per tonne silver, over 1 per cent copper, over 1 per cent lead and 0.8130 per cent zinc. "Area 2" is located in slopes of the Joseph Creek gully and consists of pyrite-chalcopryrite-galena-pyrrhotite bearing veins in metasedimentary and basaltic rocks. The best assay from "Area 2" was 2.9 grams per tonne gold and 20.8 grams per tonne silver. "Area 3" is a shear zone in siliceous sedimentary rocks that is mineralized with pyrite, pyrrhotite, chalcopryrite and bornite.

The Honeymoon claims group includes the old Windpass mine (092P 039) four kilometres to the south, for which there is a reserve of 32,400 tonnes of 7 grams per tonne gold. The claims were staked in 1988 to explore on-strike continuation of the geology and possible mineralization to the north of the Windpass. Kerr Addison Mines Limited sampled mineralized outcrops for assay, and panned 14 heavy mineral concentrate samples that year.

BIBLIOGRAPHY

EMPR ASS RPT *18582
EMPR MAP 53
EMPR OF 2002-15
EMPR P 1987-2
GSC MAP 1278A

DATE CODED: 1991/09/10
DATE REVISED: 2001/02/12

CODED BY: RAL
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 175**

NATIONAL MINERAL INVENTORY:

NAME(S): **TIP TOP**, TIP

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 11 22 N
LONGITUDE: 120 44 56 W
ELEVATION: 1260 Metres

NORTHING: 5673301
EASTING: 657307

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Trench #1 from Plates 2 and 5, Assessment Report 18960.

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Quartz Pyrite
ALTERATION: Sericite K-Feldspar Clay
ALTERATION TYPE: Silicific'n Potassic Argillic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Breccia
CLASSIFICATION: Epithermal
TYPE: H05 Epithermal Au-Ag: low sulphidation
DIMENSION: 200 x 50 Metres

STRIKE/DIP: TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Granodiorite
Rhyolite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

Overlap Assemblage

PHYSIOGRAPHIC AREA: Cariboo Plateau

INVENTORY

ORE ZONE: TRENCH

REPORT ON: N

CATEGORY: Assay/analysis

YEAR: 1989

SAMPLE TYPE: Chip

COMMODITY

GRADE

Gold

0.3850

Grams per tonne

COMMENTS: Sample width of 1.2 metres.

REFERENCE: Assessment Report 18960.

CAPSULE GEOLOGY

The Tip-Top epithermal gold prospect is located in the Cariboo Plateau. It is 50 (air) kilometres north-northeast of Savona and is readily accessible on logging roads from Cache Creek via Loon Lake (Assessment Report 18960). Outcrop is sparse in the area.

The oldest rocks in the area are andesitic and basaltic volcanic rocks of the Upper Triassic Nicola Group, which are intruded by granitic rocks (quartz diorite and granodiorite) of the Triassic to Jurassic Thuya batholith. The Mesozoic rocks are overlain by subaerial volcanic rocks (dacites, trachytes, basalts, andesites, rhyolites and related breccias) of the Eocene Skull Hill Formation (Geological Survey of Canada Memoir 363). The Eocene volcanic rocks are capped by plateau basalts of the Miocene Chasm Formation (Chilcotin Group).

The Tip showing is characterized by epithermal-style brecciation, clay, sericite and K-feldspar alteration in a zone approximately 200 metres long and 50 metres wide (Assessment Report 18960, page 11). The brecciation and alteration affects both granitic rocks and a small rhyolite plug. Minor fine pyrite mineralization is associated with the quartz. The highest assay was from a 1.2 metre chip sample which analysed 385 ppb gold (Assessment Report 18960).

The Tip and Top claims were staked in 1986 to cover epithermal-style mineralization uncovered during preparation of a logging road. The claims were subsequently optioned by Northgate Exploration Limited and in 1988 and 1989 subjected to programs of

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CAPSULE GEOLOGY

geological mapping, soil, rock and biogeochemical sampling, and machine trenching (Assessment Reports 18247, 18960).

BIBLIOGRAPHY

EMPR ASS RPT 18247, *18960
GSC MEM 363
GSC MAP 1278A

DATE CODED: 2001/02/06
DATE REVISED: 2001/02/07

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 176**

NATIONAL MINERAL INVENTORY:

NAME(S): **MOWICH LAKE COPPER, MOW**

STATUS: Anomaly
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:
LATITUDE: 51 01 33 N
LONGITUDE: 120 53 17 W
ELEVATION: 915 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of "Main Showing" in Assessment Report 12022 (figures 3 and 4).

MINING DIVISION: Clinton
Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5654820
EASTING: 648105

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Chalcocite
ASSOCIATED: Carbonate
ALTERATION: Malachite Cuprite Copper Azurite Mariposite
Ankerite
ALTERATION TYPE: Carbonate Oxidation Quartz-Carb.
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Volcanogenic
TYPE: D03 Volcanic redbed Cu

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Nicola	Undefined Formation	

LITHOLOGY: Vesicular Basalt
Amygdaloidal Augite Porphyry
Augite Porphyry Breccia
Serpentinite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
PHYSIOGRAPHIC AREA: Cariboo Plateau
Overlap Assemblage

INVENTORY

ORE ZONE: MAIN SHOWING
REPORT ON: N
CATEGORY: Assay/analysis
SAMPLE TYPE: Chip
COMMODITY: Copper
GRADE: 2.0000 Per cent
COMMENTS: Sample number 83MWVT427 across 1.5 metres in a trench in the main showing area.
REFERENCE: Assessment Report 12022.

CAPSULE GEOLOGY

The Mowich Lake copper occurrence is located 1 kilometre southeast of the south end of Mowich Lake. The area is accessible on a good-quality gravel road north from the Trans-Canada Highway 7.4 kilometres west of Savona, 35 (air) kilometres to the south. The "Main Showing" is located 1000 metres east-southeast of the bridge over the Deadman River. Chalcopyrite, with minor bornite and chalcocite are found in fractures and amygdules in vesicular basalt over an area of approximately 50 by 150 metres. Cuprite, native copper and crystalline azurite occur in fractures, particularly in the higher (easternmost) showings. Samples from trenches (Assessment Report 12022) reached 2.0 per cent copper, with only low precious metal values. Bulldozer trenching has shown the mineralized material at the "Main Showing" to be transported and to occupy depressions in Nicola Group augite porphyry. The mineralized material is believed to be transported and/or slumped, although an origin within the Nicola is not ruled out. Assessment Report 13432 suggests the mineralized material might have originated from the flat-lying basalts which unconformably overlie the Nicola rocks. A second showing is located 75 metres southwest of the bridge on the west bank of the Deadman River. Mineralization exposed in a pit consists of

CAPSULE GEOLOGY

malachite-coated massive bornite-chalcocite float up to 6 centimetres in diameter in weathered serpentinite. Carbonate/mariposite alteration is common within Nicola rocks at several places on the property, however, none contains any significant gold values.

The Mowich Lake property is underlain by the Upper Triassic Nicola Group which are exposed in a window eroded through Tertiary overlap assemblage volcanic and sedimentary rocks of the Miocene Chilcotin Group (Open File 1989-21; Geological Survey of Canada Memoir 363). The overlap assemblage consists two formations. The Deadman River Formation consists of diatomite-bearing lacustrine sediments, volcanic ash and clastic sedimentary rocks and is overlain by plateau lavas of the Chasm Formation. The Nicola rocks are comprised of augite andesite flows, polymictic volcanic breccias, which are interfingered to the south with volcanoclastic sediments and minor limestone.

The property was staked by Mr. M. Dickens of Savona and optioned to Canamax Resources Inc. in 1983. Canamax completed a program of geological mapping, linecutting, magnetometer, induced polarization/resistivity and soil geochemical surveying (Assessment Report 12022). Northair Mines Limited optioned the property in 1984 and completed additional geological mapping and bulldozer trenching over the Main Showing (Assessment Report 13432). In 1988, the property was optioned by Iron River Resources Limited, and 8.2 kilometres of magnetometer and VLF-EM surveying completed (Assessment Report 18167). Iron River completed 1.0 kilometre of induced polarization surveying, 11.6 kilometres of magnetometer and VLF-EM surveying and five diamond-drill holes (200 metres) in 1989 (Assessment Reports 18604, 19411 and 19780).

BIBLIOGRAPHY

EMPR ASS RPT *12022, *13432, 18167, 18604, 19411, 19780
EMPR OF 1989-21
GSC MEM 363
GSC MAP 1278A
Chevron File

DATE CODED: 2001/02/02
DATE REVISED: 2001/02/07

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 177**

NATIONAL MINERAL INVENTORY:

NAME(S): **SNO**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P02W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 04 42 N
LONGITUDE: 120 52 43 W
ELEVATION: 823 Metres

NORTHING: 5660677
EASTING: 648599

LOCATION ACCURACY: Within 500M

COMMENTS: Location of collar of diamond-drill hole 81-2 (Assessment Report 9136).

COMMODITIES: Molybdenum Copper

MINERALS

SIGNIFICANT: Molybdenite Chalcopyrite
ASSOCIATED: Pyrite Pyrrhotite
ALTERATION: Garnet Carbonate Chlorite Silica
ALTERATION TYPE: Skarn
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Replacement Skarn
TYPE: K07 Mo skarn

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Greenstone
Augite Andesite
Garnet Skarn
Limy Argillite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1981

SAMPLE TYPE: Drill Core

COMMODITY

GRADE

Molybdenum 0.1740 Per cent

COMMENTS: Diamond-drill hole 81-2, 1.0 metre between 79.0 and 80.0 metres.

REFERENCE: Assessment Report 9136.

CAPSULE GEOLOGY

The Sno molybdenum property is located on the west side of Snohoosh Lake, in the Deadman River valley, 38 air kilometres north of Savona. It is accessible by gravel road to Snohoosh Lake and then by boat across the lake. It can also be reached on an old logging road which leaves the Deadman road 0.5 kilometre south of Mowich Lake.

Molybdenite and minor chalcopyrite mineralization is exposed in outcrops on the west shore of Snohoosh Lake. Hostrocks are garnet skarn developed in limy argillites and carbonatized and chloritized mafic volcanic rocks of the Upper Triassic Nicola Group. The Nicola rocks contain up to 10 per cent pyrite and minor pyrrhotite (Assessment Report 9136). The Nicola rocks are exposed in a window eroded through basalts of the Miocene Chasm Formation. The window is exposed in the Deadman river valley system. Diamond drilling in 1981 intersected silica and chlorite altered augite andesites cut by numerous calcite veinlets. Drillhole 91-2 intersected molybdenite mineralization hosted in garnet skarn with minor chalcopyrite; the highest assay was 0.174 per cent molybdenum across 1.0 metre (Assessment Report 9136).

There is no record of work until 1980 when Mr. M. Dickens of Savona staked the property and optioned it to Newhawk Gold Mines Limited. Subsequently a 12 kilometre grid was prepared and

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CAPSULE GEOLOGY

magnetometer, VLF-EM and induced polarization surveys completed, as well as a 236 sample soil geochemical survey with analyses for copper, molybdenum, silver and zinc. This was followed by a five hole diamond drill program totalling 666 metres in 1981.

BIBLIOGRAPHY

EMPR ASS RPT *9136
EMPR FIELDWORK 2000, pp. 1-30
EMPR OF 1989-21
GSC MAP 1278A
GSC MEM 363

DATE CODED: 2001/01/21
DATE REVISED: 2001/02/07

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 178**

NATIONAL MINERAL INVENTORY:

NAME(S): **POISON CREEK, GOLDMIST 2**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P01E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 07 18 N
LONGITUDE: 120 14 36 W
ELEVATION: 1070 Metres

NORTHING: 5666969
EASTING: 692912

LOCATION ACCURACY: Within 500M

COMMENTS: Main Showing, diamond-drill hole SC-85-1 (Assessment Report 14846).

COMMODITIES: Gold Copper Zinc Lead

MINERALS

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

DEPOSIT

CHARACTER:	Vein			
CLASSIFICATION:	Epigenetic	Hydrothermal		
TYPE:	I01 Au-quartz veins			
SHAPE:	Tabular			
DIMENSION:		Metres	STRIKE/DIP:	TREND/PLUNGE: /

HOST ROCK

DOMINANT HOSTROCK: Plutonic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Paleozoic	Harper Ranch	Undefined Formation	

LITHOLOGY: Felsic Intrusive
Feldspar Porphyry
Intrusive Breccia
Marble
Siltstone
Argillite
Chert
Limestone

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Poison Creek showings are located on Poison Creek, a tributary to Fishtrap Creek which flows into the west side of the North Thompson River. The property is accessible on logging roads and is 55 air kilometres north of Kamloops.

Three showings are described in Assessment Report 14846. The "Main Showing" is exposed in a "pinnacle" of siliceous altered felsic intrusive rock. The hostrocks are highly carbonate altered and cut by quartz-carbonate veins with pyrite, chalcopyrite, sphalerite and galena. The veins have random orientations and range up to 30 centimetres in thickness. The "Sulphide Showing" consists of pyrite mineralization (up to 15 per cent) and minor chalcopyrite in chlorite-rich intrusive breccia and marble in contact with feldspar porphyry. The "V.G. Showing" is a narrow 10 centimetre quartz vein carrying a small grain of gold as well as base metal sulphides. Hostrocks are lightly metamorphosed sedimentary rocks of the late Paleozoic Harper Ranch Group which consist of siltstone, argillite, chert and limestone.

Prior to 1984, the property was held by prospectors who trenched the "Main showing" by bulldozer. In 1984, an airborne geophysical survey (magnetic and VLF-EM) totalling 575 kilometres was completed for the Skull Creek Syndicate by Glen White and Associates. The property was subsequently acquired by Goldbrae Developments Limited in 1984, who in 1985, in partnership with Nexus Resource Corporation and Everest Resources Limited completed a program of geological mapping, 54 kilometres of linecutting, geophysical surveys (magnetometer, VLF-EM and pulse electromagnetic), soil geochemical surveying (925 samples) and diamond drilling (308 metres in two holes).

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RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
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PAGE: 1308
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 13437, *14846
EMPR FIELDWORK 2000, pp. 1-30
GSC MAP 1278A
GSC MEM 363

DATE CODED: 2001/01/19
DATE REVISED: 2001/01/19

CODED BY: RHM
REVISED BY: RHM

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 179**

NATIONAL MINERAL INVENTORY:

NAME(S): **NORTH THOMPSON RIVER PLACER**

STATUS: Past Producer Open Pit

MINING DIVISION: Kamloops

REGIONS: British Columbia

NTS MAP: 092P01E

UTM ZONE: 10 (NAD 83)

BC MAP:

LATITUDE: 51 04 10 N

NORTHING: 5661203

LONGITUDE: 120 13 41 W

EASTING: 694200

ELEVATION: 396 Metres

LOCATION ACCURACY: Within 5 KM

COMMENTS: Along the North Thompson River just north of the village of McLure
(Figure 3, Bulletin 28).

COMMODITIES: Gold

MINERALS

SIGNIFICANT: Gold

MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unconsolidated

CLASSIFICATION: Placer

TYPE: C01 Surficial placers

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP
Quaternary

FORMATION

IGNEOUS/METAMORPHIC/OTHER
Glacial/Fluvial Gravels

LITHOLOGY: Gravel

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Harper Ranch

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The area of the North Thompson River placer showing, near McLure, appears to be underlain by late Paleozoic sedimentary and volcanic rocks of the Harper Ranch Group.

Production from 1921 to 1945 was 2456 grams gold (Bulletin 28).

BIBLIOGRAPHY

EMPR BULL *28, pp. 38,39
GSC MAP 1278A

DATE CODED: 2001/03/29
DATE REVISED: / /

CODED BY: GO
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 180**

NATIONAL MINERAL INVENTORY:

NAME(S): **KENELM**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P01E
BC MAP:

Underground

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 02 55 N
LONGITUDE: 120 10 48 W

NORTHING: 5659015
EASTING: 697655

ELEVATION: 1082 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Area of pits, adit and incline on top of a ridge west of the community of McLure on the North Thompson River (Special Report by J.S. Stevenson, 1936).

COMMODITIES: Copper

Lead

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena

ASSOCIATED: Quartz

MINERALIZATION AGE:

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Plutonic

STRATIGRAPHIC AGE

GROUP

FORMATION

IGNEOUS/METAMORPHIC/OTHER

Unknown

Unnamed/Unknown Informal

LITHOLOGY: Syenite
Diorite Dike

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane

TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Kenelm group of four claims were staked in 1936 and owned by G.E. File and associates of McLure. "The workings are at an elevation of 3600 feet and reached by a steep foot trail leaving the North Thompson road 3 miles north from McLure station, and climbing for 3 miles south-eastward to the property." (Special Report by J.S. Stevenson).

On the property, a coarse-grained syenite is cut by three quartz veins that are mineralized with minor amounts of pyrite, chalcopyrite and galena. The veins have been traced for 122 metres and are up to 1.5 metres wide. They strike from 360 to 335 degrees averaging 45 degree northeast dips. Southwards along strike the veins gradually thin to narrow tight stringers.

The veins have been explored by pits, a 2.4-metre incline and 8.2-metre adit (ca. 1936). The adit intersected a fine grained diorite dike that cuts the quartz vein and syenite.

BIBLIOGRAPHY

EMPR PF (*Special Report by J.S. Stevenson, 1936; Location map and map of workings, 1936)
GSC MAP 1278A

DATE CODED: 2001/04/03
DATE REVISED: 2001/04/04

CODED BY: GO
REVISED BY: GO

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 181**

NATIONAL MINERAL INVENTORY:

NAME(S): **SPIDER**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 32 19 N
LONGITUDE: 120 21 35 W
ELEVATION: 1370 Metres

NORTHING: 5713028
EASTING: 683099

LOCATION ACCURACY: Within 500M

COMMENTS: Location of showing northwest of Deer Lake (Assessment Report 25894).

COMMODITIES: Copper Lead

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Galena
ALTERATION: Quartz Carbonate
ALTERATION TYPE: Silicific'n Carbonate
MINERALIZATION AGE:

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Nicola	Undefined Formation	

LITHOLOGY: Pyroxene Lapilli Tuff
Agglomerate

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

The Spider occurrence is 1.5 kilometres northwest of Deer Lake. It was uncovered during construction of a new logging road in December 1997. The new road passes across the north and east ends of Spider Lake, east of Deer Lake. Along the east side of Spider Lake the road intersects several northeast trending quartz-carbonate alteration zones, and small lenses of pyrite with chalcopyrite and galena hosted in pyroxene lapilli tuff and agglomerate of the Upper Triassic Nicola Group. The quartz-carbonate veins and stockwork resembles some of the mineralization on the AA claims (092P 137) to the north (Assessment Report 25894).

BIBLIOGRAPHY

EM FIELDWORK *2000, p. 24
EMPR ASS RPT 4684, *25894
EMPR OF 2002-15
GSC MAP 1278A

DATE CODED: 2001/01/17
DATE REVISED: 2001/01/24

CODED BY: JMR
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 182**

NATIONAL MINERAL INVENTORY:

NAME(S): **CATE**, PAPOOSE, SENICAR

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P15W
BC MAP:

MINING DIVISION: Clinton

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 54 38 N
LONGITUDE: 120 47 36 W
ELEVATION: 1036 Metres

NORTHING: 5753391
EASTING: 651782

LOCATION ACCURACY: Within 500M

COMMENTS: Cate showing east of 100 Mile House (Assessment Report 24952).

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Quartz Carbonate Pyrite Pyrrhotite Arsenopyrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic
TYPE: I05 Polymetallic veins Ag-Pb-Zn±Au
COMMENTS: The showing appears to be associated with a feldspar porphyry dike.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Triassic-Jurassic	Nicola	Undefined Formation	

LITHOLOGY: Feldspar Porphyry Dike
Volcanic Wacke
Agglomerate
Siltstone
Porphyritic Augite Breccia Flow

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

INVENTORY

ORE ZONE: SHOWING

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
COMMODITY

YEAR: 1997

Gold

GRADE
0.7470 Grams per tonne

REFERENCE: Assessment Report 24952.

CAPSULE GEOLOGY

The Cate showing was discovered in 1993 on the Papoose property, about 7.5 kilometres northeast of the village of Eagle Creek, east of 100 Mile House. The showing is a quartz-carbonate vein mineralized with pyrite-pyrrhotite-arsenopyrite and lesser chalcopyrite, and which appears to be associated with a feldspar porphyry dike trending 030 degrees. A rock sample from the showing yielded a value of 0.747 gram per tonne gold (Assessment Report 24952). The hostrocks on the property include interbedded volcanic wacke, agglomerate and siltstone, overlain by porphyritic augite breccia flows of the Upper Triassic Nicola Group.

The area was staked as the Senicar claims by Imperial Metals Corporation in late 1983 following reconnaissance soil sampling which indicated highly anomalous arsenic values, along with spotty copper and gold anomalies. Reconnaissance exploration work was conducted for three years, and in 1987 and 1988, a more thorough examination and an induced polarization survey were conducted by Eastfield Resources. The Papoose claims were staked in 1993 and 1994 by David Ridley. Pioneer Metals Corporation optioned the property and initiated prospecting of the known geochemical anomalies, leading to the discovery of the Cate, and other small low-grade arsenic-copper-gold occurrences. David Ridley continued detailed prospecting, soil and rock sampling of the area surrounding the Cate showing in 1996, funded by the Prospectors Assistance Program.

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
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PAGE: 1313
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR ASS RPT 17590, 23269, 23925, *24952
EMPR EXPL 1987-C243; 1988-C141
EMPR OF 2002-15
EMPR PF (Saunders, C.R. (1987): Torrez Resources Report on the Senicar
Property)
GSC MAP 1278A

DATE CODED: 2001/01/27
DATE REVISED: 2001/05/04

CODED BY: JMR
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 183**

NATIONAL MINERAL INVENTORY:

NAME(S): **WANDERING DOG**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 32 57 N
LONGITUDE: 120 24 44 W
ELEVATION: 1466 Metres

NORTHING: 5714071
EASTING: 679418

LOCATION ACCURACY: Within 500M

COMMENTS: Location is from Fieldwork 2000, page 21.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Pyrrhotite Pyrite Chalcopyrite
ALTERATION TYPE: Skarn
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Podiform Massive
CLASSIFICATION: Skarn
TYPE: K01 Cu skarn

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Nicola

FORMATION

Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Bedded Sediment/Sedimentary
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Thompson Plateau

RELATIONSHIP:

GRADE:

INVENTORY

ORE ZONE: LENS

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Rock
COMMODITY
Copper

YEAR: 2000

GRADE
0.0872 Per cent

REFERENCE: Fieldwork 2000, page 24.

CAPSULE GEOLOGY

The Wandering Dog showing was found in 2000 by the B.C. Geological Survey. It is about 1.5 kilometres due west of Silver Lake, about 25 kilometres northwest of Little Fort. Thin bedded, locally skarn-altered sedimentary rocks are separated from a diorite stock to the northeast by a poorly-exposed lens of massive pyrrhotite-pyrite, with traces of chalcopyrite. Permian fossils were found by Campbell and Tipper (Geological Survey of Canada Map 1278A) within two hundred metres of the Wandering Dog showing, so it is uncertain whether the sedimentary hostrock for this mineralization is Permian, or Upper Triassic Nicola Group. A sample from this sulphide lens analysed 0.0872 per cent copper (Sample 00SIS-359, Fieldwork 2000). The B.C. Geological Survey conducted a regional till geochemistry program over NTS mapsheets 092P09W and 08W in 1999 (Open File 2000-17).

BIBLIOGRAPHY

EM FIELDWORK *2000, p. 24
EM OF 2000-17
EMPR OF 2002-15
GSC MAP 1278A
GSC MEM 363

DATE CODED: 2001/02/06
DATE REVISED: 2001/02/12

CODED BY: SI
REVISED BY: JMR

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **092P 184**

NATIONAL MINERAL INVENTORY:

NAME(S): **HOTFISH LAKE**

MINING DIVISION: Clinton

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P15E
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 57 02 N
LONGITUDE: 120 37 12 W
ELEVATION: 1066 Metres

NORTHING: 5758215
EASTING: 663557

LOCATION ACCURACY: Within 1 KM

COMMENTS:

COMMODITIES: Copper

Zinc

MINERALS

SIGNIFICANT: Pyrite Chalcopyrite Sphalerite
ALTERATION: Silica Carbonate
ALTERATION TYPE: Silicific'n 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
Triassic Nicola

FORMATION
Undefined Formation

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY: Pyritic Siliceous Rhyodacite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Quesnel Highland

CAPSULE GEOLOGY

The Hotfish showings are 3 small zones of sulphide vein mineralization within quartz-carbonate altered rhyodacite of the Upper Triassic Nicola Group. The showings are located just east of Hotfish Lake, about seven kilometres north of the east end of Canim Lake.

H.J. Wahl prospected and explored the area beginning in 1991. He discovered mineralization on the Fish claims in 1994, during follow-up work on extensions of cadmium and silver soil anomalies on the Hot claim group to the northwest (Assessment Report 23869). All three zones show abundant pyrite and some chalcopyrite; one zone carries stringers of sphalerite as well. The work continued with soil geochemistry and induced polarization surveys in 1997.

BIBLIOGRAPHY

EMPR ASS RPT 23336, *23869, 25029
EMPR OF 2002-15
GSC MAP 1278A

DATE CODED: 2001/01/25
DATE REVISED: 2001/02/15

CODED BY: JMR
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 185**

NATIONAL MINERAL INVENTORY:

NAME(S): **ROCK ISLAND LAKE ANOMALY, CRAZY FOX**

MINING DIVISION: Kamloops

STATUS: Anomaly
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 33 17 N
LONGITUDE: 120 16 33 W
ELEVATION: 1400 Metres

NORTHING: 5715032
EASTING: 688849

LOCATION ACCURACY: Within 1 KM

COMMENTS: Location of anomalous B.C. Geological Survey till geochemical sample 989320 from Open File 2000-17.

COMMODITIES: Zinc Copper Cadmium Molybdenum Nickel
 Cobalt Antimony

MINERALS

SIGNIFICANT: Unknown
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Unknown
CLASSIFICATION: Unknown
TYPE: * Unknown

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Nicola	Undefined Formation	

LITHOLOGY: Unknown

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

CAPSULE GEOLOGY

A multi-element anomaly for zinc, copper, cadmium, molybdenum, nickel, cobalt and antimony was discovered during the B.C. Geological Survey till geochemistry program in parts of 092P08 and 09 (Open File 2000-17; Fieldwork 2000). This anomalous sample is within a linear, north-northwest trending belt of till and soil geochemical anomalies that local prospectors traced for more than 10 kilometres in 1998 and 1999 (Fieldwork 2000). The linear anomaly appears to be along or near the contact between volcanic and overlying sedimentary rocks of the Upper Triassic Nicola Group, although the contact is locally marked by faults of the Rock Island Lake system.

Soil, rock and till geochemistry work on the Crazy Fox property was conducted by Addie and Bourdon (Assessment Reports 26290 and 26291). They were unable to locate the source of the anomaly in outcrop or float, but they did reproduce a very strong multi-element geochemical anomaly in glacial tills up to 500 metres wide and eight to ten kilometres long. A coincident airborne magnetic anomaly striking 160 degrees runs from 1.7 kilometres east of the north end of Tintlihohtan Lake, and continues to the southeast into Demers Creek (Assessment Reports 26290 and 26291).

BIBLIOGRAPHY

EM FIELDWORK *2000, p. 26
EM OF *2000-17
EMPR ASS RPT *26290, *26291
EMPR OF 2002-15
GSC MAP 1278A
WWW <http://www.infomine.com/>

DATE CODED: 2001/02/16
DATE REVISED: 2001/02/26

CODED BY: JMR
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 186**

NATIONAL MINERAL INVENTORY:

NAME(S): **EJAS LAKE**, LIZARD, GRIT

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P16W
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5747695
EASTING: 685580

LATITUDE: 51 50 57 N
LONGITUDE: 120 18 20 W
ELEVATION: 1420 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location of showing at the north end of the Lizard Grid on the Lizard 2 claim.

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Pyrite Pyrrhotite Chalcopyrite
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Volcanogenic
TYPE: G06 Noranda/Kuroko massive sulphide Cu-Pb-Zn

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Mississippian	Undefined Group	Eagle Bay	

LITHOLOGY: Quartz Muscovite Schist
Quartzitic/Quartzose Quartz Conglomerate
Phyllite
Andalusite Schist
Graphitic Phyllite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca	PHYSIOGRAPHIC AREA: Quesnel Highland
TERRANE: Kootenay	
METAMORPHIC TYPE: Regional Contact RELATIONSHIP:	GRADE: Greenschist

CAPSULE GEOLOGY

The Ejas Lake showing is about one kilometre east of the easternmost point of Ejas Lake, seven kilometres south of Mahood Lake. A pyritic quartz-muscovite schist of the Paleozoic Eagle Bay assemblage contains disseminated pyrite, pyrrhotite and rare chalcopyrite. On the property, metasedimentary rocks include carbonate and quartzite-quartz granule conglomerate, phyllite and andalusite schists. The rock units dip about 30 degrees to the southwest. The contact with the Devonian to Permian Fennell Formation of the Slide Mountain Group trends northwest and lies one or two kilometres west of the showing.

The first reported mineral exploration in the area was conducted in 1966. Aquitaine optioned the Grit claims from Barrier Reef and ran airborne electromagnetic and magnetic surveys by Aerodat in 1977. This was followed by ground geophysics over selected grids. Barrier Reef Resources Limited drilled a single hole 475 metres north of Ejas Lake on the Grit 6 claim in 1978. A piece of core from the 1978 drilling program was analysed in 1983 and indicated the presence of anomalous gold and silver in the graphitic pyrrhotite-bearing phyllite. The Lizard claims were staked in November 1984 by Kerr, Dawson and Associates Limited on behalf of Kidd Creek Mines. Soil sampling, geological mapping, stream sediment and rock sampling, and HLEM and magnetometer surveys were conducted.

BIBLIOGRAPHY

EMPR ASS RPT 6622, 6903, *13362
EMPR OF 2002-15
GSC MAP 1278A
Falconbridge File

DATE CODED: 2001/02/23
DATE REVISED: / /

CODED BY: JMR
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 187**

NATIONAL MINERAL INVENTORY:

NAME(S): **MCCARTHY**, JOSEPH 19-20, FOGGY F

STATUS: Prospect
REGIONS: British Columbia
NTS MAP: 092P09E
BC MAP:

MINING DIVISION: Kamloops
UTM ZONE: 10 (NAD 83)
NORTHING: 5712757
EASTING: 701261

LATITUDE: 51 31 48 N
LONGITUDE: 120 05 54 W
ELEVATION: 945 Metres

LOCATION ACCURACY: Within 500M

COMMENTS: Location is the site of the original Kerr Addison showing.
The newer discovery is located 50 metres north of that.

COMMODITIES: Copper Gold

MINERALS

SIGNIFICANT: Pyrrhotite Chalcopyrite Pyrite
ASSOCIATED: Quartz Magnetite
ALTERATION: Chlorite Pyrite Silica
ALTERATION TYPE: Silicific'n Pyrite Chloritic
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Massive Podiform Disseminated Breccia
CLASSIFICATION: Volcanogenic
TYPE: G05 Cyprus massive sulphide Cu (Zn)
COMMENTS: The massive sulphide mineralization occurs as fragments and discontinuous bands in a prominent north-northwesterly striking fault zone. Stratigraphy strikes north and dips moderately to the east.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE: Paleozoic GROUP: Slide Mountain FORMATION: Fennell IGNEOUS/METAMORPHIC/OTHER:

LITHOLOGY: Basalt
Chloritic Basalt
Diorite Sill
Bedded Chert

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Slide Mountain
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Shuswap Highland

RELATIONSHIP: GRADE: Greenschist

INVENTORY

ORE ZONE: ROCK REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1993
SAMPLE TYPE: Grab
COMMODITY GRADE
Gold 0.4110 Grams per tonne
Copper 9.3500 Per cent
COMMENTS: Grab sample is from Trench C.
REFERENCE: Assessment Report 22686.

ORE ZONE: TRENCH REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1993
SAMPLE TYPE: Channel
COMMODITY GRADE
Gold 0.3150 Grams per tonne
Copper 2.2400 Per cent
COMMENTS: Channel sample is 1.0 metres across, located at the discovery hand trench. The channel sample averages 1.1 per cent copper over 6.6 metres.
REFERENCE: Assessment Report 22686.

CAPSULE GEOLOGY

The McCarthy property is located just south of the old Queen Bess Mine (092P 042), east of the North Thompson River about 20 kilometres south of Clearwater. Massive sulphide mineralization occurs as fragments and discontinuous bands within a prominent north-northwest striking fault zone. The sulphides are pyrite,

CAPSULE GEOLOGY

pyrrhotite and chalcopyrite, and they carry a little gold.

The original showing on the property is pyrite, pyrrhotite and chalcopyrite mineralization in silicified basalt of the Devonian to Permian Fennell Formation of the Slide Mountain Group. North of that occurrence, bands up to 20 centimetres thick of massive pyrite, with chalcopyrite, pyrrhotite and magnetite in a quartz gangue are hosted by chloritic basalt. Disseminated pyrite and pyrrhotite associated with silicification and faulting were exposed by trenching and are common on the claims. The bands of massive sulphide are locally fragmented structurally. Fragments of massive sulphide are variable in size, and range up to 1.0 by 0.5 metres. Fragments are aligned parallel to the fault strike and are concentrated in a zone several metres thick. Teck Exploration geologists reported that field relationships imply that silicification and widespread pyritization may be related to later faulting, while chloritization and massive mineralization were pre-existing, and later disrupted and brecciated during faulting. Their observation that the fault zone is not chloritized and does not contain significant copper mineralization supports this idea.

On the claims, massive, featureless basalt is the dominant lithology. Locally, the basaltic rocks are coarse grained and may be dikes or sills; feeders for overlying flows. Thin-bedded chert is present locally, mainly in Axel Creek. Bedding in the cherts indicates that the stratigraphy strikes north and dips moderately (30 to 50 degrees) to the east. Local bedding dip reversals indicate folding. Mapping by Schiarizza and Preto (Paper 1987-2) shows a northeast-directed, north striking thrust fault cutting the McCarthy claim area. Faulting was exposed by trenching and mapped by Teck Exploration geologists along the baseline of the main grid. A north to northwest striking zone of intense shearing and brecciation is up to 30 metres wide. The zone has a shallow to moderate east dip. Intense alteration and pyritization are associated with this structure. In the area of Trench B, this fault zone appears to be offset.

In 1979, Craigmont Mines Limited flew a Dighem III survey covering all of the Fennell Formation between Barriere and Clearwater, including the McCarthy claims area (Assessment Report 7659). Barrier Reef Resources Limited conducted a reconnaissance prospecting and soil geochemistry program over anomalies of the Dighem survey in 1983, including those on the Joseph 19 and 20 claims (the Foggy F group). During 1988, Kerr Addison Mines Limited carried out prospecting and sampling in the nearby Joseph Creek area, on and around the Honeymoon showing (092P 174) (Assessment Report 18582). That program led to the discovery of a showing of stringer and fracture-fill pyrite-pyrrhotite-chalcopyrite in what became the Main Grid area of the McCarthy property. Martin Peter owned the property, and carried out a prospecting magnetometer survey. Hand trenching of magnetic anomalies revealed massive sulphide mineralization, 50 metres north of the original showing. Teck Exploration optioned the claim group in 1992 and carried out a program of magnetometer, soil and geological mapping surveys, and trenching. The discovery hand trench was sampled; best results were 6.6 metres at 1.1 per cent copper, including 1.0 metre at 2.24 per cent copper and 0.315 gram per tonne gold. A grab sample of the massive sulphide from Trench C, north of the original showing, assayed 9.35 per cent copper and 0.411 gram per tonne gold. In 1993, Teck continued the magnetic surveys and trenching to the south of the original showing.

BIBLIOGRAPHY

EMPR ASS RPT 7659, 11968, 18582, *22686, 22916
EMPR OF 2002-15
EMPR P 1987-2
GSC MAP 1278A

DATE CODED: 2001/03/19
DATE REVISED: 2001/03/20

CODED BY: JMR
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 188**

NATIONAL MINERAL INVENTORY:

NAME(S): **HC GOLD**

MINING DIVISION: Kamloops

STATUS: Showing
 REGIONS: British Columbia
 NTS MAP: 092P09W
 BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 33 50 N
 LONGITUDE: 120 21 07 W
 ELEVATION: 1450 Metres

NORTHING: 5715858
 EASTING: 683537

LOCATION ACCURACY: Within 500M
 COMMENTS:

COMMODITIES: Gold Copper Silver

MINERALS

SIGNIFICANT: Gold
 ASSOCIATED: Mariposite Pyrite Carbonate Quartz
 ALTERATION: Ankerite Carbonate Mariposite
 ALTERATION TYPE: Quartz-Carb.
 MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein Breccia
 CLASSIFICATION: Hydrothermal Porphyry Epigenetic
 TYPE: L03 Alkalic porphyry Cu-Au I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Nicola	Undefined Formation	

LITHOLOGY: Fragmental Andesite

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
 TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: TRENCH REPORT ON: N

CATEGORY: Assay/analysis YEAR: 1988
 SAMPLE TYPE: Chip

<u>COMMODITY</u>	<u>GRADE</u>	
Silver	2.2500	Grams per tonne
Gold	0.2100	Grams per tonne
Copper	0.1000	Per cent

COMMENTS: These values are an average of a series of continuous 2.0 metre long chip samples cut across the full 24 metres width of the zone of pyritic, pervasive quartz-carbonate-mariposite alteration hosted by fragmental andesite.

REFERENCE: Property File - Rebagliati, 1987.

CAPSULE GEOLOGY

The HC Gold occurrence is located in the approximate centre of the HC claim group, about 6.5 kilometres south of the south shore of Taweel Lake, west of Clearwater. Wide bands of quartz-carbonate-mariposite alteration, enriched in gold, base metals and elements indicative of hydrothermal activity (Rebagliati, 1987), are hosted by fragmental basalt of the Triassic to Jurassic Nicola Group. Silver bearing quartz-calcite veins occur in the western part of the claim block, and are listed as a separate occurrence (HC Silver, 092P 189).

Three northwesterly trending zones of pervasive quartz-iron carbonate-mariposite alteration are located in the approximate centre of the HC claim group. The zones are discordant to bedding, display crude banding, brecciation, and crosscutting ferroan dolomite veining. They are interpreted by Rebagliati to be healed faults which have undergone multiple episodes of movement. Late quartz stringers infilling fractures, breccias and dilation zones within the broad areas of carbonate alteration carry the highest gold values, accompanied by minor concentrations of copper and antimony, and some silver.

Evidence of exploration of the silver mineralization on the west side of the HC claim consists of old shafts and pits. The first documented work on the ground was geological, geophysical and soil

CAPSULE GEOLOGY

surveys done on the west side of the claim, over the silver anomaly (092P 189), by Imperial Oil Limited in 1972. In 1982, a regional reconnaissance program conducted by BP Selco identified altered rocks on the claim with anomalous values for mercury, arsenic and gold. BP Selco staked and prospected the ground, located the silver-lead-zinc mineralization, and continued prospecting to the east. This resulted in discovery of the gold-enriched alteration zones in the centre of the claim block. They conducted a 200 by 200 metre multi-element soil geochemical survey. In 1985, three alteration zones were trenched by backhoe. Lancer Resources optioned the HC claim from BP, and conducted a detailed soil geochemical survey. The B.C. Geological Survey conducted a regional till geochemistry program over NTS mapsheets 092P09W and 08W (Open File 2000-17).

BIBLIOGRAPHY

EMPR ASS RPT *12101, 16973
EMPR EXPL 1988-A45,C139
EMPR OF 2002-15
EMPR PF (*Rebagliati, M. (1987): Lancer Resources Report on the HC Gold Project)
GSC MAP 1278A

DATE CODED: 2001/03/19
DATE REVISED: 2001/03/20

CODED BY: JMR
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 189**

NATIONAL MINERAL INVENTORY:

NAME(S): **HC SILVER**

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P09W
BC MAP:
LATITUDE: 51 33 55 N
LONGITUDE: 120 22 01 W
ELEVATION: 1555 Metres
LOCATION ACCURACY: Within 500M
COMMENTS:

Underground

MINING DIVISION: Kamloops

UTM ZONE: 10 (NAD 83)

NORTHING: 5715975
EASTING: 682492

COMMODITIES: Silver Lead Zinc Gold Copper

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Galena Pyrite Tetrahedrite
ASSOCIATED: Quartz Calcite
ALTERATION: Carbonate
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Hydrothermal Epigenetic Porphyry
TYPE: L03 Alkaalic porphyry Cu-Au I05 Polymetallic veins Ag-Pb-Zn±Au

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Triassic-Jurassic Nicola Undefined Formation

LITHOLOGY: Epiclastic Siltstone
Argillite
Greywacke
Augite Porphyry Flow
Pyroclastic

GEOLOGICAL SETTING

TECTONIC BELT: Intermontane
TERRANE: Quesnel

PHYSIOGRAPHIC AREA: Thompson Plateau

INVENTORY

ORE ZONE: SHAFT

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Channel

YEAR: 1987

COMMODITY	GRADE	
Silver	24.3400	Grams per tonne
Gold	0.7500	Grams per tonne
Zinc	3.3100	Per cent

COMMENTS: Sample from a vein exposed in an old shaft, across 0.70 metre.
REFERENCE: Property File, Rebagliati, 1987.

CAPSULE GEOLOGY

The HC Silver occurrences are located near the western edge of the HC claim group, about 6.5 kilometres south of the south shore of Taweel Lake, west of Clearwater. Near the midpoint of the western claim boundary, several calcite-quartz veins, up to 80 centimetres thick, cut siltstone. The veins are exposed in old hand-dug shafts and trenches in a 500 metre long southeast trending zone, and contain sphalerite, chalcopyrite, galena, pyrite and tetrahedrite. A representative sample was cut across 0.70 metre by Mark Rebagliati in 1987; it assayed 24.34 grams per tonne silver, 3.31 per cent zinc and 0.75 gram per tonne gold. The silver-zinc veins are underlain by siltstone, argillite and greywacke, which are associated with augite porphyry flows and pyroclastics of the Upper Triassic Nicola Group.

Evidence of exploration of the silver mineralization on the west side of the HC claim consists of old shafts and pits. The first documented work on the ground was geological, geophysical and soil surveys done over the west side of the claim by Imperial Oil Limited in 1972. In 1982, a regional reconnaissance program was conducted by BP Selco. BP Selco relocated the silver-lead-zinc mineralization, and also discovered an area of gold-enriched alteration near the centre of the claim (HC Gold, 092P 188). In 1985, three alteration zones were trenched by backhoe. Lancer Resources optioned the HC

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CAPSULE GEOLOGY

claim from BP, and conducted a detailed soil geochemical survey. The B.C. Geological Survey conducted a regional till geochemistry program over NTS mapsheets 092P09W and 08W in 1999 (Open File 2000-17).

BIBLIOGRAPHY

EM FIELDWORK 2000, pp. 1-29
EM OF 2000-17
EMPR ASS RPT *12101, *15221, 16973, 24827
EMPR EXPL 1988-A45,C139
EMPR OF 2002-15
EMPR PF (*Rebagliati, M. (1987): Lancer Resources report on the HC Gold Project)
GSC MAP 1278A

DATE CODED: 2001/03/20
DATE REVISED: 2001/03/20

CODED BY: JMR
REVISED BY: JMR

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **092P 190**

NATIONAL MINERAL INVENTORY:

NAME(S): **MAURY**

MINING DIVISION: Kamloops

STATUS: Showing
REGIONS: British Columbia
NTS MAP: 092P16W
BC MAP:

UTM ZONE: 10 (NAD 83)

LATITUDE: 51 53 01 N
LONGITUDE: 120 18 03 W
ELEVATION: 1330 Metres

NORTHING: 5751537
EASTING: 685763

LOCATION ACCURACY: Within 500M

COMMENTS: Located at the northwest end of Maury Lake.

COMMODITIES: Copper Lead Zinc Silver Gold
 Molybdenum

MINERALS

SIGNIFICANT: Chalcopyrite Galena Sphalerite
ASSOCIATED: Pyrite
ALTERATION: Quartz Carbonate Limonite Clay
MINERALIZATION AGE:

DEPOSIT

CHARACTER: Vein
CLASSIFICATION: Epigenetic

HOST ROCK

DOMINANT HOSTROCK: Metasedimentary

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Hadrynian	Snowshoe	Unnamed/Unknown Formation	

LITHOLOGY: Phyllite
 Quartz Sericite Schist
 Quartzite

GEOLOGICAL SETTING

TECTONIC BELT: Omineca
TERRANE: Kootenay

INVENTORY

ORE ZONE: MAIN

REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 2001
SAMPLE TYPE: Grab	
<u>COMMODITY</u>	<u>GRADE</u>
Lead	2.3550 Per cent
Zinc	0.3560 Per cent
Silver	237.0000 Grams per tonne
Gold	0.9070 Grams per tonne
Molybdenum	545.0000 Per cent

REFERENCE: Prospector Report 2001-19.

CAPSULE GEOLOGY

The Maury showing is located approximately 250 metres northwest of the north end of Maury Lake. D. Riley and C. Riley discovered it in 1995 however no work was recorded until 2001.

The area is underlain by Hadrynian to Paleozoic Snowshoe Group quartzite, black phyllite and quartz sericite schist. Mineralization occurs within a shear zone, which contains quartz carbonate veining with pyrite, chalcopyrite, galena and sphalerite. A grab sample taken 25 metres south of a logging road assayed 2.355 per cent lead, 0.356 per cent zinc, 237 grams per tonne silver, 0.907 gram per tonne gold and 545 grams per tonne molybdenum (Prospector Report 2001-19).

Molybdenite is assumed to occur but was not reported in hand sample.

BIBLIOGRAPHY

EMPR OF 2002-15
GSC MAP 1278A
PAP Report 2001-19 (Black, D., Riley, D. (2001))

DATE CODED: 2003/06/16
DATE REVISED: / /

CODED BY: ICLW
REVISED BY:

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **102I 001**

NATIONAL MINERAL INVENTORY: 102I16 Cu1

NAME(S): **STRANBY, CS, CID,**
RAN, ED CREEK

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 102I16E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 50 34 N
LONGITUDE: 128 09 26 W
ELEVATION: 1 Metres

NORTHING: 5632680
EASTING: 559337

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the skarn occurrence is 0.8 kilometres west of mouth of Shuttleworth Bight on Queen Charlotte Sound (Assessment Report 1847, page 18).

COMMODITIES: Copper Magnetite Iron

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Bornite
ALTERATION: Garnet Epidote Quartz Calcite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Podiform
CLASSIFICATION: Skarn Epigenetic Industrial Min.
SHAPE: Tabular
DIMENSION: STRIKE/DIP: 135/55W
COMMENTS: Local strike of sediments is southeast; dip is 45 to 65 degrees south-west.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 230 Ma
DATING METHOD: Fossil
MATERIAL DATED: Gymnotropite ammonites
ISOTOPIC AGE: 154 +/- 8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Hornblende

LITHOLOGY: Limestone
Garnet Epidote Quartz Skarn
Basalt
Granodiorite

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island; Island Plutonic Ste hornblende from Soren Hill area (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Contact
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
GRADE: Hornfels

CAPSULE GEOLOGY

The Stranby occurrence is underlain by Upper Triassic Vancouver Group, Karmutsen Formation basalts which have been intruded by granodiorite of the Jurassic Island Plutonic Suite.

Locally, a 10 metre thick limestone band within basalts has been altered to garnet-epidote-calcite-quartz skarn, containing chalcopyrite with minor bornite and magnetite. A granodiorite stock occurs east of Stranby River and country rocks in this vicinity are strongly fractured. Within the basalts and stratigraphically 100 metres below the limestone-skarn zone lies a layer of massive magnetite, ranging in thickness from 5 to 60 centimetres. Significant amounts of chalcopyrite are reported locally within the magnetite (Assessment Report 1847, page 19).

A northeast trending strike-slip fault with left-lateral displacement offsets the mineralized zones by 30 metres. The occurrence is similar and on strike with 102I 003 (Ed Creek). Note: Assessment Report 2383 erroneously locates the occurrence east of the mouth of Stranby Creek.

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RUN TIME: 11:19:00

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PAGE: 1326
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BIBLIOGRAPHY

EMPR AR 1968-96
EMPR ASS RPT 1252, *1847, 2383, 10322, 12570
EMPR EXPL 1982-613; 1984-357
EMPR GEM 1969-200; 1970-254,258
GSC BULL 242
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC P 67-1A; 69-1A; 70-1A; 72-44; 74-8; 79-30
WWW <http://www.infomine.com/>

DATE CODED: 1985/07/24
DATE REVISED: 1988/11/19

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **1021 002**

NATIONAL MINERAL INVENTORY: 102116 Fe1

NAME(S): **ORI**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 102116E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 50 23 N
LONGITUDE: 128 06 54 W
ELEVATION: 40 Metres

NORTHING: 5632375
EASTING: 562313

LOCATION ACCURACY: Within 500M

COMMENTS: Location of shaft on Irmly Creek, 500 metres east of the mouth of the creek on Queen Charlotte Sound (from Assessment Report 1252).

COMMODITIES: Zinc Copper Magnetite Iron Molybdenum

MINERALS

SIGNIFICANT: Sphalerite Chalcopyrite Magnetite Molybdenite Pyrite
ALTERATION: Garnet
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound
CLASSIFICATION: Skarn Epigenetic Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
Jurassic			Island Plutonic Suite

ISOTOPIC AGE: 230 Ma
DATING METHOD: Fossil
MATERIAL DATED: Gymnotropite ammonites

ISOTOPIC AGE: 154 +/- 8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Hornblende

LITHOLOGY: Limestone
Garnet Skarn
Limy Argillite
Andesite
Diorite
Granite

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island; Island Plutonic Ste hornblende from Soren Hill area (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell Plutonic Rocks
METAMORPHIC TYPE: Contact RELATIONSHIP: GRADE: Hornfels

CAPSULE GEOLOGY

Locally, a 200 metre wide wedge of limestone, limy argillite and andesite of the Upper Triassic Vancouver Group Karmutsen Formation is surrounded by diorite and granite of the Jurassic Island Plutonic Suite.

Skarn is associated with the limestone. Erratic lenses of sphalerite, chalcopyrite and magnetite are present in the skarn. Minor pyrite and molybdenite are also reported.

BIBLIOGRAPHY

EMPR AR 1925-281; 1967-69; 1968-281
EMPR GEM 1970-254
EMPR ASS RPT *1252
GSC P 67-1A; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC BULL 242

DATE CODED: 1985/07/24
DATE REVISED: 1988/11/19

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **102I 003**

NATIONAL MINERAL INVENTORY:

NAME(S): **ED CREEK**, CS, CID,
RAN, BU DU SU

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 102I16E
BC MAP:

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)

LATITUDE: 50 49 11 N
LONGITUDE: 128 08 30 W
ELEVATION: 30 Metres

NORTHING: 5630129
EASTING: 560462

LOCATION ACCURACY: Within 500M

COMMENTS: Location of the occurrence is 2 kilometres south of the mouth of Stranby River on Queen Charlotte Sound (Assessment Report 1847).

COMMODITIES: Copper Magnetite Iron

MINERALS

SIGNIFICANT: Chalcopyrite Magnetite Bornite
ALTERATION: Garnet Epidote Quartz Calcite
ALTERATION TYPE: Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stratabound Massive Podiform
CLASSIFICATION: Skarn Epigenetic Industrial Min.
SHAPE: Tabular
DIMENSION: STRIKE/DIP: 135/55W
COMMENTS: Local strike of sediments is southeast, dip 45 to 65 degrees southwest.

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Upper Triassic Vancouver Karmutsen

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

Jurassic

ISOTOPIC AGE: 154 +/- 8 Ma

DATING METHOD: Potassium/Argon

MATERIAL DATED: Hornblende

Island Plutonic Suite

LITHOLOGY: Limestone
Garnet Epidote Quartz Skarn
Basalt
Granodiorite

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island; Island Plutonic Ste hornblende from Soren Hill area (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular

TERRANE: Wrangell

METAMORPHIC TYPE: Contact

Plutonic Rocks

RELATIONSHIP:

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

GRADE: Hornfels

CAPSULE GEOLOGY

The Ed Creek occurrence lies within Upper Triassic Vancouver Group, Karmutsen Formation basalts that have been intruded by granodiorite of the Jurassic Island Plutonic Suite.

This occurrence is similar to the Stranby (102I 001) and occurs within a 10 metre thick limestone band intercalated with Karmutsen basalts. The limestone is altered to garnet-epidote-calcite-quartz skarn and hosts chalcopyrite with minor bornite and magnetite.

To the east of the occurrence, a granodiorite stock intrudes the volcanics and the rocks in this vicinity are strongly fractured.

BIBLIOGRAPHY

EMPR AR 1968-96
EMPR GEM 1969-200; 1970-254,258
EMPR EXPL 1982-613; 1984-357
EMPR ASS RPT 1252, 1847, 2383, *10322, 12570
GSC P 67-1A; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC OF 9; 170; 463
GSC MAP 4-1974

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

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BIBLIOGRAPHY

GSC BULL 242

DATE CODED: 1985/07/24
DATE REVISED: 1988/11/21

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **1021 004**

NATIONAL MINERAL INVENTORY: 10219 Cu5

NAME(S): **SCOTT**, CS 6403

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 102116W
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 46 09 N
LONGITUDE: 128 15 31 W
ELEVATION: 183 Metres

NORTHING: 5624418
EASTING: 552280

LOCATION ACCURACY: Within 500M

COMMENTS: Located 1 kilometre southeast of Cape Scott on a fork of Fisherman River (Assessment Report 2383).

COMMODITIES: Copper Silver

MINERALS

SIGNIFICANT: Chalcopyrite
COMMENTS: Silver may be associated with chalcopyrite.

ASSOCIATED: Quartz Chlorite
ALTERATION: Silica Epidote Chlorite Clinozoisite Carbonate
Pyrite

ALTERATION TYPE: Silicific'n Propylitic
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Disseminated
CLASSIFICATION: Epigenetic Hydrothermal
SHAPE: Tabular
MODIFIER: Sheared

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Porphyritic Lava
Siliceous Rock
Massive Lava

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

INVENTORY

ORE ZONE: SHEAR

REPORT ON: N

CATEGORY: Assay/analysis	YEAR: 1970
SAMPLE TYPE: Grab	
COMMODITY	GRADE
Silver	2.8000 Grams per tonne
Copper	1.3400 Per cent

COMMENTS: 3.0 metre sample from mineralized silicified shear zone.
REFERENCE: Assessment Report 2383.

CAPSULE GEOLOGY

At the Cape Scott occurrence, copper mineralization is present in siliceous sections of several vertical, east striking shear zones. The shear zones range in width from 5 centimetres to 4.6 metres and lie within porphyritic to massive lava of the Upper Triassic Vancouver Group, Karmutsen Formation. When not silicified, the shear zones are unmineralized and are characterized by soft chloritic gouge. Other alteration minerals recognized are epidote, clinozoisite, carbonate and pyrite. Locally, weak disseminated chalcopyrite is present in the unaltered country rock.

A 3.0 metre sample taken from chalcopyrite mineralization in a silicified shear zone assayed 2.8 grams per tonne silver and 0.73 to 1.34 per cent copper (Assessment Report 2383, page 16).

RUN DATE: 26-Jun-2003
RUN TIME: 11:19:00

MINFILE MASTER REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1331
REPORT: RGEN0100

BIBLIOGRAPHY

EMPR AR 1968-96
EMPR GEM 1969-200; 1970-254,258
EMPR ASS RPT 1847, *2383
GSC P 67-1A; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC BULL 242

DATE CODED: 1985/07/24
DATE REVISED: 1988/11/21

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **1021 005**

NATIONAL MINERAL INVENTORY: 10219,16 Cu6

NAME(S): **KNOB HILL**, ELK, OBLING CREEK

STATUS: Prospect
REGIONS: British Columbia, Vancouver Island
NTS MAP: 102116E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 45 59 N
LONGITUDE: 128 03 12 W
ELEVATION: 425 Metres

NORTHING: 5624274
EASTING: 566760

LOCATION ACCURACY: Within 500M

COMMENTS: Location of Drill hole 72-1 on Elk 33 claim (Assessment Report 5352).
Later drilling slightly west of this location.

COMMODITIES: Copper Zinc Lead Gold Silver
Molybdenum

MINERALS

SIGNIFICANT: Pyrite Arsenopyrite Pyrrhotite Chalcopyrite Sphalerite
Galena Magnetite Molybdenite

ASSOCIATED: K-Feldspar
ALTERATION: Sericite Clay Chlorite Epidote Biotite
Quartz Pyrite Pyrrhotite

ALTERATION TYPE: Argillic Propylitic Silicific'n Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated Stockwork Vein
CLASSIFICATION: Hydrothermal Epigenetic Epithermal
TYPE: H04 Epithermal Au-Ag-Cu: high sulphidation
SHAPE: Irregular
MODIFIER: Folded Faulted
COMMENTS: Attitude difficult to determine, thought to be northwest striking and southwest dipping.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE GROUP FORMATION IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic Bonanza Undefined Formation

ISOTOPIC AGE: 200 Ma
DATING METHOD: Fossil
MATERIAL DATED: Mollusks
Jurassic Island Plutonic Suite

ISOTOPIC AGE: 154 +/- 8 Ma
DATING METHOD: Potassium/Argon
MATERIAL DATED: Hornblende

LITHOLOGY: Andesite
Porphyritic Feldspar Andesite
Rhyolite
Rhyolite Breccia
Rhyodacite
Diorite

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell
METAMORPHIC TYPE: Regional RELATIONSHIP: GRADE: Zeolite

INVENTORY

ORE ZONE: DRILLHOLE

REPORT ON: N

CATEGORY: Assay/analysis
SAMPLE TYPE: Drill Core

YEAR: 1972

COMMODITY
Silver 3.0852 Grams per tonne
Copper 0.1000 Per cent

COMMENTS: Drillhole 72-1, over 27 metres.
REFERENCE: Assessment Report 5352.

CAPSULE GEOLOGY

The area of the showing is underlain by the Lower Jurassic Bonanza Group andesite to rhyodacite volcanics intruded by diorite of the Jurassic Island Plutonic Suite. The structural setting comprises gentle folding and block faulting which, with the pervasive altera-

CAPSULE GEOLOGY

tion, makes attitude determinations difficult. It is thought, however, that they generally strike northwest and dip southwest. A pyrite-clay-silica alteration zone extends the length of the volcanic belt and several mineral occurrences are associated with these volcanics.

The Elk claims, staked in 1972, are centered on Knob Hill 42 kilometres west of the Port Hardy airport. Mineralization on the property is hosted by altered porphyritic feldspar andesite and rhyodacite. Drill core contains abundant (1 to 5 per cent) disseminated pyrite and pyrrhotite, minor chalcopyrite and sphalerite and rare magnetite with associated low silver values. Geochemical sampling returned trace values for molybdenum and gold. The alteration assemblage consists of sericite, clay minerals, chlorite, epidote, biotite, quartz, pyrite and pyrrhotite (sulphides replace mafic constituents). In 1972 a 27 metre drill core sample assayed 0.10 per cent copper and 3.0852 grams per tonne silver (Assessment Report 5352). Drill core from subsequent drilling (1976 and 1980) assayed substantially lower.

In 1995, with support from the Explore B.C. Program, P.G. Dasler, P.Geo. completed 30.3 kilometres of magnetic surveys and collected and analysed 1657 soil samples. This work, concentrated in the central part of the property to fill in and compliment previous work, defined extensive gold and arsenic anomalies coincident with a copper anomaly identified by Chevron in 1972. The data so far assembled points strongly to a high level, porphyry related, Le Panto style gold deposit (Explore B.C. Program 95/96 - M95).

In 1996, First Choice Industries conducted a 10-hole (600 metres total) diamond drilling program. Nine holes intersected intensely mineralized and clay altered rhyolite and rhyolite breccia. The massive rhyolite was found to be fractured, crackle-brecciated, and cut by irregular, fine-grained, sooty, pyrite and arsenopyrite and minor amounts of chalcopyrite, sphalerite and galena. The tenth hole encountered epidote-altered, sulphide veined, andesite.

Gold values range from a few hundredths or tenths of a gram per tonne over substantial lengths to erratic highs of several tens of grams per tonne gold over a few centimetres (Abstracts (Core Shack), 1997 Cordilleran Roundup, (Property File).

An induced polarization survey over the geochemical anomaly was conducted after the drill program.

In 1997, First Choice drilled 20 holes totalling 1905 metres.

BIBLIOGRAPHY

EMPR ASS RPT *5352, 5809, 6170, *9213
EMPR Explore B.C. Program 95/96 - M95
EMPR EXPL 1975-E123; 1976-E134; 1980-305; 2002-29-40
EMPR GEM 1972-326; 1974-230
EMPR INF CIRC 1997-1, p. 29
EMPR PF (*Abstract from 1997 Cordilleran Roundup book of Abstracts)
GSC P 69-1 pt.A p.126, pp.27-29; 70-1 pt. A p.44; 74-8
GCNL #149(Aug.5), #164(Aug.26), #174(Sept.10), #187(Sept.29), #194
(Oct.8), #204(Oct.23), #216(Nov.10), 1997
WWW http://www.infomine.com/index/properties/KNOB_HILL.html
Placer Dome File

DATE CODED: 1989/05/08
DATE REVISED: 1997/05/05

CODED BY: DEJ
REVISED BY: GSB

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **1021 006**

NATIONAL MINERAL INVENTORY: 10219 Cu2

NAME(S): **AIRD**

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 102109E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 44 29 N
LONGITUDE: 128 12 48 W
ELEVATION: 170 Metres

NORTHING: 5621362
EASTING: 555506

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization in northeast corner of Aird 1 claim -
1 kilometre north of north end of William Lake and 10 kilometres
southeast of Cape Scott (Assessment Report 1909).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite
ASSOCIATED: Pyrite
ALTERATION: Quartz
ALTERATION TYPE: Silicific'n
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Disseminated
CLASSIFICATION: Porphyry
SHAPE: Regular
DIMENSION:
COMMENTS: Silicified zone strikes east.

STRIKE/DIP: 090/

TREND/PLUNGE:

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Amygdaloidal Andesite
Basalt Flow
Argillite

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island (Geological Survey of Canada
Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

CAPSULE GEOLOGY

The area is underlain by the Upper Triassic Vancouver Group, Karmutsen Formation which is in fault contact with the Upper Triassic Vancouver Group, Quatsino Formation limestone and Lower Jurassic Bonanza Group volcanics. This northwest striking contact lies about 1.0 kilometre to the west of the Aird occurrence (Geological Survey of Canada Map 4-1974).

Disseminated pyrite and chalcopyrite occur in a silicified zone within interbedded argillite, amygdaloidal andesite and basalt flows of the Karmutsen Formation. The mineralized zone strikes east-west and is located in the northeast corner of the Aird 1 claim.

BIBLIOGRAPHY

EMPR GEM 1969-200; 1970-254
EMPR ASS RPT *1909
GSC P 67-1A; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC BULL 242

DATE CODED: 1985/07/24
DATE REVISED: 1988/11/21

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **1021 007**

NATIONAL MINERAL INVENTORY:

NAME(S): **WILLIAM LAKE**, CS 495

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 102109E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 43 59 N
LONGITUDE: 128 11 41 W
ELEVATION: 170 Metres

NORTHING: 5620450
EASTING: 556829

LOCATION ACCURACY: Within 500M

COMMENTS: Location of mineralization in the northeast corner of CS 495 claim, 500 metres northeast of William Lake, 10 kilometres east-southeast of Cape Scott (Assessment Report 2383).

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Chalcopyrite Bornite Copper Malachite

COMMENTS: Minor native copper and malachite are present.

ALTERATION: Malachite

ALTERATION TYPE: Oxidation

MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork

CLASSIFICATION: Epigenetic

TYPE: D03 Volcanic redbed Cu

DIMENSION:

STRIKE/DIP: 315/60

TREND/PLUNGE:

COMMENTS: Attitude is of local stratigraphy.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Vancouver

FORMATION

Karmutsen

IGNEOUS/METAMORPHIC/OTHER

ISOTOPIC AGE: 230 Ma

DATING METHOD: Fossil

MATERIAL DATED: Gymnotropite ammonites

LITHOLOGY: Amygdaloidal Andesite

HOSTROCK COMMENTS:

Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

CAPSULE GEOLOGY

The William Lake occurrence is underlain by Upper Triassic Vancouver Group, Karmutsen Formation volcanics. The rocks strike northwest and dip to the southwest. Chalcopyrite and bornite occur as fracture fillings in dark coloured amygdaloidal andesite. Minor native copper and malachite are also reported.

BIBLIOGRAPHY

EMPR AR 1968-96
EMPR GEM 1969-200; 1970-254,258
EMPR ASS RPT 1847, *2383
GSC P 67-1A; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC BULL 242

DATE CODED: 1985/07/24
DATE REVISED: 1988/11/21

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **1021 008**

NATIONAL MINERAL INVENTORY: 10219 Cu3

NAME(S): **AAA 48**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 102109E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 42 24 N
LONGITUDE: 128 03 56 W
ELEVATION: 330 Metres

NORTHING: 5617622
EASTING: 565982

LOCATION ACCURACY: Within 500M

COMMENTS: Location (from Assessment Report 1865) 6.5 kilometres north-northwest of Holberg. Location is centre of AAA 48 claim.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Bornite
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Epigenetic Porphyry
TYPE: D03 Volcanic redbed Cu

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Massive Amygdaloidal Basalt

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

RELATIONSHIP:

GRADE: Zeolite

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group, Karmutsen Formation volcanics which have undergone regional zeolite facies metamorphism. The volcanics trend northwest and consist mainly of massive, green to purple, amygdaloidal basalt.

On the AAA 48 claim, small fracture systems in the volcanics in-filled with quartz, host minor disseminated bornite and malachite.

BIBLIOGRAPHY

EMPR GEM 1969-201; 1970-254
EMPR ASS RPT *1865
GSC P 67-1A; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC BULL 242

DATE CODED: 1985/07/24
DATE REVISED: 1988/11/22

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **1021 009**

NATIONAL MINERAL INVENTORY: 10219 Cu3

NAME(S): **AAA 6**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 102109E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 41 49 N
LONGITUDE: 128 02 16 W
ELEVATION: Metres

NORTHING: 5616566
EASTING: 567957

LOCATION ACCURACY: Within 500M

COMMENTS: Location is 5.5 kilometres north-northwest of Holberg, (from Assessment Report 1865). Location is centre of AAA 6 claim.

COMMODITIES: Copper

MINERALS

SIGNIFICANT: Bornite
ASSOCIATED: Quartz
ALTERATION: Malachite
ALTERATION TYPE: Oxidation
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Stockwork Disseminated
CLASSIFICATION: Epigenetic Porphyry

HOST ROCK

DOMINANT HOSTROCK: Volcanic

<u>STRATIGRAPHIC AGE</u>	<u>GROUP</u>	<u>FORMATION</u>	<u>IGNEOUS/METAMORPHIC/OTHER</u>
Upper Triassic	Vancouver	Karmutsen	
ISOTOPIC AGE: 230 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Gymnotropite ammonites			

LITHOLOGY: Amygdaloidal Massive Basalt

HOSTROCK COMMENTS: Karmutsen ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular	PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell	
METAMORPHIC TYPE: Regional	RELATIONSHIP: GRADE: Zeolite

CAPSULE GEOLOGY

The area is underlain by Upper Triassic Vancouver Group, Karmutsen Formation volcanics which have undergone regional zeolite facies metamorphism.

On the AAA 6 claim, bornite and malachite are disseminated within narrow quartz-filled fractures in massive green to purple, amygdaloidal basalt. Similar mineralization occurs about 2.7 kilometres south-southeast on the AAA 48 claim (1021 008).

BIBLIOGRAPHY

EMPR GEM 1969-201; 1970-254
EMPR ASS RPT *1865
GSC P 67-1A; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC BULL 242

DATE CODED: 1985/07/24
DATE REVISED: 1988/11/22

CODED BY: GSB
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **1021 010**

NATIONAL MINERAL INVENTORY: 10219 Cu1

NAME(S): **MILLINGTON**, HOLBERG, CRACKERJACK,
JB, ACE, CEE,
KAY, JACK, RUSH,
RICK, JILL, MAY,
LUCKY, LORI, FLATS

MINING DIVISION: Nanaimo
UTM ZONE: 09 (NAD 83)
NORTHING: 5612236
EASTING: 567522

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 102109E
BC MAP:
LATITUDE: 50 39 29 N
LONGITUDE: 128 02 41 W
ELEVATION: 152 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Location of workings at 152 metres elevation, from Minister of Mines Annual Report 1919. The showing is 4 kilometres west of Holberg, south of Goodspeed (Spruce) River.

COMMODITIES: Copper Silver Gold

MINERALS

SIGNIFICANT: Bornite Chalcocite Chalcopyrite
COMMENTS: Lenses and disseminations of bornite.
ASSOCIATED: Pyrite Quartz Orthoclase
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Massive Podiform Disseminated Vein
CLASSIFICATION: Porphyry Volcanogenic Epigenetic
TYPE: D03 Volcanic redbed Cu
SHAPE: Tabular
MODIFIER: Sheared
DIMENSION: 0070 x 0001 Metres STRIKE/DIP: 045/ TREND/PLUNGE:
COMMENTS: Strike of main zone is northeast.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Karmutsen	

ISOTOPIC AGE: 230 Ma
DATING METHOD: Fossil
MATERIAL DATED: Gymnotropite ammonites

LITHOLOGY: Amygdaloidal Basalt

HOSTROCK COMMENTS: Ammonites from Hisnit Island area (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular PHYSIOGRAPHIC AREA: Nawwhitti Lowland
TERRANE: Wrangell

INVENTORY

ORE ZONE: ADIT REPORT ON: N
CATEGORY: Assay/analysis YEAR: 1919
SAMPLE TYPE: Grab
COMMODITY GRADE
Silver 56.2000 Grams per tonne
Gold 0.0001 Grams per tonne
Copper 21.0000 Per cent
COMMENTS: Selected sample.
REFERENCE: Minister of Mines Annual Report 1919, page 206.

CAPSULE GEOLOGY

The area of the Millington occurrence is underlain by amygdaloidal basalts of the Upper Triassic Vancouver Group Karmutsen Formation.
The main occurrence, located on Crackerjack Creek, consists of lenses of massive bornite up to 1.2 metres in width. Disseminations of bornite with minor chalcopyrite and chalcocite occur within amygdules of the basalts. Bornite also occurs as fracture fillings in the volcanics. Mineralization has been traced over 70 metres vertically.
A sample from a dump near the adit entrance at elevation 116

CAPSULE GEOLOGY

metres, assayed trace gold, 5.6 grams per tonne silver and 2.1 per cent copper. A selected sample from the open cut at the Number One adit, at elevation of 149 metres, assayed trace gold, 56.2 grams per tonne silver and 21.0 per cent copper (Minister of Mines Annual Report 1919, page 206).

A "vein of similar mineralogy" (Minister of Mines Annual Report 1927) occurs 150 metres west of the old workings.

BIBLIOGRAPHY

EMPR AR 1918-221,268; *1919-205; 1922-232; 1923-251; 1924-229;
1926-304; 1927-346; 1928-374; 1929-377; 1930-295; 1962-96;
1963-128; 1964-154; *1965-228; 1966-65; 1967-69
EMPR GEM 1969-201; 1970-254
EMPR ASS RPT 497, 1765
EMPR PF (092L080-Seal; 092L247-Hol)
EMR MP CORPFILE (Holberg Mines Ltd.; Cominco Ltd.)
GSC SUM RPT 1918B, p. 36; *1929A, p. 139
GSC P 67-1A; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC BULL 242

DATE CODED: 1985/07/24
DATE REVISED: 1988/11/22

CODED BY: GSB
REVISED BY: WV

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **1021 012**

NATIONAL MINERAL INVENTORY:

NAME(S): **REALGAR**, ORP

MINING DIVISION: Nanaimo

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 102109E
BC MAP:

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 38 59 N
LONGITUDE: 128 05 06 W
ELEVATION: 55 Metres

NORTHING: 5611273
EASTING: 564687

LOCATION ACCURACY: Within 500M

COMMENTS: Located in San Josef River, 5.8 kilometres west of the community of Holberg (Property File - P. Wilton).

COMMODITIES: Mercury Arsenic Gemstones

MINERALS

SIGNIFICANT: Cinnabar Realgar Arsenopyrite
ASSOCIATED: Pyrite Amethyst Quartz Calcite
ALTERATION: Orpiment Chlorite
ALTERATION TYPE: Oxidation Skarn
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Vein Stratabound
CLASSIFICATION: Hydrothermal Epigenetic Industrial Min.
TYPE: 108 Silica-Hg carbonate

HOST ROCK

DOMINANT HOSTROCK: Sedimentary

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Upper Triassic	Vancouver	Quatsino	
ISOTOPIC AGE: 225 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Juvarite ammonites			

LITHOLOGY: Limestone
Feldspar Porphyry Dike

HOSTROCK COMMENTS: Ammonites from Alice Lake (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell

PHYSIOGRAPHIC AREA: Nawwhitti Lowland

CAPSULE GEOLOGY

The Realgar occurrence is located at waterline on the east side of San Josef River, and is exposed only at low water. Locally, Upper Triassic Vancouver Group, Quatsino Formation limestone is cut by a feldspar porphyry dyke of unknown (Tertiary?) age. Within about 4 metres of the dyke the limestone is cut by irregular veins comprised of fine-grained chloritic skarn that range up to 10 centimetres in width. Cinnabar and realgar are abundant as thin veinlets and as fracture coatings in the limestone, and as accessory minerals in the skarned veins. Orpiment occurs as coatings on the oxidized mercury-arsenic minerals. Traces of amethyst occur in veinlets. Arsenopyrite and pyrite occur as disseminations in the limestone near the dyke and within thin, vuggy quartz-calcite veinlets cutting both the limestone and the dyke. High mercury values with coincident arsenic and molybdenite values are reported in soils over a wide area centered on the showing.

BIBLIOGRAPHY

EMPR GEM 1970-254
EMPR PF (P. Wilton, 1988, Property Visit Report)
GSC BULL 242
GSC MAP 4-1974
GSC OF 9; 170; 463
GSC P 67-1A; 69-1A; 70-1A; 72-44; 74-8; 79-30
GCNL #91, 1988
Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, p. 193
Chevron File

DATE CODED: 1988/06/10
DATE REVISED: 1989/02/23

CODED BY: PW
REVISED BY: LLD

FIELD CHECK: Y
FIELD CHECK: N

MINFILE NUMBER: **1021 012**

MINFILE NUMBER: **1021 013**

NATIONAL MINERAL INVENTORY: 10219 TIC1

NAME(S): **SOUTH KNOB**

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 102109E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 42 59 N

NORTHING: 5618731

LONGITUDE: 128 02 06 W

EASTING: 568125

ELEVATION: Metres

LOCATION ACCURACY: Within 5 KM

COMMENTS: Location from Energy, Mines and Petroleum Resources Geology, Exploration and Mining 1974, page 216, Figure 29. South Knob is about 7 kilometres north of Holberg Inlet.

COMMODITIES: Pyrophyllite

MINERALS

SIGNIFICANT: Pyrophyllite
MINERALIZATION AGE: Unknown

DEPOSIT

CHARACTER: Breccia
CLASSIFICATION: Hydrothermal Industrial Min.

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			

LITHOLOGY: Siliceous Breccia
Pyrophyllite

HOSTROCK COMMENTS: Mollusks from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
RELATIONSHIP: Syn-mineralization
GRADE: Zeolite

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group volcanics. Locally, pyrophyllite-bearing silicified breccia has been interpreted as a volcanic centre (Geology, Exploration and Mining 1974, page 217). Additional centres are found to the southeast (refer to 092L 078 - Hep; 092L 185 - Hushami; 092L 200 - Red Dog; 092L 308 - Pemberton). The pyrophyllite is thought to be formed as a product of hydrothermal alteration during low grade regional metamorphism (Open File 1988-19). Other volcanic centres are reported to contain zeolites.

BIBLIOGRAPHY

EMPR GEM 1970-254; 1974-216,230,*Fig.29
EMPR OF 1988-19
GSC P 67-1A; 69-1A; 70-1A; 72-44; 74-8; 79-30
GSC OF 9; 170; 463
GSC BULL 242
GSC MAP 4-1974

DATE CODED: 1989/02/23
DATE REVISED: 1989/05/09

CODED BY: WV
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

MINFILE NUMBER: **1021 014**

NATIONAL MINERAL INVENTORY: 092L12 Cu8

NAME(S): **BERG 87**, BERG 91, B 2

STATUS: Showing
REGIONS: British Columbia, Vancouver Island
NTS MAP: 102109E
BC MAP:

MINING DIVISION: Nanaimo

UTM ZONE: 09 (NAD 83)

LATITUDE: 50 45 14 N
LONGITUDE: 128 01 06 W
ELEVATION: 355 Metres

NORTHING: 5622916
EASTING: 569246

LOCATION ACCURACY: Within 500M

COMMENTS: Showing on Berg claims (Assessment Report 1771), located near the headwaters of the Stranby River.

COMMODITIES: Molybdenum

MINERALS

SIGNIFICANT: Molybdenite Pyrite
ALTERATION: Silica Clay Pyrite
ALTERATION TYPE: Silicific'n Argillic Pyrite
MINERALIZATION AGE: Unknown

DEPOSIT

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

HOST ROCK

DOMINANT HOSTROCK: Volcanic

STRATIGRAPHIC AGE	GROUP	FORMATION	IGNEOUS/METAMORPHIC/OTHER
Lower Jurassic	Bonanza	Undefined Formation	
ISOTOPIC AGE: 200 Ma			
DATING METHOD: Fossil			
MATERIAL DATED: Mollusks			
Jurassic			Island Plutonic Suite
ISOTOPIC AGE: 154 +/- 8 Ma			
DATING METHOD: Potassium/Argon			
MATERIAL DATED: Hornblende			

LITHOLOGY: Rhyolite

HOSTROCK COMMENTS: Bonanza mollusks from Quatsino Sound (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangell
METAMORPHIC TYPE: Regional
Plutonic Rocks
RELATIONSHIP:
PHYSIOGRAPHIC AREA: Nawwhitti Lowland
GRADE: Zeolite

CAPSULE GEOLOGY

The area is underlain by Lower Jurassic Bonanza Group andesite to rhyodacite volcanics which have been intruded by diorite of the Jurassic Island Plutonic Suite. The volcanics strike northwest and dip to the southwest. Pyrite-clay-silica alteration zone extend the length of the volcanic belt.

Locally, on the Berg 87,91 and B2 claims, pyrite and molybdenite are disseminated within strongly altered and silicified Bonanza Group volcanics (possibly rhyolite).

BIBLIOGRAPHY

EMPR ASS RPT *1771, 2189, 2834, 4872, 5391
EMPR GEM 1970-254; 1971-324
GSC AR 1886
GSC BULL 242
GSC MAP *4-1974
GSC OF 9; 170; 463
GSC P 69-1A; 72-44; *74-8; 79-30
Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with Emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis
CJES 18, p. 1; 20, p. 1, Jan., 1983
WWW <http://www.infomine.com/>

DATE CODED: 1989/04/07
DATE REVISED: 1989/05/10

CODED BY: NJH
REVISED BY: LLD

FIELD CHECK: N
FIELD CHECK: N

RUN DATE: 26-Jun-2003
RUN TIME: 11:24:30

MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
ENERGY AND MINERALS DIVISION

PAGE: 1
REPORT: RGEN0200

MINFILE NUMBER:	092L 005	NAME:	GOLDEN GATE	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1940	22		Silver	156	
			Gold	373	
			Copper		44
			Lead		39

SUMMARY TOTALS: 092L 005

NAME: **GOLDEN GATE**

	Mined:	22 tonnes	Imperial	24 tons
Recovery:	Milled:	tonnes		tons
	Silver:	156 grams		5 ounces
	Gold:	373 grams		12 ounces
	Copper:	44 kilograms		97 pounds
	Lead:	39 kilograms		86 pounds

RUN DATE: 26-Jun-2003
 RUN TIME: 11:24:30

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

PAGE: 2
 REPORT: RGEN0200

MINFILE NUMBER:	<u>092L 006</u>	NAME:	<u>TAGORE</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1939	6		Silver	560	
			Gold	249	
			Copper		8
			Lead		20
1932	7		Silver	871	
			Gold	405	
1930	1		Silver	591	
			Gold	591	
			Copper		15
1929	2		Gold	1,371	

SUMMARY TOTALS: 092L 006

NAME: **TAGORE**

	<u>Metric</u>	<u>Imperial</u>
Mined:	16 tonnes	18 tons
Milled:	tonnes	tons
Recovery:		
Silver:	2,022 grams	65 ounces
Gold:	2,616 grams	84 ounces
Copper:	23 kilograms	51 pounds
Lead:	20 kilograms	44 pounds

Comments: 1929: High grade ore was shipped

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>092L 008</u>	NAME:	<u>PRIVATEER (L.1040)</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1998	200	16	Gold	703	
1975	7		Silver	373	
			Gold	467	
1953	43		Silver	2,986	
			Gold	4,137	
			Copper		122
			Lead		131
1952	45	106	Gold	964	
1951	90		Silver	5,350	
			Gold	14,307	
1950	23	23	Silver	3,048	
			Gold	6,376	
			Copper		38
			Lead		408
1949	14	14	Silver	2,457	
			Gold	6,221	
			Copper		14
1948	21,453	13,065	Silver	157,350	
			Gold	326,084	
1947	21,086	8,204	Silver	175,670	
			Gold	357,964	
1946	6,391	3,321	Silver	27,775	
			Gold	56,017	
1944	4		Silver	2,302	
			Gold	684	
1943	17,927	12,797	Silver	166,463	
			Gold	419,424	
1942	43,799	22,746	Silver	275,541	
			Gold	695,463	
1941	50,487	28,444	Silver	353,797	
			Gold	874,958	
1940	44,677	27,223	Silver	389,689	
			Gold	920,462	
1939	34,710	24,330	Silver	375,258	
			Gold	1,025,995	
1938	41,176	6,562	Silver	179,682	
			Gold	498,363	
			Copper		2,996
			Lead		6,128
1937	383		Silver	40,060	
			Gold	87,244	
			Copper		893
			Lead		3,426
1936	2		Silver	591	
			Gold	1,804	
1935	4		Silver	467	
			Gold	1,711	
1934	7		Silver	1,337	
			Gold	2,644	

SUMMARY TOTALS: 092L 008

NAME: **PRIVATEER (L.1040)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	282,528 tonnes	311,434 tons
Milled:	146,851 tonnes	161,876 tons
Recovery:		
Silver:	2,160,196 grams	69,452 ounces
Gold:	5,301,992 grams	170,463 ounces
Copper:	4,063 kilograms	8,957 pounds
Lead:	10,093 kilograms	22,251 pounds

Comments:

1998: Bulk sample mined by Newmex Minerals Inc.
 1975: Crude ore. Operated by New Privateer Gold Mine Ltd.
 1944: Slags, precipitates and residues.
 1937: Operated by Privateer Mine Ltd.
 1934: Includes Van Isle (092L 038) and Prident (092L 009).

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 092L 009		NAME: PRIDENT		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1939	43		Silver	2,395	
			Gold	5,536	
			Copper		30
			Lead		306

SUMMARY TOTALS: 092L 009

NAME: **PRIDENT**

	<u>Metric</u>	<u>Imperial</u>
Mined:	43 tonnes	47 tons
Milled:	tonnes	tons
Silver:	2,395 grams	77 ounces
Gold:	5,536 grams	178 ounces
Copper:	30 kilograms	66 pounds
Lead:	306 kilograms	675 pounds

Recovery:

Comments:

1939: Production after 1939 included with Privateer (092L 008).

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER:	<u>092L 010</u>	NAME:	<u>WHITE STAR</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1957	5		Silver	249	
			Gold	373	
			Lead		7
			Zinc		30
1952	4		Silver	156	
			Gold	373	
1942	91		Silver	7,962	
			Gold	15,552	
			Copper		150
			Lead		2,179
1941	363		Silver	25,815	
			Gold	47,619	
			Copper		522
			Lead		4,321
1940	461		Silver	30,699	
			Gold	72,937	
			Copper		501
			Lead		5,394
1939	325		Silver	22,083	
			Gold	66,001	
			Copper		348
			Lead		4,707
1938	12		Silver	435	
			Gold	1,306	
			Copper		9
			Lead		30
1937	19		Silver	3,421	
			Gold	11,166	
			Copper		19
			Lead		357
1936	11		Silver	1,431	
			Gold	4,665	
			Copper		14
			Lead		149
1935	2		Silver	280	
			Gold	995	

SUMMARY TOTALS: 092L 010

NAME: **WHITE STAR**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,293 tonnes	1,425 tons
Milled:		tons
Recovery:		
	Silver: 92,531 grams	2,975 ounces
	Gold: 220,987 grams	7,105 ounces
	Copper: 1,563 kilograms	3,446 pounds
	Lead: 17,144 kilograms	37,796 pounds
	Zinc: 30 kilograms	66 pounds

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MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 092L 011	NAME: GOLDEN PEAK (L.1035)	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1934	3		Silver Gold	746 93	

SUMMARY TOTALS: 092L 011

	NAME: GOLDEN PEAK (L.1035)	
	<u>Metric</u>	<u>Imperial</u>
	Mined: 3 tonnes	3 tons
	Milled: tonnes	tons
Recovery:	Silver: 746 grams	24 ounces
	Gold: 93 grams	3 ounces

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: <u>092L 012</u>		NAME: <u>MOUNT ZEBALLOS</u>		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1944	27		Silver	280		
			Gold	964		
1942	7,677	5,158	Silver	42,984		
			Gold	82,889		
			Copper			325
			Lead			1,963
1941	28,719	19,288	Silver	205,031		
			Gold	303,068		
			Copper			865
			Lead			3,755
1940	29,843	21,345	Silver	171,937		
			Gold	457,743		
			Copper			1,100
			Lead			6,200
1939	8,002	5,749	Silver	24,167		
			Gold	101,925		
			Copper			118
			Lead			808

SUMMARY TOTALS: 092L 012

NAME: MOUNT ZEBALLOS

	<u>Metric</u>	<u>Imperial</u>
Mined:	74,268 tonnes	81,866 tons
Milled:	51,540 tonnes	56,813 tons
Recovery:		
Silver:	444,399 grams	14,288 ounces
Gold:	946,589 grams	30,433 ounces
Copper:	2,408 kilograms	5,309 pounds
Lead:	12,726 kilograms	28,056 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: **092L 015** NAME: **LONE STAR (L.1052)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1941	163		Silver	14,370	
			Gold	41,553	
			Copper		222
			Lead		1,074
1940	386		Silver	16,547	
			Gold	41,025	
			Copper		248
			Lead		1,908
1939	3,055		Silver	7,060	
			Gold	26,220	
1938	2,041	405	Silver	6,345	
			Gold	34,276	

SUMMARY TOTALS: 092L 015

NAME: **LONE STAR (L.1052)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	5,645 tonnes	6,223 tons
Milled:	405 tonnes	446 tons
Recovery:		
	Silver: 44,322 grams	1,425 ounces
	Gold: 143,074 grams	4,600 ounces
	Copper: 470 kilograms	1,036 pounds
	Lead: 2,982 kilograms	6,574 pounds

Comments: 1940: Includes crude ore, Bulletin 27, page 98.

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MINFILE PRODUCTION REPORT
GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 092L 016	NAME: RIMY 1-8	STATUS: Past Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1938	17		Silver	1,586	
			Gold	1,369	

SUMMARY TOTALS: 092L 016

NAME: **RIMY 1-8**

		<u>Metric</u>	<u>Imperial</u>
Mined:	17 tonnes		19 tons
Milled:			tons
Recovery:	Silver:	1,586 grams	51 ounces
	Gold:	1,369 grams	44 ounces

Comments: 1938: Bulletin 27-development ore shipped prior to 1938.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 092L 017	NAME: NORTH STAR (L.1716)	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
Commodity	Grams Recovered	Kilograms Recovered
1942	13,600	13,600
		Gold
		125,913

SUMMARY TOTALS: 092L 017

	NAME: NORTH STAR (L.1716)
	<u>Metric</u>
Mined:	13,600 tonnes
Milled:	13,600 tonnes
	<u>Imperial</u>
	14,991 tons
Recovery:	14,991 tons
	Gold:
	125,913 grams
	4,048 ounces
Comments:	
1942:	Bulletin 27-derived from average grade of 9.26 grams per tonne.

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MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 092L 019		NAME: GOLDEN HORN		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1942	1,878		Silver	62,113	
			Gold	18,475	
			Copper		196
			Lead		95
1941	1,371		Silver	46,592	
			Gold	27,899	
			Copper		122
			Lead		252

SUMMARY TOTALS: 092L 019

NAME: **GOLDEN HORN**

		<u>Metric</u>	<u>Imperial</u>
Mined:	3,249 tonnes	3,581 tons	
Milled:	tonnes	tons	
Recovery:			
Silver:	108,705 grams	3,495 ounces	
Gold:	46,374 grams	1,491 ounces	
Copper:	318 kilograms	701 pounds	
Lead:	347 kilograms	765 pounds	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 092L 020	NAME: KING MIDAS NO. 1 VEIN	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
1940	1	
		Commodity
		Silver
		Gold
		Copper
		Grams Recovered
		31
		156
		Kilograms Recovered
		10

SUMMARY TOTALS: 092L 020

	NAME: KING MIDAS NO. 1 VEIN
	<u>Metric</u>
Mined:	1 tonnes
Milled:	tonnes
	<u>Imperial</u>
	1 tons
Recovery:	
Silver:	31 grams
Gold:	156 grams
Copper:	10 kilograms
	1 ounces
	5 ounces
	22 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 092L 027	NAME: CORDOVA NO.1	STATUS: Past Producer
Production Year	Tonnes Mined	Tonnes Milled
1939	1	
		Commodity
		Silver
		Gold
		Copper
		Grams Recovered
		31
		156
		Kilograms Recovered
		4

SUMMARY TOTALS: 092L 027

	NAME: CORDOVA NO.1	
	<u>Metric</u>	<u>Imperial</u>
Mined:	1 tonnes	1 tons
Milled:	tonnes	tons
Recovery:		
Silver:	31 grams	1 ounces
Gold:	156 grams	5 ounces
Copper:	4 kilograms	9 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 092L 028		NAME: FORD		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1969	31,003	43,080	Iron		76,034,803
1968	252,721	252,721	Iron		135,670,420
1967	307,335	337,652	Iron		222,991,510
1966	331,645	331,645	Iron		293,294,720
1965	330,320	330,320	Iron		242,965,000
1964	93,046	115,447	Iron		84,120,543
1962	335,213	335,013	Iron		227,156,400

SUMMARY TOTALS: 092L 028

NAME: **FORD**

	<u>Metric</u>	<u>Imperial</u>
Mined:	1,681,283 tonnes	1,853,297 tons
Milled:	1,745,878 tonnes	1,924,501 tons
Recovery:	Iron: 1,282,233,396 kilograms	2,826,839,954 pounds

Comments:

- 1969: Iron concentrates shipped from stockpile.
- 1968: Iron concentrates shipped.
- 1967: Iron concentrates shipped.
- 1966: Iron concentrates shipped.
- 1965: Iron concentrates shipped.
- 1964: Iron concentrates shipped.
- 1962: Iron concentrates shipped.

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 092L 034		NAME: IRON CROWN (L.126)			STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1963	509,540	509,540	Iron		279,120,235	
1962	609,632	609,632	Iron		328,645,006	
1961	604,509	604,509	Iron		384,486,471	
1960	434,766	434,766	Iron		275,495,144	
1959	17,236	11,612	Iron		7,438,876	

SUMMARY TOTALS: 092L 034

NAME: **IRON CROWN (L.126)**

Metric Imperial

Mined: 2,175,683 tonnes 2,398,280 tons
 Milled: 2,170,059 tonnes 2,392,081 tons

Recovery:

Iron: 1,275,185,732 kilograms 2,811,302,519 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
 ENERGY AND MINERALS DIVISION

MINFILE NUMBER: 092L 035		NAME: OLD SPORT		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1973			Silver	239,369		
			Gold	31,912		
			Copper			805,884
1972	204,806	204,806	Silver	1,346,138		
			Gold	168,143		
			Copper			3,855,193
1971	294,677	268,239	Silver	1,309,467		
			Gold	171,782		
			Copper			4,723,654
1970	263,909	263,909	Silver	1,520,377		
			Gold	226,399		
			Copper			4,630,610
			Iron			71,182,271
1969	215,447	215,447	Silver	909,390		
			Gold	327,328		
			Copper			2,258,878
			Iron			70,203,418
1968	219,050	219,050	Silver	1,052,090		
			Gold	402,162		
			Copper			2,750,143
			Iron			68,164,066
1967	263,558	263,558	Silver	1,154,388		
			Gold	476,560		
			Copper			3,472,167
			Iron			92,737,893
1966	256,580	256,580	Silver	1,128,635		
			Gold	570,989		
			Copper			4,101,064
			Iron			66,551,998
1965	265,046	265,046	Silver	1,144,373		
			Gold	548,657		
			Copper			4,335,475
			Iron			84,651,246
1964	277,717	277,717	Silver	974,395		
			Gold	379,177		
			Copper			5,383,346
			Iron			52,657,553
1963	297,041	297,041	Silver	858,661		
			Gold	506,637		
			Copper			4,386,143
1962	63,300	60,281	Silver	93,869		
			Gold	59,096		
			Copper			490,476

SUMMARY TOTALS: 092L 035

NAME: **OLD SPORT**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,621,131 tonnes	2,889,302 tons
Milled:	2,591,674 tonnes	2,856,832 tons
Recovery:		
Silver:	11,731,152 grams	377,165 ounces
Gold:	3,868,842 grams	124,386 ounces
Copper:	41,193,033 kilograms	90,815,067 pounds
Iron:	506,148,445 kilograms	1,115,865,997 pounds

Comments:

1973: Mine ceased operation in 1972; stockpiled concentrates (3325 tons)
 1970: Magnetite plant closed August 26, 1970.
 1962: Operated by Coast Copper Company Limited.

RUN DATE: 26-Jun-2003
RUN TIME: 11:24:30

MINFILE PRODUCTION REPORT
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ENERGY AND MINERALS DIVISION

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MINFILE NUMBER:	092L 038	NAME:	VAN ISLE (L.1744)	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1940	2,812	1	Silver	16,796	
			Gold	36,640	
1936	2		Silver	62	
			Gold	62	

SUMMARY TOTALS: 092L 038

NAME: **VAN ISLE (L.1744)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	2,814 tonnes	3,102 tons
Milled:	1 tonnes	1 tons
Recovery:		
Silver:	16,858 grams	542 ounces
Gold:	36,702 grams	1,180 ounces
Comments:		
1940:	1800-level stope, Bulletin 27, pages 15,54.	
1936:	Operated by Nootka Zeballos Gold Mines Ltd.	

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: **092L 044** NAME: **MERRY WIDOW 5 (L.1533,L.1543)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1967	158,827	158,827	Iron		82,015,874
1966	146,132	146,132	Iron		60,443,922
1964			Iron		16,689,482
1963	45,580	145,032	Iron		87,643,142
1962	170,887	134,313	Iron		22,584,370
1961	486,097	486,097	Iron		330,915,680
1960	949,807	949,807	Iron		411,465,550
1959	783,056	783,056	Iron		357,029,910
1958	519,273	519,273	Iron		247,203,370
1957	112,156	112,156	Iron		60,069,254

SUMMARY TOTALS: 092L 044

NAME: **MERRY WIDOW 5 (L.1533,L.1543)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	3,371,815 tonnes	3,716,790 tons
Milled:	3,434,693 tonnes	3,786,101 tons
Recovery:	Iron: 1,676,060,554 kilograms	3,695,079,971 pounds

Comments:

- 1967: Includes Kingfisher (092L 045). Operations ceased August 4, 1967.
- 1966: Includes Kingfisher (092L 045). Iron concentrates shipped.
- 1964: Includes Kingfisher (092L 045). Concentrates from stockpile.
- 1963: Includes Kingfisher (092L 045). Iron concentrates shipped.
- 1962: Includes Kingfisher (092L 045). Iron concentrates shipped.
- 1961: Merry Widow open pit. Iron concentrates shipped.
- 1960: Includes Kingfisher (092L 045). Iron concentrates shipped.
- 1959: Includes Kingfisher and Raven (092L 046). Concentrates shipped.
- 1958: Includes Kingfisher (092L 045). Iron concentrates shipped.
- 1957: Includes Kingfisher (092L 045). Iron concentrates shipped.

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 092L 052		NAME: YREKA		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1967	66,448	66,477	Silver	1,802,326		
			Gold	19,937		
			Copper		1,605,997	
1966	75,482	67,095	Silver	2,602,761		
			Gold	28,117		
			Copper		2,250,660	
1917	816	816	Copper		16,329	
1904	117	117	Silver	7,589		
			Gold	156		
			Copper		5,262	
1903	2,320	2,320	Silver	113,650		
			Gold	1,400		
			Copper		45,861	
1902	151	151	Silver	10,793		
			Gold	280		
			Copper		11,764	

SUMMARY TOTALS: 092L 052

NAME: **YREKA**

	<u>Metric</u>	<u>Imperial</u>
Mined:	145,334 tonnes	160,203 tons
Milled:	136,976 tonnes	150,990 tons
Recovery:		
Silver:	4,537,119 grams	145,872 ounces
Gold:	49,890 grams	1,604 ounces
Copper:	3,935,873 kilograms	8,677,112 pounds

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MINFILE NUMBER: 092L 061	NAME: CALEDONIA (L.1294)	STATUS: Developed Prospect			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1929	1	1	Silver Copper	467	66

SUMMARY TOTALS: 092L 061

	NAME: CALEDONIA (L.1294)	
	<u>Metric</u>	<u>Imperial</u>
	Mined: 1 tonnes	1 tons
	Milled: 1 tonnes	1 tons
Recovery:	Silver: 467 grams	15 ounces
	Copper: 66 kilograms	146 pounds

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MINFILE NUMBER:	092L 067	NAME:	SUQUASH	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1920	127		Coal		127,000
1913	2,250		Coal		2,250,440
1912	4,564		Coal		4,563,872
1911	3,117		Coal		3,117,088
1910	2,884		Coal		2,884,424
1909	2,042		Coal		2,042,160
1852	10,000		Coal		10,000,000

SUMMARY TOTALS: 092L 067

NAME: **SUQUASH**

	<u>Metric</u>		<u>Imperial</u>
Mined:	24,984 tonnes		27,540 tons
Milled:	tonnes		tons

Recovery: Coal: 24,984,984 kilograms 55,082,445 pounds

Comments: 1852: Approximate production from 1836 to 1852 by Hudson's Bay Company.

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MINFILE NUMBER: 092L 091		NAME: BENSON LAKE (L.1555,L.1557)			STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1969	39,482	39,482	Silver	338,618		
			Gold	50,605		
			Copper		857,285	
1968	24,905	24,905	Silver	149,854		
			Gold	12,255		
			Copper		379,891	

SUMMARY TOTALS: 092L 091

NAME: **BENSON LAKE (L.1555,L.1557)**

	<u>Metric</u>	<u>Imperial</u>
Mined:	64,387 tonnes	70,975 tons
Milled:	64,387 tonnes	70,975 tons
Recovery:		
	Silver: 488,472 grams	15,705 ounces
	Gold: 62,860 grams	2,021 ounces
	Copper: 1,237,176 kilograms	2,727,505 pounds

Comments: 1969: See Old Sport (092L 035).
 1968: Operated by Cominco Ltd.

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MINFILE NUMBER:	092L 149	NAME:	MAJOR	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1939	1		Gold Copper	93	2

SUMMARY TOTALS: 092L 149

NAME: **MAJOR**

Metric

Imperial

Mined:	1 tonnes	1 tons
Milled:	tonnes	tons
Recovery:	Gold: 93 grams	3 ounces
	Copper: 2 kilograms	4 pounds
Comments:	1939: Actual copper amount was 15.5 grams.	

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MINFILE NUMBER: **092L 151** NAME: **JEUNE LANDING (L.1582)** STATUS: Past Producer

<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1960	19,655		Limestone		19,655,063
1959	14,963		Limestone		14,963,104
1958	10,297		Limestone		10,296,546
1957	8,601		Limestone		8,601,018
1956	14,576		Limestone		14,575,736
1955	12,657		Limestone		12,657,040
1954	14,798		Limestone		14,797,996
1953	13,377		Limestone		13,377,345
1952	17,562		Limestone		17,562,188
1951	14,355		Limestone		14,355,290
1950	9,525		Limestone		9,525,439
1949	3,629		Limestone		3,628,739
1948	9,888		Limestone		9,888,313
1947	10,886		Limestone		10,886,216
1946	8,797		Limestone		8,796,970
1945	8,117		Limestone		8,117,489
1944	9,514		Limestone		9,513,646
1943	6,992		Limestone		6,991,672
1942	8,272		Limestone		8,271,710
1941	6,477		Limestone		6,477,299
1940	7,843		Limestone		7,842,612
1939	1,380		Limestone		1,379,828
1938	1,981		Limestone		1,981,291
1937	5,611		Limestone		5,610,937
1936	5,835		Limestone		5,835,012
1935	4,868		Limestone		4,867,953
1934	2,475		Limestone		2,474,800
1933	8,431		Limestone		8,430,593
1932	2,601		Limestone		2,601,015
1931	7,070		Limestone		7,070,220
1930	4,536		Limestone		4,535,924
1929	7,844		Limestone		7,844,332
1928	5,970		Limestone		5,969,950
1927	5,119		Limestone		5,119,243
1926	1,009		Limestone		1,008,789
1925	4,883		Limestone		4,883,375
1924	2,604		Limestone		2,603,320
1922	4,341		Limestone		4,340,879
1921	4,062		Limestone		4,062,373
1919	1,710		Limestone		1,710,043

SUMMARY TOTALS: 092L 151

NAME: **JEUNE LANDING (L.1582)**

		<u>Metric</u>		<u>Imperial</u>	
	Mined:	313,111 tonnes		345,146 tons	
	Milled:				
Recovery:	Limestone:	313,111,308 kilograms		690,292,078 pounds	

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER:	<u>092L 158</u>	NAME:	<u>ISLAND COPPER</u>	STATUS:	Past Producer
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1995	16,474,786	16,532,189	Silver	9,535,000	
			Gold	591,403	
			Copper		34,607,475
			Molybdenum		1,449,397
			Rhenium		236
1994	18,133,070	18,174,229	Silver	13,310,279	
			Gold	1,094,792	
			Copper		50,265,248
			Molybdenum		1,330,940
1993	18,498,904	18,179,322	Silver	16,490,957	
			Gold	1,962,242	
			Copper		60,824,251
			Molybdenum		1,362,612
1992	21,554,000	19,614,169	Silver	14,591,490	
			Gold	1,588,619	
			Copper		47,064,275
			Molybdenum		417,175
1991	14,518,705	18,611,824	Silver	15,164,873	
			Gold	1,266,596	
			Copper		54,626,080
			Molybdenum		2,561,762
1990	17,150,041	18,361,577	Silver	16,512,120	
			Gold	1,088,715	
			Copper		44,861,648
			Molybdenum		2,104,784
1989	17,680,620	17,528,511	Silver	14,029,970	
			Gold	1,491,536	
			Copper		61,468,875
			Molybdenum		2,890,698
1988	17,227,344	16,703,942	Silver	13,411,539	
			Gold	1,394,152	
			Copper		64,055,889
			Molybdenum		1,972,403
1987	19,009,358	18,837,431	Silver	12,896,064	
			Gold	1,401,616	
			Copper		56,964,532
			Molybdenum		1,503,310
1986	17,457,049	17,484,419	Silver	13,605,641	
			Gold	1,681,106	
			Copper		55,730,718
			Molybdenum		1,950,817
1985	16,966,892	16,506,367	Silver	14,638,509	
			Gold	1,786,739	
			Copper		57,671,194
			Molybdenum		1,542,478
			Rhenium		
1984	16,324,287	16,360,917	Silver	13,433,965	
			Gold	1,734,765	
			Copper		57,929,749
			Molybdenum		1,461,690
			Rhenium		
1983	16,318,132	16,330,081	Silver	14,931,722	
			Gold	1,618,220	
			Copper		60,032,220
			Molybdenum		1,672,777
			Rhenium		
1982	15,299,205	15,291,656	Silver	13,537,073	
			Gold	1,395,613	
			Copper		53,890,102
			Molybdenum		1,785,863
1981	14,086,889	14,156,617	Silver	13,113,910	
			Gold	1,658,562	
			Copper		53,075,826
			Molybdenum		1,266,788
1980	13,883,221	13,782,249	Silver	13,456,484	
			Gold	1,747,704	
			Copper		50,033,433
			Molybdenum		1,113,074
1979	13,264,642	13,339,997	Silver	10,994,861	
			Gold	1,684,627	
			Copper		50,254,753
			Molybdenum		1,111,400

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 092L 158		NAME: ISLAND COPPER		STATUS: Past Producer		
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1979	13,264,642	13,339,997	Rhenium			
1978	13,209,595	14,200,203	Silver	10,402,740		
			Gold	1,345,360		
			Copper			50,653,152
			Molybdenum			859,104
			Rhenium			
1977	12,920,996	13,106,006	Silver	9,699,222		
			Gold	1,496,459		
			Copper			46,749,860
			Molybdenum			987,627
			Rhenium			
1976	12,182,566	12,246,885	Silver	9,983,690		
			Gold	1,416,959		
			Copper			48,956,470
			Molybdenum			878,072
			Rhenium			
1975	11,981,331	12,075,145	Silver	8,996,170		
			Gold	1,705,595		
			Copper			47,514,467
			Molybdenum			615,313
			Rhenium			
1974	10,043,390	10,160,416	Silver	6,808,447		
			Gold	1,309,436		
			Copper			38,188,196
			Molybdenum			574,925
			Rhenium			
1973	10,923,656	10,950,974	Silver	8,377,002		
			Gold	1,546,721		
			Copper			48,409,325
			Molybdenum			440,209
			Rhenium			
1972	7,108,043	7,239,686	Silver	5,763,821		
			Gold	1,175,009		
			Copper			30,236,801
			Molybdenum			156,640
			Rhenium			
1971	1,204,046	944,019	Silver	419,984		
			Gold	85,004		
			Copper			3,265,848

SUMMARY TOTALS: 092L 158

NAME: **ISLAND COPPER**

	<u>Metric</u>	<u>Imperial</u>
Mined:	363,420,768 tonnes	400,602,819 tons
Milled:	366,718,831 tonnes	404,238,311 tons
Recovery:		
Silver:	294,105,533 grams	9,455,699 ounces
Gold:	35,267,550 grams	1,133,876 ounces
Copper:	1,227,330,387 kilograms	2,705,799,572 pounds
Molybdenum:	32,009,858 kilograms	70,569,637 pounds
Rhenium:	236 kilograms	520 pounds

Comments:

- 1995: Ceased mining July 95 & milling December 1995.
- 1985: Rhenium shipments are confidential.
- 1984: Rhenium shipments are confidential.
- 1983: Rhenium shipments are confidential.
- 1979: Rhenium shipments are confidential.
- 1978: Rhenium shipments are confidential.
- 1977: Rhenium shipments are confidential.
- 1976: Rhenium shipments are confidential.
- 1975: Rhenium shipments are confidential.
- 1974: Rhenium shipments are confidential.
- 1973: Rhenium shipments are confidential.

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MINFILE NUMBER:	092L 164	NAME:	STEELE CREEK	STATUS:	Past Producer
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1971	2,722	2,163	Copper		44,083
1968	1,996		Silver	41,149	
			Copper		73,161

SUMMARY TOTALS: 092L 164

NAME: **STEELE CREEK**

	<u>Metric</u>	<u>Imperial</u>
Mined:	4,718 tonnes	5,201 tons
Milled:	2,163 tonnes	2,384 tons
Recovery:	Silver: 41,149 grams	1,323 ounces
	Copper: 117,244 kilograms	258,479 pounds

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MINFILE NUMBER: 092L 178		NAME: NUGGET QUEEN		STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>
1949	5		Silver	1,711	
			Gold	93	
			Lead		441
			Zinc		234
1941	491		Silver	31,041	
			Gold	14,618	
			Copper		1,346
			Lead		6,677
1940	113		Silver	12,006	
			Gold	6,158	
			Copper		409
			Lead		3,070
1939	1		Silver	124	
			Gold	62	
			Copper		4

SUMMARY TOTALS: 092L 178

NAME: **NUGGET QUEEN**

	<u>Metric</u>	<u>Imperial</u>
Mined:	610 tonnes	672 tons
Milled:	tonnes	tons
Recovery:		
Silver:	44,882 grams	1,443 ounces
Gold:	20,931 grams	673 ounces
Copper:	1,759 kilograms	3,878 pounds
Lead:	10,188 kilograms	22,461 pounds
Zinc:	234 kilograms	516 pounds

Comments:

1949: Operated by H.T. Jefferies.
 1941: Operated by R.C. McCorkell.
 1940: Operated by R.C. McCorkell.
 1939: Operated by E.M. Morrison.

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 092L 211		NAME: GOLD FIELD (L.1020)			STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1951	23		Silver	591		
			Gold	2,084		
1942	39,545	18,198	Silver	62,299		
			Gold	187,240		
			Copper			1,724
1941	66,172	31,342	Silver	186,742		
			Gold	436,406		
			Copper			2,532
			Lead			3,460
1940	50,969	25,787	Silver	171,098		
			Gold	562,933		
			Copper			2,824
			Lead			193
1939	32,302	19,005	Silver	148,641		
			Gold	478,022		
			Copper			2,115
			Lead			4,440
1938	1,739	1,544	Silver	5,319		
			Gold	14,712		
1936	4		Silver	529		
			Gold	1,462		

SUMMARY TOTALS: 092L 211

NAME: **GOLD FIELD (L.1020)**

	<u>Metric</u>		<u>Imperial</u>
Mined:	190,754 tonnes		210,270 tons
Milled:	95,876 tonnes		105,685 tons
Recovery:			
Silver:	575,219 grams		18,494 ounces
Gold:	1,682,859 grams		54,105 ounces
Copper:	9,195 kilograms		20,271 pounds
Lead:	8,093 kilograms		17,842 pounds

Comments:

1951: Mill clean-up combined with Roper (092L 013).
 1942: 1936-1942: Production includes the Roper (092L 013).

MINFILE PRODUCTION REPORT
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MINFILE NUMBER: 092L 212		NAME: CENTRAL ZEBALLOS			STATUS: Past Producer	
<u>Production Year</u>	<u>Tonnes Mined</u>	<u>Tonnes Milled</u>	<u>Commodity</u>	<u>Grams Recovered</u>	<u>Kilograms Recovered</u>	
1947	6,475	4,856	Silver	20,839		
			Gold	50,605		
			Copper			588
			Lead			3,951
1946	3,486	2,411	Silver	19,750		
			Gold	27,122		
			Copper			644
			Lead			3,862
1942	6,370	4,627	Silver	95,891		
			Gold	143,385		
			Copper			1,864
			Lead			22,151
1941	18,252	12,993	Silver	149,574		
			Gold	204,285		
			Copper			2,160
			Lead			20,139
1940	17,972	12,902	Silver	142,327		
			Gold	205,622		
			Copper			2,060
			Lead			20,478
1939	13	13	Silver	871		
			Gold	1,026		
			Copper			15
			Lead			163
1938	28	28	Silver	2,986		
			Gold	4,728		
			Copper			39
			Lead			396

SUMMARY TOTALS: 092L 212

NAME: **CENTRAL ZEBALLOS**

	<u>Metric</u>	<u>Imperial</u>
Mined:	52,596 tonnes	57,977 tons
Milled:	37,830 tonnes	41,700 tons
Recovery:		
Silver:	432,238 grams	13,897 ounces
Gold:	636,773 grams	20,473 ounces
Copper:	7,370 kilograms	16,248 pounds
Lead:	71,140 kilograms	156,837 pounds

MINFILE PRODUCTION REPORT
 GEOLOGICAL SURVEY BRANCH
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MINFILE NUMBER: 092L 295	NAME: BENSON LAKE	STATUS: Producer
Production Year	Tonnes Mined	Tonnes Milled
		Commodity
		Grams Recovered
		Kilograms Recovered
1995	80,000	Limestone
1990	40,000	Limestone
1987	13,219	Limestone
1986	9,855	Limestone
1985	3,734	Limestone

SUMMARY TOTALS: 092L 295

NAME: **BENSON LAKE**

		<u>Metric</u>	<u>Imperial</u>
Mined:	146,808 tonnes	161,828 tons	tons
Milled:			tons
Recovery:			
Limestone:	146,807,307 kilograms	323,654,619 pounds	
Comments:			
	1990:	Z.D. Hora, personal communication, 1991.	

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MINFILE NUMBER: 092L 345	NAME: TSITIKA GREY	STATUS: Producer			
Production Year	Tonnes Mined	Tonnes Milled	Commodity	Grams Recovered	Kilograms Recovered
1994	45	45	Granite		45,000
SUMMARY TOTALS: 092L 345		NAME: TSITIKA GREY			
		<u>Metric</u>	<u>Imperial</u>		
	Mined:	45 tonnes	50 tons		
	Milled:	45 tonnes	50 tons		
Recovery:	Granite:	45,000 kilograms	99,208 pounds		