

Tom Schwetz
@ KFB '05
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Possible IOCG camp

884666
Kringle

on

North Vancouver Island

Properties offered for Option

include

Kringle-consolidated

(includes Kringle, Puff, Pastry, Macaroon, Oreo, Krisp + prospective ground)

Klejne-consolidated

(Includes Boyes` Creek and Adam West showings and prospective ground)

and

Rusk

(includes Eloise and prospective ground)

by

Mikkel Schau

IOCG deposits are large volume, low- grade deposits of copper and minor gold associated with magnetite or hematite. Although their exact provenance is in dispute, certain features are common in a large number of deposits.

Deposits such as Olympic dam in the Proterozoic of Australia or Candelabria in Northern Chile have recently fueled the exploration imagination. Sillitoe in a published version of his keynote speech at IAGOD Symposium in Windhoek, Namibia, has focused on the IOCG Province of Chile as the most recent and least changed area in which to pursue more particulars about the deposit type (Sillitoe, 2003).

	Mt	%Cu,	ppb Au	ppm Ag
Candelabria	470	.95%	220	3.1

After reading the article I was struck with how many similarities there are between showings in the Karmutsen and the IOCG Belt in Chile. IOCG belts are closely associated with Mesozoic batholiths and major arc parallel fault systems. Northern Vancouver Island has both and shows many similarities to the Chile Belt (see attached table). Other enterprising Junior Mining companies are also pursuing these similarities with some success elsewhere in the Canadian Cordillera.

I have assembled three land packages with interesting IOCG possibilities. They are, with decreasing knowledge and increasing risk:

Kringle-consolidated (about 100 claim units after conversion) which lump together several showings which I have found since 2000.

Kringle, Puff, Pastry, Krisp, Oreo, Macaroon claims contain new showings

Klejne-consolidated (about 83 claim units) which brings together the Boyes' Creek prospect, with Adam West prospect, as well as some very prospective ground

Rusk (about 25 claim units) which picks up the Eloise showing in very prospective ground.

Chart comparing North Chile IOCG camp with North Vancouver Island

North Chile	FEATURE	North Vancouver Island	example
Upper Triassic Negra Formation basaltic andesites	basal volcanics	Middle to upper Triassic Karmutsen Formation basalts/feldspar phyric with local vesicular sections	host to most of showings and prospects
Cobre del punta Formation (Host)	calcalkaline volcanics	Bonanza Formation	N/A
burial, regional prehnite-pumpellyite	metamorphism	burial, regional prehnite-pumpellyite	present
Orogen parallel, Atacama fault transverse slip	regional faults	orogen parallel, north south and north-northwest trending transverse slip	many secondary cross faults
oxidized gabbro-diorite-granodiorite suite	plutons	(Adam River Pluton) oxidized diorite, granodiorite, and local meladiorite	Elevated Magnetic Susceptibility
early Jurassic to early Cretaceous	age of plutons	Jurassic	local age date
late mafic dykes in faults with mineralization and later	late mafic dykes	newly recognized mafic dykes cut mineralization	at Krisp
veins, mantos, skarns, porphyry (often in preexisting fault structures), also	style of mineralization	veins, endo and exo-skarns, proximal and distal skarns, shear zone replacement, breccias, replacement in permeable zones, with felsic dykes	Kringle, Pastry, Puff, Krisp, Oreo, Macaroon
porphyry copper, composite IOCG			
Iron oxide with copper and minor gold	type of mineralization	iron oxide with copper, silver, minor gold and palladium Local CuO!	6+%Cu, 68+ppm Ag 295 ppb Au, 118 ppb Pd
Mo, Co, As, U, Ni, P, LREE	other metals	elevated elements in acid soluble form such as Mo, Co, Ni, V, Cr, As, U, Se, P	especially in Kringle* see table below

locally important	magnetic signature	local magnetic "halo" developed in Karmutsen near intrusions	within a few km, outboard of intrusive contact
Showings near magnetic signature, or magnetite deposits	Showings near magnetic signatures	showings developed within a few Km of contact, inside magnetic halo.	Often local skarn assemblages, or felsic dyke breccias with magnetite veins/host
magnetite low Ti type	Magnetite low Ti Type	magnetite low Ti type	see Kringle magnetite
apparent aquitards, focus mineralization, mantos	local carbonate beds	thin limestone beds in Karmutsen, Quatsino Limestone	local skarns developed
biotite-qz-magnetite-kspar alteration preceded copper mineralization at Candelabria	alteration	biotite-qz-magnetite-kspar alteration	in endoskarn in Kringle
chalcopyrite, some bornite, chalcocite local, pyrite scarce	ore mineralogy	chalcopyrite, some bornite, chalcocite local, pyrite scarce	ubiquitous, in shear zones and amygdales
locally abundant	magnetite veins	locally recognized cutting host rocks and associated felsite dyke breccias,	Pastry, Kringle, Puff

Chile-data and features-discussed, after Sillitoe 2003 article in Mineralium Deposita; North Vancouver Island data from Schau assessment reports 2000-2005

Table showing best values found in mineralized Kringle-cons showings, of elements often elevated in IOCG deposits elsewhere.

Cu	7.05 %
Au	295 ppb
Ag	67.2 ppm
Pd	118 ppb

Mo	1153 ppm
Co-sol	806 ppm
Ni-sol	559 ppm
V-sol	3885 ppm
Cr-sol	333 ppm
As	326 ppm
U	54 ppm
P	.195 %
La	39 ppm
Bi	99 ppm
Cd	71.7 ppm
Se	61.9 ppm
Zn	3421 ppm

These values are maximum values from handspecimens; they do not give any quantitative information, only that such values can occur in these site.

Magnetite from Kringle skarn has been analysed, it is low Ti type, presumably hydrothermal.

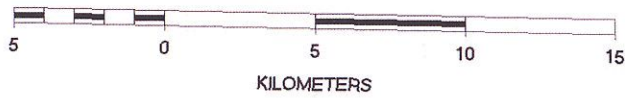
Fe	36.7%
Ti	.001 %
Mn	535 ppm

Cr	4 ppm
Ni	<1 ppm
V	9 ppm
P	.005%
As	6 ppm
U	15 ppm
La	<1 ppm

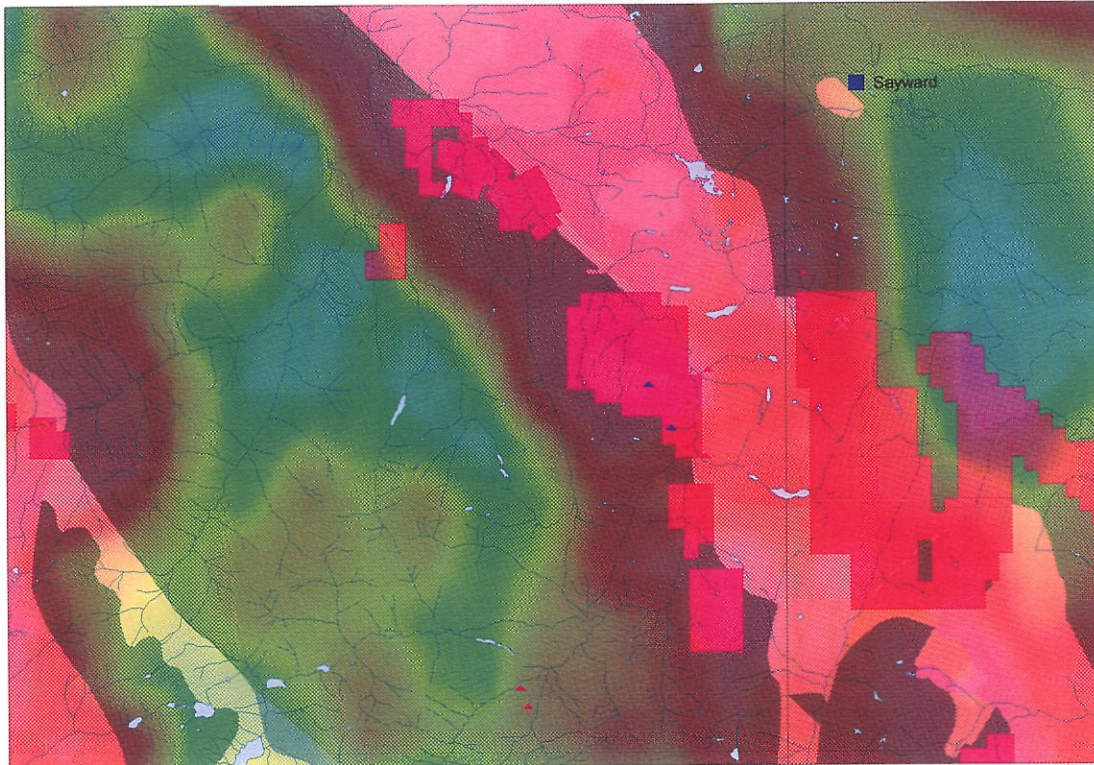
Adam River Claims



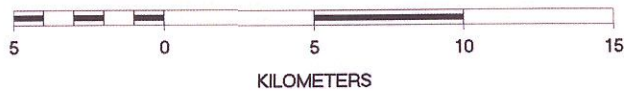
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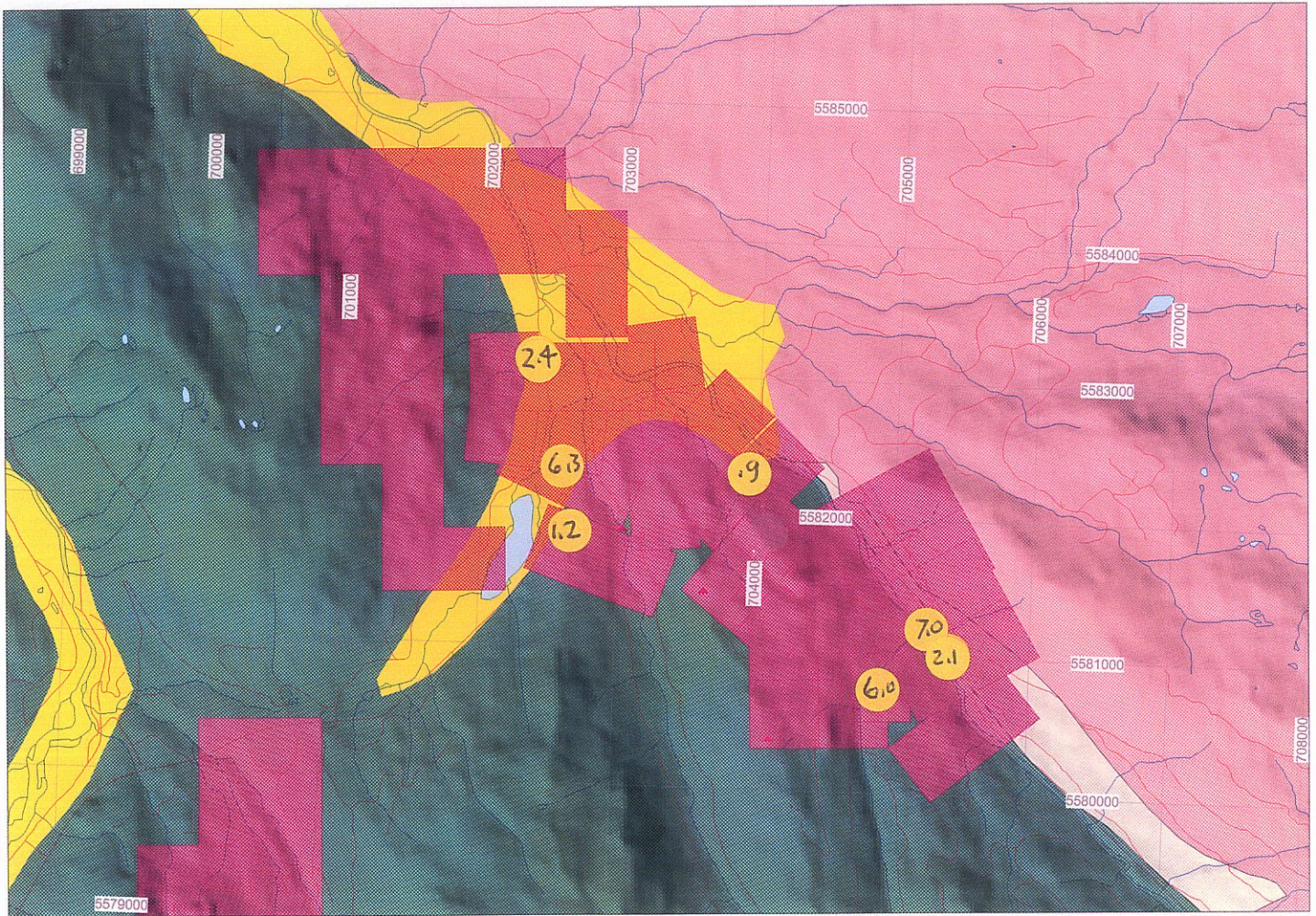
Adam River Claims



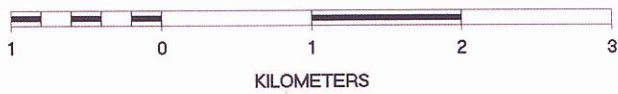
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Kringle-cons

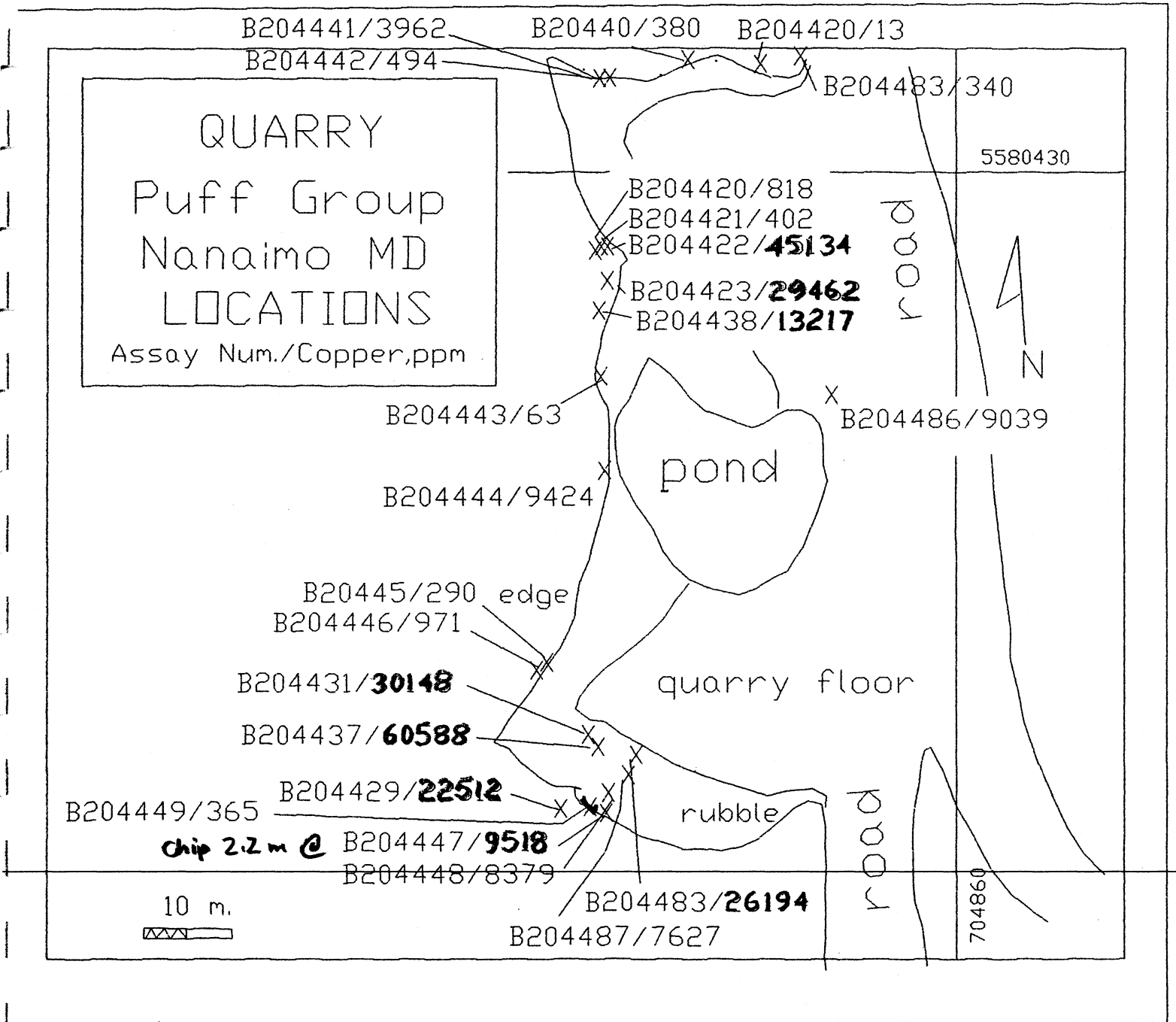


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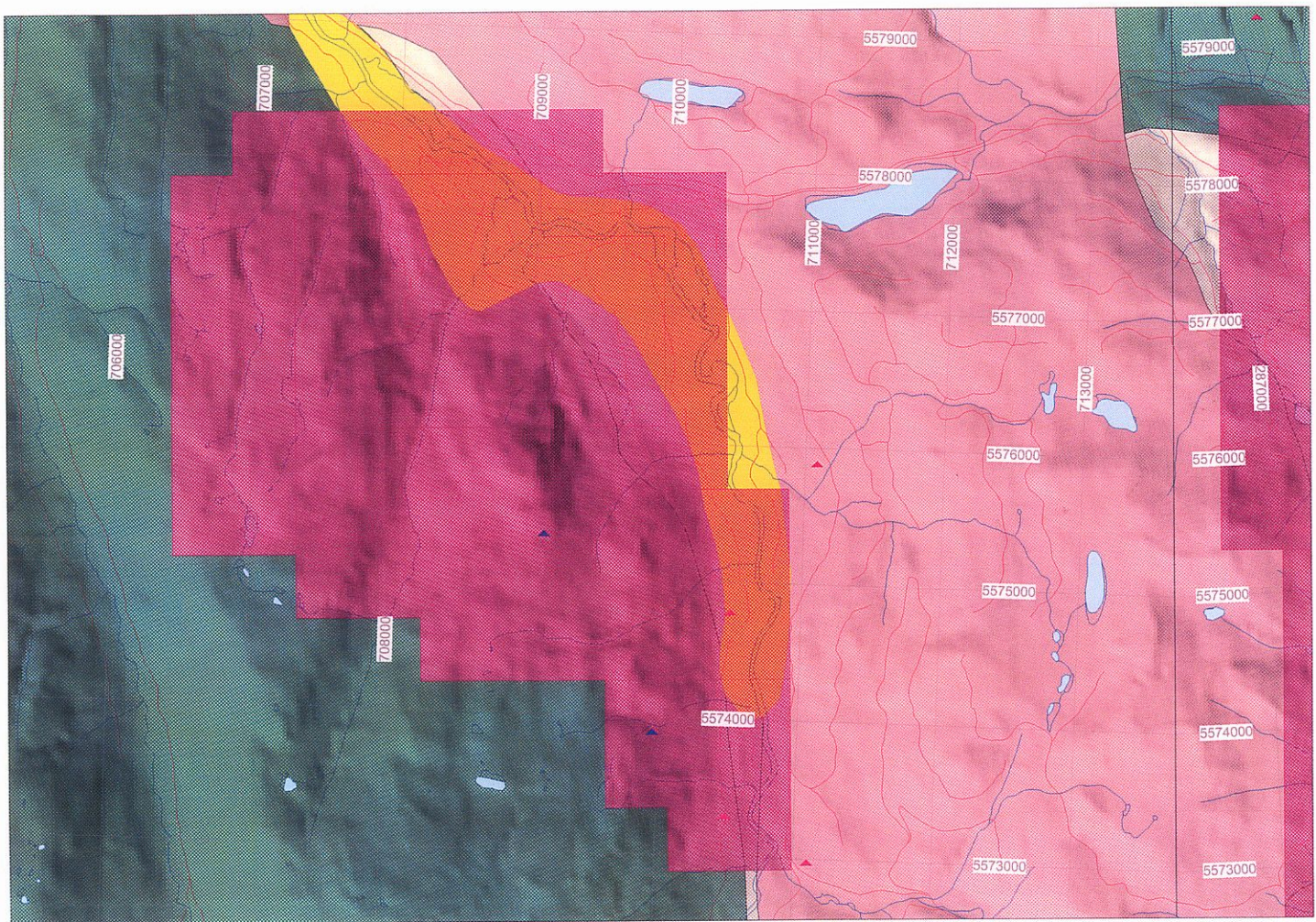


2.4

Figure 8, Detail map of quarry showing locations of assays and associated copper values.



Klejne-cons



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Run Date: 2005/Apr/09
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MINFILE / www
MASTER REPORT
GEOLOGICAL SURVEY BRANCH
MINISTRY OF ENERGY & MINES

MINFILE Number: 092L 222

National Mineral Inventory:

Name(s): ADAM WEST

Status: Prospect
Regions: British Columbia , Vancouver Island
NTS Map: 092L08E (NAD 83)
Latitude: 50 17 34 N
Longitude: 126 03 50 W
Elevation: 670 Metres
Location Accuracy: Within 500M

Mining Division: Nanaimo
UTM Zone: 09 (NAD 83)
Northing: 5575308
Easting: 709125

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: [Volcanic redbed Cu.]
Shape: Tabular
Dimension: 0002 x 0000 x 0000 metres Strike/Dip: Trend/Plunge:

HOST ROCK

Dominant Host Rock: Volcanic

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Upper Triassic	Vancouver	Karmutsen	

Isotpic Age: 230 Ma
Dating Method: Fossil
Material Dated: Gymnotropite ammonites

Lithology: Amygdaloidal Lava
Limestone
Volcanic Rock

Host Rock Comments: Ammonites from Hisnit Island (Geological Survey of Canada Paper 74-8).

GEOLOGICAL SETTING

Tectonic Belt: Insular
Terrane: Wrangell

Physiographic Area: Vancouver Island Ranges

Metamorphic Type: Regional

Relationship:

Grade: Greenschist

INVENTORY

(Reserves/Resources not compliant with National Instrument 43-101 unless specified in comments)

Ore Zone: DRILLHOLE
Category: Assay/analysis
Sample Type: Drill Core

Report On: N
Year: 1985

Commodity	Grade
Silver	0.02 g/t
Gold	1.40 g/t
Copper	0.570 %

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 Report 14284). Drilling in 1972 returned assays that included 0.84 per cent copper over 23.5 metres (GCNL # 95, 1973).

BIBLIOGRAPHY

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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

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MINFILE / www
MASTER REPORT
GEOLOGICAL SURVEY BRANCH
MINISTRY OF ENERGY & MINES

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 (NAD 83)
Latitude: 50 16 47 N
Longitude: 126 03 11 W
Elevation: 5618 Metres
Location Accuracy: Within 500M

Mining Division: Nanaimo
UTM Zone: 09 (NAD 83)
Northing: 5573887
Easting: 709954

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 x 0000 x 0000 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 Host Rock: Volcanic

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Upper Triassic	Vancouver	Karmutsen	
Jurassic			Island Plutonic Suite

Isotpic Age: 155 +/- 6 Ma
Dating Method: Potassium/Argon
Material Dated: Biotite

Lithology: Amygdaloidal Massive Basalt
Limestone

Host Rock Comments: Karmutsen ammonites from Hisnit Island. Intrusion 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

Metamorphic Type: Regional Relationship:
Grade: Greenschist

INVENTORY *(Reserves/Resources not compliant with National Instrument 43-101 unless specified in comments)*

Ore Zone: TRENCH Report On: N
Category: Assay/analysis Year: 1969
Sample Type: Channel

Commodity	Grade
Copper	3.900 %

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. Inter-bedded 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 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 western-most 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

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Field Check: N

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MINFILE / www
MASTER REPORT
GEOLOGICAL SURVEY BRANCH
MINISTRY OF ENERGY & MINES

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 (NAD 83)
Latitude: 50 16 27 N
Longitude: 126 02 45 W
Elevation: 366 Metres
Location Accuracy: Within 500M

Mining Division: Nanaimo
UTM Zone: 09 (NAD 83)
Northing: 5573290
Easting: 710493

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
Mineralization Age: Unknown

DEPOSIT

Character: Breccia Disseminated
Classification: Epigenetic Hydrothermal
Shape: Regular
Dimension: 0003 x 0000 x 0000 metres Strike/Dip: Trend/Plunge:
Comments: Mineralization occurs over 3.6 metres.

HOST ROCK

Dominant Host Rock: Volcanic

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Upper Triassic	Vancouver	Karmutsen	

Isotpic Age: 230 Ma
Dating Method: Fossil
Material Dated: Gymnotropite ammonites

Lithology: Basalt
Calcite Epidote Breccia

Host Rock Comments: Ammonites from Hisnit Island (Geological Survey of Canada, Paper 74-8).

GEOLOGICAL SETTING

Tectonic Belt: Insular
Terrane: Wrangell

Physiographic Area: Vancouver Island Ranges

Metamorphic Type: Regional

Relationship:

Grade: Greenschist

INVENTORY

(Reserves/Resources not compliant with National Instrument 43-101 unless specified in comments)

Ore Zone: SAMPLE
Category: Assay/analysis
Sample Type: Chip

Report On: N
Year: 1969

Commodity	Grade
Silver	6.20 g/t
Gold	0.60 g/t
Copper	0.900 %

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 grano- diorite. 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).

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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

Rusk



SCALE 1 : 50,000



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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EMPR GEM 1969-210; 1970-279
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