

01/86

RAMM VENTURE CORPORATION  
GROUSE MOUNTAIN PROPERTY  
REPORT ON  
GEOLOGICAL, GEOPHYSICAL & GEOCHEMICAL SURVEYS

FILMED

OCTOBER, 1984

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

14,256

TECK EXPLORATIONS LIMITED



Province of  
British Columbia

Ministry of  
Energy, Mines and  
Petroleum Resources

ASSESSMENT REPORT  
TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S) Geological, Geochemical, Geophysical, Physical	TOTAL COST \$ 44,877.64
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AUTHOR(S) Peter Peto, Ph.D. SIGNATURE(S) *W. Meyer*  
per W. Meyer, P. Eng., Exploration Mgr.

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED January 8., 1985. YEAR OF WORK 1984  
PROPERTY NAME(S) Grouse Mountain Group A 4985

COMMODITIES PRESENT Cu-Zn-Ag

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN 251

MINING DIVISION Omineca NTS 93L/10E

LATITUDE 54° 33' N. LONGITUDE 126° 44' W.

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)]:

Lakeview (Lot 6284); Mayflower (Lot 6471); Copper Crown (Lot 6472); Eureka (Lot 6473);  
Ruby (Lot 6474); Granview (Lot 6475); Cariboo (Lot 6476); Lower (Lot 6477); Maisé...  
(Lot 7254); Grouse Mtn. (20 units); ART. (18 units); ART. 2. (4 units); NIGEL (12 units);  
OWNER(S) TOM 1 (8 units); TOM 2 (4 units).

(1) Arthur J. McGill (2) Frank Warman  
Ventec Resources Inc. Wei Thomas Deng

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SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):  
The property is underlain by mid-Jurassic volcanoclastic sediments of the Smithers...  
Formation and pyroclastic tuffs and breccias of the Telkwa Formation which have been  
intruded by late Cretaceous granitic rocks correlative to Bulkley Intrusions and syenitic  
Eocene dykes belonging to Goosly Lake Intrusions. Steep east and northeast trending  
normal faults provide channelways for quartz-carbonate veins with pyrite, sphalerite  
and chalcopyrite in discontinuous lenticular pods.

REFERENCES TO PREVIOUS WORK Baker, J. (1977). B.C. Assessment Rept., 6429; Black, J.H. (1951). B.C. D.M. Annual Report 1951, pp. A-113 - A-117; Church, B.N.C. (1972). B.C.D.M. G.E.M. 1972, pp. 397-417; Hill, M. and Stark, L. (1961) Report on Copper Ridge Silver

Mines, Telkwa, B.C.; Mackenzie (1915) G.S.C. Summary Report, pp. 65-67; Tipper, H.W. (1976) G.S.C. Open File 351; Tipper, H.W. and Richards, T.A. (1976) G.S.C. Bulletin 270.

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	COST APPORTIONED
GEOLOGICAL (scale, area)		Grouse Mtn., Art, Art 2, Nigel 1, Tom 1, Tom 2, L6284, L6471, L6472, L6473, L6474, L6475, L6476, L6477, L7254	
Ground	1:5000 13.5 km <sup>2</sup> 1:2500 0.75 km <sup>2</sup>		\$ 12,617.18
Photo			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic	1:2500 7.5 line km.	Art L6284, L6471, L6472, L6473, L6474, L6475, L6476, L6477	\$ 2,834.39
Electromagnetic	1:2500 7.5 line km.	Art L6472, L6473, L6474, L6476, L7254	\$ 2,834.39
Induced Polarization			
Radiometric			
Seismic			
Other Self potential	1:2500 7.5 line km.	Art, L6472, L6473, L6474, L6475	\$ 2,834.39
Airborne			
GEOCHEMICAL (number of samples analysed for ....)		Grouse Mtn., Art, Art 2, Nigel 1, Tom 1, Tom 2, L6284, L6471, L6472, L6473, L6474, L6475, L6476, L6477, L7254	
Soil	1042/Cu-Pb-Zn-Ag-As		\$ 13,686.48
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying	87 Rock-chip/Cu-Pb-Zn-Ag-Au	Art, L6472, L6473, L6474, L6476, L7254	\$ 3,383.59
Petrographic	3 samples		\$ 519.74
Mineralogic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Legal surveys (scale, area)			
Topographic (scale, area)			
Photogrammetric (scale, area)			
Line/grid (kilometres)	1:5000 42 line km. 1:2500 12 line km.	Grouse Mtn., Art, Art 2, Nigel 1, Tom 1, Tom 2, L6284, L6471, L6472, L6473, L6474, L6475, L6476, L6477	\$ 2,808.59
Road, local access (kilometres)			
Trench (metres)	307 m. in 34 trenches.	L7254	\$ 3,358.90
Underground (metres)			
TOTAL COST			\$ 44,877.64

FOR MINISTRY USE ONLY	NAME OF PAC ACCOUNT	DEBIT	CREDIT	REMARKS:
Value work done (from report)				
Value of work approved				
Value claimed (from statement)				
Value credited to PAC account				
Value debited to PAC account				
Accepted . . . . . Date	Rept. No. . . . .			Information Class . . . . .

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## Summary

Ramm Venture Corporation's Grouse Mountain copper-zinc-silver property, consisting of 9 Crown Grants and 66 claim units, is located northeast of Smithers. It has been intermittently explored since 1915. Geological, geochemical, VLF-EM, self-potential and magnetometer surveys were carried out by Teck Explorations Limited on the property between June 25 and August 5, 1984. In addition, 87 rock chip samples were taken from surface and underground workings and 307 metres of backhoe trenching in 31 trenches was completed.

The property is underlain by subaerial and subaqueous pyroclastic rocks intercalated with marine sediments belonging to the Babine-Shelf Facies of the Telkwa Formation of early Jurassic age. These are overlain by volcanoclastic sediments belonging to the Smithers Formation. These units are cut by several northeast- to east-trending, steeply dipping fault zones. Chalcopyrite, sphalerite, pyrite, and minor galena occurs in fissure veins, fracture fillings and tectonic breccias associated with the faulting.

The best-mineralized and most thoroughly explored of these structures is known as the Ruby Zone.

The geophysical and geochemical surveys have successfully outlined these mineralized structures. Reconnaissance soil sampling has yielded 23 anomalous sample sites. Backhoe trenching has discovered a northeast trending mineralized structure, traced for at least 600 metres, which may represent the offset extension of the Ruby Zone. It is recommended that further exploration of this and other zones be carried out.

## Introduction

Teck Explorations Limited on behalf of Ramm Venture Corporation carried out preliminary VLF-EM and magnetometer surveys over and around Coppermine Lake in April 1984. These surveys outlined conductive zones, some of which coincide with areas of known mineralization. Subsequently, geological mapping and geochemical surveys, additional VLF-EM, magnetometer and self-potential geophysical surveys were completed. Surface and subsurface sampling of existing workings, additional trenching and sampling of anomalous zones and reconnaissance exploration of the remainder of the Grouse Mountain claim block was carried out to further explore the property.

A total of 87 rock chip samples and 1042 soil samples were collected for assay and geochemical analysis respectively. In addition about 307 metres of backhoe trenching in 31 trenches was completed.

## Location and Access

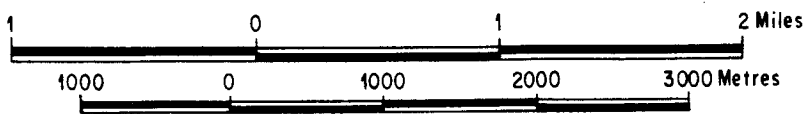
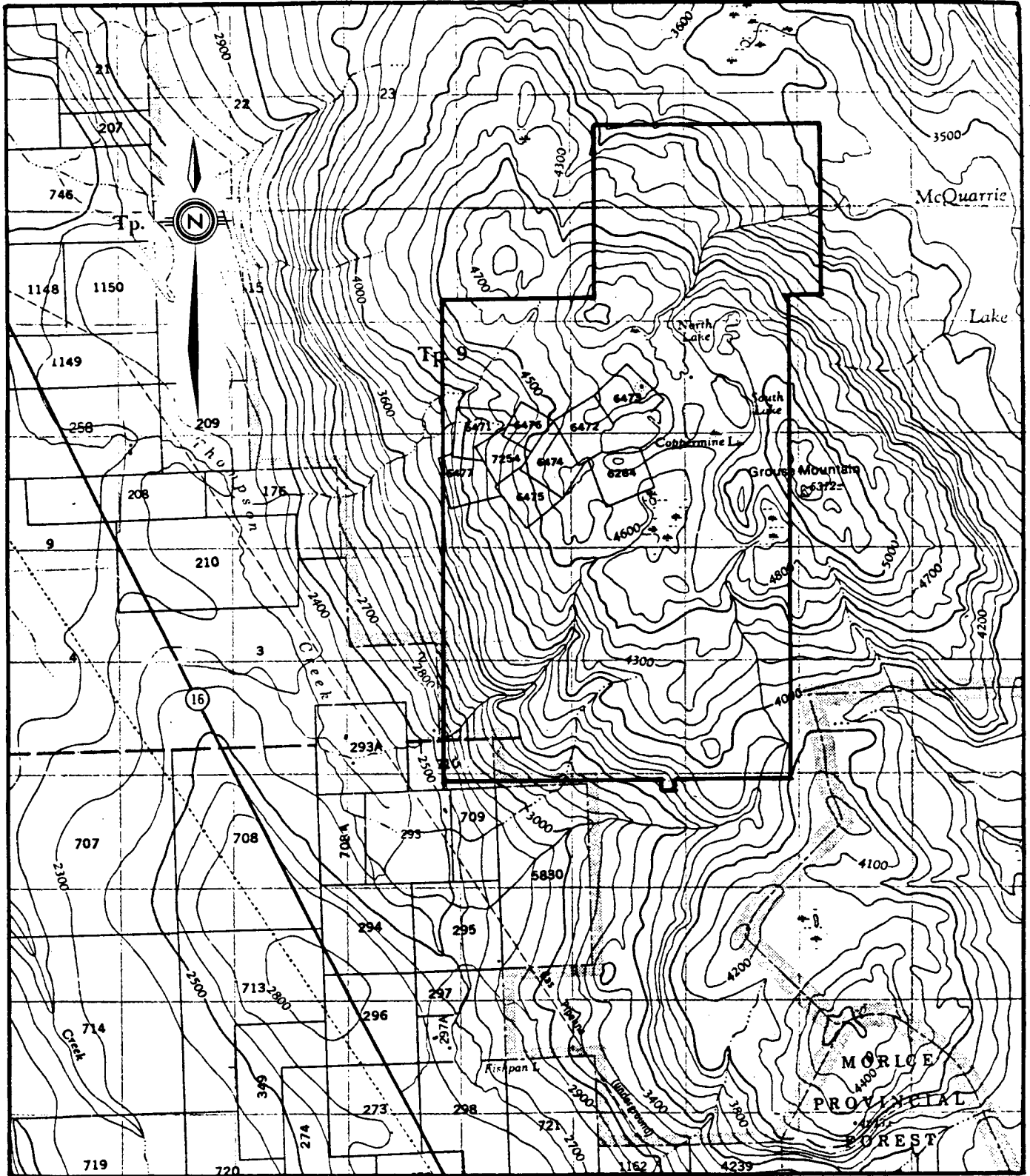
The Grouse Mountain property is situated along the Babine Range of the Skeena Mountains and on the eastern margin of the Bulkley River Valley. (Figure 1.). The claims can be accessed via Highway 16, from Smithers or Houston, and thence by a 4x4 road to Coppermine Lake, a distance of about 40 km from Smithers or

30 km from Houston. The southern portion of the claim block may also be accessed via a secondary gravel road to the microwave tower on the summit of Grouse Mountain. The claims occupy the southwestern flank of Grouse Mountain which consists of gently sloping deciduous woodlands and grassy meadows as well as gently rolling uplands covered mostly by alpine spruce. Elevations range from 790 to 1585 metres above sea level.

### Property

The property consists of a nucleus of 9 crown granted mineral claims surrounded by six contiguous claim blocks comprising 66 units as tabulated below.

<u>Claim Name</u>	<u>Record Number</u>	<u>Type</u>	<u>Anniversary</u>
LAKEVIEW	L.6284	Crown Grant	2 July
MAYFLOWER	L.6471	"	"
COPPER CROWN	L.6472	"	"
EUREKA	L.6473	"	"
RUBY	L.6474	"	"
GRANDVIEW	L.6475	"	"
CARIBOO	L.6476	"	"
LOWER	L.6477	"	"
MAISIE	L.7254	"	"
GROUSE MTN.	2561	20 units	7 March
ART	4522	18 units	8 January
ART 2	4523	4 units	8 January
NIGEL	5071	12 units	7 March
TOM 1	5722	8 units	25 August
TOM 2	5723	4 units	25 August



SCALE 1:50,000

**PROPERTY LOCATION MAP  
93L/10E**

FIGURE 1

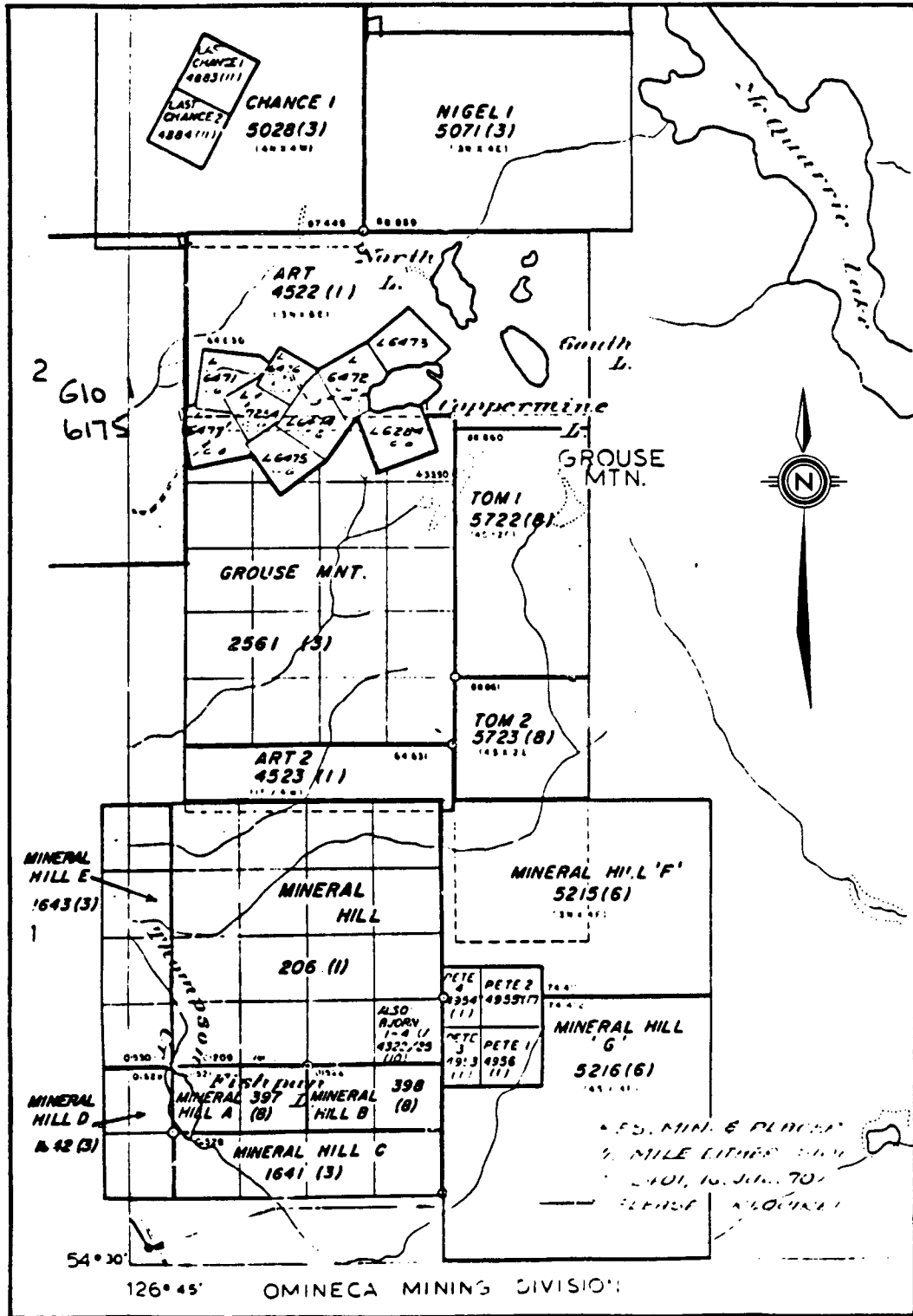
### History

Chalcopyrite and sphalerite mineralization was first discovered on Grouse Mountain in 1914. A 17 metre shaft and short adit were subsequently driven on the Copper Crown and Lakeview claims respectively. During the period 1915 to 1927 some surface trenching and extensive drifting and raising was completed on 2 levels on the Ruby Zone. A 9 metre adit was driven on the Lakeview zone.

The property was not explored again until 1951 when Copper Ridge Silver Mines Ltd. carried out nearly 5700 metres of diamond drilling and re-opened the underground workings. Further work was suspended in 1952. Intermittent exploration, consisting largely of road construction and bulldozer trenching of the "Rainstorm", "North Lake" and "Cornucopia" showings was carried out by local prospectors between 1964 to 1970. Ramm Venture Corporation acquired the Crown Grants in 1979 and carried out a preliminary VLF survey in 1980 over the Ruby Zone, which was then followed up in 1981 by 1282 metres of diamond drilling in 14 holes. -

### Regional Geology

The Grouse Mountain area is underlain by Early Jurassic variegated, felsic volcanic rocks of the Telkwa Formation which



**PROPERTY CLAIM MAP**  
**93L/10E**

FIGURE 2

form the base of the Hazelton Group (Tipper, 1976). These are overlain by Middle Jurassic volcanoclastic sediments of the Ashman Formation which comprise part of the Bowser Lake Group. The above are intruded by Late Cretaceous granites collectively referred to as the Bulkley Intrusions and by syenomonzonites of Eocene age known as the Goosly Lake Intrusions. The area is dominated by a multitude of steep normal faults (Figure 3).

Regional stratigraphic studies by Tipper and Richards (1976) indicate that the Telkwa Formation on Grouse Mountain belongs to the "Babine Shelf Facies" which is said to consist predominantly of "subaqueous and subareal pyroclastic rocks intercalated with marine sediments and intravolcanic non-marine sediments". The volcanic rocks have calc-alkaline affinities and occur as subaqueous flows, breccias, and aquagene tuffs. The sediments consist of volcanic greywackes, siltstones, shales and minor limestone having an aggregate thickness of about 1,000 metres.

A detailed stratigraphic section of the Telkwa Formation at Dome Mountain, some 21 km due north, was described by Tipper & Richards (1976): "A lower assemblage comprises interbedded, red, maroon, purple, grey and green tuff and breccia with interbeds of shale and greywacke, discontinuous limestone beds and lenses, in places with a pelycepod and ammonite fauna, are common. This unit is overlain by about 100m of black shale, separating it from a second volcanic member, estimated to be

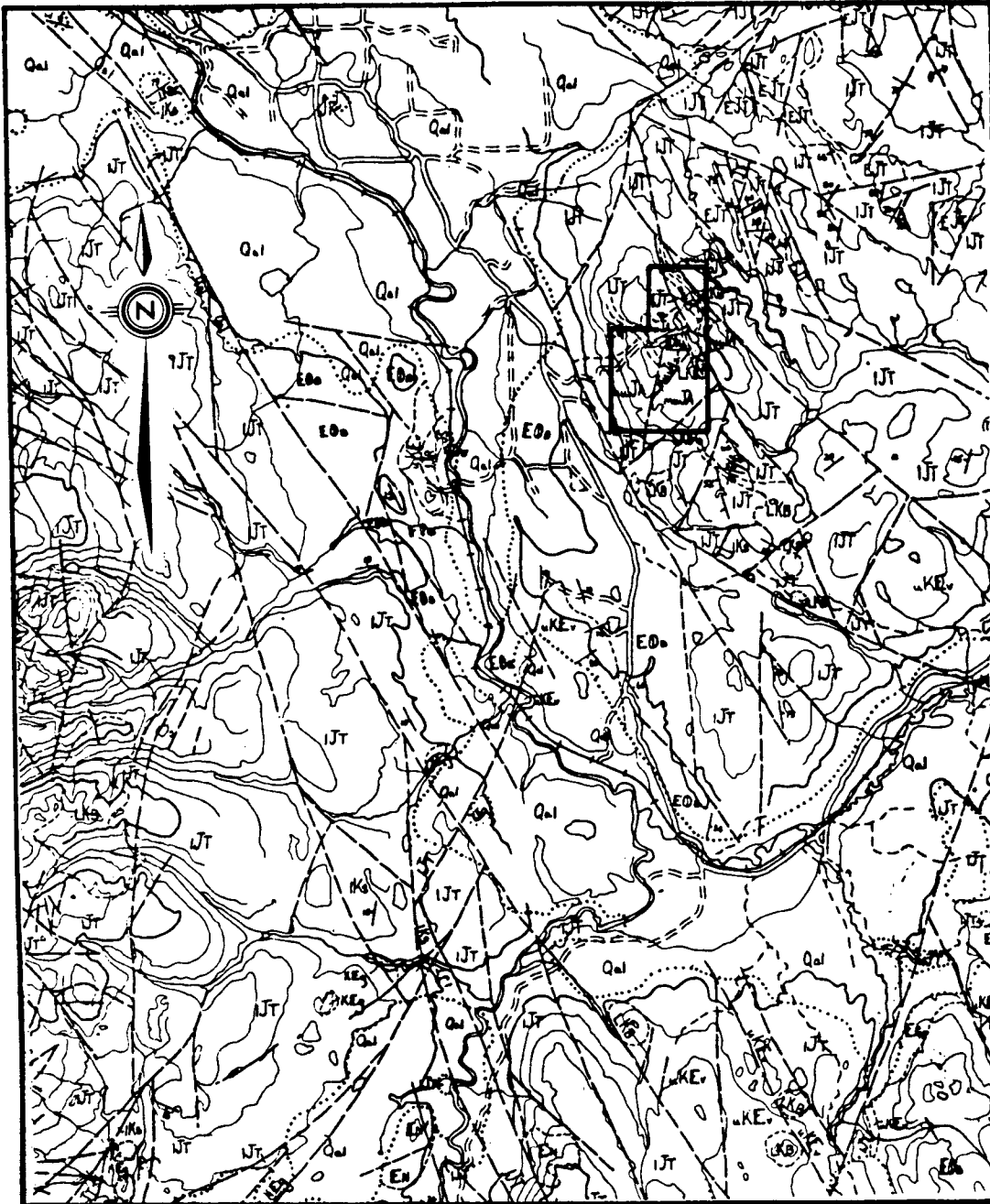


900m thick, of mainly green aquagene tuff, breccia and flows at the base, grading upward into a mainly subareal assemblage of reddish coloured lapilli tuff and fine to medium-grained (basaltic to rhyolitic) breccia and flows". Similar lithologies were observed on Grouse Mountain but the stratigraphy is uncertain.

### Property Geology

The area of the Ruby and Copper Crown workings is uniformly underlain by a monotonous sequence of light-green, fossiliferous, fine grained crystal-lithic tuffaceous greywackes (Unit 1) with intercalated siltstones or grits and volcanoclastic sharpstone breccias (Unit 2). These beds are generally immature, poorly sorted, sometimes show cross-bedding, usually carry pelycepod and belemnite fossils. They are commonly flat lying, strike east-northeast and have gentle dips. In the writer's view these rocks belong to a shallow water, deltaic facies equivalent to the Smithers Formation of Middle Jurassic age.

These units have been intruded by a variety of northerly striking, west dipping intrusions, of narrow, fine grained, granular, (basic doleritic) dykes (Unit 3) and coarse-grained feldspar-porphry dykes. These latter dykes consist of coarse, tabular or bladed, commonly foliated, plagioclase phenocrysts



SCALE 1" = 2 Miles

**LEGEND**

- muJA - Ashman Formation
- IJT - Telkwa Formation
- EG - Goosely Lake Intrusions
- LKB - Bulkley Intrusions

From GSC Open File 351

**REGIONAL GEOLOGY MAP**

set in a fine grained, dioritic matrix (Unit 4). Unit (5) comprises biotite-feldspar porphyry dykes which consist of pink feldspar phenocrysts set in finer grained, biotite rich, granodioritic matrix. Church (1972) believes these intrusions are compositionally equivalent to those in the Goosly area and therefore of probable Eocene age.

Outcrops show a high degree of fracturing with at least six fracture orientations noted. In some cases brittle deformation has been so intense as to render rock fabrics schistose. Numerous topographic lineaments conform to these orientations and probably reflect proximity to zones of normal block faulting. Rare small scale folding was observed, however there is insufficient data to comment on style and orientation.

Base metal mineralization was observed in numerous open cuts, pits, bulldozer trenches and underground workings and these invariably appear to be structurally controlled and discordant to bedding. In general, mineralization consists of pyrite, sphalerite, chalcopyrite, and, less commonly, galena.

Tetrahedrite, is also reported but was not observed. Gangue minerals consists of quartz, carbonate, chlorite and clay.

Mineralization is largely confined to fault zones as discontinuous lenticular pods up to 1.5 metres in width. The sulphides may also occur as fracture fillings along sheeted fracture zones, up to 15m wide, with individual sulphide-bearing

fractures, usually 5mm to 5cm in width. These zones sometimes carry crackle breccias formed by coalescing sulphide veinlets. Alteration envelopes do not appear to accompany mineralized structures.

Three samples from the Ruby Zone dump were submitted to Vancouver Petrographics Ltd. for microscopic examination (see Appendix 2) which determined that "Pyrite and sphalerite were the first to form and are associated with quartz. Chalcopyrite and tetrahedrite formed later and are associated with sideritic carbonate." Sulphides may in part have "replaced" their tuffaceous hosts but occasional bands of chalcopyrite in granular sphalerite was not construed to be bedding. Mineralization is considered to be "typical hydrothermal systems in a volcanic pile".

There are five distinct mineralized zones within, or near to, the surveyed area; these are the "Ruby", "Copper Crown", "Lakeview", "Eureka" and "Rainstorm" Zones which are described below.

#### Ruby Zone

The Ruby Zone is the largest and has been extensively explored by means of two drifts, 8 open cuts and by 44 winkle drill holes. It strikes about N 40° E for 500 metres, dips steeply to

the northwest and has a width of 0.5 to 1.5 metres. It appears to be terminated to the southwest by a bladed feldspar porphyry dyke and dissipates into the Copper Crown Zone to the northeast. According to Black (1951), the Ruby zone consists of many subparallel sulphide veins. Sphalerite predominates over chalcopyrite, resulting in a Zn:Cu ratio of 10:1 to 20:1. He has suggested that possible ore grade mineralization containing 5% Cu-Zn occurs in 3 "shoots" about 1 metre wide that appear to rake southwestward. He also suggest that the Ruby zone should in future be explored to the SW on lower ground where, he believes other ore shoots may occur.

#### Copper Crown

The Copper Crown Zone is found along the north shore of Coppermine Lake. It appears to be a sheeted fracture zone, striking N 70° E and dipping 70° N, with widths of up to 15m. If the showings at the northeast end of Coppermine Lake are taken to be the continuation of the same zone, the zone would have a strike length of 750 metres. Mineralization consists predominantly of chalcopyrite in subparallel lenses and fracture fillings which individually vary in width from 1mm to 1cm. Much of the diamond drilling in 1981 on the "Ruby Extension" (Borovic, 1984) was actually done on the Copper Crown structure. According to Borovic (p.36) some of the better intersections yielded 0.30% Cu, 0.4% Zn and 1.4 oz/T Ag over 5m.

### Lakeview Zone

The Lakeview Zone consists of two parallel lenticular quartz-chalcopyrite-sphalerite zones. These strike N 20°E and dip 80° westerly in gently dipping tuffaceous wackes. They are cut by N 20° W / 80° W trending post mineral faults. Mineralized widths at surface vary from 0.75m to 3 metres, but due to displacement by numerous post-mineral faults, strike lengths are short. Unfortunately the grid control could not be extended over this structure due to impassable bluffs along the south shore of Coppermine Lake. The showing was explored by two adits and 1,545 feet of diamond drilling in 14 holes.

### Schorn Zone

The Schorn Zone occurs at the southwest corner of Coppermine Lake and consists of several narrow, lenticular predominantly sphalerite bearing veins which occupy a zone striking N 25° E. The showing has been explored by 5 open cuts and pits, several bulldozer trenches and 300 feet of diamond drilling in 3 holes.

### Eureka Zone

The Eureka adit showing is a pyrite-chalcopyrite-quartz vein, about 1 to 2 metres wide, trending N70° E / 70° N cutting tuffaceous wackes. It has been explored by a short adit, now

caved, 4 open cuts and 3 diamond drill holes totalling 306 feet. It may represent the easterly continuation of the Copper Crown Zone.

### Rainstorm Zone

The Rainstorm Zone is situated immediately north of the present grid and just south of the North Lake access road where it is exposed in 4 open cuts. A number of bulldozer trenches have been unsuccessful in tracing the mineralized zone. Where exposed, the zone consists of lenticular quartz-pyrite-sphalerite-chalcopyrite veins, similar to the Ruby Zone and having a probable strike length of 200 metres.

This zone may continue to the east, where an open cut exposes a 0.45m wide brecciated shear zone trending N 60° E / 70 NW which carries chalcopyrite veinlets.

### Other

Finally, a newly discovered zone was located by means of geophysical surveys and backhoe trenching. It can be traced for a distance of some 600 metres, with an attitude of N 35° E / 75 NW and widths of 0.3 to 2 metres. The zone appears to consist of lenticular quartz-sulphide pods and sulphide bearing fractures. It is possible that it could represent the northeast

extension of the Ruby Zone, which has been off-set to the east by a N 70° E trending fault zone.

### Reconnaissance Geology

Reconnaissance geological mapping was carried out beyond the area of the survey grid (Figure 5). In general the stratigraphic succession trends north-northwest with variable dips probably due to block faulting accompanied by tilting. Massive flows and flow breccias (Unit 5) appear to be confined to the main summit. A prominent, northwest-trending, pyritic fault zone separates this unit from well bedded, laminated, pyritic, tuffaceous argillites of unit 4 which comprises most of the flatlands southeast of Coppermine Lake. Green tuffaceous wackes, gritstones and sharpstone volcaniclastic breccias (Unit 3) occupy most of the western portion of the claim block. These are considered to belong to the Smithers formation and host all the presently known mineralized zones. Red, fine grained, lapilli tuffs (Unit 2) are believed to be of subareal origin and occupy the uplands to the north and east of Coppermine Lake. Pale green-to grey, siliceous volcanic flows and breccias(?) of marine origin with small limestone lenses occur near the southwest corner of the claim block. Unfortunately the stratigraphic relations of these units are not presently known. These units are cut by numerous fine grained dykes (Unit 6) and by a persistent monzodiorite dyke (Unit 7.). In general, the



favoured direction of dyke intrusion is northwesterly, those of barren, drusy quartz veinlets are northerly, whereas sulphide bearing structures are easterly to northeasterly.

### VLF-EM Survey

Previous VLF-EM surveys by Borovic (1984) and Betmanis (1984) have indicated that mineralized structures could be traced by this method. A fill-in VLF-EM survey was undertaken using a CRONE RADEM No. 113 instrument tuned to the transmitting station at Lualualei, Hawaii, with a frequency of 23.4 kilocycles. The data was reduced to contourable values using the Fraser Filter method. The results are shown on Figure 6.

This data outlines four major and several minor conductors. The NE striking Ruby Zone conductor gradually fades out to the SW merging into an east-trending conductor coincident with the Copper Crown Zone. A sinuous east-northeast-trending conductor reflects a mineralized zone that may be the "Ruby Extension". The most northerly conductor, which trends N 70° E, coincides with a conspicuous drainage up to L6 E. The eastern portion of the conductor coincides, in part, with mineralization observed in nearby trenches. DDH-115 situated near L 0.5 E - 275 N (Borovic, 1984) intersected 12m grading 0.33% Cu, 1.0% Zn and 0.46 oz/T Ag along the conductor axis. These conductors are

open to the east and previous VLF information suggests that they may pass eastward of North Lake.

#### Self-Potential Survey

A preliminary S.P. orientation survey over the Ruby zone was successful in detecting near surface mineralization. The S.P. survey was then extended over the VLF grid in order to test the indicated VLF conductors for the presence of oxidizing sulphides.

The results of the survey are shown in figure 7.

Five S.P. anomalies are shown, namely those corresponding to the Ruby, Copper Crown, Eureka and Ruby Extension Zones and a strong unexplained anomaly, centred around L1 E and 120 N. The cause of this anomaly is not explained by four trenches within the anomaly.

#### Magnetometer Survey

A ground magnetometer survey was carried out over the line grid. Readings were taken at 25m intervals along the grid lines using a Geometrics total field proton magnetometer, Model G816/826. The values were corrected for diurnal variation by closed loop, straight-line time adjustment. The results (Figure

8) are a composite of an earlier magnetometer survey over ice-covered Coppermine Lake completed in April, 1984. The two surveys were normalized by averaging the differences observed along the base line and adding the average correction to the July survey values.

The data indicate that the mineralized zones do not have a magnetic expression. Magnetic relief is relatively flat over areas underlain by volcanoclastic tuffs. Areas underlain by dyke like intrusions, such as those found in the SW and SE portions of the grid are characterized by a higher magnetic relief.

#### Geochemical Soil Surveys

A systematic soil survey of the grid was carried out with the expectation that sulphide bearing VLF conductors could be distinguished from those which lacked sulphides. Soils were collected at 25 metre station intervals from the B horizon by means of a mattock. Most soil profiles showed a rather pronounced, rusty "B" horizon about 6 to 12 inches below the surface. Soils were developed from a rather thin veneer of transported glacial overburden, usually less than 1 metre thick and invariably lying on smooth, glacially polished bedrock. Ice movement was from west to east.

Soil samples were shipped to Acme Analytical Laboratories Ltd. in Vancouver for analysis for Cu, Pb, Zn, Ag and As by I.C.P. spectroscopy. Analytical results for each metal are plotted on Figures 9 through 13 and these are briefly described below.

Copper: Using an arbitrary threshold value of 100ppm Cu, both the Ruby and Copper Crown - Eureka zones are associated with anomalous values. Anomalous soils also occur on L1 W to L3 W just north of the base line. This anomaly may reflect a narrow fissure zone carrying copper immediately above the No. 2. level portal.

Lead: A threshold of 100ppm lead was arbitrarily selected. Anomalous soils occur along the Ruby Zone and along a narrow zone of galena bearing veins from L2 W - 200 S to L2.5 W - 175 S to 250 S. Anomalous lead in soils also occurs to the east of North Lake.

Zinc: An arbitrary threshold of 700ppm zinc outlines a broad dispersion halo around the Ruby, Copper Crown - Eureka zones and to the NE of the No. 2 portal between L1 W to L3 W. This zone appears to coincide with a weak west trending VLF conductor which may reflect an underlying sphalerite bearing structure.

Silver: A threshold of 1ppm silver produces a similar pattern of anomalies to those observed for Cu, Pb and Zn.

Arsenic: With the exception of three isolated anomalous samples, arsenic values do not appear to reflect the mineralized zones and may thus account for rather low concentrations of associated gold.

Systematic reconnaissance soil sampling along lines spaced 200m apart and 100 metre sample intervals, was undertaken over the remainder of the claim block. Sample locations and analytical results for Cu, Pb, Zn and Ag are shown in figure 14.

Several anomalies outlined will require some follow-up prospecting and additional fill-in soil sampling.

#### Trenching & Sampling Program

A program of backhoe trenching was undertaken to explore extensions to known structures and areas of coincident geophysical and geochemical anomalies. A total of 34 individual trenches were completed (figure 15). A sampling program was carried out on newly exposed mineralization as well as the old showings and underground workings. The sample results are shown on figures 15 and 16 and are summarized in the table below.

TABLE #2: GEOLOGICAL CHARACTERISTICS OF MINERALIZED ZONES

NAME	ORIENTATION	STRIKE LENGTH (Metres)	MEAN WIDTH (Metres)	WEIGHTED AVERAGES					Cu
				%Cu	%Pb	%Zn	oz./T Ag	oz./T Au	Zn
Ruby	N40°E-70°NW	>500	1.14	1.59	0.07	9.36	4.07	0.002	0.17
Copper Crown	N70°E-75°N	400 to 750	1.92	1.26	0.02	0.18	1.17	0.001	7.0
Eureka (Ruby Extension?)	N35°E-75NW	>600	1.33	1.17	0.03	0.15	1.32	0.005	7.8
Lakeview	N20°E-80°W	>50?	1.22	2.83	0.09	18.32	7.52	0.001	0.15
Shorn	N40°E-20°NW	>30?	0.25	1.26	0.06	11.93	5.78	0.001	0.1
Rainstorm	N80°E-75°N	>200?	1.0	0.53	0.53	8.72	1.67	0.005	0.84

Conclusions and Recommendations

Based on the foregoing it is concluded that:

- (1) The Grouse Mountain property is underlain by volcanoclastic rocks belonging to the Telkwa and Smithers formations of the Hazelton group.
- (2) Pyrite, chalcopyrite and sphalerite occur in quartz-carbonate filled shear zones or as fillings in sheeted fracture zones which are controlled by pre-existing, steeply dipping fault zones.
- (3) Mineralization is discordant to bedding and lacks associated alteration envelopes.

- (4) There are at least six distinct, cogenetic, mineralized structures in the vicinity of the Copper Lake Crown Grants. Most are relatively unexplored in comparison with the Ruby Zone.
- (5) VLF-EM, self-potential and soil geochemical surveys are effective exploration methods for detecting the above mineralized structures.
- (6) Reconnaissance soil sampling suggests that other mineralized structures may occur on the property.

It is therefore recommended that further exploration be carried out, mainly in the form of drilling, to test the southwest extension of the Ruby Zone, the newly discovered Eureka Zone and to further drill the Copper Crown Zone. In addition, VLF-EM, SP and soil surveys should be carried out to better outline the Rainstorm and Lakeview Zones prior to drilling. Geochemical anomalies identified by reconnaissance soil sampling also require follow up by additional sampling and EM and SP surveys.

Specific drill hole locations are shown on the table below.

TABLE 3: RECOMMENDED DIAMOND DRILL HOLE LOCATIONS

<u>ZONE</u>	<u>LOCATION</u>	<u>BEARING</u>	<u>INCLINATION</u>	<u>DEPTH(M)</u>
Ruby	L6W-200S	160°	-45°	75
Ruby	L6.5W-200S	160°	-45°	75
Ruby	L7W-255S	160°	-45°	80
Copper Crown	L1E-20S	340°	-45°	80
Copper Crown	L1.5E-20S	340°	-45°	80
Copper Crown	L0.5E-25S	340°	-45°	80
Copper Crown	L0.5E-25S	340°	-45°	80
Eureka	L3.1E-140N	160°	-45°	75
Eureka	L5.1E-225N	160°	-45°	75
Rainstorm	L2.53-225N	340°	-45°	75
Rainstorm	L1E-220N	160°	-45°	80
Rainstorm	L2W-275N	160°	-45°	80
Rainstorm	L1W-300N	160°	-45°	100

In summary a minimum of 1425 metres is recommended with allowance for additional 500 metres where required.

---

Peter Peto, Ph.D, F.G.S.C.



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ITEMIZED COST STATEMENT

PETER PETO, PH.D., P.ENG., CONTRACT GEOLOGIST		
June 25-30 incl. 6 days @ \$220.00	\$ 1,320.00	
July 1-31 incl. 31 days @ \$220.00	6,820.00	
August 1,2,3,4,5,7,8,9, 10,11,13,14,15 13 days @ \$220.00	<u>2,860.00</u>	\$11,000.00
JIM HUTTER, GEOLOGICAL ASSISTANT		
June 26-30 incl. 5 days @ \$165.00	825.00	
July 2,3,6,7,10,11,14,15, 19,20,21,24-31 incl. 19 days @ \$165.00	3,135.00	
Aug. 1,2,3,4, 4 days @ \$165.00	<u>660.00</u>	4,260.00
JACK HEMELSPEOK, FIELD ASSISTANT		
June 28,29,30 3 days @ \$137.50	412.50	
July 2,3,6,7,14,15,17,18, 20,21,23-31 incl 19 days @ \$137.50	2,612.50	
Aug. 1,2,3,4, 4 days @ \$137.50	<u>550.00</u>	3,575.00
KENNETH MCKIRDY, GEOPHYSICS		
June 25 to Aug. 5 Backhoe/Trenching	6,077.39	
T. JOHNSTON - July	228.80	
J. HILDBER - Aug.	<u>3,130.10</u>	3,358.90
LABORATORY COST		
1042 Soil Samples, ICP analyses for Cu-Pb-Zn-Ag-As @ \$4.60	4,793.20	
87 Rock-drip (Cu-Zn-Ag-Au) @ \$32.73	<u>2,847.51</u>	7,604.71

ITEMIZED COST STATEMENT

PETER PETO, PH.D., P.ENG., CONTRACT GEOLOGIST		
June 25-30 incl. 6 days @ \$220.00	\$ 1,320.00	
July 1-31 incl. 31 days @ \$220.00	6,820.00	
August 1,2,3,4,5,7,8,9, 10,11,13,14,15 13 days @ \$220.00	<u>2,860.00</u>	\$11,000.00
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LABORATORY COST		
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87 Rock-drip (Cu-Zn-Ag-Au) @ \$32.73	<u>2,847.51</u>	7,604.71

ITEMIZED COST STATEMENT - continued

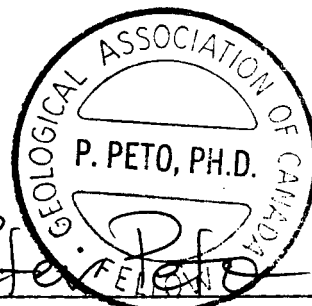
ACCOMODATION/MEALS		
104 man days @ \$26.75		2,782.00
TRAVEL EXPENSES		
June	1,234.72	
Aug.	<u>577.91</u>	1,812.63
COMMUNICATION		
July	9.05	
August	<u>158.38</u>	167.43
PETROGRAPHICS		519.74
FIELD SUPPLIES - June, July, August		985.63
DRAFTING - June, July, August		2,338.21
		<u>\$44,877.64</u>

APPENDIX I

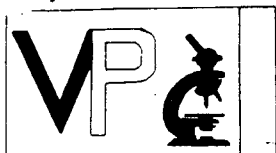
STATEMENT OF QUALIFICATIONS

I, Peter S. Peto, of the city of Penticton, B.C., DO HEREBY CERTIFY THAT:

- (1) I am a consulting exploration geologist, with a home and business address of 125 Bassett Street, Penticton, B.C., V2A 5W1
- (2) I obtained B. Sc and M. Sc. degrees in geology from the University of Alberta in 1968 and 1970 respectively and my Ph. D. in geology from the University of Manchester in 1975.
- (3) I am a member in good standing, of the Geological Association of Canada.
- (4) This report is based on information obtained from field work carried out from 25 June to 5 August, 1984 and from literature references cited in this report.
- (5) I have written this report as a temporary contract employee of TECK CORPORATION and that I do not have any interest in, nor do I expect to receive any, in the securities of RAMM VENTURE CORPORATION.
- (6) I grant permission to Ramm Venture Corporation to use this report to satisfy the requirements of the B.C. Securities Commission and/or Vancouver Stock Exchange.



PETER PETO, PH.D., F.G.S.C.



# Vancouver Petrographics Ltd.

JAMES VINNELL, Manager  
JOHN G. PAYNE, Ph. D. Geologist

P.O. BOX 39  
8887 NASH STREET  
FORT LANGLEY, B.C.  
VOX 1J0

PHONE (604) 888-1323

Invoice 4606

Report for: W. Meyer,  
Teck Explorations Ltd.,  
1199 West Hastings Street,  
Vancouver, B.C.,  
V6E 2K5

July 5, 1984

Samples: #1, #2, #3.

## SUMMARY:

Sample #1 is a volcanoclastic tuff consisting of fine andesitic and tuffaceous fragments in a chloritic matrix. Quartz-pyrite-carbonate veins cut the rock. There is also a large patch of sulphide-rich material which could be a vein. This contains tuffaceous and volcanic fragments dissimilar to those in the tuff.

Sample #2 is a brecciated and mineralized (mainly sphalerite) andesite. The sphalerite is associated with quartz. Chalcopyrite formed after the sphalerite and is associated with carbonate.

Sample #3 is a massive sulphide rock consisting mainly of sphalerite with streaks of chalcopyrite. The only significant silicate is chlorite. I suspect that this is a finely bedded tuff which has been replaced by sulphides.

Mineralization in all the samples is similar. Pyrite and sphalerite were the first to form and are associated with quartz. Chalcopyrite and tetrahedrite formed after and are associated with sideritic carbonate. This sequence of mineralization is typical of hydrothermal systems in a volcanic pile. In the breccia (#2) and in the vein-patch in the tuff (#1) the remnant volcanic fragments have been partly assimilated by the mineralization. The occurrence of volcanic and tuffaceous fragments in the mineralized vein-patch of sample #1 suggests that the mineralization was associated with the volcanism.

A. L. Littlejohn, M.Sc.

#1: MINERALIZED TUFF.

This is a fine grained pyroclastic rock consisting of small volcanic fragments packed together in a chloritic matrix. The fragments are andesites, dacites and very fine grained tuffs(?). Pyrite is scattered within the rock. Thin quartz-pyrite veinlets cut across the bedding. At one end of the hand specimen there is a large quartzitic patch which appears to be a coarser quartz vein containing pyrite, chalcopyrite, sphalerite and tetrahedrite and also fine grained tuffaceous fragments foreign to the sample itself. Carbonate occurs in the veins. Composition of the tuff is:

amorphous fragments	30%
andesite fragments	20
dacite fragments	5
altered fragments	20 (mainly sericite)
basalt fragments	minor
quartz fragments	minor
chlorite	15
sericite	4
amorphous	4
pyrite	1
Fe-Ti oxide	1
quartz	minor

Fragments are rounded to ovoid and vary in size from 0.2 to 1.0mm. The more elongated ones are aligned parallel to a poorly developed bedding plane. They are packed closely together in a chloritic matrix. The commonest consists of extremely fine cryptocrystalline material of uncertain origin. They may be extremely fine grained tuffs or perhaps altered volcanic material. The andesites consist of shapeless interlocking plagioclase grains 0.01 to 0.08mm in size. Each fragment is more or less equigranular. Dacites are similar to the andesites but contain quartz intergrown with the plagioclase. They tend to be coarser than the andesites. Many of the recognisable volcanic fragments have been highly altered by sericite and there are many fragments which have been completely replaced by sericite. Some chlorite and amorphous material may be intergrown with the sericite. There are also a few basaltic fragments consisting of a mass of very fine plagioclase laths along with dark mafic material of uncertain identity. Scattered amongst the volcanic fragments are angular quartz fragments.

The matrix of the rock consists of a mass of extremely fine grained greyish-green chlorite mixed with small patches of amorphous material and with sericite disseminated throughout. The edges of some of the fragments grade into the matrix. Fine grained Fe-Ti oxides are disseminated throughout the matrix and also occur within many of the fragments. Scattered about the rock are subcubic pyrite grains 0.1 to 0.5mm in size. Small amounts of quartz may occur adjacent to the pyrite grains.

(continued)



#1 (continued)

Quartz veins are 1 - 2mm thick and consist of subhedral to rounded quartz grains 0.1 to 0.5mm in size intergrown with subcubic pyrite grains. Quartz is by far the dominant mineral in the veins. The veins are spaced several centimeters apart. Fine carbonate occurs between the quartz grains and there are a few patches up to 1mm in size. It is intimately mixed with hematite and is probably siderite. At the edge of the vein there is a narrow zone of chlorite. Rutile forms subprismatic grains less than 0.05mm in size which occur adjacent to the vein within the rock.

The quartz-sulphide patch-vein consists of:

fragments	15%	
plagioclase	20	
quartz	30	
pyrite	15	
chalcopyrite	5	
sphalerite	2	
tetrahedrite	2	
Fe-Ti oxide	1	
chlorite	5	
carbonate	5	(siderite?)
sericite	minor	

Sulphides are associated mainly with quartz which occurs in a patchy network grading into silicified andesitic material. This consists of irregularly shaped plagioclase grains 0.02 to 0.1mm in size occurring in patches of variable size. Fine quartz is intergrown with the plagioclase in many places. Very fine sericite is sometimes present within the plagioclase and fine chlorite may occur between the grains. Small patches of very fine carbonate occur within the plagioclase patches. The quartz forms a patchy network of irregularly shaped to subhedral grains of highly variable size up to 1.0mm. Fine carbonate and chlorite occur between the quartz grains. Fine Fe-Ti oxide is disseminated throughout the plagioclase. This material is similar to that in sample #2 (breccia).

Tuffaceous fragments are angular and 4 - 10mm in size. They consist of very fine andesitic and related fragments, some quartz, set in a fine chloritic matrix. They appear similar to the host tuff in gross composition but fragments are much smaller (less than 0.2mm).

The dominant sulphide is pyrite which forms rounded to subcubic grains 0.5 to 2.5mm in size. Clusters and aggregates are common. It occurs within relatively coarse quartz patches. Chalcopyrite forms highly irregularly shaped grains up to 0.5mm in size occurring between quartz grains and larger vein-like patches. Carbonate is sometimes intergrown with the chalcopyrite. The chalcopyrite tends to occur around the pyrite. The chalcopyrite is sometimes associated with tetrahedrite which also occurs adjacent to the pyrite. It also occurs in thin fractures in the pyrite and small inclusions at the edge of the pyrite grains are present. Sphalerite also occurs in vein-like patches intergrown with quartz and tends to enclose the pyrite. It may contain small inclusions of chalcopyrite.

#2: BRECCIATED, MINERALIZED ANDESITE.

This sample consists of dark angular rock fragments up to 2cm in size which are contained within a mass of sphalerite and quartz. Patches of chalcopyrite are also present. The dark rock fragments are fine grained volcanic rocks originally consisting mainly of plagioclase. They have been silicified in part and also altered by carbonate associated with chalcopyrite. Fragments make up about 40% of the rock. Minerals are:

sphalerite	52	
chalcopyrite	6	
pyrite	1	
quartz	18	
plagioclase	11	
carbonate	7	(siderite?)
chlorite	2	
sericite	2	
hematite	1	

Volcanic fragments are subangular and vary in size from a few millimeters to a few centimeters. Some are very small and are included within the sphalerite masses. They consist of a mass of irregularly shaped interlocking plagioclase grains 0.02 to 0.1mm in size. Grain size distribution is patchy within the fragments. Some recrystallisation may have occurred during mineralization and alteration. Grains and patches of fine quartz are intergrown with the plagioclase. A few thin veinlets of quartz cut some fragments. Some fragments are highly siliceous. Extremely fine sericite occurs disseminated within the plagioclase in places and there are also a few small vein-like patches of sericite cutting through the fragments. Chlorite forms flakes about 0.2mm in size which occur in aggregates intergrown with the edges of the sphalerite adjacent to the fragments.

Sphalerite and quartz make up the matrix of the breccia. Large massive interconnected patches of sphalerite enclose the fragments. Rounded quartz inclusions are quite common but most of the quartz forms irregularly shaped grains of variable size up to 1mm which are intergrown with the edges of the sphalerite masses. These sometimes grade into the silicified fragments. The sphalerite is quite crowded with subrounded to irregularly shaped chalcopyrite inclusions 0.05 to 0.2mm in size. These tend to occur towards the centre of the sphalerite masses. Most of the chalcopyrite occurs in patches around the edges of the sphalerite masses. Subcubic pyrite grains about 0.3mm in size occur in clusters within the larger patches of chalcopyrite.

The chalcopyrite is associated with carbonate mineralization. At the edges of the sphalerite masses some of the chalcopyrite is intergrown with carbonate. Most of the carbonate forms fine grains occurring in small patches within the fragments. It is associated with very fine hematite with which it is intimately intergrown. It is probably sideritic since it does not react with dilute acid. In some of the fragments there are patches of relatively coarse grained carbonate (up to 0.4mm) and in these there is a narrow rim of hematite around the grains. The carbonate also occurs between quartz grains and in places the quartz has been replaced.

#3: MASSIVE SULPHIDE (SPHALERITE - CHALCOPYRITE).

This sample consists mainly of massive sphalerite with streaks of chalcopyrite occurring in widely spaced layer-like patches. Small streaky patches of chlorite and carbonate occur within the mass of sphalerite. Minerals are:

sphalerite	70%
chalcopyrite	15
chlorite	11
carbonate	3 (siderite?)
hematite	1
pyrite	minor
sericite	minor
quartz	trace
plagioclase	trace

The bulk of the rock consists of a mass of sphalerite. Subrounded to irregularly shaped chalcopyrite inclusions, 0.05 to 0.2mm in size, occur within the sphalerite and are often concentrated in streaky clusters. Most of the chalcopyrite occurs in ragged streaky patches up to 1mm thick and several millimeters in length occurring within the sphalerite. Smaller patches are associated with chlorite and carbonate. Subcubic pyrite grains about 0.2mm in size occur in clusters intergrown with the edges of the chalcopyrite patches. Smaller rounded inclusions occur scattered within the chalcopyrite. They rarely occur within the sphalerite.

The chlorite forms flakes about 0.2mm in size which occur scattered within the masses of sphalerite or occurring in ragged streaky patches. In places there are aggregates of extremely fine grains within the flakey aggregates. The chlorite flakes tend to be aligned parallel to the banding. In some of the chlorite patches there are small patches of fine sericite and rarely these are intergrown with a few small grains of plagioclase. The plagioclase may be remnants of an original volcanic (?) rock, the chlorite having formed from mafic silicates during the addition of the sphalerite. Quartz forms subrounded inclusions about 0.3mm in size within the sphalerite and also aggregates of a few grains. These probably formed during the sulphide mineralization.

Chalcopyrite mineralization occurred after the sphalerite mineralization and is associated with carbonate alteration. In the chlorite patches there is a narrow zone of chalcopyrite between the chlorite and sphalerite, usually where carbonate has replaced the chlorite. Small subangular grains are intergrown with the chlorite. The carbonate forms subrhomboidal grains about 0.2mm in size and smaller shapeless grains which replace the chlorite in small patches. It is sometimes intimately intergrown with fine chalcopyrite and hematite. Hematite often forms fine grains occurring in a narrow rim around the carbonate grains or intimately intergrown with it. The association of hematite and carbonate suggests that it is a sideritic carbonate (it does not react with dilute acid).

A P P E N D I X 3

ASSAYS AND ANALYSES

## APPENDIX 3

ACME ANALYTICAL LABORATORIES LTD.  
 852 E. HASTINGS, VANCOUVER B.C.  
 PH: (604)253-3158 COMPUTER LINE:251-1011

DATE RECEIVED JULY 22 1984

DATE REPORTS MAILED

*July 25/84*

## ASSAY CERTIFICATE

SAMPLE TYPE : ROCK - CRUSHED AND PULVERIZED TO -100 MESH.

ASSAYER: *D. C. Toye* DEAN TOYE, CERTIFIED B.C. ASSAYER

TECK FILE# 84-1699B

PAGE# 1

SAMPLE	CU %	PB %	ZN %	AG OZ/T	AU OZ/T	WIDTH (METRES)
21009	2.10	.01	4.46	5.41	.001	1.0
21010	3.84	.03	7.72	14.75	.001	2.3
21011	2.35	.13	5.52	6.21	.001	0.85
21012	1.72	.68	15.42	8.58	.002	1.2
21013	2.02	.08	21.06	3.98	.003	1.15
21014	.17	.04	13.75	.84	.005	0.5
21015	6.38	.03	7.04	17.92	.012	grabs
21016	.03	.02	1.44	.33	.002	0.3
21017	2.52	.01	.23	1.98	.001	1.5
21018	5.68	.01	.20	5.02	.001	grabs
21019	1.90	.12	16.72	10.01	.001	0.25
21020	.89	.03	9.96	3.92	.001	0.25
21021	1.07	.04	21.98	3.09	.025	0.3
21022	3.75	.04	16.12	10.04	.005	~ 1.0
21023	4.97	.45	12.84	13.83	.005	1.3
21024	2.31	.02	9.16	5.09	.001	1.0
21025	.22	.02	.17	.54	.001	1.7
21026	.62	.01	.06	.91	.001	1.2
21027	.77	.01	.06	1.21	.001	1.5
21028	5.62	.01	.05	3.66	.004	2.0
21029	.65	.01	.03	.88	.002	2.0
21030	2.10	.01	.92	2.16	.002	0.35

ACME ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: JULY 25 1984

DATE REPORT MAILED: *July 31/84*

### ASSAY CERTIFICATE

1.00 GRAM SAMPLE IS DIGESTED WITH 50ML OF 3-1-3 OF HCL-HNO3-H2O AT 95 DEG.C FOR ONE HOUR.  
AND IS DILUTED TO 100ML WITH WATER. DETECTION FOR BASE METAL IS .01%.  
- SAMPLE TYPE: ROCK CHIPS AU# 10 GRAM REGULAR ASSAY

ASSAYER: *D. Toy* DEAN TOYE. CERTIFIED B.C. ASSAYER

TECK EXPLORATION FILE # 84-1776B  
Project # 11326

PAGE 1

SAMPLE#	CU %	FB %	ZN %	AG OZ/T	AU OZ/T	WIDTH (METRES)
R21031	.39	2.93	23.20	4.19	.001	0.3
R21032	4.30	.10	2.70	3.58	.001	0.45
R21033	.89	.02	.18	2.82	.001	0.30
R21034	1.59	.01	.32	1.17	.050	1.0
STD C-8	1.07	1.08	1.96	5.50	-	

ACME ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE 253-3158      TELEX 04-53124

DATE RECEIVED: AUG 4 1984

DATE REPORT MAILED: *Aug 10/84*

### ASSAY CERTIFICATE

1.00 GRAM SAMPLE IS DIGESTED WITH 50ML OF 3-1-3 OF HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR.  
AND IS DILUTED TO 100ML WITH WATER. DETECTION FOR BASE METAL IS .01%.  
- SAMPLE TYPE: SOCK CHIPS    AU# 10 GRAM REGULAR ASSAY

ASSAYER: *D. Toy* DEAN TOYE. CERTIFIED B.C. ASSAYER

TECK      PROJECT # 1326      FILE # 94-1949

PAGE 1

SAMPLE#	CU %	PB %	ZN %	AG OZ/T	AU OZ/T	WIDTH (METRES)
21370	3.64	.05	.09	11.00	.001	1.0
21371	.80	.02	16.22	.98	.008	0.5
21372	.39	.01	8.85	.76	.001	0.5
21373	.18	.03	10.14	.56	.002	1.2
21374	.04	.04	1.88	.22	.007	1.0
21375	.65	.03	5.12	1.26	.003	1.6
21376	2.50	.04	20.07	4.94	.004	0.5
21377	.94	.05	6.02	2.56	.002	2.0
21378	.36	.21	4.15	1.08	.001	1.7
21379	2.14	.01	.09	1.89	.001	2.3
21380	.44	.02	.18	.30	.001	3.0
21381	.28	.01	.10	.20	.001	1.3
STD C-8	1.07	1.08	1.98	5.50	-	

ACME ANALYTICAL LABORATORIES LTD.  
 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
 PHONE 253-3158 TELEX 04-53124

DATE RECEIVED: AUG 9 1984

DATE REPORT MAILED: *Aug. 15/84*

**ASSAY CERTIFICATE**

1.00 GRAM SAMPLE IS DIGESTED WITH 50ML OF 3-1-3 OF HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR.  
 AND IS DILUTED TO 100ML WITH WATER. DETECTION FOR BASE METAL IS .01%.  
 - SAMPLE TYPE: ROCK CHIPS AU: 10 GRAM REGULAR ASSAY

ASSAYER: *Dean Toye* DEAN TOYE. CERTIFIED B.C. ASSAYER

TECK PROJECT # GROUSE MTN #1326 FILE # 84-2042B PAGE 1

SAMPLE#	CU %	PB %	ZN %	AG OZ/T	AU OZ/T	WIDTH (METRES)
21035	2.20	.01	6.43	3.59	.002	0.80
21036	3.86	.03	10.57	7.17	.003	0.45
21037	3.77	.03	22.42	7.80	.003	0.80
21038	2.59	.01	24.49	7.61	.001	1.0
21039	2.22	.04	14.36	7.27	.002	0.45
21040	1.44	.03	12.00	3.96	.003	0.75
21041	.75	.01	6.18	1.12	.001	0.70
21042	12.60	.11	3.57	10.72	.002	0.4
21043	2.40	.22	1.86	12.32	.001	0.50
21044	3.71	.16	.51	6.42	.004	1.0
21045	1.93	.01	.06	1.95	.003	1.7
21046	2.04	.01	.05	1.02	.001	2.2
21047	.50	.02	.08	.47	.001	1.5
21048	2.21	.01	.06	1.04	.001	1.2
21049	.09	.01	.06	.28	.001	0.3
21050	.30	.13	.23	.77	.002	0.5
21351	.03	.01	.07	.50	.005	0.73
21352	.18	.01	.17	.62	.013	2.0
21353	.13	.01	.08	.36	.002	2.5
21354	.90	.01	.06	1.14	.001	3.4
21355	.16	.02	.04	.50	.001	2.5
21356	.07	.08	.33	.20	.001	1.45
21357	.02	.01	.03	.35	.005	0.7
21358	.03	.01	.11	.17	.002	0.7
21359	2.11	.01	.04	1.89	.017	1.35
21360	4.99	.01	.02	1.46	.001	1.2
21361	.22	16.35	2.57	4.44	.001	0.15
21362	1.77	.60	20.57	5.97	.001	0.1
21363	.67	.01	.08	.55	.001	2.8
21364	.84	.06	.05	.82	.001	2.4
21365	.85	.01	.14	1.01	.001	2.3
21366	.32	.01	.05	.59	.002	2.5
21367	.34	.26	11.76	1.89	.005	0.8
21368	.09	.10	4.28	.54	.002	0.5
21369	.19	.67	9.64	1.68	.008	4.0
STD C-8	1.07	1.08	1.97	5.51	-	



APPENDIX 4

ACME ANALYTICAL LABORATORIES LTD.  
 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
 PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: JULY 7 1984

DATE REPORT MAILED: *July 10/84...*

**GEOCHEMICAL ICP ANALYSIS**

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: SOIL

ASSAYER: *D. Toye* DEAN TOYE. CERTIFIED B.C. ASSAYER

TECK EXPLORATIONS PROJECT # 1326 FILE # 84-1468 PAGE 1

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
L6W 0+00	39	82	678	.4	15
L6W 0+25S	32	72	692	.1	18
L6W 0+50S	23	47	442	.1	8
L6W 0+75S	36	172	836	.1	30
L6W 1+00S	32	57	536	.3	28
L6W 1+25S	231	90	1598	2.8	45
L6W 1+50S	270	100	2625	.6	49
L6W 1+75S	119	183	950	.9	25
L6W 2+00S	35	295	685	.1	30
L6W 2+25S	29	29	273	.1	18
L6W 2+50S	48	33	340	.1	18
L6W 2+75S	22	41	295	.4	58
L6W 3+00S	24	25	206	.3	28
L6W 3+25S	19	27	251	.1	15
L6W 3+50S	16	21	210	.1	20
L6W 3+75S	31	15	285	.1	14
L6W 4+00S	22	22	190	.1	20
L5+50W 0+00	55	50	672	.1	18
L5+50W 0+25S	27	48	487	1.0	25
L5+50W 0+50S	17	54	382	.5	39
L5+50W 0+75S	61	109	1169	.3	26
L5+50W 1+00S	37	30	923	.2	18
L5+50W 1+25S	32	50	744	.1	27
L5+50W 1+50S	96	82	2785	.5	40
L5+50W 1+75S	74	122	1328	.7	52
L5+50W 2+00S	25	270	643	.7	25
L5+50W 2+25S	95	19	145	.1	2
L5+50W 2+50S	58	64	424	.3	28
L5+50W 2+75S	25	36	291	.1	23
L5+50W 3+00S	25	30	187	.1	21
L5+50W 3+25S	14	15	173	.1	10
L5+50W 3+50S	27	32	241	.6	23
L5W 0+00	44	34	576	.4	26
L5W 0+25S	37	50	520	.3	15
L5W 0+50S	44	169	949	.6	28
L5W 0+75S	77	83	1781	.1	26
L5W 1+00S	28	37	608	.5	21
STD A-1	29	39	184	.3	10

SAMPLE#	CU PPM	FB PPM	ZN PPM	AG PPM	AS PPM
L5W 1+25S	28	34	285	.1	15
L5W 1+50S	23	38	268	.1	24
L5W 1+75S	32	60	1392	.2	30
L5W 2+00S	48	64	789	.4	30
L5W 2+25S	149	192	2967	.2	121
L5W 2+50S	58	563	1419	2.4	63
L5W 2+75S	56	44	256	.1	13
L5W 3+00S	77	49	306	.1	25
L4+50W 0+00	30	69	683	.2	27
L4+50W 0+25S	37	58	571	.1	25
L4+50W 0+50S	106	144	2910	.5	36
L4+50W 0+75S	339	191	3466	.4	34
L4+50W 1+00S	37	88	441	.4	20
L4+50W 1+25S	1528	105	9640	2.6	254
L4+50W 1+50S	48	29	603	.3	15
L4+50W 1+75S	23	24	244	.1	12
L4+50W 2+00S	22	25	196	.1	12
L4+50W 2+25S	27	21	504	.1	12
L4+50W 2+50S	28	44	336	.1	21
L4+50W 2+75S	26	23	197	.1	24
L4+50W 3+00S	42	46	304	.1	24
L4W 0+00	38	53	717	.4	19
L4W 0+25S	36	49	667	.1	34
L4W 0+50S	34	50	980	.2	19
L4W 0+75S	103	106	1192	.3	24
L4W 1+00S	22	51	317	.9	23
L4W 1+25S	33	60	430	2.2	18
L4W 1+50S	46	286	362	.5	41
L4W 1+75S	42	494	325	1.4	4
L4W 2+00S	107	77	276	.1	36
L4W 2+25S	27	63	265	.4	20
L4W 2+50S	21	48	236	.1	21
L3+50W 0+00	49	66	921	.1	33
L3+50W 0+25S	60	37	876	.1	36
L3+50W 0+50S	110	32	1749	.4	23
L3+50W 0+75S	93	132	2729	1.0	37
L3+50W 1+00S	75	68	1922	.2	16
STD A-1	30	40	188	.3	9

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
L3+50W 1+25S	142	97	1011	.2	21
L3+50W 1+50S	59	135	737	1.6	26
L3+50W 1+75S	40	110	700	1.0	14
L3+50W 2+00S	58	993	879	1.3	39
L3W 3+00N	38	49	942	1.2	12
L3W 2+75N	68	47	503	.5	43
L3W 2+50N	39	44	540	.2	42
L3W 2+25N	57	57	431	.2	16
L3W 2+00N	42	25	545	.1	32
L3W 1+75N	45	41	512	.1	28
L3W 1+50N	86	47	1746	.2	30
L3W 1+25N	190	121	3449	.6	36
L3W 1+00N	163	61	1255	.1	45
L3W 0+75N	78	86	701	1.1	54
L3W 0+50N	25	39	305	.1	40
L3W 0+25N	45	53	697	.4	17
L3W 0+00	47	51	1489	.3	29
L3W 0+25S	26	27	303	.1	20
L3W 0+50S	93	27	2382	1.0	30
L3W 0+75S	20	20	200	.1	22
L3W 1+25S	43	60	1672	.3	24
L3W 1+50S	46	65	525	.1	24
L2.5W 0+00	47	34	863	.1	19
L2.5W 0+25S	19	33	250	.1	21
L2.5W 0+50S	57	36	1281	.1	14
L2.5W 0+75S	24	43	483	.1	24
L2.5W 1+00S	26	87	932	.6	16
L2.5W 1+25S	23	242	650	4.2	233
L2.5W 1+50S	29	73	848	.5	40
L2W 3+00N	41	41	730	.4	29
L2W 2+75N	23	22	1384	.1	23
L2W 2+50N	1421	37	7326	1.6	15
L2W 2+25N	91	43	2050	.2	27
L2W 2+00N	58	52	875	.3	44
L2W 1+75N	57	82	962	.9	32
L2W 1+50N	104	38	1412	1.1	21
STD A-1	31	39	186	.3	9

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
L2W 1+25N	38	23	928	.3	22
L2W 1+00N	277	51	2685	2.2	42
L2W 0+75N	397	33	1053	.7	29
L2W 0+50N	25	19	127	.3	19
L2W 0+25N	92	57	1216	1.2	35
L2W 0+00	104	64	1163	.7	23
L2W 0+25S	23	38	486	.1	28
L2W 0+50S	214	49	1252	1.2	31
L2W 0+75S	34	62	383	.2	31
L2W 1+00S	9	19	100	.1	17
L2W 1+25S	28	21	285	.1	22
L1.5W 0+00	61	44	932	.6	22
L1.5W 0+25S	39	41	555	.5	22
L1.5W 0+50S	37	33	1117	.4	19
L1.5W 0+75S	21	46	398	.1	28
L1.5W 1+00S	14	25	145	.4	23
L1.5W 1+25S	49	41	410	.3	31
L1W 3+00N	53	56	1013	.5	37
L1W 2+75N	25	28	845	.5	27
L1W 2+50N	144	74	3487	2.1	33
L1W 2+25N	46	52	621	.3	26
L1W 2+00N	63	29	276	.6	31
L1W 1+75N	26	25	575	.5	27
L1W 1+50N	32	26	377	.8	39
L1W 1+25N	34	25	291	.6	24
L1W 1+00N	52	30	420	.6	46
L1W 0+75N	24	30	551	.4	24
L1W 0+50N	209	25	418	.6	17
L1W 0+25N	95	23	865	.6	17
L0+00 3+00N	23	59	480	.6	25
L0+00 2+75N	44	42	1378	.7	39
L0+00 2+50N	45	62	625	.8	35
L0+00 2+25N	27	34	163	.5	34
L0+00 2+00N	35	15	291	.3	35
L0+00 1+75N	26	26	384	.6	38
L0+00 1+50N	16	21	165	.2	14
L0+00 1+25N	31	22	373	.4	32
L0+00 1+00N	49	29	397	.2	27
STD A-1	30	39	186	.3	10

## TECK EXPLORATION

PROJECT # 1326

FILE # 84-1468

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SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
L0+50E 3+00N	18	25	420	.2	18
L0+50E 2+75N	36	65	769	.2	30
L0+50E 2+50N	11	56	517	.1	14
L0+50E 2+25N	34	28	745	.2	28
L0+50E 2+00N	95	70	1091	.6	48
L0+50E 1+75N	28	32	313	.1	35
L0+50E 1+50N	27	42	231	.1	38
L0+50E 1+30N	32	31	317	.2	274
L0+50E 1+00N	42	33	451	.1	44
L0+50E 0+75N	21	30	221	.1	21
L0+50E 0+50N	41	33	416	.1	28
L0+50E 0+25N	23	16	281	.2	17
L0+50E 0+00N	21	22	193	.2	20
L1+50E 3+00N	36	44	570	1.2	36
L1+50E 2+75N	25	45	477	.2	25
L1+50E 2+50N	36	28	627	.1	36
L1+50E 2+25N	103	56	489	.1	58
L1+50E 2+00N	17	24	199	.2	21
L1+50E 1+75N	21	43	476	.1	66
L1+50E 1+50N	34	18	412	.1	51
L1+50E 1+25N	48	17	157	.1	16
L1+50E 1+00N	58	28	406	.1	26
L1+50E 0+75N	39	27	309	.1	38
L1+50E 0+50N	52	30	549	.2	41
L1+50E 0+25N	39	30	449	.2	24
L1+50E 0+00	63	61	394	1.0	53
L2+50E 3+00N	21	29	406	.4	20
L2+50E 2+75N	53	37	628	.5	16
L2+50E 2+50N	15	18	192	.1	12
L2+50E 2+25N	25	20	158	.2	19
L2+50E 2+00N	23	24	270	.3	38
L2+50E 1+75N	20	27	173	.1	33
L2+50E 1+50N	45	35	496	.6	28
L2+50E 1+25N	39	26	621	.4	13
L2+50E 1+00N	57	34	232	.3	45
L2+50E 0+75N	38	66	220	.2	36
L2+50E 0+50N	100	26	537	.7	30
STD A-1	29	39	188	.3	8

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
L2+50E 0+25N	435	43	639	1.6	49
L2+50E 0+00	35	12	288	.3	26
L3+75E 3+00N	42	29	994	.1	20
L3+50E 2+75N	374	19	463	.1	21
L3+50E 2+50N	41	40	386	.5	22
L3+50E 2+25N	29	21	168	.1	16
L3+50E 2+00N	61	22	607	.6	33
L3+50E 1+75N	159	24	1683	.2	30
L3+50E 1+50N	34	16	408	.1	20
L3+50E 1+25N	31	34	244	.1	19
L3+50E 1+00N	12	17	84	.3	9
L3+50E 0+75N	145	28	205	.1	27
L3+50E 0+50N	32	25	178	.3	39
L3+50E 0+25N	58	31	387	.2	63
L3+50E 0+00	29	19	539	.2	37
L4+50E 3+00N	25	19	336	.1	15
L4+50E 2+75N	44	30	499	.4	27
L4+50E 2+50N	31	20	824	.3	19
L4+50E 2+25N	16	15	180	.1	25
L4+50E 2+00N	25	12	443	.1	10
L4+50E 1+75N	47	21	814	.6	28
L4+50E 1+50N	59	13	698	.1	17
L4+50E 1+25N	45	25	295	.2	43
L4+50E 1+00N	93	22	425	.5	29
L4+50E 0+75N	50	24	1573	.1	35
L4+50E 0+50N	92	20	1267	.7	30
L4+50E 0+25N	101	27	1797	.3	33
L4+50E 0+00	183	30	1290	1.0	42
L5+50E 3+00N	36	16	237	.3	66
L5+50E 2+75N	68	16	368	.3	17
L5+50E 2+50N	184	30	1280	.2	57
L5+50E 2+25N	161	23	1104	.2	23
L5+50E 2+00N	20	9	225	.1	6
L5+50E 1+75N	55	25	676	.4	49
L5+50E 1+50N	44	25	700	.9	45
L5+50E 1+25N	53	10	714	.4	39
L5+50E 1+00N	75	16	1191	.3	18
STD A-1	29	38	182	.3	10

TECK EXPLORATION

PROJECT # 1326

FILE # 84-1468

PAGE 7

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
L5+50E 0+75N	107	29	375	.1	39
L5+50E 0+50N	23	20	262	.1	18
L5+50E 0+25N	297	51	907	3.2	36
L5+50E 0+00	41	25	511	1.4	70

ADCFE ANALYTICAL LABORATORIES LTD.  
 352 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
 PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: JULY 16 1984

DATE REPORT MAILED: *July 20/84*

**GEOCHEMICAL ICP ANALYSIS**

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: SOIL

ASSAYER: *D. Toye* DEAN TOYE. CERTIFIED B.C. ASSAYER

TECK EXPL. PROJECT # 1326 FILE # 84-1592 PAGE 1

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
1.5W 450S	16	21	237	.4	12
1.5W 525S	19	33	183	.3	17
1.5W 550S	15	19	182	.5	7
1W 450S	32	24	537	.9	9
1W 475S	13	17	133	.1	8
1W 500S	26	50	302	.2	28
1W 525S	21	22	315	.4	11
0.5W 450S	27	23	204	.1	9
0.5W 475S	15	27	174	.2	10
0.5W 500S	20	35	361	.8	7
0.5W 525S	33	38	633	.4	15
0.5W 550S	13	21	92	.1	7
0W 450S	17	19	168	.1	6
0W 475S	18	19	235	.1	9
0W 500S	22	15	169	.1	7
0W 525S	20	22	182	.1	5
0W 550S	17	23	185	.1	13
2E 300N	42	15	513	.3	3
2E 250N	21	21	366	.1	23
2E 225N	61	37	789	.1	47
2E 200N	42	21	176	.2	5
2E 125N	28	26	287	.2	23
2E 75N	38	24	233	.2	23
2E 50N	26	14	179	.2	25
3E 325N	21	197	518	.3	13
3E 300N	36	34	734	.4	17
3E 275N	25	31	521	.1	24
3E 225BN	22	24	186	.2	23
3E 225AN	30	47	295	.3	498
3E 200N	17	17	134	.2	30
3E 175N	55	24	650	.1	19
3E 125N	51	22	643	.1	29
3E 100N	22	22	148	.4	39
3E 75N	25	18	240	.3	31
3E 50N	29	24	439	.4	31
3E 25N	82	22	1629	.3	24
3.5E 200S	26	40	475	.2	19
STD S-1	126	119	190	33.1	127



SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
3.5E 225S	20	32	301	.3	17
3.5E 250S	29	39	226	.4	13
3.5E 275S	28	36	360	.6	18
3.5E 300S	30	54	377	.5	19
3.5E 325S	47	67	441	1.0	23
3.5E 350S	21	18	214	.3	11
4E 300N	34	36	582	.9	21
4E 275N	23	51	457	.3	12
4E 250N	19	47	382	.5	21
4E 200N	19	18	171	.2	21
4E 175N	19	19	212	.2	28
4E 150N	21	25	288	.2	36
4E 125N	51	23	395	.4	42
4E 100N	22	16	306	.3	32
4E 75N	54	18	494	.4	20
4E 50N	26	82	331	.2	43
4E 25N	70	30	500	.4	34
4E 0N	21	31	338	1.0	23
4E 200S	115	40	1639	1.0	16
4E 225S	16	30	164	.2	17
4E 250S	16	26	206	.2	9
4E 275S	17	24	154	.2	12
4E 300S	32	43	327	.3	20
4E 315S	25	37	225	.2	7
4.5E 700N	23	48	181	.3	36
4.5E 675N	18	41	261	.1	23
4.5E 650N	22	39	240	.6	19
4.5E 625N	14	34	140	.1	19
4.5E 600N	21	37	125	.3	14
4.5E 575N	21	31	237	.6	20
4.5E 550N	14	47	217	.2	20
4.5E 525N	16	29	335	.4	27
4.5E 175S	33	18	187	.2	18
4.5E 200S	20	24	167	.2	19
4.5E 225S	14	20	80	.2	11
4.5E 250S	24	17	121	.5	13
4.5E 275S	19	21	316	.3	13
STD S-1	124	117	186	32.2	124

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
4.5E 300S	30	21	266	.4	16
4.5E 325S	21	19	246	.4	14
5E 700N	25	16	181	.3	10
5E 675N	41	360	200	1.4	97
5E 650N	33	57	223	.1	30
5E 625N	20	43	230	.1	23
5E 600N	30	9	292	.3	9
5E 575N	21	15	265	.4	19
5E 325N	28	11	125	.3	10
5E 300N	20	13	132	.1	15
5E 275N	23	5	125	.4	7
5E 250N	29	18	345	.9	52
5E 225N	85	31	472	.8	36
5E 200N	28	16	264	.3	39
5E 175N	20	18	222	.2	22
5E 150N	19	14	158	.1	33
5E 125N	84	73	2017	1.6	29
5E 75N	67	67	823	.2	22
5E 50N	38	30	691	.3	24
5E 25N	188	101	1237	1.3	53
5E 0N	915	41	1888	1.2	105
5E 175S	64	28	361	.2	26
5E 200S	20	17	146	.2	12
5E 225S	48	34	450	.4	14
5E 250S	39	21	416	.5	19
5E 275S	142	32	1017	1.9	15
5.5E 700N	20	29	118	.1	8
5.5E 650N	27	27	217	.1	9
5.5E 625N	20	20	98	.5	14
5.5E 600N	27	25	144	.4	8
5.5E 575N	15	18	76	.5	13
5.5E 175S	18	23	183	.4	20
5.5E 200S	20	11	121	.2	17
5.5E 225S	17	12	64	.4	17
5.5E 250S	33	23	274	.3	22
5.5E 275S	85	40	424	.8	26
5.5E 325S	18	14	181	.3	16
STD S-1	123	116	184	31.0	129

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
6E 675AN	43	37	473	.5	18
6E 650N	51	38	708	.7	27
6E 625AN	27	42	299	.2	26
6E 625N	32	37	315	.2	14
6E 600AN	16	37	107	1.2	15
6E 600N	35	37	460	.3	18
6E 575AN	17	34	259	.4	19
6E 575N	34	32	218	.4	13
6E 550AN	19	33	252	.4	18
6E 550N	23	42	148	.5	22
6E 525N	33	52	420	.2	21
6E 200S	35	14	287	.7	9
6E 225S	31	26	264	.4	16
6E 250S	33	20	215	.6	16
6E 275S	38	23	285	1.0	14
6E 300S	33	25	289	.5	15
6E 325S	24	29	179	.2	17
6E 350S	24	35	162	.3	21
6.5E 675N	32	242	770	.3	63
6.5E 650N	16	20	94	.6	9
6.5E 625N	24	33	135	.3	13
6.5E 600N	96	73	200	.6	10
6.5E 575N	27	45	215	.2	17
6.5E 550N	21	48	123	.2	17
6.5E 525N	27	52	269	.3	16
6.5E 350S	21	24	220	.1	17
6.5E 375S	15	28	183	.1	17
6.5E 400S	24	37	264	.5	27
6.5E 425S	26	238	269	.2	25
6.5E 450S	26	50	296	.4	27
7E 425N	23	32	314	.2	35
7E 350S	15	18	141	.2	19
7E 375S	28	27	222	.2	23
7E 400S	160	223	1691	2.0	31
7E 450S	39	118	416	.7	30
7.5E 350S	27	25	269	.2	23
7.5E 375S	26	57	411	.4	38
STD S-1	124	117	186	33.2	120

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
7.5E 400S	33	44	363	1.1	42
7.5E 425S	33	39	803	.4	45
7.5E 450S	30	37	299	.5	21
8E 350S	22	28	179	.4	21
8E 375S	28	33	344	.8	26
8E 400S	23	33	249	.3	18
8E 425S	25	37	255	.3	23
8E 450S	31	48	695	1.0	19
8.5E 300S	24	35	170	.5	20
8.5E 325S	24	21	190	.1	18
8.5E 425S	52	63	1999	3.2	58
8.5E 450S	61	149	2049	1.8	33
9E 375N	54	37	2759	1.3	65
9E 350S	32	31	446	.2	27
9E 400S	38	68	693	1.1	32
9E 425S	26	38	185	.6	21
9E 450S	39	49	570	.7	25
10.5E 600N	20	61	401	.2	24
10.5E 575N	17	27	189	.7	27
10.5E 550N	14	21	129	.3	16
10.5E 525N	18	32	186	.5	25
10.5E 500N	18	38	164	.3	25
10.5E 475N	17	57	201	.2	49
10.5E 450N	19	33	154	.2	31
10.5E 425N	18	48	453	.2	21
10.5E 400N	22	33	464	.4	14
10.5E 375N	21	38	528	.2	28
10.5E 325N	39	45	756	.6	36
10.5E 300N	19	41	253	.3	29
10.5E 275N	16	71	298	.4	32
10.5E 225N	30	31	784	.3	47
10.5E 200N	257	19	343	1.3	15
11E 600N	30	18	480	.1	13
11E 575N	16	17	91	.3	13
11E 550N	21	93	650	.1	40
11E 525N	24	54	210	.3	22
11E 500N	92	478	646	.6	35
STD 8-1	125	118	188	33.5	123

TECK EXPL.

PROJECT # 1326

FILE # 84-1592

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SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
11E 475N	24	65	87	1.1	17
11E 450N	19	115	224	.9	34
11E 425N	35	30	499	1.1	14
11E 400N	27	70	208	.6	15
11E 375N	15	35	278	.6	13
11E 350N	24	53	411	.7	28
11E 325N	32	44	336	1.0	39
11E 300N	20	41	295	.6	41
11E 275N	17	23	115	.6	23
11E 250N	23	95	402	.7	42
11E 225N	27	33	603	.8	24
11E 200N	240	60	4987	2.3	54
STD S-1	124	117	186	33.4	129

ACME ANALYTICAL LABORATORIES LTD.  
 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
 PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: JULY 17 1984

DATE REPORT MAILED: *July 20, 1984*

**GEOCHEMICAL ICP ANALYSIS**

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: P1-SOIL P2-ROCK & SOIL

ASSAYER: *D. Deane* DEAN TOYE. CERTIFIED B.C. ASSAYER

TECK EXPLORATION FILE # 84-1615

PAGE 1

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
BL 16+00W	20	49	427	.4	27
BL 15+75W	18	51	417	.7	15
BL 15+50W	14	57	564	.5	23
BL 15+25W	19	44	391	.3	28
BL 15+00W	35	169	1118	1.4	34
BL 14+75W	68	164	1098	.9	27
BL 14+50W	37	111	721	.6	26
BL 14+25W	15	30	316	.4	15
BL 14+00W	14	36	368	.5	18
BL 13+75W	18	55	352	.6	16
BL 13+50W	33	96	850	.8	23
BL 13+25W	13	58	342	.4	24
BL 13+00W	17	53	332	.3	24
BL 12+75W	32	39	407	.5	23
BL 12+50W	19	28	403	.4	18
BL 12+25W	17	26	594	.5	17
BL 12+00W	43	75	1024	.9	21
BL 11+75W	28	33	456	.1	16
BL 11+50W	22	43	491	.6	27
BL 11+25W	11	16	424	.5	15
BL 11+00W	75	151	1541	1.1	27
BL 10+75W	162	208	3562	2.4	22
BL 10+50W	67	98	1303	.4	23
BL 10+25W	36	29	484	.1	32
BL 10+00W	11	13	114	.1	10
BL 9+75W	15	45	322	.6	15
BL 9+50W	39	39	572	.3	22
BL 9+25W	66	117	1075	.8	29
BL 9+00W	31	52	626	.3	14
BL 8+75W	17	33	111	.1	4
BL 8+50W	16	17	304	.4	18
BL 8+25W	23	39	354	.3	11
BL 8+00W	44	65	786	.4	25
BL 7+75W	30	34	476	.7	27
BL 7+50W	24	42	475	.2	17
BL 7+25W	24	53	577	.3	23
BL 7+00W	30	70	503	.4	26
STD S-1	124	117	186	34.9	131

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
BL 6+75W	88	169	1182	.8	24
BL 6+50W	26	68	388	1.1	13
BL 6+25W	21	107	661	.6	21
BL 6+00W	30	22	281	.4	5
BL 5+75W	26	35	433	.3	20
BL 5+50W	58	57	707	.8	18
BL 5+25W	47	43	803	.9	26
BL 5+00W	22	21	208	.6	18
BL 3+50W	38	55	722	.3	27
BL 3+25W	26	36	458	.6	27
BL 3+00W	38	33	1463	.7	24
3+50W 1+00N	30	57	272	.8	23
3+50W 0+75N	35	59	639	.5	32
3+50W 0+50N	50	55	827	.5	43
3+50W 0+25N	78	42	755	.4	34
21001 ROCK	8572	2842	990	109.6	1574
21002 ROCK	1550	164	148	2.6	195
21003 ROCK	110	280	19420 <sup>^</sup>	.9	23
21004 ROCK	185	98	3580	.8	45
21005 ROCK	24	2048	59118 <sup>^</sup>	2.3	7
21006 ROCK	642	1726	6290	.8	82
21007 ROCK	332	2824	15299 <sup>^</sup>	.5	17
21008 ROCK	188	5639	33234 <sup>x</sup>	1.9	78
STD S-1	124	117	186	34.0	120

*Assay digestion suggested.*

ACME ANALYTICAL LABORATORIES LTD.  
 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
 PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: JULY 22 1984

DATE REPORT MAILED: *July 25/84*

**GEOCHEMICAL ICP ANALYSIS**

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: P1-2 SOIL P3-ROCK

ASSAYER: *D. Toye* DEAN TOYE. CERTIFIED B.C. ASSAYER

TECK FILE # 84-1699A

PAGE 1

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
15W 100S	32	49	408	.9	22
15W 180S	109	54	615	2.0	27
15W 300S	59	61	605	1.2	42
15W 400S	34	46	404	1.0	29
15W 500S	46	122	1082	1.1	24
15W 595S	18	18	271	.4	6
15W 665S	20	18	242	.3	14
15W 700S	21	19	251	.4	16
15W 805S	75	59	811	1.0	13
15W 900S	21	25	380	.8	21
15W 1000S	18	26	278	.4	19
15W 1068S	34	35	233	.6	22
15W 1100S	20	25	227	.8	17
15W 1200S	34	32	229	.5	23
15W 1285S	129	39	500	2.2	68
15W 1400S	33	39	436	.6	27
15W 1500S	27	28	166	.4	21
15W 1575S	101	36	343	2.1	19
15W 1700S	57	33	342	1.0	23
15W 1800S	48	29	400	.3	9
15W 1890S	65	24	482	.7	21
13W 200N	21	42	1250	.5	12
13W 100N	121	69	2884	1.7	29
13W 100S	14	35	515	.6	13
13W 200S	30	37	707	.5	8
13W 300S	12	29	374	.3	16
13W 400S	35	51	445	.7	33
13W 500S	38	57	603	.8	27
13W 600S	41	27	363	.7	21
13W 700S	39	26	277	.3	30
13W 800S	35	19	195	.6	14
13W 900S	137	47	465	3.7	16
13W 1000S	23	22	237	.4	19
13W 1100S	100	29	313	1.7	24
13W 1200S	71	23	259	.9	21
13W 1300S	79	37	257	1.0	24
13W 1400S	44	21	236	.4	35
STD S-1	123	114	183	31.6	116



SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
13W 1500S	19	26	163	.5	33
13W 1600S	18	26	196	.4	35
13W 1700S	16	18	153	.9	13
13W 1800S	11	13	257	.4	14
13W 1900S	42	19	134	.7	14
11W 200N	114	126	1399	2.4	34
11W 100N	26	30	493	.5	22
9W 200N	34	43	685	.8	23
9W 100N	25	59	542	.8	15
1W 400S	14	12	218	.5	9
1W 500S	15	18	279	.7	16
1W 600S	15	29	192	.5	17
1W 700S	18	38	268	.4	12
1W 800S	16	40	203	.4	14
1W 900S	18	13	148	.2	16
1W 1000S	17	35	160	.6	18
1W 1100S	15	6	99	.4	8
1W 1200S	21	21	125	.5	24
1W 1300S	12	21	67	.4	16
1W 1400S	20	28	201	.4	34
1W 1500S	15	19	152	.6	20
1W 1600S	28	64	342	.4	42
1W 1700S	22	22	107	.4	34
1W 1800S	35	50	160	.2	92
1E 500S	16	12	85	.7	11
1E 600S	17	49	291	.8	19
1E 700S	11	16	150	.3	14
1E 800S	14	18	105	.3	10
1E 900S	18	71	127	.3	13
1E 1000S	16	17	152	.7	7
1E 1100S	15	6	91	.2	10
1E 1190S	13	15	133	.3	14
1E 1300S	21	30	138	.7	31
1E 1400S	16	16	177	.5	26
1E 1500S	22	18	218	.3	26
1E 1600S	34	30	244	.5	41
1E 1700S	22	24	201	.5	25
STD S-1	124	115	185	33.4	126

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
2W 175S	11246	4176	38945	84.7	76
2.5E 225N	1905	291	938	52.0	214
3.5E 200N	4673	272	20006	33.8	101

ACME ANALYTICAL LABORATORIES LTD.  
 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
 PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: JULY 22 1984

DATE REPORT MAILED: *July 26/84*

**GEOCHEMICAL ICP ANALYSIS**

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: SOIL

ASSAYER: *DEAN TOYE* DEAN TOYE. CERTIFIED B.C. ASSAYER

TECK PROJECT # 1326 FILE # 84-1709

PAGE 1

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
11W 1100N	19	21	407	.3	16
11W 1000N	26	38	699	.1	10
11W 900N	21	21	536	.5	9
11W 835N	11	18	279	.5	5
11W 700N	11	16	282	.5	8
11W 685N	108	29	2128	.9	12
11W 600N	53	46	758	.9	23
11W 500N	48	85	822	.6	28
11W 450N	118	77	2525	1.2	31
11W 400N	56	39	619	.6	25
11W 300N	38	33	695	.6	13
11W 100S	60	335	611	.9	17
11W 200S	19	36	475	.6	12
11W 300S	11	21	150	.4	8
11W 400S	36	39	447	.5	15
11W 500S	46	50	485	.9	25
11W 600S	13	17	144	.3	10
11W 700S	31	29	208	.3	31
11W 800S	21	20	250	.3	17
11W 900S	46	20451	438	.3	11
11W 1000S	21	15	202	.1	13
11W 1100S	15	19	133	.2	10
11W 1200S	39	14	215	.6	21
11W 1300S	32	10	119	.3	13
11W 1400S	19	13	187	.5	11
11W 1500S	17	20	228	.5	12
9W 1100N	43	24	276	.5	11
9W 1000N	25	23	706	.5	9
9W 900N	32	31	289	.1	20
9W 800N	39	52	688	1.0	24
9W 700N	30	31	421	.5	27
9W 600N	32	27	452	.5	23
9W 500N	25	41	762	.1	17
9W 400N	61	42	805	.4	34
9W 300N	95	53	2149	.6	29
9W 100S	53	78	674	.4	31
9W 200S	26	47	336	.2	23
STD S-1	123	116	186	34.1	125

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
9W 300S	37	22	199	.3	14
9W 380S	70	57	471	1.4	23
9W 500S	66	56	406	.6	34
9W 600S	17	28	193	.2	19
9W 700S	33	32	385	.4	21
9W 800S	25	14	170	.3	28
9W 900S	70	39	346	1.1	19
9W 1000S	24	26	291	.2	20
9W 1100S	19	29	420	.3	24
9W 1200S	17	31	345	.6	12
9W 1300S	20	48	471	.2	18
9W 1400S	19	22	171	.5	14
9W 1500S	37	12	188	.1	17
7W 1400N	16	15	243	.1	15
7W 1300N	19	16	216	.1	11
7W 1200N	22	15	102	.2	2
7W 1100N	36	27	182	.2	13
7W 1000N	54	36	306	.6	18
7W 945N	26	25	271	.5	14
7W 900N	18	24	285	.4	18
7W 800N	18	31	275	.3	15
7W 700N	15	47	454	.5	13
7W 600N	54	32	626	1.1	25
7W 500N	14	26	314	.3	17
7W 400N	48	65	1018	.4	37
7W 300N	38	34	408	.2	31
7W 200N	40	30	312	.1	17
7W 100N	60	38	720	.1	27
5W 1400N	12	16	115	.1	11
5W 1300N	15	15	107	.1	10
5W 1200N	8	12	45	.1	9
5W 1100N	28	5	252	.1	16
5W 1000N	17	14	231	.4	12
5W 900N	14	19	229	.2	16
5W 800N	36	30	1472	.5	7
5W 700N	21	46	875	.3	23
5W 600N	18	8	777	.1	8
STD S-1	125	119	191	35.6	124

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
5W 500N	22	44	932	.9	11
5W 400N	323	60	4435	1.5	19
5W 300N	133	34	5044	1.3	26
5W 200N	58	35	785	.6	26
5W 100N	29	41	527	.8	26
2+50W 3+00N	21	42	663	.4	18
2+50W 2+75N	95	51	1562	1.4	23
2+50W 2+50N	39	41	946	.5	36
2+50W 2+25N	36	24	808	.4	28
2+50W 2+00N	17	24	137	.3	8
2+50W 1+75N	73	36	761	1.2	20
2+50W 1+50N	148	63	6093	1.3	29
2+50W 1+25N	146	135	2551	1.3	32
2+50W 1+00N	162	39	1791	.4	37
2+50W 0+75N	50	45	515	1.1	34
2+50W 0+50N	71	34	695	.5	25
2+50W 0+25N	64	53	820	.8	27
2+50W 0+00N	227	26	1972	.4	10
2+50W 1+75S	140	338	1428	1.0	19
2+50W 2+00S	51	55	662	.5	17
2+50W 2+25S	522	255	1140	10.3	47
2+50W 2+50S	33	240	971	1.1	28
2+00W 1+75S	20	51	110	1.1	13
2+00W 2+00S	68	156	503	1.5	21
2+00W 2+25S	52	162	724	1.2	33
2+00W 2+50S	27	57	273	.4	24
1+50W 3+00N	20	27	710	.6	18
1+50W 2+75N	27	35	1017	.4	16
1+50W 2+50N	52	26	2002	.5	13
1+50W 2+25N	63	136	1469	.9	33
1+50W 2+00N	63	59	733	.3	40
1+50W 1+75N	39	61	558	.3	36
1+50W 1+50N	24	27	357	.4	39
1+50W 1+25N	37	44	958	.3	22
1+50W 1+00N	44	20	747	.5	16
1+50W 0+75N	154	54	1731	1.4	51
1+50W 0+50N	52	39	364	.6	28
STD S-1	124	115	187	32.4	119

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
1+50W 0+25N	65	38	681	.7	35
1+50W 0+00N	65	44	1064	.9	29
1+00W 3+50N	19	36	515	1.1	19
1+00W 3+25N	59	50	1634	.6	18
1+00W 3+00N	38	44	862	.6	31
6+00E 0+75N	76	36	1417	.6	32
6+00E 0+50N	30	17	1256	.5	33
6+00E 0+25N	30	25	247	.9	33
6+00E 0+25S	30	19	649	.6	76
6+50E 0+75N	34	26	489	.6	43
6+50E 0+50N	33	28	1019	1.5	27
6+50E 0+25N	30	33	474	.9	33
7+00E 0+75N	25	22	239	.6	29
7+00E 0+50N	112	27	375	.9	40
7+00E 0+25N	502	40	1583	2.4	159
7+00E 0+25S	113	22	766	.6	36
7+00E 0+50S	36	21	224	.5	38
BL 6+00E	33	22	177	.7	34
BL 6+25E	30	23	177	.6	33
BL 6+50E	20	20	184	.7	43
BL 6+75E	294	27	711	3.1	196
STD S-1	124	117	186	33.8	135

ACME ANALYTICAL LABORATORIES LTD.  
 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
 PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: JULY 25 1984

DATE REPORT MAILED: *July 31/84..*

**GEOCHEMICAL ICP ANALYSIS**

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: SOIL

ASSAYER: *D. Toye*... DEAN TOYE. CERTIFIED B.C. ASSAYER

TECK EXPLORATION FILE # 84-1776A

PAGE 1

Project # 11326

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
L6.5W 25S	18	38	328	.5	19
L6.5W 50S	209	169	2828	2.4	40
L6.5W 75S	375	135	3080	3.5	54
L6.5W 100S	28	52	435	.5	28
L6.5W 125S	33	72	397	.7	44
L6.5W 150S	22	52	243	.2	30
L6.5W 175S	25	42	223	.2	18
L6.5W 200S	48	35	271	.1	25
L6.5W 225S	61	44	251	.3	26
L6.5W 250S	32	43	263	.1	26
L6.5W 275S	15	40	185	.2	20
L6.5W 338S	58	37	407	1.0	32
L3W 1400N	28	43	307	.1	29
L3W 1300N	19	31	277	.1	13
L3W 1200N	13	19	117	.1	14
L3W 1100N	17	12	242	.1	14
L3W 1060N	34	29	339	.3	22
L3W 1000N	16	19	243	.1	11
L3W 900N A	89	49	524	.9	42
L3W 900N B	26	21	305	.1	20
L3W 800N A	16	30	118	.2	11
L3W 800N B	32	54	716	.6	24
L3W 700N A	27	33	678	.2	26
L3W 700N B	27	47	289	.1	31
L3W 700N C	21	40	277	.1	33
L3W 600N A	36	50	559	.7	18
L3W 600N B	21	48	306	.4	23
L3W 500N A	38	55	1099	.4	27
L3W 500N B	11	21	230	1.0	13
L3W 400N	22	35	733	.4	26
L3W 400S	23	23	262	.1	27
L3W 500S	17	23	306	.2	17
L3W 600S	22	32	759	.2	14
L3W 800S	15	17	146	.1	14
L3W 900S	30	32	655	.5	22
L3W 1000S	16	17	137	.3	15
L3W 1100S	26	30	576	.6	32
STD S-1	126	119	187	36.2	130

## TECK EXPLORATION

FILE # 84-1776A

PAGE 2

Project # 11326

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
L3W 1200S	20	23	152	.5	15
L3W 1300S	27	25	170	.6	30
L3W 1400S	18	19	162	.4	24
L3W 1500S	16	10	109	.5	12
L3W 1600S	12	14	143	.3	11
L3W 1700S	18	7	122	.4	11
L1W 1400N	24	22	221	.3	21
L3W 1800S	23	21	209	.5	22
L1W 1300N	41	29	315	.4	16
L1W 1200N	11	11	103	.4	8
L1W 1100N	20	15	188	.4	16
L1W 1000N	17	14	169	.3	16
L1W 900N	60	38	696	2.0	35
L1W 800N	17	29	266	.4	25
L1W 700N	17	29	379	.6	14
L1W 600N	29	37	625	1.1	32
L1W 400N	16	34	451	.8	11
L1E 1300N	20	41	168	.4	14
L1E 1200N	45	37	517	.4	23
L1E 1100N	31	22	261	.2	18
L1E 1000N	25	30	215	.4	12
L1E 900N	16	26	223	.4	18
L1E 800N	16	72	580	.6	28
L1E 700N	20	89	412	.4	21
L1E 600N	17	21	629	.5	14
L1E 500N	22	24	278	.4	13
L1E 400N	34	73	727	.9	24
L3E 1300N	31	23	286	.4	16
L3E 1200N	42	32	405	.4	22
L3E 1100N	63	63	449	.2	23
L3E 1000N	16	16	181	.4	16
STD S-1	125	120	186	35.1	129



ACME ANALYTICAL LABORATORIES LTD.  
 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
 PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: JULY 31 1984

DATE REPORT MAILED: *Aug 2/84*

**GEOCHEMICAL ICP ANALYSIS**

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: SOIL -80 MESH

ASSAYER: *D. Toye* DEAN TOYE. CERTIFIED B.C. ASSAYER

TECK EXPLORATION PROJECT # 1326 FILE # 84-1878 PAGE 1

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
L250N 400E	20	21	187	.2	25
L250N 500E	37	33	254	.2	27
L250N 600E	32	32	230	.1	26
L250N 665E	49	22	192	.8	22
L250N 700E	35	27	167	.2	21
L250N 800E	20	19	119	.1	27
L250N 900E	23	22	156	.2	18
L250N 1000E	20	18	153	.1	28
L250N 1100E	19	20	236	.2	57
L250N 1200E	18	6	63	.1	4
L250N 1300E	15	12	119	.1	16
L250N 1400E	20	15	193	.1	23
L250N 1500E	42	43	745	.1	100
L250N 1600E	31	11	127	.1	17
L250N 1700E	10	16	83	.3	13
L250N 1800E	20	35	424	.1	33
L250N 1900E	34	27	227	.3	26
L250N 2000E	39	27	230	.3	22
L250N 2100E	32	22	179	.4	20
L250N 2200E	20	19	132	.1	15
L250N 2300E	99	27	277	1.9	24
L250N 2350E	34	40	208	.5	19
L250N 2400E	88	28	237	.6	22
L175N 2400E	38	35	225	.3	19
L0 -0E	23	21	143	.1	27
L0 100E	163	130	327	2.2	63
L0 200E	93	31	598	.5	21
L0 300E	45	19	306	.2	19
L0 400E	46	29	179	.3	25
L0 495E	39	24	158	.1	24
L0 600E	38	26	170	.2	23
L0 700E	38	24	378	.1	19
L0 800E	52	31	390	.1	22
L0 900E	43	30	399	.1	19
L0 1000E	41	37	370	.1	51
L0 1100E	16	21	262	.1	24
L0 1200E	51	21	375	.3	20
STD S-1	125	117	188	35.1	127

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
L0 1300E	71	25	538	.4	15
L0 1400E	23	16	223	.2	16
L0 1410E	40	15	156	.2	14
L0 1500E	25	22	223	.2	25
L0 1600E	27	14	171	.3	12
L0 1700E	84	15	169	.4	11
L0 1800E	23	13	129	.7	10
L0 2000E	21	15	244	.8	11
L0 2100E	29	16	156	.1	7
L0 2200E	35	14	204	.3	10
L0 2400E	30	43	207	.6	22
L7W 100S	27	63	525	.6	42
L7W 200S	61	69	262	1.0	14
L7W 300S	26	65	391	.5	50
L7W 400S	48	48	363	.4	21
L7W 500S	15	21	183	.5	18
L7W 600S	23	42	284	.4	28
L7W 700S	12	23	232	.7	13
L7W 800S	43	56	381	1.8	40
L7W 900S	15	22	210	.7	15
L7W 1000S	20	31	325	.4	15
L7W 1100S	19	32	241	.9	22
L7W 1200S	48	20	210	.8	12
L7W 1250S	64	34	566	.8	15
L7W 1300S	49	37	250	.5	17
L7W 1400S	32	53	264	.2	27
L7W 1500S	38	37	196	.3	32
L7W 1600S	16	24	212	.1	16
L7W 1700S	12	17	99	.4	10
L7W 1800S	24	19	120	.4	13
L7W 1900S	22	14	179	.3	13
L7W 2000S	42	36	352	.5	16
L5W 400S	22	24	155	.6	20
L5W 500S	15	15	132	.7	12
L5W 700S	13	21	108	.5	8
L5W 782S	16	33	145	.4	4
L5W 900S	19	19	140	.3	7
STD S-1	125	116	185	36.1	129

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
L5W 1030S	52	31	599	.2	25
L5W 1100S	34	29	202	.2	26
L5W 1200S	35	24	246	.9	23
L5W 1300S	32	29	184	.1	28
L5W 1400S	11	18	70	.1	16
L5W 1500S	26	16	125	.2	16
L5W 1600S	13	26	162	.1	23
L5W 1700S	22	20	156	.1	21
L5W 1800S	23	26	226	.3	21
L5W 1900S	16	14	118	.2	17
L5W 2000S	33	23	262	.6	18
STD S-1	126	119	188	35.6	135

ACME ANALYTICAL LABORATORIES LTD.  
 852 E. HASTINGS ST. VANCOUVER, B.C. V6A 1R6  
 PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: AUG 6 1984

DATE REPORT MAILED:

*Aug 10/84*

**GEOCHEMICAL ICP ANALYSIS**

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: SOIL

ASSAYER: *D. Toyer* DEAN TOYE. CERTIFIED B.C. ASSAYER

TECK EXPLORATION PROJECT # 1326 FILE # 84-1957 PAGE 1

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
12.5N 0E	29	15	128	.3	9
12.5N 1E	23	16	136	.4	18
12.5N 2E	30	32	504	.1	38
12.5N 3E	16	11	173	.1	15
12.5N 4E	30	19	155	.5	18
12.5N 5E	39	27	181	.3	26
12.5N 6E	54	14	199	1.3	6
12.5N 7E	52	15	294	.1	12
12.5N 8E	24	26	160	.4	32
12.5N 9E	51	19	354	.9	11
12.5N 10E	33	33	194	.1	14
12.5N 11E	63	27	210	.2	14
12.5N 12E	18	4	92	.1	2
12.5N 13E	33	12	141	.2	11
12.5N 14E	38	16	177	.1	12
12.5N 15E	25	16	173	.1	15
10N 0E	21	11	190	.3	16
10N 1E	25	44	435	.6	47
10N 2E	23	27	210	.2	10
10N 3E	93	116	439	2.2	75
10N 4E	40	38	348	.3	21
10N 5E	23	20	189	.4	13
10N 6E	16	15	93	.1	16
10N 7E	139	22	290	6.1	21
10N 8E	8	15	46	.2	2
10N 9E	60	19	229	1.0	12
10N 10E	17	19	97	.2	8
10N 11E	31	21	169	.2	13
10N 12E	32	17	205	.1	11
10N 13E	42	31	160	.1	15
10N 14E	15	12	133	.2	13
10N 15E	25	42	434	.6	51
7.5N 3E	31	31	326	.1	16
7.5N 4E	19	16	296	.2	6
7.5N 5E	49	23	241	.8	6
7.5N 6E	17	10	165	.3	9
7.5N 7E	25	15	223	.3	28
7.5N 8E	11	9	72	.4	3
7.5N 9E	38	9	243	1.1	6
STD S-1	122	113	182	32.4	114

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
7.5N 10E	87	37	337	3.3	39
7.5N 11E	110	34	332	2.2	19
7.5N 12E	14	15	78	.2	8
7.5N 13E	13	8	45	.3	8
7.5N 14E	21	21	213	.2	20
7.5N 15E	29	19	132	.3	12
7.5N 16E	24	14	154	.2	18
7.5N 17E	19	13	134	1.0	16
7.5N 18E	17	24	136	.3	9
7.5N 19E	44	28	259	.5	16
7.5N 20E	53	24	212	.6	17
5N 1E	34	27	244	.3	15
5N 2E	21	18	136	.5	17
5N 3E	47	31	306	1.8	22
5N 4E	13	17	113	.3	14
5N 5E	13	11	62	.3	6
5N 6E	20	12	142	.2	9
5N 7E	20	15	105	.6	10
5N 8E	11	15	99	.2	4
5N 9E	13	8	82	.2	7
5N 10E	26	27	109	.4	7
5N 11E	12	8	126	.4	16
5N 12E	15	10	107	.3	17
5N 13E	21	22	157	.1	10
5N 14E	14	14	53	.4	4
5N 15E	100	35	222	2.0	16
5N 16E	21	18	135	.2	13
5N 17E	22	14	187	.3	17
5N 18E	26	15	113	.6	7
5N 19E	33	26	187	.5	13
5N 20E	32	20	171	.6	13
T2W 1200N	22	29	135	.5	22
T2W 1100N	30	27	161	.5	34
T2W 1000N	18	19	138	.5	13
T2W 900N	21	42	179	1.4	70
T2W 800N	41	62	402	1.6	32
T2W 700N	27	32	200	.4	26
STD S-1	123	114	183	33.0	120

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
T2W 600N	23	20	119	.2	12
T2W 500N	38	31	287	.3	20
T2W 400N	28	43	152	.4	12
T2W 300N	34	21	211	.2	16
T2W 200N	21	23	155	.3	18
T2W 100N	18	18	187	.1	10
TOW 1300N	18	38	161	.4	28
TOW 1200N	28	40	226	.7	65
TOW 1140N	28	32	197	.5	47
TOW 1025N	15	26	106	.6	20
TOW 900N	15	31	88	.4	9
TOW 800N	32	17	186	.7	16
TOW 700N	29	16	192	.6	13
TOW 600N	27	30	180	.2	33
TOW 500N	29	71	253	.4	37
TOW 400N	23	18	147	.3	13
TOW 300N	37	28	215	.6	26
TOW 200N	56	30	308	.4	26
TOW 100N	35	58	350	1.3	35
TOW ON	33	43	320	.3	25
STD S-1	123	114	183	33.8	118

OME ANALYTICAL LABORATORIES LTD.  
 52 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
 PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: AUG 9 1984

DATE REPORT MAILED: *Aug 15/84...*

**GEOCHEMICAL ICP ANALYSIS**

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.NG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: SOIL

ASSAYER: *D. Toye* DEAN TOYE. CERTIFIED B.C. ASSAYER

TECK PROJECT # GROUSE MTN #1326 FILE # 84-2042A PAGE 1

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
NL2.5E 15N	28	7	66	.9	4
NL2.5E 14N	29	8	124	.1	8
NL2.5E 13N	17	8	113	.3	7
NL2.5E 12N	25	137	153	.2	14
NL2.5E 11N	16	9	100	.1	8
NL2.5E 10N	16	13	111	.1	11
NL2.5E 9N	21	6	25	.5	2
NL2.5E 8N	7	10	23	.2	2
NL2.5E 7N	49	15	172	1.1	7
NL2.5E 6N	23	16	171	.2	31
NL2.5E 5N	22	23	166	.1	28
NL2.5E 4N	21	22	117	.1	25
NL2.5E 3N	9	6	30	.2	2
NL2.5E 2N	65	32	139	1.4	6
NL2.5E 1N	21	17	135	.2	17
NL2.5E 0N	9	15	82	.1	16
NL3.5E 15N	10	8	50	.1	6
NL4.5E 15N	14	7	81	.1	8
NL5.5E 15N	28	7	51	.3	2
NL6.5E 15N	17	9	94	.1	12
NL7.5E 15N	21	6	104	.1	11
NL7.5E 14N	13	10	67	.3	8
NL7.5E 13N	21	7	108	.1	13
NL7.5E 12N	12	9	72	.1	7
NL7.5E 11N	22	17	153	.1	11
NL7.5E 10N	14	11	54	.1	5
NL7.5E 9N	14	15	71	.1	16
NL7.5E 8N	18	13	102	.1	12
NL7.5E 7N	25	35	193	.3	23
NL7.5E 6N	18	27	228	.3	21
NL7.5E 5N	25	29	321	.6	23
NL7.5E 4N	11	13	80	.1	6
NL7.5E 3N	11	8	67	.1	11
NL7.5E 2N	13	16	157	.1	21
NL7.5E 1N	57	47	390	3.6	18
NL7.5E 0N	27	27	206	.2	21
NL12.5 15N	28	9	81	.2	11
STD S-1	124	115	183	33.4	122

*#1326*

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM
NL12.5E 14N	74	17	198	1.5	13
NL12.5E 13N	73	18	194	1.3	9
NL12.5E 12N	24	15	110	.1	17
NL12.5E 11N	61	16	207	.1	10
NL12.5E 10N	42	18	247	.4	22
NL12.5E 9N	71	24	396	1.6	19
NL12.5E 8N	30	23	241	.2	27
NL12.5E 7N	26	26	351	.2	24
NL12.5E 6N	23	34	224	.4	26
NL12.5E 5N	15	28	83	.2	27
NL12.5E 4N	118	80	2345	.2	86
NL12.5E 3N	42	75	990	.3	122
NL12.5E 2N	653	305	1816	5.6	120
NL12.5E 1N	31	33	167	.9	33
NL12.5E 0N	21	18	102	.2	27
NL13E 15N	36	11	101	.3	12
NL14E 15N	35	7	101	.1	10
NL15E 15N	30	10	113	.1	11
NL15E 0N	30	51	569	.1	32
NL16E 15N	30	10	94	.2	12
NL16E 0N	32	46	251	.3	38
NL17E 15N	13	10	73	.1	11
NL17E 14N	11	4	60	.1	5
NL17E 13N	80	19	166	.4	20
NL17E 12N	11	6	57	.1	9
NL17E 11N	28	19	199	.8	20
NL17E 10N	40	21	600	.4	22
NL17E 9N	20	17	215	.4	19
NL17E 8N	63	44	610	1.0	36
NL17E 7.25N	45	60	670	.3	38
NL17E 7N	24	48	260	.4	36
NL17E 6N	36	106	645	.4	53
NL17E 5N	41	40	536	.9	26
NL17E 4N	30	41	382	.2	38
NL17E 3N	23	26	214	.4	15
NL17E 2N	29	363	1678	2.1	149
NL17E 1N	38	90	464	.8	71
NL17E 0N	70	39	304	.4	49
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