GEOLOGICAL, TRENCHING and METALLURGICAL ASSESSMENT REPORT

Amended

on the

CALEDONIA PROSPECT/QUATSE SILVER PROPERTY
Port Hardy – Coal Harbour Area

Nanaimo Mining Division
Latitude 50°38'39"N/Longitude 127°36'17"W
NTS 92L/12E (92L.062)
Permit: MX-8-75 Mine 0800429

Prepared for
Quatse Silver Resources Inc.
#5-2330 Tyner St.
Port Coquitlam, B.C.
V3C 2Z1
Phone: 604-970-6402, Fax: 604-944-6102

Prepared by

J. T. SHEARER, M.Sc., P.Geo.
#5-2330 Tyner St.
Port Coquitlam, B.C.
V3C 2Z1
Phone: 604-970-6402, Fax: 604-944-6102

March 1, 2008

Fieldwork completed between July 22, 2007 and February 2, 2008

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SUMMARY

1) 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 volcanics, intruded by bodies of the Early-Middle Jurassic Island Plutonic Suite.

2) Locally, epidote-garnet-actinolite skarn containing tennanite [CuAs(Ag)S] 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°, dipping 25° to the south..

3) East of the workings, garnet, epidote, magnetite and minor tennanite are present in a skarn zone in limestone at a granodiorite contact. A narrow wedge-shaped body of mineralization extends about 12 metres into the granodiorite.

4) North of Quatse Lake, bornite replaces siliceous and tuffaceous beds in the upper part of the Karmutsen Formation.

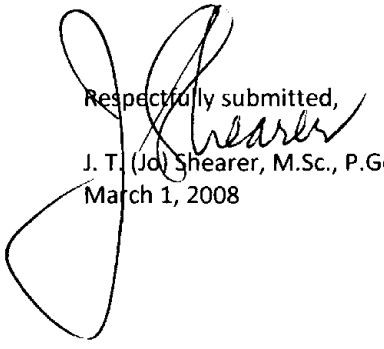
5) In 1929, 0.9 tonnes of ore was shipped from the property, grading 514.2 grams per tonne silver and 7.3% copper (Malcolm, 1969). A chip sample collected across 1.8 metres in 1926 assayed trace gold, 418.2 grams per tonne silver, 2.9% copper, 0.8% Lead and 10.0% zinc (Minister of Mines Annual Report, 1926).

6) Underground development outlined a possible resource of 68,000 tonnes grading 704.2 grams per tonne silver (20.54 oz/ton) 6.1% copper, 7.45% zinc, 0.6% lead and 0.34 g/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 ahs expanded the surface mineralized zone for a strike length of 600 metrres over a 300 metre width (George Cross News Letter #221, 1981).

7) Sampling in 2007 from trenching returned values of 581.7 g/tonne silver (16.97 oz/ton), 4.42% Copper, 0.13% Pb, 8.97% Zn from tennanite bearing skarn.

8) Metallurgical testing indicates that flotation gives high recovery rates for Silver and Copper. Discussions have been initiated with NVI regarding shipping a 10,000 tonne bulk sample to Myra Falls.

9) An exploration program consisting of geological mapping, percussion drilling, geophysics and bulk sampling at a cost of $232,000 is recommended for 2008.



Respectfully submitted,

J. T. (Jo) Shearer, M.Sc., P.Geo.
March 1, 2008

INTRODUCTION

The Caledonia Property is located 15km southwest of Port Hardy, a short distance northwest of Quatse Lake.

The deposit is an epidote-garnet-actinolite skarn containing mainly tennanite with minor bornite and chalcopyrite occurs at the contact between Quatsino limestone. Karmutsen volcanics and granodiorite. Some of the mineralization extends into the granodiorite in sericitized fractures. The limestone strikes 315°, dipping 25° to the south.

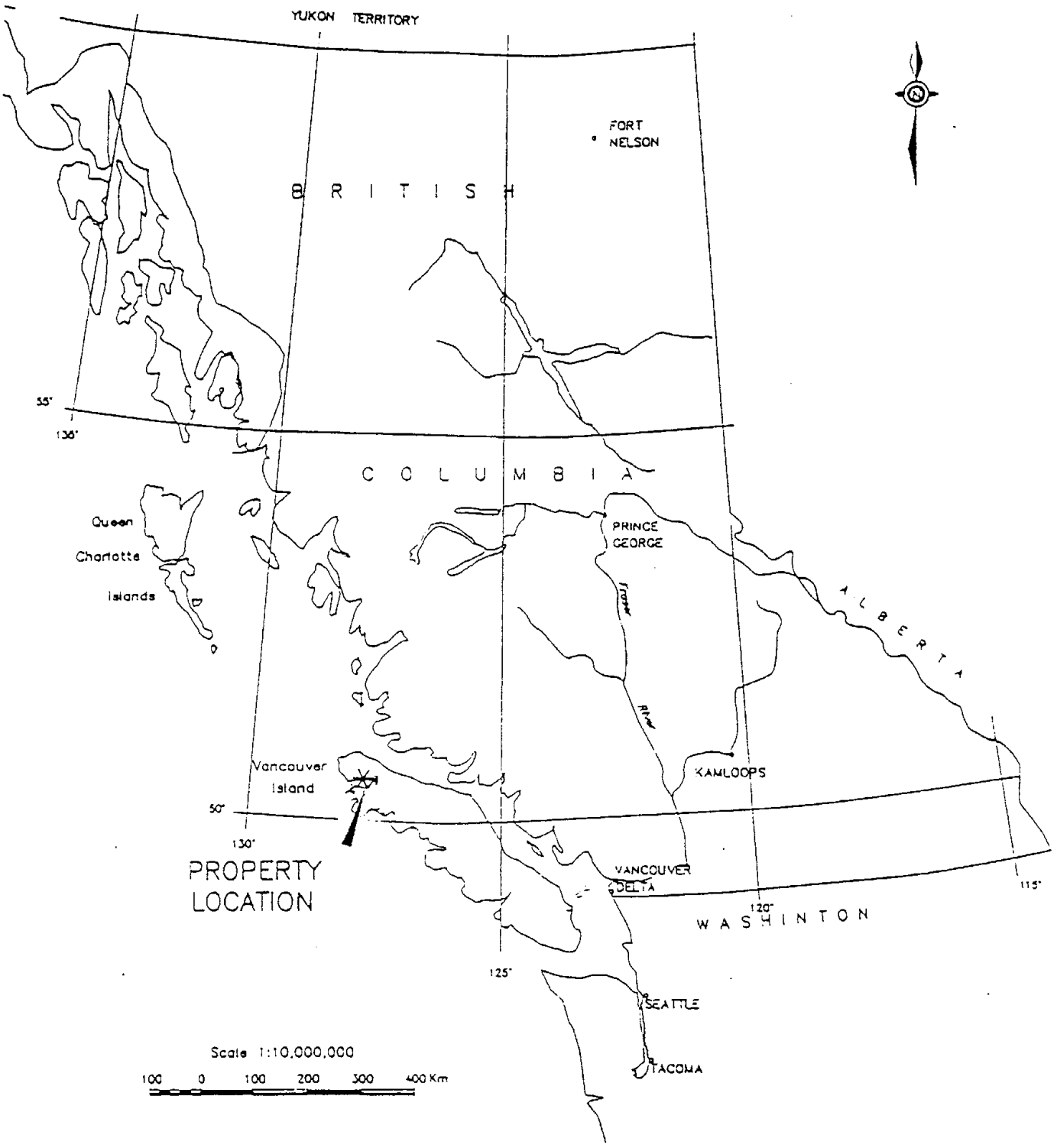
The property has been known for many years. A substantial amount of surface and underground exploration was completed prior to 1929. The property is held by 3 crowngrants (in good standing). The taxes on these growngrants has been paid for many years by R. Zimmerman, who has a agreement with the registered owner. J. Shearer and R. Zimmerman own the property 50-50. Who have agreed to vend the property to a new entity for an NSR on the bulk sample.

Access is by all weather logging roads a distance of 8km from paved road between Port Hardy and Coal Harbour. A 200m bulldozer trail from the end of branch logging road CH1210 to the underground workings.

The property is with the shared Traditional Territory of the Quatsino First Nation and the Kwakiutl First Nation. Two Letters of Support have been received from the Quatsino First Nation (one for the trenching and opening the bulldozer trail completed and one for the proposed bulk sample). An application is pending for a bulk sample from the Ministry of Energy, Mines and Petroleum Resources.

Previous work (from BC Minfile is as follows: underground development outlined possible reserves of 68,000 tonnes grading 704.2 grams per tonne silver (20.54 oz/ton), 6.1% copper, 7.45% zinc, 0.6% lead and 0.34 g/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 ahs expanded the surface mineralized zone for a strike length of 600 metrres over a 300 metre width (George Cross News Letter #221, 1981).

Work in August, September and October 2007 consisted of approximately $60,000 spent to date for completing opening the road, trenching, sampling, geological mapping, ABA assays, First Nations negotiations, Timber cruising, haul road layout, metallurgical flotation tests, stripping, drafting Environmental Baseline Study and permit application (Trenching and Bulk Sampling) plus Reclamation Bond.



HOMEGOLD RESOURCES LTD.

APPLE BAY PROJECT
CALEDONIA CLAIMS

LOCATION MAP

SCALE as shown	DATE Aug. 00	N.T.S. 92L/12E	WORK BY J. T. Shearer	FIGURE 1

LOCATION AND ACCESS

The Caledonia Project is located on northern Vancouver Island in the Nanaimo Minig Divistion at Latitude 50°38'39"N and 127°36'17"W Longitude. The map reference is NTS 92L/12W (92L.062).

Access to the claims is gained by travelling south for 14km from Port Hardy along the Port Hardy – Coal Harbour paved road. From Coal Harbour travel west along the Coal Harbour Mainline logging road to CH1210 branch road a distance of 8km to the mineralized zone.

The area is within the traditional territory of the Quatsino First Nation who have provided 3 letters of support for the project.

FIGURE 2-1 GENERAL LOCATION MAP

FIGURE 2
ACCESS MAP

CLAIMS STATUS

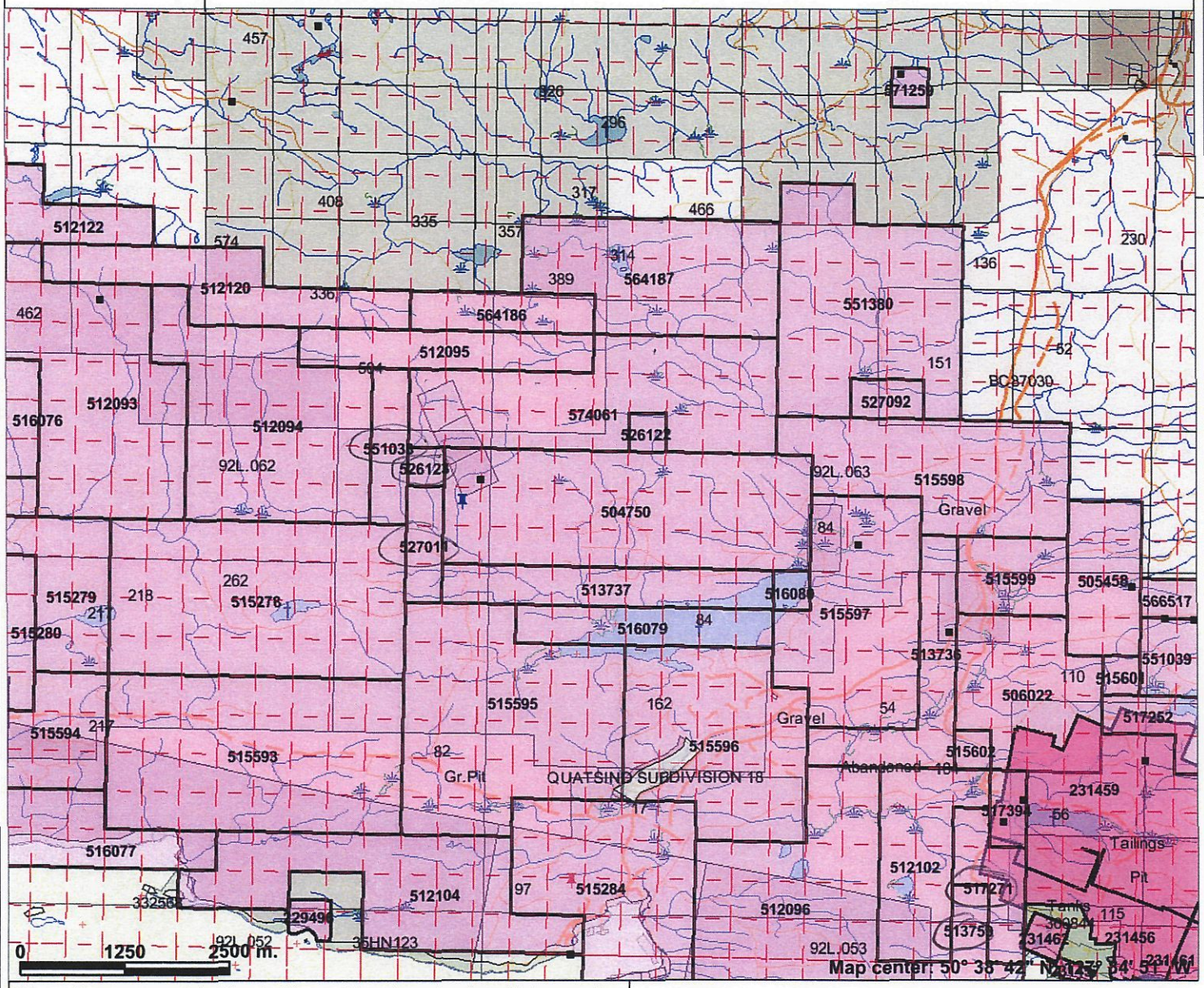
TABLE I
List of Claims

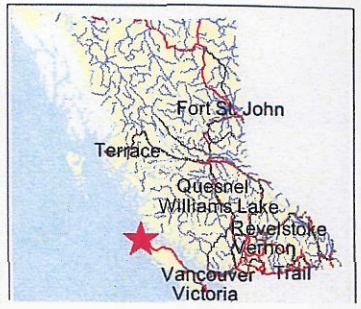
Name	Tenure #	Area	Issue Date	Current Expiry Date	Registered Owner
Caledonia W	551038	81.96	February 3, 2008	February 3, 2011	Shearer?
	504750	614.79	January 24, 2005	November 15, 2010	
Caledonia West One	527011	61.48	February 2, 2006	February 2, 2011	
Caledonia Extention One	526123	20.49	January 24, 2006	January 24, 2011	
Rupert 1	517252	82.01	July 12, 2005	November 15, 2010	
Hankin East	513759	164.11	June 1, 2005	November 15, 2010	
North Q	564186	102.42	August 5, 2007	August 5, 2010	
East Q	564187	389.16	August 5, 2007	August 5, 2010	
Caledonia N.E.	526122	20.49	January 24, 2006	January 24, 2011	
Quatse North One	527092	40.98	February 6, 2006	February 6, 2011	
	515598	389.33	June 30, 2005	November 15, 2010	
	515599	122.97	June 30, 2005	November 15, 2010	
Rupert 2	517271	102.55	July 12, 2005	November 15, 2010	
Quatse East 1	513736	184.51	June 1, 2005	November 15, 2010	
	506022	287.01	February 6, 2005	November 15, 2010	
	505458	163.96	February 2, 2005	November 15, 2010	
Rupert Arm 2	515602	20.50	June 30, 2005	November 15, 2010	
Quatse Three	516080	20.50	July 5, 2005	November 15, 2010	
Pick 2	551039	245.98	February 3, 2007	February 3, 2010	
Rupert Arm	515601	20.50	June 30, 2005	November 15, 2010	
Rupert 4	517394	41.01	July 12, 2005	November 15, 2010	
Quatse Lake South	513737	184.47	June 1, 2005	November 15, 2010	
Caledonia N.E.	574061	491.71	January 18, 2008	January 23, 2011	

Crown Grants					
Caledonia	Lot 1294				
Cascade	Lot 1995				
Bluebell	Lot 1996				

Mineral rights are acquired in British Columbia via the Mineral Act and regulations. Assessment work is required each year in the amount of $4 per year per hectare for the first three years and $8 per hectare on each claim over 3 years.

Caledonia Project





Legend

MINFILE Status
- Producer
- Past Producer
- Developed Prospect
- All others

Indian Reserves
National Parks
Parks
MTO Grid (MTO)

Mineral Tenure (current)
- Mineral Claim
- Mineral Lease

Mineral Reserves (current)
- Placer Claim Designation
- Placer Lease Designation
- No Staking Reserve
- Conditional Reserve
- Release Required Reserve
- Surface Restriction
- Recreation Area
- Others

Survey Parcels
BCGS Grid

Contours (1:250K)
- Contour - Index
- Contour - Intermediate
- Areaof Exclusion
- Areaof Indefinite Contours

Transportation - Points (TRIM)
- Helipad

Transportation - Lines (TRIM)
- Airfield

0 1250 2500 m.

Scale: 1:71,466

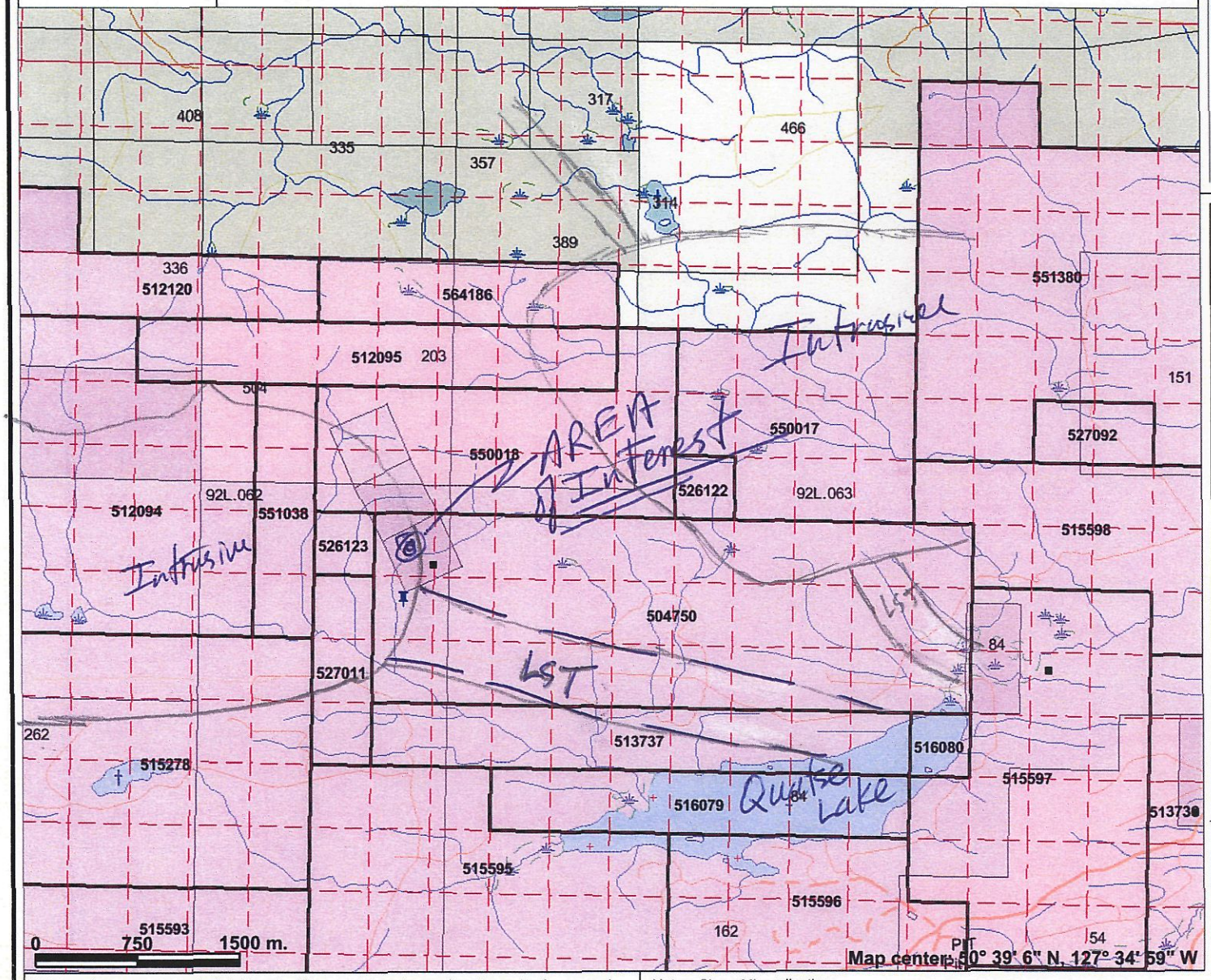
This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

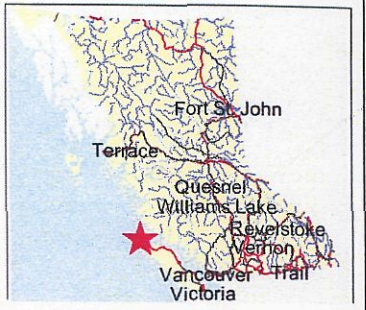
FIG 3

CLAIM MAP

Caledonia Area

LOCATION MAP





Legend

MINFILE Status
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- All others

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MTO Grid (MTO)

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- Contour - Index
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- Areaof Indefinite Contours

Transportation - Points (TRIM)
- Helipad

Transportation - Lines (TRIM)
- Airfield

N

Scale: 1:43,575

Notes: Skarn Mineralization

FIGURE 4

Detail Claim Map

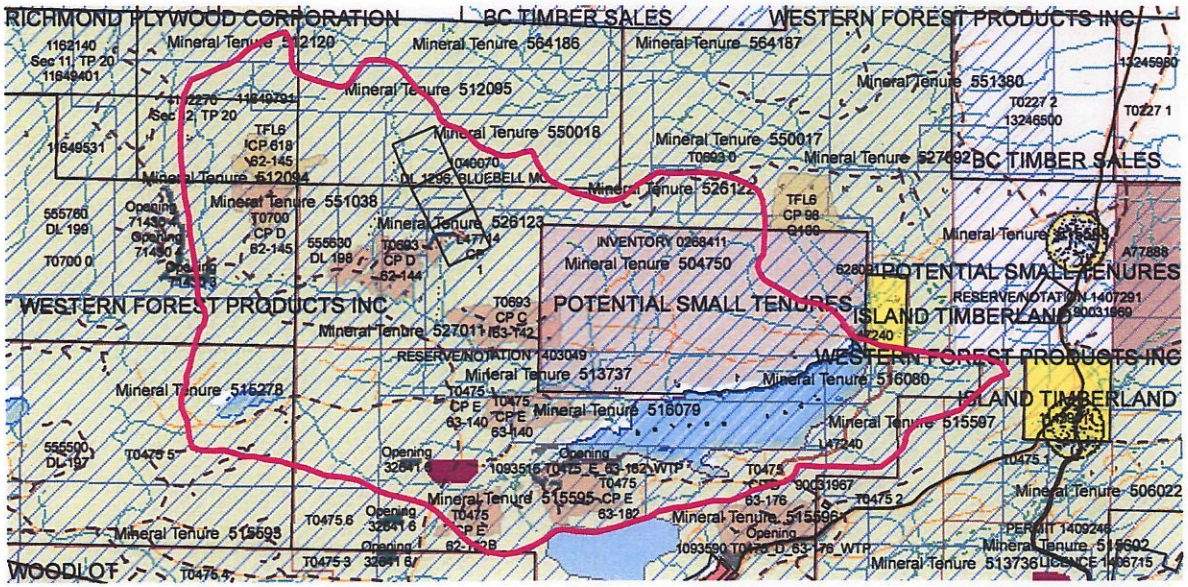


FIGURE 5
Forest Tenure MAP

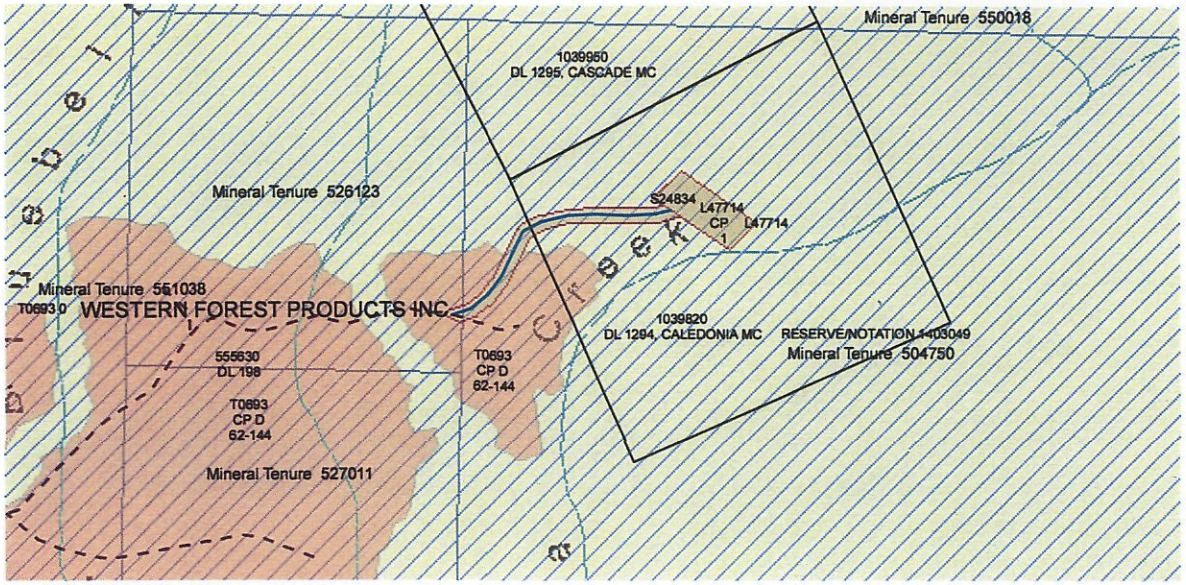


FIG 5
Forest Tenure
Map

HISTORY

The Caledonia Property was discovered prior to 1923. At that time, stripping and open-cutting on the Caledonia and Cascade claims exposed a band of mineralization first seen in the creek bed nearby. The adit had advanced 50 feet but not far enough to intercept the mineralization. The body of mineralization in the creek was 30 feet wide and assayed – copper 3.2%, zinc 10% and silver 16 oz/ton. Open cut No. 2, 300 feet west from Caledonia Creek exposed 9 feet of mineralization assaying – copper 3.2%, Zinc (not assayed) and silver 19 oz/ton.

Further work in the next two years included new open cuts, demonstrating continuity of the mineralized band in excess of 300 feet in a N 60° W (mag) direction. All open cuts which reached bedrock showed strong mineralization. (Open cuts 1A and 2A, though 10 feet deep, did not reach bedrock.) As well, the crosscut adit was extended to intersect the mineralization.

No further work of any consequence was done on the property until 1968 when it was acquired by North Island Mines Ltd. In 1968 access roads were upgraded, cat trenching was done, additional claims were staked (total 170 claims), geochemical soil surveys were done and 15 diamond drill holes were completed totalling 2,300 feet. (BCDM 1968). Following the diamond drilling, a tonnage estimate was made by D. C. Malcolm, P.Eng. using cut-off grades. This estimate was 75,000 tons averaging 6.09% copper, 7.45% zinc, 0.6% lead, 20.54 oz/ton silver and 0.01 oz/ton gold. The zone was reported to have good extension possibilities to the west (GCNL August 15, 1972). Trenches and workings are shown in the accompanying plan figures 5 and 7 (C. R. Saunders, 1968), and drill Holes are shown in Figure 2. D. C. Malcolm indicates that the massive mineralization is "younger", replacing pre-existing skarn (personal communication 1982).

Additional zone 350 feet uphill from the above-mentioned zone trenched by C. M. and S. in 1929 was reported to exhibit a magnetite-copper "vein" 2 to 5 feet wide exposed for nearly 1,000 feet having an east-west strike and 80° south dip. This zone, occurring at the top of a band of grey crystalline limestone not more than 50 feet thick, is underlain and overlain by andesitic lava flows. A similar zone on the Scotia claim "includes a fair amount of chalcopyrite, sphalerite and galena" and may represent the same zone exposed in the Cascade trenches.

On the Bluebell claim, roads and trenches expose numerous copper-magnetite bands in the Karmutsen volcanics. Several percussion drill holes were completed on some of the zones but results are unknown.

Trenching done on an area within the present Pick 10 claim in 1972, northwest of the Bluebell revealed copper-magnetite mineralization within the Karmutsen volcanics adjacent to the same porphyritic intrusive seen at Caledonia. The trenching exposed copper mineralization over an area 1,200 feet by 400 feet (D. C. Malcolm in GCNL). Six surface grab samples from various zones assayed from 0.39% Cu to 2.0% Cu. Several percussion drill holes were completed but results have not been located.

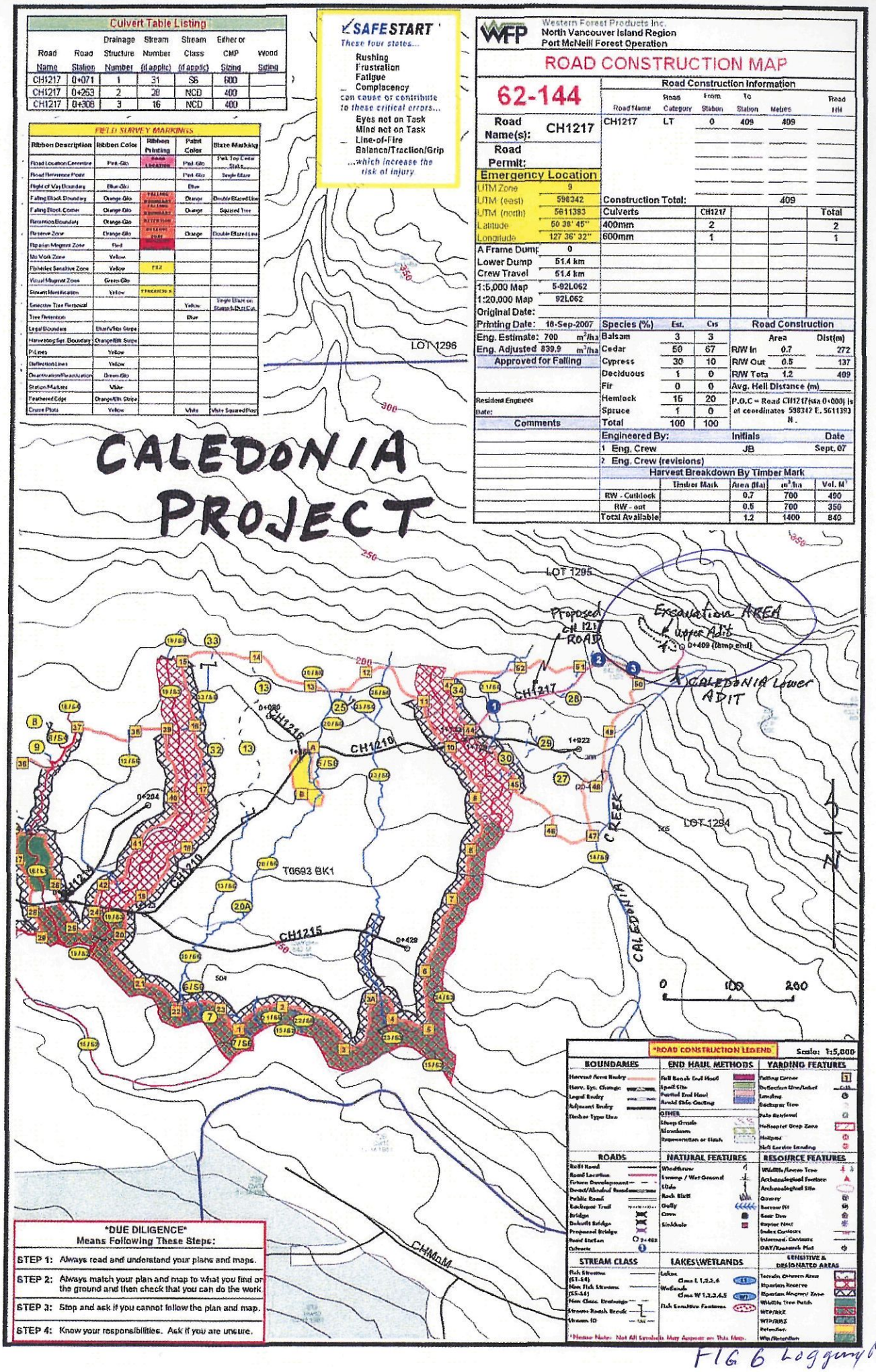


FIG 6 Logging Map

Culvert Table Listing

Road Name	Road Station	Drainage Structure Number	Stream Number (if applic)	Stream Class (if applic)	Either or CMP Sizing	Wood Sizing
CH1217	0+071	1	31	S6	600	
CH1217	0+253	2	28	NCD	400	
CH1217	0+308	3	16	NCD	400	

FIELD SURVEY MARKINGS

Ribbon Description	Ribbon Color	Ribbon Printing	Paint Color	Blaze Marking
Road Location Centerline	Pink-Glo	ROAD LOCATION	Pink-Glo	Pink Top Cedar Stake
Road Reference Point			Pink-Glo	Single Blaze
Right of Way Boundary	Blue-Glo		Blue	
Falling Block Boundary	Orange-Glo	FALLING BOUNDARY	Orange	Double Blazed Line
Falling Block Corner	Orange-Glo	FALLING BOUNDARY	Orange	Squared Tree
Retention Boundary	Orange-Glo	RETENTION		
Reserve Zone	Orange-Glo	RESERVE ZONE	Orange	Double Blazed Line
Riparian Mngmnt Zone	Red	RIPARIAN MENT ZONE		
No Work Zone	Yellow			
Fisheries Sensitive Zone	Yellow	FSZ		
Visual Mngmnt Zone	Green-Glo			
Stream Identification	Yellow	STREAM ID G		
Selective Tree Removal			Yellow	Single Blaze on Stump & Butt Cut
Tree Retention			Blue	
Legal Boundary	Blue/White Stripe			
Harvesting Sys. Boundary	Orange/Blk Stripe			
P-Lines	Yellow			
Deflection Lines	Yellow			
Deactivation/Reactivation	Green-Glo			
Station Markers	White			
Feathered Edge	Orange/Blk Stripe			
Cruise Plots	Yellow		White	White Squared Post

SAFESTART

These four states...

Rushing
Frustration
Fatigue
_ Complacency

can cause or contribute to these critical errors...

Eyes not on Task
Mind not on Task
_ Line-of-Fire
Balance/Traction/Grip

...which increase the risk of injury.

Western Forest Products Inc.
North Vancouver Island Region
Port McNeill Forest Operation

ROAD CONSTRUCTION MAP

62-144

Road Name(s): CH1217

Road Permit:

Emergency Location

UTM Zone	9
UTM. (east)	598342
UTM. (north)	5611393
Latitude	50 38' 45"
Longitude	127 36' 32"

A Frame Dump	0
Lower Dump	51.4 km
Crew Travel	51.4 km
1:5,000 Map	5-92L062
1:20,000 Map	92L062
Original Date:	
Printing Date:	18-Sep-2007
Eng. Estimate:	700 m^3/ha
Eng. Adjusted	839.9 m^3/ha

Approved for Falling

Resident Engineer

Date:

Comments

Road Construction Information

Road Name	Road Category	From Station	To Station	Metres	Road HM
CH1217	LT	0	409	409	
Construction Total:				409	

Culverts	CH1217			Total
400mm	2			2
600mm	1			1

Species (%)	Est.	Crs
Balsam	3	3
Cedar	50	67
Cypress	30	10
Deciduous	1	0
Fir	0	0
Hemlock	15	20
Spruce	1	0
Total	100	100

Road Construction

	Area	Dist(m)
R/W In	0.7	272
R/W Out	0.5	137
R/W Tota	1.2	409

Avg. Heli Distance (m)_____

P.O.C = Road CH1217 (sta 0+000) is at coordinates 598342 E, 5611393 N.

Engineered By:	Initials	Date
1 Eng. Crew	JB	Sept. 07
2 Eng. Crew (revisions)		

Harvest Breakdown By Timber Mark

	Timber Mark	Area (Ha)	m^3/ha	Vol. M^3
RW - Cutblock		0.7	700	490
RW - out		0.5	700	350
Total Available		1.2	1400	840

CALEDONIA PROJECT

LOT 1296
LOT 1295
LOT 1294
T0693 BK1
CH1216
CH1210
CH1215
CH1217
Proposed CH 1217 ROAD
Excavation AREA
Upper Adit
0+409 (temp end)
CALEDONIA Lower ADIT
CALEDONIA CREEK
0+090
0+204
1+922
0+429
CHMoM
0 100 200

*ROAD CONSTRUCTION LEGEND — Scale: 1:5,000

BOUNDARIES
Harvest Area Bndry
Harv. Sys. Change
Legal Bndry
Adjacent Bndry
Timber Type Line

END HAUL METHODS
Full Bench End Haul
Spoil Site
Partial End Haul
Avoid Side Casting

OTHER
Steep Grade
Blowdown
Regeneration or Slash

YARDING FEATURES
Falling Corner
Deflection Line/Label
Landing
Backspar Tree
Pole Retrieval
Helicopter Drop Zone
Helipad
Heli Service Landing

ROADS
Built Road
Road Location
Future Development
Deact/Abndnd Road
Public Road
Backspar Trail
Bridge
Debuilt Bridge
Proposed Bridge
Road Station
Culverts

NATURAL FEATURES
Windthrow
Swamp / Wet Ground
Slide
Rock Bluff
Gully
Cave
Sinkhole

RESOURCE FEATURES
Wildlife/Leave Tree
Archaeological Feature
Archaeological Site
Quarry
Borrow Pit
Bear Den
Raptor Nest
Index Contours
Intermed. Contours
G&Y/Research Plot

STREAM CLASS
Fish Streams (S1-S4)
Non Fish Streams (S5-S6)
Non Class. Drainage
Stream Reach Break
Stream ID

LAKES\WETLANDS
Lakes Class L 1,2,3,4
Wetlands Class W 1,2,3,4,5
Fish Sensitive Features

SENSITIVE & DESIGNATED AREAS
Terrain Concern Area
Riparian Reserve
Riparian Mngmnt Zone
Wildlife Tree Patch
WTP/RRZ
WTP/RMZ
Retention
Wtp/Retention

*Please Note: Not All Symbols May Appear on This Map.

DUE DILIGENCE
Means Following These Steps:

STEP 1: Always read and understand your plans and maps.

STEP 2: Always match your plan and map to what you find on the ground and then check that you can do the work.

STEP 3: Stop and ask if you cannot follow the plan and map.

STEP 4: Know your responsibilities. Ask if you are unsure.

FIG 6 Logging Map

REGIONAL GEOLOGY

Comprehensive geological mapping of Northern Vancouver Island was carried out during the late 1960's, the bulk of it by Dr. Jan Muller of the Geological Survey of Canada with major assistance by Dr. Kenneth Northcote of the B.C. Department of Mines and J. A. Jeletzky. The results of their mapping are summarized on G.S.C. Map 1552A. More recently, mapping was carried out on map sheets NTS 97L/12 and 92L/11W by Hammock, J. L. et. al in the 1990's. The result of this work, which was produced by the Geological Survey Branch of the British Columbia government, is available in both digital and hard copy formats.

The basement upon which the rocks of northern Vancouver Island were laid down is probably of Middle to Upper Paleozoic Age. At the time of deposition, the landmass, which now makes up Vancouver Island, was located in the equatorial regions of the Pacific Ocean. It consisted of felsic to basic volcanics deposited in a submarine environment. The very important copper-zinc-gold-silver ore bodies at Western Mines' Buttle Lake operations were developed within this sequence.

In Upper Triassic time (about 200 million years ago), these basement rocks were covered by a series of pillow lavas and flows largely of basaltic composition. Total thicknesses extruded probably exceed 2400 metres. These rocks are known as the Karmutsen Formation.

Following this period of basaltic volcanism, carbonate rocks (the Quatsino Limestone) accumulated to thicknesses of about 300 metres, although a much thinner section appears to be the rule north of Holberg Inlet. Of importance from an economic standpoint is the correlation between the Karmutsen – Quatsino section of Vancouver Island and the Nikolai Greenstone – Chitistone Limestone section of southeastern Alaska, both of which are part of the same Central Pacific terrane. The Nikolai, like the Karmutsen, is considerably enriched in copper as compared with the average basalt. The Chitistone Limestone was host to the very high-grade Kennecott Copper deposit, which was apparently derived by re-concentration of the much lower-grade copper disseminated through large volumes of Nikolai rock.

Above the Quatsino Formation there is generally found a clastic section of which appears to be of slightly different age and of varying composition in different parts of northern Vancouver Island. Depending on age, composition and location, it is known as the Parson Bay Formation or the Harbledown Formation. The Parson Bay is somewhat calcareous and of upper-most Triassic age while the Harbledown is more argillitic and of lower-most Jurassic age. Above the sedimentary section are the Jurassic Bonanza Volcanics, an assemblage of flows, tuffs and fragmentals largely of andesitic composition, but with minor basaltic and rhyodacitic sections.

During and after eruption of the Bonanza Volcanics, granitic bodies were emplaced within the Karmutsen-Quatsino-Bonanza sequence. These bodies ranged in size from dykes and small plugs to masses of batholithic proportions. Some of these intrusives formed the underground reservoirs, which broke through to surface to deposit the Bonanza Volcanics.

Reaction between these very hot, high-level vent zones and circulating groundwater and seawater led to the development of numerous zones of highly altered rock, within or adjacent to which are copper-gold-molybdenum deposits. The alteration zones are generally characterized by the presence of large amounts of silica, clay minerals, pyrite, pyrophyllite and laumontite. Of the various alteration zones, perhaps 90% are located in the belt immediately north of Rupert and Holberg Inlets particularly in the vicinity of the PEM100 Quarry and Pemberton Hills, which are covered by the Apple Bay and Jody Claims.

At some time during the latter part of the Jurassic, following a long period of northward drift, the Vancouver Island – Queen Charlotte Islands – Southeast Alaska terrane, apparently somewhat fragmented, collided with and fused to the North American Continent. Following this accretion, and a

Figure 4-1 Regional Geology – Northern Vancouver Island

REGIONAL GEOLOGY
NORTHERN VANCOUVER ISLAND

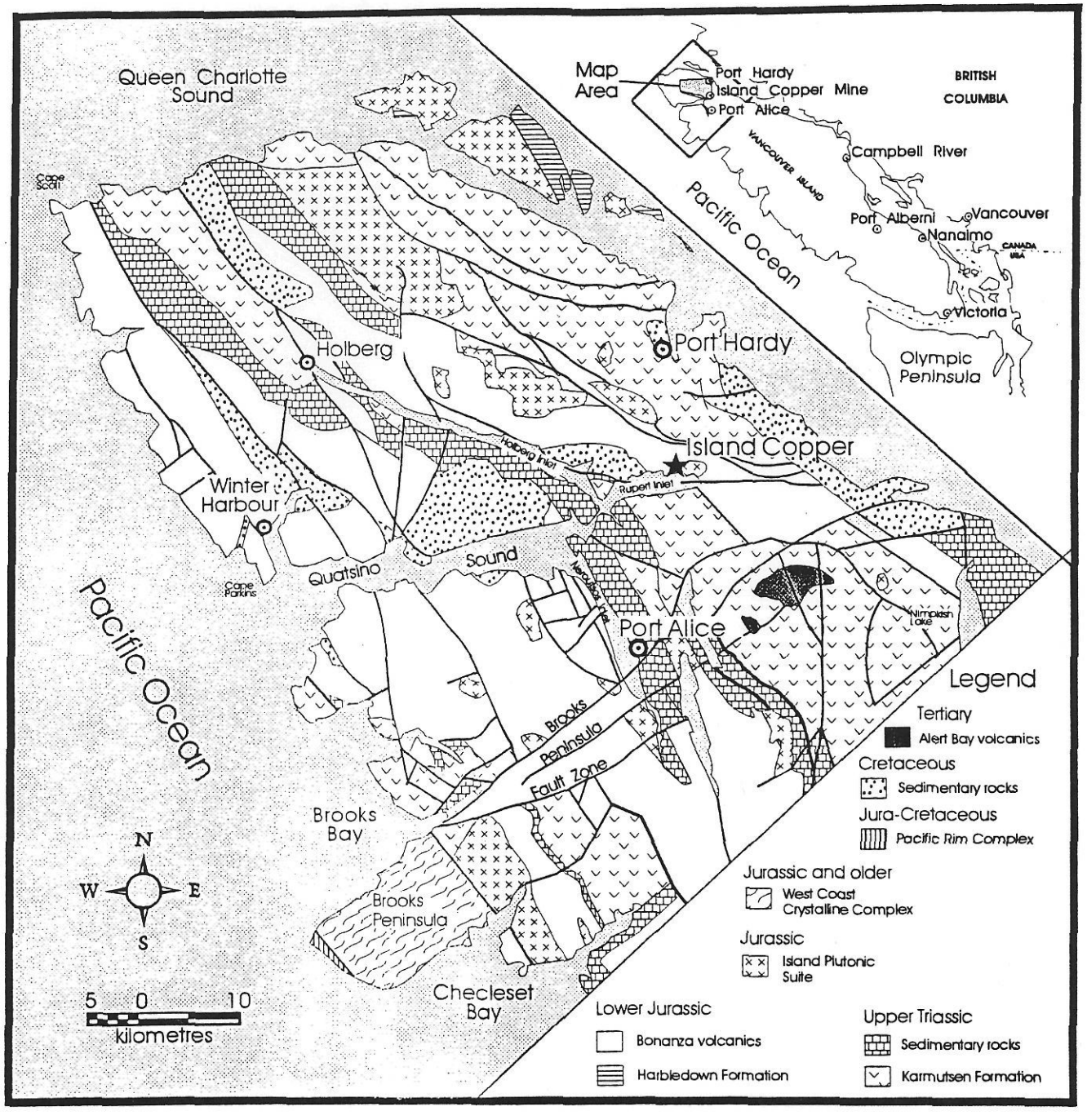


Figure 7
Regional Geology

general elevation of the landscape probably caused related to the mechanics of collision, highland portions of the terrane were eroded into basinal areas, forming continental transgressive sandstones of Cretaceous age, which included numerous coal measures, those of the Nanaimo basin being most notable.

One of the small Lower Cretaceous basins of sandstone and conglomerate extends from the western edge of the Island Copper Mill area to the vicinity of Apple Bay, which lies to the west of the claims. Since the deposition of these various sandstones, there has been minor volcanic and intrusive activity on the island.

Figure 4-2 Regional Geology – Holberg Inlet

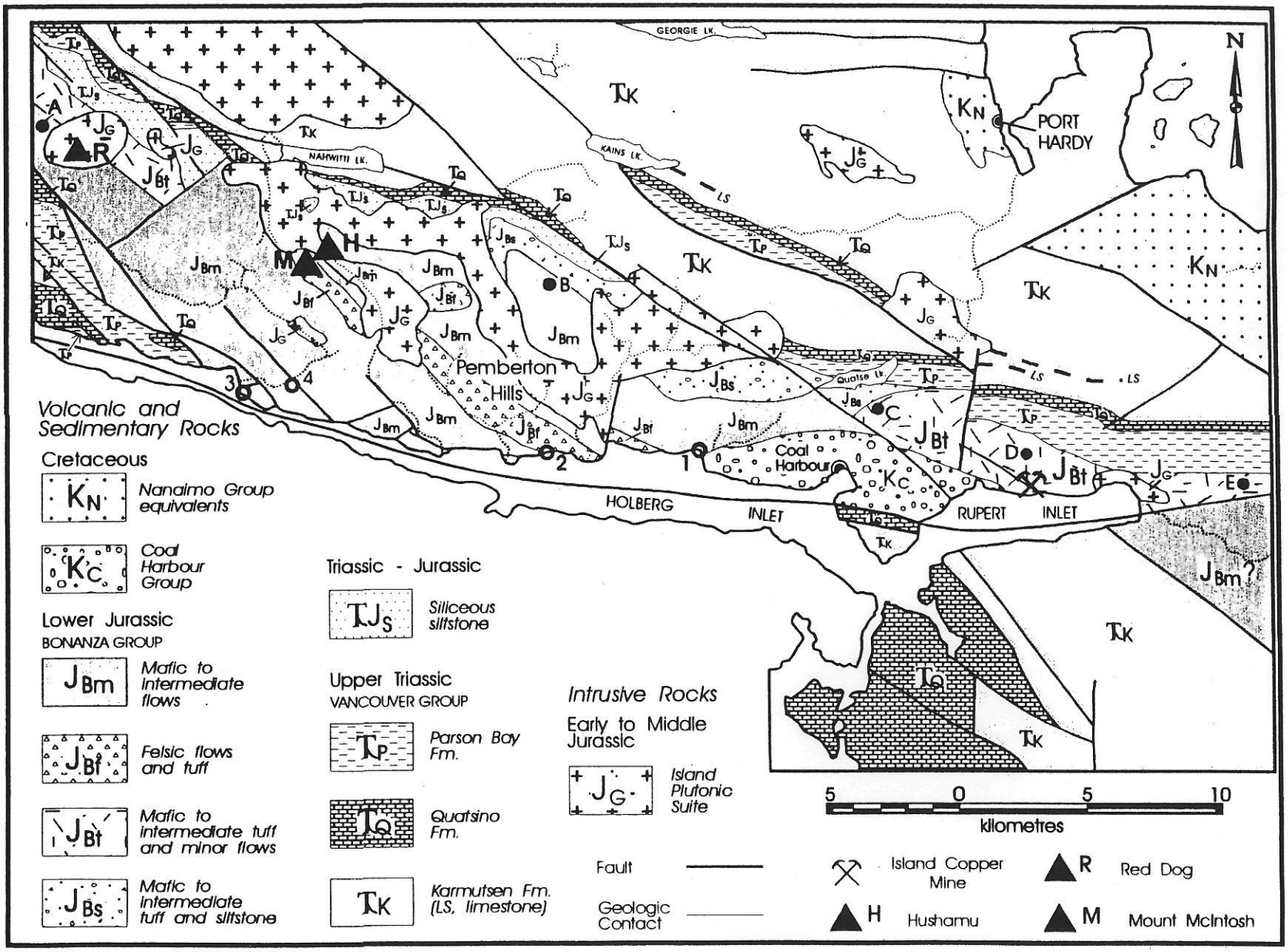


FIGURE 8
Local Geology

LOCAL GEOLOGY and MINERALIZATION

The Caledonia Property was discovered prior to 1923. At that time, stripping and open-cutting on the Caledonia and Cascade claims exposed a band of mineralization first seen in the creek bed nearby. The adit had advanced 50 feet but not far enough to intercept the mineralization. The body of mineralization in the creek was 30 feet wide and assayed – copper 3.2%, zinc 10% and silver 16 oz/ton. Open cut No. 2, 300 feet west from Caledonia Creek exposed 9 feet of mineralization assaying – copper 3.2%, Zinc (not assayed) and silver 19 oz/ton.

Further work in the next two years included new open cuts, demonstrating continuity of the mineralized band in excess of 300 feet in a N 60° W (mag) direction. All open cuts which reached bedrock showed strong mineralization. (Open cuts 1A and 2A, though 10 feet deep, did not reach bedrock.) As well, the crosscut adit was extended to intersect the mineralization.

The new open cuts provided the following intersections at surface:

		Cu	Zn	Pb	Ag		Au
3A	10.0 ft.	2.5%	5%	1%	12 oz/t	411.42 g/tonne	Tr.
1	6.0 ft.	2.0%	10%	0.8%	12.2 oz/t	418.28 g/tonne	Tr.
1B	2.6 ft.	0.5%	3%	Tr.	6.5 oz/t	222.85 g/tonne	Tr.

In 1927 the crosscut was advanced a further 60 feet and 300 feet of drifting planned.

In 1929 the property was bonded to Consolidated Mining and Smelting Company, who completed at least 400 feet of drifting eastward and westward from the crosscut and another drift 50 feet westward.

A raise was driven to intersect the mineralized band in open cut 3A. The work in 1929 demonstrated that the mineralized band was shallowly dipping at the contact of granodiorite and limestone and the contact was irregular, but well mineralized, with widths of 5 to 25 feet of copper/lead/zinc "ore" "which looked very promising" (BCDM, 1929).

Mineralization in this zone consisted of an irregular replacement of sphalerite, chalcopyrite, magnetite, specularite, bornite, pyrite, and galena with quartz, epidote and garnet in limestone at or adjacent to the granodiorite contact. The granodirote-volcanic contact is a fault, and the limestone overlying the volcanics (Karmutsen) dips shallowly (20° - 25°) southwestward toward the granodiorite. The skarn is developed at the base of the limestone unit, which appears to be overlain by further volcanic flows. The rocks are cut by dark green dykes (lamprophyre?) and several granodiorite dykes. Amethystine quartz is present in silicified limestone areas in the drift, and thin stringers of sphalerite have been traced into the granodiorite, which is strongly altered near the contact and turned pinkish by the addition of K-feldspar, as discrete veinlets and also as pervasive alteration of the intrusive.

North of Quatse Lake, near the logging access road which gives access to the Caledonia claims, several areas of disseminated copper and skarn copper mineralization are known.

The area is underlain by the typical Karmutsen-Quatsino-Parsons Bay and Bonanza sequence trending westerly to north westerly and dipping shallowly southward. The granodirotic Island Intrusion is in probable fault contact with the Karmutsen volcanics in the northern part of the area, and it is in the Karmutsen volcanics and Karmutsen-Quatsino contact near the intrusive contact that the best mineralization is present. (Figure 8)

Exploration work was initiated in this area by Thomas Kirk, North Island Mines in 1968. Copper mineralization was discovered on the banks of Kettle Pot Creek and on the series of rocky hills known as

Caledonia Area

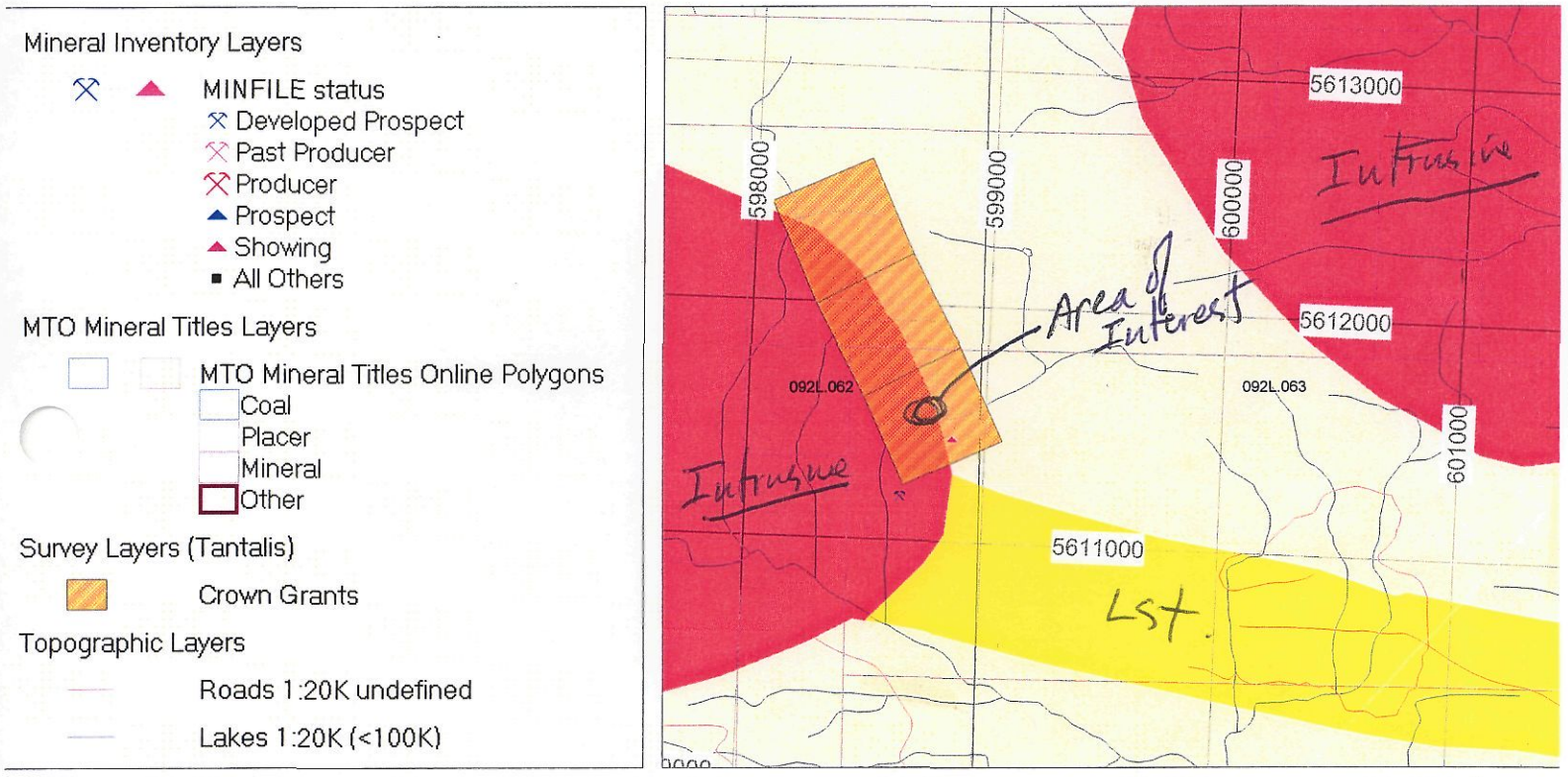


FIGURE 9

~~REGIONAL~~ LOCAL CLAIM GEOLOGY

Figure 9

Hill 140, 160 and 155. In 1972 geological mapping, geochemical sampling and magnetometer surveys were completed under the supervision of R. K. Germundsen, Ph.D. with engineering consultation provided by D. C. Malcolm, P. Eng.

On the Hill 140 occurrence, a grid was cut and flagged and the area was gridded with 265 blast holes. Twenty-five of these pits, covering an area 400 feet by 400 feet were sampled with 40 lb. samples. Results ranged from 0.18% Cu to 0.80% Cu averaging 0.29% copper (GCNL, August 16, 1972). The mineralized zone coincides with a prominent 2,000 gamma airborne and ground magnetometer survey (Map 8b).

The rocks are reported to be strongly fractured basic volcanics – the fracturing may result from concentration of northeast and east northeast fault intersections in an area 2,600 feet long by 1,500 feet wide (R. K. Germundson, 1973). Fractures have abundant chlorite, calcite, epidote and K-feldspar with silica, pyrite and chalcopyrite.

In 1973, a drillhole (73-1) placed approximately halfway between Kettle Pot Creek and 140 Hill was trilled N 10° E and 45° approximately 600 feet. Chalcopyrite, fracturing and K-feldspar alteration increased with depth in the hole but assays are not known at this time.

The Kettle Pot zone centred on the creek, is associated with a magnetic anomaly and an airborne EM conductor (Map 8b). Magneittie and copper mineralization is present on both banks of the creek.

A north-east trending coincident mag anomaly with EM response is centred on Kettle Pot Creek 400 metres north of the above-mentioned zone, apparently within the intrusive and may represent an area of alteration and mineralization.

Copper is also present in two other zones tested by pits and drill holes. Zone 160 on geologic strike northwest of the 140 zone has significant bornite disseminations in fine banded silicic tuff between amygdaloidal andesite units (A. O. Birkeland).

Zone 165 has numerous pits with copper and is tested partially by DDH 165-1 and 165-2 (results unknown).

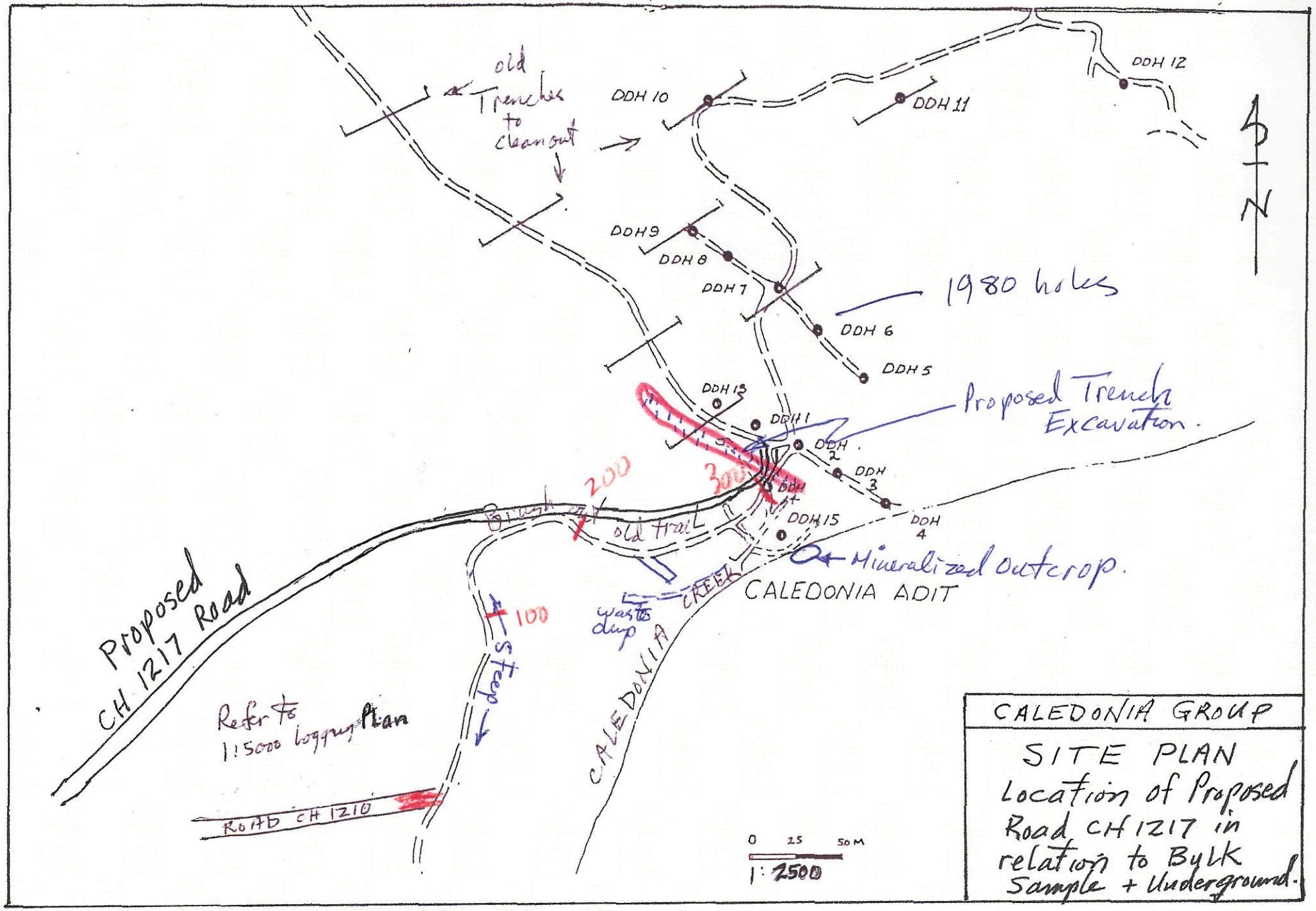
A zone known as the 155 zone, situated 775 metres southwest of Hill 140 has copper mineralization in a 5 ft. skarn band. DDH 155-1 drilled in 1972 extends northward at -45° encountered 10 feet of skarn in altered andesite. Additional skarn bands trending southwest occur in several exposures from 200 to 5000 metres northwest of DDH 155-1. It is not known whether these have been evaluated.

A soil geochemical survey conducted by G. Anselmo, Tricon Exploration Ltd. resulted in several anomalies with values exceeding 100 ppm and ranging up to 800 ppm. The largest of these are shown on Map 8c and coincide with areas of known mineralization.

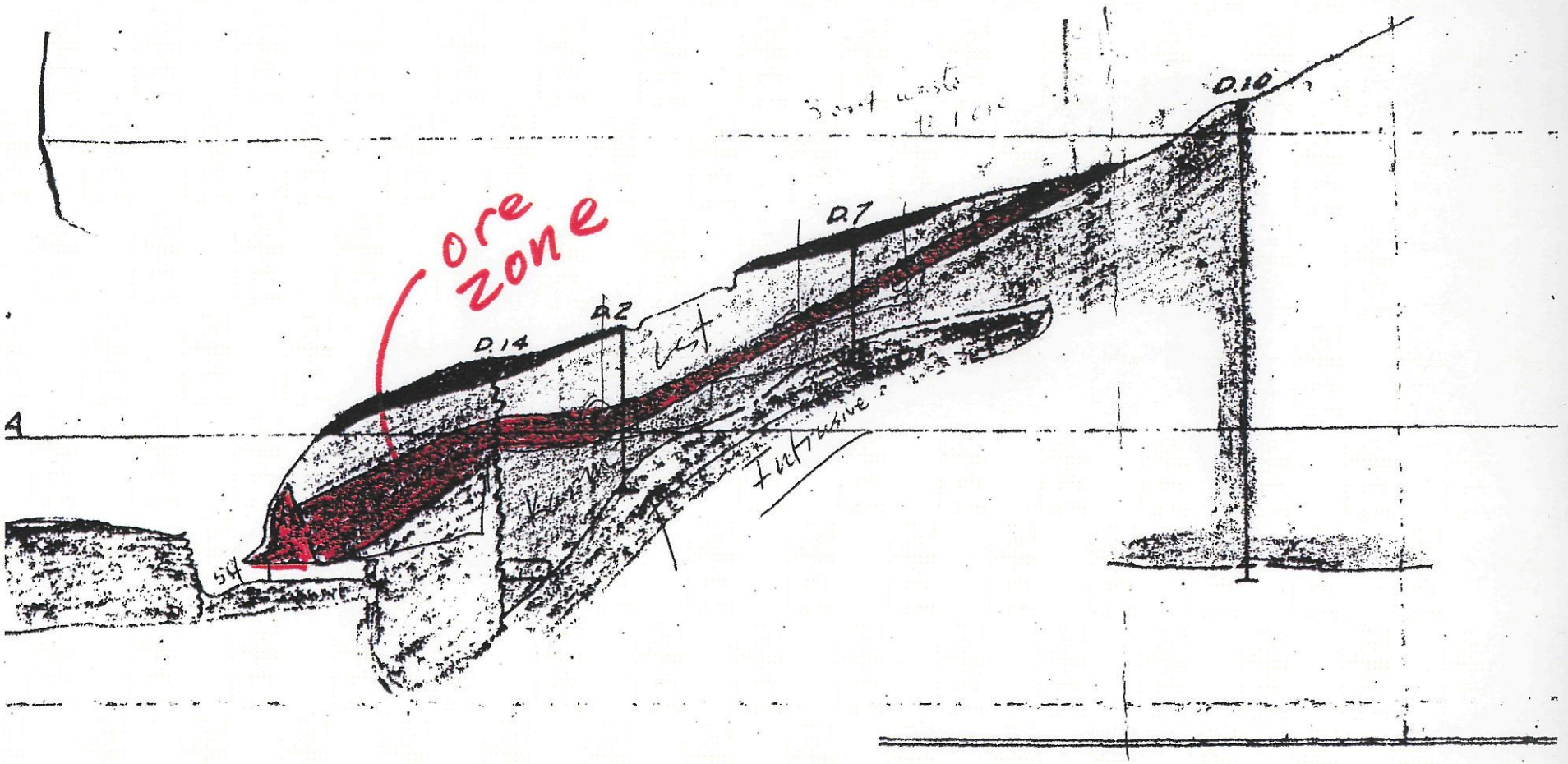
To test all targets on the property, D. C. Malcolm recommended a two phase program with 35 percussion holes in Stage I.

At least 11 diamond drill holes and 67 percussion drill holes have known locations marked on the accompanying maps. Diamond drill holes numbered to 25 suggest this number of holes, and additional percussion holes are suspected to have been drilled. However, as yet, no results have been located for any of the holes.

Summarizing known data from the Caledonia-Quatse Lake area, 20 drill holes in 1968 outlined 75,000 tons of high grade copper-zinc-silver mineralization at the Caledonia plrospect and numerous additional skarn and disseminated copper showings occur along the trend from Quatse River 7km northwestward.

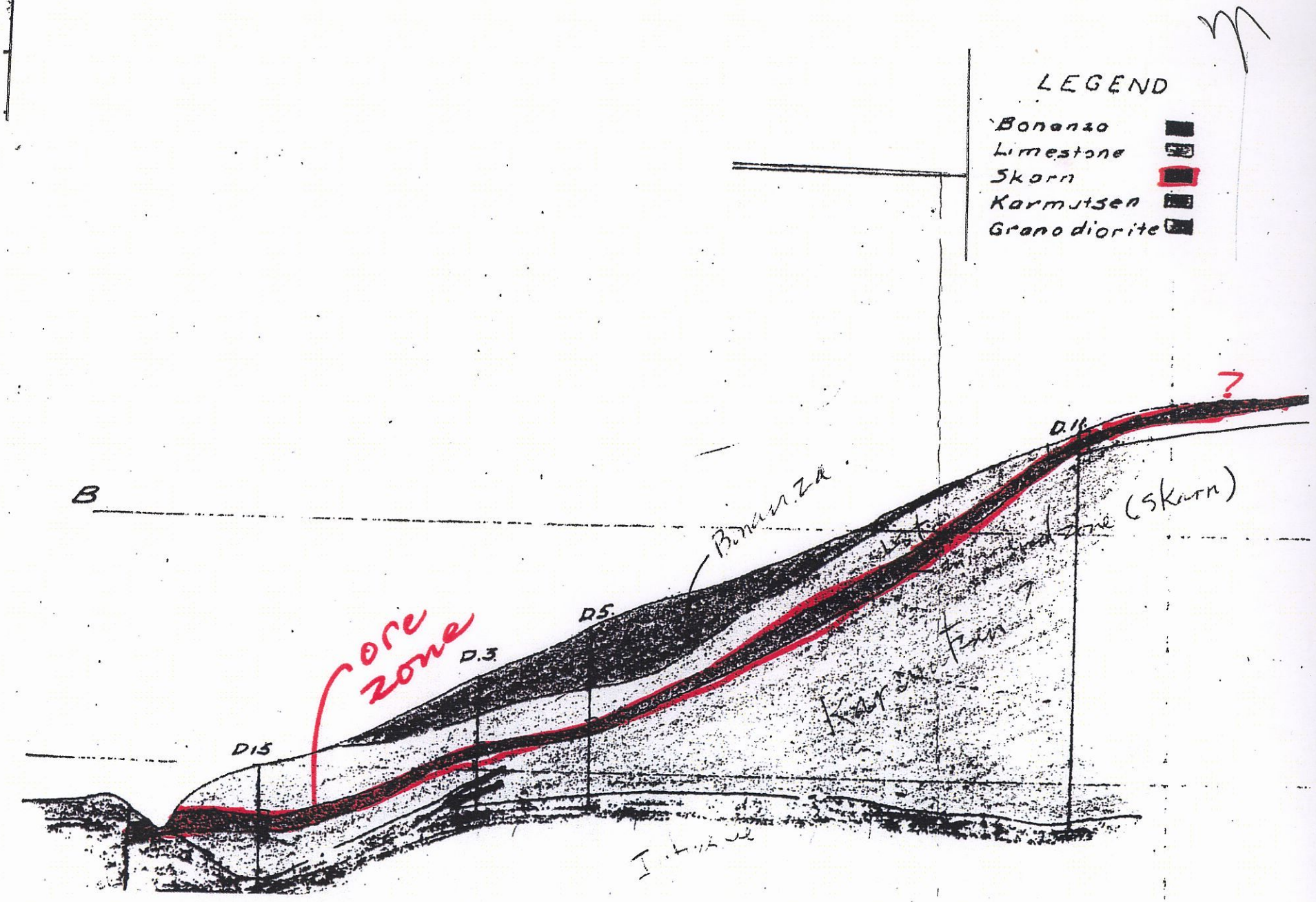

old Trenches to clean out
DDH 10
DDH 11
DDH 12
DDH 9
DDH 8
DDH 7
DDH 6
DDH 5
1980 holes
DDH 13
DDH 1
DDH 2
DDH 3
DDH 4
DDH 14
DDH 15
Proposed Trench Excavation.
200
300
Branch
old trail
Mineralized outcrop.
CALEDONIA ADIT
CALEDONIA CREEK
waste dump
100
steep
Proposed CH 1217 Road
Refer to 1:5000 logging Plan
ROAD CH 1210
0 25 50M
1:2500
CALEDONIA GROUP
SITE PLAN
Location of Proposed Road CH 1217 in relation to Bulk Sample + Underground.

Sufficient room and encouragement exists within the belt for further exploration for porphyry and high-grade skarn deposits.



LEGEND

- Bonanza
- Limestone
- Skarn
- Karmutsen
- Granodiorite


LEGEND
Bonanza
Limestone
Skarn
Karmutsen
Granodiorite
B
D15
D3
D5
D11
?
Bonanza
core zone
(skarn)

TRENCHING 2007

The 250m access trail dating from the 1920's and 1980's was cleaned out to a driveable condition with ATV's and 4x4 trucks. The old trenches were cleaned out, extended and sampled, refer to Figure 13 and assays in Appendix III.

Sampling in 2007 from the upper adit and raise returned values of 581.7 g/tonne silver (16.97 oz /ton), 4.42% Copper, 0.13% Pb, 8.97% Zn from tennanite bearing skarn. The location of this sampling is plotted on Figure 13.

The area between trench 1 and 5 was stripped with the Excavator to more clearly show the contact between the silicified limestone and altered intrusive.

Trench 1 is 20m long by 1.5m wide with variable depth averaging 1.5m deep.

Trench 2 is 18m x 1.5m x 1.2m.

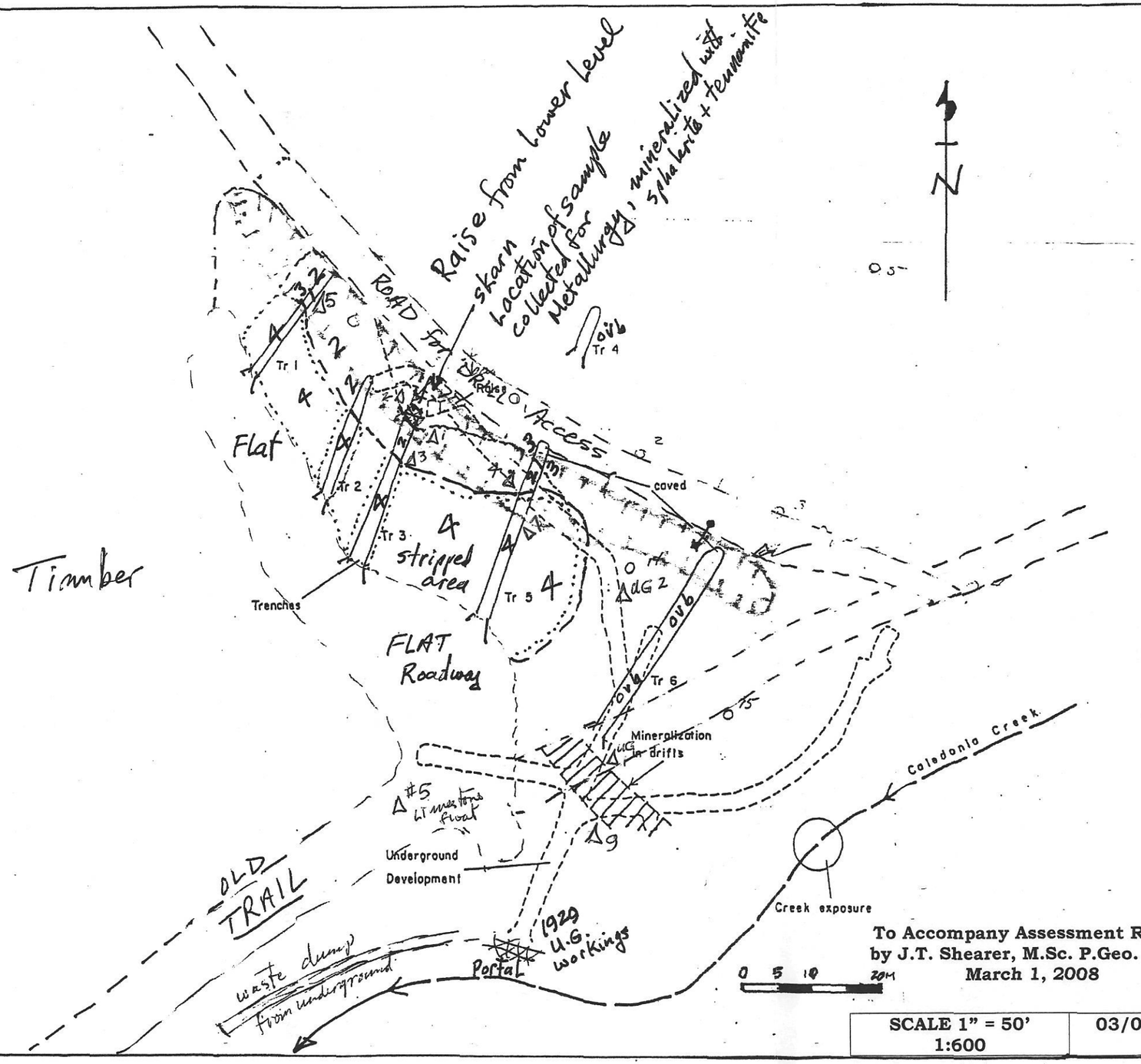
Trench 3 is 25m x 1.5m x 2m.

Trench 4 is 8m x 1.5m x 1.2m in overburden.

Trench 5 is 27m x 1.5m x 1.8m.

Trench 6 is 31m x 1.5m x 2.5m all in overburden.

An all weather road was engineered to provide access from the end of Logging road CH1020.



LEGEND

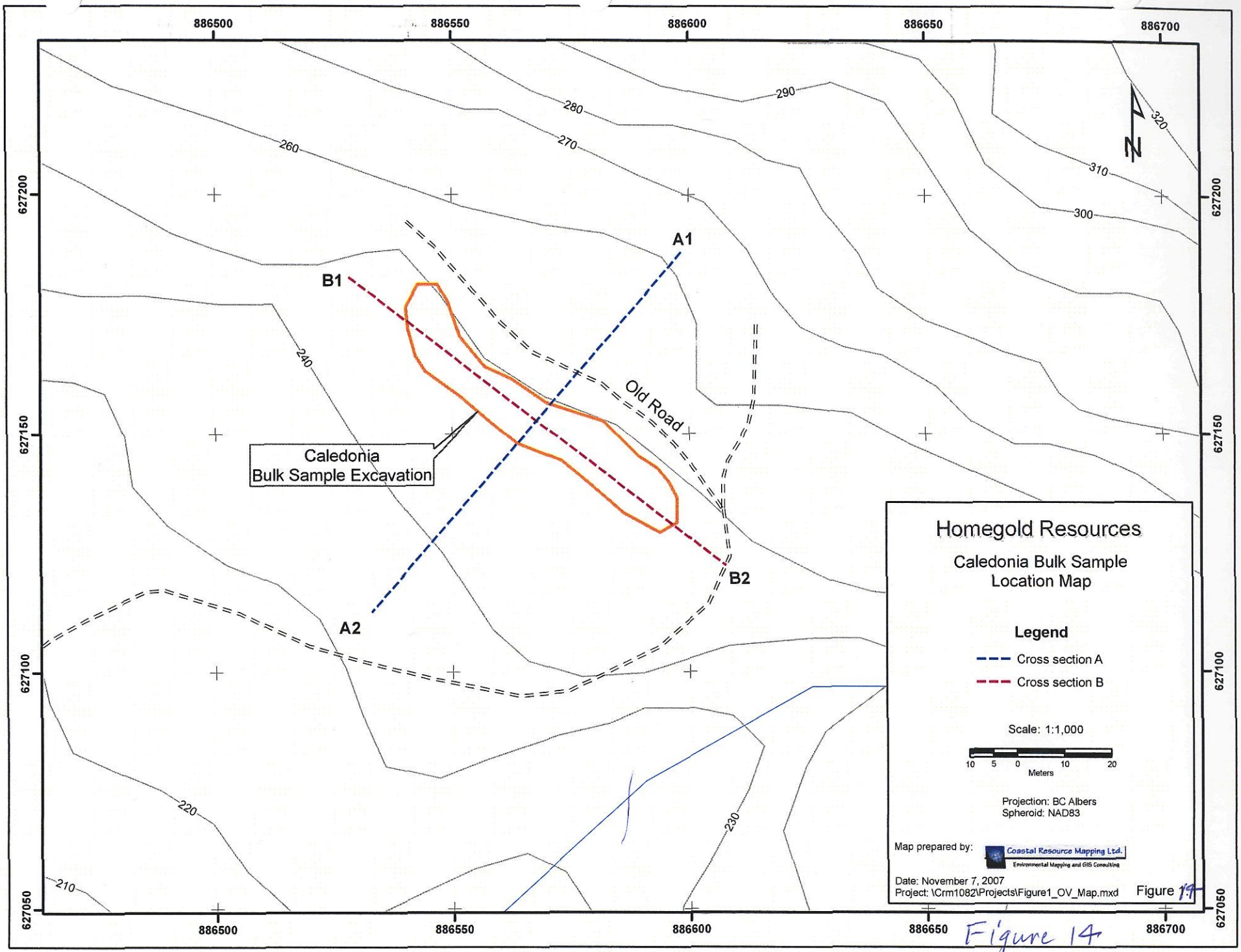
1	SKARN
2	SILICEOUS ALTERED LIMESTONE
3	LIMESTONE
4	INTRUSIVE
	UNDERGROUND WORKINGS
	STRIPPED AREA
	TRENCH DUG IN 2007
05	OLD DRILLHOLE
ovb	overburden.
Δ5	Rock sample

To Accompany Assessment Report
by J.T. Shearer, M.Sc. P.Geo. dated
March 1, 2008

QUATSE SILVER RESOURCES INC.

CALEDONIA PROJECT
PLAN OF 2007 TRENCHES
Geology and Sample Locations

SCALE 1" = 50' 1:600	03/01/08	NTS: 92L.062 Figure 13


886500
886550
886600
886650
886700
627200
627150
627100
627050
260
270
280
290
300
310
320
240
220
210
230
N
A1
A2
B1
B2
Old Road
Caledonia
Bulk Sample Excavation
Homegold Resources
Caledonia Bulk Sample
Location Map
Legend
Cross section A
Cross section B
Scale: 1:1,000
10 5 0 10 20
Meters
Projection: BC Albers
Spheroid: NAD83
Map prepared by:
Coastal Resource Mapping Ltd.
Environmental Mapping and GIS Consulting
Date: November 7, 2007
Project: \Crm1082\Projects\Figure1_OV_Map.mxd
Figure 14

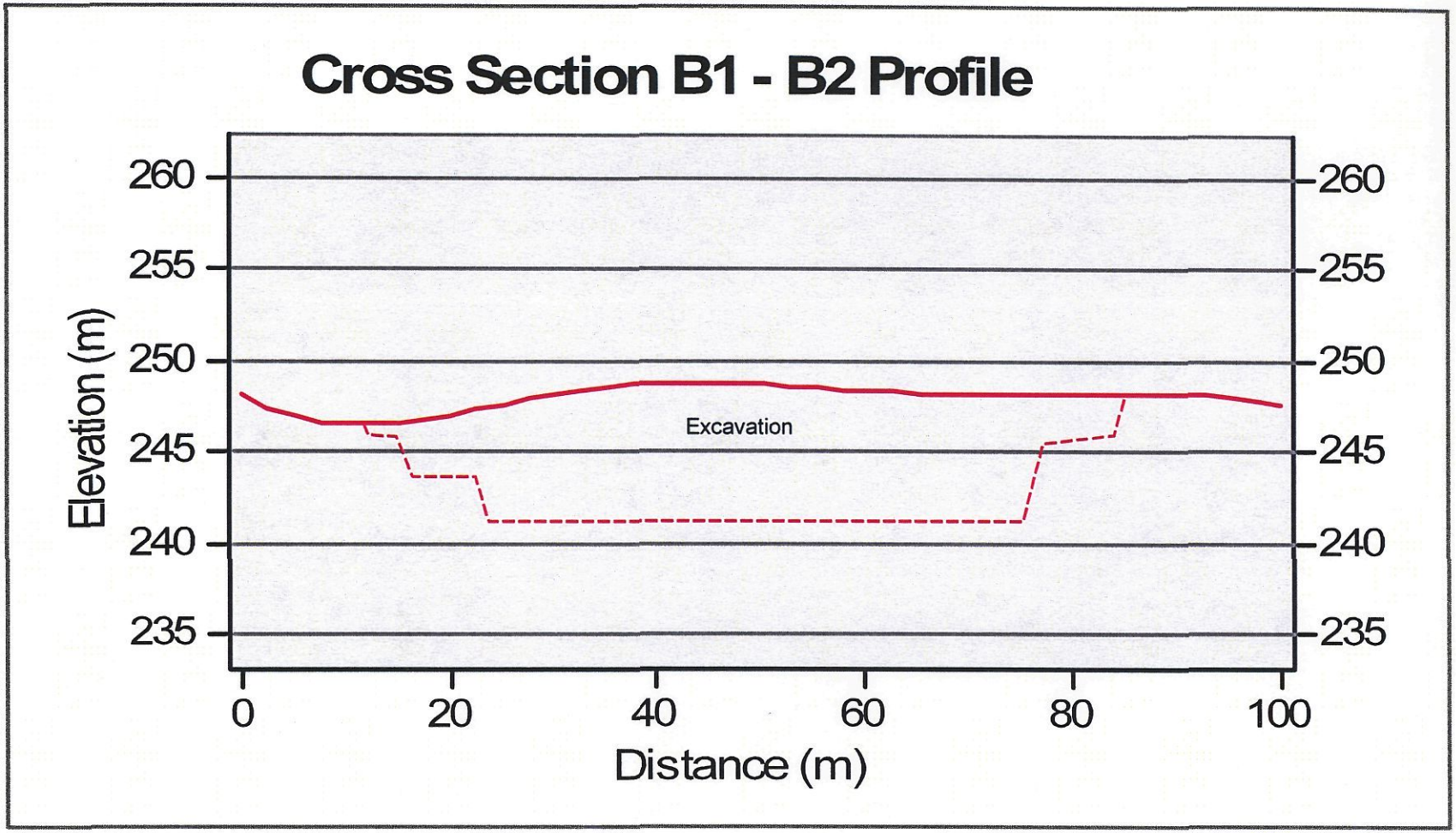


Figure 15a

Homegold Resources
Northwest - Southeast Cross Section B1 - B2
(Looking Northeast)

Figure 15a

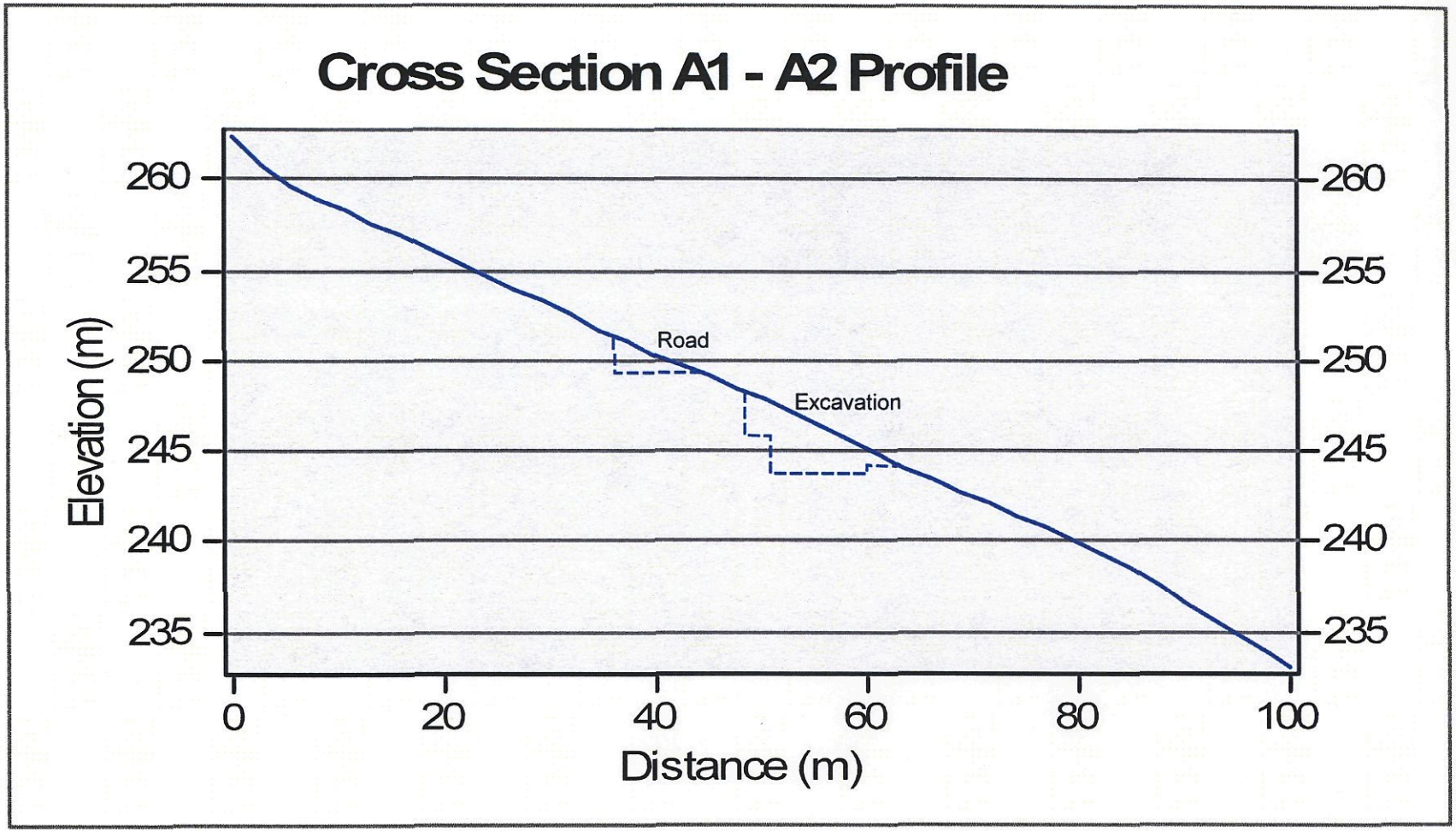


Figure 15b

Homegold Resources
Northeast - Southwest Cross Section A1 - A2
(Looking Southeast)

Figure 15b

METALLURGY 2007

The initial results of 3 rougher flotation tests are contained in Appendix IV. The initial tests have a high recovery rate. As expected from tennanite, the silver follows both the copper and arsenic. The mineralization does not require a fine primary grind, since the tailings fractions indicate that it is not grind sensitive.

Tests on separating the sphalerite from the tetrahedrite by depressing sphalerite and experiment with cleaning tests is recommended. Since it would appear that we will be able to make a suitable concentrate with silver reporting with copper (and separate zinc – to be confirmed), it is appropriate to initiate discussions between NVI and Homegold as to the possibility of shipping mineralized material from the Caledonia Project.

CONCLUSIONS AND RECOMMENDATIONS

Work to be completed in the near future is a percussion drill program to more closely define the resource available to the bulk sample open cut.

The deposit is an epidote-garnet-actinolite skarn containing mainly tennanite with minor bornite and chalcopyrite occurs at the 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.

There is also considerable larger exploration potential along the intrusive-limestone contact.

General Plans for the property are twofold:

Phase (I) Bulk sampling at least 10,000 tonnes custom milling at Myra Falls and sale of concentrates to Myra Falls. Gross value of ore approximately $400 per tonne = approximately$4 million. Cost of transportation and custom milling approximately $1.5 million. Possible profit could be up to approx $2.5 million. (Negotiations are ongoing with Myra Falls and Metallurgy tests.)

Phase (II) Longterm exploration of Property along intrusive-limestone contact. Possible budget - $1 million.

Phase (I) is anticipated to be private, need to raise $200,000 to start project, profit to be dividended out.

Phase (II) possibly IPO to going public.

(a) Metallurgical Testing	
(b) Percussion Drilling (all in cost)	
(c) First Nation Liaison and Permitting	
(d) Investigate availability and cost of 2 stage, 2 product flotation mill, nominal 125 tonnes per day size and Tailings disposal	
(e) Produce Bulk Sample, 10,000 tonnes	
(f) Build 300m haul road	

COST ESTIMATE

Phase I: mapping, soil sampling, IP/Resistivity, trenching, drilling.

1)	Soil sampling, 10 md @ $175/md.	$ 1,750.00
	250 samples (Au, As) @ $12.00/sample	3,000.00
2)	Grid preparation, surveying & cutting, 8 line-km, 32 md @ $175/md.	5,600.00
3)	IP/Resistivitiy, 8 line-km, @ $1350/line-km	10,800.00
4)	Geological mapping, 12 md @ $300/md	3,600.00
5)	Trenching (525m) 42 hr @ $85/hr	3,570.00
	Mob/Demob	500.00
6)	Drilling 1000 m @ $120/m	120,000.00
	Mob/Demob	6,000.00
7)	Site supervision, geology, sampling/drilling and trenching program	
	Geologist, 40 md @ $300/md.	12,000.00
	Assistant, 40 md @ $175/md.	7,000.00
	1000 assays @ $1650/sample (Au,As,Sb)	16,500.00
8)	Support Costs	
	- room and board, 170 md @ $50/md	8,500.00
	- vehicle, 1.5 months @ $1,500/mo	2,500.00
	- fuel	1,000.00
	- airfares, 5 x $400	2,000.00
	- consumables & equipment rental	2,000.00
	- communications & freight	1,000.00
9)	Engineering, drafting, reporting	10,000.00
10)	Grid preparation, survey, 5 line-km, 10 md @ $175/md	1,750.00
11)	Soil sampling, 10 md @ $175/md	1,750.00
	250 samples (Au,As) @ $12.00/sample	3,000.00
12)	Geology, 5 md @ $300/md	1,500.00
	Prospecting, 5md @ $175/md	875.00
	Assays, 100 (Au,As,Sb) @ $16.50/sample	1,650.00
13)	Support Costs	
	- room and board, 30 md @ $50/md	1,500.00
	- vehicle, 10 md @ $70/d	700.00
	- consumables & equipment rental	200.00
	- communications & freight	100.00
14)	Engineering, drafting, reporting	$ 1,500.00
	TOTAL PHASE I	$ 231,845.00

Respectfully submitted

J. T. (Jo) Shearer, M.Sc, P.Geo
March 1, 2008

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APPENDIX I

STATEMENT OF QUALIFICATIONS

MARCH 1, 2008

APPENDIX I

STATEMENT OF QUALIFICATIONS

I, JOHAN T. SHEARER, of 1817 Greenmount Avenue, in the City of Port Coquitlam, in the Province of British Columbia, do hearby certify:

1. I am a graduate of the University of British Columbia (B.Sc., 1973) in Honours Geology, and the University of London, Imperial College (M.Sc., 1977).

2. I have over 35 years of experience in exploration for base and precious metals and industrial mineral commodities in the Cordillera of Western North America with such companies as McIntyre Mines Ltd., J. C. Stephen Explorations Ltd., Carolin Mines Ltd. and TRM Engineering Ltd.

3. I am a fellow in good standing of the Geological Association of Canada (Fellow No. F439) and I am a member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia (Member No. 19,279).

4. I am an independent consulting geologist employed since December 1986 by Homegold Resources Ltd. Unit #5-2330 Tyner Street, Port Coquitlam, British Columbia.

   I am the author of this report entitled "Geological, Trenching and Metallugical Report on the Caledonia Property" dated March 1, 2008.

5. I have visited the property in July 22 & 23, 2007, August 15-30, 2007, September 4-8, 21-25 and October 2, 2007. I carried out geological mapping and sample collection. I am familiar with the regional geology and geology of nearby properties. I have become familiar with the previous work conducted on the Caledonia property by examining in detail the available reports, plans and sections, and have discussed previous work with persons knowledgeable of the area.

6. I own an interest in the property described herein.

Dated at Port Coquitlam, British Columbia, the 1st day of March, 2008.

J. T. Shearer, M.Sc., F.G.A.C., P.Geo.

APPENDIX II

STATEMENT OF COSTS 2007 PROGRAM

MARCH 1, 2008

Statement of Costs

Professional Services	
Wages	
J.T. Shearer, M.Sc., P.Geo., (refer to timesheet)	
14 days @ $600/day, July 22 & 23, Aug. 15-30, Sept. 4-8, 21-25 + Oct. 2, 2007	$8,400.00
GST	504.00
Subtotal	$8,904.00
Expenses (Refer to attached Expense sheet)	
Truck Rental, 4x4 fully Equipped, 14 day @ $89.90/day	1,258.60
Gas	680.00
4x4 Tuck, Sept 24-28, Oct. 2, 2007, 6 days @ $50/day	300.00
Ferry	185.00
Meals & Accommodation	1,770.00
B. MacDonald, Field Assistant, 11 days @ $200/day, Chainsaw	2,400.00
Darren Bullock, Excavator Operator	
Trenching, Sept. 17-20, 37.5 hrs @ $25/hr	937.50
Darren Bullock, Excavator Operator	
Trenching, Sept. 24-28 + Oct. 2, 39 hrs @ $25/hr	975.00
Excavator, 76.5 hrs @ $100/hr	7,650.00
Metallurgical Test Work, Westcoast Testing, G. Hawthorne, P.Eng.	5,000.00
Analytical	425.00
Road Layout, Western Forest Products Engineers	2,000.00
Environmental Report (Nova Pacific Environmental)	6,200.00
Opening Road, August 16-21/07, 5 days @ $1,200/day	6,360.00
Subtotal	$ 36,141.10
Total	**$ 45,045.10**

File Feb. 3, Event #4193757	$ 38,000.00
File Feb. 3, Event #4193760	4,000.00
Total	$ 42,000.00

APPENDIX III

ASSAY CERTIFICATES of 2008 WORK

+ Sample Descriptions.

MARCH 1, 2008

CALEDONIA PROJECT

SAMPLE DESCRIPTIONS
Plotted on Figure 13

SAMPLE #	Location	
1	at top of raise	siliceous epidote-chlorite skarn with sphalerite + Tennanite.
2	at top of raise	siliceous epidote-chlorite skarn with sphal + Tenn.
3	entrance to raise	epidote skarn, minor sulfides
4	Trench 3	very altered intrusive diorite.
5	Trench 1	Mineralized skarn.
6	Float	White crystalline Limestone - Marble.
7	Trench 5	altered siliceous andesitic dyke
8	Float	altered siliceous Limestone
UG-1	UG.	altered intrusive
UG-2	UG	Mineralized zone U.G.

CERTIFIC ' E OF ANALYSIS
iPL 07H3750

INTERNATIONAL PLASMA LABS LTD.
ISO 9001:2000 CERTIFIED COMPANY

200 - 11620 eshoe Way
Richmond, ,
Canada V7A 4V5
Phone (604) 879-7878
Fax (604) 272-0851
Website www.ipl.ca

Homegold Resources
Project : Caledonia
Shipper : Johan T. Shearer
Shipment: PO#: None Given
Comment:

10 Samples Print: Sep 07, 2007 In: Aug 23, 2007 Page 1 of 2 [375018:03:25:70090707:001]

CODE	AMOUNT	TYPE	PREPARATION DESCRIPTION	PULP	REJECT
B21100	10	Rock	crush, split & pulverize to -150 mesh.	12M/Dis	03M/Dis

NS=No Sample Rep=Replicate M=Month Dis=Discard

Analytical Summary
Analysis: Ag Cu Zn Pb ABA / ICP(AqR)30

##	Code	Method	Units	Description	Element	Limit Low	Limit High
01	0802	Spec	Kg	Initial Weight in Kilo-gram	Weight	0.01	99999.00
02	0357	MuAICP	ppm	Ag Assay - Multi-Acid by AA/ICP in ppm	Silver	0.5	1000.0
03	0113	MuAICP	%	Cu Assay - Multi-Acid by AA/ICP in %	Copper	0.01	20.00
04	0118	AsyMuA	%	Pb Assay - Multi-Acid by AA/ICP in %	Lead	0.01	20.00
05	0140	MuAICP	%	Zn Assay - Multi-Acid by AA/ICP in %	Zinc	0.01	20.00
06	0135	Leco	%	S(tot) Assay by LECO in %	Sulfur (LECO)	0.01	100.00
07	7051	ABA	Paste	Paste pH	pH	0.001	14.000
08	7052	ABA	Kg/MT	Neutralization Potential (NP)-CaCO3	NP	0.01	999.00
09	7053	ABA	Kg/MT	Maximum Potential Acidity (MPA)-CaCO3	MPA	0.01	999.00
10	7054	ABA	Kg/MT	Net Neutralization Potential(NNP)-CaCO3	NNP	0.01	999.00
11	0721	ICP	ppm	Ag ICP	Silver	0.1	100.0
12	0711	ICP	ppm	Cu ICP	Copper	1	10000
13	0714	ICP	ppm	Pb ICP	Lead	2	10000
14	0730	ICP	ppm	Zn ICP	Zinc	1	10000
15	0703	ICP	ppm	As ICP	Arsenic	5	10000
16	0702	ICP	ppm	Sb ICP	Antimony	5	2000
17	0732	ICP	ppm	Hg ICP	Mercury	3	10000
18	0717	ICP	ppm	Mo ICP	Molydenum	1	1000
19	0747	ICP	ppm	Tl ICP (Incomplete Digestion)	Thallium	10	1000
20	0705	ICP	ppm	Bi ICP	Bismuth	2	2000
21	0707	ICP	ppm	Cd ICP	Cadmium	0.2	2000.0
22	0710	ICP	ppm	Co ICP	Cobalt	1	10000
23	0718	ICP	ppm	Ni ICP	Nickel	1	10000
24	0704	ICP	ppm	Ba ICP (Incomplete Digestion)	Barium	2	10000
25	0727	ICP	ppm	W ICP (Incomplete Digestion)	Tungsten	5	1000
26	0709	ICP	ppm	Cr ICP (Incomplete Digestion)	Chromium	1	10000
27	0729	ICP	ppm	V ICP (Incomplete Digestion)	Vanadium	1	10000
28	0716	ICP	ppm	Mn ICP	Manganese	1	10000
29	0713	ICP	ppm	La ICP (Incomplete Digestion)	Lanthanum	2	10000
30	0723	ICP	ppm	Sr ICP (Incomplete Digestion)	Strontium	1	10000
31	0731	ICP	ppm	Zr ICP (Incomplete Digestion)	Zirconium	1	10000
32	0736	ICP	ppm	Sc ICP	Scandium	1	10000
33	0726	ICP	%	Ti ICP (Incomplete Digestion)	Titanium	0.01	10.00
34	0701	ICP	%	Al ICP (Incomplete Digestion)	Aluminum	0.01	10.00
35	0708	ICP	%	Ca ICP (Incomplete Digestion)	Calcium	0.01	10.00
36	0712	ICP	%	Fe ICP (Incomplete Digestion)	Iron	0.01	10.00
37	0715	ICP	%	Mg ICP (Incomplete Digestion)	Magnesium	0.01	10.00

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	Fx:(604)944-6102				
	Em:jo@homegoldresourcesltd.com				

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* Our liability is limited solely to the analytical cost of these analyses.

BC Certified Assayers: David Ching Ron Williams

Signature: _____

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iPL 07H3750

IIITERNATIONAL PLASMA LABS LTD.
ISO 9001:2000 CERTIFIED COMPANY

200 - 11620 ' eshoe Way
Richmond, E
Canada V7A 4V5
Phone (604) 879-7878
Fax (604) 272-0851
Website www.ipl.ca

Homegold Resources
Project : Caledonia
Shipper : Johan T. Shearer
Shipment: PO#: None Given
Comment:

10 Samples Print: Sep 07, 2007 In: Aug 23, 2007 [375018:03:25:70090707:001]

##	Code	Method	Units	Description	Element	Limit Low	Limit High
38	0720	ICP	%	K ICP (Incomplete Digestion)	Potassium	0.01	10.00
39	0722	ICP	%	Na ICP (Incomplete Digestion)	Sodium	0.01	10.00
40	0719	ICP	%	P ICP	Phosphorus	0.01	5.00

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DL=Download 3D=3½ Disk EM=E-Mail BT=BBS Type BL=BBS(1=Yes 0=No) ID=C058401
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BC Certified Assayers: David Chris Ron Williams

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CERTIFIC[illegible]T OF ANALYSIS
iPL 07H3750

INTERNATIONAL PLASMA LABS LTD.
ISO 9001:2000 CERTIFIED COMPANY

200 - 11620 [illegible]shoe Way
Richmond, L
Canada V7A 4V5
Phone (604) 879-7878
Fax (604) 272-0851
Website www.ipl.ca

Client : Homegold Resources
Project: Caledonia

10 Samples

Ship#

10=Rock 1=Repeat

Print: Sep 07, 2007
[375016:14:39:70090707:00] Aug 23, 2007

Sample Name	Type	Int Wt Kg	Ag ppm	Cu %	Pb %	Zn %	S(tot) %	pH Paste	NP Kg/MT	MPA Kg/MT	NNP Kg/MT	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm
#1	Rock	3.25	581.7	4.42	0.13	0.47	2.32	7.888	220.38	72.50	147.88	0.1m	4.30%	1313	4714	1.02%	<5
#2	Rock	2.45	167.5	1.12	0.52	8.97	4.87	7.967	81.47	152.19	-70.72	0.1m	1.11%	5431	8.91%	3369	104
#3	Rock	1.20	19.8	0.15	0.01	0.07	0.11	8.370	52.59	3.44	49.15	20.6	1482	113	673	118	<5
#4	Rock	2.85	5.0	0.05	0.09	0.04	0.02	8.187	10.22	0.56	9.65	4.7	526	870	404	37	<5
#5	Rock	3.25	218.8	2.47	0.34	0.35	1.75	7.868	228.39	54.69	173.70	0.1m	2.43%	3344	3536	2388	10
#6 (#9)	Rock	3.45	3.0	0.01	<0.01	0.01	<0.01	8.137	942.95	0.22	942.73	2.7	109	23	82	12	<5
#7	Rock	1.70	4.0	0.04	0.01	0.03	0.03	8.045	12.74	0.78	11.96	3.0	411	77	281	<5	<5
#8	Rock	2.95	4.0	<0.01	0.01	0.01	<0.01	8.305	287.16	0.03	287.13	<0.1	49	83	122	<5	<5
UG-I	Rock	1.30	3.0	0.09	0.01	0.08	0.55	7.803	17.28	17.31	-0.03	1.6	869	142	830	<5	<5
UG-Z	Rock	2.60	109.3	0.74	0.77	7.89	0.96	7.930	17.40	30.03	-12.63	1.9	1678	176	1832	<5	<5
RE #1	Repeat	—	579.0	4.50	0.13	0.47	2.30	7.897	221.71	71.88	149.84	0.1m	4.36%	1314	4648	1.03%	<5
Minimum Detection		0.01	0.5	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.1	1	2	1	5	5
Maximum Detection		99999.00	1000.0	20.00	20.00	20.00	100.00	14.000	999.00	999.00	999.00	100.0	10000	10000	10000	10000	2000
Method		Spec	MuAICP	MuAICP	AsyMuA	MuAICP	Leco	ABA	ABA	ABA	ABA	ICP	ICP	ICP	ICP	ICP	ICP

---=No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x1000 %=Estimate % NS=No Sample

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200 - 11620 [illegible]eshoe Way
Richmond,
Canada V7A 4V5
Phone (604) 879-7878
Fax (604) 272-0851
Website www.ipl.ca

Client : Homegold Resources
Project: Caledonia

10 Samples

Ship#

10=Rock 1=Repeat

Print: Sep 07, 2007
[375016:14:39:70090707:001h] Aug 23, 2007

Sample Name	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %
#1	24	13	<10	<2	47.4	11	<1	30	<5	45	12	1193	5	73	3	1	0.01	1.56	9.04
#2	<3	12	<10	<2	748.3	65	<1	15	<5	64	20	1970	<2	9	1	<1	<0.01	0.81	3.74
#3	<3	3	<10	<2	5.8	6	<1	39	<5	50	18	1642	7	103	4	1	0.05	2.20	3.45
#4	<3	6	<10	<2	1.8	3	4	8	<5	107	18	416	<2	22	<1	<1	0.01	0.85	0.64
#5	12	18	<10	<2	28.1	8	4	<2	5	51	47	1746	<2	23	<1	1	0.01	1.63	8.73
#6 (#9)	<3	4	<10	<2	<0.2	1	<1	4	<5	11	4	484	<2	262	<1	<1	0.01	0.18	37%
#7	<3	3	<10	<2	<0.2	7	4	16	<5	69	21	1940	6	54	5	1	0.05	2.27	2.71
#8	<3	4	<10	<2	<0.2	2	7	7	<5	59	16	562	<2	85	<1	<1	0.01	1.50	12%
UG-I	<3	81	<10	<2	<0.2	56	<1	11	16	25	24	6222	7	60	6	<1	<0.01	1.58	4.56
UG-Z	<3	71	<10	<2	<0.2	51	<1	23	53	5	43	3794	<2	30	5	<1	<0.01	1.30	0.69
RE #1	24	13	<10	<2	46.8	11	<1	29	<5	44	12	1217	5	72	4	2	0.01	1.59	9.22
Minimum Detection	3	1	10	2	0.2	1	1	2	5	1	1	1	2	1	1	1	0.01	0.01	0.01
Maximum Detection	10000	1000	1000	2000	2000.0	10000	10000	10000	1000	10000	10000	10000	10000	10000	10000	10000	10.00	10.00	10.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

---=No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x1000 %=Estimate % NS=No Sample

CERTIFICATE OF ANALYSIS
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200 - 11620 Eshoe Way
Richmond, B
Canada V7A 4V5
Phone (604) 879-7878
Fax (604) 272-0851
Website www.ipl.ca

Client : Homegold Resources
Project: Caledonia

10 Samples

Ship#

10=Rock 1=Repeat

Print: Sep 07, 2007
[375016:14:39:70090707:0Th] Aug 23, 2007

Sample Name	Fe %	Mg %	K %	Na %	P %
#1	0.82	0.33	0.02	0.03	<0.01
#2	0.78	0.90	<0.01	0.01	0.01
#3	0.61	0.63	0.02	0.03	0.03
#4	0.36	0.43	0.02	0.02	0.01
#5	1.85	0.98	<0.01	0.02	<0.01
#6 (#9)	0.17	0.15	<0.01	0.02	<0.01
#7	0.69	0.61	<0.01	0.02	0.02
#8	0.28	0.27	0.02	0.02	0.01
UG-I	16%	1.19	<0.01	0.02	<0.01
UG-Z	32%	1.27	<0.01	0.02	<0.01
RE #1	0.81	0.34	0.03	0.03	<0.01
Minimum Detection	0.01	0.01	0.01	0.01	0.01
Maximum Detection	10.00	10.00	10.00	10.00	5.00
Method	ICP	ICP	ICP	ICP	ICP

---=No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x1000 %=Estimate % NS=No Sample

International Plasma Labs Ltd.
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#200 - 11620 Horseshoe Way
Richmond, B.C.
Canada V7A 4V5

Phone: 604/879-7878 604/272-7818
Fax: 604/879-7898 604/272-0851
Website: www.ipl.ca
Email: info@ipl.ca

ISO 9001:2000 CERTIFICATION Intertek

Certificate#: 07J4436
Client: Westcoast Mineral Testing Inc.
Project: Shearer
Shipment#: None Given
PO#: None Given
No. of Samples: 9
Analysis #1: Ag Cu Zn As
Analysis #2: ICP(AqR)30
Analysis #3:
Comment #1:
Comment #2:
Date In: Oct 03, 2007
Date Out: Oct 09, 2007

Sample Name	SampleType	Ag g/mt	Ag ppm	Cu %	Zn %	As %
07-60A	Pulp	2013.4	1640.8	11.84	32.704	2.600
07-60B	Pulp	4176.1	1897.0	21.21	22.000	4.166
07-60C	Pulp	1700.1	1638.5	10.91	3.097	1.741
07-61	Pulp	--	14.9	0.28	0.160	0.027
07-61A	Pulp	--	10.3	0.16	0.087	0.016
07-61B	Pulp	--	9.5	0.17	0.077	0.017
07-61C	Pulp	--	7.4	0.17	0.083	0.016
07-61D	Pulp	--	15.8	0.37	0.230	0.043
07-62	Pulp	--	647.8	3.68	5.820	0.775
RE 07-60A	Repeat	2032.8	1817.6	11.81	32.678	2.593
Minimum detection		0.3	0.5	0.01	0.001	0.001
Maximum detection		9999	1000	20	100	100
Method		FAGrav	MuAICP	MuAICP	AsyMuA	Assay

** Values highlighted (in yellow) are over the high detection limit for the corresponding methods. Other testing me*

Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
12.9	2568	584	1456	278	<5	<3	8	<10
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
300.9	31474	2712	60669	6337	106	18	23	<10
--	--	--	--	--	--	--	--	--
0.1	1	2	1	5	5	3	1	10
100	10000	10000	10000	10000	2000	10000	1000	1000
ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

thods would be suggested. Please call for details.

Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
<2	4.1	31	4	26	<5	9	24	5315
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
<2	575.6	84	<1	12	<5	4	17	5809
--	--	--	--	--	--	--	--	--
2 2000 ICP	0.2 2000 ICP	1 10000 ICP	1 10000 ICP	2 10000 ICP	5 1000 ICP	1 10000 ICP	1 10000 ICP	1 10000 ICP

La	Sr	Zr	Sc	Ti	Al	Ca	Fe	Mg
ppm	ppm	ppm	ppm	%	%	%	%	%
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
5	94	3	<1	0.01	1.47	6.85	1.68	1.29
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
2	66	2	<1	0.01	1.49	6.09	2.18	1.35
--	--	--	--	--	--	--	--	--
2	1	1	1	0.01	0.01	0.01	0.01	0.01
10000	10000	10000	10000	10	10	10	10	10
ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

K	Na	P
%	%	%
--	--	--
--	--	--
--	--	--
<0.01	0.02	0.02
--	--	--
--	--	--
--	--	--
--	--	--
<0.01	0.01	<0.01
--	--	--
0.01	0.01	0.01
10	10	5
ICP	ICP	ICP

APPENDIX IV

SAMPLE DESCRIPTIONS

MARCH 1, 2008

FLOTATION TEST **W-07-28** Date: Sept 29-07

Client: Joe Shearer Project: Caledonia

Sample: Grab sample of fist sized rocks by Joe Shearer

Objective: First test to check the response to flotation.

Procedure

Grind	2,000 gm	20 minutes	67 % solids
Pan		no	
Rougher float	staged		
Cleaner float	no		
Screening	rougher tailing to 325 mesh		

Test Conditions - rougher flotation

Time - min	Event	DF250	3418A	PAX	copper sulphate		pH
0	Grind						
0	F-1	yes					8.2
11	F-2	yes	2				
13		yes	4				
16			4				
19	F-3	yes		10			
24		yes		10			
26		yes		10			
28				10			
29				10			
31				30			
33	F-4				150		
37			10	80	150	-	

All reagent additions in g/t of original feed.

Notes & Observations

1 The work index of this material is quite low, when considering the grinding time and RT % - 200 mesh.
2 The F-1 rougher concentrate was grey (tetrahedrite).
3 The tail end of the F-2 RC appeared to contain sphalerite.
4 The F-3 RC appeared to be predominantly Sph.
5 The F-4 RC contained very little weight, so was combined with the F-3 RC.
6 There was no apparent Py in any product.
7 Cytec A-120 floccualnt performed well.

Conclusions

1 Excellent overall recoveries of all four assayed "metals".
2 The somewhat elevated grades in the tailing minus 325 mesh fractions, suggests minor oxidation, not surprising considering that these were surface samples.
3 As expected from the tetrahedrite, the silver follows both the copper and the arsenic.
4 Given the high distribtion of the Zn to the first flotation concentrate, it is easy to conclude that the Sph is naturally floatable.
5 This material does not require fine primary grind, since the tailing fractions indicate that it is not grind sensitive.

Recommendations

1 One additional test should be undertaken at a somewhat coarser grind to include a sulphide separation stage, i.e. tetrahedrite vs sphalerite. includeding
2 Depending upon the success (or failure) of that test, optical microscopy may be useful to identify sulphide mineral locking.
3 Since the Sph is naturally floating anyway, it might be useful to undertake a bulk rougher / cleaner float, followed by Sph depression.

International Plasma Labs Ltd.
ISO 9001:2000 Certified Company

#200 - 11620 Horseshoe Way
Richmond, B.C.
Canada V7A 4V5

Phone: 604/879-7878 604/272-7818
Fax: 604/879-7898 604/272-0851
Website: www.ipl.ca
Email: info@ipl.ca

Certificate#: 07J4436
Client: Westcoast Mineral Testing Inc.
Project: Shearer
Shipment#: None Given
PO#: None Given
No. of Samples: 9
Analysis #1: Ag Cu Zn As
Analysis #2: ICP(AqR)30
Analysis #3:
Comment #1:
Comment #2:
Date In: Oct 03, 2007
Date Out: Oct 09, 2007

Sample Name	SampleType	Ag g/mt	Ag ppm	Cu %	Zn %	As %	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm
07-60A	Pulp	2013.4	1640.8	11.84	32.704	2.600	--	--	--	--	--	--	--	--	--	--	--	--
07-60B	Pulp	4176.1	1897.0	21.21	22.000	4.166	--	--	--	--	--	--	--	--	--	--	--	--
07-60C	Pulp	1700.1	1638.5	10.91	3.097	1.741	--	--	--	--	--	--	--	--	--	--	--	--
07-61	Pulp	--	14.9	0.28	0.160	0.027	12.9	2568	584	1456	278	<5	<3	8	<10	<2	4.1	31
07-61A	Pulp	--	10.3	0.16	0.087	0.016	--	--	--	--	--	--	--	--	--	--	--	--
07-61B	Pulp	--	9.5	0.17	0.077	0.017	--	--	--	--	--	--	--	--	--	--	--	--
07-61C	Pulp	--	7.4	0.17	0.083	0.016	--	--	--	--	--	--	--	--	--	--	--	--
07-61D	Pulp	--	15.8	0.37	0.230	0.043	--	--	--	--	--	--	--	--	--	--	--	--
07-62	Pulp	--	647.8	3.68	5.820	0.775	300.9	31474	2712	60669	6337	106	18	23	<10	<2	575.6	84
RE 07-60A	Repeat	2032.8	1817.6	11.81	32.678	2.593	--	--	--	--	--	--	--	--	--	--	--	--
Minimum detection		0.3	0.5	0.01	0.001	0.001	0.1	1	2	1	5	5	3	1	10	2	0.2	1
Maximum detection		9999	1000	20	100	100	100	10000	10000	10000	10000	2000	10000	1000	1000	2000	2000	10000
Method		FAGrav	MuAICP	MuAICP	AsyMuA	Assay	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

** Values highlighted (in yellow) are over the high detection limit for the corresponding methods. Other testing methods would be suggested. Please call for details.*

OVERALL FLOTATION

Sample	Product	gm	WT %	Ag - g/t	Cu %	As %	Zn %
07-60A	F-1 RC	259.5	13.2	2,013	11.8	2.60	32.7
07-60B	F-2 RC	156.3	8.0	4,176	21.2	4.17	22.0
07-60C	F-3 RC	127.1	6.5	1,700	10.9	1.74	3.1
	O/A RC	542.9	27.7	2,563	14.3	2.85	22.7
07-61	RT	1,417.0	72.3	12	0.2	0.03	0.1
	Feed - calc	1,959.9	100.0	718	4.1	0.81	6.4
07-62	Feed - assay grade			648	3.7	0.78	5.8

DISTRIBUTION

Product			Ag	Cu	As	Zn
F-1 RC			37.1	37.8	42.6	67.8
F-2 RC			46.4	40.8	41.1	27.5
F-3 RC			15.3	17.1	14.0	3.1
O/A RC			98.8	95.7	97.6	98.4
RT			1.2	4.3	2.4	1.6
Feed - calc			100.0	100.0	100.0	100.0

Rougher Tailing

Mesh	gm	WT %	Ag - g/t	Cu %	As %	Zn %
	33.3	14.5	10.3	0.16	0.016	0.09
150						
	54.1	23.6	9.5	0.17	0.017	0.08
200						
	51.9	22.7	7.4	0.17	0.016	0.08
325						
	89.7	39.2	15.8	0.37	0.043	0.23
Total	229.0	100.0	11.6	0.25	0.027	0.14
Assay			14.9	0.28	0.027	0.16

Grind	% - 200 Mesh		61.8

dry gross tlg - gm	1,188

Ni	Ba	W	Cr	V	Mn	La	Sr	Zr	Sc	Ti	Al	Ca	Fe	Mg	K	Na	P
ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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4	26	<5	9	24	5315	5	94	3	<1	0.01	1.47	6.85	1.68	1.29	<0.01	0.02	0.02
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<1	12	<5	4	17	5809	2	66	2	<1	0.01	1.49	6.09	2.18	1.35	<0.01	0.01	<0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1	2	5	1	1	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
10000	10000	1000	10000	10000	10000	10000	10000	10000	10000	10	10	10	10	10	10	10	5
ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

ROADENG Profile	Horz Scale 1:2000	P. 1
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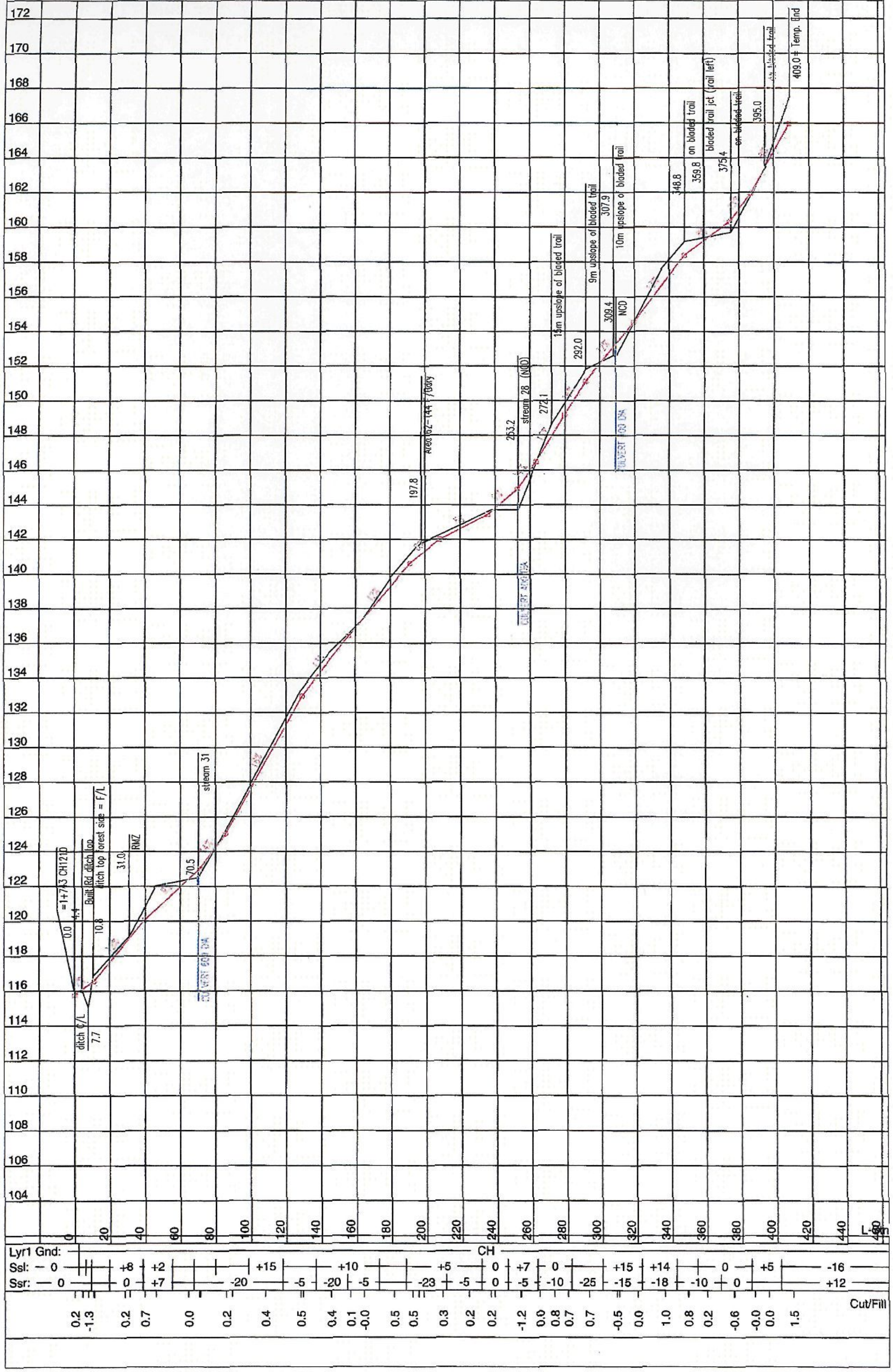

ROADENG Section | Scale 1:200 | P. 1

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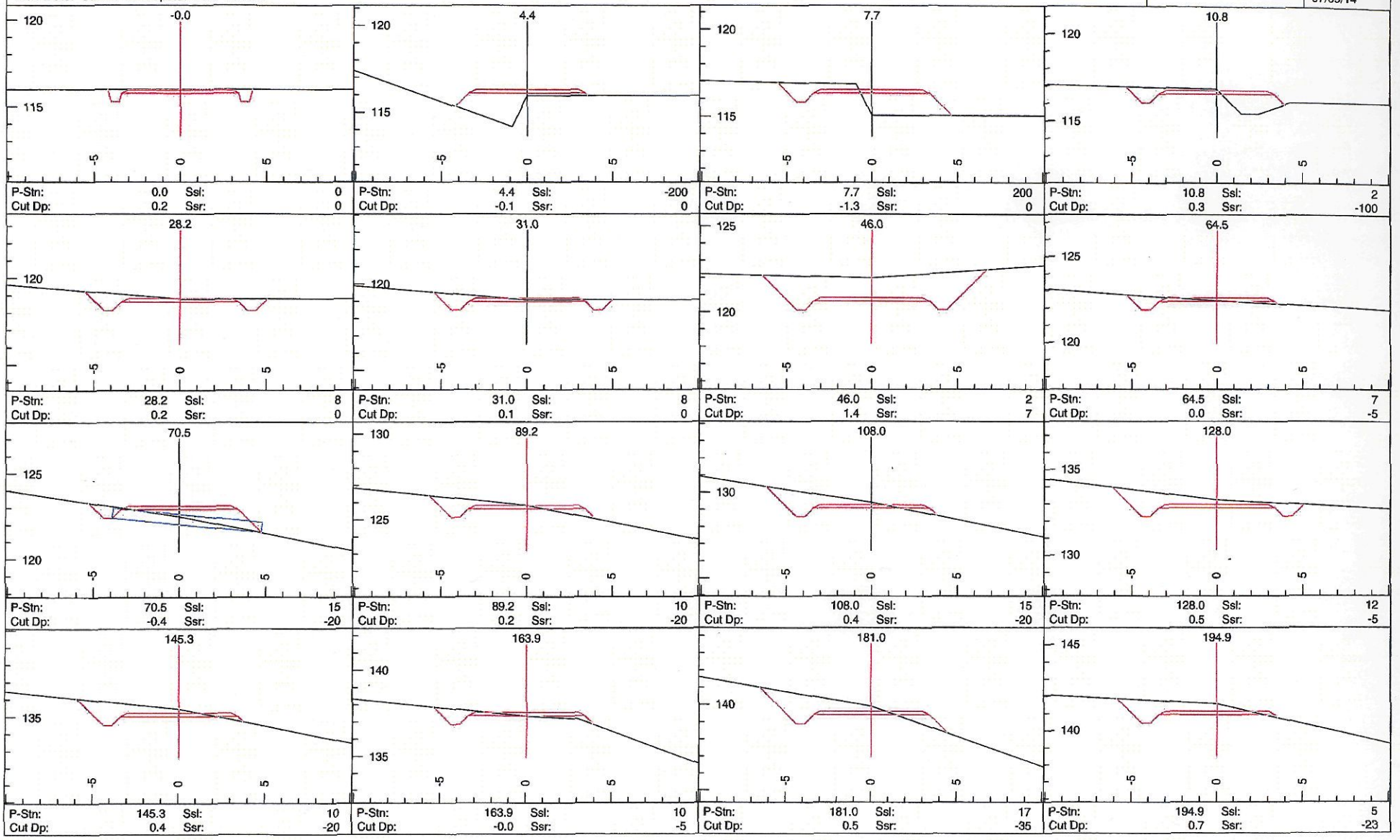

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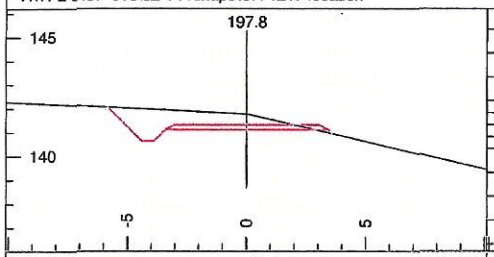

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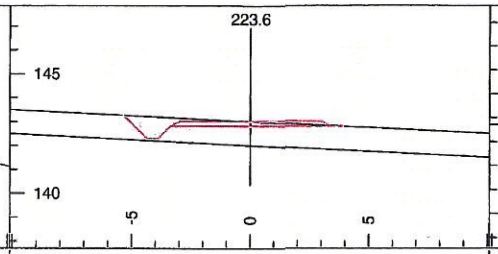

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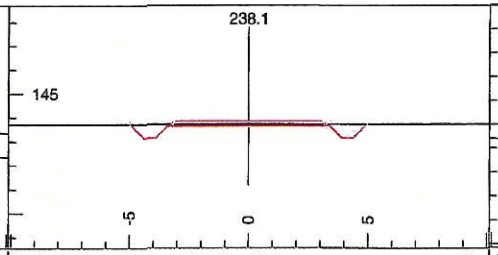

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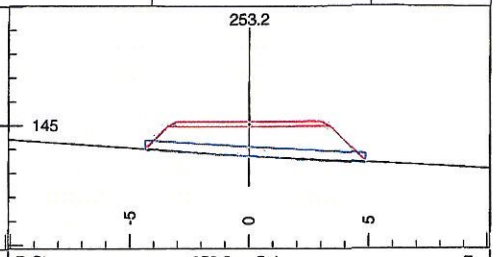

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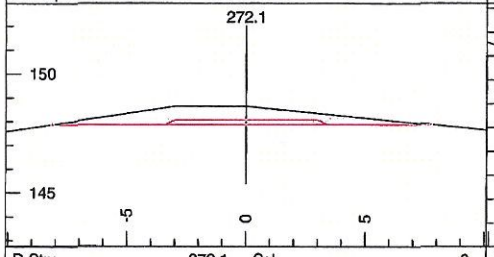

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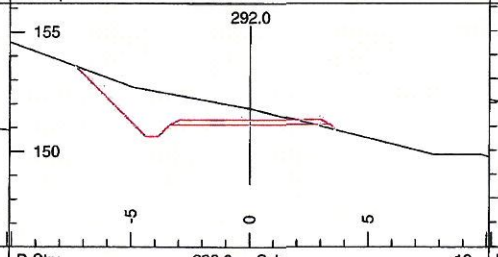

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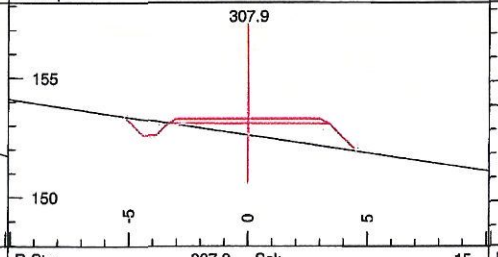

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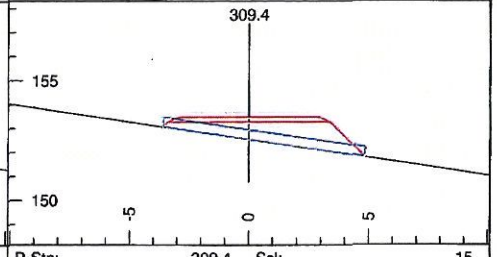

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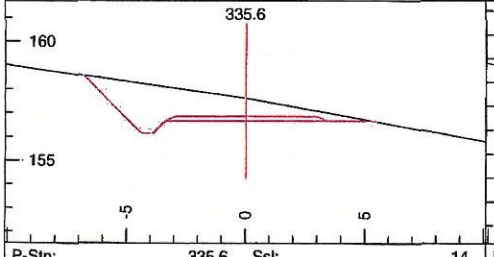

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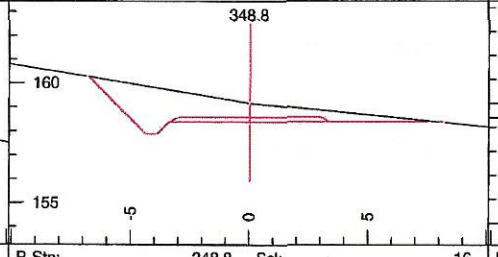

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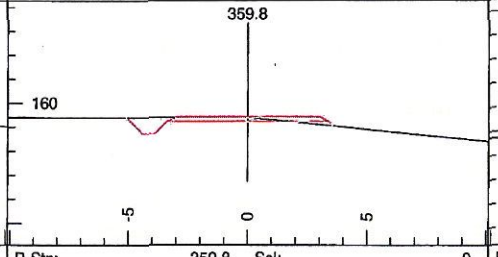

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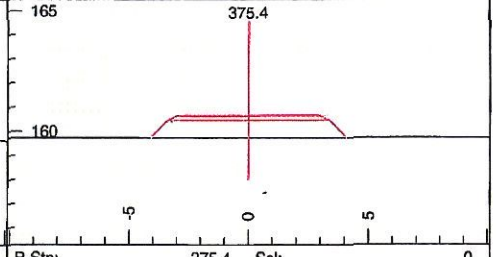

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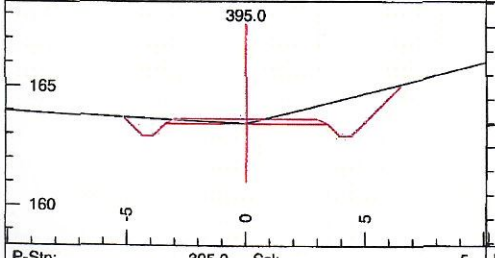

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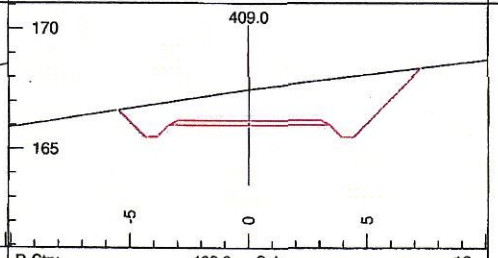

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Overview assessment of environmental issues associated with a potential mine site at Caledonia Creek, B.C.

November 2007

Prepared for:

Quatse Silver Resources inc.

Prepared by:

Ross Murray, RPBio

&

Fraser Ross, BSc.

Nova Pacific Environmental

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Introduction

The Caledonia Creek property is located on a south facing slope in the watershed of the Quatse River. The location is approximately 7.5 km from the town of Coal Harbour and 6 km from the shores of Holberg Inlet. Figure 1 shows the location of the property in relation to Quatse Lake.

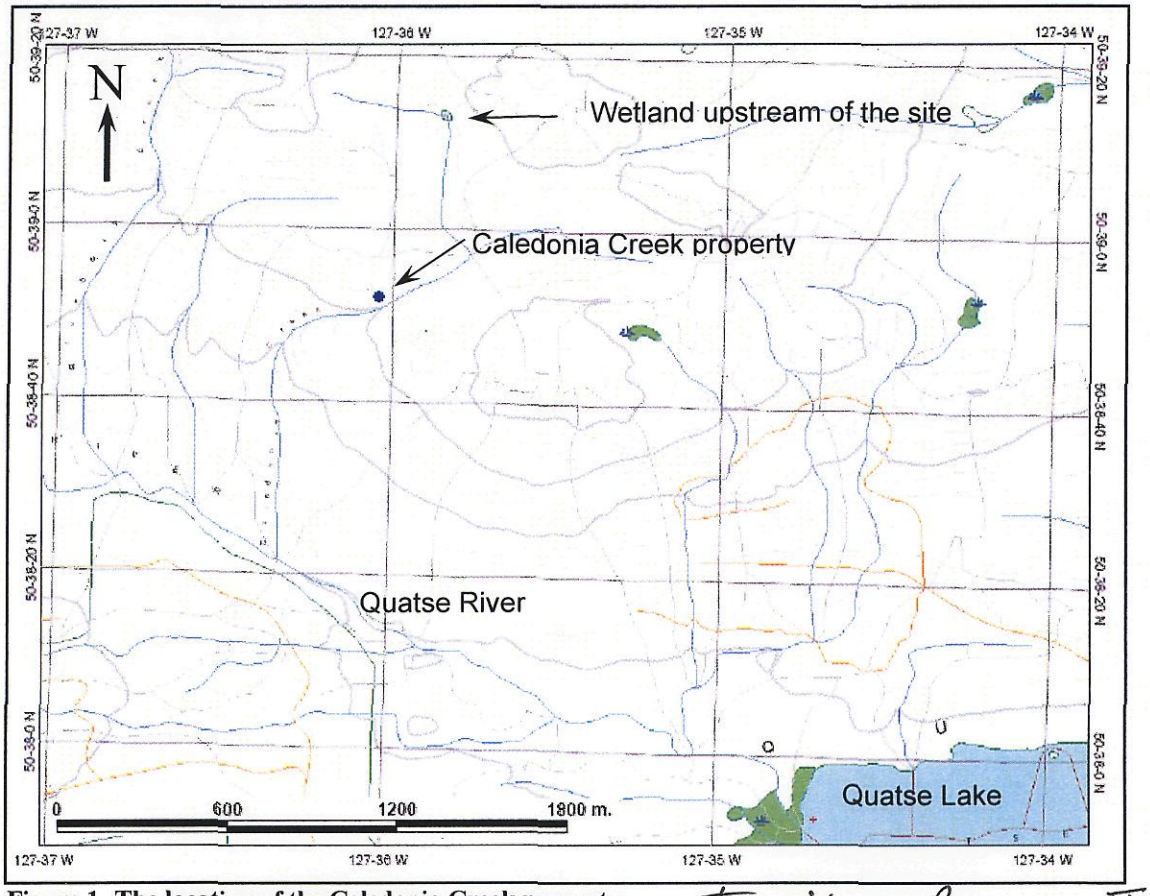

Figure 1- The location of the Caledonia Creek property

Quatse Silver Resources Inc

Nova Pacific Environmental Ltd was retained by ~~HomeGold Resources Ltd.~~ to provide an environmental assessment of the property in relation to the potential development of a mine focused on the mineral tennantite. The report includes:

- An overview of the existing conditions within and around the site;
- Identification of the fisheries and wildlife issues surrounding the site;
- A review of species at risk considerations that pertain to the property; and
- Identification of future studies that may be required to support development activities.

Methods

The review of the property was completed through a site assessment and a literature review. The site assessment included a basic vegetation survey, water quality sampling from Caledonia Creek, and wildlife observations including bird nest spotting. The literature review was conducted using information available from various published sources and internet sites. Location maps were prepared using the provincial mapping site[1]. Lists of potential fauna and flora were created and developed by analyzing habitat information for each species as detailed below. Fish

resources were determined from the Fisheries Inventory Data website operated by the Ministry of Environment[2].

Site Assessment

A site assessment was conducted on 24th August 2007. The vegetation survey was conducted to characterize the typical vegetation of the area. Species were identified, photographed and sampled where necessary and the abundance of each species was assessed as present, common or abundant. Water quality samples were taken at two sites in Caledonia Creek; one upstream of the property and the other downstream. The locations of the sampling sites can be seen in Figure 2. Throughout the site assessment all signs of wildlife were recorded. Each aspect of the site assessment was complemented with photographic and GPS documentation.

Species at Risk Analysis

The legal frameworks that oversee species at risk in British Columbia and Canada are reviewed in Appendix 1 and a brief summary is included here. Both levels of government utilize a model where an advisory body develops lists and recommends species for legislative recognition. The federal advisory body is the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and it operates under the Species at Risk Act (SARA). The provincial advisory body is called the Conservation Data Centre (CDC) and it advises the Ministry of Environment of BC. Species are ranked as extinct, extirpated, endangered, threatened, special concern, or stable. In both cases, the list recommended by the advisory body is larger than the list protected under law.

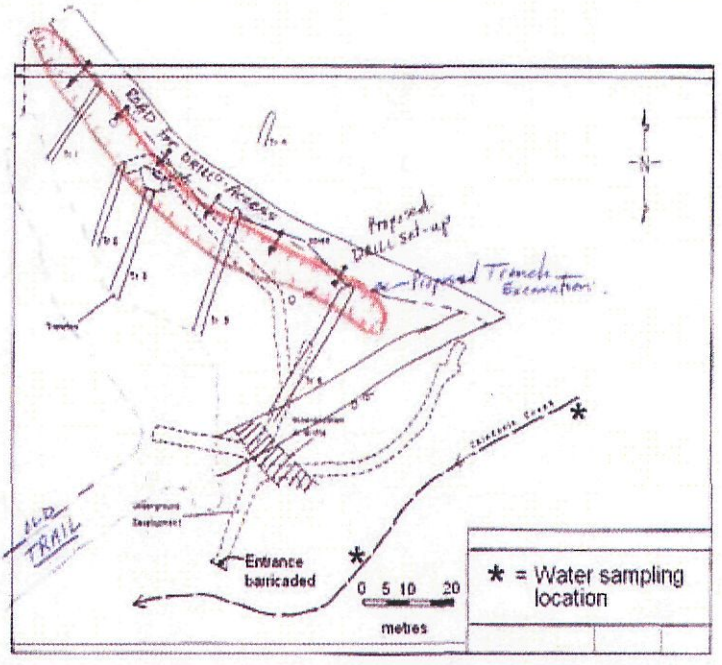

Figure 2- Water quality sampling locations

Federally, COSEWIC lists 552 species while SARA lists 457 species, 303 of which are protected as extirpated, endangered or threatened. For reasons explained in the Appendix, SARA applies only to migratory birds or aquatic species at the Caledonia Creek property, and this reduces the list applicable to the property to 74 species. Provincially, CDC lists 731 species, subspecies or populations of species as red-listed (extirpated, endangered or threatened) and 644 species, subspecies or populations of species as blue listed (special concern). While new legislation is forthcoming that will facilitate the listing of species for conservation purposes, these procedures are not in place. In contrast to the advisory list prepared by CDC, under the Wildlife Act the BC Government lists only 4 species at risk in British Columbia. These are the burrowing owl (*Athene cunicularia*), the sea otter (*Enhydra lutris*), Vancouver Island Marmot (*Marmota vancouverensis*) and the American White Pelican (*Pelecanus erythrorhynchos*). While new regulations that could extend the provincial species at risk listings are awaiting enactment, until the new legislation comes into force the current status will remain unchanged.

Additional provincial protection is provided under some of the general provisions of the Wildlife Act that apply to all species. In addition, Section 34 of the Wildlife Act protects all birds and their

nests when occupied by an egg and the nests of eagles, peregrine falcons, gyrfalcons, ospreys, herons, and burrowing owls are protected at all times[3].

The list of plant and animal species included in this review was generated using a search engine provided by the Conservation Data Centre (CDC), a department of the Ministry of Environment of BC[4, 5]. The search was directed to include all species designated Red or Blue status, according to the provincial government, and which were known to occur in the Coastal Western Hemlock (CWH) biogeoclimatic zones of the North Island-Central Coast District. This list was supplemented by a search of the federally regulated SARA registry, in order to include any federally protected species which may have been excluded by the original search parameters[6].

Once these species lists were assembled, the species were ranked by comparing their preferred habitat information with the condition found at the site. Species that are exclusively found in one type of habitat without exception (e.g. whales in the sea) were removed from further consideration. Details of exclusions can be found in Appendix 4.2 and 5.2. Species that had not been recorded locally and were known to have habitat preferences which did not match the site were designated as "very unlikely". Species that were generally known to occur within the forest district, but were not expected to be found in the habitat conditions present at the site were designated as "unlikely". Species known to be present in the general area and whose habitat preferences matched conditions at the site were designated as "possible". No listed species achieved rankings that designated a greater likelihood than possible.

Site description

This project area is within the North Island – Central Coast Forest District. The biogeoclimatic zone of the site and the surrounding area is Coastal Western Hemlock (CWH), subzone submontane, very wet, maritime (CWH-vm1). The CWH zone is characterized by mild, wet weather, and relatively little variation in temperature through the seasons[7]. The sub-montane very wet maritime subzone has the following characteristics: elevation from 2 to 741 m, mean annual temperature of 7.8° C and mean annual precipitation of 2976 mm[8].

The property is situated at 50° 38' 51" N by 127° 36' 10" W and at approximately 330 m elevation on a steep slope of mature second growth forest. Caledonia Creek flows through the property and is located within 20 m of the working area to the south. Figure 2 shows the location of the site in relation to the creek.

The creek flows along a steep, rocky watercourse south into the Quatse River. Adjacent to the site it is in a steep ravine that varies considerably in depth. During the site visit, the creek was intermittently flowing and several small pools were observed. From the property the creek flows approximately 1.3 km to the upper course of the Quatse River and into Quatse Lake. The Quatse River above Quatse Lake is a small mountain creek. Quatse Lake is used as a domestic water supply for Coal Harbour and Quatsino Reserve. Mount Waddington Regional District operates a Class IV water treatment facility on this water supply. Quatse Lake flows into Quatse River and then north-east for 10 km where it drains into Hardy Bay in Queen Charlotte Straight at Port Hardy.

Photograph 1- Old adit located next to Caledonia Creek

Mining activities have occurred at this site previously. An old adit is located within approximately two metres of Caledonia Creek on the right bank of the creek at the bottom of the ravine (Photograph 1). Due to the overgrown and relatively undisturbed nature of the immediate surroundings it appears that

this work was completed several decades ago.

Site Activities

Site activities were initiated prior to the site visit on August 24, 2007. Clearing of vegetation on the proposed site had already begun (Photograph 2) and a track approximately 400 m long for All Terrain Vehicle (ATV) access had been constructed from the end of Logging Road CH1210 to the site.

The cleared area at the site is approximately 60 m long and five m wide. There are four troughs that have been dug perpendicular to the main area. These troughs are approximately one m wide and five to eight metres long (photograph 4).

Photograph 2- Clearing of the site.

Photograph 3- Exploratory trench.

The proposed activities include excavating a trench approximately 100 m long, 3 m wide and 3 m deep (Figure 2). This will have a surface area of 0.03 ha. In addition two holes will be drilled at each of six different locations (a total of 12 holes) to depths of 1500 m. The waste drillings will be controlled by sumps and limestone will be stored and used to partially fill the excavation upon completion. A new all weather road, Logging Road CH1217, will be constructed from the end of Logging Road CH1210. Upon completion the area will be permanently deactivated, seeded and restocked following the direction of Western Forest Products (WFP).

Results

Fisheries Resources

Caledonia Creek is located to the south of the site. It is a steep watercourse with many boulders for substrate and lots of Large Woody Debris (LWD) in the channel. During the site visit the creek flowed to ground and resurfaced downstream at several locations (Photograph 4).

The water was dark from tannins, which may be an impact of the small wetland located several hundred metres upstream (Figure 1). Due to the steep nature of the creek it is unlikely that it supports salmonids in the reach adjacent to the site but a presence/absence test has not been completed. The Quatse River, which receives the flow from the creek, is known to support a variety of fish species, including several salmonids.

Photograph 4- Caledonia Creek flowed to ground in several locations

Chum salmon (*Oncorhynchus keta*), Coho salmon (*Oncorhynchus kisutch*), Dolly Varden (*Salvelinus malma*), Kokanee and Sockeye salmon (*Oncorhynchus nerka*), Rainbow trout and Steelhead (*Oncorhynchus mykiss*), Pink salmon (*Oncorhynchus gorbuscha*) and Cutthroat trout (*Oncorhynchus clarki*) have all been documented in the Quatse River watercourse[9].

The Greater Georgia Steelhead Recovery Plan (GGSRP) ranks the wild steelhead population of the Quatse River as "in decline" and describes the stock trend as an extreme conservation concern. The Quatse River has a hatchery located 2 km from the estuary. This hatchery is run by the North Vancouver Island Salmonid Enhancement Agency (NVISEA). They release several salmonid species into the Quatse River on an annual basis. Unfed pink salmon fry are released annually, including 1,000,000 on odd numbered years and 1,500,000 on even numbered years. 100,000 coho smolts are released into the lower river each year and 50,000 coho fry are released into Quatse Lake. 20,000 steelhead smolts are released in the lower reach of the river and 5,000 fry are released in Quatse Lake. 125,000 one gram (g) chum fry are released annually below the hatchery. Due to the hatchery production and proximity to Port Hardy the lower reach of the river receives moderate fishing pressure and is considered one of the most important salmonid bearing rivers on the north of Vancouver Island.

Water Quality Results

Water quality results from the two Caledonia Creek locations showed no significant differences from the upstream and downstream samples. This demonstrates that current site activities were not having an impact on water quality. Appendix 2 contains the full results of the water quality analysis.

Caledonia Creek is located in a region where acid rock drainage is a common problem surrounding development. Effective water quality monitoring will be required to ensure the success of mitigation measures designed to prevent negative impacts on sensitive areas downstream. This will be especially important when the various types of bedrock are exposed. The target mineral, Tennantite, has the chemical formula $(Cu,Ag,Fe,Zn)_{12}As_4S_{13}$. This gives the potential for negative impacts of rock exposure on the aquatic habitat.

The toxicity of copper (Cu) is dependent on the hardness of the water[10] and the maximum concentrations of Cu allowed in discharges entering aquatic habitats vary with water hardness. The maximum Cu concentration to meet aquatic life standards is calculated using the following equation:

Maximum Cu (µg/L) = 0.094(hardness)+2 (hardness as mg/L $CaCO_3$) [11]

Using hardness data obtained from the water quality samples, the maximum Cu allowed has been calculated and compared with current results (Table 1).

Table 1 – Maximum Copper concentration allowed in discharges to aquatic habitats.

	Caledonia Creek upstream	Caledonia Creek downstream
Hardness (mg/L $CaCO_3$)	12.5	12.4
Cu reading (µg/L)	1.8	1.6
Maximum Cu (µg/L)	3.2	3.2

This table shows that, while Cu is currently below the maximum allowable levels, a relatively small increase would result in Cu exceeding maximum levels and this needs to be effectively managed. The Canadian Water Quality Guidelines (CWQG) state that the maximum concentration of copper in drinking water is 1.0 mg/L (1000µg/L) so current levels are far below drinking water standards. While copper is close to the limits set for aquatic life, it is nearly three orders of magnitude below the safe limit for drinking water.

Deficiencies of Vitamin E or selenium can increase the susceptibility of an organism to toxicity of silver. Ag has a maximum level allowed by aquatic life standards of 0.1µg/L. Both readings were below the minimum detection level (<0.02µg/L).

Fe is not considered hazardous to human health and is a secondary or aesthetic contaminant. Tap water can actually provide a significant portion of dietary Fe to humans. Fe is generally only toxic to aquatic life in its dissolved state. The maximum allowable level is currently under review and is set at 0.3 mg/L for aquatic life. The reading at the upstream site was 0.35 mg/L and the downstream site was 0.36 mg/L, and Fe levels are shown to be in excess of standards for the protection of aquatic life prior to any activity on the site.

Arsenic is highly reactive and most compounds can dissolve in water. Heightened concentrations of arsenic in water can be toxic to humans and aquatic life. The CWQG states that 0.025mg/L is the maximum arsenic level in drinking water and 0.05mg/L for protection of freshwater aquatic life (under review). The level of arsenic in the water tested at both sites was below the detection level (<0.0005mg/L).

Sulphur is a an element in tennantite and also a primary factor in generating acid rock drainage, an impact of mining common in the north of Vancouver Island. The maximum allowable level of sulphur (as SO_4) in drinking water is 500mg/L and 100mg/L for aquatic life. The results at both sites were below the minimum detectable levels (<1mg/L).

Many Zn salts are highly soluble in water. Zn often has a half life in water of greater than 200 days and as a result it is a persistent problem once it is introduced to a water body. The recommended level of Zn in drinking water is less than 5000 µg/L and less than 33 µg/L for aquatic life. Both sites had readings below detectable levels (< 5 µg/L).

Pb is toxic to humans, especially children and to the aquatic environment. As a result the Canadian Water Quality Guideline is set to protect children at 10 µg/L. Aquatic life standards set a maximum of 7 µg/L. The readings were less than the detectable level at both sites (<5 µg/L).

The maximum Sb level allowed in drinking water is 6 µg/L and is currently under review. Both readings at the site were below detection levels (<5 µg/L).

Many of the elements in tennantite are far below the maximum levels set for aquatic life and drinking water standards. However Cu is close to the maximum and Fe slightly exceeds the maximum levels for aquatic life at background levels. As a result, these elements will need to be managed particularly carefully to meet allowable levels. The current levels of both elements are far below levels that are a concern to human health.

Vegetation Assessment

Almost all of the north of Vancouver Island is categorized as CWH. The CWH zone is home to vast forests of western hemlock (*Tsuga heterophylla*) western red cedar (*Thuja plicata*) and other common tree species including amabalis fir (*Abies amabilis*), yellow-cedar (*Chamaecyparis nootkatensis*), Douglas-fir (*Pseudotsuga menziesii*), and big-leaf maple (*Acer macrophyllum*). These forests are highly productive ecosystems and are home to a wide variety of plants and

animals, many of which are strongly associated with the CWH zone. Interspersed between the forest areas, particularly in the lowland zone, it is also common to find freshwater bogs which contribute to the variety of species.

Photograph 5- Remnant tree stumps from logging.

The site is a maturing second growth forest as it is over 100 years since it was logged. There is evidence of the original forestry activities as there are still tree stumps on the site (Photograph 5). Appendix 3 gives a list of plant species recorded during the site visit. Plant species found at the site were typical of the CWH zone. There were mature stands of trees consisting of many of the species expected to be found in this habitat. In addition the shrub layer was well developed at the site, including many expected shrub and fern species. There were many mosses, lichens and fungi at the site however they were not identified. No species currently CDC-listed as blue or red were identified at the site.

Species At Risk Assessment

Plants

The search of the CDC Species and Ecosystems Explorer returned 30 plant species. 18 of these species could not occur at the site and were excluded from further consideration (See Appendix 4 table 2 for details). Of the remaining 12 species, 5 were considered possible and 7 very unlikely. Appendix 4 gives the details that led to these conclusions. As stated above, no listed plant species were recorded at the site during the fieldwork. However, this overview study was outside the flowering season and would not be expected to provide a comprehensive vegetation list. Further, strategically-timed studies would be needed to effectively assess use of this site by plant species at risk.

Animals

The search of the CDC Species and Ecosystems Explorer returned 44 animal species. 22 of these species could not occur at the site and were excluded from further consideration (See Appendix 5 table 2 for details). Of the remaining 22 species, 12 were considered possible, eight unlikely and two very unlikely. Appendix 5 gives the details that led to these conclusions. During the fieldwork deer sign was observed at the site and wood pecker activity was also evident. No nests were observed on or near to the site. Of the species listed as red or blue by the CDC none were recorded at the site during the fieldwork. However, determination of a comprehensive wildlife species list was beyond the scope of this overview study and further study would be required to confirm the presence or absence of these species and any measures that might be needed to protect them.

Conclusions

The site lies within the watershed of Quatse River. Quatse Lake is used as the water supply for the town of Coal Harbour via a Class IV water treatment facility and the river and lake support valuable fisheries resource. Any development activity will need to be managed to ensure that all outcomes of development meet guidelines for the protection of human and environmental health.

The total area of land disturbed by the proposed activities will be relatively small and much of the clearing of vegetation has already occurred. From the water samples taken on August 24th no impacts were observed from current activities of vegetation clearance. Once rock is exposed and mining begun there will be additional water quality concerns that will need to be managed effectively to protect the watershed. Management of acid rock drainage issues will be a significant challenge associated with development of this site. Impacts will need to be managed

but partially mitigated by the abundant limestone in the area.

by careful environmental management of the site, including adherence to all appropriate best management practices, and by effective reclamation of the site upon completion.

The site is mature second growth forest that lies within the CWH zone. This type of habitat covers most of coastal BC. The vegetation assessment of the site showed that the vegetation is typical of the CWH zone. No species at risk were identified on the site during this overview site assessment, however, the literature review identified important species that could occur at the site. This information can assist in identifying areas for further study.

Recommendations

Several recommendations are presented below to assist in preventing negative impacts on local habitat and the health of the watershed. Regulatory agencies may change or add to these recommendations.

- Regular detailed water quality monitoring should be completed prior to, during and after completion of all activities
- Adequate facilities should be kept on site to allow an immediate response to any deterioration of water quality
- Proactive measures should be taken to prevent deterioration of water quality through best management practices, including but not limited to:
    - Silt traps lined with silt material to reduce sediment load of runoff
    - Treatment of runoff to ensure that all effluent parameters meet standards for the protection of aquatic and human life
    - Covering stored soils and waste rock with tarps
    - Covering exposed slopes with coco mats or straw
    - Minimising the duration of exposed rock and soils
- Complete full reclamation of the site upon project completion following BMPs and WFP instruction
- Suitable setback zones from the creek should be Identified and marked and adhered to.
- Adequate spill prevention and containment procedures and tools should be on site and staff members trained in their use.

Prior to development beyond the exploratory phase, complete detailed on-site surveys to finalize species at risk information and permit any appropriate measures to protect species at risk or their habitat to be taken.

expand on "Treatment"

References

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Appendix 1

Species at risk legislation and listing procedures

Species at risk are covered under federal and provincial law. Federally, species at risk are covered by the Species at Risk Act (SARA). Provincially, species at risk are covered under the Wildlife Act and the Forest and Range Practices Act.

Federal Law

SARA makes it an offence to kill, harm, harass, capture or take an individual of a listed species that is extirpated, endangered or threatened; possess, collect, buy, sell or trade an individual of a listed species that is extirpated, endangered or threatened, or its part or derivative; or to damage or destroy the residence of a listed endangered or threatened species or of a listed extirpated species if a recovery strategy has recommended its reintroduction.

However, this federal legislation applies only to federal lands except for aquatic species and migratory birds covered by the *Migratory Birds Convention Act, 1994* where it applies to all lands. Federal lands are lands owned by the federal government and include national parks, lands used by the Department of National Defence, reserve lands and most of the land in the three territories.

This means that the Act applies to listed aquatic species and birds covered by the *Migratory Bird Convention Act, 1994* wherever they are found and to all listed species on federal lands only. In the provinces, listed species other than aquatic species and migratory birds are protected under provincial laws except that the federal government may intervene on the absence of provincial action, but this has not occurred.

Provincial Law

Species at risk are covered in BC under the Wildlife Act and the Forest and Range Practices Act. The Wildlife Act is the principal act and an amendment to this act has passed Third Reading and been given Royal Ascent but it will not become law until it is brought into force by regulation of the Lieutenant Governor in Council. It has been awaiting that final step since May 20, 2004, and until this occurs the Wildlife Act 1996 stands on its own.

Species at risk are afforded the general protection afforded to all wildlife species under the Wildlife Act. That is, it is illegal to possess, take, injure, molest, destroy or otherwise interfere with any wildlife without a license or permit, and this general statute protects species at risk. The current Wildlife Act also stipulates that it is an offence to possess, take, injure, molest or destroy a bird or its egg, or its nest if that nest is occupied, or the nest of an eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl at any time. The government may also designate land in an existing wildlife management area as a critical wildlife area or a wildlife sanctuary. It may also designate a species as endangered or threatened.

If and when the Wildlife Amendment Act 2004 comes into force, the government will have the ability to designate a species as extirpated, endangered or threatened on its own information or as endangered or threatened based on its federal listing. Under this new legislation it will be an offence to kill, harm, harass, capture or take; damage or destroy a residence of; import, export or traffic in; possess, ship, or transport a species at risk except where such action may be authorized by one of a variety of legal instruments (e.g. a sampling permit for scientific purposes).

Under the Forest and Range Practices Act, the Identified Wildlife Management Strategy has the goals of minimizing the effects of forest and range practices on Identified Wildlife, and to maintain their limiting habitats throughout current, and where appropriate, historic ranges. These provisions apply only to range or forest activities, or other activities that require forestry permits to clear land.

Listing Process and Status

Species potentially at risk are evaluated and ranked at the provincial and national levels by agencies which support the legislative process. At the national level, species are evaluated and ranked by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). In British

Columbia, the Conservation Data Centre (CDC) in Victoria is responsible for tracking the status of rare, endangered and vulnerable animal and plant species and communities found in B.C. Both COSEWIC and CDC are advisory bodies that propose species for listing to the legislative bodies.

Federally. COSEWIC creates lists and individual species on these lists are considered for inclusion on the lists prepared under SARA. Not all recommendations are accepted and there are resulting differences in the lists. In addition, not all SARA listed species are protected; only species listed in SARA Schedule 1 as extirpated, endangered or threatened are protected under federal statute.

While COSEWIC lists 552 species, SARA lists a total of 457 species in total. SARA lists 303 species in Schedule 1 as extirpated, endangered or threatened and those 303 species are protected under law. Of those 303 species, 22 are migratory birds and 52 are aquatic species, and they are protected under SARA wherever they may occur in Canada. The remaining 229 species are protected by federal law only on federal lands.

Provincially, the CDC prepares and presents lists and the government designates species at risk under the Provincial Wildlife Act. Species are classified as Red-Listed (extirpated, endangered or threatened) or Blue-Listed (of special concern). Red- and blue-listed species are also ranked based on their global (G) status and sub national (S) rarity (1=critically imperilled; 2=imperilled; 3=vulnerable; 4=apparently secure; 5=secure; T=infraspecific taxon (usually subspecies); B=breeding; N=non breeding; NR=not ranked; Q=questionable taxonomy; Z=migratory transient). CDC lists 731 species as Red-Listed and 644 species as Blue-Listed. However, only four species are listed under the provisions of the Wildlife Act, and all are Red Listed. These are the Vancouver Island Marmot (*Marmota vancouverensis*), the Burrowing Owl (*Athene cunicularia*), the Sea Otter (*Enhydra lutris*) and the American White Pelican (*Pelecanus erythrorhynchos*).

Finally, it should be noted that ranking is applied to species, subspecies, populations, and ecotypes. This means that 100 species at risk may in fact be less than 100 "species" since a given species may appear more than one time if more than one population of that species is at risk. For example, the White Sturgeon (*Acipenser transmontanus)* is listed individually by CDC for the Kootenay, Columbia, Nechako, Upper Fraser, Middle Fraser and Lower Fraser populations, and it therefore appears 6 times as Red-Listed.

Appendix 2

Water Quality Results

Please refer to Figure 2 for the exact location of the sample sites.

Sample ID	Caledonia Creek upstream		Caledonia Creek downstream	
Date Sampled	24-AUG-07		24-AUG-07	
Physical Tests				
Hardness (as CaCO3)	12.5	mg/L	12.4	mg/L
Conductivity	25.9	uS/cm	26.4	uS/cm
pH	7.66	pH	7.56	pH
Total Dissolved Solids	50.0	mg/L	49.0	mg/L
Total Suspended Solids	<3.0	mg/L	6.5	mg/L
Anions and Nutrients				
Acidity (as CaCO3)	4.4	mg/L	4.1	mg/L
Alkalinity, Total (as CaCO3)	8.3	mg/L	8.6	mg/L
Sulphate (SO4)	<1.0	mg/L	<1.0	mg/L
Total Metals				
Aluminum (Al)-Total	0.461	mg/L	0.640	mg/L
Antimony (Sb)-Total	<0.00050	mg/L	<0.00050	mg/L
Arsenic (As)-Total	<0.00050	mg/L	<0.00050	mg/L
Barium (Ba)-Total	<0.020	mg/L	<0.020	mg/L
Beryllium (Be)-Total	<0.0010	mg/L	<0.0010	mg/L
Boron (B)-Total	<0.10	mg/L	<0.10	mg/L
Cadmium (Cd)-Total	<0.000017	mg/L	<0.000017	mg/L
Calcium (Ca)-Total	3.88	mg/L	3.73	mg/L
Chromium (Cr)-Total	<0.0010	mg/L	<0.0010	mg/L
Cobalt (Co)-Total	0.00033	mg/L	<0.00030	mg/L

Copper (Cu)-Total	0.0018	mg/L	0.0016	mg/L
Iron (Fe)-Total	1.03	mg/L	0.971	mg/L
Lead (Pb)-Total	<0.00050	mg/L	<0.00050	mg/L
Lithium (Li)-Total	<0.0050	mg/L	<0.0050	mg/L
Magnesium (Mg)-Total	0.59	mg/L	0.56	mg/L
Manganese (Mn)-Total	0.0187	mg/L	0.0168	mg/L
Mercury (Hg)-Total	<0.000020	mg/L	<0.000020	mg/L
Molybdenum (Mo)-Total	<0.0010	mg/L	<0.0010	mg/L
Nickel (Ni)-Total	<0.0010	mg/L	<0.0010	mg/L
Potassium (K)-Total	<2.0	mg/L	<2.0	mg/L
Selenium (Se)-Total	<0.0010	mg/L	<0.0010	mg/L
Silver (Ag)-Total	0.000020	mg/L	<0.000020	mg/L
Sodium (Na)-Total	<2.0	mg/L	<2.0	mg/L
Thallium (Tl)-Total	<0.00020	mg/L	<0.00020	mg/L
Tin (Sn)-Total	<0.00050	mg/L	<0.00050	mg/L
Titanium (Ti)-Total	<0.010	mg/L	<0.010	mg/L
Uranium (U)-Total	<0.00020	mg/L	<0.00020	mg/L
Vanadium (V)-Total	<0.030	mg/L	<0.030	mg/L
Zinc (Zn)-Total	<0.0050	mg/L	<0.0050	mg/L
Dissolved Metals				
Aluminum (Al)-Dissolved	0.310	mg/L	0.326	mg/L
Antimony (Sb)-Dissolved	<0.00050	mg/L	<0.00050	mg/L
Arsenic (As)-Dissolved	<0.00050	mg/L	<0.00050	mg/L
Barium (Ba)-Dissolved	<0.020	mg/L	<0.020	mg/L
Beryllium (Be)-Dissolved	<0.0010	mg/L	<0.0010	mg/L
Boron (B)-Dissolved	<0.10	mg/L	<0.10	mg/L
Cadmium (Cd)-Dissolved	0.000017	mg/L	<0.000017	mg/L
Calcium (Ca)-Dissolved	4.02	mg/L	3.98	mg/L

Chromium (Cr)-Dissolved	<0.0010	mg/L	<0.0010	mg/L
Cobalt (Co)-Dissolved	<0.00030	mg/L	<0.00030	mg/L
Copper (Cu)-Dissolved	0.0037	mg/L	0.0017	mg/L
Iron (Fe)-Dissolved	0.346	mg/L	0.359	mg/L
Lead (Pb)-Dissolved	<0.00050	mg/L	<0.00050	mg/L
Lithium (Li)-Dissolved	<0.0050	mg/L	<0.0050	mg/L
Magnesium (Mg)-Dissolved	0.59	mg/L	0.59	mg/L
Manganese (Mn)-Dissolved	0.00210	mg/L	0.00213	mg/L
Mercury (Hg)-Dissolved	<0.000020	mg/L	<0.000020	mg/L
Molybdenum (Mo)-Dissolved	<0.0010	mg/L	<0.0010	mg/L
Nickel (Ni)-Dissolved	<0.0010	mg/L	<0.0010	mg/L
Potassium (K)-Dissolved	<2.0	mg/L	<2.0	mg/L
Selenium (Se)-Dissolved	<0.0010	mg/L	<0.0010	mg/L
Silver (Ag)-Dissolved	<0.000020	mg/L	<0.000020	mg/L
Sodium (Na)-Dissolved	<2.0	mg/L	<2.0	mg/L
Thallium (Tl)-Dissolved	<0.00020	mg/L	<0.00020	mg/L
Tin (Sn)-Dissolved	<0.00050	mg/L	<0.00050	mg/L
Titanium (Ti)-Dissolved	<0.010	mg/L	<0.010	mg/L
Uranium (U)-Dissolved	<0.00020	mg/L	<0.00020	mg/L
Vanadium (V)-Dissolved	<0.030	mg/L	<0.030	mg/L
Zinc (Zn)-Dissolved	<0.0050	mg/L	<0.0050	mg/L

Appendix 3

Plant species identified at the site

Species	Habitat Information	Occurrence on the site
Amabilis fir *(Abies amabilis)*	Shade tolerant, presence increases with increasing moisture and elevation.	Present
Alaskan blueberry *(V. alaskaense)*	Moist coniferous forests, forest openings, clearings often in soils rich in decaying wood; at low to subalpine elevations.	Present
Red alder *(Alnus rubra)*	Shade-intolerant species that is abundant in disturbed environments.	Present
Red huckleberry *(Vaccinium parvifolium)*	Coniferous forest, often at edges or under canopy openings, in soils rich in decaying wood or on stumps.	Common
Salal *(Gaultheria shallon)*	Coniferous forest to the seashore, low to medium elevations. Among the most common under story shrubs.	Abundant
Salmonberry *(Rubus spectabilis)*	Moist to wet places, disturbed sites, often abundant along stream edges.	Present
Sword fern *(Polystichum munitum)*	Moist forest at low to middle elevations. Widespread from central Vancouver Island and adjacent mainland south. Less common further north.	Common
Western hemlock *(Tsuga heterophylla)*	Shade tolerant evergreen conifer, found in wet nutrient medium to poor soils. Common in coastal B.C.	Present
Western red cedar *(Thuja plicata)*	Tolerant of most edaphic ranges, shade tolerant species that can be found on very steep, loose slopes.	Common
Yellow-cedar *(Chamaecyparis nootkatensis)*	Coniferous forests with a broad tolerance to soil range and moisture. Increases with altitude.	Present

Appendix 4

Table 4.1 Listed plant species showing listing status by regulatory body and likelihood of occurrence evaluated based on site conditions and documented distributions and habitat needs of listed species.

Common Name	Scientific Name	Global Rank	Prov Rank	COSEWIC	BC Status	SARA	Likelihood of Occurrence	Habitat and Distribution Notes
Dicotyledons								
Chamisso's montia	*Montia chamissoi*	G5	S2S3		Blue		**Very Unlikely**	Range does not include this biogeoclimatic (BGC) zone, reported to occur in drier locations at greater elevations, BGC Zones include CWHds - Dry Submaritime, SBPSxc - Sub-Boreal Pine - Spruce - Very Dry Cold, CWHxm - Very Dry Maritime
Dotted saxifrage	*Saxifraga nelsoniana* ssp. *carlottae*	G5T3?	S3		Blue		**Very Unlikely**	While suitable habitat may be present, site is south of the documented range of this subspecies.
Menzies' burnet	*Sanguisorba menziesii*	G3G4	S2S3		Blue		**Possible**	Found in fens, bogs, marshes and wet meadows in lowland and montane zones.
Purple-leaved willowherb	*Epilobium ciliatum* ssp. *watsonii*	G5T3T5	S2S3		Blue		**Possible**	Wet to mesic disturbed areas, roadsides, fields and ditches below 350 m. From sea level to the lower levels of the mountains.

Common Name	Scientific Name	Global Rank	Prov Rank	COSEWIC	BC Status	SARA	Likelihood of Occurrence	Habitat and Distribution Notes
Pygmy water lily	*Nymphaea tetragona*	G5	S2S3		Blue		**Very Unlikely**	Ponds, swamps, lakes, and quiet streams in the lowland and montane zones, at an elevation of 0-1200 m. Rare in coastal and C BC.
Queen Charlotte avens	*Geum schofieldii*	G2Q	S2		Red		**Very Unlikely**	Wet rock crevices in the lowland to subalpine zones; rare on the Queen Charlotte Islands and NW Vancouver Island.
Queen Charlotte butterweed	*Senecio moresbiensis*	G3	S3		Blue		**Possible**	Moist to wet bogs and slopes in the lowland to subalpine zones; locally infrequent on the Queen Charlotte Islands and extreme N Vancouver Island. On Vancouver Island, it occurs in Port Hardy, Port McNeil areas and on Brooks Peninsula (4 records). BC Conservation Data Centre: Conservation Status Report. http://srmapps.gov.bc.ca/apps/eswp/esr.do?id=19351
Monocotyledons								
Bog adder's-mouth orchid	*Malaxis paludosa*	G4	S2S3		Blue		**Possible**	Bogs, muskegs and moist forests near streams at low to middle elevations
Bog rush	*Juncus stygius*	G5	S2S3		Blue		**Very unlikely**	Pond margins and peat bogs in the lowland and montane zones. 0- 800 metres in elevation. Rare in coastal BC north of 50° N.

Common Name	Scientific Name	Global Rank	Prov Rank	COSEWIC	BC Status	SARA	Likelihood of Occurrence	Habitat and Distribution Notes
Nodding semaphoregrass	*Pleuropogon refractus*	G4	S3		Blue		**Possible**	Wet places, such as bogs, streambanks, swampy meadows, as well as shaded woods; from near sea level to approximately 1500 metres asl in elevation. South western BC southward into the Olympic, Cascade and Coastal mountains
White glacier lily	*Erythronium montanum*	G4	S2S3		Blue		Very Unlikely	Not known in northern part of Vancouver Island. Found in rocky woodlands at low elevations
Lichen								
Oldgrowth Specklebelly	*Pseudocyphellaria rainierensis*	G3G4	S1	SC	Red	3	Very unlikely	Mostly in old growth forest

Table 4.2 Listed plant species generated by the computer search and judged to be absent based on site conditions and documented distributions and habitat needs of listed species

Common Name	Scientific Name	Habitat and Distribution Notes
Dicotyledons		
American glehnia	*Glehnia littoralis* ssp. *leiocarpa*	Only found on coastal dunes and sandy beaches
Beach bindweed	*Convolvulus soldanella*	Only found on coastal dunes and sandy beaches
Four-leaved mare's-tail	*Hippuris tetraphylla*	Tidal marshes, mudflats and shallow ponds. Not known in northern Vancouver Island
Grey beach peavine	*Lathyrus littoralis*	Only found on coastal dunes and sandy beaches
Hairy goldfields	*Lasthenia maritima*	Not found on northern Vancouver Island
Northern adder's-tongue	*Ophioglossum pusillum*	Not found in northern Vancouver Island
Queen Charlotte twinflower violet	*Viola biflora* ssp. *carlottae*	Only recorded on Brooks Peninsula on Vancouver Island
Three-forked mugwort	*Artemisia furcata* var. *heterophylla*	Only recorded on Brooks Peninsula on Vancouver Island
Trelease's hybrid willowherb	*Epilobium x treleasianum*	Not found in Northern Vancouver Island
Waterwort water-milfoil	*Myriophyllum quitense*	Aquatic species
White wintergreen	*Pyrola elliptica*	Not found in Northern Vancouver Island
Yellow sand-verbena	*Abronia latifolia*	Moist coastal beaches and sand dunes in the lowland zone. To 850 metres in elevation. Infrequent on the Queen Charlotte Islands, Vancouver Island and the Gulf Islands; S to CA.

Common Name	Scientific Name	Habitat and Distribution Notes
Monocotyledons		
Dune bentgrass	*Agrostis pallens*	This is a rare species or group of species formerly thought to be confined to sand dunes but now known to occur inland in habitats subject to extreme summer drought. *E-Flora BC*
Gmelin's sedge	*Carex gmelinii*	Only found in tidal marshes
Lesser saltmarsh sedge	*Carex glareosa* var. *amphigena*	Only found in tidal marshes
Sand-dune sedge	*Carex pansa*	Habitat/Range: Sandy beaches, dunes and rocky shores in the lowland zone (CWHvh1, CWHwh1); rare on the Queen Charlotte Islands and Vancouver Island; S to CA.
Ferns		
Alaska holly fern	*Polystichum setigerum*	
Lichen		
Cryptic Paw	*Nephroma occultum*	Not found in northern Vancouver Island

Appendix 5

Table 5.1 Listed animal species showing listing status by regulatory body and likelihood of occurrence evaluated based on site conditions and documented distributions and habitat needs of listed species.

Common Name	Scientific Name	Global Rank	Provincial Rank	COSEWIC	BC Status	SARA List	Likelihood of Occurrence	Habitat and Distribution Notes
Birds								
Band-tailed Pigeon	*Patagioenas fasciata*	G4	S3S4B		Blue		**Unlikely**	Forages in a broad range of habitats. Project area is located at the northern edge of large range. Does nit breed on Vancouver Island
Barn Swallow	*Hirundo rustica*	G5	S3S4B		Blue		**Unlikely**	Forages over open areas, often near water, and remains relatively close to the nest. Nests in buildings, caves, and cliff crevices. Possible near Quatse Lake.
Canada Goose, *occidentalis* subspecies	*Branta canadensis occidentalis*	G5T2T3	S1N		Blue		**Unlikely**	Breeds in Alaska. May winter in general area. Feeds on vegetation often associated with bodies of water.
Great Blue Heron, *fannini* subspecies	*Ardea herodias fannini*	G5T4	S3B,S4N	SC (May 1997)	Blue	3	**Possible**	Not a known breeding area but it does nest in similar habitats. Susceptible to disturbance. Potential foraging nearby in riparian habitat. Usually nests within 5km of feeding grounds.
Marbled Murrelet	*Brachyramphus marmoratus*	G3G4	S2B,S4N	T (Nov 2000)	Red	1	**Unlikely**	Nests high in canopy of old growth forests, within 75 km of coastline. Site is within breeding range but the trees may not be old enough.
Northern Goshawk, *laingi* subspecies	*Accipiter gentilis laingi*	G5T2	S2B	T (Nov 2000)	Red	1	**Possible**	Tend to nest in maturing-to-old mesic, coniferous stands dominated by Douglas-fir and western hemlock. Nests on all aspects on Vancouver Island.
Northern Pygmy-Owl, *swarthi* subspecies	*Glaucidium gnoma swarthi*	G5T3Q	S3		Blue		**Possible**	Forages near forest edges , clearcut edges and natural openings, rather than continuous forest. Known occurrence within 50km.

Common Name	Scientific Name	Global Rank	Provincial Rank	COSEWIC	BC Status	SARA List	Likelihood of Occurrence	Habitat and Distribution Notes
Peregrine Falcon, *pealei* subspecies	*Falco peregrinus pealei*	G4T3	S3B	SC (Apr 2007)	Blue	1	**Unlikely**	No suitable nesting habitat and no concentrations of prey (e.g. colonies of breeding birds)
Pine Grosbeak, *carlottae* subspecies	*Pinicola enucleator carlottae*	G5T3	S3B		Blue		**Possible**	Is known to nest in second growth forest. Distribution not well documented.
Sandhill Crane	*Grus canadensis*	G5	S3S4B	NAR (May 1979)	Blue		**Unlikely**	Known occurrence within 40km. Typical foraging habitat includes shallow wetlands, marshes, swamps, fens, bogs, ponds, meadows, estuarine marshes, intertidal areas, and dry upland areas such as grasslands and agricultural fields.
Western Screech-Owl, *kennicotii* subspecies	*Megascops kennicottii kennicottii*	G5T4	S3	SC (May 2002)	Blue	1	**Unlikely**	Found in any variety of forest at lower elevations. Prefers open forest for foraging and large old trees for nesting.
Mammals								
American Water Shrew, *brooksi* subspecies	*Sorex palustris brooksi*	G5T2	S2		Red		**Possible**	Very little distribution and habitat information available. Found along creeks where they feed on invertebrates.
Ermine, *anguinae* subspecies	*Mustela erminea anguinae*	G5T3	S3		Blue		**Possible**	Restricted to Vancouver Island and Saltspring Island. Preys on a variety of small mammals in a variety of habitats.
Roosevelt Elk	*Cervus canadensis roosevelti*	G5T4	S3		Blue		**Possible**	Feed mainly in open coniferous or deciduous forest stands, non-forested wetlands, riparian areas, and vegetated slide areas. Fragmented distribution throughout the north end of the Island
Townsend's Big-eared Bat	*Corynorhinus townsendii*	G4	S3		Blue		**Possible**	Maternity and hibernation colonies use caves and mine tunnels. It is possible that the adits may be utilized. Very sensitive to

Common Name	Scientific Name	Global Rank	Provincial Rank	COSEWIC	BC Status	SARA List	Likelihood of Occurrence	Habitat and Distribution Notes
								disturbance[12]. Currently the most northern population on Van. Is. Is Sayward but distribution information is very limited.
Wolverine, *vancouverensis* subspecies	*Gulo gulo vancouverensis*	G4T1Q	SH	SC (May 1989)	Red		**Very Unlikely**	One historical sighting within 30km. Ranges over very large areas, very susceptible to human disturbance. No recorded sightings since 1982.
Invertebrates								
Black Petaltail dragonfly	*Tanypteryx hageni*	G4	S3		Blue		**Unlikely**	Usually found in lowlands in BC. Strongly associated with seepage areas and bogs. Will not be found beneath the shade of tall trees.
Broadwhorl Tightcoil snail	*Pristiloma johnsoni*	G2G3	S2S3		Blue		**Possible**	Found in old growth and older second growth. Susceptible to human disturbance. Confirmed identification at other locations on Vancouver Island. Very little information on distribution.
Pacific Sideband snail	*Monadenia fidelis*	G4G5	S3S4		Blue		**Possible**	Distribution not well documented. Active in open areas in spring and hibernates under mosses or leave litter in winter.
Scarletback Taildropper slug	*Prophysaon vanattae*	G4	S3S4		Blue		**Possible**	Lives on mosses that cover trees and shrubs. Known to inhabit Vancouver Island but density and distribution unknown.
Zerene Fritillary butterfly	*Speyeria zerene bremnerii* subspecies	G5T3T4	S2		Red		**Very Unlikely**	Known to occur at northern Vancouver Island. Inhabits open meadows with violet plants.
Amphibians								
Red-legged Frog	*Rana aurora*	G4	S3S4	SC (Nov 2004)	Blue	1	**Possible**	Live in and around a variety of aquatic habitats.

Table 5.2 Listed animal species generated by the computer search and judged to be absent based on site conditions and documented distributions and habitat needs of listed species

Common Name	Scientific Name	Explanation of Exclusion from Assessment
Birds		
Cassin's Auklet	*Ptychoramphus aleuticus*	Nests in large offshore colonies and feeds at sea.
Common Murre	*Uria aalge*	Nests on cliffs and small islands. Feeds offshore.
Double-crested Cormorant	*Phalacrocorax auritus*	Nests in association with large water bodies and feeds in water with schooling fish mostly in marine habitats.
Northern Fulmar	*Fulmarus glacialis*	Nests in colonies on cliffs and feeds at sea.
Short-eared Owl	*Asio flammeus*	Does not occur on Vancouver Island
Thick-billed Murre	*Uria lomvia*	Nests on cliffs and feeds at sea.
Tufted Puffin	*Fratercula cirrhata*	Marine species, found only on the west coast of Vancouver Island.
Mammals		
Fisher	*Martes pennanti*	Does not occur on Vancouver Island.
Grey Whale	*Eschrichtius robustus*	Only exists in marine habitats
Grizzly Bear	*Ursus arctos*	Does not occur on Vancouver Island
Sea Otter	*Enhydra lutris*	Only exists in marine habitats
Steller Sea Lion	*Eumetopias jubatus*	Only exists in marine habitats

Townsend's Vole, *cowani* subspecies	*Microtus townsendii cowani*	Does not occur on Vancouver Island
Wolverine, *luscus* subspecies	*Gulo gulo luscus*	Does not occur on Vancouver Island.
Fish		
Bull Trout	*Salvelinus confluentus*	Not found in the Quatse River watershed.
Cutthroat Trout, *clarkii* subspecies	*Oncorhynchus clarkii clarkii*	These species are not found directly on the site. However they are found downstream within the watershed. See Fisheries Resources section for further information.
Dolly Varden	*Salvelinus malma*	
Giant Black Stickleback	*Gasterosteus* sp.	Only found in Misty Lake (12km NW of Port McNeil) on Vancouver Island.
Misty Lake "Lake" Stickleback	*Gasterosteus sp.*	Only found in Misty Lake (12km NW of Port McNeil) on Vancouver Island.
Misty Lake "Stream" Stickleback	*Gasterosteus sp.*	Only found in Misty Lake (12km NW of Port McNeil) on Vancouver Island.
Amphibians		
Coastal Tailed Frog	*Ascaphus truei*	Does not inhabit Vancouver Island
Reptiles		
Leatherback	*Dermochelys coriacea*	Only exists in marine habitats

References (Appendices)

[12] EcoLogic Research http://www.ecologicresearch.ca/bat_projects.html

Lieutenant-Governor.

No. 8959
960

TAXATION ACT

Compared.
D.A.S.

PROVINCE OF BRITISH COLUMBIA.

FOR Deputy Minister of Lands.

ELIZABETH THE SECOND, by the Grace of God, of the United Kingdom, Canada and Her other Realms and Territories, Queen, Head of the Commonwealth, Defender of the Faith.

To all to whom these presents shall come, Greeting:

Know ye that We do by these presents, for Us, Our heirs and successors, in consideration of the sum of One hundred and ten & 41/100 Dollars to Us paid, give and grant unto GEORGE KEARON STOREY, his heirs and assigns, all mineral deposits, precious and base (save coal, petroleum, and any gas or gases), which may be found in, upon or under all that Parcel or Lot of Land situate in RUPERT District, and numbered Lot One thousand two hundred and ninety-four (1294) on the Official Plan or Survey of the said RUPERT District, and known as the "CALEDONIA" Mineral Claim, to have and to hold the said minerals unto the said GEORGE KEARON STOREY, his heirs and assigns, for ever:

subject always, however, to the payment to Us, Our heirs and successors, of royalty on all minerals and mineral deposits won or gotten from the lands covered by the said mineral claim, payable in such manner and in such amount or amounts as may be fixed from time to time by regulation made by the Lieutenant-Governor in Council.

PROVIDED that the grant hereby made of the said minerals shall be subject to the laws for the time being in force respecting mineral lands held in fee-simple:

PROVIDED further that it shall be lawful for any person duly authorized by Us, Our heirs and successors, to take and occupy such water privileges, and to have and enjoy such right of carrying water over, through, or under any parts of the said land, as may be reasonably required for agricultural or other purposes in the vicinity of the said land, upon paying therefor a reasonable compensation to the aforesaid GEORGE KEARON STOREY, his heirs and assigns.

In testimony whereof, We have caused these Our Letters to be made Patent and the Great Seal of *OUR PROVINCE OF BRITISH COLUMBIA* to be hereunto affixed: *WITNESS*, His Honour FRANK MACKENZIE ROSS Lieutenant-Governor of Our said Province, at Our Government House, in Our City of Victoria, this Twenty-sixth day of March, in the year of our Lord one thousand nine hundred and Fifty-seven and in the Sixth year of Our Reign.

By Command.

F2 No timber rights

Deputy Provincial Secretary.

Taxation Min., F. 2—200-653-4277