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EAGLE 1,3 MINERAL CLAIMS  
New Westminster Mining Division

NTS 92G/9E

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VANCOUVER, B.C.	

1992 GEOLOGICAL and GEOCHEMICAL REPORT

(from May to July 1992)

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

22,533

by:

Jim Cuttle, B.Sc, P.Geo

#37009, 2930 Lonsdale Ave.  
North Vancouver, B.C.  
V7N-4M4

September 30, 1992

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TABLE OF CONTENTS

	page
SUMMARY .....	1
INTRODUCTION .....	2
LOCATION and ACCESS .....	2
CLAIM STATUS .....	2
HISTORY and PREVIOUS PROPERTY WORK .....	3
REGIONAL GEOLOGY .....	3
Harrison Lake Group .....	4
Fire Lake Group .....	5
REGIONAL MINERALIZATION .....	6
Seneca Deposit .....	7
LOCAL GEOLOGY and MINERALIZATION .....	8
1992 FIELD WORK .....	9
Rock geochemistry .....	9
Soil Geochemistry .....	10
Mapping and Prospecting .....	10
CONCLUSIONS .....	12
REFERENCES .....	13

## ILLUSTRATIONS

- Fig 1. Property Location Map
- Fig 2. Current Claim Map , 92G/9E, 1:50,000
- Fig 3. Regional Geology, Harrison Lake.
- Fig 4. Geological Section of the Seneca Deposit
- Fig 5. 1992 Grid and Rock Sample Location, 1:20,000
- Fig 6. Grid Soil Geochemistry, (Eagle 3), 1:2,000  
(Cu,Pb,Zn in ppm, Au ppb)
- Fig 7. Grid Geology (Eagle 3), 1:2,000

## APPENDIX

- #1 Rock and Silt Geochemical Results
- #2 Cost breakdown of field work
- #3 Author Qualifications

## SUMMARY

The Eagle #1 and #3 mineral claims, located approximately 8 kilometers north of Chehalis Lake on NTS map sheet 92G/9E received fourteen mandays of prospecting, soil sampling and geological mapping from May through July 1992. Portions of the 38 unit claim block are believed to cover upper stratigraphic sections of the Harrison Lake volcanics including the Echo Island Member and the conformably overlying Mysterious Creek Formation argillites. These Middle to Upper Jurassic volcanic and sedimentary rocks are considered ideal for hosting potential "Kuroko" Zn-Cu-Pb(Au,Ag) stratiform volcanogenic mineralization similar to the Seneca deposit found 32 kilometers to the south of the Eagle property.

Several well mineralized Cu-Pb-Zn boulders were found during 1992 on the eastern portion of Eagle 3 claim above and below a road cut in an old logged area. The mineralized and brecciated creamy rhyolite with fragments of siliceous argillite float assayed 5.5%Zn, 3.9%Pb, 2.3%Cu, 115g/tAg and 0.28g/tAu. A soil grid was established over this area and 78 soil samples were taken to isolate any hidden and mineralized stratigraphic horizons. Other mineralized and altered float samples include chloritized magnetite sphalerite rich mafic volcanic, pyritized and cherty black argillites and epidotized intermediate volcanoclastics. A second area of interest outcrops on the northern boundary of the Eagle 1 claim at 970m along the north side of Alder Creek. At least three zones of massive to disseminated sphalerite and chalcopyrite (10-15cms wide where accessible) cross-cut stratigraphy and seem to fan vertically upwards into the overlying cliffs and steep faces. Iron stain from pyrite and pyrrhotite becomes noticeably more prominent with elevation above the Zn-Cu mineralization.

The focus of this report describes the geochemical, geological and regional prospecting work conducted on the Eagle 1 & 3 claims during the early summer months of 1992.

## INTRODUCTION

The Eagle 1 claim was staked by the author on April 23, 1989 to cover an extensive zone of sulphide rich skarn formation in contact with and adjacent to the Jurassic Harrison Lake Group and the Cretaceous Coast Plutonic Complex. The geology is also considered highly favourable for hosting 'Kuroko' style Cu-Zn-Pb volcanogenic mineralization similar to the 'Seneca' deposit located 30 kilometers to the south. The Eagle 3 claim was later staked on July 6, 1990 to increase the ground position in the area.

A total of 8 rock samples and 78 soil samples were taken during 1992 in areas that could be reached relatively easily, particularly on the east side of Eagle #3 and #1 claims. Other areas of notable heavy gossan seen in the central portions of the claims have yet to be prospected and are considered highly prospective zones for additional outcropping of volcanogenic and skarn type mineralization.

## LOCATION and ACCESS

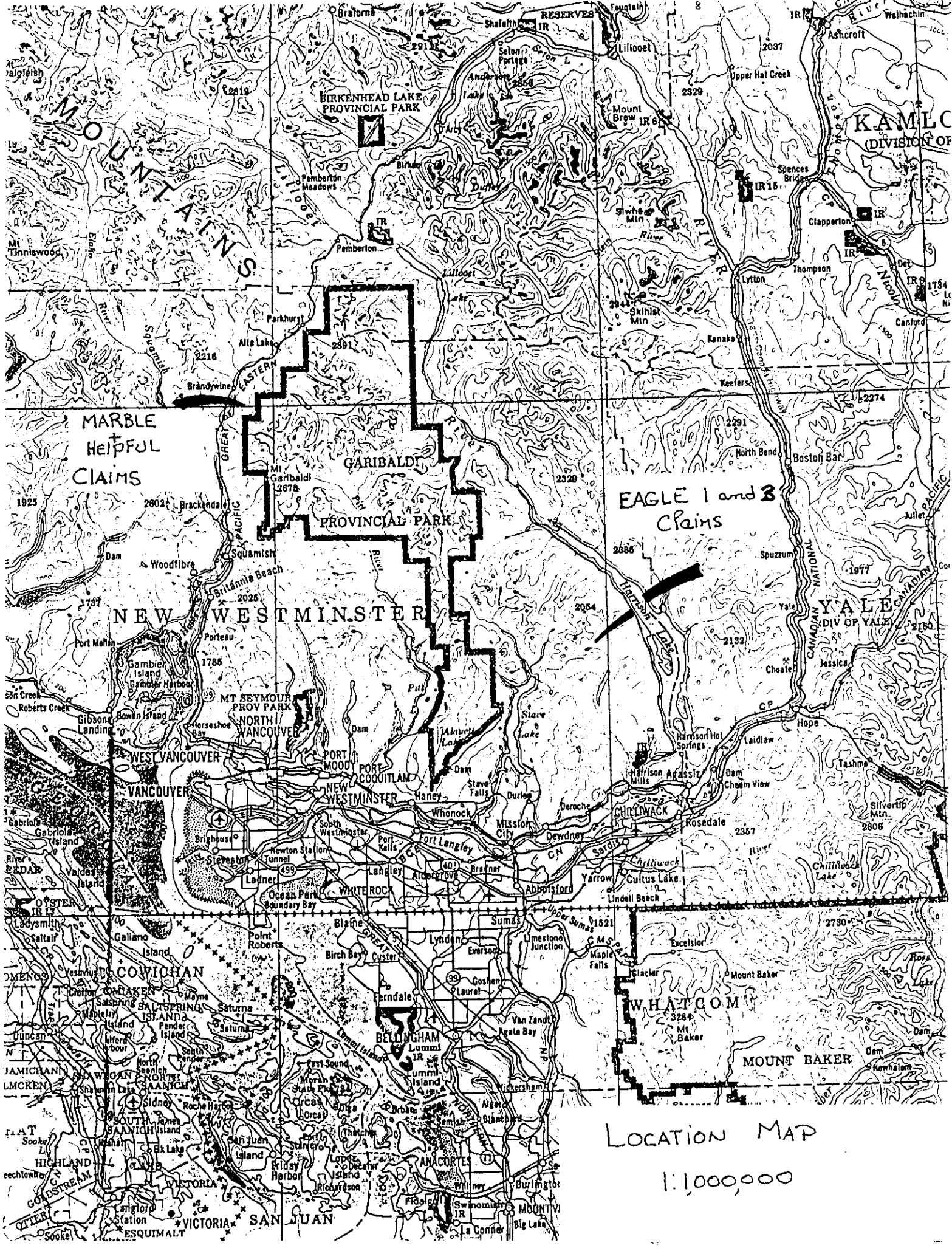
The Eagle mineral claims are found on NTS 92G/9E approximately 8 kilometres north of Chehalis Lake and 110 kilometres east of Vancouver. Well maintained logging roads from Harrison Mills head up the west side of the Chehalis River and access the south and east sides of the Eagle 1 and 3 claims. The remainder of the property is accessible only by foot or helicopter. The topography is relatively rugged throughout the property as elevations varying from 500 to 1650 meters. Recently a new logging road has been driven to the west along the northern sections of Eagle Creek and when completed it will offer excellent access to the central and northern parts of Eagle #3 claim.

## CLAIM STATUS

A total of two claims (38 units) surround and cover portions of the sulphide rich zones found in the Eagle Creek area. With the work described in this report the claims are in good standing until April 23 and July 6, 1994.

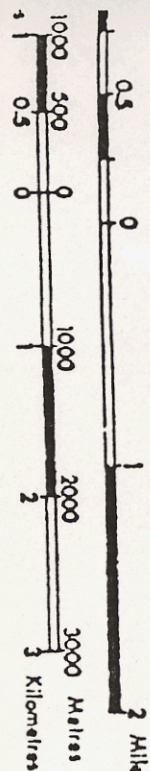
(\*\* New Westminster Mining Division \*\*) NTS 92G/9E

<u>CLAIM</u>	<u># UNITS</u>	<u>RECORD #</u>	<u>RECORDED</u>	<u>ANNIVERSARY</u>
Eagle 1	20	3622 (235883)	Apr 23/89	Apr 23/94
Eagle 3	18	4025 (236275)	Jul 06/90	Jul 06/94

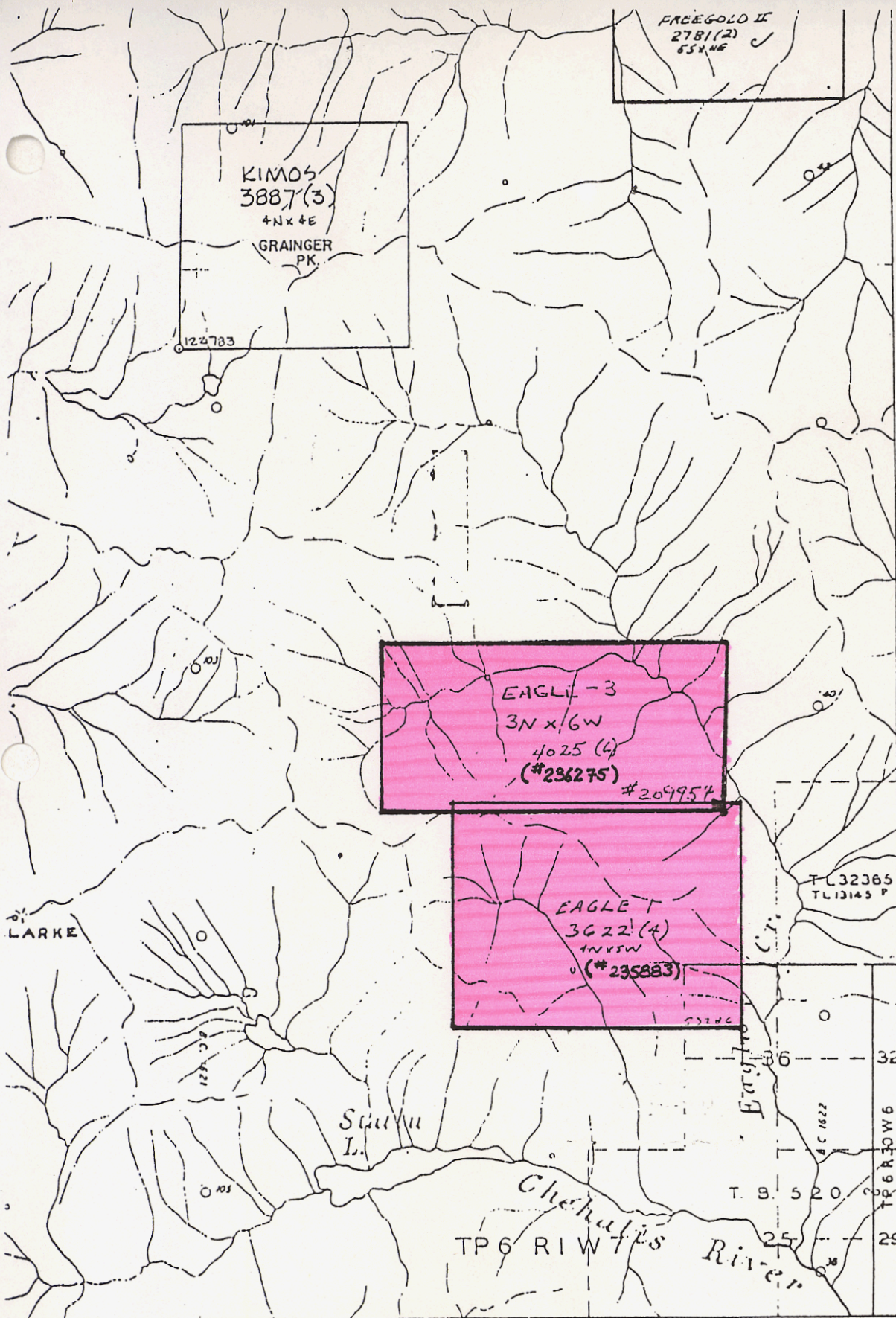


LOCATION MAP  
1:1,000,000

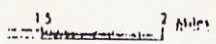




UNLESS VERIFIED OR SURVEYED, THE MAP POSITION OF A  
 LEGAL CORNER POST IS BASED ON THE LOCATOR'S SKETCH.  
 FOR FURTHER INFORMATION, APPLY TO THE OFFICE OF THE  
 MINING DIVISION CONCERNED.  
 DATE OF MICROFILM: 1990 June 28



**MINING RESOURCES REFERENCE MAP 92G/9E**  
 MINES AND PETROLEUM RESOURCES VICTORIA, B.C.  
 This map shows only the location of mineral claims that have not been surveyed. Where the  
 location of a corner post has been verified it is indicated with the symbol, Ver. Additional  
 information on claims may be obtained at the Mining Division concerned.



**M 92G/9E**



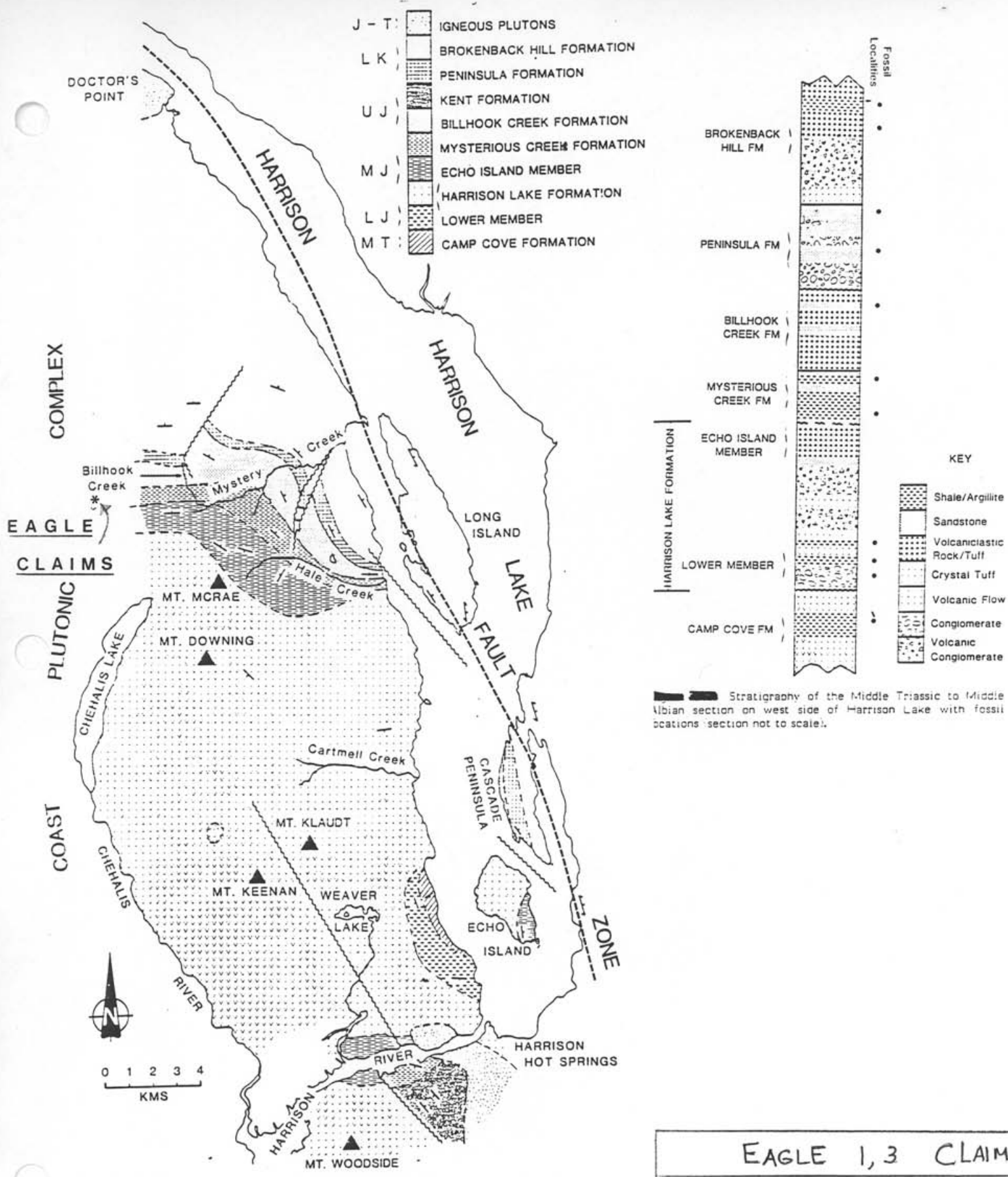
## PROPERTY HISTORY and PREVIOUS WORK

The only recorded data of previous exploration work in the property area is from assessment reports submitted by Chevron in 1972, 1976 and 1977 where their interest was focused on the potential of Cu,Pb,Zn volcanogenic mineralization hosted by the Harrison Lake Group. Geochemical sampling, geological mapping and reconnaissance prospecting primarily concentrated on a linear contact zone between the Harrison Lake Group and the Coast Range intrusives. Several areas of massive to semi-massive pyrite were isolated over a length of 3.5 kilometres. Most of which have coincident but untested copper, lead and zinc geochemical anomalies, with only a few assays for gold. Chevron had kept the property in good standing for several years and later allowed it to lapse, when it was then restaked by the author in early 1989. Since then, this report accounts for the third assessment submitted on property geology and new mineralization.

## REGIONAL GEOLOGY and MINERALIZATION

On a regional scale the volcanic and sedimentary strata found between the west side of Harrison Lake and Chehalis Lake area contain two volcanic episodes (Middle Jurassic Harrison Lake Group in the south and Lower Cretaceous Fire Lake Group in the north) separated by shales and volcanoclastic sediments of the Mysterious Creek and Billhook Creek Formations. Besides two unconformities known to exist at the bottom of the Harrison Lake volcanics (Triassic Jurassic boundary) and the Billhook Creek and overlying Fire Lake Group (Late Jurassic), the package represents a relatively complete section of bimodal island arc volcanics and associated clastic sediments. There are several linears and possible thrust fault trends that can be isolated by airphoto in the Harrison Lake Group that generally align themselves to the northwest-southeast. These Late Cretaceous high angle faults are well represented by the "Harrison Lake Fault" and the "Fire Creek Thrust". An earlier, possibly Jurassic age, northwest fault system may be represented by the occurrence of domal features along disguised linears such as Mt Keenan, Mt Klautt, and Mt Downing. Subtle northeast trending Tertiary strike slip faults are known to have localized basaltic dykes and plutons particularly evident at the Skookumchuck and Sloquet hot springs in the Fire Lake Group and along the Glacier Lake Fault. Offset of these Tertiary faults is considered no greater than 4.0 kilometers with downdrop in the northwestern block. Descriptions of the geological units have been taken and modified after Arthur, A.J (1986) and Lynch, J.V (1990) and are as follows:





Stratigraphy of the Middle Triassic to Middle Albian section on west side of Harrison Lake with fossil locations (section not to scale).

EAGLE 1,3 CLAIMS  
Regional Geology  
Fig #3

Geology of study area west of Harrison Lake (see Monger, 1986, for location map).

**Harrison Lake Group volcanics (Lower - Middle Jurassic)**  
after Arthur, 1986

**"Harrison Lake Formation (Middle Jurassic)**

The Harrison Lake Formation unconformably overlies the Middle Triassic Camp Cove Formation. The unconformity is marked by a basal conglomerate with abundant fossils found in the weathered calcareous clasts. Immediately overlying the conglomerate is well indurated calcareous argillite with minor volcanic flows possibly suggesting the onset of the Harrison Lake volcanism. These conglomerates and argillites are known as the Lower Member (Lower Jurassic) of the Harrison Lake Formation. Most of the Harrison Lake Formation consists of a thick section of intermediate to acid volcanic flows and pyroclastics that cover a large area, from the top of the argillite unit near Harrison Lake, 10 km west to the Chehalis valley and 15 km north to Hale Creek. The lensoid nature of the units, lack of abundant bedding structures and high degree of hydrothermal alteration (especially in the central region) make internal stratigraphic correlation within the volcanics difficult. Crickmay (1925) measured 2816m of volcanic material along the west shore of Harrison Lake. The flow rocks include massive, thick dacite, light grey to tan rhyolite and dark green plagioclase porphyry andesite, which are locally amygdaloidal (Thompson, 1972). Pyroclastic rocks exceed flow rocks in abundance and vary from tuffs to volcanic breccias.

**Echo Island Member (Middle Jurassic)**

Northeast of Mt McRae a thick section of finely banded tuffs and argillites outcrop which were called Echo Island Formation by Crickmay (1925). Similar rocks are also found on the northeast corner of Echo Island, where they are in conformable contact with Harrison Lake volcanics, and along parts of Harrison River. Within the interbedded light and dark coloured tuff and argillite are rare plagioclase porphyry flows and medium grained sandstone beds. The flows are up to 10 meters thick and closely resemble the green andesite flows of Harrison Lake volcanics. Because this sequence is closely related to Harrison Lake volcanics, it is better described as the Echo Island Formation. Beds are commonly lensoidal and the unit is quite variable in thickness and lithology. On the southeast corner of Echo Island, volcanic sandstone is common and some volcanoclastic beds are found but no flows. Northeast of Mt McRae the sequence is finer grained and flow rocks are common. West towards Chehalis valley exposure is poor but volcanic rocks seem to dominate. The Echo Island Member of the Harrison Lake Group marks the waning of Middle Jurassic volcanism in the area as shown by an increase in sediments and a decrease in volcanics. Attitudes in the Echo Island Member are highly variable and small scale folding is common. The attitudes of the overlying Mysterious Creek Formation, however are regular and no small scale folding is apparent. This may imply a possible hiatus between the Harrison Lake Formation (Echo Island Member) and the overlying Mysterious Creek.

Formation.

### Sedimentary interlude (Middle - upper Jurassic)

#### Mysterious Creek Formation (Middle Jurassic)

The sediments of the Mysterious Creek Formation are mainly grey to black shale and argillite with interbedded medium grained green sandstone beds near the top of the section. The formation underlies the upper reaches of the Mystery Creek valley and strikes west to the Chehalis valley, but exposure is poor. The section in Mystery creek was computed by Crickmay (1925) to be 700 - 880 meters thick.

#### Billhook Creek Formation (Upper Jurassic)

The Billhook Formation conformably overlies the Mysterious Creek. The contact is gradational with the green sandstone in the upper section of the Mysterious Creek being found in Billhook Formation interbedded with a very characteristic green volcaniclastic rock. A sample from a granodiorite pluton 7 kilometers northwest of Weaver Lake collected by J. Monger in 1985 was dated at 160 +/- 2Ma. This is approximately coeval with the volcaniclastic rocks of the Billhook Formation.

#### Kent Formation (Early Cretaceous)

Conglomerate, sandstone and argillite beds form the Kent Formation, which is found in the southern part of the map area on Mt Agassiz. It rests on the Mysterious Creek Formation and a section measured by Crickmay (1925) from the Mysterious Creek - Kent contact to the top of Mt Agassiz gave a thickness of 933 meters. The conglomerate of the Kent is composed of sedimentary clasts (argillite, tuff, sandstone) and some volcanic clasts (probably derived from the Harrison Lake volcanics) that are up to 15cms across. The Kent represents a period of uplift and perhaps minor orogenic deformation which Crickmay (1931) named the Agassiz Orogeny.

#### **Fire Lake Group (Lower Cretaceous)**

modified after Lynch, 1990 and Arthur, 1986.

#### Peninsula Formation (Lower Cretaceous)

The Peninsula Formation unconformably overlies the Billhook Formation west of Long Island and on the west shore of Cascade Peninsula where the unconformity is well exposed. Two members are distinguished. The lower is conglomerate; the upper consists of interbedded arkose and pyritic slate. The conglomerate is about 1200 meters thick. Clasts include andesite, rhyolite and feldspar porphyry, as well as chert, jasper, or quartzite, siltstone, detrital quartz and feldspar crystals and granitic clasts. In Chehalis valley, granitic clasts up to 50 cms across were noted. The size decreases to 20 - 30 cms in Mystery Creek valley and along the lakeshore the clasts are small and mixed with beach sands and well rounded chert pebbles. This indicates a western source from

the granitic bodies within the present Coast Mountains, which must have been exposed in the latest Jurassic or earliest Cretaceous in order to supply the granite clasts to the conglomerate. The upper member is a dark sandstone and commonly tuffaceous. The increase in tuffaceous material marks the beginning of the second major volcanic episode in the area.

Brokenback Hill Formation (Lower Cretaceous)

The Brokenback Hill Formation within the Fire Lake Group is subdivided into four members; these are mostly volcanic and distinct from the sedimentary succession of the Peninsula Formation. The lowest member consists of interbedded feldspar crystal tuff, with slate or phyllite. It is generally massive and thin to thick bedded, but locally displays graded bedding, flame structures and local rip-up clasts. Above the feldspar crystal tuff are andesite and intermediate volcanic rocks, rhyolite is rare. These volcanics vary widely in occurrence and texture. Massive flows of andesite with plagioclase and amphibole phenocrysts occur locally, but more commonly the unit occurs as a heterolithic volcanic breccia or conglomerate. Secondary chlorite, muscovite, biotite, epidote, albite, calcite and actinolite are widespread. The third member is mostly a coarse grained volcaniclastic sandstone. Quartz is a minor component. The clasts are rounded, but primary structures are rare and the member is poorly bedded. The upper member of the Brokenback Hill Formation is dominated by a complex array of pyroclastic volcanic rocks. Clasts are commonly welded and flattened in the bedding plane, forming a competent rock. The tuffs are well bedded."

## REGIONAL MINERALIZATION

The region is known to contain several different types of base and precious metal mineralization. To date, 'Kuroko' style VMS is the most important (Seneca), followed by thrust related mesothermal Au-Cu veins (Fire Mountain), granite related and epithermal Au mineralization associated with Tertiary felsic intrusives (Doctors Point). Furthermore; relatively small iron rich skarn mineralization are found along the contacts of the coast plutonics and the volcanic and sedimentary pendant rocks. The focus of this report and the 1992 field season, is the possibility of the Eagle claims hosting the Kuroko style massive sulphide mineralization, similar to the Middle Jurassic Seneca deposit found to the south.

**Seneca Zn-Cu-Pb(Ag,Au,Ba):** This Kuroko style VMS deposit is located in the southern exposures of the Harrison Lake volcanics along the eastern slope of the Chehalis River approximately 32

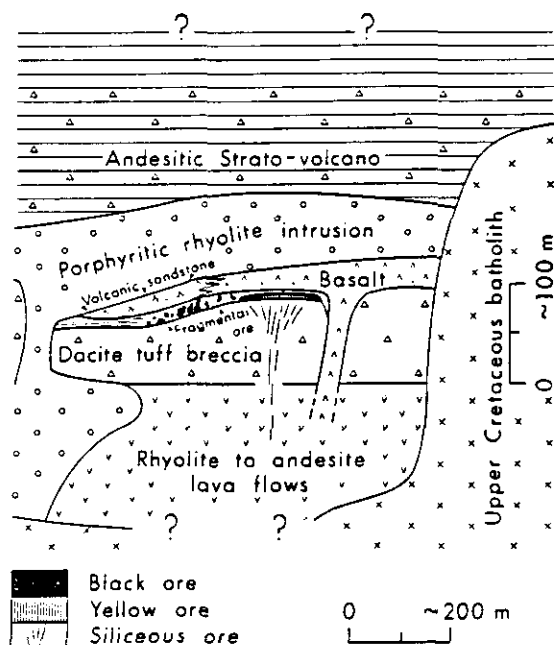


FIG. 4. Schematic geologic section, looking southeast, of the Seneca prospect. Yellow ore is the small lens below the black ore.

kilometers south of the Eagle property. Mineralization was initially found during a logging operation in 1950-51, and since then the property has received sporadic exploration and drilling work. Chevron outlined a deposit known to contain 1.5 million tonnes grading 3.57% Zn, .63% Cu, .82g/t Au and 41.1g/t Ag (Minfile, 1991). Presently two other mineralized showings found 1 and 3 kms to the northwest of Seneca are presently receiving considerable attention by Minnova. Two drill holes in the 'Vent Zone' during 1985 (1 km nw of Seneca) assayed 4.09% Zn, 1.45% Pb, .26% Cu, .82 g/t Au and 36 g/t Ag over 9.6 meters. A second hole assayed 1.69% Zn over 33 meters. During 1991 drilling on the

'Fleetwood' Zone (3 km nw of Seneca) had three holes along a 500 meter strike average 7.65% Zn, .52% Cu, .89% Pb, 2.49opt Ag and .03opt Au over 1.83 meters (Northern Miner, 1991).

Mineralization at Seneca can be found in what is thought to be slumped sulphide bearing argillite containing fragmental ore within a narrow rhyolitic to pyroclastic host. Thin bands of laminated argillite and andesite lapilli tuff are intercalated (Thompson, 1972). The kuroko deposit has a chalcopyrite + pyrite rich base (yellow ore) with a partly zoned overlying layer of sphalerite + barite + galena ore (black ore) with a closely associated and underlying silicified stringer zone in dacitic tuff breccia. A basalt lava flow and porphyritic rhyolite cap the bimodal sequence of rocks around the Seneca.



**PROPERTY GEOLOGY and MINERALIZATION**

Much of the Eagle Creek area, although highly faulted, includes a variety of incomplete stratigraphic sections of hydrothermally altered Mid Jurassic Harrison Lake felsic and intermediate volcanics. Overlying this are tuffaceous Echo Island Member and the conformable black siliceous argillites of the Mysterious Creek Formation. Bedding is generally very flat to the west and southwest approximately 20-45 degrees. Intruding these volcanics and to varying degrees the sediments, are a variety of moderately altered feldspar porphyry and quartz diorite plugs and dykes, most of which to date are small intrusives of less than 20 meters in width (synvolcanic?). Their location suggests they underlie parts of the extensive gossan zone found on the property, upper Alder Cr. on Eagle 1. Other small and relatively fresh intrusives are found trending along the eastern portion of Eagle 3. This quartz feldspar porphyry intrusive tongue is post volcanic and more probably related to the underlying Cretaceous Coast Mountain Intrusives. At least three NE/SW trending faults (both normal and strike slip), found along the north ends of both the Eagle # 1&3 claims cut these gossanous zones forming block faulted contacts. From previous work (Chevron, 1977) these faults are known to host disseminated chalcopyrite, sphalerite, magnetite and pyrrhotite mineralization. These faults are commonly identified by hosting grey amygdoidal massive basalt dykes (< 2 meters) and from regional interpretations (Lynch, 1990) may isolate hot spring activity (Sloquet, Harrison and Skookumchuk), or form important Tertiary feeder zones similar to mineralization at Doctors Point where they intersect older northwest trending steep angled thrust structures. No discrete northwest structures have yet been isolated on the property. Apart from these broad descriptions very little geological mapping has been done to accurately place the stratigraphic successions within a known geological group. It is believed from field observation of sedimentary rocks in the Mystery Creek area that these Middle to Upper Jurassic sediments are very similar to what outcrops on Eagle 1 and 3.

Two types of mineralization (skarn and Zn-Cu-Pb (Au,Ag) volcanogenic) occur within the claim boundary. Mid to Late Cretaceous quartz diorite of the Coast Range intrusives are in contact with the Harrison Lake Group volcanics and Echo Island member along the western and southwestern portions of the claims. This northwest trending contact contains a zone of extensive skarn type sulphide enrichment (Fox, 1977) and hornfels with closely associated areas of massive coarse pyrite, pyrrhotite and minor arsenopyrite. Other float samples suggest a volcanogenic nature to the ore with massive and banded pyrite, pyrrhotite, sphalerite and minor chalcopyrite and arsenopyrite within a mafic host having assayed up to 12%Zn (Cuttle, 1990). Recently, boulders of cherty and pyrite rich rhyolite breccia have assayed 5.5%Zn, 3.99%Pb, 2.39%Cu and 3.37opt Ag (Cuttle, 1992 Eagle 3).

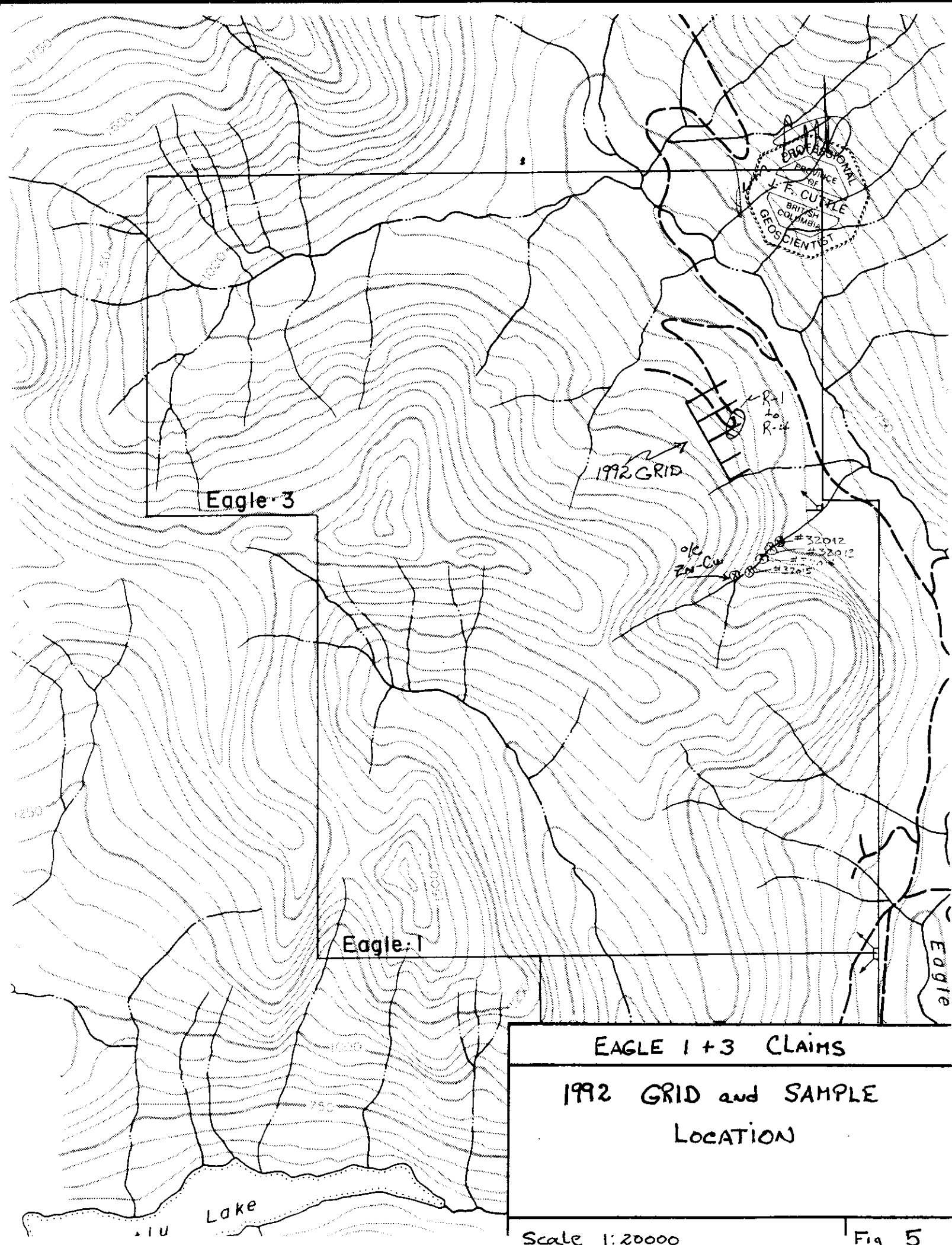
## 1992 FIELD WORK

Two particular areas were worked during the early part of the field season that included either soil geochemistry, rock geochemistry or mapping and prospecting on the northern section of Eagle #1 along Alder Cr and approximately 800 meters to the north on Eagle #3. This work was in response to new Zn,Cu,Pb mineralization found in areas with rhyolite breccia outcrop and float, as well as intermediate volcanic lapilli tuffs and agglomerate, creamy cherts, black siliceous argillites and ash flow tuffs with pumice layers. The target mineralization is volcanogenic. Some volcanic rock types suggest a close proximity to a volcanic vent. Outcrop is generally very good although portions of the surveyed area are steep and include several cliffs and creek gorges.

**Rock Geochemistry**

(R-1 thru R-4 found on grid area, Eagle #3)

<u>R-1</u>	Float	L-2+00S, 1+00E, Epidote rich, skarnified mafic - intermediate vol with banded or veined pyrite(<3cm) minor sphalerite and hematite.				
<u>R-2</u>	Float	L-1+30S, 1+50E, Felsic fragmental or breccia of creamy white to grey rhyolite with altered and fresh black and grey argillaceous or cherty fragments. > 10% combined and layered cp, gal, sp with pyrite. Sample is possible slumped ore, may also suggests deposition at rhyolite/argillite interface.				
<u>R-3</u>	Float	L-1+15S, 1+65E, Similar to R-2, distinct contact with dark brown black argillite. 8% cp, bn, sp, gn and py as banded and massive sulphide.				
<u>R-4</u>	Float	L-1+25S, 1+45E, Creamy white grey brecciated rhyolite with disseminated and banded cp and sp.				
		(32012 thru 32015 found in Alder Cr, <u>800m south</u> , Eagle #1)				
<u>32012</u>	Float	Alder Cr @ 750 m, 5% po in altered felsic volcanic with minor sp.				
<u>32013</u>	Float	Alder Cr @ 780 m, 10% po in intermediate to felsic volcanic with disseminated sp.				
<u>32014</u>	Float	Alder Cr @ 820 m, Rhyolitic volcanic with py and disseminated sp.				
<u>32015</u>	Float	Alder Cr @ 870 m, Massive banded py with disseminated sp in felsic host.				
		Cu                      Zn                      Pb                      Au                      Ag				
<u>R-1</u>		.113%	.59%	.05%	.08g/t	4.7g/t
<u>R-2</u>		2.33%	5.50%	3.99%	.28g/t	115.5g/t
<u>R-3</u>		2.68%	4.43%	2.58%	.31g/t	95.3g/t
<u>R-4</u>		1.11%	.80%	.60%	.20g/t	27.6g/t
<u>32012</u>		421ppm	8400ppm	132ppm	48ppb	2.5ppm
<u>32013</u>		257ppm	3200ppm	292ppm	4ppb	2.7ppm
<u>32014</u>		213ppm	3570ppm	580ppm	4ppb	3.4ppm
<u>32015</u>		86ppm	5440ppm	39ppm	12ppb	2.0ppm



Eagle 3

Eagle 1

1992 GRID

ok  
Zn-Cu

#32012  
#32013  
#32015

PROFESSIONAL  
Geoscientist  
Province of  
BRITISH COLUMBIA  
F. CURLY

Eagle

EAGLE 1 + 3 CLAIMS

1992 GRID and SAMPLE  
LOCATION

Lake

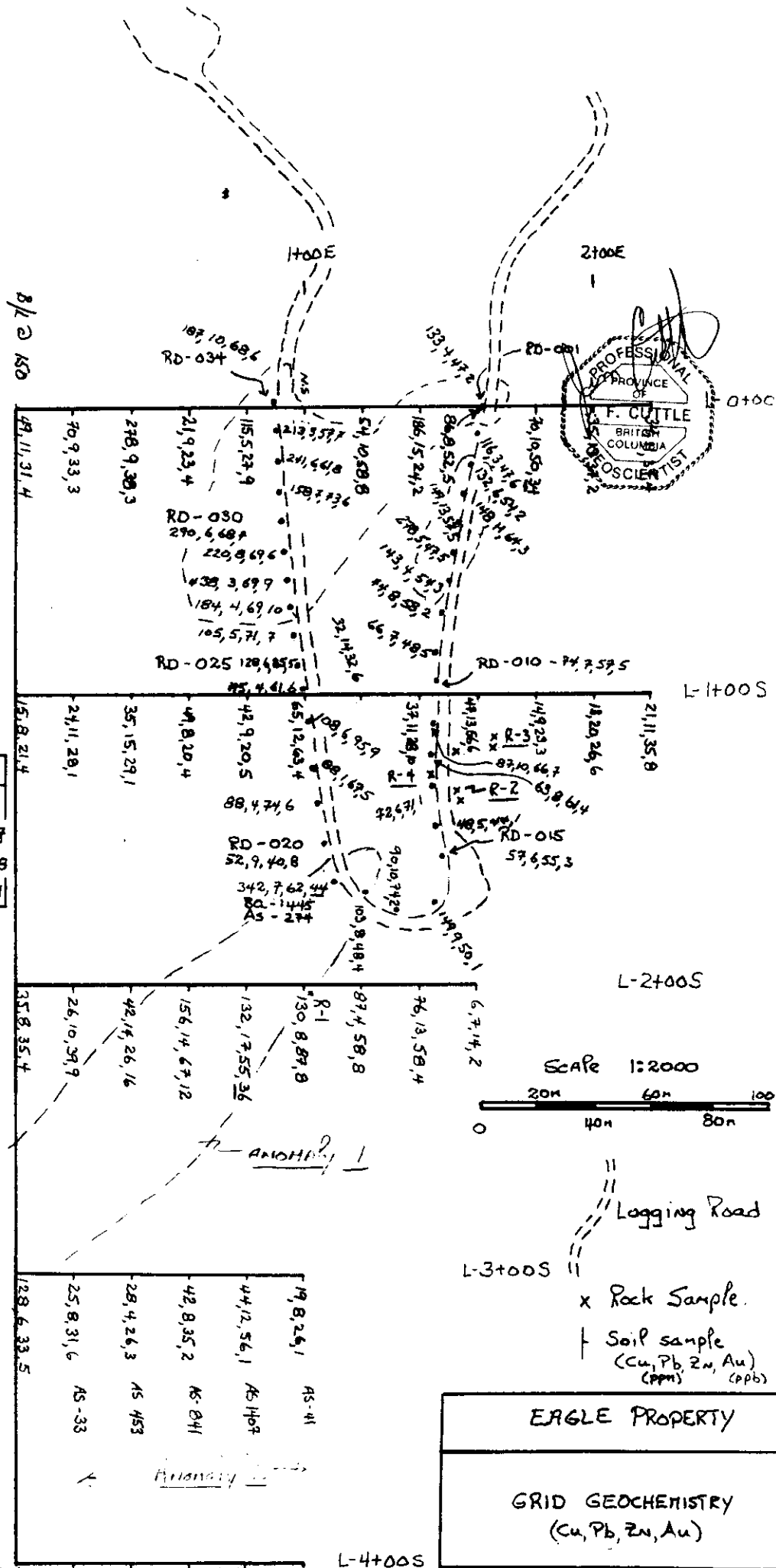
Scale 1:20000

Fig 5

Besides the samples and assays of float listed above, an important find was made late in the field work period. An area of interest outcrops on the northern boundary of the Eagle 1 claim at 970m along the north side of Alder Creek. At least three zones of massive to disseminated sphalerite and chalcopyrite outcrop (10-15cms wide where accessible) and cross-cut stratigraphy and seem to fan and broaden vertically upwards into the overlying cliffs and steep faces. Iron stain from pyrite and pyrrhotite becomes noticeably more prominent with elevation above the Zn-Cu mineralization. No samples were taken from this zone although visual estimates are as high as > 10% Zn, 3% Cu with traces Pb. The host is a highly chloritized and partially epidotized massive dacitic volcanic flow and the unit underlies the rhyodacitic tuffs and grey/green and black argillites found on the grid area 800m to the north. It is suggested this zone may represent peripheral type vein and less active feeder mineralization surrounding a possible vent area that is presently buried down dip to the northwest. Boulders of rhyolitic/pyrite breccia, intermediate volcanic tuff, and banded rhyolite lie in Alder Cr just below 850m, their source very possibly from the cliffs above the Zn-Cu mineralization. Samples of these large 3x3m boulders (32012-15) are known to contain disseminated sphalerite mineralization as seen by the previous assays. With this idea in mind the 800m long area between Alder Creek and the 1992 grid becomes very attractive for hints of outcrop of Zn-Cu-Pb massive sulphide.

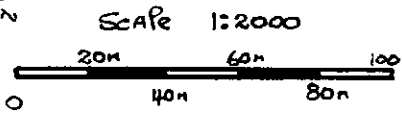
#### Soil Geochemistry

A total of 78 soil samples were taken along five flagged grid lines on Eagle #3 at a sample spacing of 20 meters to cover and surround the area where Zn-Cu-Pb float (rock# R-2 to 4) had earlier been isolated. The samples were analysed by ICP for Cu, Pb, Zn, Ag, As, Ba, Bi, Cd, Mg, Mn, Mo, Sb, and fire geochem Au. The results of the sampling generally reflect background although a few linear and spot anomalies do exist. A weak copper (128 - 342ppm Cu) +/- Au, Ba anomaly (Anomaly 1) can be seen trending for 200m and open to the south at 190 degrees from L-1+50S, 1+15E to L-3+00S, B/L. The anomaly strike is known to be coincident with the mineralized argillaceous float samples and the strike of the underlying black and cherty argillite unit. Anomaly 2 is an area of arsenic enrichment (10ppm - 1407ppm As) found on L-3+00S & 4+00S at all stations. It is not clear what the source of this anomaly is. One other area of notable mention is a somewhat circular copper anomaly between L-0+00S and L-1+00S along the road. It is believed this anomaly is the result of soil sampling along the upper cuts of the road banks and represents a misleading and enriched geochemical anomaly.



Rock Assays.

#	%Cu	%Pb	%Zn	Au, Ag (ppm)
R-1	.113	.05	.59	.002 .14
R-2	2.39	3.99	5.50	.008 3.37
R-3	2.60	2.58	4.43	.009 2.78
R-4	1.11	.60	.80	.006 .81



- == Logging Road
- x Rock Sample.
- + Soil sample (Cu, Pb, Zn, Au) (ppm)

EAGLE PROPERTY

---

GRID GEOCHEMISTRY  
(Cu, Pb, Zn, Au)



### Mapping and Prospecting

Fig #7 shows the general geology of the rock units found on the grid area. Alternating sequences of cherty black argillite, rhyodacitic agglomeratic tuff, mafic tuff, spotted intermediate lapilli tuff and bedded lapilli and ash tuff are in contact with a tongue of relatively unaltered Cretaceous quartz feldspar porphyry intrusive. From previous regional mapping the sedimentary/volcanic sequence found on the property correlates in part to the Middle Jurassic Echo Island Member of the Harrison Lake Group. Conformably overlying this member is a relatively thick sequence of gossanous Middle to Upper Jurassic Mysterious Creek argillite that is found to outcrop to the west of the grid area. All units are relatively well preserved and strike consistently to the north northeast and dip shallow to the west (20 -45). Bedding can usually be distinguished in some of the tuffaceous argillites and the bedded ash pumice tuffs. Epidote alteration of fragments is commonly seen within the rhyodacitic tuffs and to a lesser degree occurs pervasively in selected finer grained horizons. Silicification and pyritization is common within portions of the argillite, at times resembling creamy black rhyolite.

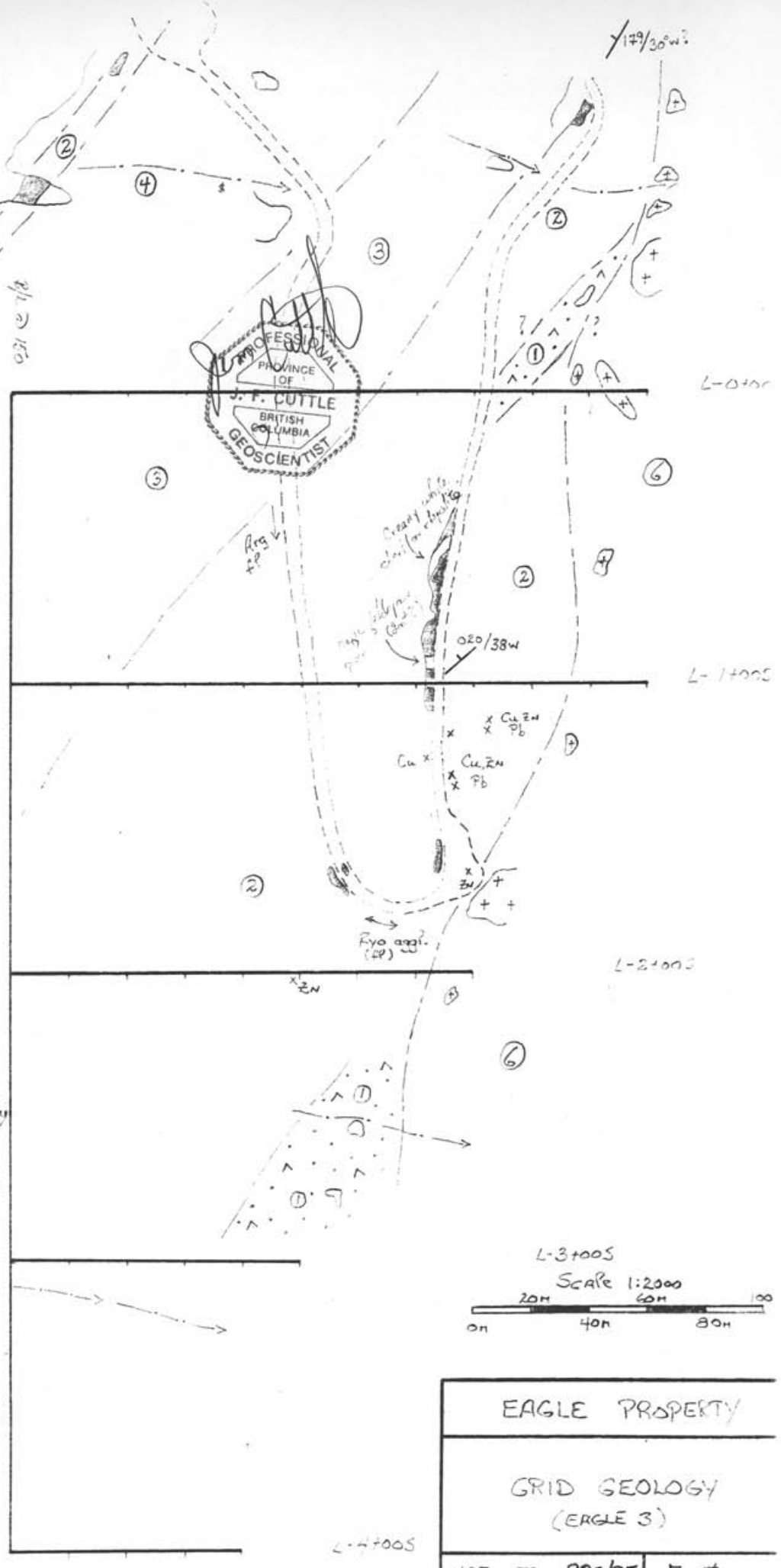
Elsewhere on the property varieties of these rock types mentioned above are found and can be followed consistently over the length of the claims and beyond. A marker horizon for prospecting are the cherty black alternating argillites found directly above coarse rhyodacitic tuff and agglomerate in the Echo Island Member. From grid mapping this horizon is located approximately 200 meters vertically below the Mysterious Creek Echo Island contact.



Quartz, feldspar  
 Porphyry  
 (Intermediate-felsic  
 Matrix, minor Epidote  
 carbonate)

- 5
Bedded Ash-Lapilli tuff  
 (Banded, grey weathered,  
 highly variable, xbedding,  
 felsic to intermediate component)
- 4
Intermediate Lapilli tuff  
 (agglomerate sections,  
 spotted + mottled, ± epidote)
- 3
Mafic Lapilli tuff  
 (grey-green, fine grain  
 sections variable)
- 2
Massive Black cherty Argillite  
 (portions of bedded tuff,  
 creamy greenish-white rhyolite?,  
 conchoidal fracture, Gx zones, Fe stain)
- 1
Rhyodacitic - dacitic tuff  
 (fracture healed, epidote  
 fragmental, agglomeratic)

- Logging Road
- Creek
- outcrop
- Strike/Dip



EAGLE PROPERTY

GRID GEOLOGY  
 (EAGLE 3)

926/9E<sup>1</sup> Fig 7

## CONCLUSION

Rock units of the Echo Island Member of the Middle Jurassic Harrison Lake Group underlie the Eagle 1 & 3 mineral claims and have potential for hosting Zn-Cu-Pb-Ag(Au) volcanogenic massive sulphide. Angular float samples found in June 1992 assayed up to 5.5%Zn, 3.9%Pb, 2.3%Cu, 115g/tAg and are hosted by a black to creamy rhyolite with black argillite fragments (slumped ore). This has created a "marker" horizon with which prospecting should be conducted. From the 1992 grid area south (800m) to Alder Cr would be considered an area of particular exploration interest keeping well in mind the vein or partial feeder zone Zn-Cu mineralization located in the creek and variety of coarse felsic pyroclastic rocks both talked about under "rock geochemistry" may be indicative of a buried feeder zone down dip to the west

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**APPENDIX 1**  
**(Rock and Soil Geochemical Results)**





**MINERAL  
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**VANCOUVER OFFICE:**  
706 WEST 15TH STREET  
NORTH VANCOUVER, B.C. CANADA V7M 1T2  
TELEPHONE (604) 980-5814 OR (604) 988-4524  
FAX (604) 980-9821

**SMITHERS LAB.:**  
3178 TATLOW ROAD  
SMITHERS, B.C. CANADA V0J 2N0  
TELEPHONE (604) 847-3004  
FAX (604) 847-3005

*Assay Certificate*

2V-0602-RA1

Company: **CYPRUS CANADA**  
Project: **EAGLE**  
Attn: **ALVIN JACKSON/JIM CUTTLE**

Date: **JUL-10-92**  
Copy 1. CYPRUS CANADA, VANCOUVER, B.C.

*We hereby certify* the following Assay of 4 ROCK samples  
submitted JUL-06-92 by JIM CUTTLE.

Sample Number	AU	AU	AG	AG	CU	PB	ZN	F
	g/tonne	oz/ton	g/tonne	oz/ton	%	%	%	ppm
R-1	.08	.002	4.7	.14	.113	.05	.59	390
R-2	.28	.008	115.5	3.37	2.330	3.99	5.50	180
R-3	.31	.009	95.3	2.78	2.680	2.58	4.43	240
R-4	.20	.006	27.6	.81	1.112	.60	.80	310

Certified by \_\_\_\_\_

MIN-EN LABORATORIES

COMP: CYPRUS CANADA

PROJ: EAGLE

ATTN: ALVIN JACKSON/JIM CUTTLE

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

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

FILE NO: 2V-0602-SJ1+2

DATE: 92/07/13

• SOIL \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	BA PPM	B1 PPM	CD PPM	CU PPM	MG PPM	MN PPM	MO PPM	PB PPM	SB PPM	ZN PPM	AU-FIRE PPB	
L-0+00S B/L	.1	1	38	8	.1	49	3340	51	1	11	1	31	4	
L-0+00S 0+20E	.1	1	50	8	.1	70	5360	114	1	9	1	33	3	
L-0+00S 0+40E	.1	1	67	11	.1	278	9840	189	1	9	1	38	3	
L-0+00S 0+60E	.1	1	14	10	.1	21	2510	156	1	9	1	23	4	
L-0+00S 0+80E	.1	1	27	8	.1	115	2120	84	1	5	1	27	9	
L-0+00S 1+20E	.1	1	144	13	.1	54	9930	475	1	10	1	58	8	
L-0+00S 1+40E	.2	1	52	6	.1	186	2480	95	1	15	1	24	2	
L-0+00S 1+60E	.1	1	111	13	.1	86	9340	408	1	8	1	52	5	
L-0+00S 1+80E	.1	1	154	13	.1	70	10000	389	1	10	1	50	34	
L-0+00S 2+00E	.1	1	122	9	.1	35	4600	218	1	19	1	37	2	
L-0+00S 2+20E	.1	1	112	10	.1	34	5790	279	1	11	1	37	4	
L-1+00S B/L	.1	1	36	6	.1	15	4750	88	1	8	1	21	4	
L-1+00S 0+20E	.1	1	71	7	.1	24	7870	135	1	11	1	28	1	
L-1+00S 0+40E	.1	1	78	5	.1	35	5030	448	1	15	1	29	1	
L-1+00S 0+60E	.2	1	33	3	.1	49	1630	63	1	8	1	20	4	
L-1+00S 0+80E	.5	1	29	2	.1	42	180	39	1	9	1	20	5	
L-1+00S 1+00E	.1	1	277	13	.1	65	11630	490	1	12	1	63	4	
L-1+00S 1+20E	.1	1	86	5	.1	32	4360	218	1	14	1	32	6	
L-1+00S 1+40E	.2	1	60	3	.1	37	2870	143	1	11	1	28	10	
L-1+00S 1+60E	.1	1	181	11	.1	47	8750	404	1	13	1	56	6	
L-1+00S 1+80E	.1	1	85	3	.1	14	1280	74	1	9	1	23	3	
L-1+00S 2+00E	.7	8	126	2	.1	13	470	44	1	20	2	26	6	
L-1+00S 2+20E	.1	1	81	7	.1	21	2510	134	3	11	1	35	8	
L-2+00S B/L	.1	1	85	7	.1	35	6780	147	1	8	1	35	4	
L-2+00S 0+20E	.1	1	36	8	.1	26	7130	258	1	10	1	39	9	
L-2+00S 0+40E	.1	1	52	10	.1	42	3520	176	1	14	1	26	16	
L-2+00S 0+60E	.1	1	108	8	.1	152	156	8260	513	1	14	1	67	12
L-2+00S 0+80E	.1	4	86	7	.1	142	132	6720	435	1	17	1	55	36
L-2+00S 1+00E	.1	1	57	13	.1	128	130	5970	159	2	8	1	87	7
L-2+00S 1+20E	.1	1	134	15	.1	87	9840	353	1	4	1	58	8	
L-2+00S 1+40E	.1	1	231	6	.1	76	5950	468	1	13	1	58	4	
L-2+00S 1+60E	.5	3	42	3	.1	6	660	101	1	7	1	14	2	
L-3+00S B/L	.1	1	87	7	.1	16	128	3280	119	1	6	1	33	5
L-3+00S 0+20E	.1	33	65	6	.1	25	2190	128	1	8	1	31	6	
L-3+00S 0+40E	.1	453	83	5	.1	28	1850	98	1	4	1	26	3	
L-3+00S 0+60E	.1	841	165	6	.1	42	3620	149	1	8	1	35	2	
L-3+00S 0+80E	.2	1407	134	6	.1	44	3080	205	2	12	1	56	1	
L-3+00S 1+00E	.7	41	184	1	.1	19	420	22	1	8	1	26	1	
L-4+00S B/L	.1	54	56	6	.1	38	2560	129	1	10	1	41	1	
L-4+00S 0+20E	.1	10	53	6	.1	32	2390	118	1	11	1	34	3	
L-4+00S 0+40E	.6	17	133	2	.1	12	650	16	1	11	1	42	1	
L-4+00S 0+60E	.5	15	83	3	.1	6	480	22	1	11	1	28	3	
L-4+00S 0+80E	.6	12	115	2	.1	8	840	15	1	9	1	29	1	
L-4+00S 1+00E	.5	20	189	3	.1	12	720	30	1	17	1	55	1	
RD-001	.1	1	162	11	.1	133	7010	281	1	4	1	47	2	
RD-002	.1	1	170	10	.1	116	7240	301	1	3	1	47	6	
RD-003	.1	1	204	11	.1	132	8020	414	1	6	1	54	2	
RD-004	.1	1	255	12	.1	148	9740	470	1	11	1	64	3	
RD-005	.1	1	154	11	.1	149	6430	309	1	13	1	52	5	
RD-006	.1	1	185	10	.1	278	7590	358	1	5	1	47	5	
RD-007	.1	1	206	11	.1	143	8730	398	1	4	1	54	3	
RD-008	.1	1	240	11	.1	74	9050	442	1	8	1	58	2	
RD-009	.1	1	200	11	.1	66	7980	370	1	7	1	48	5	
RD-010	.1	1	179	11	.1	74	8330	394	1	7	1	57	5	
RD-011	.1	1	296	11	.1	87	10090	489	1	10	1	66	7	
RD-012	.1	1	183	11	.1	63	8590	414	1	8	1	61	4	
RD-013	.1	1	272	12	.1	72	9360	459	1	6	1	71	1	
RD-014	.1	1	114	10	.1	48	6190	267	1	5	1	44	1	
RD-015	.1	1	144	10	.1	57	8050	325	1	6	1	55	3	
RD-016	.1	1	86	9	.1	149	6540	211	4	9	1	50	1	





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708 WEST 18TH STREET  
NORTH VANCOUVER, B.C. CANADA V7M 1T2  
TELEPHONE (604) 960-5014 Orl (604) 960-4824  
FAX (604) 960-9621

**SMITHERS LAB.:**  
3176 TATLOW ROAD  
SMITHERS, B.C. CANADA V0J 2N0  
TELEPHONE (604) 847-3004  
FAX (604) 847-3006

Geochemical Analysis Certificate

2V-0420-RG1

Company: **CYPRUS CANADA**  
Project: **GENERATIVE**  
Attn: **MR. A. JACKSON**

Date: **JUN-03-92**

Copy 1, CYPRUS CANADA, VANCOUVER, B.C.

We hereby certify the following Geochemical Analysis of 4 ROCK samples submitted MAY-27-92 by ALVIN JACKSON.

Sample Number	AU-FINE PPB	AG PPM	CU PPM	PB PPM	ZN PPM
32012	48	2.5	421	132	8400
32013	4	2.7	257	292	3200
32014	4	3.4	215	580	3570
32015	12	2.0	86	39	5440

*Eagle clams - Alder Creek.*

Certified by \_\_\_\_\_

**APPENDIX 2**

**(Cost Breakdown, May 22 - July 6, 1992)**



Statement of Costs

Wages	J.Cuttle, 6 days(Jun 18-19 <sup>+</sup> , Jul 1,4-6) at 350/day .....	2100.00
	A.Smallwood, 5 days (Jun 18,19, Jul 4-6) at 200/day .....	1000.00
Rental	Truck, 6 days at 60/day .....	360.00
Samples	78 soil, 4 rock .....	960.00
Expenses	Gas, food and supplies .....	170.00
Cyprus Property Visit	1 day, A.Jackson & J.Cuttle 4 rocks, truck and expense.	910.00
	Total	5500.00
	PAC	300.00
		-----
(Eagle 1 & 3)		5800.00

**APPENDIX 3**  
**(Statement of Qualifications)**

STATEMENT OF QUALIFICATIONS

I, **JIM CUTTLE**, of the Municipality of North Vancouver, in the Province of British Columbia, certify as follows regarding the work performed on the **Eagle 1,3 Mineral Claims** .

That I am a geologist having practised my profession in Canada and Norway for the past 12 years.

That I am a graduate of the University of New Brunswick with a Bachelor of Science in Geology.

That I am presently working as a private consultant at the home address of P.O # 37009, 2930 Lonsdale Ave, North Vancouver, B.C.

That I am a certified member of the Association of Professional Engineers and Geoscientists of British Columbia.

That I am the sole owner of the Eagle 1 and 3 mineral claims located in the New Westminster Mining Division of British Columbia.

Signed: \_\_\_\_\_



**Jim Cuttle, B.Sc, P.Geo**

**September 30, 1992.**