86-772-15324

KARGEN DEVELOPMENT CORP.
GEOLOGICAL & GEOCHEMICAL REPORT
ON THE
EH 1,3,5 & 6 CLAIMS
CLINTON MINING DIVISION
LATITUDE: 51°15.7'N LONGITUDE: 122°30'W
NTS 920/8W & 7E,12E

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DATE OF WORK: August 28 - Sept. 3, 1986
DATE OF REPORT: November 26,1986

Owner/Operator: Glen E. White

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1. INTRODUCTION

This report covers the **EH** claim block, located in south-central British Columbia. The claim group is situated 6 kilometres south of Blackdome Mountain, where an auriferous quartz vein system is being developed. A reconnaissance geological and geophysical evaluation of the property was carried out by Western Geophysical Aero Data Ltd. in 1984.

White Geophysical Inc. explored the property in 1985 for mineral occurrences by carrying out a program of geological mapping, prospecting and a geochemical survey. Results of the program confirmed the presence of a geological environment similar to that on Blackdome Mountain and revealed a number of gold-in-soil anomalies.

In 1986, White Geophysical Inc. undertook a twofold exploration program aimed at evaluating the economic potential of areas not previously examined and detailed coverage in areas where previous surveys had yielded encouraging results. Geological mapping, heavy mineral concentrate and stream sediment sampling were carried out in areas not previously examined while base of slope and contour line soil sampling, geological mapping, and rock-chip sampling were carried out as follow-up to the 1985 program.

A crew of two persons carried out the field work from August 28 to September 3, 1986. The program was supervised by geologist, B.P.Butterworth under the direction of geologist J.C.Freeze, of White Geophysical Inc.

1.1 Location and Access

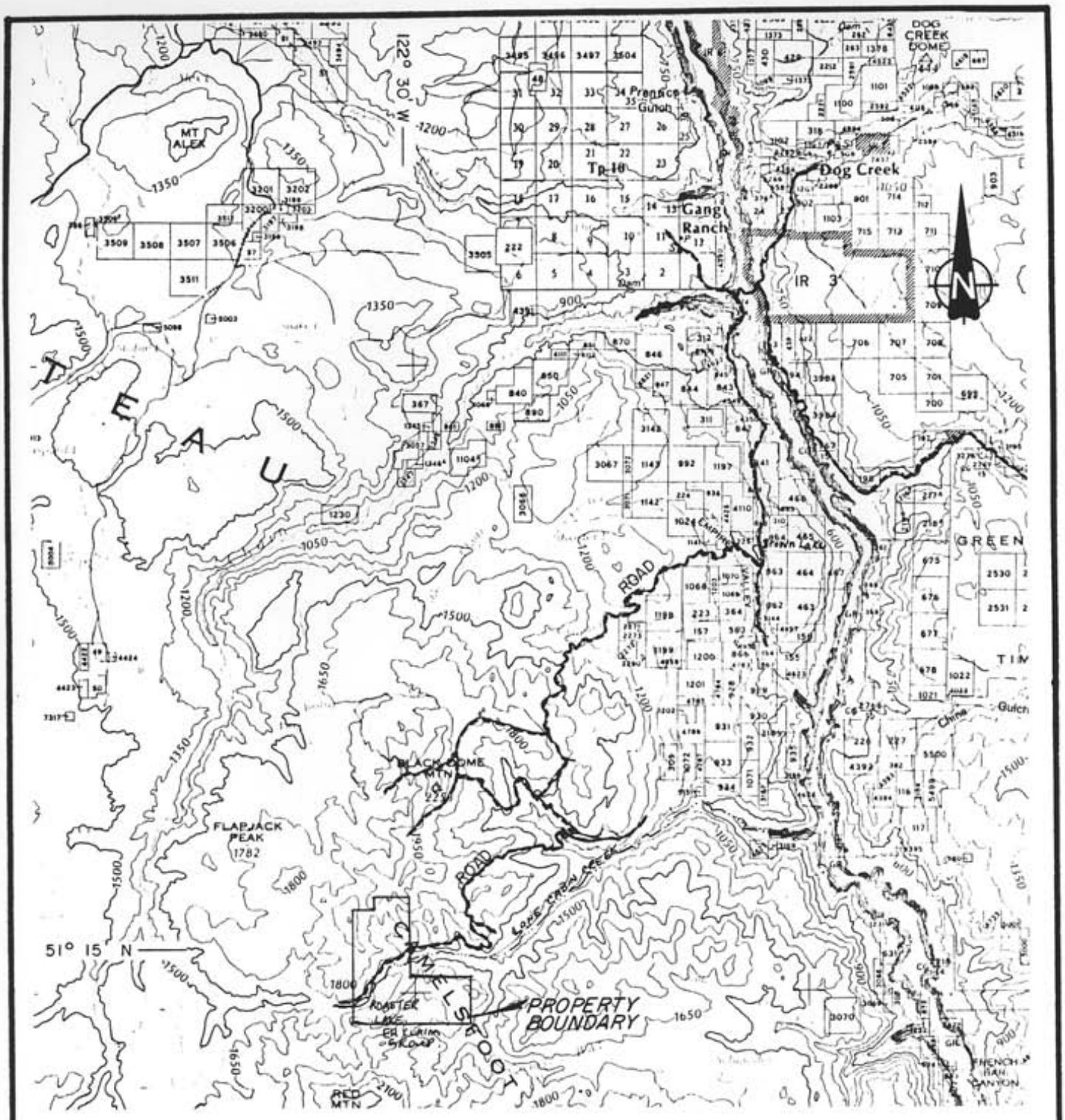
The **EH** property is situated in the Clinton Mining Division and the Williams Lake Forestry District, 65 kilometres west-northwest of the town of Clinton (Figures 1.1 and 1.2). The claims cover 20 square kilometres centered on latitude 51°15'N and longitude 122°30'W, found on NTS map sheet 920/7E & 8W.

The claims are accessible during dry weather by four wheel drive vehicle along a network of logging and mining roads. The most direct route takes approximately five hours from Clinton, B.C. via: 15km north along Highway 97, 75km west on the Gang Ranch road to the Gang Ranch bridge; 15km south to the Blackdome access road; 18.5km along the Blackdome access road; 4.5km along an old access road which climbs steeply up to the west; an unmaintained road to the southwest which crosses Porcupine Creek at 5.5km; 15km west this road crosses the eastern claim boundary and eventually it leads along the north bank of Lone Cabin Creek. The old access road is only usable during dry weather.

1.2 Physiography

The **EH** property is in a climatic zone of moderate snow cover and severe winters. Average annual precipitation is high, from 41 to 183 cm. Mean daily temperature in July is 14 to 16 degrees Celsius and in January is -5 to -10 degrees Celsius.

The topography of the property is centered on the steep U-shaped Lone Cabin Creek Valley in the Chilcotin Ranges of B.C. Slopes are steep to moderate with elevations ranging from 1630m (5346 ft.) to 2115m (6937 ft.). The northwestern claims cover a ridge top where creeks tend to be boggy and meandering. Lakes are shallow.



LOCATION AND TOPOGRAPHICAL MAP

1 : 250,000

0 5 km 10 km

N.T.S. 92 O/7,8 , UTM 3480

WHITE GEOPHYSICAL INC.

FIGURE I.1

Vegetation over the area is predominantly open consisting of grassy slopes to moderate bush with moderately abundant poplar, spruce, and fir trees. Deadfall is abundant in some areas, apparently a remnant of bushfires. Denser, larger growth is found in the valley bottoms.

The **EH** area is drained by the Lone Cabin Creek and its tributaries. The Lone Cabin drainage system flows northeastward into the southward-flowing Fraser River.

Glacial till occurs as a thin cover, averaging 3 metres on the property. A well developed "B" soil horizon is often red-brown with abundant charcoal fragments. Outcrop is moderately well exposed, found mainly in road cuts and forming spines on hillsides.

1.3 Claim Information

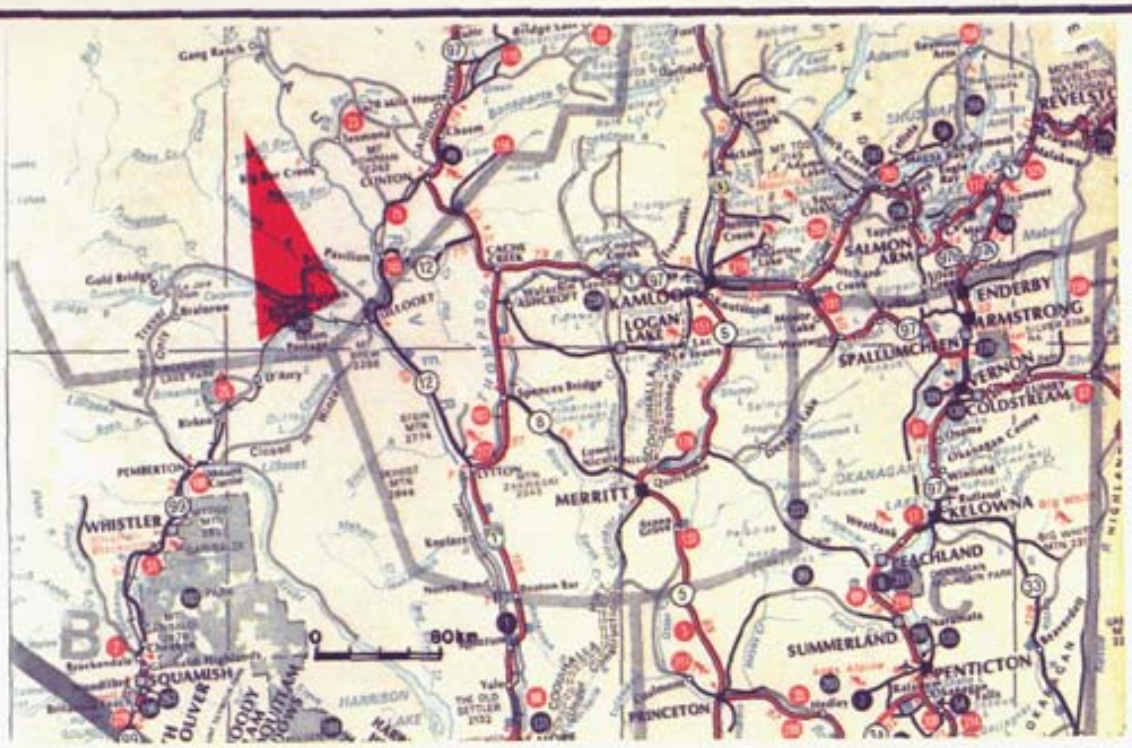
The **EH** property is comprised of 4 modified grid claims, totalling 80 units. **Kargen Development Ltd.** carried out field work over the **EH 3,5 and 6** claims.

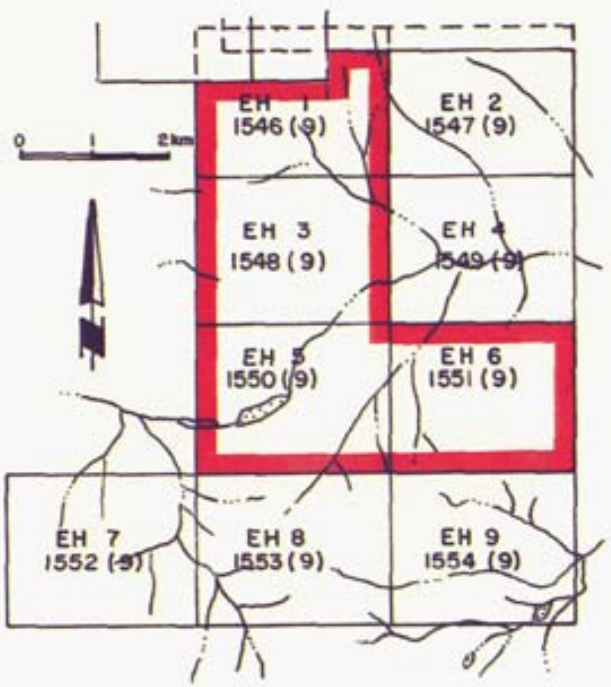
TABLE 1.3

CLAIM STATUS

CLAIM NAME	UNITS	RECORD NO.	EXPIRY DATE
EH1	20*	1546	Sept. 7,1987
EH3	20	1548	Sept. 7,1987
EH5	20	1550	Sept. 7,1987
EH6	20	1551	Sept. 7,1987

* Less fractions previously staked as illustrated on Figure 1.2.





J.B.L. RESOURCES LTD.

— EH 1,3,5, & 6 CLAIMS —

LOCATION AND CLAIMS MAP

N.T.S. 92 O/7,8

WHITE GEOPHYSICAL INC.

FIGURE 1.2

1.4 History

The **EH** claim block was staked to cover a geological environment potentially similar to that of Blackdome Mountain, where an auriferous quartz vein system is being developed.

An airborne magnetometer and VLF-electromagnetometer survey accompanied by a reconnaissance geological examination of the claims was carried out by Western Geophysical Aero Data Ltd. in 1984. These surveys showed **EH 1,3,5 and 6** claims to be underlain by a geological environment similar to that on Blackdome Mountain.

In 1985, an exploration program consisting of geological mapping, soil, stream sediment and rock chip sampling was carried out by White Geophysical Inc. on the **EH-3 and EH-5** mineral claims. The program revealed a number of geologically and geochemically favourable areas that were followed-up during the 1986 exploration program.

1.5 Work by Kargen Development Corp.

In 1986 field work by **Kargen Development Corp.** was conducted from August 28 to September 3. During this period the following surveys were completed:

1) Reconnaissance (1:10,000 scale) geological mapping, prospecting and rock chip sampling was carried out over the property.

2) Contour line soil sampling of the "B" horizon above Lone Cabin Creek road at approximately 1645m and 1585m. A total of 97 soil samples were collected.

3) Stream sediment and heavy mineral concentrate samples were collected from creeks flowing northeasterly through the **EH-5 and 6** mineral claims and southeasterly through the **EH-1 and EH-3** claims. A total of 9 stream sediment and 6 heavy mineral concentrate samples were collected.

2. GEOLOGY

2.1 General Geology

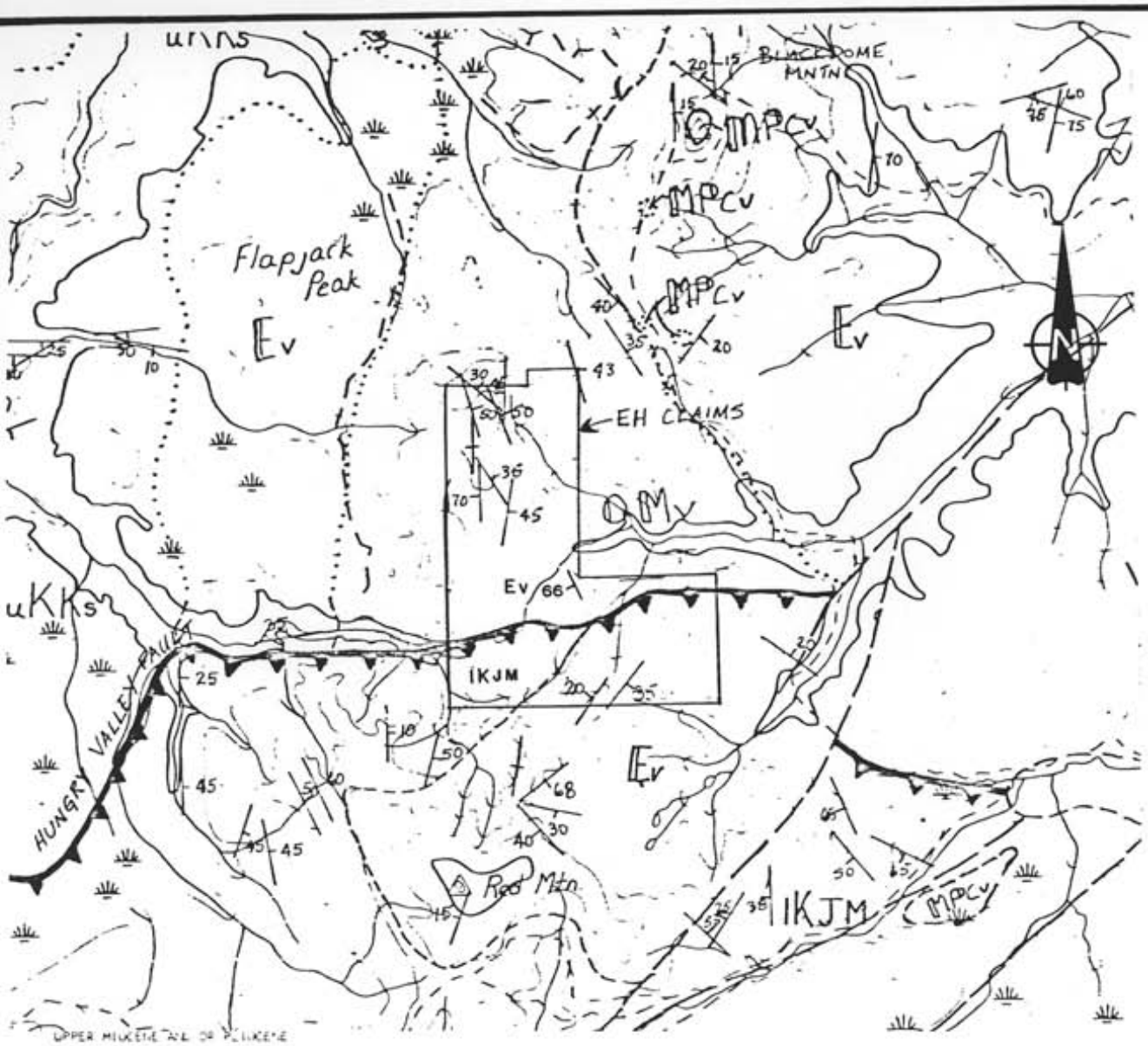
The geology of topographic sheet 920 was compiled by H.W.Tipper of the Geological Survey of Canada in 1978 on open file map #534.

The **EH** property is underlain predominantly by Oligocene to Eocene basaltic to rhyolitic tuffs, breccias, and flows of the Chilcotin Group. A regional thrust, the Hungry Valley fault, strikes east-west across the southern edge of the claims. South of the fault, Eocene rhyolitic and dacitic tuff, breccia and flows are overlain by Lower Cretaceous boulder-pebble conglomerates and lithic wackes of the Jackass Mountain Group (see Figure 2.1 and Map 3.2).

2.2 PROPERTY GEOLOGY

2.2.1 LITHOLOGY

The geology of the property as determined by the 1985 and 1986 mapping programs indicates that the claims are underlain by units similar to those found on Blackdome Mountain and thus have a high potential for gold and silver mineralization (Map 3.2). These units include thin to thick bedded basaltic to rhyolitic flows, tuffs and breccias including both subaerial welded tuffs and subaqueous pillow fragments. Bedding varies from flat lying to a moderately



UPPER MIOCENE TO OLIGOCENE

CHILCOTIN GROUP

MPCv Olivene basalt, anuesite, minor relate tuff and breccia

OLIGOCENE AND (?) LOWER MIOCENE

OMv Grey to brown, fine-grained to porphyritic and amygdaloidal andesite and basalt tuff, breccia, and flows; includes minor Ev

EOCENE AND YOUNGER (?), OLDER (?)

Ev Rhyolitic and dacitic tuff, breccia, and flows; minor andesitic to basaltic rocks; may include minor OMv

LOWER CRETACEOUS (BARREMIAN TO ALBIAN)

JACKASS MOUNTAIN GROUP

IKJM Buff to green greywacke, grey shale and pebble conglomerate, massive boulder conglomerate

TERTIARY

EOCENE

Ef Felsite, feldspar porphyry, biotite felespar porphyry

REGIONAL GEOLOGY MAP

1 : 125,000

0 2.5km 5.0km

FROM G.S.C. O.F. 534
COMPILATION BY TIPPER, 1978

WHITE GEOPHYSICAL INC.

FIGURE 2.1

east to southeast dip which may indicate paleotopography. Descriptions of these units follow:

Basalt-andesite: Medium drab grey-green, weathers mottled brown gray, fine grained, soft rare carbonate stringers, moderately magnetic, white subhedral feldspars to 2mm., 7 - 10% rare rounded grains of white-grey quartz to 2mm.

Basic tuff-breccia: Fresh and weathered green-grey-brown. 50 - 60% unsorted angular to rounded clasts to 35cm of assorted composition. Larger fragments, mainly basic, include: andesite, dacite, rhyolite and chert. One 35cm clast appears to be a pillow basalt fragment. Matrix is variable from chloritic medium-green tuffaceous and moderately fissile in part, to very soft and clayey. Possibly a lahar, nonmagnetic, very calcareous in patches. Vugs to 1cm of coarse crystalline calcite-quartz and minor chalcedony. Some cockscomb quartz. No visible sulphides. Includes some 35cm thick beds of andesite-dacite, light to medium gray-green, weathered tuff, with 3% feldspar crystals to 2mm., and 5% grey quartz crystals to 2mm. Variably calcareous.

Andesite: - Medium-light gray, grey-brown and reddish mottled. Weathers light buff to limonitic. Very fine to fine-grained. Moderately soft. Variably calcareous, nonmagnetic, generally massive, but contains rare fragments of same composition. Weathered surface shows faint flow banding. Contains from 0% to 10% white-buff feldspar crystals, clay altered and with carbonate rims. Greenish-black specks <5% may be chlorite. Disseminated pyrite to 0.25mm., 1/2% to 1%.

Dacite-andesite: Variably dark gray-brown-pink-green, weathers brown-gray. Fine-grained. Massive to shaley to knobbly. Some with approx. 5% dark grey siliceous nodules to 1 metre. Sightly magnetic. Variably calcareous. Up to 10% white-cream anhedral specks to 0.5mm., may be altered feldspars with carbonate rims. Tuffaceous in part. No visible sulphides.

Lithic lapilli (crystal) dacite tuff: Light to medium green, fine-grained, moderately siliceous matrix with up to 50% angular fragments to 2cm, rarely 5cm, of same composition. Few fragments of very clay altered rock to 1cm., plus rare chert and basalt. Weathers dark grey-green. In part contains approx. 7% black anhedral to subhedral hornblende crystals to 2mm, and 7-10% white anhedral to subhedral feldspar crystals. Massive to moderately foliated, noncalcareous, nonmagnetic, up to 4% disseminated fine grained pyrite (0.5mm max.).

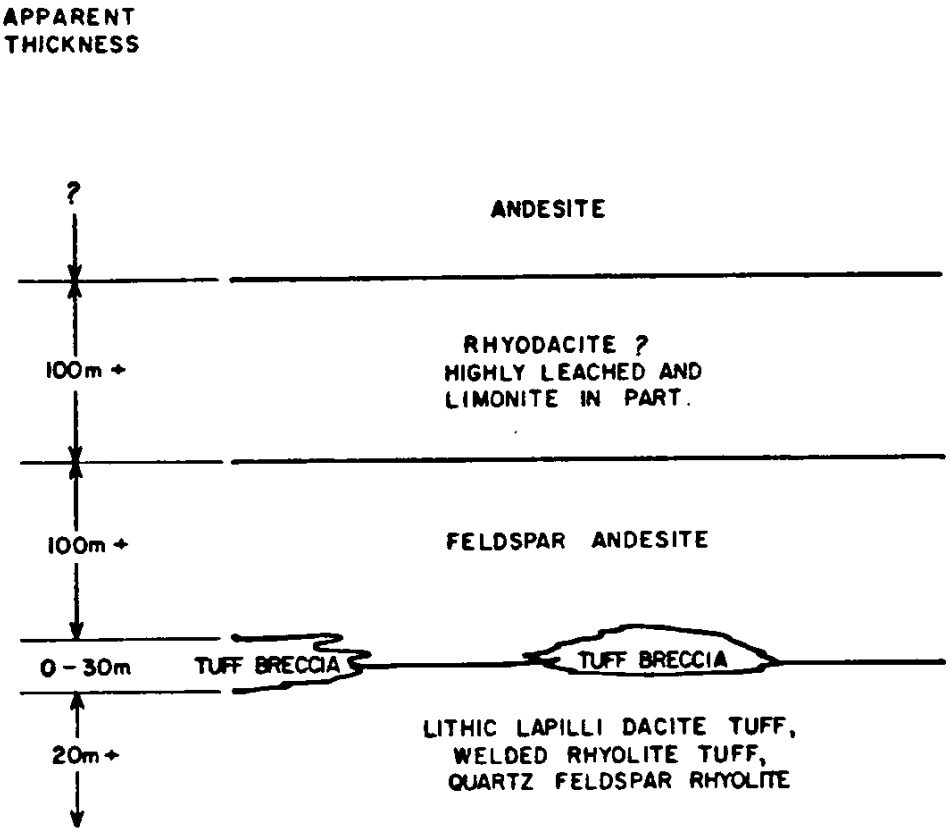
Rhyolite-dacite: Light-gray-green, weathers same to buff, pitted. Fine to coarse grained, mainly tuffaceous. Feldspar crystals to 1mm, 5% to 20%, subhedral with some clay alteration. Carbonate-quartz blebs to 3mm, 5 - 7%, some hematite rimmed. Clear gray quartz grains to 2mm, rarely 1.5cm, 5 - 7%. Variably magnetic. Dark mafic specks to 0.5mm are biotite, 7%. Limonitic cubes to 0.5mm may be from pyrite, 1/2%.

Rhyolite-dacite: White-brown highly leached siliceous rock, heavily limonitic to jarositic stained throughout, some manganese staining on fractures. Fine-grained. Gray quartz lenses and

grains to 1cm x 1mm, 10%. Limonitic cubes to 3mm, 10%, probably from pyrite. Nonmagnetic. Noncalcareous.

Welded rhyolite tuff: White-gray, weathers light limonitic, fine grained, nonmagnetic, noncalcareous. Under hand lens can see flattened glassy shards. Pyrite - none to trace disseminated, 0.25mm max.

The geological setting of the **EH 3 and 5** claims seems to be similar to the lowest section of the Blackdome rocks - mainly acidic flows, tuffs and breccias overlain by andesite and/or dacite (see Figures 2.2 and 2.3). While the upward series of rocks at Blackdome is rhyolite, volcaniclastic sediments, feldspar andesite and/or dacite, oxidized horizon, basalt the corresponding units on the **EH 3 and 5** claims appears to be rhyolite, tuff breccia, feldspar andesite, leached limonitic siliceous rock (rhyodacite), andesite. Finer volcaniclastic sediments were not seen, and the breccia unit is thicker. The overlying feldspar andesite seems to be thinner than at Blackdome. The 4m thick oxidized horizon at Blackdome appears to be the equivalent of the highly leached limonitic siliceous rock on the **EH** claim, where it is possibly over 100m thick. This is again overlain by andesite. The basalt cap rock was not seen but may be present on the western edge of the property, as suggested by the 1984 geological survey.



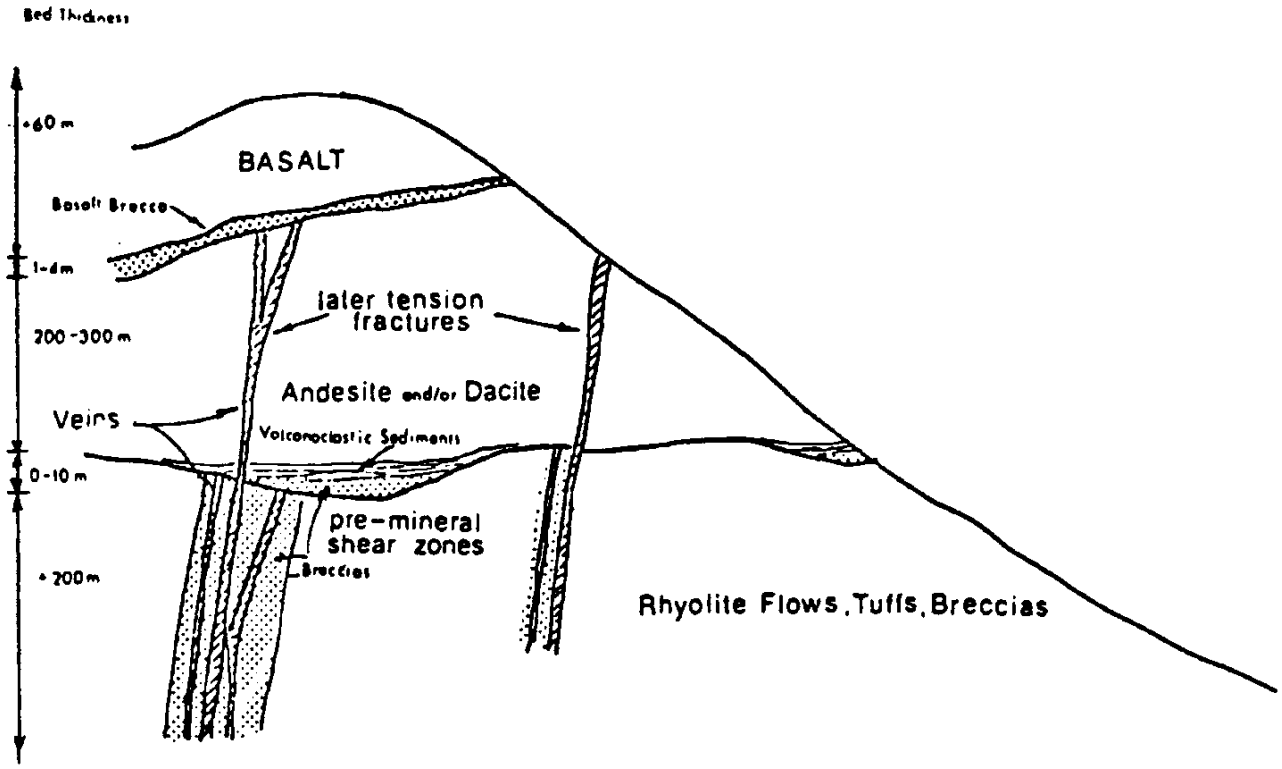
IDEALIZED CROSS SECTION - EH CLAIMS

1 : 5,000

GEOLOGY BY K.H.

WHITE GEOPHYSICAL INC.

FIGURE 2.2



IDEALIZED CROSS-SECTION
BLACKDOME MOUNTAIN AREA
Showing Vein Formation

IDEALIZED CROSS SECTION-BLACKDOME MTN.

TAKEN FROM ADTEC MINING CONSULTANTS,
WESTERN GEOPHYSICAL AERO DATA LTD.
1984 REPORT

WHITE GEOPHYSICAL INC.

FIGURE 2.3

2.2.2 ECONOMIC GEOLOGY

The gold and silver mineralization on Blackdome Mountain occurs in typical epithermal quartz veins, most of which are hosted by rhyolite and dacitic andesite. On the **EH 3** mineral claim milky quartz, chalcedony and calcite veining was observed on talus slopes immediately north of the main road (see Map 3.2). The veins rarely exceed a few centimetres in width and carry only trace quantities of gold but, do however, indicate the presence of a good hydrothermal system conducent to precious metals mineralization. To date, the veins have been found only as float, but due to the abundance and highly angular nature of the rock fragments, a nearby source can be assumed.

3. GEOCHEMISTRY

3.1 Soil and Silt Sampling

3.1.1 Sampling

On the **EH** claims, contour line soil sampling was carried out above the Lone Cabin Creek road along two contour lines at 1585m, and 1645m elevation. Base of slope soil samples were collected along a tributary of Lone Cabin Creek draining the **EH-1 and EH-5** mineral claims. A total of 97 samples were collected at 25 and 50 metre intervals along these lines (see map 3.1). Nine silt samples were also collected from tributaries draining southeasterly from the **EH 1 and EH 3** mineral claims and northeasterly through the **EH 5 and EH 6** mineral claims.

3.1.2 Sample Preparation and Analytical Procedures

All soil samples were collected from the "B" soil horizon with the aid of a lightweight mattock and were sent to Chemex for the same analysis.

In the laboratory, soil and silt samples were oven dried at approximately 60°C. The dried samples were ring pulverized to approximately -100 mesh and were analyzed for the elements copper, zinc, silver, arsenic, mercury, and gold by atomic absorption after digestion with hot concentrated nitric and hydrochloric acids. A fire assay preconcentration was also used for gold analysis.

3.1.3 Treatment and Presentation of Results

In assessing the soil geochemical results, graphical statistical methods were used to separate background from anomalous metal concentration. Threshold and anomalous levels were determined at the mean plus two standard deviations (x+2s) and the mean plus three standard deviations (x+3s), respectively, from log probability plots prepared for each element. This data is given in Table 3.1.

Sample locations and analytical results are shown on Map 3.1. Results for all elements have been highlighted at threshold (x+2s) and anomalous (x+3s) levels.

TABLE 3.1

MEAN, THRESHOLD AND ANOMALOUS METAL VALUES IN "B" HORIZON SOIL SAMPLES FROM THE EH PROPERTY

METAL	N	THRESHOLD (X+2s)	ANOMALOUS (X+3s)
Cu	97	40 ppm	65 ppm
ZN	97	65 ppm	80 ppm
Ag	97	0.2 ppm	0.3 ppm
As	97	6 ppm	10 ppm
Au	97	10 ppb	15 ppb
Hg	97	130 ppb	170 ppb

3.1.4 Discussion of Results

Soil geochemical results north of the Lone Cabin Creek road (Map 3.1) yielded sporadic, isolated, single element Au, Ag, As and Hg anomalies throughout the sample area. Statistical analysis performed on the results indicate a very low correlation between elements.

Silt samples did not show any anomalous copper, zinc, silver arsenic or gold values (Map 3.1).

3.2 Heavy Mineral Concentrate Sampling

3.2.1 Sampling Procedure and Treatment

Samples were collected at 500m intervals along a tributary of Lone Cabin Creek draining the **EH 5** and **EH 6** claims and from two tributaries draining the **EH 3** mineral claim (Map 3.1).

A 30 - 50 kg sample of stream gravel was collected from a site where the heavy mineral fraction had shown some accumulation. Each sample was wet sieved to minus 20 mesh, the coarse fraction discarded and the remaining fine fraction panned down, "tailed out", and visually inspected. All obvious minerals of interest such as free gold were noted.

In the laboratory, the remaining light minerals were removed by heavy liquid separation and the resulting heavy fraction, with the magnetic minerals removed, was crushed and then analyzed with the ICP technique. A fire assay preconcentration and atomic absorption analysis was used for gold.

3.2.2 DISCUSSION OF RESULTS

Heavy mineral concentrate samples from tributaries draining the **EH 3,4 and 6** mineral claims revealed no appreciable anomalies. Moderate positive correlations exist between Ba and Sr, Ca and Sr, and Ca and Ba indicating the possible presence of strontianite, witherite, and calcite occurring as carbonate interbeds and fracture infillings within the Jackass Mountain Group of greywackes, shales and conglomerates. Gold concentrations in all samples were below the detection limit.

3.3 Lithogeochemistry - Rock Chip Sampling

3.3.1 Sampling, Sample Preparation and Analytical Procedures

Rock chip samples were collected from all outcrops with visible mineralization, boxwork, iron staining or silification.

In most cases, grab samples were taken where outcrop exposures were poor. Chip samples were taken at regular intervals (according to the size of the unit) across the width of structures. A total of 10 rock samples were collected for analysis.

The samples were placed in numbered plastic bags and sent to Chemex Labs Ltd. in North Vancouver for analysis. In the laboratory, samples were put through primary and secondary jaw crushers and a tertiary cone crusher. A sub-sample of approximately 250 gm was then pulverized using a rotary grinder. The pulp was screened to minus 140 mesh, and examined for metallics, then preconcentrated by fire assay and analyzed by atomic absorption for copper, zinc, silver, arsenic, mercury and gold.

3.3.2 Presentation and Discussion of Results

Geochemical analyses, locations and descriptions of samples are listed in table 3.2 and shown on map 3.2. Assay certificates are included in the Appendix.

Rocks analyzed from the 1986 field program contained low gold contents (peak value 20 ppb), however some did contain anomalous concentrations of other elements. A rhyodacitic flow-banded tuff (sample R-86-04) has a significant silver content, 2.3 ppm, and a peak gold content. Other significant lithogeochemical results include mercury values up to 870 ppb and an anomalous arsenic content of 14 ppm. Copper and Zinc occur only in trace amounts.

TABLE 3.2

Rock Chip Sample Assay Values

Locations and Descriptions

Sample #	Location	Cu ppm	Zn ppm	Ag ppm	As ppm	Hg ppm	Au ppb
R-86-01 (04751H)	On ridge S. of Roaster L.	76	60	0.6	1	60	20

Description: Trachyte dyke-weak-moderate perv. Kaol., limonite stained fracture surfaces.

R-86-03 (04752H)	On ridge E. of Roaster L.	35	36	0.4	1	60	5

Description: Rhyo-dacitic flow-banded tuff. Occassionally amygdaloidal with epidote infilling.

R-86-04 (04753H)	On ridge E. of Roaster L.	46	48	2.3	2	110	20

Description: Same as 04752H with limonitic haloes surrounding vugs. Occas. speck of f.gr. diss.Py.

Sample #	Cu ppm	Zn ppm	Ag ppm	As ppm	Hg ppm	Au ppb
R-86-05 (04754H)	19	45	0.6	3	870	15

Location: **EH-6** Mineral Claim. Main trib. flowing NE into Lone Cabin Creek.

Description: Lapilli Tuff-Angular marroon andesite and chert(?) fragments in a highly fractured, medium grained matrix. Vuggy texture.Occas. speck of f.gr. Py.

R-86-06 (04755H)	35	41	0.2	2	350	5

Location: **EH-5** M.C. Immed. NE of main road paralleling Lone Cabin Creek.

Description: Rhyodacitic welded tuff. Qtz-chalcedony calcite stockwork infills fractures. (<1cm in width) No visible mineralization.

R-86-07 (04756)	27	30	0.3	2	360	10

Location: See R-86-06

Description: Rhyolitic welded tuff. Pale green matrix contains subhedral quartz and feldspar plenocrysts. Narrow (<5cm) quartz, chalcedony and calcite veins infill fractures.

Sample #	Cu ppm	Zn ppm	Ag ppm	As ppm	Hg ppm	Au ppb
R-86-08 (04757)	33	38	0.3	5	720	15

Location: See R-86-06

Description: Same as above. Vuggy texture, Hairline fracture infilled with pyrite.

R-86-09 (04758)	39	38	0.8	1	780	<5

Location: See R-86-06

Description: Same as above

R-86-10 (04759)	12	20	0.2	14	170	<5

Location: **EH-3** M.C. on north side of main road paralleling Lone Cabin Creek.

Description: Rhyolitic welded tuff with moderate fracture controlled Fe-oxide staining. Quartz and carbonate veining is visible within many of the rock fragments. Talus slope.

R-86-11 (04759)	32	49	0.3	2	70	<5

Location: See R-86-10

Description: Dacitic Tuff. Fine grained, pale green and porphyritic. No visible sulphides.

Conclusions

Geochemical sampling and geological mapping has been the focus of field exploration on the **EH claims** during 1986. Field programs have been limited thus geological information is scanty, however in essence, Tertiary volcanic and volcaniclastic rocks of the Chilcotin Group are in fault contact with Lower Cretaceous, Jackass Mountain Group, greywackes, shales and conglomerates.

Geological mapping of the claim group has uncovered an epithermal quartz-chalcedony-calcite vein system similar to that found on Blackdome Mountain. Although gold contents were only sightly above trace levels and a source is yet to be located, the results indicate the presence of a favourable host environment for precious metals mineralization.

These areas should be followed up with detailed geological mapping, particularly on the north side of the main access road, in conjunction with detailed soil and rock chip sampling over an established grid.

Respectfully submitted,

B. Butterworth, B.Sc.

GEOLOGICAL ASSOCIATION OF CANADA
J.C. FREEZE
FELLOW

J.C. Freeze, B.Sc., F.G.A.C.

Cost Statement

Geology, Prospecting and Geochemistry
August 28 to September 3, 1986

Geology	Dates	Rate/day	Days	Total
B.P. Butterworth	Aug. 29,30	$300	2	$600.00
D. Odenwald	Aug. 29,30	175	2	350.00
Vehicle w/fuel		100	2	200.00
Meals & Accommodation		60	4	240.00
Supplies				250.00
Chemex Labs Ltd.	10 rock samples analysed for Au, Ag, As, Hg, Cu, Zn @ $22/sample			220.00
Report Preparation				800.00
				$2,660.00

Geochemistry

B.P. Butterworth	Aug 31-Sept 2	$300	3	$ 900.00
D. Odenwald	Aug 31-Sept 2	175	3	525.00
Vehicle w/fuel		100	3	300.00
Meals & Accommodation		60	6	360.00
Chemex Labs Ltd.:	97 Soil samples analysed for Au, Ag,As,Hg,Cu,Zn @ $20.30/sample			$1,969.10
	9 stream sediment samples for Au,Ag,As,Hg,Cu,Zn @ $20.30/sample			182.70
	6 heavy mineral concentrate samples analysed for Au,Ag and 30 element ICP @ $27/sample			162.00
Report Preparation				200.00
				$4,599.00

Prospecting	Dates	Rate/day	Days	Total
B.P. Butterworth	Aug 28	300	1	$300.00
D. Odenwald	Aug 28	175	1	175.00
Vehicle w/fuel		100	1	100.00
Meals & Accommodation		100	1	120.00
Report Preparation		60	2	300.00
				$995.00

+ GEOLOGY TOTAL	$2,660.00
+ GEOCHEMISTRY TOTAL	$4,599.00
TOTAL EXPLORATION COSTS =	**$8,254.00**

REFERENCES

Ash, W.M. and Pezzott, E.T. September, 1984	Geophysical and Geological report on the EH 1-9 claims
Heberlein, K. and Freeze, J.C. October, 1985	Geological and Geochemical report on the EH 1,3,5 & 6 claims.
Tipper, H.W. 1978	Open file 534 - Geological Survey of Canada Geological Map of NTS 920.

STATEMENT OF QUALIFICATIONS

NAME: BUTTERWORTH, Brian P., B.Sc.

PROFESSION: Geologist

EDUCATION: B.Sc. Geology
University of British Columbia

EXPERIENCE: 1986-Present: Geologist with White Geophysical Inc. supervising mineral projects throughout B.C.

1985: Geologist with Brinco Mining Ltd. Supervised precious and base metal exploration projects in southwestern B.C.

1983-1984: Geologist with Mark Management Ltd. Responsible for exploration programs in B.C., Yukon and Manitoba.

STATEMENT OF QUALIFICATIONS

NAME:	Freeze, J.C., (nee Ridley), F.G.A.C.
PROFESSION:	Consulting Geologist
EDUCATION:	1981 B.Sc. Geology - University of British Columbia 1978 B.A. Geography - University of Western Ontario
PROFESSIONAL ASSOCIATIONS:	Fellow of the Geological Association of Canada
EXPERIENCE:	1985 - Present: Chief Geologist with White Geophysical Inc. Coordinating mineral exploration projects involving geology, geochemistry, geophysics and diamond drilling in B.C. and Yukon. 1981 - 1985: Project Geologist with Mark Management Ltd. Hughes-Lang Group. Responsible for precious metals exploration programmes involving geology, geochemistry, geophysics and diamond drilling in Western Canada. 1979 - 1981: Summer and part-time Geologist involved with coal exploration in N.E. B.C. with Utah Mines Ltd.

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CERTIFICATE OF ANALYSIS

TO : WHITE GEOPHYSICAL INC. **

9251 BECKWITH ROAD
RICHMOND, B.C.
V6X 1V7

ROCK GEOCHEMISTRY

CERT. # : A8617927-001-A
INVOICE # : I8617927
DATE : 18-SEP-86
P.O. # : NONE
EH #8611

ATTN: B. BUTTERWORTH

Sample description	Prep code	Cu ppm	Zn ppm	Ag ppm Aqua R	AS ppm	Hg ppb	Au ppb FA+AA
04751 H	207	76	60	0.6	1	60	20
04752 H	207	35	36	0.4	1	60	5
04753 H	207	46	48	2.3	2	110	20
04754 H	207	19	45	0.6	3	870	15
04755 H	207	35	41	0.2	2	350	5
04756 H	207	27	30	0.3	2	360	10
04757 H	207	33	38	0.3	5	720	15
04758 H	207	39	38	0.8	1	780	<5
04759 H	207	12	20	0.2	14	170	<5
04760 H	207	32	49	0.3	2	70	<5

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RICHMOND, B.C.
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SILT GEOCHEMISTRY

ATTN: B. BUTTERWORTH

**

CERT. # : A8617936-001-A
INVOICE # : I8617936
DATE : 21-SEP-86
P.O. # : NONE
EH #8611

Sample description	Prep code	Cu ppm	Zn ppm	Ag ppm Aqua R	AS ppm	Hg ppb	Au ppb FA+AA
SL-86-01	217	23	48	0.1	15	90	<5
SL-86-02	217	21	57	0.1	4	150	<5
SL-86-03	217	21	50	0.3	5	140	10
SL-86-04	217	18	52	0.1	3	90	<5
SL-86-05	217	20	52	0.1	3	80	<5
SL-86-06	217	24	57	0.1	3	140	<5
SL-86-07	217	34	43	0.1	1	130	<5
SL-86-08	217	36	44	0.2	10	160	<5
SL-86-09	217	37	41	0.3	4	260	<5

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RICHMOND, B.C.
V6X 1V7

ATTN: B. BUTTERWORTH

** CERT. # : A8617937-001-A
INVOICE # : I8617937
DATE : 22-SEP-86
P.O. # : NONE
EH #8611

SOIL GEOCHEMISTRY

Sample description	Prep code	Cu ppm	Zn ppm	Ag ppm Aqua R	AS ppm	Hg ppb	Au ppb FA+AA
S-86-01	217	25	40	0.1	4	180	<5
S-86-02	217	26	56	0.1	2	60	<5
S-86-03	217	73	53	0.3	3	150	<5
S-86-04	217	55	49	0.3	2	80	<5
S-86-05	217	26	46	0.1	3	60	<5
S-86-06	217	37	50	0.1	2	60	<5
S-86-07	217	23	30	0.1	1	60	<5
S-86-08	217	42	53	0.2	3	130	<5
S-86-09	217	34	47	0.2	2	140	<5
S-86-10	217	20	51	0.1	1	70	<5
S-86-11	217	21	43	0.1	1	60	<5
S-86-12	217	25	46	0.1	3	60	<5
S-86-13	217	20	56	0.1	1	60	<5
S-86-14	217	18	34	0.1	3	50	<5
S-86-15	217	24	49	0.1	3	60	<5
S-86-16	217	27	47	0.1	3	60	<5
S-86-17	217	28	42	0.1	3	70	<5
S-86-18	217	48	50	0.2	7	140	<5
S-86-19	217	26	44	0.1	5	80	<5
S-86-20	217	28	48	0.1	3	50	<5
S-86-21	217	24	62	0.1	2	70	<5
S-86-22	217	24	49	0.1	1	100	<5
S-86-23	217	9	38	0.1	1	40	<5
S-86-24	217	19	68	0.1	2	40	<5
S-86-25	217	14	47	0.1	1	30	<5
S-86-26	217	25	47	0.1	1	60	<5
S-86-27	217	20	55	0.1	1	50	<5
S-86-28	217	14	46	0.1	1	50	<5
S-86-29	217	15	45	0.1	1	70	<5
S-86-30	217	19	48	0.1	1	110	<5
S-86-31	217	10	44	0.1	1	50	<5
S-86-32	217	14	54	0.1	1	50	<5
S-86-33	217	11	56	0.1	1	50	<5
S-86-34	217	11	47	0.1	1	40	<5
S-86-35	217	13	55	0.1	1	50	<5
S-86-36	217	10	42	0.1	1	40	<5
S-86-37	217	15	33	0.1	1	70	<5
S-86-38	217	11	36	0.1	1	40	<5
S-86-39	217	12	41	0.1	1	50	<5
S-86-40	217	12	48	0.1	1	60	<5

VOI rev. 4/85

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APPENDIX

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CERTIFICATE OF ANALYSIS

TO : WHITE GEOPHYSICAL INC.

9251 BECKWITH ROAD
RICHMOND, B.C.
V6X 1V7

ATTN: B. BUTTERWORTH

** CERT. # : A8617937-002-A
INVOICE # : I8617937
DATE : 22-SEP-86
P.O. # : NONE
EH #8611

Sample description	Prep code	Cu ppm	Zn ppm	Ag ppm Aqua R	AS ppm	Hg ppb	Au ppb FA+AA
S-86-41	217	25	38	0.1	1	130	<5
S-86-42	217	14	35	0.1	1	70	<5
S-86-43	217	22	38	0.1	1	80	<5
S-86-44	217	26	37	0.1	1	220	<5
S-86-45	217	13	58	0.1	1	70	<5
S-86-46	217	13	45	0.1	1	80	<5
S-86-47	217	18	35	0.1	1	90	<5
S-86-48	217	15	46	0.1	1	50	<5
S-86-49	217	25	46	0.1	1	90	<5
S-86-50	217	20	42	0.1	1	100	<5
S-86-51	217	19	41	0.1	1	70	<5
S-86-52	217	18	46	0.1	1	100	<5
S-86-53	217	20	43	0.1	1	90	<5
S-86-54	217	15	42	0.1	1	90	<5
S-86-55	217	15	39	0.1	1	60	<5
S-86-56	217	21	44	0.1	1	140	<5
S-86-57	217	22	48	0.1	1	70	<5
S-86-58	217	22	45	0.1	1	130	<5
S-86-59	217	24	46	0.1	1	230	<5
S-86-60	217	24	44	0.1	1	120	<5
S-86-61	217	19	49	0.1	1	100	<5
S-86-62	217	21	49	0.1	1	110	<5
S-86-63	217	23	47	0.1	2	110	<5
S-86-64	217	16	64	0.1	1	70	<5
S-86-65	217	25	37	0.1	1	80	<5
S-86-66	217	23	39	0.1	1	100	<5
S-86-67	217	14	44	0.1	1	60	<5
S-86-68	217	17	40	0.1	1	90	<5
S-86-69	217	22	37	0.1	1	120	<5
S-86-70	217	21	63	0.1	1	130	<5
S-86-71	217	25	39	0.1	1	130	<5
S-86-72	217	21	46	0.1	1	120	<5
S-86-73	217	39	62	0.1	7	110	<5
S-86-74	217	30	43	0.1	5	110	<5
S-86-75	217	24	45	0.1	4	70	5
S-86-76	217	27	47	0.1	4	70	<5
S-86-77	217	28	43	0.1	4	70	<5
S-86-78	217	26	47	0.1	5	120	<5
S-86-79	217	25	47	0.1	3	60	<5
S-86-80	217	20	52	0.1	4	50	<5

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V6X 1V7

ATTN: B. BUTTERWORTH

CERT. # : A8617937-003-A
INVOICE # : I8617937
DATE : 22-SEP-86
P.O. # : NONE
EH #8611

Sample description	Prep code	Cu ppm	Zn ppm	Ag ppm Aqua R	AS ppm	Hg ppb	Au ppb FA+AA
S-86-81	217	16	54	0.1	4	50	<5
S-86-82	217	35	48	0.1	7	60	<5
S-86-83	217	54	80	0.1	12	60	5
S-86-84	217	34	46	0.1	5	50	<5
S-86-85	217	26	42	0.1	5	60	<5
S-86-86	217	41	50	0.1	6	90	<5
S-86-87	217	23	48	0.1	2	50	<5
S-86-88	217	29	49	0.1	6	50	<5
S-86-89	217	16	45	0.1	1	50	<5
S-86-90	217	20	41	0.1	1	40	<5
S-86-91	217	31	50	0.1	2	120	<5
S-86-92	217	16	74	0.1	1	50	<5
S-86-93	217	14	50	0.1	1	70	<5
S-86-94	217	16	94	0.1	1	50	<5
S-86-95	217	12	52	0.1	1	40	<5
S-86-96	217	16	48	0.1	1	50	<5
S-86-97	217	24	65	0.1	1	60	<5

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APPENDIX

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V6X 1V7

HEAVY MINERAL
CONCENTRATE
GEOCHEMISTRY

** CERT. # : A8618001-001-A
INVOICE # : I8618001
DATE : 29-SEP-86
P.O. # : NONE
E.H. #8611

Semi quantitative multi element ICP analysis

Nitric-Aqua-Regia digestion of 0.5 gm of material followed by ICP analysis. Since this digestion is incomplete for many minerals, values reported for Al, Sb, Ba, Be, Ca, Cr, Ga, La, Mg, K, Na, Sr, Tl, Ti, W and V can only be considered as semi-quantitative.

COMMENTS :
ATTN: BUTTERWORTH

Sample description	Au ppb FA+AA	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	
HMC-86-1	<5	1.17	0.2	40	620	0.5	<2	1.55	<0.5	19	156	6	14.17	10	0.04	70	0.73	1901	1	0.03	33	1030	26	<10	105	0.44	<10	<10	482	<10	64	--
HMC-86-2	<5	1.25	0.2	20	250	<0.5	<2	1.67	<0.5	21	148	1	14.28	10	0.04	80	0.69	2244	1	0.04	29	890	24	<10	109	0.47	<10	<10	513	<10	58	--
HMC-86-3	<5	0.72	0.2	20	90	1.0	<2	1.08	<0.5	16	112	5	9.83	10	0.03	40	0.59	952	<1	0.02	26	1780	20	<10	66	0.22	<10	<10	326	<10	48	--
HMC-86-4	<5	0.90	0.2	30	90	0.5	<2	1.15	<0.5	21	116	<1	15.50	10	0.04	70	0.70	1260	<1	0.03	33	1410	24	<10	76	0.36	<10	<10	552	<10	56	--
HMC-86-5	<5	0.80	0.2	10	60	0.5	<2	1.01	<0.5	9	106	14	3.18	<10	0.02	30	0.42	458	<1	0.03	17	970	16	<10	49	0.24	<10	<10	105	<10	32	--
HMC-86-6	<5	0.95	0.2	20	50	1.0	<2	1.11	<0.5	14	136	25	5.51	10	0.03	30	0.68	687	2	0.04	44	860	16	<10	60	0.30	<10	<10	139	<10	46	--

Certified by ..B. Cayl.....

1546 (9)
EH-1
EH-3
1548 (9)

14,47,0.1,1,30,—
19,68,0.1,2,40,—
9,38,0.1,1,40,—
24,49,0.1,1,100,—
24,62,0.1,2,70,—
S-86-20
XSL-86-08,36,44,0.2,10,160,<5
SL-86-09,37,41,0.3,4,260,<5
28,48,0.1,3,50,—
26,44,0.1,5,80,—
48,50,0.2,7,140,—
28,42,0.1,3,70,—
27,47,0.1,3,60,—
24,49,0.1,3,60,—
18,34,0.1,3,50,—
20,56,0.1,1,60,—
25,96,0.1,3,60,—
21,43,0.1,1,60,—
S-86-10
34,47,0.2,2,140,—
20,51,0.1,1,70,—
42,53,0.2,3,130,—
23,30,0.1,1,60,—
37,50,0.1,2,60,—
26,46,0.1,3,60,—
55,40,0.3,2,80,—
73,53,0.3,3,150,—
26,56,0.1,2,60,—
25,40,0.1,4,180,—
S-86-01
HMC-86-05,16,32,0.2,<5
SL-86-02,34,43,0.1,1,130,<5
HMC-86-06,16,46,0.2,<5

39,62,0.1,7,110,—
30,43,0.1,5,110,—
24,45,0.1,4,70,—
27,47,0.1,4,70,—
28,43,0.1,4,70,—
26,47,0.1,3,60,—
25,42,0.1,3,60,—
20,54,0.1,4,70,—
16,54,0.1,4,70,—
34,48,0.1,2,60,—
34,45,0.1,2,60,—
25,46,0.1,2,60,—
29,49,0.1,2,60,—
23,46,0.1,2,50,—
16,45,0.1,1,50,—
20,51,0.1,1,50,—
16,24,0.1,1,50,—
14,50,0.1,1,40,—
12,52,0.1,1,40,—
16,39,0.1,1,40,—
15,48,0.1,1,50,—
24,63,0.1,1,60,—
S-86-80
S-86-90
S-86-97
25,47,0.7,1,60,—
S-86-30
*29,55,0.1,1,50,—
*14,46,0.1,1,50,—
*15,45,0.1,1,50,—
*19,48,0.1,1,110,—
*10,44,0.1,1,50,—
*14,54,0.1,1,50,—
*11,56,0.1,1,50,—
*11,47,0.1,1,40,—
*13,51,0.1,1,40,—
S-86-40
10,42,0.1,1,40,—
15,35,0.1,1,70,—
11,36,0.1,1,40,—
22,38,0.1,1,80,—
26,37,0.1,1,220,—
*14,35,0.1,1,70,—
*25,38,0.1,1,80,—
*10,48,0.1,1,50,—
*13,58,0.1,1,70,—
*13,45,0.1,1,80,—
*8,35,0.1,1,90,—
S-86-50
*18,46,0.1,1,100,—
*20,43,0.1,1,90,—
20,52,0.1,1,50,—
19,41,0.1,1,100,—
15,46,0.1,1,50,—
16,24,0.1,2,110,—
21,49,0.1,1,100,—
24,44,0.1,1,60,—
24,46,0.1,1,50,—
22,48,0.1,1,30,—
21,48,0.1,1,70,—
15,39,0.1,1,90,—
25,35,0.1,1,80,—
15,43,0.1,1,90,—
21,49,0.1,1,140,—
S-86-66
23,39,0.1,1,100,—
14,44,0.1,1,60,—
12,40,0.1,1,90,—
22,37,0.1,1,120,—
S-86-65
S-86-60
S-86-70
21,63,0.1,1,130,—
*25,39,0.1,1,130,—
*21,46,0.1,1,120,—
HMC-86-01,26,64,0.2,<5
SL-86-01,23,48,0.1,15,90,<5
XHMC-86-02,24,58,0.2,<5
SL-86-02,21,57,0.1,4,150,<5
SL-86-03,21,50,0.3,5,140,10
HMC-86-03,20,48,0.2,<5
SL-86-04,18,52,0.1,3,90,<5
XHMC-86-04,24,56,0.2,<5
SL-86-05,20,52,0.1,3,80,<5
SL-86-06,24,57,0.1,3,140,<5

Lone Cabin Creek
Roaster Lake
Camp

1550 (9) | 1551-(9)
EH-5 | EH-6

LEGEND

- •S-86-01 — Soil Sample Location.
  25,40,0.1,4,180,— Cu,Zn,Ag,As (ppm) Hg,Au (ppb)
- XSL-86-01 — Silt Sample Location.
  23,48,0.1,15,90,10 Cu,Zn,Ag,As (ppm) Hg,Au (ppb)
- XHMC-86-01 — Heavy Mineral Concentrate.
  26,64,0.2,<5 Pb,Zn,Ag (ppm) Au (ppb)
- Geologic Contact Inferred.
- Road.
- Creek.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15724

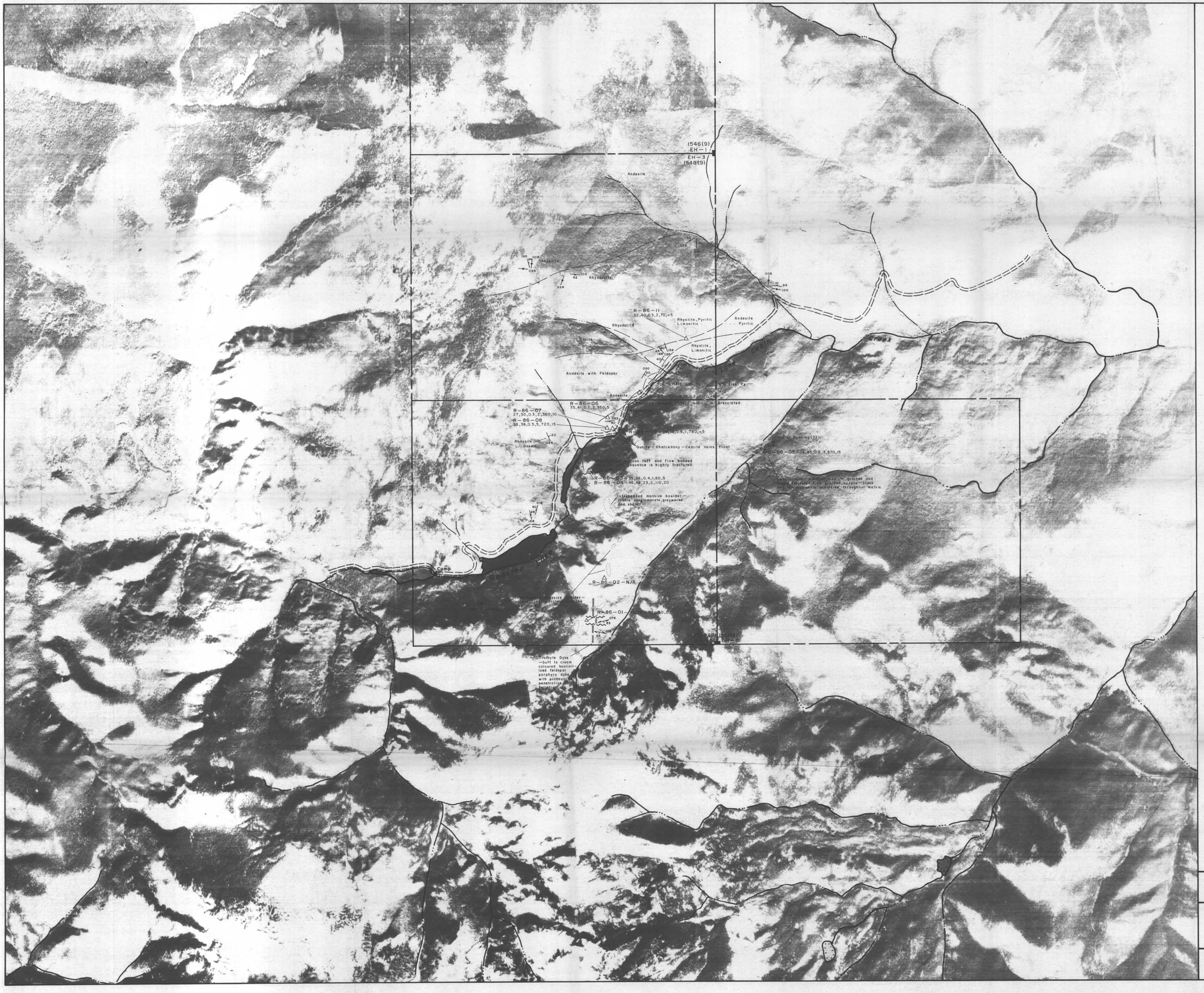
1:5,000
50 0 100 200 300 400
Meters

KARGEN DEVELOPMENT CORP.
EH 1,3,5,6 CLAIMS
CLINTON MINING DIVISION — BRITISH COLUMBIA

SOIL, SILT & HEAVY MINERAL CONCENTRATE SURVEY

WHITE GEOPHYSICAL INC.

Interpreted By:	J.C.F., B.P.B.
Drawn By:	T.M.
Checked By:	B.P.B.
Date:	NOV. 1986
Fig. No.	3.1



LEGEND

- Claim Boundary.
- Creek.
- △ Rock Sample.
- R-86-01 Sample Number.
- 42,57,0.1,4,170,<5 Sample Results. — Cu, Zn, Ag, As (ppm) / Hg, Au (ppb)
- Outcrop.
- Geological Contact Inferred.
- Bedding.
- Fractures.
- Foliation.
- Fault.
- N/A Not Assayed.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19924

J.C. FREEZE FELLOW

1:10,000

100 0 200 400 600 800
Meters

KARGEN DEVELOPMENT CORP.
EH 1,3,5,6 CLAIMS
CLINTON MINING DIVISION — BRITISH COLUMBIA

GEOLOGY & LITHOGEOCHEMISTRY

WHITE GEOPHYSICAL INC.

Interpreted By:	J.C.F., B.P.B.
Drawn By:	T.M.
Checked By:	B.P.B.
Date:	NOV. 1986
Fig. No.	3.2