

ARIS SUMMARY SHEET

District Geologist, Victoria

Off Confidential: 89.02.12

ASSESSMENT REPORT 17065

MINING DIVISION: Vancouver

PROPERTY: Helpful
LOCATION: LAT 50 02 00 LONG 123 05 54
UTM 10 5542122 492957
NTS 092J03E

CLAIM(S): Helpful
OPERATOR(S): Cuttle, J.F.
AUTHOR(S): Cuttle, J.F.
REPORT YEAR: 1988, 29 Pages

COMMODITIES
SEARCHED FOR: Gold, Silver, Lead, Zinc, Copper

GEOLOGICAL
SUMMARY: The claim isolates a north-northwesterly trending sheared contact between Lower Cretaceous Gambier Group(?) volcanics and Cretaceous and Tertiary Coast Plutonic Complex quartz diorite. The sheared contact is highly siliceous and contains mineralized concordant and discordant quartz veins. Overlying an area of the claim are Garibaldi Formation basalt flows.

WORK
DONE: Geological
GEOL 500.0 ha
Map(s) - 1; Scale(s) - 1:5000
ROCK 33 sample(s) ;AU,AG,AS,CU,PB,ZN
MINFILE: 092JW

LOG NO: 0219	RD.
ACTION:	
FILE NO:	

2/15/53

GEOLOGICAL REPORT ON THE
 HELPFUL CLAIM

FILMED

Vancouver Mining Division, NTS: 92J/3

Longitude: 123 05.5'

**GEOLOGICAL BRANCH
 ASSESSMENT REPORT**

Latitude: 50 00.5'

17 065

RECEIVED
 FEB 12 1953
 Gold Commissioner's Office
 VANCOUVER, B.C.

By

Jim Cuttle, B.Sc , F.GAC
 # 103 1612 St Georges Ave
 North Vancouver, B.C.,
 V7L 3J7

TABLE OF CONTENTS

	page
SUMMARY	ii
INTRODUCTION	1.
LOCATION , ACCESS, and GEOGRAPHY	1.
PROPERTY STATUS	1.
AREA HISTORY, GEOLOGY, and MINERALIZATION	2.
PROPERTY WORK and DISCUSSION	7.
CONCLUSION	10.
REFERENCES	11.

APPENDICIES

Appendix A	Cost Breakdown of Fieldwork
Appendix B	Rock Geochemical Results
Appendix C	Statement of Qualifications

LIST OF FIGURES

Figure 1	General B.C. Location Map	after page 1.
Figure 2	Claim Location Map (1:100,000)	1.
Figure 3	Detail Claim Map (1:20,000)	1.
Figure 4	Rock Chip Sample Location (1:1000)	9.
Figure 5	General Claim Geology (1:5000)	in pocket

SUMMARY

The Helpful claim, located in the Vancouver Mining Division, includes 20 units, staked and recorded in May 1987. The property lies 115 kilometers north of Vancouver via highway #99 and consists of numerous secondary roads throughout its boundary.

The claim is part of the Coast Plutonic Complex and is underlain by a package of Lower Cretaceous volcanic and volcanoclastic roof pendant rock. Surrounding the volcanics are a series of Cretaceous and Tertiary diorite and quartz diorite intrusives. Age dating has suggested similarities in time of formation to that of the Britannia roof pendant.

Two mining camps are located in the area, all of which are located in the volcanic pendant rock. The Northair mine, approximately 12 kilometers to the north of the Helpful claim was an important gold silver producer between 1976 and 1982. After mine shutdown indicated reserves are presently at 65121 tons (Mines Handbook 1986-1987) grading 0.265 oz/ton Au, 0.78oz/ton Ag and approximately 2% combined lead zinc. The Brandywine Camp, located 8 kilometers to the north northwest of the property, has several massive sulphide and gold quartz vein prospects. Values in grab and chip samples have been found up to 0.4 oz/ton Au, 2.0 oz/ton Ag over widths of 2 feet. Numerous other zones have been isolated with similar values.

The 1987 summer and fall field program involved general reconnaissance mapping and rock chip sampling along and within the vicinity of a sheared contact between intrusive and volcanic pendant rock. This same zone is known to contain highly anomalous gold/silver values to the south on the Marble claim. A total of 33 rock samples were taken, some grabs and others chip samples, and were combined with property geology to isolate potential mineralized horizons. Values up to 5000 ppb Au and 17.8 ppm Ag, with accompanying 0.6% Pb were found in both cross cutting and concordant sugary quartz veins in the unit contact area.

INTRODUCTION

The Helpful claim consists of 20 units, and is presently owned by J.Cuttle of #103 1612 St. Georges Ave. N. Vancouver, B.C. V7L 3J7.

Exploration was carried out during selected times during the fall of 1987, and included prospecting, rock chip sampling, and property mapping. The work and results described in this report are intended to fulfill assessment requirements for the Helpful claim.

LOCATION, ACCESS, and GEOGRAPHY

The Helpful claim, found in the Vancouver Mining Division on map sheet number 92J/3, is 115 kilometers north of Vancouver and approximately 13 kilometers southwest of Whistler. The property bounds the northeastern edge of Daisy Lake.

A major logging road running through the center of the claim is accessible by the main Vancouver/Pemberton highway #99 just north of Callaghan Creek. Old and new logging operations have left a network of smaller roads that are driveable with the use of both two wheel and four wheel drive trucks. The main logging road is presently being kept open year round due to active forestry work on and around the property.

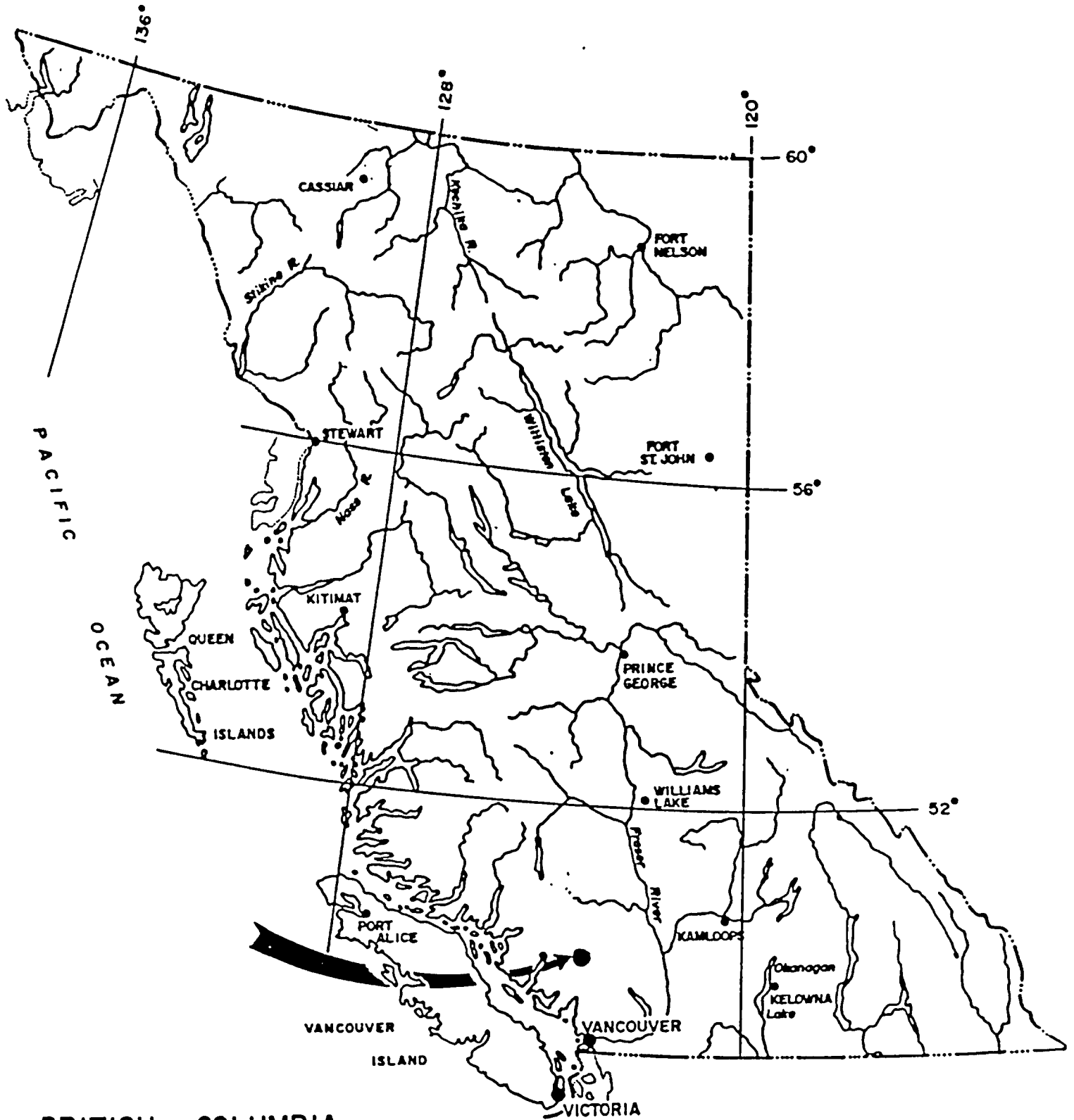
The area commonly receives 250 cms (100 inches) of annual precipitation of which 40% is snow. From field work experience depth of snow varies greatly with elevation and can conceivably be worked from April to December. The area is presently 40% logged and is characterized by rugged northerly trending cliffs and steep depressions with roughly 20% rock exposure.

PROPERTY STATUS

The claim was staked and is owned by J Cuttle in May, 1987. With the submission of this report and the required field work the property will be in good standing until its anniversary date in 1989

Claim	Record #	# of units	Recording date
Helpful	2124	20 (4nx5e)	May 6, 1987

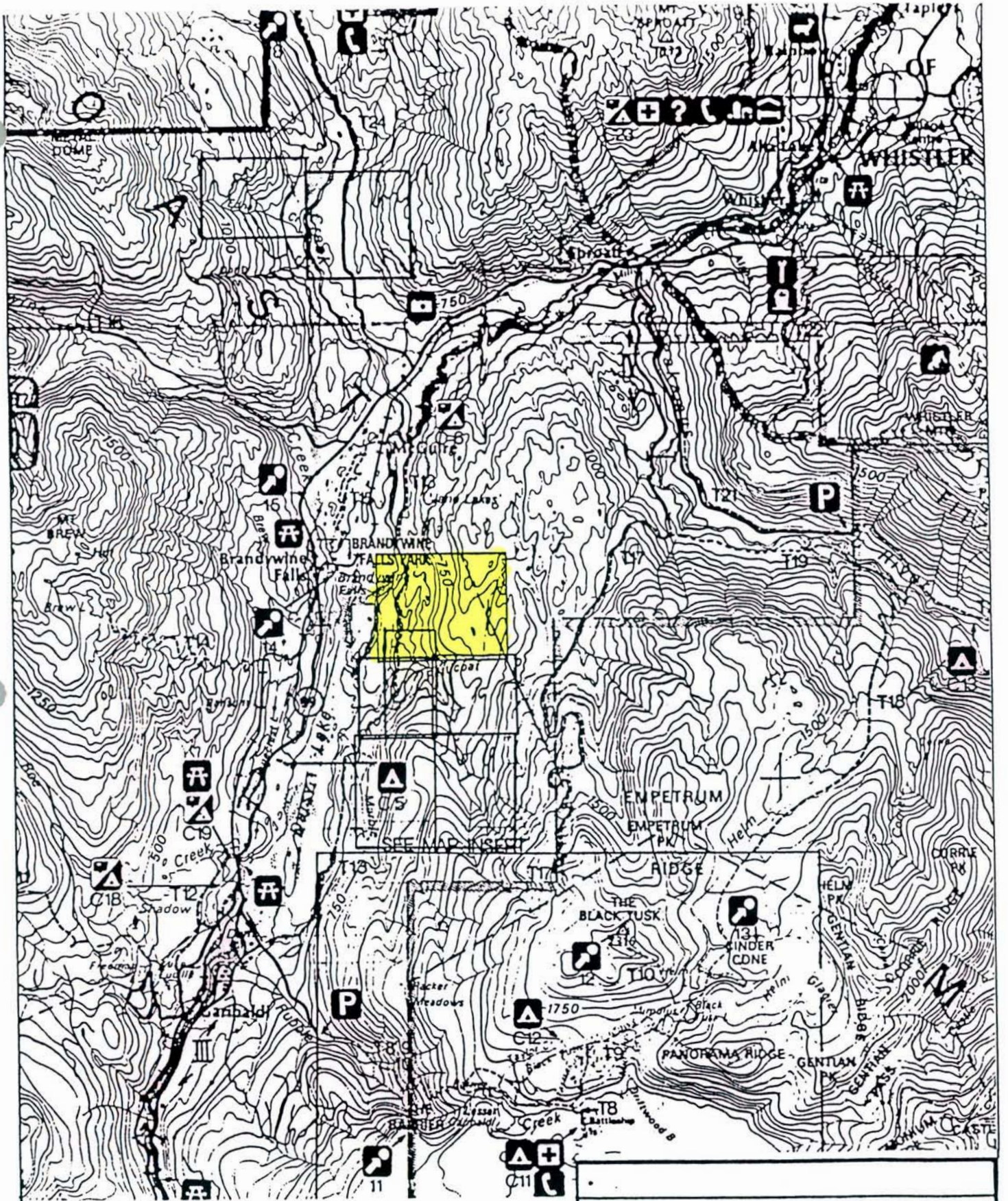
The southern claim boundary overlaps the Marble 1 and 2 in the south and the LCP can easily be found on the ridge top above the northeast corner of Daisy Lake.



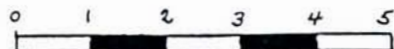
BRITISH COLUMBIA

Scale 1:7,500,000 approx.

<h2>General Location Map</h2>	
By: J. CUTTLE	Figure:
Drawn:	1
Date:	



Scale



1:100,000

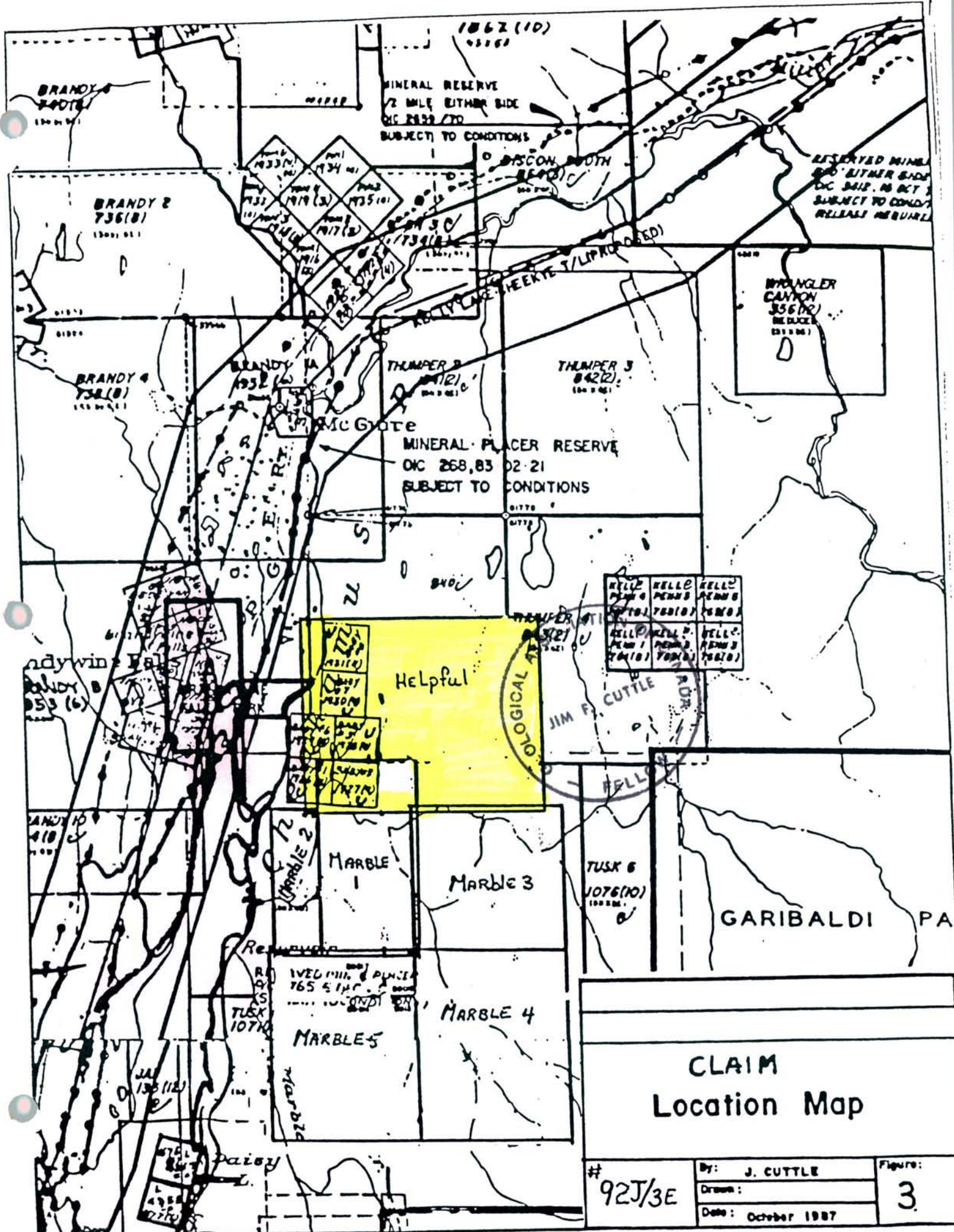
CLAIM Location Map

By: J. CUTTLE

Drawn:

Figure:

2



1862 (10)
 MINERAL RESERVE
 1/2 MILE EITHER SIDE
 OF R339/70
 SUBJECT TO CONDITIONS

RESERVED MINERAL
 1/2 MILE EITHER SIDE
 OF R341, 80 OCT 3
 SUBJECT TO CONDITIONS
 RELEASE REQUIRED

WYOMING
 CANYON
 356(10)
 REDUCED
 (31 8 81)

THUMPER 2
 842(2)
 THUMPER 3
 842(2)
 McGate
 MINERAL PLACER RESERVE
 DIC 268,83 02-21
 SUBJECT TO CONDITIONS

HELLO PLAN 4 761(10)	HELLO PLAN 2 760(10)	HELLO PLAN 6 760(10)
HELLO PLAN 1 761(10)	HELLO PLAN 3 760(10)	HELLO PLAN 5 760(10)

JIM F. CUTLER
 HELLO

Helpful
 GEOLOGICAL

MARBLE 1
 MARBLE 2
 MARBLE 3
 MARBLE 4
 MARBLE 5

TUSK 6
 1076(10)
 1000000

GARBALDI PA

CLAIM Location Map

# 92J/3E	By: J. CUTLER	Figure: 3
	Drawn:	
	Date: October 1987	

AREA HISTORY REGIONAL GEOLOGY and MINERALIZATION

The earliest recorded work in the area dates back to 1917 when prospectors first located veins with precious and base metal values in the Brandywine Creek area. Various mineral groups such as the AMADRA, BRANDYWINE, BLUEJACK, ASTRA, and FITZSIMMONS were staked along with numerous other small groups. Sporadic interest continued through the years in areas such as these and others such as the east side of Daisy Lake (VENETIAN, NANI, DAISY) and in the vicinity of Highway #99 in the Alta Lake area. In 1969, a Vancouver dentist prospecting along Callaghan Creek isolated mineralized float in conjunction with anomalous stream sediment samples. Lead-zinc-copper mineralization was later isolated in outcrop during the 1970 summer and later trenching exposed what is known today as the Manifold Zone. Two other zones (Discovery and Warman) were also found, and the three combined gave birth to the Northair Mine.

Regionally the area is underlain by volcanic and sedimentary rocks of the Callaghan Creek roof pendant. This pendant forms one of the many volcano/sedimentary roof pendants found within the Coastal Plutonic Complex of British Columbia and correlates similarly to the age and formation of the Gambier Group Britannia Mine roof pendant. Associations of the Callaghan Creek roof pendant to the Cheakamus and Fire Lake Groups have also been suggested but confirmation is still in doubt. A K/Ar date of 127 ± 4 Ma on hornblende on a possible zone within the Callaghan Creek pendant suggests a lower Cretaceous age for the volcanics (Miller, 1978). Surrounding the pendant rocks is the Coast Plutonic Complex of Cretaceous and early Tertiary diorite, quartz diorite, and quartz monzonite. Overlying these units are local Pleistocene mafic and felsic volcanic flows of the Garibaldi Group. Regionally the Callaghan Creek pendant rocks can best be described by Miller (1978) in increasing order of age as follows:

Olivine basalt occurs as a sequence of flows which are medium mauve-brown amygdaloidal, porphyritic, and exhibit a well developed columnar jointing.

Equigranular rhyodacite is a pale pink to tan, fine grained to aphanitic, and equigranular. This rock unit occurs in elongate north south pods, as dykes and, locally as blankets capping feeder dykes.

Porphyritic rhyodacite is a pale pink to tan colour with phenocrysts of (in decreasing order of abundance) quartz, plagioclase, sanidine, and biotite. These phenocrysts constitute about 50 % of the rock. This rock unit is similar in occurrence to equigranular rhyodacite mentioned above.

Epiclastic breccia has a dark grey to black, aphanitic matrix which averages 40% and supports fragments of quartz diorite (60%) and basalt (40%). The fragments are angular to subangular and generally spherical in shape.

COAST PLUTONIC COMPLEX

Quartz diorite is fine to medium grained and pale to medium greygreen with a typical granitic texture. Quartz constitutes about 16 % of the rock.

Hornblende diorite is generally medium grained and medium grey-green with a granitic texture. Hornblende composes approximately 20% of the rock.

Granodiorite is medium grained with anhedral patches of salmon pink perthite interrupting the monotony of an otherwise pale grey-green rock. The rock has a granitic texture with potassium feldspar comprising approximately one-fifth of the rock.

GAMBIER GROUP EQUIVALENT(?)

Andesitic agglomerate has a fine grained, dark grey-green tuffaceous matrix, averaging 40 volume percent. Fragments are porphyritic andesite (70%), equigranular andesite (22%), porphyritic dacite (5%), sandstone (2%), and equigranular dacite (1%). Fragments are rounded to subangular, ovoid, and up to 70 cms in diameter.

Epiclastic volcanic breccia has a fine-grained black matrix, comprising an average of 15% of the rock unit. Porphyritic andesite (38%), andesitic crystal tuff (32%), equigranular andesite (20%), equigranular dacite (8%), siliceous (1%), and glass (1%) are the remaining fragments. Fragments are angular to subangular, elongate; they have an average diameter of 3 cms but range up to 30 cms.

Arkosic wacke and minor amounts of interbedded mudstone are pale to medium grey and brown and coarse to fine grained. Poorly developed crossbedding and graded bedding indicate stratigraphic tops are to the east.

Andesitic crystal tuff has an aphanitic, dark grey matrix surrounding broken clasts of subhedral zoned plagioclase. These clasts comprise an average of 25% of the rock but may vary from 20 to 40 percent over a distance of 8 cms. Clasts of plagioclase average 0.8 mm in length.

Matrix supported dacitic agglomerate is a massive, epiclastic rock consisting of 50% medium grey-green matrix and 50% medium to light grey-green, dacitic to rhyodacitic fragments. The fragments are subangular, elongate, and up to 30cms in length. Cross bedding and graded bedding observed in the basal section of this unit indicate that stratigraphic tops are to the east.

Siliceous siltstone is very fine grained and dark grey. It occurs as pods within the matrix supported dacitic agglomerate, sandstones, and siltstones.

Tuffaceous sandstones and siltstones contain interbedded, very fine grained dark grey siltstones, pale brown arkosic wackes, and minor amounts of very fine grained rhyolite tuffs. Wackes comprise 70% of the unit; siltstones make up 25%.

Andesitic crystal tuff is a dark grey fine grained rock containing abundant subhedral, zoned plagioclase clasts and less abundant subhedral hornblende clasts. The clasts average 1 cm in length and generally comprise approximately 20% of the rock. Small hornblendite dykes crosscut southern exposures of andesitic crystal tuff and are assumed to represent a feeder zone. Hornblende within the dykes has a K/Ar model age of 127 ± 4 Ma.

Andesitic agglomerate is a massive, epiclastic rock containing 30% dark grey-green matrix; the remainder is composed of dark grey-green, porphyritic fragments and slightly less abundant medium grey-green, dacitic fragments. The fragments are well rounded to subangular, are commonly ovoid in shape, and are up to 1 meter in diameter.

Greenstone is dark grey-green, fine grained, well sheared, and primarily andesitic in composition.

Marble occurs as several moderately sheared pods that are interbedded with greenstone and chert layers, varying from 1mm to 1 meter in thickness.

The volcanic rocks have been metamorphosed to greenschist facies, characterized by the occurrence of actinolite, epidote, zoisite, chlorite, biotite, and albite. North northwesterly trending schistosity is commonly subparallel to bedding in the volcanic rocks with near vertical dips. Miller (1978) has indicated with the use of sedimentary structures that units young to the east. Unit contacts, notably the pendant contacts are generally sharp and are commonly associated with narrow shear zones subparallel to foliation.

Important to note regionally is all orebodies presently known in the area are restricted to particular units within the volcanics rocks, which in turn offers excellent advantages for mineral exploration. The following are descriptions of known occurrences:

The Brandywine Camp (Silver Tunnel, Millsite, Tedi-Pit, Zone 4) 5

Located 8 kilometers northwest along strike of the Marble claims, these old showings have extensive history for volcanogenic massive sulphide (Pb,Zn,Cu) and high grade gold silver base metal quartz veins. Presently Silver Tusk Mines of Vancouver own 100% interest in the properties. These ore bodies are confined to lense like satellite pendants of the main Callaghan roof pendant. They include greenstone, andesitic volcanics, marbles, and intrusive hornblende diorite. These rock units are considered the oldest within the volcanic package.

The Silver Tunnel(Blue Jack) occurs as sulphide minerals in veinlets crosscutting the host greenstone. Ore also occurs as massive sulphide formed parallel to foliation (Miller,1978).

Previous recorded values from field work are as follows:

open cut 1	0.24 oz/ton Au	, 1.8 oz/ton Ag
open cut 2	0.20 oz/ton Au	, 2.4 oz/ton Ag
open cut 3	0.36 oz/ton Au	, 2.6 oz/ton Ag, 2.5%Pb

The Millsite showing is essentially a base metal (Pb,Zn,Cu) occurrence located within greenstone with associated nearby hornblende diorite. Small veinlets and stringers of sphalerite, galena, and chalcopyrite are commonly found within the greenstone.

The Tedi-Pit (Cambria and Astra)has four distinguishable rock units. The mineralized greenstone unit consists of both disseminated and massive sulphide zones of galena, sphalerite, pyrite, and chalcopyrite. Meta dacite, hornblende diorite, and rhyodacite dykes are also closely associated with the ore. Small amounts of mineralized (Pb,Zn,Cu) fault breccia have been isolated in the Tedi-Pit but remain limited in strike length.

Width	Au oz/ton	Ag oz/ton	Pb	Zn
15 ft chip	0.4	2.0	2.6%	4.0%
75 ft chip	tr.	1.5	1.4%	4.0%

(after Marton,1978)

Other chip samples from underground workings have yielded similar values as above.

The Zone 4 showing is very possibly a replacement base metal occurrence (Zn,Pb,Cu) located within a pod of marble surrounded by massive greenstone. Limited work has been done on this showing.

The Northair Camp (Warman, Discovery, Manifold)

Located 13 kilometers north of the Marble claims, the Northair mine first began producing ore in 1976 at a rate of 300 tpd. Reserves as of May,1977, were estimated at 330,637 tons (Ditson) averaging 0.4 oz/ton Au, 4.6 oz/ton Ag, 2.7% Pb, and 4.0 % Zn. After mine closure in 1982 reserves are presently 65121 tons averaging 0.265 oz/ton Au, 0.78 oz/ton Ag, and 2% combined Pb,Zn (Gardner,1986).

The ore body is confined to the upper units of the Callaghan Creek roof pendant. It strikes south southeasterly and is confined to quartz and quartz carbonate veins within andesitic agglomerate and volcanic breccia. It has been suggested these deposits formed originally as distal volcanogenic ore bodies and were later partially remobilized into crosscutting vein structures. High level hydrothermal (?) precious metal mineralization may have accompanied the remobilization during Tertiary times.

Drill indicated grades from 1976 (after Ditson) are as follows

	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Au oz/ton</u>	<u>Ag oz/ton</u>
Discovery Zone	0.55%	5.4%	6.5%	0.10	1.18
Warman Zone	0.24%	1.4%	2.4%	0.68	0.85
Manifold Zone	0.07%	0.3%	0.5%	0.28	14.48

Daisy Lake (Venetian, Nani, Daisy)

These old showings and adits are located approximately 800 meters southwest of the southwest corner of the Marble #5 claim. Work dates back to 1917 and very possibly earlier. The adits are covered by two crown grants with lot numbers #4357 and # 4358. Property descriptions are best described by Camsell (1917) as follows:

"Several mineral locations have been made on the east side of Daisy Lake, but the only important deposits seem to be on the Venetian group which is 750 ft above the lake. Sandstone, slate, and some limestone north 30 degrees west and dipping at high angles, are traversed by a quartz vein striking north 75 degrees west and dipping southward 20 to 35 degrees. The vein is very irregular in size and pinches and swells from a few inches up to 15 feet. The ore minerals are mainly pyrite and chalcopyrite which occur more abundantly near the walls and along fractures in the quartz. The ore contains gold, silver, and copper and about fifteen tons of it have been picked and sacked for shipment. The owners estimate this will average about \$80 per ton in these metals. The vein is developed by an incline from the outcrop, 72 feet in length, and a crosscut tunnel 158 ft long which cuts the vein at a vertical depth of 40 feet below the outcrop."

PROPERTY WORK and DISCUSSION

The initial prospecting began in late summer, with the idea of isolating the continuation of known northerly striking shear zones found to the south of the Helpful claim. Several samples taken from these zones range between 0.8 and 2.42 oz/ ton Au. Silver is generally within a 3:1 ratio with gold and at times these zones are accompanied with highly anomalous Cu, Pb, Zn values.

The north northwesterly shear zones found in the Helpful claim appear to be highly altered sheared contacts between Coast Plutonic quartz diorite and Gambier (?) Group volcanics. There is one and possibly two shears of varying widths both expressing noticeable degrees of alteration (chlorite - sericite - silica). Mineralized zones in the shears are found as both concordant and discordant sugary quartz veins and silica rich horizons. The host rock is in all cases the quartz diorite which at times shows a variety of hybrids where perhaps the mafic volcanic rock has been partially digested by the intrusive. These mineralized zones vary in widths from 5 cms to 1.5 meters and are commonly associated with highly weathered pyrite, and minor amounts of galena, sphalerite, and chalcopyrite. Associated with these shears are Garibaldi Group feeder dykes, generally basaltic in composition, and at times amygdolal and highly magnetic. They range in widths from 0.5 to 4.0 meters and are thought to be the source of the flood basalts of the Callaghan Creek area. They cover an extensive portion of the northeast corner of the Helpful claim and have hidden a majority of the older, mineralized sheared contact. Prospecting with circumstances such as these can only be preformed where there are windows through the basalts. The Cheakamus River provides such a window through the 30 - 40 meter thick flows. This area can be seen in the northwest section of the claim and is located accurately on the geology map included in the back of the report. Although a low water level is needed to see the underlying geology in the Cheakamus Canyon, the altered and sheared contact is still persistent, with its closely associated andesitic/basaltic feeder dykes. With reconnaissance geological mapping, this zone has an intermittent strike length of 1600 meters in the Helpful claim alone.

Rock samples were selectively taken where prospecting uncovered interesting rock. Chip samples over a well exposed portion of the shear zone between L-1+00N to L-1+75N at 3+00W failed to isolate any significant gold/silver values although further to the north at L-2+75N , 2+15W a grab sample of a quartz vein on the flanks of the shear geochemed 5000ppb (0.14 oz/ton) Au. The following are descriptions and locations of the rock samples taken.

LOCATION	DESCRIPTION	(Au ppb, Ag, As, Pb, Zn, Cu ppm)					Cu
		Au	Ag	As	Pb	Zn	
L-0+78N,3+00W	1.0m chip in creek bed with trace cp, sp, py	50	4.2	42			
L-0+84N,3+00W	grab sample in shear zone	175	25.0	104			
L1+16N,3+07W	grab sample in highly siliceous zone	40	1.0	6			
L-1+18N,3+08W	0.4m chip in siliceous shear with <1% py	15	0.7	10			
L-1+27N,3+07W	grab sample from east bank of creek	23	1.4	1			
L-1+37N,3+00W	grab sample from highly sheared and sulphidized creek exposure	46	0.7	2			
L-1+40N,3+05W	0.8m chip from shear zone in creek. 1-2% py	62	7.4	40			
L-1+43N,3+05W	grab sample from shear with high % of weathered py	65	2.1	15			
L-1+85N,2+80W	grab sample of cross section of shear zone	26	0.5	2			
L-1+89N,2+77W	-----"-----	22	1.2	2			
L-1+87N,2+70W	-----"-----	73	3.5	2			
L-1+90N,2+67W	-----"-----	10	1.3	1			
L-1+98N,2+62W	float sample	12	0.7	1			
L-1+86N,2+52W	grab sample of cross section of shear zone	72	1.8	3			
L-1+88N,2+50W	-----"-----	8	0.5	2			

LOCATION	DESCRIPTION	(Au ppb, Ag, As, Pb, Zn, Cu ppm)					
		Au	Ag	As	Pb	Zn	Cu
L-1+77N,2+25W	grab sample of silified zone with qtz vein. Visible cp,sp, gal.	230	17.8		2480	1530	590
L-1+70N,2+58W	grab sample of n/s trending qtz vein.	355	9.5		6100	760	310
L-1+45N,2+23W	grab sample of fe stained qtz vein (10cms) 2% py	280	1.3				
L-3+55N,1+90W	grab sample of siliceous zone	25	1.0				
L-4+45N,2+23W	grab sample of siliceous zone	720	2.1				
L-2+75N,2+15W	grab sample of sugary qtz vein (10 cms)	5000	7.3				
R-1 , near the southeast corner of the claim	grab sample of n/s trending sugary qtz vein	20	0.8				
R-2, ----"----	-----"-----	10	0.5				
R-3, near the west end of L-8+50N at the creek exposure	0.5m chip of felsic vol/ cherty sericite schist. Bands of po.	5	1.2		27	21	302
R-4 ,----"----	0.75m chip of sulphidized felsic vol	5	1.9		103	63	127
R-5,-----"----	grab from carbonate zone, with minor po,cp	5	1.7		41	12	18
R-6,in the river canyon near the north claim line	grab sample of shear zone. Minor py	5	1.1				

LOCATION	DESCRIPTION	(Au ppb, Ag, As, Pb, Zn, Cu ppm)					
		Au	Ag	As	Pb	Zn	Cu
L-0+70N,3+02W	1.2m chip in middle of creek Siliceous shear	8	0.2	6			
L-0+73N,3+00W	0.8m chip in creek 1 - 2% py	48	1.1	18			
L-1+95N,2+47W	grab sample of cross section of shear zone	9	0.8	2			
L-2+45N,2+23W	minor sugary qv. 5cms in shear zone <0.5% py	10	0.8				
L-10+40N,5+70W	grab of cross cutting qtz vein Minor iron stain	5	0.7		6	9	8

Grid locations of these samples can be referenced by the geology map that is included in the back, or partially by the map that shows the chip sample locations.

L-1175N

L-1100N

L-0100N

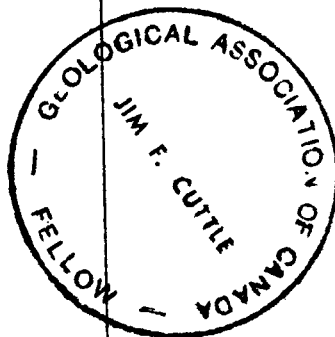
⊗
1.46 oz/t Au
1.7 oz/t Ag

2100W

2150W

7/L-3100W

South Grid



Claim Boundary (chip Au)
(MARBLE 1)

2125W -

⊗ 9,0.8
- 8,0.5 ⊗ 72,1.8

⊗ 12,0.7

⊗ 10,1.3
⊗ 75,3.5

2145W -

⊗ 22,1.2

⊗ 26,0.5

Stream

7/L-3100W -

0.8m chip (65, 2.1)

grab (46, 0.7)

0.4m chip (15, 0.7)

60m chip (50, 4.2)

0.8m chip (48, 1.1)

0.878 oz/t Au
2.51 oz/t Ag

500, 1.7

grab (62, 7.4)

grab (23, 1.4)

grab (40, 1.0)

chip (175, 25)

1.2m chip (8, 0.2)

1140W

1140W

1120W

0180W

Helpful Claim
(South Grid)

Rock chip location
and Results.
(Au ppb, Ag ppm)

1:1000 Scale

CONCLUSION

Prospecting and follow-up rock chip sampling has served to isolate potential gold/silver base metal mineralized horizons trending to the north through the Helpful claim. Additional work should be concentrated on the north and northwest sides of the Cheakamus River in the vicinity of the contact between the quartz diorite and the bimodal volcanic pendant rock.

REFERENCES

11

- Bacon, W.R. (1975) Lode Gold Deposits in Western Canada. Paper presented at C.I.M annual western meeting, Edmonton, Alberta. p 103 - 104
- Barr, D.A. (1979) Gold in the Canadian Cordillera. C.I.M Bulletin, March 1980. p 53 - 54
- Camsell, C. (1917) "Venetian", G.S.C Summary Report 1, 1917 , p 21b
- Dickson, M.P., and Mcleod, D.A. (1975) Northair Mines: Grassroots to Senior Financing, Cdn Min Jour, April, p 79 - 82
- Ditson, G.M. (1978) Metallogeny of the Vancouver - Hope Areas. Unpublished M.Sc Thesis, 1978. University of Southern California.
- Fraser, D.C. (1966) Contouring of VLF-EM Data. Geophysics, 34 p 958 - 967
- Gardner, C.D. ed. (1986) Canadian Mines Handbook, 1986 - 1987 pp 496.
- Geonics Ltd., (1970) Operating Manual for EM-16 VLF Electromagnetic unit, Toronto, Ontario.
- Geonics Ltd., (1972) Operating Manual for EM-16R. Direct reading ground resistivity meter. Toronto, Ont.
- Hjelt, S.E., Kaikkonen, P., Pietila, R. (1985) On the Interpretation of VLF Resistivity Measurements. Geoexploration, 23, p 171 - 181.
- Marton, A.S. (1978) Bedrock Geology of thr Tedi-Pit Lead Zinc Copper Silver Showing. Unpublished B.Sc. Thesis, 1978. University of British Columbia. pp 59
- McCall, K.M. (1987) Geology of the Britannia Ridge, East Section, Southwest B.C. Unpublished M.Sc. Thesis, 1987. University of British Columbia.
- Miller, J.H.L and Sinclair, A.J. (1978) Geology of Part of the Callaghan Creek Roof Pendant, B.C. Ministry of Energy, Mines, and Pet. Resources. Geological Fieldwork, 1978, Paper 1979-1, p 124-131.
- Miller, J.H.L and Sinclair, A.J. (1979) Geology of an Area including Northair Mines Ltd., Callaghan Creek Property; B.C. Ministry of Energy, Mines, and Pet. Resources. Geological Fieldwork, 1979.

Phillips, W.J., Richards, W.E. (1975) A Study of the (12
Effectiveness of the VLF Method for the Location
of Narrow Mineralized Fault Zones.
Geoexploration,13; p 215-226.

Roddick, J.A. and Woodsworth, G.J. (1975): Coast Mountain
Project. Pemberton (92J) Map-Area, B.C., G.S.C
Paper 75-1 Pt.A, p 37-40.

Woodsworth, G.J. (1977) Geology, Pemberton (92J) Map Area, G.S.C.
O.F. # 482.

_____ B.C. Ministry of Mines Annual Report. "Venetian",
1916,p372; 1974,p198; 1976,E121.

_____ B.C. Ministry of Mines Annual Report. "Northair",
1973, p245-248; 1974, p200-202.

_____ B.C. Minister of Mines; Assessment Report #6114,
#7793.

APPENDIX A

STATEMENT OF EXPENSES

Helpful claims (20 units)

Personnel: J.Cuttle B.Sc. Geologist (200/day) 1600.00
 Aug 18,19,21,23
 Oct 11,15
 Nov 17,26

Rock Geochem: 33 rocks total
 5 rocks 55.50
 2 rocks 19.00
 18 rocks 279.00
 7 rocks 75.50
 1 rock 13.25

 33 rocks 442.25

TOTAL 2042.25



APPENDIX B

MIN-EN LABORATORIES LTD.

Specialists in Mineral Environments

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604) 960-5514 OR (604) 989-4524

TELEX: VIA USA 7601067 UC

Certificate of GEOCHEM

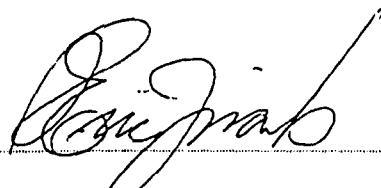
Company: J. BUTLER
Project: HELPPIL
Attorney: J. BUTLER

File: 7-2116/F1
Date: DEC 28/87
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	CU PPM	PB PPM	ZN PPM	AG PPM	AU-WET PPM
R1				.8	20
R2				.5	10
R3	302	27	21	1.2	5
R4	127	103	63	1.9	5
R5	18	41	12	1.7	5
R6				1.1	5
L1040N 570W	8	6	9	.7	5

Certified by



MIN-EN LABORATORIES LTD.

MIN-EN LABORATORIES LTD.

Specialists in Mineral Environments

295 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604) 980-5814 OR (604) 980-4574

TELEX: VIA USA 7601067 UC

Certificate of GEOCHEM

Company: JIM TUTTLE
Project: HELPFUL
Attention: JIM TUTTLE

File: 7-1400/P1
Date: SEPT 29/87
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AG PPM	AS PPM	AU-WET PPB
0275N 215W	7.3	1	5000

Certified by



MIN-EN LABORATORIES LTD.

MIN-EN LABORATORIES LTD.

Specialists in Mineral Environments

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524

TELEX: VIA USA 7601067 UC

Certificate of GEOCHEM

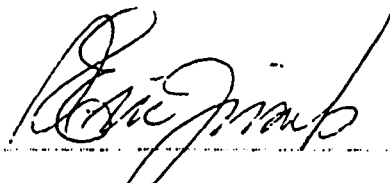
Company: J. CUTTLE
Project: HELPFUL
Attention: J. CUTTLE

File: 7-1905/P1
Date: NOV 21/87
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	CU PPM	PB PPM	ZN PPM	AG PPM	AU-WET PPB
L177N 225W	590	2480	1530	17.8	230
L170N 258W	310	6100	760	9.5	355
L145N 223W				1.3	280
L445N 223W				2.1	720
L355N 190W				1.0	25

Certified by



MIN-EN LABORATORIES LTD.

MIN-EN LABORATORIES LTD.

Specialists in Mineral Environments

705 West 15th Street North Vancouver, B.C. Canada V7K 1T2

TE: (604) 980-5814 OR (604) 983-4524

TELEX: VIA USA 7601067 BC

Certificate of Geochem

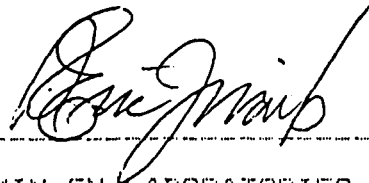
Company: J. CUTTLE
Project: HELPFUL
Attention: J. CUTTLE

File: 7-1607/P1
Date: OCT 19/87
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AS PPM	AU-WET PPG
L2+78N 2+20W	2.6	30
L2+45N 2+23W	.8	10

Certified by



MIN-EN LABORATORIES LTD.

MIN-EN LABORATORIES LTD.
Specialists in Mineral Environments
705 West 15th Street North Vancouver, B.C. Canada V7H 1T2

PHONE: (604) 980-5814 OR (604) 988-4524

TELEX: VIA USA 7601067 UC

Certificate of GEOCHEM

Company: JIM CUTTLE
Project: HELPFUL
Attention: JIM CUTTLE


File: 7-1158/P1
Date: AUGUST 29/87
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AG PPM	AS PPM	AU-FIRE PPB
L143N 305W	7.4	40	62
L140N 305W	2.1	15	65
L137N 300W	0.7	2	46
L127N 307W	1.4	1	23
L118N 308W	0.7	10	15
L116N 307W	1.0	6	40
L084N 300W	25.0	104	175
L078N 300W	4.2	42	50
L073N 300W	1.1	18	48
L070N 302W	0.2	6	8
L189N 277W	1.2	2	22
L185N 280W	0.5	2	26
L198N 262W	0.7	1	12
L190N 267W	1.3	1	10
L187N 270W	3.5	2	73
L186N 252W	1.8	3	72
L188N 250W	0.5	2	8
L195N 247W	0.8	2	9

Rock

Certified by _____



MIN-EN LABORATORIES LTD.

APPENDIX C

STATEMENT OF QUALIFICATIONS

I, JIM F. CUTTLE, of the Municipality of North Vancouver, in the Province of British Columbia, certify as follows regarding the report on the Marble 1-5 mineral claims:

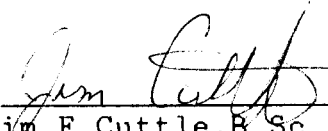
That I am a geologist having practiced my profession in Canada and Norway for the past 7 years.

That I am a graduate of the University of New Brunswick with a B.Sc in Geology.

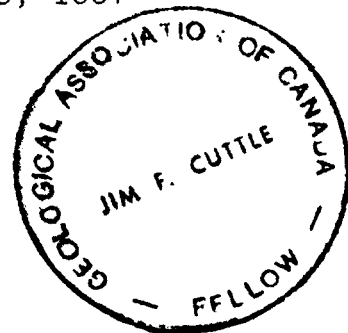
That I am presently working as a private consultant.

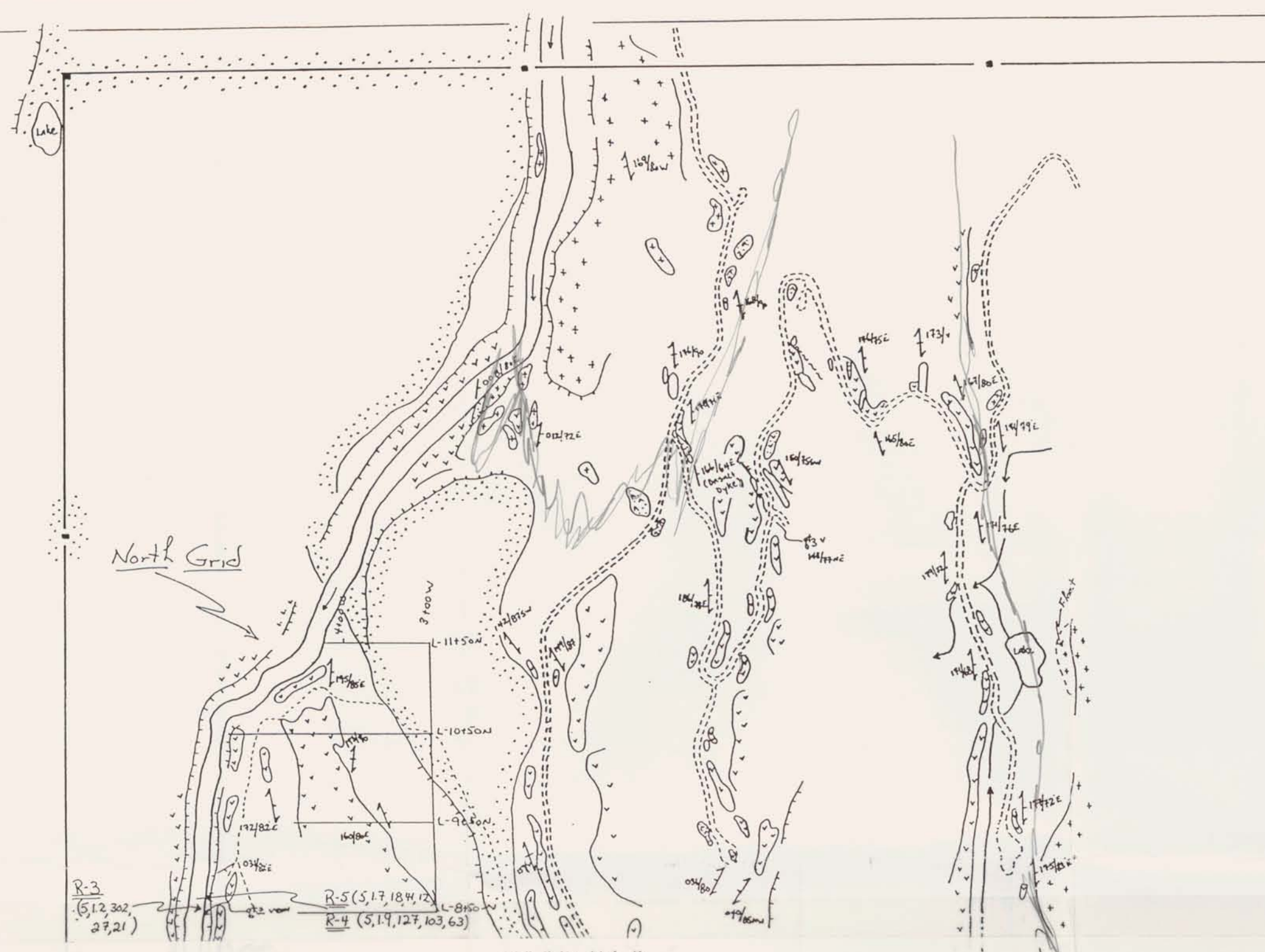
That I am a Fellow of the Geological Association of Canada.

That I am presently residing at #103-1612 St. Georges Ave., North Vancouver, British Columbia.

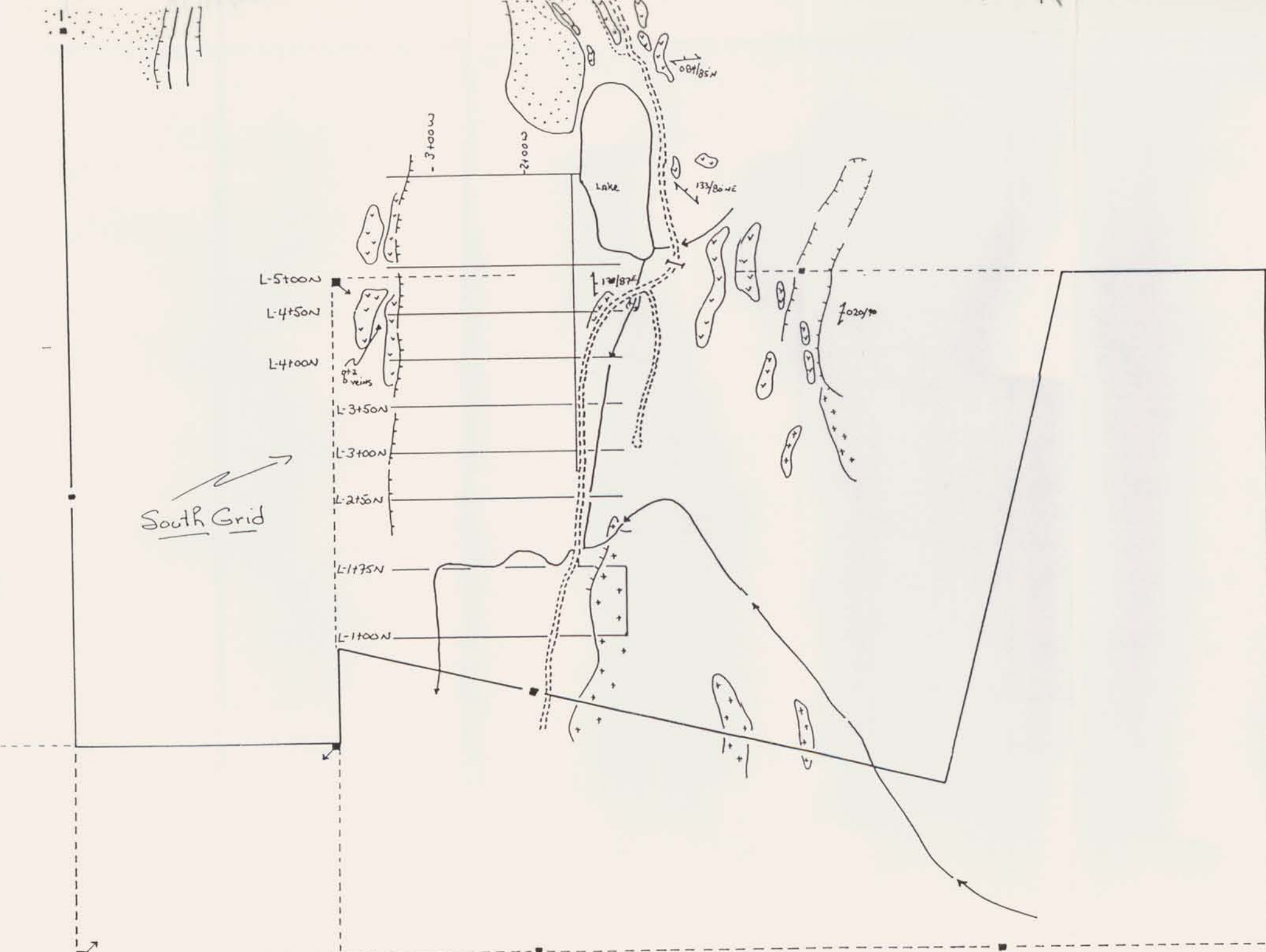
Signed: 
Jim F. Cuttle, B.Sc., F.G.A.C.

December 10, 1987




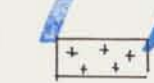
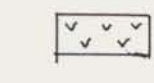


Helpful Claim (SE x 4N)




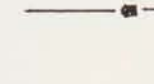


GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,065

-  Garibaldi Group: Basalt and andesitic flows
-  Coast Plutonic Complex: Quartz diorite
-  Gambier Group(?) Mafic to felsic volcanics with interbedded argillites.

R-5 (45, 1.8, 3, 13, 70) Au, Ag, Cu, Pb, Zn

-  Road
-  Stream
-  Strike/Dip of foliation/schistosity
-  Claim boundary + post.

