GEOCHEMICAL AND GEOPHYSICAL REPORT

ON

FOGGY B, FOGGY C, FOGGY D, FOGGY E GROUPS

Kamloops Mining Division
NTS 82M/12W
Latitude 59°32'N by Longitude 119°53'W

by

C. C. EVERETT and W.G. COOPER

November 7, 1983

Owner: Barrier Reef Resources Ltd.
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Vancouver, B.C.
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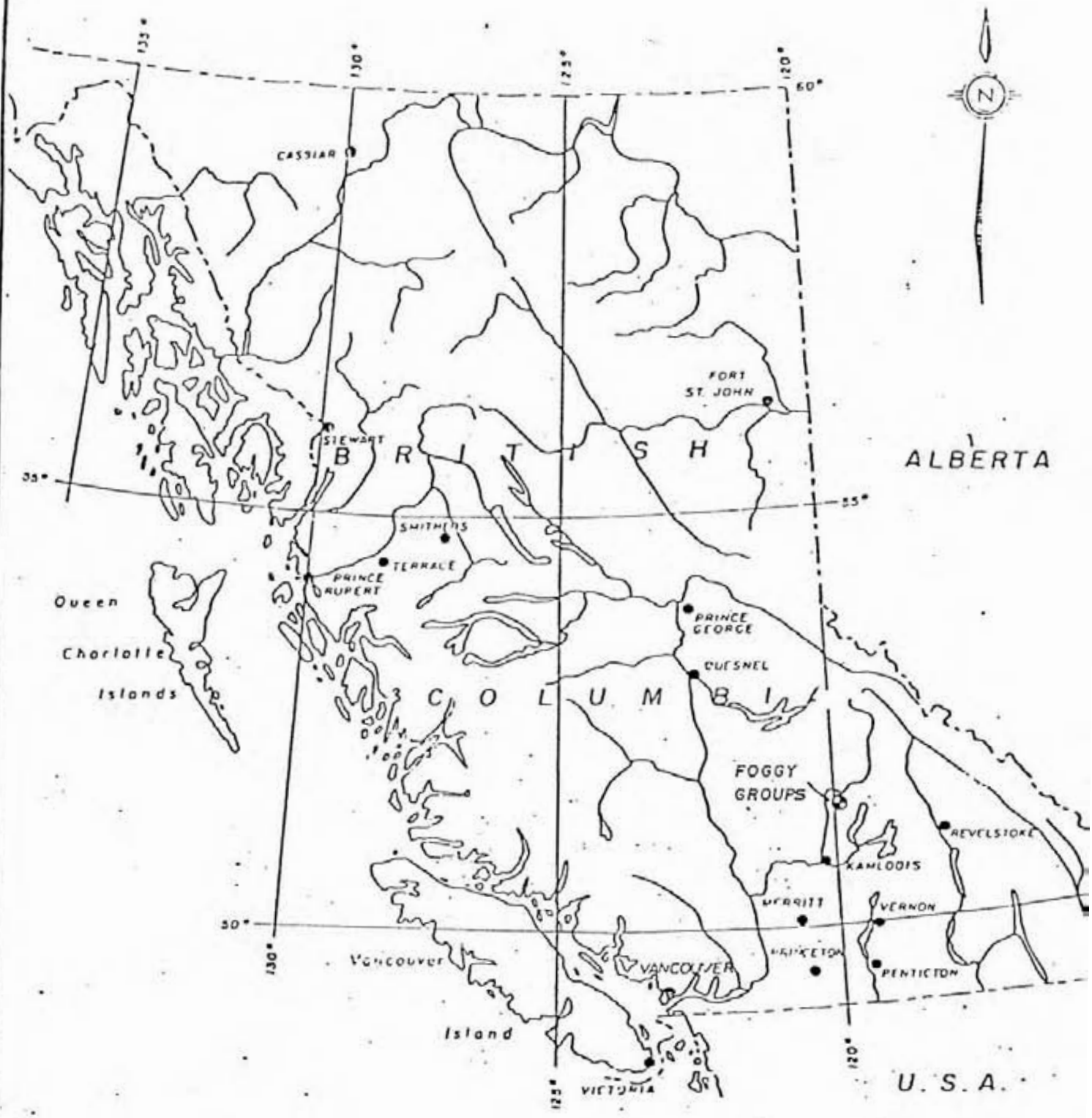
Summary

The Foggy B, Foggy C, Foggy D and Foggy E Group mineral claims are located about 100 km north-northeast of the city of Kamloops and 11 km south of the village of Birch Island, B.C.

This report covers detailed soil geochemical and ground geophysical surveying as follow-up exploration of an airborne EM/magnetics survey. Grid locations are shown on figure #2. The field work was completed in the Foggy 2, Foggy 3, Joseph 3, Joseph 5, Joseph 7 and Joseph 9-13 mineral claims.

Soil geochemical results indicate several anomalous (copper, lead, zinc, silver ± gold) zones in areas underlain by Fennel Formation black graphitic argillites and basic-felsic volcanic rocks. The anomalies are often coincident with ground E.M. conductors. Detailed surface rock chip sampling, hand trenching and possibly diamond drilling are recommended to fully evaluate these zones.



ESSO MINERALS CANADA

LOCATION MAP

FOGGY GROUPS

KAMLOOPS MINING DIVISION, B.C.

Drawn By: C. E.	Date : AUG. 1983
Scale : 1cm = 87km.	Fig No. 1

1.0 Introduction

1.1 Location and Access

The Foggy B, Foggy C, Foggy D and Foggy E Groups are located in south-central British Columbia about 100 km NNE of the city of Kamloops and 11 km south of the village of Birch Island. Approximate geographic center of the property is at 59°32' north latitude and 119°53' west longitude.

Access to the property is by four wheel drive vehicle, 15 km east from Birch Island along the south side of the North Thompson River and thence 20 km south and west along the Jones Creek logging road.

Terrain varies from steep heavily wooded slopes in the lower part of the claims to open alpine meadows at the highest topographic points. Elevations vary between 1070 and 1,980 metres.

1.2 Property

The Foggy B, Foggy C, Foggy D and Foggy E Groups consist of 22 mineral claims aggregating 280 contiguous units. Claim names, units, month of record, record numbers and anniversary dates are listed below in Table #1.

(Table #1)

LAND RECORD

Group	Claim	Units	Month of Record	Record #	Anniv. Date
Foggy B	Foggy 2	20	1	1678	Jan 5, 1985*
	Foggy 3	20	1	1679	Jan 5, 1985*
	FH-1	1	11	3096	Nov 20, 1984*
	FH-2	1	11	3097	Nov 20, 1984*
	FH-3	1	11	3098	Nov 20, 1984*
	FH-4	1	11	3099	Nov 20, 1984*
	FH-5	1	11	3100	Nov 20, 1984*
	FH-6	1	11	3101	Nov 20, 1984*
	FH-7	1	11	3102	Nov 20, 1984*
	FH-8	1	11	3103	Nov 20, 1984*
Foggy C	Joseph 11	20	10	1492	Oct 26, 1983*
	Joseph 12	20	10	1493	Oct 26, 1983*
	Joseph 13	16	10	1494	Oct 26, 1983*
	Joseph 14	16	12	1626	Dec 13, 1983*
Foggy D	Joseph 3	20	10	1484	Oct 26, 1983*
	Joseph 4	20	10	1485	Oct 26, 1983*
	Joseph 9	20	10	1490	Oct 26, 1983*
	Joseph 10	20	10	1491	Oct 26, 1983*
Foggy E	Joseph 5	20	10	1486	Oct 26, 1983*
	Joseph 6	20	10	1487	Oct 26, 1983*
	Joseph 7	20	10	1488	Oct 26, 1983*
	Joseph 8	20	10	1489	Oct 26, 1983*

*Pending notification for approval of assessment work credits

1.3 History of Property

The Barrier prospect has received spurts of exploration activity since the early 1900's. In 1913 the Fennell family of Barriere drove a crosscut tunnel to intersect 4 narrow galena bearing quartz veins on the "Foghorn" showing. Additional development work in 1915 included a 200 foot crosscut adit, 40' vertical shaft, 40' drift and 2 open surface cuts. Three 6-12" wide fissures containing galena, sphalerite and pyrite were exposed. A representative sample assayed: gold trace, silver 16 oz, lead 16.7%, copper 6.6%, zinc 16.5% and iron 17.5%. Two carloads of ore, approximately 75 tons, were shipped in 1916, bringing a net return of $\sim$ $3500.00.

In 1958 the prospect was optioned to Rexspar Uranium and Metals Co. A 11.2 km access road was constructed from the Rexspar camp to Foghorn Mountain. Radiometric surveys were carried out over a wide area. Self potential, electromagnetic and soil geochemical surveys were conducted over the showing. The best anomalies were tested with extensive bulldozer trenching. Craigmont Mines Ltd. drilled one hole over the old underground workings in 1980. The veins received no further work until 1983.

Several other vein-type showings (Chingren Property) were discovered in 1924, 0.6 km north of the Foghorn showings. These veins have only been developed by a number of deep trenches.

The district east of the Foghorn vein system has also seen extensive exploration activity. The "Lydia" showing, a stratiform copper showing, has been explored by Imperial Oil Enterprises Limited, Noranda and Barrier Reef Resources Ltd. over the last 15 years. The earliest recorded work are 2 adits on the surface showings between 1915 and 1918.

The Rexspar deposit, approximately 4 km to the northwest, and the Harper Creek copper deposit, approximately 8 km to the east, are the most noteable discoveries from the early 1950's to the late 1970's. It was the discovery of the Chu Chua Mountain massive sulphide deposit to the southwest which re-focused exploration attention in the Clearwater-Barrier district.

In the spring of 1979, Dighem II airborne electromagnetic, resistivity and magnetics surveys by both Craigmont Mines Ltd. and Barrier Reef Resources Limited were flown over Foghorn Mountain. Several bands of conductors, magnetic highs and resistivity lows were delineated. In 1980 and 1981 Craigmont and Barrier Reef initiated ground follow-up geophysical and soil geochemical surveys to cover the airborne anomalies. The attractive exploration targets were drilled. Esso Resources Canada Limited optioned the entire property in 1982.

1.4 Regional Geology

The regional geology of the Barrier prospect is taken from Paper 1982-1, B.C.D.M. Geological Fieldwork 1981, Clearwater Area, by P. Schiarizza. Figure 3 is a generalized geological map

BARRIER PROJECT
REGIONAL GEOLOGY MAP

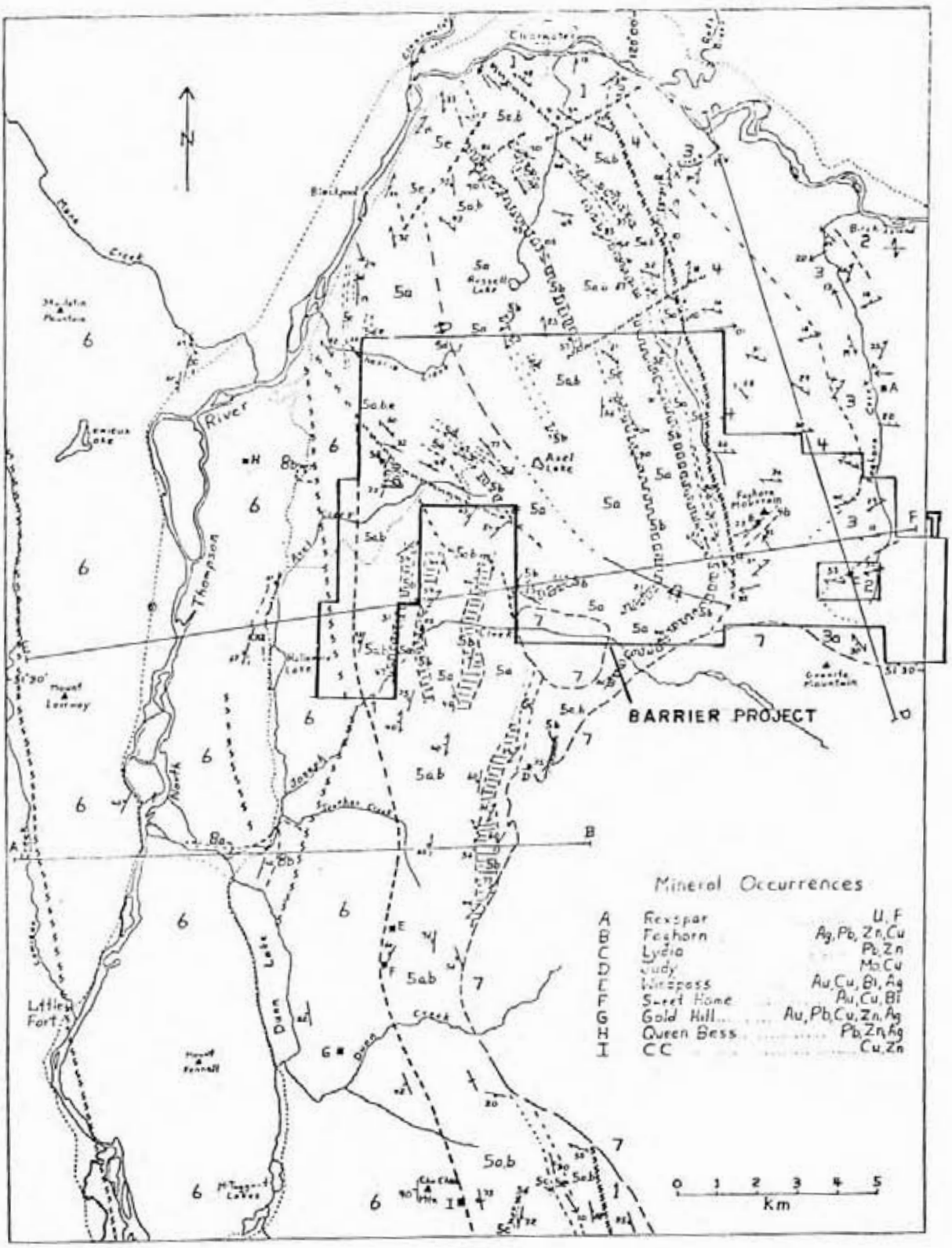


Figure 3. Generalized geological map of the Clearwater-Chu Chua area.

LEGEND (See figure 3)

EOCENE AND LATER (?)

8 (b) Skull Hill Formation: vesicular andesite
(a) Chu Chua Formation: conglomerate, sandstone, shale

CRETACEOUS

7 Biotite quartz monzonite of Baldy Batholith and Joseph Creek stock

UPPER PALEOZOIC

FENNELL FORMATION

6 Upper Fennell Formation: pillowed and massive greenstone, minor chert
6a: bedded chert

5 Lower Fennell Formation
PERMO-TRIASSIC
(f) limestone
(e) sandstone, argillite, phyllite
(d) conglomerate
(c) quartz feldspar porphyry
(b) bedded chert
(a) greenstone

FAULT CONTACT?~~~~?

Eagle Bay Formation

4 Rusty weathering, greenish grey, feldspathic chlorite-sericite schist
4a: quartzite

MISSISSIPPIAN
3 Quartz-sericite schist with interbedded dark grey phyllite; minor chlorite schist, platy sericitic quartzite, and trachyte
3a: biotite-quartz gneiss, amphibolite, pelitic hornfels

2 Chlorite schist, minor grey phyllite and limestone

1 Black phyllite with interbedded siltstone, sandstone, and grit

Symbols

Bedding: tops known, overturned; tops not known .....

Schistosity: inclined; horizontal .....

Early mesoscopic fold axis .....

Late mesoscopic fold axis .....

Inferred fault .....

Early synclinal axial trace, overturned .....

Geological contact .....

Mineral occurrence .....

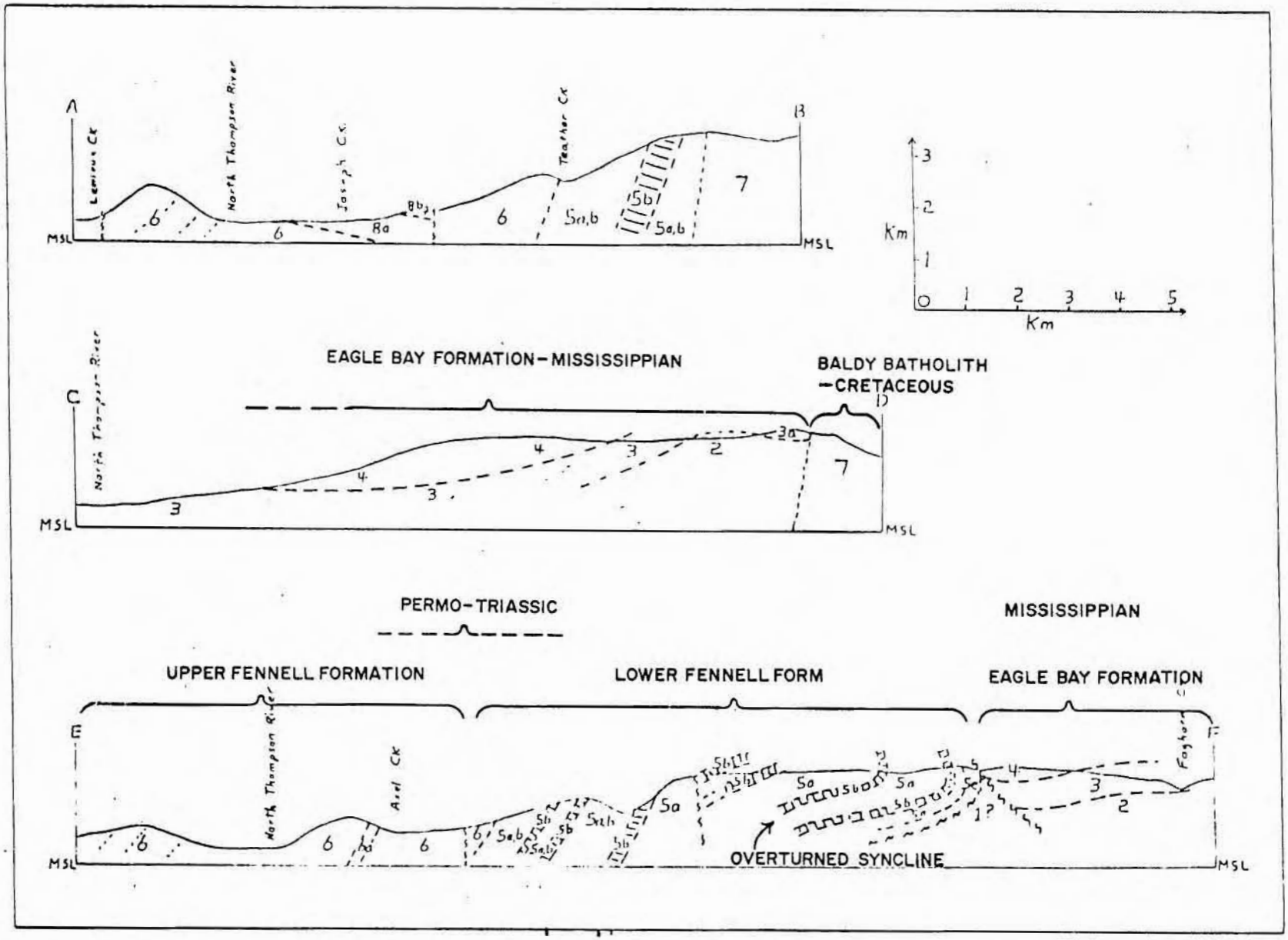


Figure . Vertical cross-sections to accompany Figure 3

of the Clearwater-Chu Chua area. Vertical cross-sections to accompany figure #3 are shown on figure #3A.

East of the Foghorn showings, the property is underlain by rusty weathering greenish-grey feldspathic chlorite schists, chlorite schists, sericite schists, quartz sericite schists and sericitic quartzites of the Eagle Bay Formation. These units comprise a relatively flat lying plate, occurring as a gentle north plunging synform.

West of the Foghorn showings the property is underlain by rocks of the Lower and Upper Fennell Formation. The Lower Fennell Formation consists of (5a) aphanitic to very coarse grained basalt with both extrusive and intrusive phases, (5b) chert and cherty mudstone, (5c) quartz-feldspar porphyry, (5d) conglomerate, (5e) sandstone, argillite and phyllite, and (5f) partly crystalline limestone. The Upper Fennell Formation consists mainly of aphanitic to fine grained pillowed basalts with minor discontinuous pods of chert.

Although it is not exposed, the contact between the Lower and Upper Fennell appears to be stratigraphic rather than tectonic.

Unit 7, the Middle Cretaceous Baldy Batholith occupies the southeast corner of the map area. Coarse grained biotite quartz monzonite comprises much of the batholith. A small body of similar rock outcrops in the Joseph Creek valley to the northwest.

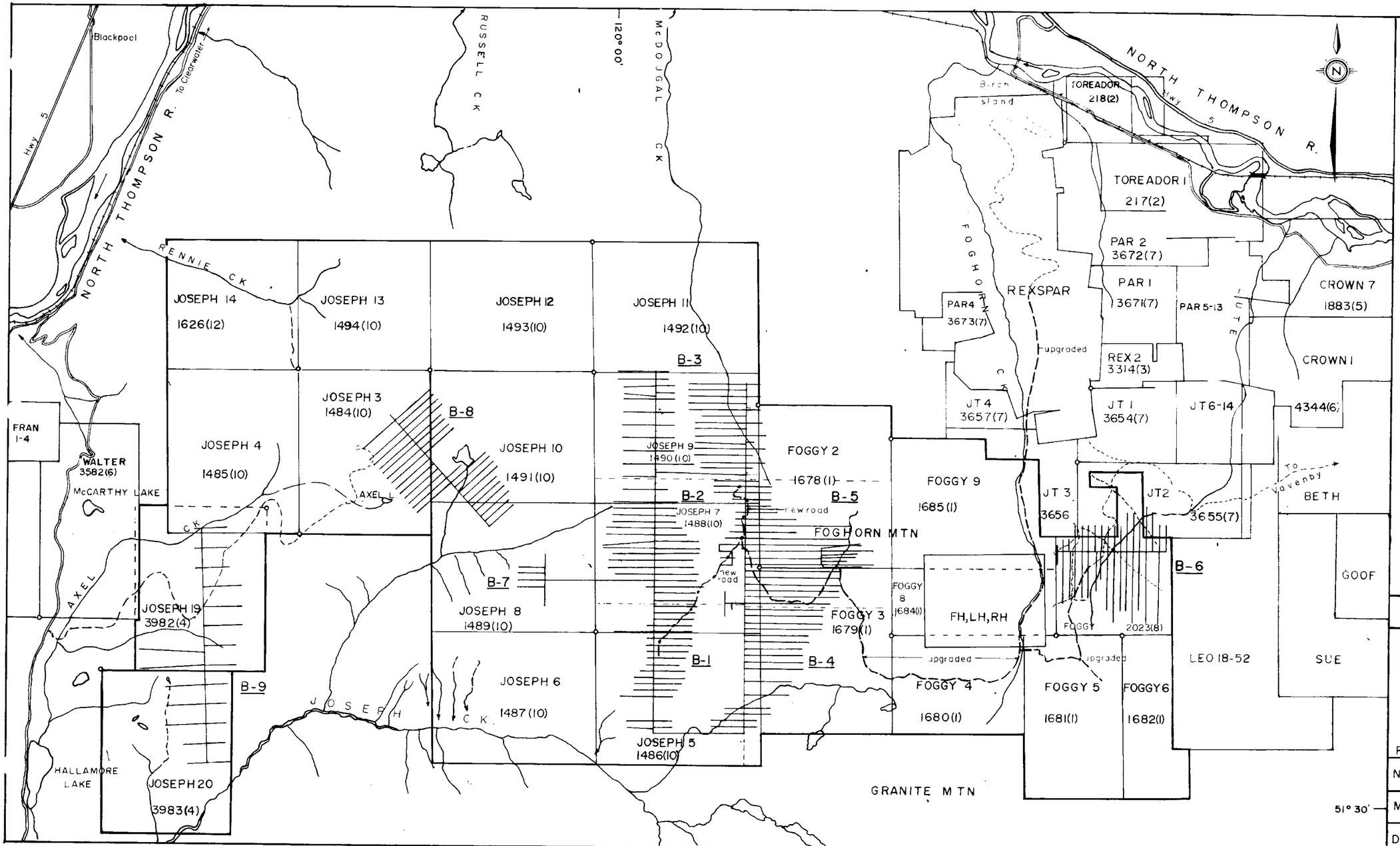
A westerly overturned syncline in the Lower Fennell Formation is the dominant structure between Joseph Creek and Clearwater. It plunges shallowly towards the north-northwest. There appears to be a slight flexure in the axial trace from the northeast to the north.

West of the Baldy Batholith, the Fennell Formation comprises a west-dipping and facing homocline. The homocline may be an antiformal deflection of the western upright limb of the syncline.

The Eagle Bay Formation stratigraphy appears to be discordant with the adjacent Fennell Formation. The contact may be an east-dipping thrust fault that post-dates the Fennell Formation syncline.

1.5 Details of 1983 Program

Fieldwork completed on the Barrier prospect in 1983 comprised linecutting, soil geochemistry, HLEM and proton magnetometer surveying. Table #2 summarizes the exploration program as per B1-5 and B-8 grids.



GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,381

—·—·— new road construction, Barrier prospect

— — — upgraded Barrier prospect access road

B-1: GRID NO.

SCALE 1:50000

0 500 1000 2000 metres

ESSO MINERALS CANADA

BARRIER PROJECT

CLAIM AND GRID

LOCATION MAP

Project No. 2189

NTS: 92P/8E,82M/12W	LAT.: 119° 54' LONG: 51° 32'
Min.Div.: KAMLOOPS	Drawn by: C.E.
Date: Nov., 1983	Figure 2

(Table #2)

1983 Work Summary

Grid	(km) Linecutting	Soil Geochemistry	HLEM (km)	Proton Mag (km)
#1	3.5 picket line 13.7 flagged	82	11.2	7.4
#2	2.0 picket line 23.8 flagged	214	14.4	11.0
#3	4.6 picket line 20.3 flagged	171	14.4	14.6
#4	2.0 picket line 13.0 flagged	246	11.2	13.0
#5	11.8 picket line 16.0 flagged	450	12.9	13.0
#8	2.3 picket line 20.8 flagged	142	12.5	9.9
	26.2 picket 121.3 flagged	1305	76.6	68.9

All results are plotted at a 1:2500 scale. Soil samples are taken at both 25 and 50 metre intervals, depending on underlying geology and target size. C horizon samples were taken where overburden was estimated to be in excess of 5-10 metres. Geochemical sampling methods are described in detail in Appendix A.

The HLEM survey was carried out with a Scintrex SE88 Genie EM system, using a coil spacing of 100 metres and transmitting frequency ratios of 3037.5 HZ/112.5 HZ, 1012.5 HZ/112.5 HZ and 337.5 HZ/112.5 HZ. The magnetometer survey was carried out with a Geometrics G816 proton precession magnetometer.

Access to the property was improved by 18.5 kilometres of old road upgrading and 4.0 kilometres of new road construction. The locations of all physical work are shown on figure #2.

2.0 Technical Data and Interpretation of Results

2.1 Introduction

The gridded areas for the B1-5 and B8 grids, figure #2, are underlain by aphanitic to coarse grained basalt, micro to coarsely porphyritic basalt, basic lapilli crystal tuffs, gabbro, chert, cherty siltstone, conglomerate, sandstone, argillite and limestone of the Upper Fennell Formation. In the B1-5 grids the overall attitude of the units is north-south with steep east or west dips. The volcanic and sedimentary units on the B-8 grid trend northwest-southeast. Outcrop are scarce on the property. General unit trends are extrapolated from float occurrences.

Soil geochemical and geophysical surveying was concentrated on the belts of 1979 airborne EM conductors and 1980-1981 soil geochemical anomalies discovered by Craigmont Mines Limited and Barrier Reef Resources Limited. Results are discussed in sections 2.2 to 2.7.

2.2 B-1 Grid

2.2.1 Soil Geochemistry

Anomaly A

Anomaly A is a 100-200 x 1400 metre silver anomaly associated with a north south trending black carbonaceous argillite belt.

Anomalous values are as follows,

B Horizon	2.0-6.0 ppm Ag
C Horizon	2.0-8.7 ppm Ag

Silver values generally increase with depth along line 2+00N. Results tend to decrease with depth, B horizon to C horizon, from line 6+00N to 14+00N. A surficial enrichment of silver is suggested for this area. Copper, lead and zinc values are erratic and only moderately anomalous.

Copper	108-282 ppm
Lead	100-134 ppm
Zinc	214-361 ppm

Anomaly A is coincident with conductors 7, 8, 9, 10, 11 and 12.

Anomaly B

Anomaly B and coincident conductors 2, 5 and 6 extend from the northernmost portion of the B-1 grid, through the B-2 grid. A detailed anomaly description is given in section 2.3.1.

2.2.2 Geophysics

The B-1 grid HLEM survey outlined 15 conductors. These are labelled 1 to 15 on map 3. Conductors 2, 5 - 8 and 11 - 12, occur within areas mapped as argillite and are caused by grapnitic sediments. Conductors 1 and 3 occur within the area mapped as chert. Conductors 9 and 13 - 15 occur within areas with extensive overburden cover and could be underlain by basalt, chert or argillite.

The magnetometer survey outlined 3 anomalies. These are labelled M1 to M3 on map 4. The source of these anomalies is unknown.

2.3 B-2 Grid

2.3.1 Soil Geochemistry

Anomaly B

From line 16+00N to 36+00N conductors 2 and 16-25 appear to be compacted together as the underlying black argillite horizon narrows. Base and precious metal values in soils are greatly enriched in this zone. An 1800 metre strike and 50-100 metre true width is estimated for the anomaly. The northernmost portion of the anomaly is warped to the west and appears to link with Anomaly C.

The strongest geochemical results occur between lines 26+00N and 31+00N. Extensive glacial cover to the north appears to subdue copper, lead, silver and gold values. Zinc is the only anomalous element (285-3440 ppm) within this zone. Estimated anomalous values for Anomaly B are listed below.

Copper	115-1085 ppm
Lead	147-1840 ppm (highs to 4900 ppm)
Zinc	263-5500 ppm (highs to 9500 ppm)
Silver	2.0-6.9 ppm
Gold	20-94 ppb

Within the anomaly core geochemical values appear to increase within the C-horizon. B horizon samples tend to be greater than the C horizon along the fringes. The exaggeration of the true anomaly width appears to be caused by the hydromorphic dispersion of base metals by groundwater.

Anomaly C

Anomaly C has a 1100 metre strike length and 30-75 metre true width. Anomalous copper, lead, zinc and silver values extend along a chert/argillite horizon, parallel to Anomaly B.

Copper	109-206 ppm
Lead	112-380 ppm (high of 2700 ppm)
Zinc	210-1390 ppm
Silver	2.3-6.5 ppm

At line 34+00N the anomaly arcs to the northeast and apparently links up with the eastern anomaly. The erratic nature of the geochemical results and weak lensoid character of coincident HLEM conductors 27, 28, 29 and 30 is attributed to a variable graphite content in the chert/argillite horizon and irregular pockets of thick glacial cover which would disrupt the depth penetration of the HLEM system.

2.3.2 Geophysics

The HLEM survey outlined 22 conductors. These are labelled 1, 2 and 16 - 35 on map 7. Conductors 1 and 2 are the northern extensions of the same conductors on map 3. Conductors 2, 16 - 20, 29, 34, 35 occur in areas mapped as argillites and are caused

by graphitic sediments. The remaining conductors occur in areas mapped as chert, basalt or are covered with glacial debris.

The magnetometer survey outlined 9 anomalies. These are labelled M4 to M12 on map 8. These anomalies occur within basalt and may either reflect local concentrations of magnetite, pyrrhotite or small dikes.

2.4 B-3 Grid

2.4.1 Soil Geochemistry

Anomaly D

Reconnaissance soil lines were run east of baseline 55+00W: 48+00N-56+00N to test a north-south trending band of sericite-pyrite (1-15%) schists. Only the C horizon sampling gave moderately anomalous results.

Copper	123-185 ppm
Lead	365-515 ppm
Zinc	392-575 ppm
Silver	3.1-3.9 ppm
Gold	38-49 ppb

The proven anomaly dimensions are a 200 metre strike and 25-75 metre width. Soil profile sampling was completed on only 2 grid lines. Additional sampling could enlarge the anomaly boundaries. There is no HLEM conductor or magnetic anomaly associated with this zone.

2.4.2 Geophysics

The HLEM survey outlined 25 conductors. These are labelled 31, 32 and 34 - 56 on map 11. Conductors 31, 32, 34, and 35 are the northern extensions of the same conductors on map 7. Conductors 34-35 and 49-53 occur in areas mapped as argillites and are caused by graphitic sediments. The remaining conductors occur in areas mapped as chert or volcanics and may be caused by massive sulphides.

The magnetometer survey outlined 13 anomalies. These are labelled M13 - M25 on map 12. The anomalies occur within the basalt and may either reflect local concentrations of magnetite/pyrrhotite or small dikes.

2.5 B-4 Grid

2.5.1 Soil Geochemistry

Anomaly E

Anomaly E extends from line 13+00N-17+00N: 50+50W-51+25W. The anomaly is located on a gentle east facing slope with shallow, 1-3 metre, till cover.

Copper	115-339 ppm
Lead	112-235 ppm (high of 1920 ppm)
Zinc	243-277 ppm
Silver	2.3-4.2 ppm
Gold	20-23 ppb

Angular pyritic chert, black argillite and banded chlorite-sericite-pyrite schist (probable intermediate flow) float occur within this zone. The associated HLEM conductors 67 and 75-77 are unexplained. The geochemical values are considered only weakly anomalous and not deserving of further work.

Anomaly F

Anomaly F is a drainage anomaly parallel to conductors 72 and 73. The zone is marked by a south-southwest draining tributary of Joseph Creek. Spotty, weakly anomalous copper, lead, zinc and silver values (in C horizon samples only) occur along the creek bank from line 14+00N to 18+00N.

Copper	108-125 ppm
Lead	114-186 ppm
Zinc	201-280 ppm
Silver	2.0-3.8 ppm

Anomalies G and H, located upstream in the B-5 Grid, are the likely source for the anomalous soils. The conductors appear to be caused by a graphitic fault zone.

2.5.2 Geophysics

The HLEM survey outlined 21 conductors. These are labelled 57 - 77 on map 15. Conductors 57 - 66 occur within areas mapped as argillites and are caused by graphitic sediments. Conductors 68-73 are caused by graphitic sediments found in the chert unit. The remaining conductors are unexplained.

The magnetometer survey outlined 10 anomalies. These are labelled M26 - M35 on map 16. The cause of these anomalies is unknown.

2.6 B-5 Grid

2.6.1 Soil Geochemistry

Anomaly G

A chlorite-sericite schist band with isolated pockets of fracture controlled pyrite, chalcopyrite and galena extends from line 20+00N to 25+00N. The unit trends north-south and appears to be sub-vertically dipping. The associated soil geochemical anomaly has a pronounced copper signature and erratic lead, zinc and gold values. Anomalous results are as follows:

Copper	133-1520 ppm
Lead	123-173 ppm
Zinc	216-416 ppm
Gold	30-287 ppb (in C horizon only)

There is no HLEM conductor associated with this anomaly.

Anomaly H

Anomaly H is a crudely circular, 300 x 400 metre, zone marked by a gossanous swamp on surface. Seeps draining the area are acidic, pH:3.5. Soil profile results indicate a decrease in base metal content with depth. Lead values appear to be totally anomalous while copper, zinc, silver and gold values occur as isolated one sample highs.

Copper	102-288 ppm
Lead	100-1470 ppm
Zinc	213-910 ppm
Silver	2.1-3.5 ppm
Gold	1 sample only:505 ppb - possible lab error?

Copper, zinc and silver are considered mobile elements and might be leached out of the soil by acidic groundwater. Lead is a less mobile element and might remain in place, occurring with Fe-sulphates.

Anomaly I: Foghorn Showings

The Foghorn vein showings were tested with 4 soil lines as an orientation survey to illustrate the geochemical signature for narrow base metal bearing fissures. Anomalous lead and zinc values occur as a broad halo to the veins while copper and silver values appear as erratic one sample highs.

Copper	102-306 ppm
Lead	114-880 ppm
Zinc	203-3450 ppm
Silver	2.1-3.3 ppm

Anomaly J

Anomaly J, as in Anomaly A, is a silver anomaly associated with Fennell Formation black argillies.

Anomalous values range between 2.3-6.3 ppm with several other one sample anomalies occurring between line 25+00N-41+00N.

Anomaly K

East of the Foghorn showings a silica-pyrite breccia zone, with minor galena and sphalerite, crosscuts a cherty rhyolite

horizon. The zone has a minimum strike length of 300 metres and an apparent true width of 30-50 metres. Anomalous soil geochemical results for the zone are as follows:

Copper	107-125 ppm
Lead	200-5200 ppm
Zinc	442-1030 ppm
Silver	2.9-14.8 ppm

2.6.2 Geophysics

The HLEM survey outlined 18 conductors. These are labelled 34, 72, 73 and 78 - 92 on map 19. Conductors 72 and 73 are the northern extensions of the same conductors on map 15. Conductor 34 is the southern extension of the same conductor on map 7. Conductors 87 to 92 occur within the area mapped as argillites and are caused by graphitic sediments. The remaining conductors are unexplained.

No anomalous features are observed in the magnetic data.

2.7 B-8 Grid

2.7.1 Soil Geochemistry

Anomaly O

Anomaly O is associated with a narrow 50x200 metre sericite-pyrite (5-15%) schist lens within Fennell Formation basalt. The unit has a moderately anomalous silver soil geochemical signature, 2.9-3.4 ppm. It has no HLEM or magnetics response.

Anomaly P

Conductors 93-98 and soil Anomaly P are associated with a 100-300 x 400 metre black argillite pod encased in basalt. The unit occurs on a gentle north facing slope and is well covered by overburden; in excess of 5 metres. Anomalous soil geochemical results are listed below:

Copper	102-216 ppm
Zinc	536-660 ppm - isolated 1 sample highs
Silver	2.2-4.6 ppm - isolated 1 sample highs

Anomaly Q

Anomaly Q and conductor 105 are associated with a northwest-southeast trending band of cherty black argillies. The anomaly extends from line 29+00N to 30+00N, though the argillite horizon has a minimum strike length of 400 metres

Copper	103-185 ppm
Lead	117-325 ppm
Zinc	221-1320 ppm
Silver	2.3-5.6 ppm

A mineralized source for the anomaly was not found. The HLEM conductor is caused by graphite.

2.7.2 Geophysics

The HLEM survey outlined 13 conductors. These are labelled 93 - 105 on maps 25 and 26. Conductors 97, 98 and 101 - 105 occur in areas mapped as argillites and are caused by graphitic sediments. The remaining conductors are unexplained.

The magnetic survey outlined 7 anomalies. These are labelled M36-M42. These anomalies occur within the basalt unit and may either reflect local concentrations of magnetite/pyrrhotite or small dikes.

STATEMENT OF QUALIFICATIONS

I am a Bachelor of Science graduate from the University of New Brunswick (May 1977) and have been employed as an exploration geologist within the mining industry for six years; the last 3 years with Esso Resources Canada Limited.

Cal Everett

CAL C. EVERETT

STATEMENT OF QUALIFICATIONS

I attended the University of Waterloo, Waterloo, Ontario between 1975 - 1979 graduating with a B.Sc. (Honours) degree in Earth Sciences. From 1975 to 1979 I was employed during the summer months by Esso Minerals Canada to conduct Magnetic, Electromagnetic, Gravity and Induced Polarization surveys. Since graduating I have been employed by Esso Minerals as a geophysicist.

W. G. Cooper.

W. GORDON COOPER

SUMMARY OF COSTS

COST ESTIMATE - FOGGY B, FOGGY C, FOGGY D, FOGGY E GROUPS

Type of Work	Man Days	Cost/Man Day	Cost	Total
Geochemistry	1	$ 157.00	$ 157.00	
	3	96.00	288.00	
	7	142.00	994.00	
	1	142.00	142.00	
	1	86.00	86.00	
	33	71.00	2343.00	
	33	71.00	2343.00	
	1	73.00	73.00	
				$ 6426.00
Geophysics	22	$ 142.00	3124.00	
	23	73.00	1679.00	
	31	86.00	2666.00	
	1	142.00	142.00	
				$ 7611.00
Linecutting	4	$ 157.00	$ 628.00	
	3	96.00	288.00	
	2	142.00	284.00	
			$ 1200.00	
- contracted Ashworth Explorations 22.5 km @ $350.00 per km			$7875.00	
				$ 9075.00
Road Construction: Clearwater Valley Construction 74.0 hrs @ $120.00 per hour				$ 8880.00
Laboratory: 1305 soils (Cu Pb Zn Ag) @ 4.70 per unit			$ 6133.00	
146 soils (Au) @ $6.50 per unit			949.00	
				7082.00
Transportation:				
Vehicle Rental:				
3/4 ton pickup; 2.2 months @ $700.00/month			$1540.00	
G.M.C. Jimmy; 2.2 months @ $900.00/month			$1980.00	
Toyota Pick-up; 2.2 months @ 850.00/month			$1870.00	
Fuel			$ 2488.00	
				$ 7878.00

SUMMARY OF COSTS
COST ESTIMATE - FOGGY B, FOGGY C, FOGGY D, FOGGY E GROUPS contd.

Type of Work	Man Days	Cost/Man Day	Cost	Total
Travel Expenses:				
Ashworth Explorations $800.00 (Demob-fee)				$ 800.00
Food and Accommodation:				
July 17 - Sept 26th				
166 man days @ 35.00 per man/per day				$ 5810.00
Freight Charge (Soil Samples to Vancouver)				$ 350.00
Cook 72 man days @ 85.00 per day				$ 6120.00
Materials and supplies (Camp and Equipment/ Field Supplies etc.)				$ 8739.00
Report Preparation:				
8 man days @ $157.00 per day			$ 1256.00	
Drafting 15 man days @ 142.00 per day				2130.00
Map Reproduction				400.00
				$ 3786.00
		TOTAL		$ 72557.00

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COST DISTRIBUTION

	TOTAL	GROUP B	GROUP C	GROUP D	GROUP E
Geochemistry	6426.00	2160.00	1213.00	1813.00	1240.00
Geophysics	7611.00	2805.00	1255.00	1893.00	1658.00
Linecutting	9075.00	2625.00	2625.00	2625.00	1200.00
Analysis	7082.00	3934.00	795.00	1362.00	991.00
Transportation	7878.00	1984.00	1964.00	1965.00	1965.00
Freight Charge	350.00	100.00	50.00	100.00	100.00
Travel Expenses	800.00	200.00	200.00	200.00	200.00
Food/Accommodation	5810.00	1452.00	1452.00	1453.00	1453.00
Supplies	8739.00	2184.00	2184.00	2184.00	2187.00
Cook	6120.00	1530.00	1530.00	1530.00	1530.00
Report Preparation	3786.00	946.00	946.00	947.00	947.00
Road Construction	8880.00	1000.00	2626.00	2628.00	2626.00
TOTAL	72557.00	20920.00	16840.00	18700.00	16097.00
TOTAL APPLIED	67200.00	20800.00	14400.00	16000.00	16000.00

LIST OF PERSONNEL

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Contractors - Linecutting

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APPENDIX A

GEOCHEMICAL METHODS

Soil samples were taken at the B and locally C horizons with hand tools, stored in brown gusset bags, dried and shipped to Min En Laboratories in North Vancouver for geochemical analysis. Each sample was oven dried, sieved to obtain the -80 mesh fraction and then subjected to hot nitric perchloric acid digestion. Measurements of trace element concentrations were done by Atomic Absorption analysis. Samples were analyzed for Cu, Pb, Zn and Ag. Selected samples were analyzed for Au. Au values were obtained by fire assay plus AA analysis. Pulps for all samples are stored at the Esso Minerals Canada office in Vancouver, B.C.

APPENDIX B

GEOPHYSICAL SURVEYS

THEORY AND PROCEDURES

MAGNETICS:

A Geometrics G816 portable proton precession magnetometer was used. This instrument measures the total magnetic field strength, by measuring the frequency at which protons (hydrogen atoms) precess about the axis of the earth's magnetic field. The magnetic field strength, which is directly proportional to the frequency, is digitally displayed.

Readings were taken at 25 meter intervals along the survey lines. To correct time variations of the earth's magnetic field (diurnal), base stations were first established within the survey area. Readings were taken at these base stations at the beginning and end of each traverse. The difference in the readings at these base stations was linearly distributed over the other readings along the traverse.

HLEM:

The Scintrex SE88 Genie EM system uses a portable transmitter consisting of two transmitting coils and power supply, and a receiver with signal detection electronics. The transmitter and receiver coils are normally maintained in the vertical axis co-planar mode, commonly referred to as the horizontal loop mode.

The transmitter simultaneously generates two alternating magnetic fields - one referred to as the "signal frequency" and the other as the "reference frequency". The resultant electromagnetic fields set up in the ground are detected by the receiver coil located at a fixed distance from the transmitter. The receiver measures the received "signal frequency" amplitude, Hs, and the received "reference frequency" amplitude, Hr. The value of (Hs/Hr-1) x 100 (referred to as "Ratio") is digitally displayed on the receiver.

The survey plotting point is considered to be at the mid-point of the transmitter-receiver separation (L). Readings were taken at station intervals of 1/2 L if no conductor was present and 1/4 L if a conductor was present.