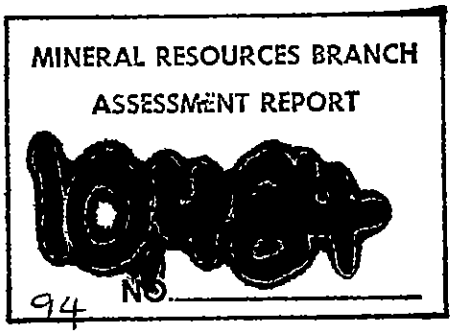
MineQuest Report No. 15a

CULTUS CREEK PROJECT

GEOLOGY, GEOCHEMISTRY AND GEOPHYSICS

NTS 82 F2, F7

Nelson Mining Division, B.C.



Latitude 49°17'N
Longitude 116°54'W

by

R.V. Longe

of

MINEQUEST EXPLORATION ASSOCIATES LTD.

for

S.M.E. INVESTMENTS LTD.

AND WAGNER MINES LTD.

December, 1981

Name	# of Units	Record #	Due Date	Registered Owner	Beneficial Owner
SNOW	9	2417	June 26/82	MineQuest	W. Smith
SNOW II	16	2341	June 24/82	MineQuest	W. Smith
SNOW III	10	2340	June 24/82	MineQuest	W. Smith
LAIB II	15	2419	June 26/82	MineQuest	W. Smith
LAIB I	18	2418	June 26/82	MineQuest	W. Smith
CUL I	15	2303	June 9/82	MineQuest	W. Smith
CUL II	12	2302	June 9/82	MineQuest	W. Smith
DON	18	1220	Sept /79	W. Smith	W. Smith
NEXT	20	2304	June 9/82	MineQuest	W. Smith
NEXT II	12	2346	June 26/82	MineQuest	W. Smith

Submitted May 1982

SUMMARY

B.C. Ministry of Mines reports (1926 and 1927) describe what are today encouraging values of silver and copper in ground now covered by the DON claims. Boulders of dolostone containing up to 1.2% copper and 0.84 oz/Ag/ton can be found close to what appears to have been an old trench or adit. The former workings are no longer accessible and no outcrop mineralization has been located.

Induced polarization and soil geochemistry described in this report outline two zones with coincident geophysical and geochemical anomalies. Geological mapping places these anomalous zones in two parallel belts of carbonate lying in a transitional zone between a thick sequence of Proterozoic tuffaceous rocks to the east and an overlying sequence of argenaceous, sediments of approximately the same age to the west.

This belt of sediments which can be followed for 40 km contains two mineral occurrences at the same stratigraphic level as those on the DON claims.

Further exploration is proposed for both the DON claims on which drilling is recommended and for the rest of the belt on which geological mapping and geochemistry is required.

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V	Averaged values from geochemical reconnaissance soil lines
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1. **Figures**

The following figures show an idealized grid:

A1	Soil Geochemistry Silver, ppm (plan 178)
A2	Soil Geochemistry Copper, ppm (plan 177)
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1. **INTRODUCTION**

The DON claim was staked in September, 1979 by Mr. Wayne Smith who, having selected the area on the basis of descriptions in B.C Ministry of Mines Reports, found copper-bearing boulders and traces of copper stain in bedrock. The writer first examined the claims, accompanied by Mr. Smith, on October 8th, 1980. That examination led to a recommendation for an induced polarization survey directed at finding the source of the copper-bearing boulders and at testing the hypothesis that the sulphide zone was stratigraphically controlled. This report describes and compiles the results of an induced polarization survey carried out in February 1981, a soil geochemical survey and geological mapping carried out in June 1981, and the results of regional mapping designed to trace metal-enriched sediments to the north and south.

Funding was provided by S.M.E. Investments Ltd. and by Wagner Mines Ltd., both of which are controlled by Mr. Smith.

2. LOCATION, ACCESS AND TOPOGRAPHY

2.1 Location

The DON claim is located in southern British Columbia on a divide between Cultus and Next Creeks, 30 km east of Salmo at: latitude 49°17'N; longitude 116°54'W (Figure 1).

Location of former workings: UTM 507100E, 5457600N.

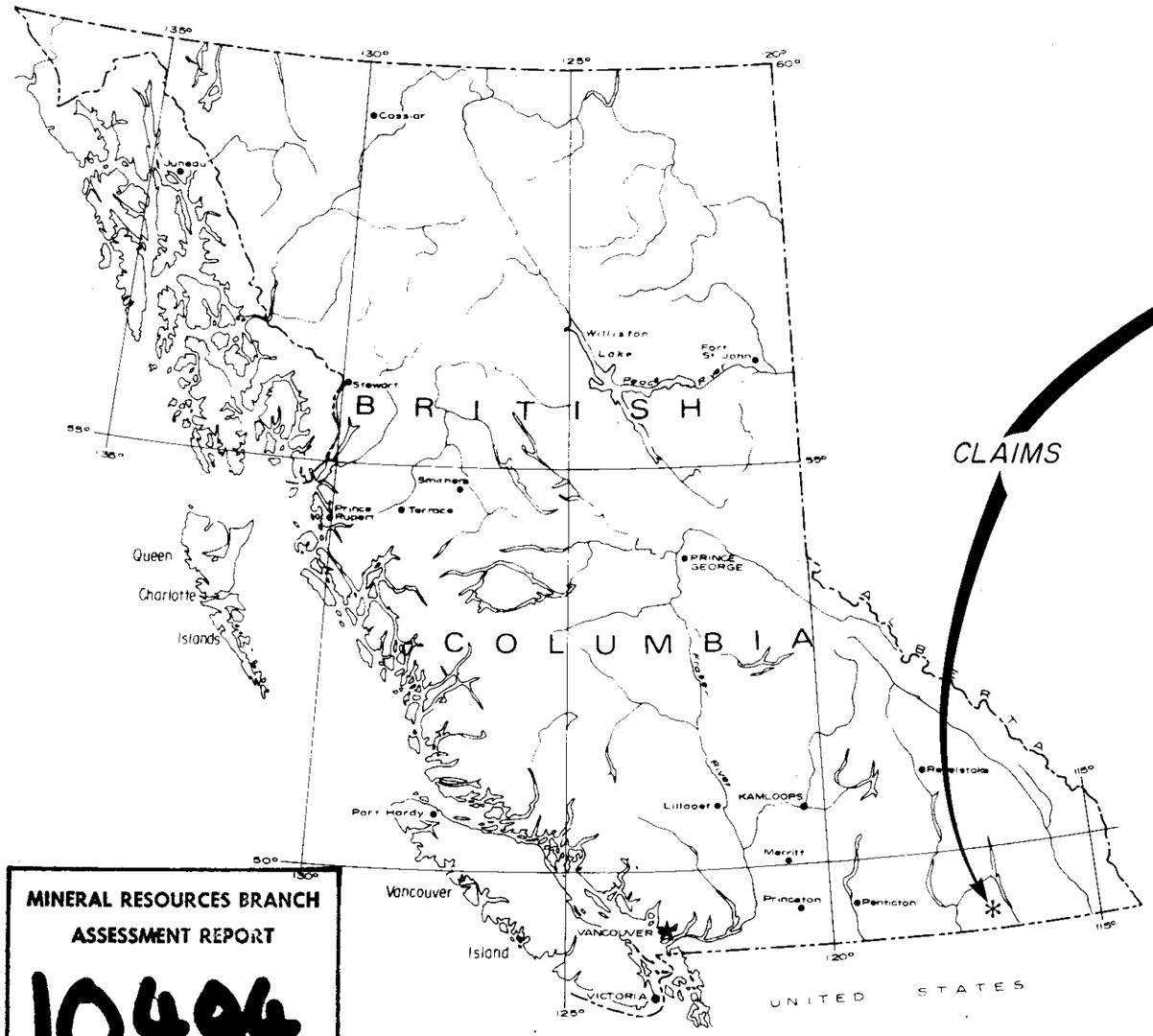
The belt of rocks stratigraphically equivalent to those on the DON claims extends from a latitude of 49°24'N in the north to the Canada-U.S. border in the south, a distance of 45 km.

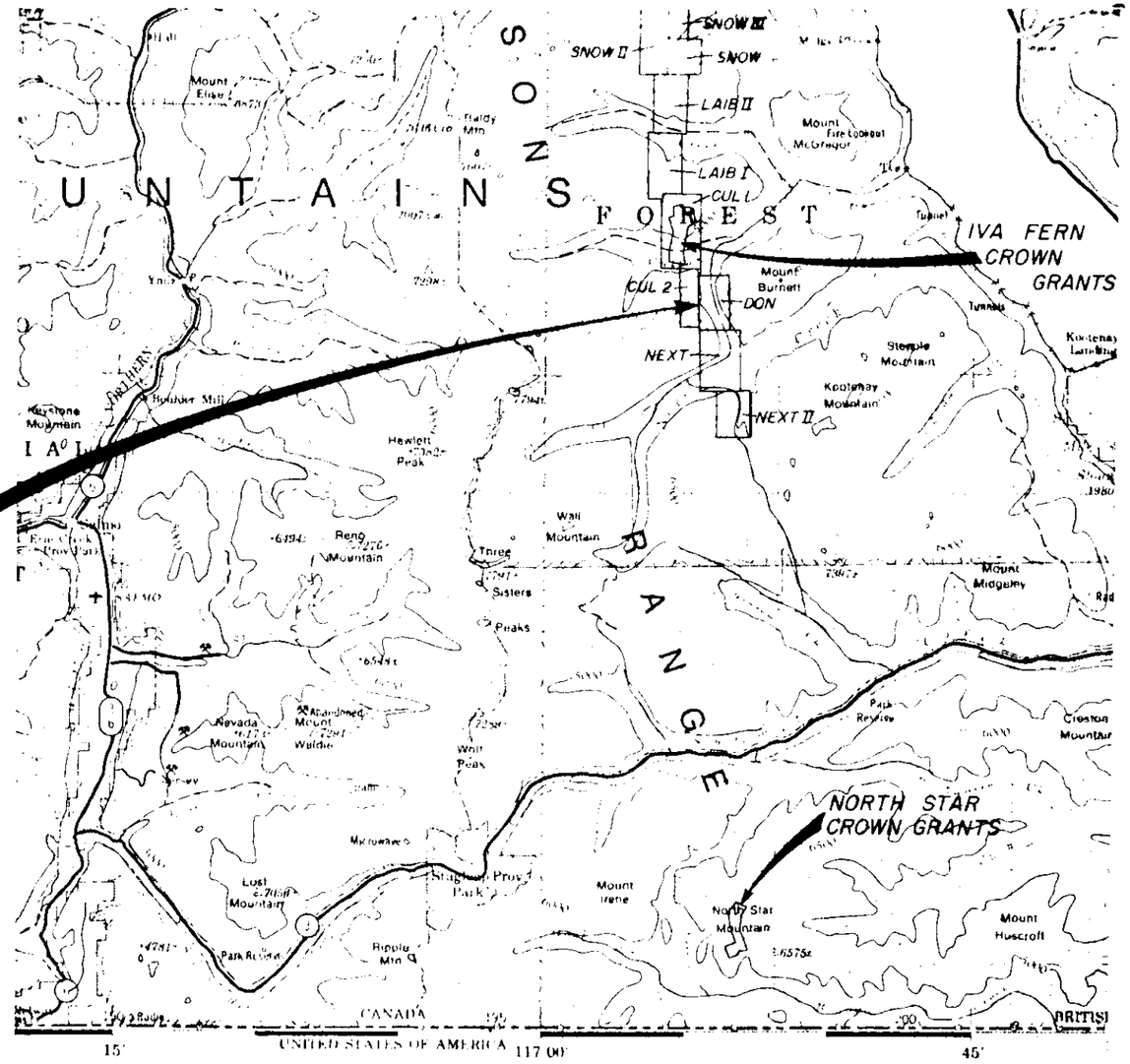
2.2 Access

Access is by 25 km of logging road east of Highway 6 along Porcupine and Cultus Creeks or from the Salmo-Creston Highway by 25 km of logging road (shorter if the Jersey Creek Road is open) along Blazed Creek.

2.3 Topography

The DON claim covers both moderate and steep hillsides at elevations between 4,500 and 6,000 feet. Much of the property in the vicinity of the geochemical and geophysical surveys has been recently logged. The rest contains mature timber.





SCALE 1:250,000

5 0 5 10 15 20 Km

Km 100 0 100 200 300 400 Km

Miles 100 50 0 100 200 Miles

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

10484
NO.

DON CLAIMS

LOCATION MAP

PLAN No.	DRAWN	DATE	FIGURE
171		NOV. 1980	1
Revised		N.T.S. 82 F7	

MINEQUEST EXPLORATION ASSOCIATES LTD.

3. OWNERSHIP AND CLAIM STATUS

Name	# of Units	Record #	Due Date	Registered Owner	Beneficial Owner
SNOW	9	2417	June 26/82	MineQuest	W. Smith
SNOW II	16	2341	June 24/82	MineQuest	W. Smith
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NEXT II	12	2346	June 26/82	MineQuest	W. Smith
TOTAL	127				

4. SURFACE AND TIMBER RIGHTS

Both surface and timber rights are owned outright by Crestbrook Forest Industries Ltd. in the south half of the property and by Darkwood Forest Industries in the north half of the property. Crestbrook, subject to a written agreement and posting of $1,000 bond, has given approval for excavation of five trenches by backhoe. Because it would cause less damage than trenching, approval for drilling would almost certainly be forthcoming. Darkwood, whose ground is not of concern at present, have expressed a willingness to cooperate.

5. HISTORY AND PREVIOUS WORK

5.1 DON Claim

In 1962 claims known as the "Cultus Creek Group" (Minfile #082FSE082) were located over what appears to be the divide in the pass joining Cultus and Next Creeks, the area now covered by the DON claim. Trenching is reported (B.C.M.M.A.R., 1936, p.284) to have indicated mineralized rock some 40 - 50 feet thick but whether this represents true thickness is questionable.

In 1927 a property named "Humdinger & Hunkadora" (Minfile #082FSE056) occupied ground believed to be nearby or possibly coincident with ground covered by the Cultus Creek Group. Copper is reported (B.C.M.M.A.R., 1927, p.325) to have been discovered in the course of building the trail between Cultus Creek and Next Creek (formerly called Canyon Creek). The showing of copper with associated values of silver and gold is described as being seven feet wide.

More recently, in 1968, claims known as the PEANUT (Minfile #082FSE081) were located in the vicinity of what is now the DON claim but, on the basis of the type of rocks described (granite), it is thought that the workings on the PEANUT claims lie to the east of the copper occurrences on the DON claim.

5.2 Iva Fern Crown Grants

Some 3 km to the north of the centre of the DON claims lies the Iva Fern group of crown grants (Minfile #082FSE037) on which trenching between 1918 and 1919 amounted to some 250 feet. A considerable amount of mining development work was carried out, first in the period 1917-1919, and then in 1928 and 1937. Sampling indicates the ore to be lead-rich with a low silver to lead ratio and a width of 1 to 6 feet.

5.3. North Star Area

Near the Canada-U.S. border a group of crown grants on North Star Mountain cover dolostone lying at the same stratigraphic position as the dolostone on the DON claims. Little is known about this property but galena, sphalerite, barite and pyrite are reported from a neighbouring group of claims, the Canada Belle (Minfile #82FSE054) worked in 1955.

6. WORKED CARRIED OUT UNDER CURRENT EXPLORATION PROGRAM

6.1 DON and NEXT Claims

3.4 km of induced polarization survey was carried out in February 1981. Electrode array was dipole-dipole, "A" spacing was 25m at four separations.

During June 1981, 726 soil geochemical samples were collected over the area covered by the induced polarization survey. The geology of the DON and NEXT claims was mapped at 1:10,000 scale. Outcrop is sparse except in logged areas where road cuts have exposed enough of the bedrock for mapping of the main lithologic units.

In November the base line and four cross lines were surveyed and marked with high pickets for location during the winter.

6.2 Regional

The belt of sedimentary rocks, part of which is covered by the DON claims, was geologically mapped at a reconnaissance scale (1:50,000) for a total of 50 km.

Nine claims consisting of 127 units were staked making a continuous belt of claims running north and south through the DON claims.

Geochemical soil samples were collected at 10m spacing across strike along seven reconnaissance lines to indicate which parts of the belt contain elevated level of base and precious metals.

6.3 Personnel

Picketing, soil sampling and staking was carried out under the supervision of P.D. McCarthy. Geological mapping was carried out by R.V. Longe and W.C. Hampton.

7. GEOLOGY

7.1 Regional Geology

No geological map of the area has been published since GSC memoir 228 (1941) in which rocks in the vicinity of the present DON claims are referred to as the Horsethief Creek series, a subdivision of the Windermere Group, consisting of argillaceous quartzites, limestones, arkoses and pebble conglomerates.

Recent work, (GSC Open File 514) assigns the rocks to a "Unit 6" which includes the Horsethief Creek series but embodies a revised subdivision of the Windermere. Unit 6 consists of:

Three Sisters Formation
Horsethief Creek Group
Monk Formation

Immediately to the south a continuation of the same stratigraphic units has been studied in greater detail by Glover and Price (1976), who subdivide the Windermere as follows:

Three Sisters Formation
Monk Formation
Irene Volcanic Formation
Toby Foundation

From the description given by Glover and Price (1976), the rocks of the DON claims can be assigned to the Irene Volcanic Formation.

7.2 Stratigraphy of DON Claim and Cultus Creek Belt (Figures 2 and 3)

The property is underlain by a sequence of Proterozoic sediments striking NNW-SSE and dipping steeply to the west. The same sedimentary sequence can be followed 20 km to the north, and, interrupted by a granitic intrusion, 20 km to the south.

7.2.1 Tuff Unit (Map Symbol "T")

The most easterly and probably the oldest stratigraphic unit consists of a thick sequence of tuffs with minor flows. The base of this unit is not seen, but regional mapping suggests it has a thickness of at least 500m. The tuffs are grey-green, chloritic and are exceptionally well-bedded. In the south part of the belt, the tuff unit is schistose in places.

7.2.2 First Carbonate (Map Symbol "C1")

Overlying the tuffs is a poorly-exposed sequence of carbonate, up to 200m thick, consisting predominantly of orange-weathering dolostone seen to contain sulphide minerals in three locations on the DON claims. The dolostone is locally very siliceous, may be free of sulphides, or contain as much as 10% pyrite and chalcopyrite.

7.2.3. Siltstone Unit (Map Symbol "S")

Overlying the first carbonate unit in the vicinity of the DON claims and as far north as Laib Creek is a moderately resistant formation consisting of indurated siltstone grading locally into chloritic tuffs indistinguishable from those of the Tuff Unit. Thickness is approximately 300m. This formation has not been recognized in the southern part of the belt.

7.2.4. Second Carbonate (Map Symbol "C2")

This unit which is up to 300m thick consists of grey limestone, orange weathering dolostone, quartzite bands, siltstones, phyllitic shales and sericite schists. Carbonate predominates.

7.2.5. Phyllitic Shales (Map Symbol "PS")

Brown-weathering shales, mudstones and phyllites overly the second carbonate and appear to be at least 1500m thick.

7.2.6. Quartzite Unit (Map Symbol "Q")

This unit which outcrops to the west of the claims and does not appear on the 1:10,000 map (Figure 1) consists of a thick sequence of grits and conglomerates and quartzite.

7.2.7 Granite (Map Symbol "G")

Granitic intrusives believed to be similar to those of the Nelson Batholith intrudes the Tuff Unit in the western part of the claims. The intrusive contact has yet to be delineated. A large granitic intrusion cuts the entire sequence to the south of Next Creek.

7.3 Stratigraphic position of mineral properties (Figure 2)

The first metal-enriched carbonate on the DON claims lies immediately above the tuff unit. The second metal-enriched carbonate lies above the siltstone unit. As far as can be determined only the First Carbonate unit C1 has been previously explored.

On the basis of two brief examinations one of which was hampered by snow, it appears that the lead and zinc sulphides on the Iva Fern crown grant occur in the same stratigraphic position as the mineralization exposed by previous workers on the DON claims i.e. in the C1 carbonate.

The North Star crown grants lie along the tuff-carbonate contact. There being no siltstone recognized in this part of the belt, only one carbonate is shown. The Canada Belle property, worked in 1955, lies in the same carbonate.

8. MINERALIZATION

8.1 DON Claims

Near the old workings on the saddle of the pass connecting Cultus and Next Creeks a number of boulders of copper and silver-bearing siliceous dolostone can be found both above and below the road. Chip samples from several of the more gossanous boulders yielded grades of 1.2% Cu and 0.84 oz/ton Ag (sample 05 in Table below). Chalcopyrite occurs as blebs and fine grained disseminations throughout these rocks, none of which was seen in outcrop. The rocks and contained minerals are similar (except of lower grade) to those described in the 1926 report on the Cultus Creek Property and the 1927 report on the Humdinger and Hunkadora properties.

The presence of old mining equipment indicates proximity to the former workings. The nearby geochemical and geophysical anomalies described below also indicate that the boulders are probably derived from the immediate vicinity.

At the time of writing no work has been done to expose the mineralization described in previous reports nor to expose the rocks in the vicinity of the IP and geochemical anomalies.

At the north end of the claim, traces of copper with high Ag/Cu ratios (Samples 01-04 in Table) were found in quartz veins within the Siltstone Unit which lies between the two Carbonate Units.

Sample Number	% Cu	% Co	oz./ Ton Ag	oz./ Ton Au
801008 - 01	0.11	0.001	0.26	<0.003
801008 - 02	0.02	0.006	0.20	<0.003
801008 - 03	0.84	0.001	0.46	<0.003
801008 - 04	0.15	0.001	0.10	<0.003
801008 - 05	1.20	0.024	0.84	<0.003

8.2 Iva Fern Crown Grants

Spoil from a tunnel on the Iva Fern crown grants includes finely-banded dolostone with disseminations of galena, sphalerite and chalcopyrite. Results of assaying selected samples are given below. These are instructive not for their absolute values which are probably unrepresentative, but for the relative amounts of Ag, Pb, Zn and Cu and for the absence of Au.

Sample	Cu percent	Pb percent	Zn percent	Ag oz/t	Au oz/t	
7196	—	—	—	0.05	<0.003	—
7199	—	6.71	5.54	0.56	<0.003	—
7200	0.93	2.96	3.65	2.02	<0.003	—
7201	—	—	—	0.04	<0.003	—
7202	—	—	—	0.62	<0.003	—

8.3 North Star

There appears to be no information on the North Star crown grants. On the neighbouring Canada Belle property sparsely mineralized, conformable veins of barite, galena, sphalerite and pyrite in dolostone are reported (B.C.D.M.A.R. 1955, p.56).

9. RESULTS OF GEOPHYSICAL SURVEY (Figure 4)

The Induced Polarization (IP) Survey had two purposes: first to locate a source for the sulphide-bearing boulders, and second to determine whether or not any sulphide-bearing zones detected were conformable or transgressive.

The work was undertaken in February while between six and eight feet of snow remained on the ground. Despite these difficult conditions, the survey succeeded in outlining two zones in which IP suggested the presence of sulphide. These two zones correspond to the two belts of carbonate rocks identified by geological mapping and to geochemical anomalies developed by soil geochemistry.

The results of the IP survey are reported in full by P. Walcott and Associates (Appendix II).

10. RESULTS OF SOIL GEOCHEMISTRY

10.1 DON Claims (Figure 4)

Because the source of the copper-bearing boulders was thought likely to be a relatively narrow bed, samples were taken across strike at 10m intervals in the vicinity of the IP anomalies and at 50m intervals elsewhere. Both IP anomalies are shown to coincide with soil geochemical anomalies although the greater part of the eastern IP anomaly is not considered suitable for geochemical soil sampling because much of the soil is derived from alluvial material. Geochemical samples were run for lead, zinc, copper and silver which exhibit anomalous zones coinciding with each other and with the IP anomalies.

The most pronounced anomaly for lead follows the base line and is associated with a narrow outcrop of dolostone some 800 metres long and open to the south. Contamination from road-making may be partly responsible for the shape of the anomaly. The western anomaly is of comparable length and is broader. A weak anomaly enclosed between the two major anomalies appears open to the north. Silver values coincide with lead but are higher in the western anomaly than in the eastern.

Copper anomalies (Figure 4) are weak and patchy and are displaced to some extent from the IP, lead and silver anomalies, possibly by hydromorphic dispersion.

The zones anomalous in zinc correspond to both the lead and silver anomalies. A coincident zinc-copper anomalous zone occurs north of the westernmost IP anomaly.

10.2 Reconnaissance Soil Lines (Figures 5 and 6)

Seven lines of close-spaced geochemical samples were collected across strike where the carbonate unit was thought to exist.

One line on the NEXT claim and three lines to the north of the DON claims yielded enhanced values of Cu, Pb, Zn, Ag over the inferred location of the carbonate unit.

One line over the North Star crown grant gave a slight response in Pb over the carbonate unit. Two lines between the North Star crown grants and the Salmo-Creston Highway gave no encouragement.

Some of these lines (RSL 3 in particular) indicate that lead and zinc lie at a higher stratigraphic level than copper, a feature of both volcanagenic and diagenetic, sediment-hosted deposits.

It must be pointed out that this geochemical sampling technique is very preliminary, is very sensitive to overburden depths, and should be followed up with more definitive methods of appraising the various parts of the belt.

11. DISCUSSION

The Cultus Creek project involves ground ranging from unstaked and virtually unexplored to ground on which drill targets are now developed.

Regional work is at a very early stage. The belt was mapped rapidly with the prime intention of locating the carbonate units or the stratigraphic level they represent. A considerable amount of reconnaissance mapping remains to be done before more detailed work such as determining facies changes in carbonate or alteration of volcanic rocks can be undertaken.

The lines of close-spaced reconnaissance geochemistry suggest that the northern part of the belt is metal-enriched to a degree comparable to that of the DON and Iva Fern areas, and that the south part of the belt between the Salmo-Creston Highway and the North Star property is less encouraging. These results are very tentative and need to be checked.

At this stage little is known about the belt except that there exists a carbonate bed (or beds) which is at least locally enriched in Cu, Ag, Pb, Zn. Whether this enrichment approaches economic concentrations, or whether the enrichment is merely of a geochemical magnitude cannot be said.

Although early work in the DON claims suggest that metal concentrations approach economic grades in at least one location, reports on the Iva Fern crown grants indicate that widths may be too thin to be economic.

Neither the mineral occurrences themselves nor the regional characteristics of this belt define any known class of mineral deposit. Certain aspects of the belt, however, are common to known classes of deposit. The mineralization is not of red bed type but the occurrence of chalcopyrite disseminations within an impure dolostone is a feature the deposits in Cultus Creek have in common with red beds. Although the metal-enriched beds occur at the end of a major volcanic event, this type of mineralization is not in any sense volcanogenic: no felsic volcanics have been seen and the carbonates cannot be related to volcanic stratigraphy. Because granites occur within 2 km of the probable source of copper-bearing boulders on the DON claims, contact metasomatism should be considered as a possible origin to the mineralization. On the other hand, mineral occurrences (Iva Fern, North Star) further along the

belt are less readily attributable to granites. At this stage the writer is inclined to ascribe the mineralization to a diagenetic concentration in carbonate beds following extraction of metals from the tuff sequence by groundwaters.

Further exploration of the belt will be dependent on detailed geologic mapping aided by regional (preferably heavy mineral) geochemistry. Where overburden permits, geochemical soil sampling will remain the cheapest and most effective way of outlining the sulphide-bearing zones. Elsewhere, induced polarization will remain an effective though expensive tool. Magnetometry seems likely to outline the tuff-carbonate contact but has yet to be tried.

On the DON and NEXT claims the geology has been mapped at 1:10,000 scale and partially at 1:2,500. Coincident geochemical and geophysical targets have been developed. The coincidence of geochemical and induced polarization anomalies with carbonate, much of which is rusty, and some of which contain sulphide-bearing dolostone, coupled with the copper-bearing boulders and reports of attractive grades exposed in 1926 and 1927, justify trenching or drilling to expose bedrock beneath both the east and west anomalies.

The proposal that the next step should be to test the targets developed on the DON claims stems from the perception that it is generally advisable to find out more about the nature of developed targets than to develop new targets with the same unknown characteristics. Trenching has been considered as a way of exploring the targets of the DON claims, but in the circumstances drilling is preferred because trenching seems likely to leave many questions unanswered.

12. **CONCLUSIONS**

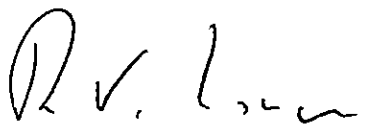
1. The source of the copper-bearing boulders is believed to lie near the former workings, coincident with the geochemical and geophysical anomalies.

2. The targets developed by geophysics and geochemistry justify drilling.

3. The dolostone is metal-enriched at a regional scale as evidenced by:

   a) the occurrence of three mineral properties, the DON, Iva Fern and North Star on this carbonate unit.

   b) five of the seven reconnaissance soil lines across the carbonate unit give evidence of metal enrichment.



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Regional

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including GSC Map 603A

GSC Open File 514
Regional Stream Sediment Survey

GSC Paper 76-1B pp 21-23
(Glover & Price 1976)

Cultus Creek Property

B.C. Dept. Mines Annual Report
1926 pp 284

Humdinger & Hunkadora

B.C. Dept. Mines Annual Report
1927 pp 326

Peanut

B.C. Dept. Mines Annual Report
1968 pp 241

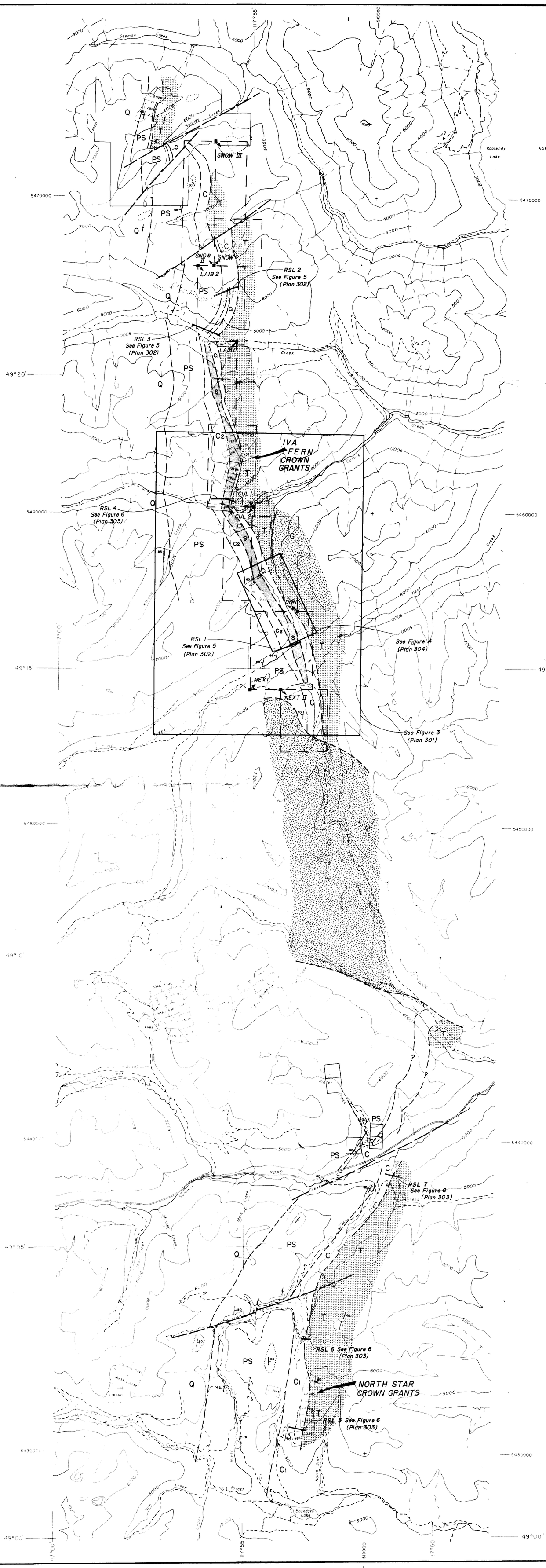
Iva Fern

B.C. Dept. Mines Annual Report
1917 pp 167
1919 pp 135
1928 pp 351
1937 pp E8-4

GSC Memoir 228 pp 81

Canada Belle

B.C. Dept. Mines Annual Report
1955 pp 54



LEGEND

STRATIGRAPHIC UNITS

G — Granitic Intrusives

Q — Quartzite Unit
Quartzite, grits and conglomerates

PS — Phyllitic Shale Unit
Phyllitic shales and phyllites

C2 — Second Carbonate
Grey limestone with interbedded quartzite
Rusty weathering sericite schist
Minor shales

S — Siltstone Unit
Interbedded grey siltstone and chloritic tuff

C1 — First Carbonate
Dolostone, orange weathering, locally siliceous and sulphide-bearing
Grey white limestone
Rusty weathering sericite schist

T — Tuff Unit
Tuffs and tuffaceous sediments, generally well bedded, chloritic, schistose in parts
Minor flows

GEOLOGIC SYMBOLS

- GEOLOGIC CONTACT, INFERRED
- FAULT
- BEDDING, STRIKE AND DIP
- OUTCROP

OTHER SYMBOLS

- LEGAL CORNER POST AND BOUNDARY OF CLAIM OWNED BY OR STAKED ON BEHALF OF OWNER
- BOUNDARY OF CLAIM OR CROWN GRANT BELONGING TO OTHERS
- RSL 5 — RECONNAISSANCE SOIL LINE — SOIL SAMPLES AT 10 METRE SPACING

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
[redacted]

SCALE 1:50,000
1000 500 0 1000 2000 3000 4000 Metres
Contour Interval 500 feet

WAGNER MINES LTD.

CULTUS CREEK PROJECT

RECONNAISSANCE GEOLOGY

AND INDEX TO OTHER MAPS AND PLANS

PLAN No.	DRAWN	DATE	FIGURE
174		JUNE 1981	2
REVISED MAY 1982		N.T.S. 82 F/2, F/7	

MINEQUEST EXPLORATION ASSOCIATES LTD

LEGEND

STRATIGRAPHIC UNITS

G — Granitic Intrusives

Q — Quartzite Unit

Quartzite, grits and conglomerates

PS — Phyllitic Shale Unit

Phyllitic shales and phyllites

C_2 — Second Carbonate

Grey limestone with interbedded quartzite
Rusty weathering sericite schist
Minor shales

S — Siltstone Unit

Interbedded grey siltstone and chloritic tuff

C_1 — First Carbonate

Dolostone, orange weathering, locally siliceous and sulphide-bearing
Grey white limestone
Rusty weathering sericite schist

T — Tuff Unit

Tuffs and tuffaceous sediments, generally well bedded, chloritic, schistose in parts
Minor flows

GEOLOGIC SYMBOLS

GEOLOGIC CONTACT, INFERRED

BEDDING, STRIKE AND DIP

OUTCROP

OTHER SYMBOLS

LEGAL CORNER POST AND BOUNDARY OF CLAIM OWNED BY OR STAKED ON BEHALF OF OWNER

BOUNDARY OF CLAIM OR CROWN GRANT BELONGING TO OTHERS

GRID LINES COVERED BY SOIL GEOCHEMISTRY AND (PARTIALLY) BY INDUCED POLARIZATION

GEOCHEMICAL ANOMALY
0.5 ppm Ag
For Cu, Pb, Zn which have similar distribution of anomalous values see geochemical maps

INDUCED POLARIZATION ANOMALY
PROBABLE AND POSSIBLE

See Figure 4 (Plan 304)

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

[redacted]

SCALE 1:10,000

200 100 0 200 400 600 800 Metres

WAGNER MINES LTD.

CULTUS CREEK PROJECT

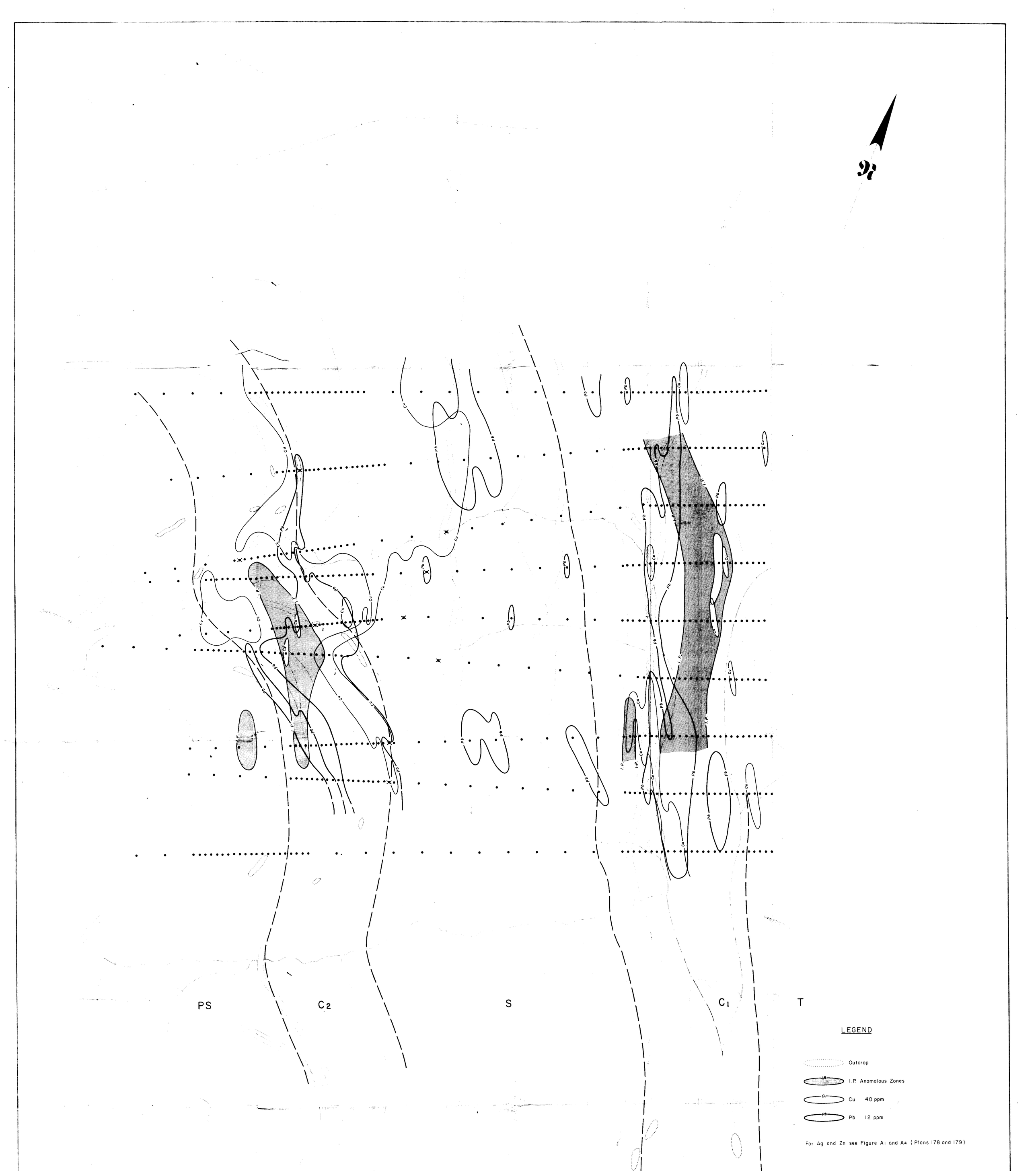
DON AND NEXT CLAIMS

GEOLOGY

PLAN No.	DRAWN	DATE	FIGURE
301	R.V.L. / E.D.S.	JULY 81	3
REVISED MAY 1982		N.T.S. 82 E 7	

MINEQUEST EXPLORATION ASSOCIATES LTD.

EXCLUSIVE DRAFTING SERVICES LTD.



SCALE 1:2500

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CULTUS CREEK PROJECT

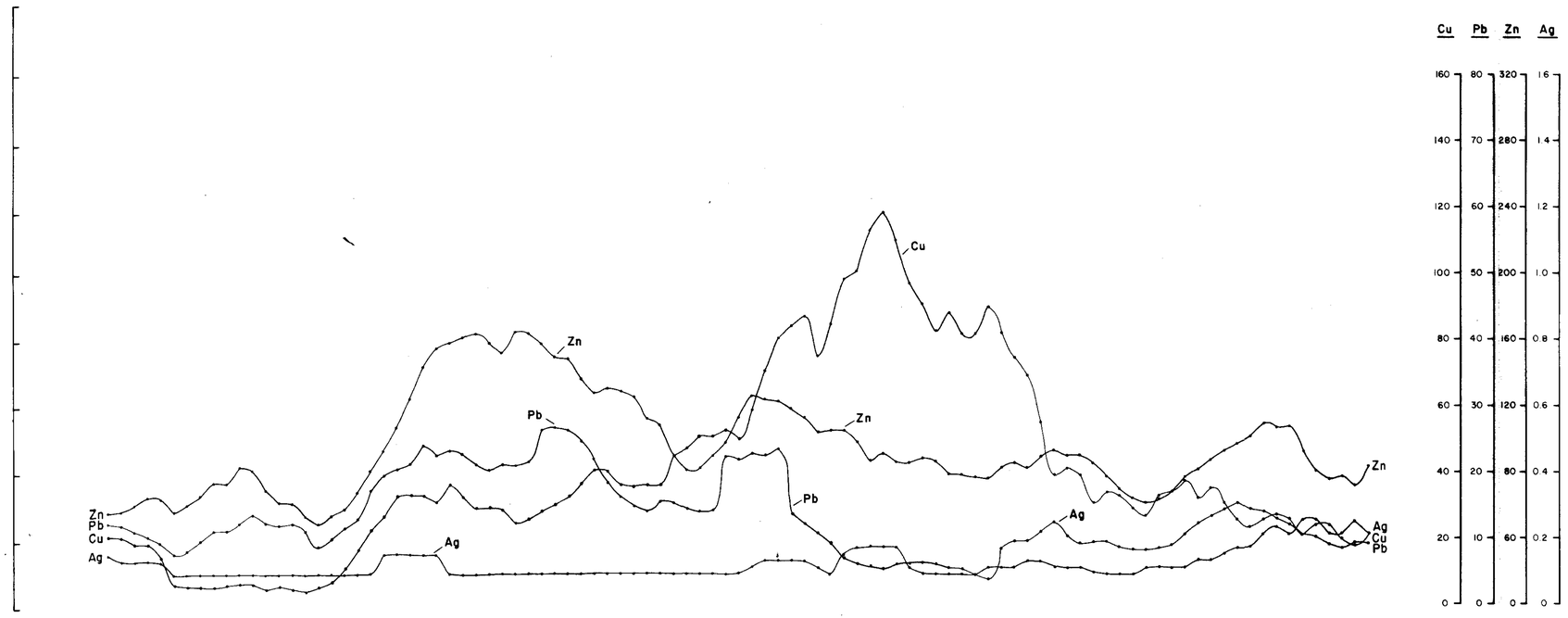
DON CLAIMS

COMPILATION : GEOCHEMISTRY, GEOPHYSICS AND GEOLOGY

304 A.G. December 1981

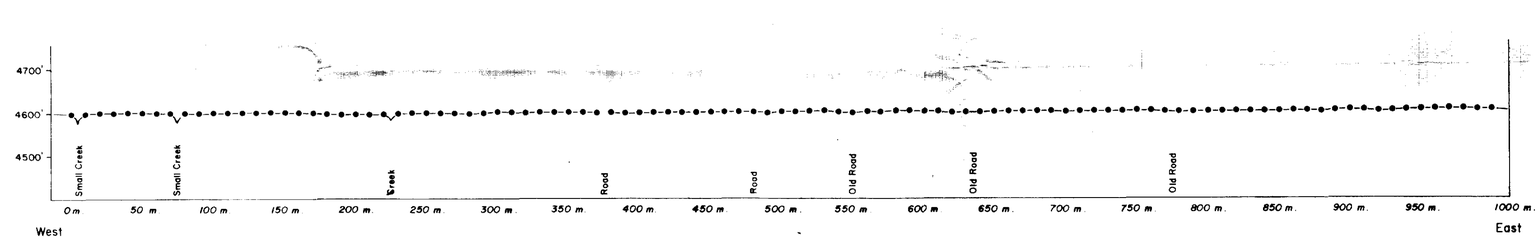
4

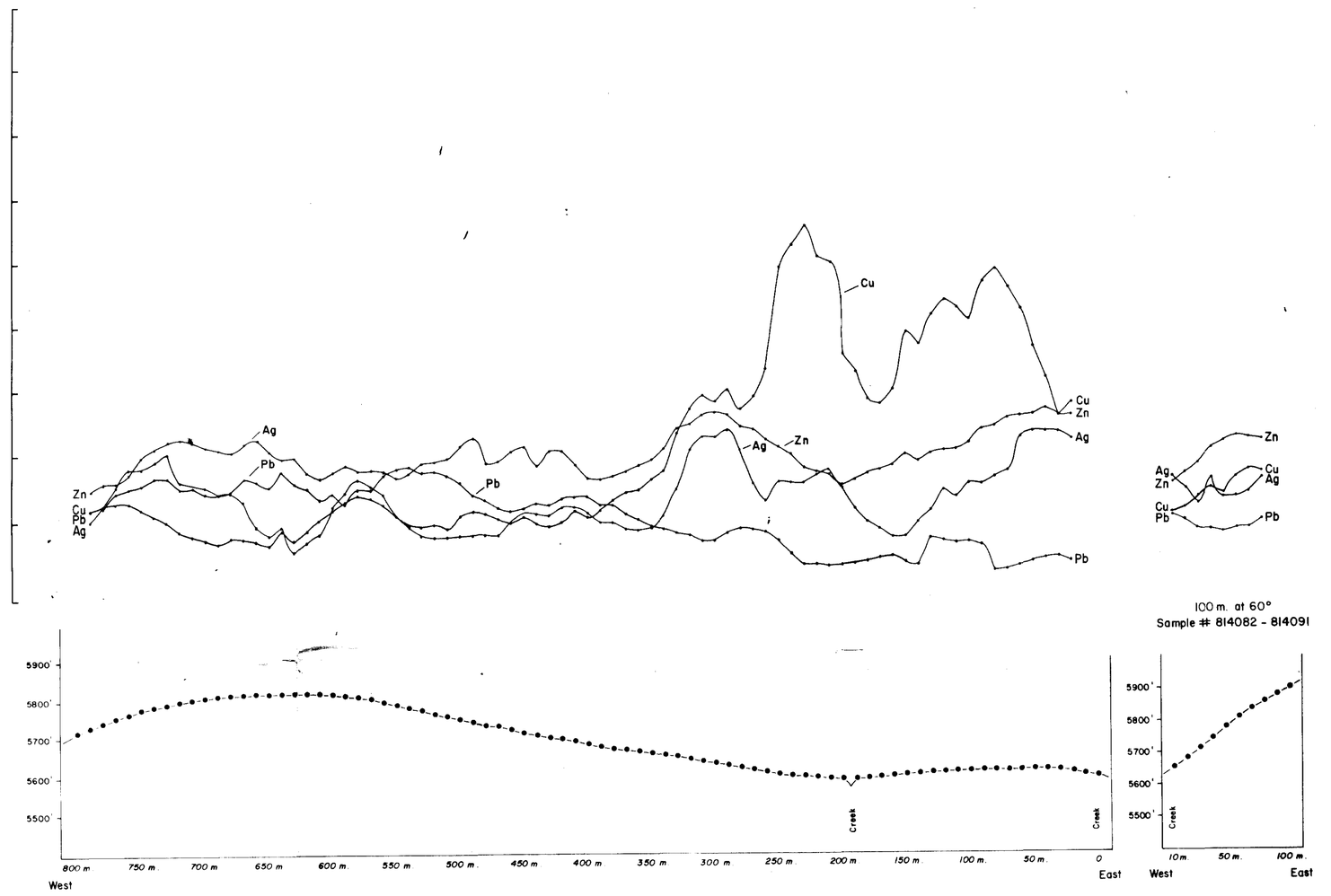
MARQUEST EXPLORATION ASSOCIATES LTD.



RSL 3

1000 m. at 110°
Sample # 812905 - 813005

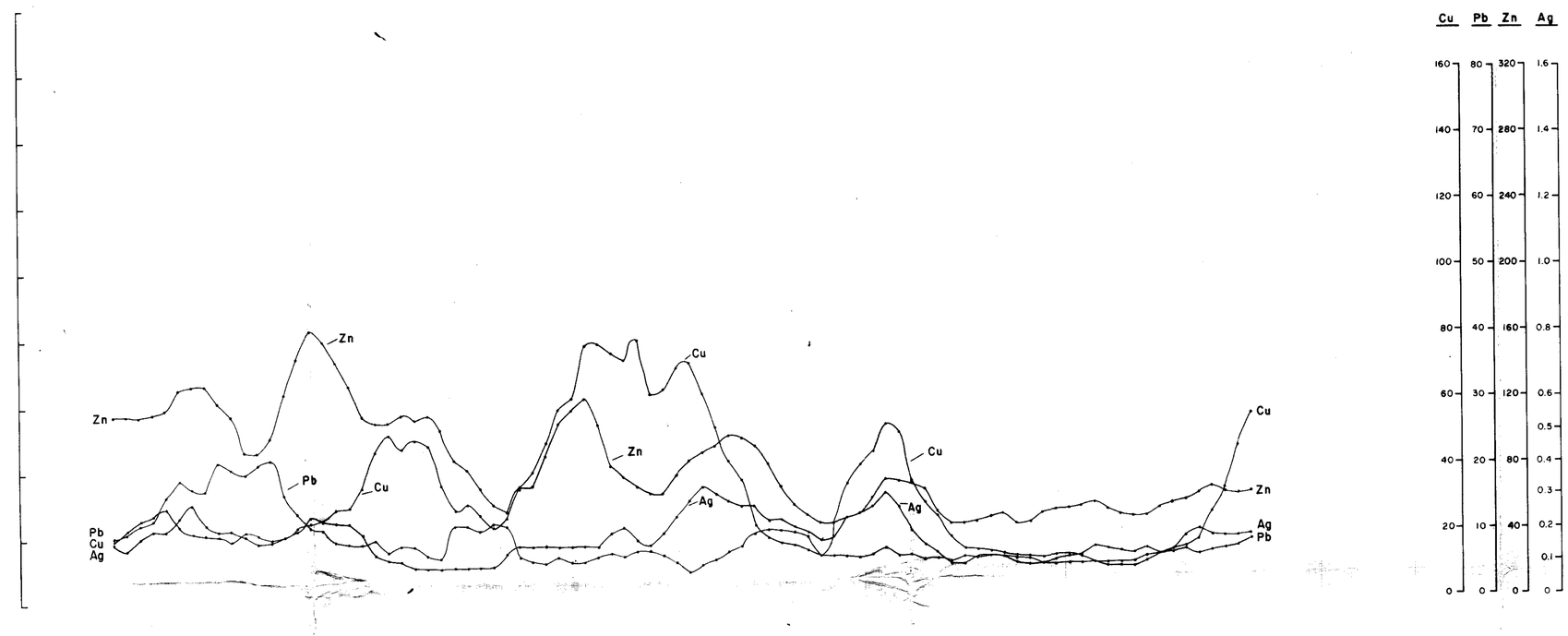




100 m. at 60°
Sample # 814082 - 814091

RSL 2

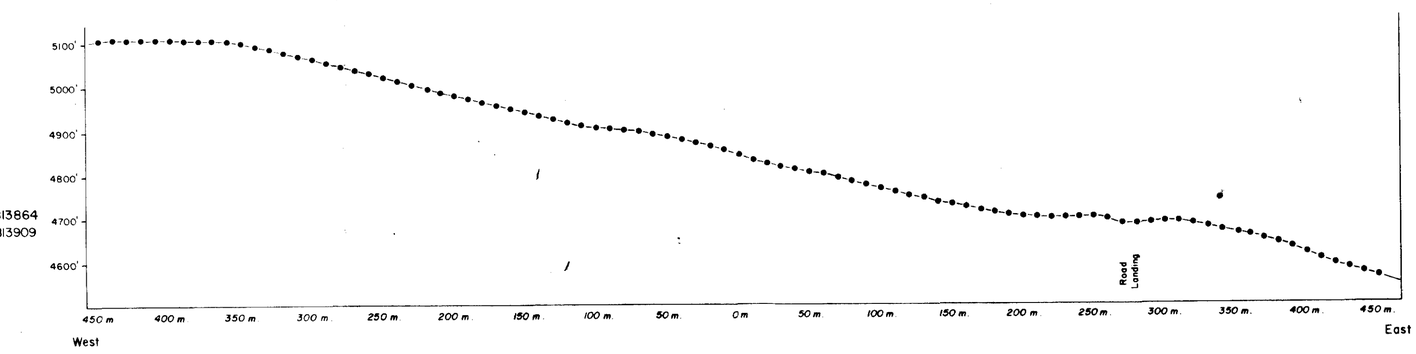
800 m. at 240°
Sample # 814001 - 814081



RSL 1

900 m.

450 m. at 70 m. Sample # 813819 - 813864
450 m. at 250m. Sample # 813865 - 813909



SCALE 1:2500

50 0 50 100 150 200 Metres

WAGNER MINES LTD

CULTUS CREEK PROJECT

RECONNAISSANCE SOIL LINES 1-3

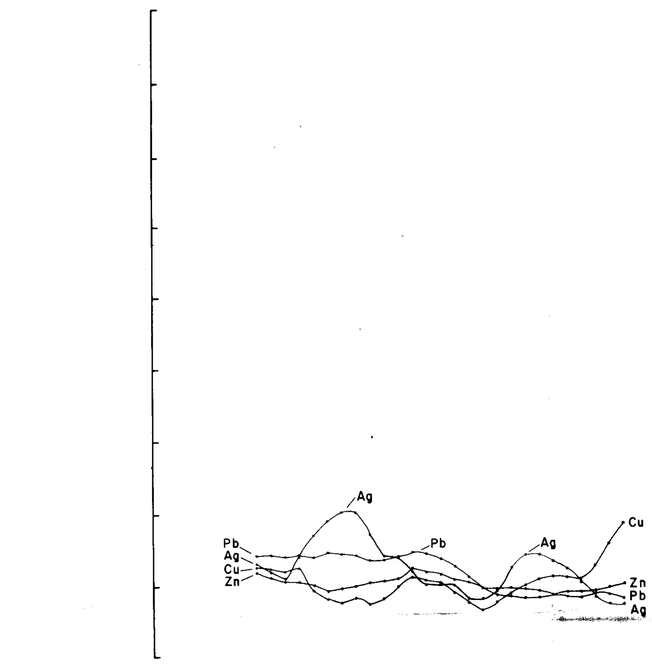
GEOCHEMICAL PROFILES

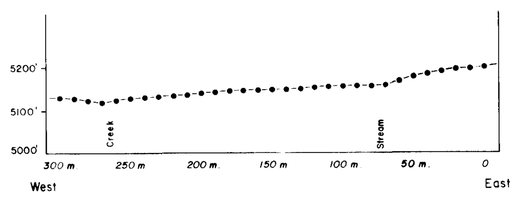
FIVE POINT MOVING AVERAGE

PLAN No	DRAWN	DATE	FIGURE
302	R.V.L.	NOV. 81	5
REVISED		N.T.S. 82 F/7	

MINEQUEST EXPLORATION ASSOCIATES LTD.

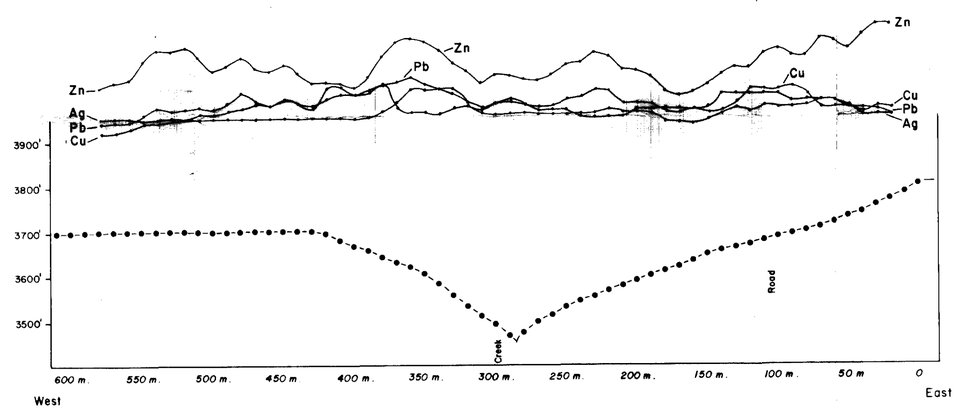
EXCLUSIVE DRAFTING SERVICES LTD.





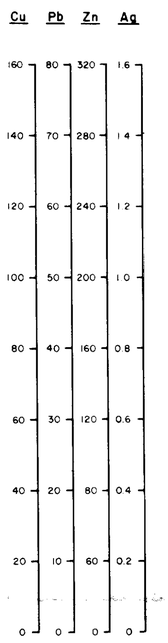
RSL - 6

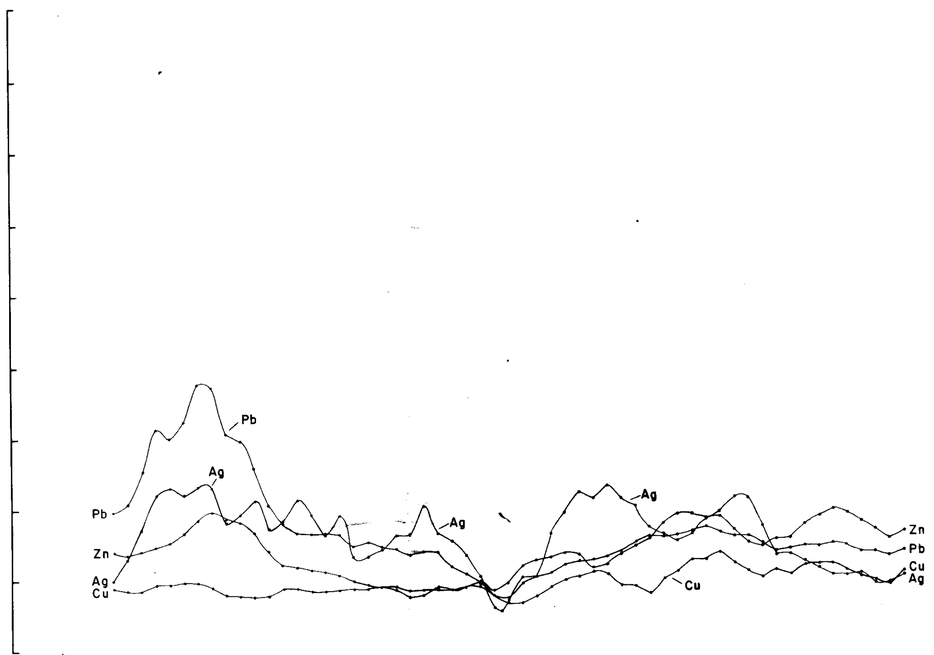
300m. at 270°
Sample # 814153 - 814183

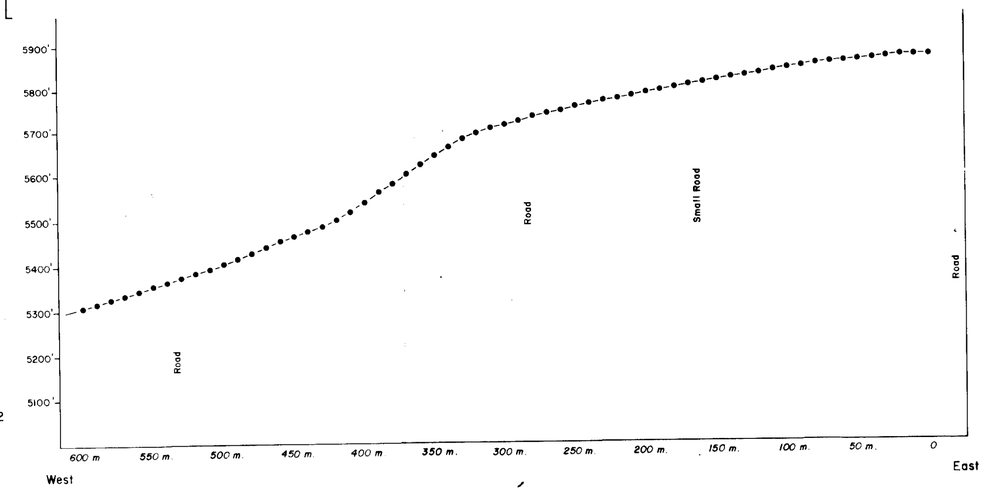


RSL - 7

600m at 290°
Sample # 814184 - 814244

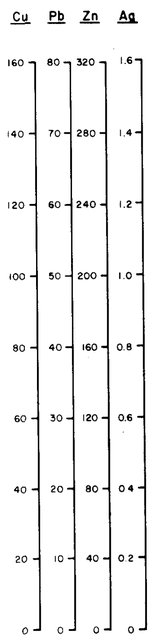


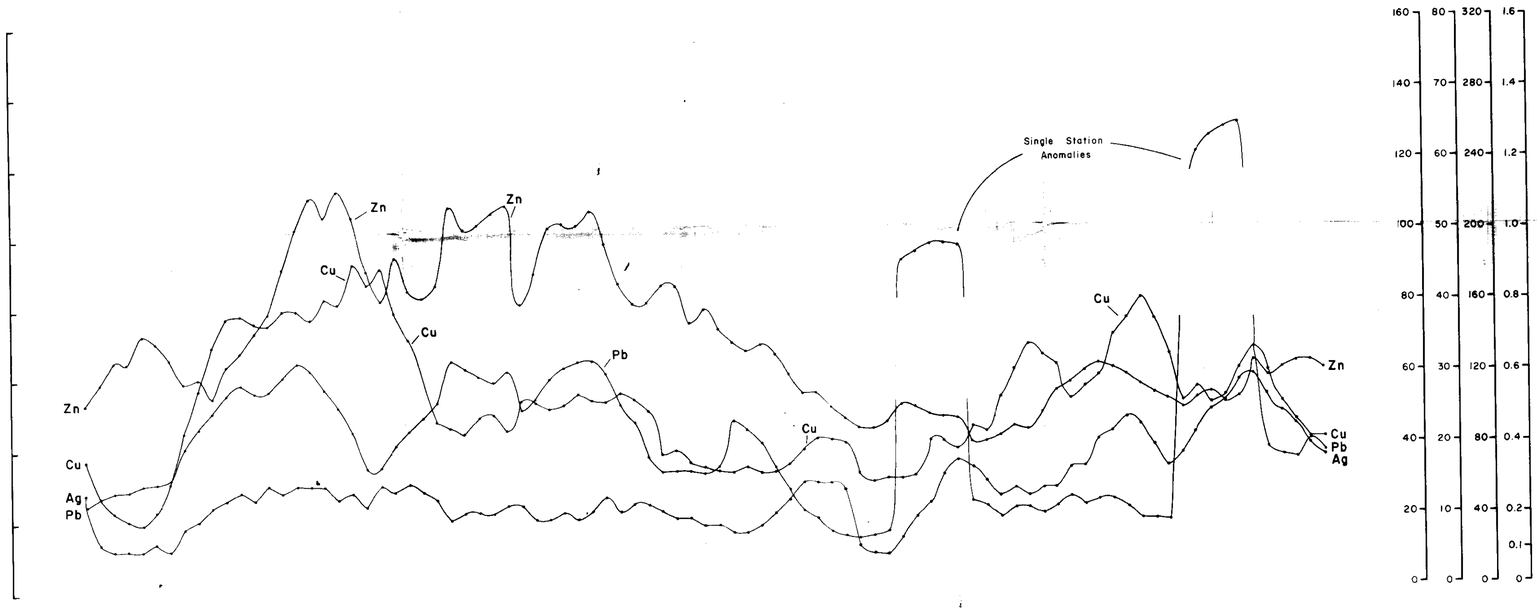




RSL - 5

600 m. at 290°
Sample # 814092 - 814152





RSL - 4

900 m.
500 m. at 270°
400 m. at 110°
Sample # 813910 - 814000

SCALE 1:2500

50 0 50 100 150 200 Metres

WAGNER MINES LTD.

CULTUS CREEK PROJECT

RECONNAISSANCE SOIL LINES 4 - 7

GEOCHEMICAL PROFILES

FIVE POINT MOVING AVERAGE

PLAN No.	DRAWN	DATE	FIGURE
303	R.V.L.	NOV. 81	6
REVISED		N.T.S. 82 F/2,7	

MINEQUEST EXPLORATION ASSOCIATES LTD.

APPENDIX V

AVERAGED VALUES FROM GEOCHEMICAL RECONNAISSANCE SOIL LINES

ROLLING 5 POINT AVERAGES FOR LINE NO. RSL5

SAMPLE NO.	ASSAY VAUES PPM CU	PB	ZN	AG	ROLLING 5 PT. AVG. PPM CU	PB	ZN	AG
[illegible]92	34	16	84	0.2	0.0	0.0	0.0	0.00
[illegible]93	16	12	54	0.2	0.0	0.0	0.0	0.00
[illegible]94	27	15	76	0.2	20.8	13.6	64.8	0.20
[illegible]95	12	12	50	0.3	17.4	13.0	62.4	0.18
[illegible]96	15	13	60	0.1	18.4	13.6	66.4	0.18
[illegible]97	17	13	72	0.1	19.8	13.6	71.6	0.20
[illegible]98	21	15	74	0.2	21.4	14.4	75.6	0.20
[illegible]99	34	15	102	0.3	23.6	14.6	77.6	0.20
[illegible]100	20	16	70	0.3	23.4	14.2	74.4	0.22
[illegible]101	26	14	70	0.1	23.2	14.4	71.6	0.24
[illegible]102	16	11	56	0.2	20.0	14.0	61.6	0.26
[illegible]103	20	16	60	0.3	21.6	13.8	61.2	0.26
814104	18	13	52	0.4	19.2	14.8	58.0	0.34
814105	28	15	68	0.3	21.2	15.8	59.6	0.42
814106	14	19	54	0.5	23.8	15.8	66.4	0.42
[illegible]107	26	16	64	0.6	27.0	16.2	74.0	0.38
[illegible]108	33	16	94	0.3	24.2	17.0	73.6	0.36
814109	34	15	90	0.2	24.2	16.4	75.6	0.32
814110	14	19	66	0.2	21.4	16.0	75.6	0.30
814111	14	16	64	0.3	19.4	15.6	70.0	0.32
814112	12	14	64	0.5	15.8	16.0	61.6	0.34
814113	23	14	66	0.4	17.0	15.0	56.8	0.40
814114	16	17	48	0.3	17.6	13.8	51.6	0.42
814115	20	14	42	0.5	20.4	13.0	47.6	0.46
814116	17	10	38	0.4	20.8	12.6	44.8	0.42
814117	26	10	44	0.7	20.0	12.6	52.4	0.44
814118	25	12	52	0.2	19.6	12.0	52.8	0.38
814119	12	17	86	0.4	17.4	10.8	51.2	0.32
814120	18	11	44	0.2	14.4	10.2	50.4	0.20
814121	6	4	30	0.1	13.4	9.4	47.2	0.20
814122	11	7	40	0.1	12.6	7.0	36.4	0.14
814123	20	8	36	0.2	15.0	7.6	34.8	0.12
814124	8	5	32	0.1	17.8	9.6	36.4	0.20
814125	30	14	36	0.1	17.6	10.4	33.6	0.26
814126	20	14	38	0.5	16.0	11.8	32.8	0.30
814127	10	11	26	0.4	17.6	13.6	32.8	0.32
814128	12	15	32	0.4	15.0	13.6	32.8	0.40
814129	16	14	32	0.2	14.6	13.2	32.4	0.32
814130	17	14	36	0.5	16.4	14.2	34.4	0.32
814131	18	12	36	0.1	17.6	14.6	34.8	0.28
814132	19	16	36	0.4	16.6	15.0	36.0	0.26
814133	18	17	34	0.2	16.6	14.6	38.4	0.26
814134	11	16	38	0.1	16.6	16.2	40.8	0.38
814135	17	12	48	0.5	16.4	16.4	43.2	0.32
814136	18	20	48	0.7	16.0	16.4	44.4	0.38
814137	18	17	48	0.1	16.6	16.4	46.8	0.42
814138	16	17	40	0.5	16.4	17.8	48.0	0.36
814139	14	16	50	0.3	15.4	20.6	55.6	0.34
814140	16	19	54	0.2	15.0	26.4	69.6	0.42
814141	13	34	86	0.6	15.4	29.4	72.0	0.38
814142	16	46	98	0.5	15.8	30.6	74.0	0.36
814143	18	32	72	0.3	17.6	37.2	78.0	0.46
814144	16	22	60	0.2	18.6	37.6	74.8	0.46
814145	25	52	74	0.7	18.6	32.4	65.6	0.44
814146	16	36	70	0.6	18.2	30.0	60.4	0.46
814147	16	20	52	0.4	18.2	31.2	59.2	0.44
814148	16	20	46	0.4	16.8	25.2	56.0	0.34
814149	16	28	54	0.1	16.8	20.8	52.8	0.26
814150	16	22	58	0.2	17.6	19.8	54.4	0.20
814151	16	14	54	0.2	0.0	0.0	0.0	0.00
814152	20	15	60	0.1	0.0	0.0	0.0	0.00

ROLLING 5 POINT AVERAGES FOR LINE NO. RSL6

SAMPLE NO.	ASSAY VAUES PPM CU	PB	ZN	AG	ROLLING 5 PT. AVG. PPM CU	PB	ZN	AG
814153	46	8	38	0.1	0.0	0.0	0.0	0.00
814154	52	8	40	0.1	0.0	0.0	0.0	0.00
814155	40	9	40	0.1	36.2	8.0	37.6	0.14
814156	23	8	34	0.3	31.0	8.2	36.4	0.14
814157	20	7	36	0.1	24.6	8.4	35.6	0.16
814158	20	9	32	0.1	20.6	8.0	34.0	0.20
814159	20	9	36	0.2	21.2	8.0	34.8	0.24
814160	20	7	32	0.3	22.0	8.2	34.0	0.26
814161	26	8	38	0.5	21.2	8.0	36.0	0.28
814162	24	8	32	0.2	19.6	8.0	36.8	0.28
814163	16	8	42	0.2	17.6	8.2	36.8	0.24
814164	12	9	40	0.2	14.8	8.2	36.4	0.18
814165	10	8	32	0.1	12.6	9.4	37.2	0.16
814166	12	8	36	0.2	14.6	11.0	40.8	0.16
814167	13	14	36	0.1	17.8	12.6	42.0	0.20
814168	26	16	60	0.2	20.2	13.6	44.4	0.20
814169	28	17	46	0.4	20.6	14.4	46.4	0.20
814170	22	13	44	0.1	22.0	14.6	48.8	0.24
814171	14	12	46	0.2	19.2	14.0	43.6	0.28
814172	20	15	48	0.3	16.0	13.4	42.0	0.28
814173	12	13	34	0.4	15.2	13.4	41.2	0.34
814174	12	14	38	0.4	16.2	14.0	39.2	0.40
814175	18	13	40	0.4	15.4	14.2	38.4	0.40
814176	19	15	36	0.5	16.0	14.6	37.6	0.38
814177	16	16	44	0.3	18.4	14.0	36.8	0.34
814178	15	15	30	0.3	24.6	14.2	40.0	0.28
814179	24	11	34	0.2	24.0	14.0	41.6	0.22
814180	49	14	56	0.1	24.4	14.4	42.4	0.24
814181	16	14	44	0.2	25.4	14.2	48.8	0.26
814182	18	18	48	0.4	0.0	0.0	0.0	0.00
814183	20	14	62	0.4	0.0	0.0	0.0	0.00

ROLLING 5 POINT AVERAGES FOR LINE NO. RSL7

SAMPLE NO.	ASSAY VAUES PPM CU	PB	ZN	AG	ROLLING 5 PT. AVG. PPM CU	PB	ZN	AG
814184	8	5	80	0.1	0.0	0.0	0.0	0.00
814185	16	6	68	0.1	0.0	0.0	0.0	0.00
814186	10	6	86	0.1	11.4	5.4	70.4	0.10
814187	13	4	50	0.1	11.8	6.0	70.4	0.10
814188	10	6	68	0.1	10.0	6.0	64.4	0.10
814189	10	8	80	0.1	12.0	6.4	57.2	0.12
814190	7	6	38	0.1	11.8	7.0	62.0	0.14
814191	20	8	50	0.2	11.8	7.2	62.4	0.14
814192	12	7	74	0.2	15.4	6.4	52.8	0.14
814193	10	7	70	0.1	17.6	6.2	53.2	0.14
814194	28	4	32	0.1	16.8	6.2	57.6	0.16
814195	18	5	40	0.1	16.8	6.6	55.2	0.16
814196	16	8	72	0.3	16.8	5.6	46.4	0.16
814197	12	9	62	0.2	13.2	6.2	47.2	0.16
814198	10	2	26	0.1	11.0	5.6	43.6	0.16
814199	10	7	36	0.1	10.2	4.8	36.4	0.12
814200	7	2	22	0.1	11.0	4.0	32.8	0.12
814201	12	4	36	0.1	10.2	4.4	31.6	0.12
814202	16	5	44	0.2	10.6	4.4	33.2	0.12
814203	6	4	20	0.1	13.0	5.4	41.2	0.12
814204	12	7	44	0.1	13.8	5.8	45.2	0.12
814205	19	7	62	0.1	13.8	5.8	45.6	0.10
814206	16	6	56	0.1	16.2	6.0	52.8	0.10
814207	16	5	46	0.1	17.0	5.6	55.2	0.10
814208	18	5	56	0.1	14.8	5.4	49.6	0.10
814209	16	5	56	0.1	14.4	5.2	48.4	0.12
814210	8	6	34	0.1	13.0	5.2	43.6	0.12
814211	14	5	50	0.2	12.2	5.2	40.0	0.12
814212	9	5	22	0.1	13.4	5.6	40.4	0.14
814214	14	5	38	0.1	13.8	5.4	43.2	0.14
814215	22	7	58	0.2	12.8	5.4	39.2	0.12
814216	10	5	48	0.1	13.0	6.8	44.8	0.14
814217	9	5	30	0.1	12.4	8.2	51.2	0.18
814218	10	12	50	0.2	10.4	9.0	58.4	0.18
814219	11	12	70	0.3	10.8	9.8	62.0	0.18
814220	12	13	94	0.2	10.6	10.8	64.0	0.18
814221	12	9	66	0.1	12.2	10.0	62.0	0.16
814222	8	10	40	0.1	13.0	9.6	54.4	0.12
814223	18	8	40	0.1	17.6	8.8	42.8	0.10
814224	45	10	32	0.1	17.2	8.6	36.0	0.10
814225	5	7	36	0.1	19.4	8.4	38.8	0.10
814226	10	8	32	0.1	18.2	7.8	39.6	0.10
814227	19	9	54	0.1	12.4	6.6	39.6	0.10
814228	12	5	44	0.1	14.0	7.0	44.8	0.10
814229	16	4	32	0.1	15.4	7.4	50.4	0.10
814230	13	9	62	0.1	13.6	6.8	47.6	0.10
814231	17	10	60	0.1	14.0	7.4	48.0	0.10
814232	10	6	40	0.1	13.0	8.6	54.0	0.10
814233	14	8	46	0.1	12.8	7.2	48.4	0.10
814234	11	10	62	0.1	11.2	6.4	47.6	0.10
814235	12	2	34	0.1	10.8	6.6	54.8	0.10
814236	9	6	56	0.1	10.0	6.2	59.6	0.10
814237	8	7	76	0.1	9.8	6.0	58.0	0.10
814238	10	6	70	0.1	9.4	6.6	59.2	0.10
814239	10	9	54	0.1	9.0	5.6	52.0	0.10
814240	10	5	40	0.1	7.6	4.6	42.8	0.10
814241	7	1	20	0.1	7.2	4.6	41.6	0.10
814242	1	2	30	0.1	6.8	4.2	38.8	0.10
814243	8	6	64	0.1	0.0	0.0	0.0	0.00
814244	8	7	40	0.1	0.0	0.0	0.0	0.00

ROLLING 5 POINT AVERAGES FOR LINE NO. RSL3

SAMPLE NO.	ASSAY VAUES PPM CU	PB	ZN	AG	ROLLING 5 PT. AVG. PPM CU	PB	ZN	AG
B12905	12	14	66	0.2	0.0	0.0	0.0	0.00
B12906	18	12	50	0.1	0.0	0.0	0.0	0.00
B12907	12	10	44	0.1	23.2	12.6	56.4	0.16
B12908	28	12	48	0.1	22.8	12.4	57.2	0.14
B12909	46	15	74	0.3	21.6	11.6	60.8	0.14
B12910	10	13	70	0.1	21.6	10.8	65.2	0.14
B12911	12	8	68	0.1	17.2	9.8	64.4	0.14
B12912	12	6	66	0.1	8.8	8.0	57.2	0.10
B12913	6	7	44	0.1	8.4	8.6	61.2	0.10
B12914	4	6	38	0.1	8.4	10.0	67.6	0.10
B12915	8	16	90	0.1	8.0	11.4	74.0	0.10
B12916	12	15	100	0.1	8.8	11.4	74.0	0.10
B12917	10	13	98	0.1	9.2	12.8	84.0	0.10
B12918	10	7	44	0.1	9.2	13.8	82.0	0.10
B12919	6	13	88	0.1	7.4	12.8	70.0	0.10
B12920	8	21	80	0.1	8.2	12.2	62.4	0.10
B12921	3	10	40	0.1	7.8	12.6	62.4	0.10
B12922	14	10	60	0.1	7.6	11.6	55.2	0.10
B12923	8	9	44	0.1	8.0	9.0	49.6	0.10
B12924	5	8	52	0.1	9.4	10.0	55.6	0.10
B12925	10	8	52	0.1	13.8	12.0	58.8	0.10
B12926	10	15	70	0.1	19.4	13.2	68.0	0.10
B12927	36	20	76	0.1	25.2	17.0	80.4	0.10
B12928	36	15	90	0.1	29.0	19.6	94.0	0.16
B12929	34	27	114	0.1	35.4	20.6	108.4	0.16
B12930	29	21	120	0.4	35.2	21.6	125.2	0.16
B12931	42	20	142	0.1	34.6	24.2	144.0	0.16
B12932	35	25	160	0.1	33.4	22.8	155.2	0.16
B12933	33	28	184	0.1	38.4	23.6	158.0	0.10
B12934	28	20	170	0.1	34.8	23.0	161.6	0.10
B12935	54	25	134	0.1	31.8	21.2	164.0	0.10
B12936	24	17	160	0.1	32.0	20.4	158.8	0.10
B12937	20	16	172	0.1	31.6	21.2	152.4	0.10
B12938	34	24	158	0.1	27.2	21.0	165.6	0.10
B12939	26	24	138	0.1	28.6	22.8	164.0	0.10
B12940	32	24	200	0.1	30.6	26.6	159.6	0.10
B12941	31	26	152	0.1	32.6	26.8	150.8	0.10
B12942	30	35	150	0.1	35.4	26.4	148.4	0.10
B12943	44	25	114	0.1	38.6	24.8	136.8	0.10
B12944	40	22	126	0.1	43.4	22.0	128.0	0.10
B12945	48	16	142	0.1	42.6	18.6	133.6	0.10
B12946	55	12	108	0.1	38.2	16.8	134.0	0.10
B12947	26	18	178	0.1	38.0	15.0	127.2	0.10
B12948	22	16	116	0.1	38.8	14.4	112.8	0.10
B12949	39	13	92	0.1	38.6	15.8	108.8	0.10
B12950	52	13	70	0.1	45.4	15.4	90.8	0.10
B12951	54	19	88	0.1	49.8	14.6	81.6	0.10
B12952	60	16	88	0.1	52.6	14.2	83.2	0.10
B12953	44	12	70	0.1	52.6	14.2	89.2	0.10
B12954	53	11	100	0.1	55.0	22.4	97.6	0.10
B12955	52	13	100	0.1	52.2	22.0	112.8	0.10
B12956	66	60	130	0.1	61.4	23.0	127.2	0.12
B12957	46	14	164	0.1	72.8	22.8	124.8	0.14
B12958	90	17	142	0.2	82.4	23.8	123.6	0.14
B12959	110	10	88	0.2	86.2	13.8	119.6	0.14
B12960	100	18	94	0.1	89.4	12.4	112.8	0.14
B12961	85	10	110	0.1	77.6	11.0	104.4	0.12
B12962	62	7	130	0.1	86.8	9.6	106.4	0.10
B12963	31	10	100	0.1	100.4	7.0	105.2	0.16
B12964	156	3	98	0.1	103.0	6.2	98.4	0.18
B12965	168	5	88	0.4	115.8	6.0	86.4	0.18
B12966	98	6	76	0.2	120.8	5.6	91.2	0.18
B12967	126	6	70	0.1	112.8	6.2	87.6	0.18
B12968	56	8	124	0.1	99.2	6.4	86.0	0.12
B12969	116	6	80	0.1	93.6	6.6	89.6	0.10
B12970	100	6	80	0.1	84.4	6.2	87.6	0.10
B12971	70	7	94	0.1	90.0	5.6	78.4	0.10
B12972	80	4	60	0.1	84.0	5.4	79.6	0.10
B12973	84	5	78	0.1	84.0	4.8	77.6	0.10
B12974	86	5	86	0.1	92.0	4.0	76.8	0.12
B12975	100	3	70	0.1	84.0	7.6	83.6	0.12
B12976	110	3	90	0.2	76.4	9.2	85.6	0.12
B12977	40	22	94	0.1	71.6	9.6	83.6	0.14
B12978	46	13	88	0.1	56.8	11.0	90.8	0.14
B12979	62	7	76	0.2	40.8	12.6	94.4	0.12
B12980	26	10	106	0.1	43.2	10.2	90.8	0.12
B12981	30	11	108	0.1	41.2	9.6	90.8	0.12
B12982	52	10	76	0.1	32.2	9.8	86.4	0.10
B12983	36	10	88	0.1	35.4	9.8	77.6	0.10
B12984	17	8	54	0.1	34.4	8.8	68.8	0.10
B12985	42	10	62	0.1	31.0	8.4	64.8	0.10
B12986	25	6	64	0.1	28.6	8.4	67.2	0.12
B12987	35	8	56	0.1	34.4	8.8	64.0	0.12
B12988	24	10	70	0.2	37.2	9.0	68.8	0.12
B12989	46	10	68	0.1	38.6	10.8	76.4	0.14
B12990	56	11	86	0.1	34.0	12.4	81.6	0.14
B12991	32	15	102	0.2	36.4	13.6	87.6	0.14
B12992	12	16	82	0.1	32.4	14.2	92.4	0.16
B12993	36	16	100	0.2	27.2	15.2	97.2	0.18
B12994	26	13	92	0.2	24.8	14.2	100.8	0.18
B12995	30	16	110	0.2	27.4	14.0	108.8	0.22
B12996	20	10	120	0.2	28.6	13.0	106.8	0.24
B12997	25	15	122	0.3	27.8	12.0	107.6	0.22
B12998	42	11	90	0.3	22.6	10.6	92.0	0.26
B12999	22	8	96	0.1	25.8	10.2	80.0	0.26
B13000	4	9	32	0.4	25.6	9.0	75.6	0.22
B13001	36	8	60	0.2	21.6	8.4	77.6	0.22
B13002	24	9	100	0.1	19.6	9.2	71.2	0.26
B13003	22	8	100	0.3	22.8	9.2	84.0	0.22
B13004	12	12	64	0.3	0.0	0.0	0.0	0.00
B13005	20	9	96	0.2	0.0	0.0	0.0	0.00

ROLLING 5 POINT AVERAGES FOR LINE NO. RSL4

SAMPLE NO.	ASSAY VAUES PPM CU	PB	ZN	AG	ROLLING 5 PT. AVG. PPM CU	PB	ZN	AG
B13910	28	11	120	0.2	0.0	0.0	0.0	0.00
B13911	46	15	114	0.2	0.0	0.0	0.0	0.00
B13912	28	49	138	0.1	32.6	21.8	136.4	0.18
B13913	30	18	110	0.1	34.0	22.8	128.8	0.16
B13914	31	16	200	0.3	32.8	23.8	138.0	0.16
B13915	35	16	82	0.1	33.2	17.0	146.4	0.18
B13916	40	20	160	0.2	34.0	16.2	157.2	0.18
B13917	30	15	180	0.2	35.8	16.6	149.2	0.20
B13918	34	14	164	0.1	38.8	16.6	169.6	0.20
B13919	40	18	160	0.4	38.0	16.8	169.6	0.22
B13920	50	16	184	0.1	50.0	18.6	161.2	0.24
B13921	36	21	160	0.3	53.6	23.6	160.8	0.24
B13922	90	24	138	0.3	55.2	26.0	171.8	0.22
B13923	52	39	162	0.1	52.4	30.4	195.0	0.26
B13924	48	30	215	0.3	53.4	32.8	215.0	0.22
B13925	36	38	300	0.3	55.4	32.4	205 8	0.20
B13926	41	33	260	0.1	52.0	31.2	207 4	0.22
B13927	100	22	92	0.2	51.0	29.8	204.4	0.20
B13928	35	33	170	0.2	53 4	26.8	179.2	0.20
B13929	43	23	200	0.2	53.6	25.4	160.8	0.24
B13930	48	23	174	0.3	45.6	31.0	218.4	0.24
B13931	42	26	168	0.3	49.4	29.4	214.8	0.22
B13932	60	50	380	0.2	48.4	30.4	207.6	0.22
B13933	54	25	152	0.1	44.0	31.4	204.8	0.22
B13934	38	28	164	0.2	46.0	32.2	217.2	0.20
B13935	26	28	160	0.3	47.6	26.6	169.2	0.26
B13936	52	30	230	0.2	47.8	24.6	164.8	0.28
B13937	68	22	140	0.5	71.4	22.8	170.0	0.30
B13938	55	15	130	0.2	78.4	20.6	188.0	0.28
B13939	156	19	190	0.3	90.8	17.8	164.8	0.30
B13940	61	17	250	0.2	86.2	17.6	180.8	0.24
B13941	114	16	114	0.3	92.2	22.6	212.8	0.28
B13942	45	21	220	0.2	80.6	26.0	227.8	0.26
B13943	85	40	290	0.4	82.4	28.2	213.8	0.30
B13944	98	36	265	0.2	76.8	31.4	223.0	0.30
B13945	70	28	180	0.4	79.8	32.2	205.8	0.30
B13946	86	32	160	0.3	79.6	30.2	183.4	0.28
B13947	60	25	134	0.2	75.6	28.6	157.2	0.30
B13948	84	30	178	0.3	76.0	28.2	147.2	0.26
B13949	78	28	134	0.3	78.0	29.4	136.8	0.28
B13950	72	26	130	0.2	77.6	27.8	128.0	0.26
B13951	96	38	108	0.4	69.2	25.4	108.8	0.24
B13952	58	17	90	0.1	56.4	23.2	120.0	0.20
B13953	42	18	82	0.2	45.4	20.8	118.0	0.18
B13954	14	17	190	0.1	30.2	16.0	134.4	0.12
B13955	17	14	120	0.1	22.8	15.8	140.8	0.14
B13956	20	14	190	0.1	19.4	15.4	146.8	0.12
B13957	21	16	122	0.2	20.2	14.4	128.8	0.12
B13958	25	16	112	0.1	23.2	14.6	130.4	0.12
B13959	18	12	100	0.1	27.6	13.8	118.4	0.14
B13960	32	15	128	0.1	36.6	12.4	114.0	0.28
B13961	42	10	130	0.2	39.6	11.0	110.8	0.30
B13962	66	9	100	0.9	42.0	10.0	108.4	0.30
B13963	40	9	96	0.2	41.6	8.0	102.0	0.30
B13964	30	7	88	0.1	40.4	7.4	95.6	0.28
B13965	30	5	96	0.1	32.4	7.2	93.2	0.12
B13966	36	7	98	0.1	30.0	7.4	93.2	0.10
B13967	26	8	88	0.1	31.2	8.0	94.4	0.10
B13968	28	10	96	0.1	30.6	46.2	103.2	0.14
B13969	36	10	94	0.1	31.8	47.2	100.0	0.20
B13970	27	196	140	0.3	41.0	48.6	98.4	0.24
B13971	42	12	82	0.4	41.4	48.8	96.0	0.32
B13972	72	15	80	0.3	39.4	48.6	95.6	0.36
B13973	30	11	84	0.5	44.8	12.2	82.0	0.34
B13974	26	9	92	0.3	44.0	11.8	82.8	0.30
B13975	54	14	72	0.2	53.6	10.0	84.4	0.26
B13976	38	10	86	0.2	61.6	11.4	89.2	0.28
B13977	120	6	88	0.1	68.0	11.4	88.0	0.26
B13978	70	18	108	0.6	65.2	10.2	97.2	0.28
B13979	58	9	86	0.2	62.0	11.2	108.8	0.28
B13980	40	8	118	0.3	52.4	13.0	115.2	0.34
B13981	22	15	144	0.2	56.0	11.8	121.2	0.34
B13982	72	15	120	0.4	59.6	12.2	126.0	0.42
B13983	88	12	138	0.6	71.2	12.2	124.0	0.44
B13984	76	11	110	0.6	75.6	11.2	119.2	0.48
B13985	98	8	108	0.4	81.2	9.8	113.2	0.46
B13986	44	10	120	0.4	75.6	9.8	108.0	0.40
B13987	100	8	90	0.3	65.8	9.4	105.6	0.34
B13988	60	12	112	0.3	51.0	47.4	100.0	0.38
B13989	27	9	98	0.3	55.4	61.4	104.4	0.44
B13990	24	198	30	0.6	51.4	63.8	108.0	0.50
B13991	66	80	142	0.7	53.4	64.8	103.2	0.52
B13992	80	20	108	0.6	60.2	65.4	106.4	0.60
B13993	70	17	88	0.4	66.4	32.8	126.4	0.58
B13994	61	12	114	0.7	60.0	19.6	117.2	0.50
B13995	55	35	180	0.5	50.4	18.4	122.0	0.48
B13996	34	14	96	0.3	46.0	18.0	125.2	0.44
B13997	32	14	132	0.5	40.4	20.8	125.6	0.38
B13998	48	15	104	0.2	40.6	19.0	120.4	0.36
B13999	33	26	116	0.4	0.0	0.0	0.0	0.00
B14000	56	26	154	0.4	0.0	0.0	0.0	0.00

ROLLING 5 POINT AVERAGES FOR LINE NO. RSL1

SAMPLE NO.	ASSAY VAUES PPM CU	PB	ZN	AG	ROLLING 5 PT. AVG. PPM CU	PB	ZN	AG
813819	82	2	82	0.3	0.0	0.0	0.0	0.00
813820	74	3	94	0.3	0.0	0.0	0.0	0.00
813821	71	3	76	0.4	72.4	4.0	84.8	0.30
813822	49	6	96	0.3	62.8	5.0	90.0	0.34
813823	86	6	76	0.2	52.8	6.0	92.4	0.32
813824	34	7	108	0.5	42.4	7.2	98.8	0.30
813825	24	8	106	0.2	36.6	8.0	97.2	0.28
813826	19	9	108	0.3	23.0	10.0	94.0	0.28
813827	20	10	88	0.2	19.4	10.4	82.4	0.24
813828	18	16	60	0.2	17.4	10.4	68.4	0.24
813829	16	9	50	0.3	16.8	10.2	57.6	0.22
813830	14	8	36	0.2	15.6	9.4	52.0	0.20
813831	16	8	54	0.2	13.6	6.8	47.6	0.18
813832	14	6	60	0.1	19.6	6.8	47.2	0.18
813833	8	3	38	0.1	35.6	6.8	51.2	0.24
813834	46	9	48	0.3	41.2	6.6	52.4	0.26
813835	94	8	56	0.5	45.0	6.8	60.4	0.28
813836	44	7	60	0.3	53.0	7.8	72.4	0.32
813837	33	7	100	0.2	50.2	6.6	71.2	0.28
813838	48	8	98	0.3	36.0	6.8	71.6	0.20
[illegible]	32	3	42	0.1	29.6	6.0	66.8	0.16
813840	23	9	58	0.1	25.4	6.0	53.6	0.14
813841	12	3	36	0.1	19.0	5.6	44.8	0.10
813842	12	7	34	0.1	15.4	6.4	45.6	0.10
813843	16	6	54	0.1	14.8	6.2	43.2	0.12
813844	14	7	46	0.1	14.4	6.6	46.0	0.12
813845	20	8	46	0.2	13.8	6.4	48.0	0.12
813846	10	5	50	0.1	12.6	5.6	44.4	0.12
813847	9	6	44	0.1	12.8	5.0	45.6	0.12
813848	10	2	36	0.1	12.0	5.0	52.4	0.10
813849	15	4	52	0.1	12.4	5.6	53.2	0.10
813850	16	8	80	0.1	12.6	6.4	54.0	0.10
813851	12	8	54	0.1	11.8	6.6	56.4	0.10
813852	10	10	48	0.1	10.8	7.8	57.6	0.10
813853	6	3	48	0.1	9.6	7.4	53.2	0.10
813854	10	10	58	0.1	9.6	7.0	51.2	0.10
813855	10	6	58	0.1	9.6	6.8	50.4	0.10
813856	12	6	44	0.1	11.4	7.2	50.8	0.12
813857	10	9	44	0.1	12.6	6.6	54.8	0.12
813858	15	5	50	0.2	14.2	6.8	57.6	0.14
813859	16	7	78	0.1	15.4	7.2	59.6	0.18
813860	18	7	72	0.2	17.4	6.8	63.6	0.20
813861	18	8	54	0.3	26.0	7.6	66.8	0.18
813862	20	7	64	0.2	32.8	7.6	64.0	0.18
813863	58	9	66	0.1	46.0	7.6	62.8	0.18
813864	50	7	64	0.1	55.6	7.4	64.4	0.18
813865	84	7	66	0.2	62.8	7.4	64.8	0.16
813866	66	7	62	0.3	62.2	6.6	68.8	0.18
813867	56	7	66	0.1	79.0	7.0	75.2	0.22
813868	55	5	86	0.2	72.8	6.6	82.8	0.20
813869	134	9	96	0.3	75.6	6.0	106.8	0.16
813870	53	5	104	0.1	78.0	5.8	121.2	0.16
813871	80	4	182	0.1	77.4	6.4	122.8	0.16
813872	68	6	138	0.1	61.6	5.8	115.6	0.16
813873	52	8	94	0.2	58.0	6.0	108.0	0.16
813874	55	6	60	0.3	48.2	6.6	87.6	0.16
813875	35	6	66	0.1	39.6	11.4	70.0	0.16
813876	31	7	80	0.1	34.2	11.6	67.6	0.14
813877	25	30	50	0.1	25.8	10.8	57.6	0.10
813878	25	9	82	0.1	22.6	11.2	59.6	0.10
813879	13	2	10	0.1	26.8	11.4	68.8	0.10
813880	19	8	76	0.1	29.8	6.8	80.0	0.10
813881	52	8	126	0.1	28.0	7.0	85.2	0.10
813882	40	7	106	0.1	35.6	8.2	104.0	0.10
[illegible]	16	10	104	0.1	47.8	8.2	112.8	0.10
813884	51	8	104	0.1	49.8	7.6	110.4	0.12
813885	80	8	120	0.1	46.6	9.2	112.4	0.12
813886	62	5	114	0.2	50.4	8.8	109.2	0.14
813887	24	15	116	0.1	46.0	8.8	108.4	0.20
813888	35	8	92	0.2	35.4	9.0	114.4	0.24
813889	29	8	100	0.4	29.6	11.0	131.6	0.24
813890	27	9	150	0.3	28.8	11.4	145.2	0.24
813891	33	15	200	0.2	25.4	13.6	158.4	0.26
813892	20	17	184	0.1	24.0	16.4	164.4	0.22
813893	18	19	158	0.3	23.8	21.8	148.8	0.20
813894	22	22	130	0.2	20.0	21.0	121.6	0.18
813895	25	36	72	0.2	19.8	19.6	100.0	0.18
813896	14	11	64	0.1	20.8	20.2	90.8	0.20
813897	19	10	76	0.1	22.0	21.2	92.4	0.22
813898	23	22	112	0.4	19.4	17.0	114.0	0.22
813899	28	27	138	0.3	20.6	17.6	122.8	0.24
813900	13	15	180	0.2	21.0	18.6	132.4	0.30
813901	20	14	108	0.2	22.0	16.2	132.4	0.26
813902	21	15	124	0.4	24.0	12.8	130.8	0.22
813903	28	10	112	0.2	28.8	12.0	117.6	0.22
813904	38	10	130	0.1	27.6	10.8	115.2	0.20
813905	37	11	114	0.2	26.0	9.4	114.0	0.16
813906	14	8	96	0.1	23.2	10.0	113.2	0.18
813907	13	8	118	0.2	19.8	10.6	118.4	0.22
813908	14	13	108	0.3	0.0	0.0	0.0	0.00
813909	21	13	156	0.3	0.0	0.0	0.0	0.00

ROLLING 5 POINT AVERAGES FOR LINE NO. RSL2

SAMPLE NO.	ASSAY VAUES PPM CU	PB	ZN	AG	ROLLING 5 PT. AVG. PPM CU	PB	ZN	AG
814001	58	4	100	0.5	0.0	0.0	0.0	0.00
814002	55	4	94	0.4	0.0	0.0	0.0	0.00
814003	55	4	114	0.3	56.4	4.6	105.2	0.46
814004	52	6	114	0.5	53.6	5.0	107.2	0.48
814005	62	5	104	0.6	64.6	5.0	110.4	0.48
814006	44	6	110	0.6	74.6	4.6	107.6	0.48
814007	110	4	110	0.4	86.2	4.0	107.2	0.46
814008	105	2	100	0.3	93.4	3.6	104.4	0.36
814009	110	3	112	0.4	98.6	3.2	99.6	0.34
814010	98	3	90	0.1	94.6	7.0	98.0	0.32
814011	70	4	86	0.5	82.8	7.4	89.6	0.32
814012	90	23	102	0.3	87.6	7.2	85.2	0.28
814013	46	4	58	0.3	89.2	7.4	84.4	0.30
814014	134	2	90	0.2	84.4	7.8	82.4	0.24
814015	106	4	86	0.2	75.0	4.0	77.6	0.20
814016	46	6	76	0.2	78.8	4.4	81.2	0.16
814017	43	4	78	0.1	61.2	5.2	74.8	0.16
814018	65	6	76	0.1	56.4	5.0	72.0	0.18
814019	46	6	58	0.2	58.0	4.8	70.4	0.20
814020	82	3	72	0.3	66.6	4.4	66.0	0.24
814021	54	5	68	0.3	72.0	4.4	63.6	0.30
814022	86	2	56	0.3	100.4	3.8	68.4	0.36
814023	92	6	64	0.4	103.6	4.2	70.4	0.34
814024	188	3	82	0.5	112.0	4.2	72.8	0.32
814025	98	5	82	0.2	106.0	5.8	81.6	0.32
814026	96	5	80	0.2	98.8	7.4	86.4	0.32
814027	56	10	100	0.3	67.2	8.8	90.0	0.26
814028	56	14	88	0.4	58.8	9.0	96.4	0.32
814029	30	10	100	0.2	54.6	9.2	98.4	0.42
814030	56	6	114	0.5	60.2	8.6	105.2	0.48
814031	75	6	90	0.7	57.0	7.4	106.4	0.46
814032	84	7	134	0.6	59.0	7.4	104.0	0.46
814033	40	8	94	0.3	54.2	8.2	98.4	0.42
814034	40	10	88	0.2	47.2	8.6	96.4	0.30
814035	32	10	86	0.3	35.2	9.2	84.4	0.22
814036	40	8	80	0.1	32.8	9.4	78.0	0.18
814037	24	10	74	0.2	29.8	10.6	73.6	0.18
814038	28	9	62	0.1	29.4	11.2	68.8	0.18
814039	25	16	66	0.2	26.2	12.8	68.0	0.20
814040	30	13	62	0.3	23.4	12.8	65.6	0.20
814041	24	16	76	0.2	21.6	14.0	66.0	0.22
814042	10	10	62	0.2	23.0	13.8	73.6	0.24
814043	19	15	64	0.2	19.8	13.6	82.4	0.24
814044	32	15	104	0.3	18.2	12.6	83.2	0.22
814045	14	12	106	0.3	19.8	13.0	73.2	0.22
814046	16	11	80	0.1	21.2	12.0	84.8	0.22
814047	18	12	12	0.2	19.6	11.8	82.4	0.20
814048	26	10	122	0.2	20.2	12.2	76.0	0.16
814049	24	14	92	0.2	22.0	13.4	75.2	0.16
814050	17	14	74	0.1	22.8	14.2	90.8	0.16
814051	25	17	76	0.1	21.6	16.0	84.4	0.16
814052	22	16	90	0.2	18.8	17.0	78.0	0.16
814053	20	19	90	0.2	19.0	17.8	76.0	0.16
814054	10	19	60	0.2	18.2	17.6	74.4	0.16
814055	18	18	64	0.1	19.0	18.4	68.4	0.18
814056	21	16	68	0.1	21.8	18.0	64.8	0.22
814057	26	20	60	0.3	24.4	17.0	69.6	0.28
814058	34	17	72	0.4	26.8	15.0	70.8	0.30
814059	23	14	84	0.5	27.8	14.8	70.0	0.32
814060	30	8	70	0.2	24.6	13.0	73.6	0.28
814061	26	15	64	0.2	22.8	14.2	69.2	0.24
814062	10	11	78	0.1	20.0	13.4	64.4	0.16
814063	25	23	50	0.2	16.8	15.0	68.4	0.14
814064	9	10	60	0.1	14.4	16.0	78.0	0.12
814065	14	16	90	0.1	16.8	17.6	78.4	0.18
814066	14	20	112	0.1	13.8	15.6	83.2	0.16
814067	22	19	80	0.4	14.4	16.0	89.2	0.18
814068	10	13	74	0.1	14.8	16.4	87.6	0.26
814069	12	12	90	0.2	15.2	14.8	80.8	0.28
814070	16	18	82	0.5	14.0	14.2	83.6	0.28
814071	16	12	78	0.2	14.6	14.4	84.4	0.30
814072	16	16	94	0.4	15.8	15.2	88.0	0.30
814073	13	14	78	0.2	17.0	15.0	89.2	0.32
814074	18	16	108	0.2	19.8	16.6	88.0	0.40
814075	22	17	88	0.6	21.8	16.6	83.2	0.38
814076	30	20	72	0.6	23.2	15.4	77.6	0.36
814077	26	16	70	0.3	25.6	15.0	67.2	0.36
814078	20	8	50	0.1	25.6	14.4	62.4	0.30
814079	30	14	56	0.2	24.8	12.8	61.6	0.24
814080	22	14	64	0.3	23.6	11.6	58.8	0.20
814081	26	12	68	0.3	24.8	12.0	61.2	0.30
814082	20	10	56	0.1	23.6	11.2	64.0	0.34
814083	26	10	62	0.6	24.8	10.4	70.4	0.30
814084	24	10	70	0.4	28.4	9.4	76.4	0.26
814085	28	10	96	0.1	30.6	9.0	85.2	0.34
814086	44	7	98	0.1	29.4	8.8	90.8	0.28
814087	31	8	100	0.5	34.4	9.2	94.8	0.28
814088	20	9	90	0.3	36.8	9.4	93.6	0.30
814089	49	12	90	0.4	36.0	10.6	92.0	0.34
814090	40	11	90	0.2	0.0	0.0	0.0	0.00
814091	40	13	90	0.3	0.0	0.0	0.0	0.00

comfortably either on foot or horseback in about three hours. The claims are staked in a northerly direction along the strike of the veins from the valley of Cultus creek to the summit of the rounded ridge lying between the North and South forks of the creek. J. Mulholland, the original owner, bonded the property to the Consolidated Mining and Smelting Company in 1918, under which bond he accepted a contract to drive a crosscut tunnel and altogether do some 700 or 800 feet of underground work. The mine cabins consist of a bunk-house and cook-house with accommodation for about eight men; there is also a small blacksmith-shop at the tunnel and another cabin on the creek at the foot of the mountain trail which is used as a storehouse.

The surface of the mountain in the vicinity of the workings is covered with a depth of from 3 to 6 feet of overburden and few rock-exposures are visible. The formation in which the ore has been found, consisting of steeply tilted and highly metamorphosed rocks of sedimentary origin, has been intruded in the vicinity of the veins by a basic lamprophyre dyke, which may be genetically connected with the ore-deposits.

The surface work has so far been confined to an area near the summit of the ridge, and although the vein is said to have been traced down the hill, little work has been done at lower altitudes. Long shallow trenches dug across the strike of the formation disclose the rock in-place, which near the surface has been subjected to highly oxidizing agencies; the dyke-rock is decomposed and there are wide zones of broken material stained with oxide of iron. Besides oxidized and decomposed ledge material, small quartz stringers carrying ore are the only indications of the vein or veins in these trenches.

Near the summit of the ridge, at an elevation of about 6,300 feet, a 10-foot shaft has been sunk on the No. 2 vein. At this point there is a wide exposure of oxidized and decomposed material in which ore occurs in streaks and bunches. On the foot-wall side at the bottom of the shaft the ore shows a width of 2 feet, but the shattered condition of the enclosing rocks is not convincing as to its continuity. The vein conforms to the stratification of the formation, the dip being almost vertical and strike north and south. From this shaft 3 or 4 tons of ore has been extracted, a grab sample of which ran: Gold, 0.04 oz.; silver, 4.2 oz.; copper, 3.5 per cent.; lead, 26 per cent.; zinc, 9 per cent.

Farther down the hill and in an easterly direction from the No. 2 vein a 20-foot shaft has been sunk on what is known as the No. 1 vein. At the top of this shaft the vein shows a width of about 6 feet, but the fact that the shaft was caved and partly filled prevented an examination of the bottom. A grab sample of a few tons of ore extracted from this shaft ran: Gold, 0.02 oz.; silver, 5.2 oz.; lead, 35 per cent.; zinc, 4 per cent.

It is interesting to note the difference between the ore from these two veins. That from the No. 2 vein consists of a fairly coarse-grained galena, with which is associated chalcopyrite and zinc-blende. The ore from the No. 1 vein is a steel-grain galena and carries no copper. The gangue material in both cases is composed of lime and silica.

The crosscut tunnel which is being driven by the Consolidated Mining and Smelting Company to intersect these veins is now in 252 feet, and will gain a depth of about 200 feet on the No. 2 and 125 feet on the No. 1 vein. At a distance of 200 feet from the portal two quartz stringers carrying galena were cut. The wall-rocks at this point are hard, massive slate. The last 50 feet of the tunnel is in the same material, but, judging by surface indications, softer ground will be encountered as the No. 2 vein is approached.

The No. 2 vein is the strongest and is of particular interest on account of its copper content, which possibly owes its origin to pneumatolytic processes created during the intrusions of the hornblendic dyke-rock. More surface prospecting might be done to advantage on this vein, while the continuation of the crosscut tunnel will demonstrate the possibilities at depth.

The property is still a prospect and its future depends upon the development of sufficient ore to warrant the erection of a concentrator. The indications for finding ore are favourable, but at present the probabilities of its becoming an important producer are still problematical.

McPeak Group. This property, comprising three claims, is situated on Corn creek at a distance of three miles from Kootenay flats, from whence a good trail of easy grade leads to the mine cabin. The creek-valley and adjoining hillsides are heavily timbered with cedar, hemlock, and pine. The surface of the claims is covered with overburden and no rock-exposures were visible, except in the creek-bottom, where the outcrop of the vein was discovered. The apparent direction of the vein is south-west, with a dip of 25 degrees to

APPENDIX VI

STATEMENT OF QUALIFICATIONS

Statement of Qualifications

I, R. V. Longe, hereby certify that:

1. I am a consulting geologist with a business office at 311 Water Street, Vancouver, B.C. V6B 1B8.

2. I am President of MineQuest Exploration Associates Ltd., a company performing geological consulting and contract exploration services for the mineral exploration industry.

3. I am a graduate of Cambridge University, (B.A. Hons., 1961 Natural Sciences Tripos, Parts 1 & 2, Geology) and of McGill University (M.Sc. 1965).

4. I am a Fellow of the Geological Association of Canada, and a member on the Canadian Institute of Mining and Metallurgy.

5. I have practiced my profession as geologist for 16 years.

6. The information, opinions and recommendations in the attached report are based on personal familiarity with the property and supervision of the programme described in this report.

Signed _____
(R.V. Longe)

dated at Vancouver, B.C. this
5th day of March 1982

APPENDIX I

GEOCHEMICAL RESULTS

CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111593-001-A
INVOICE # : I8111593
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
812501	201	40	12	94	0.2	--	--
812502	201	35	10	100	0.1	--	--
812503	201	31	10	64	0.2	--	--
812504	201	39	16	74	0.1	--	--
812505	201	32	12	66	0.1	--	--
812506	201	32	12	72	0.1	--	--
812507	201	8	7	68	0.1	--	--
812508	201	10	9	54	0.1	--	--
812509	201	7	9	54	0.1	--	--
812510	201	22	8	60	0.1	--	--
812511	201	10	10	72	0.1	--	--
812512	201	14	9	60	0.2	--	--
812513	201	10	10	68	0.2	--	--
812514	201	13	10	66	0.3	--	--
812515	201	11	10	62	0.9	--	--
812516	201	42	10	112	0.2	--	--
812517	201	22	11	124	0.6	--	--
812518	201	36	15	154	0.2	--	--
812519	201	32	16	164	0.1	--	--
812520	201	20	19	172	0.7	--	--
812521	201	44	26	144	0.2	--	--
812522	201	16	18	164	0.4	--	--
812523	201	14	16	112	0.5	--	--
812524	201	22	18	375	0.2	--	--
812525	201	14	14	122	0.1	--	--
812526	201	18	12	160	0.2	--	--
812527	201	20	12	98	0.1	--	--
812528	201	4	12	28	0.1	--	--
812529	201	6	11	42	0.2	--	--
812530	201	20	10	68	0.2	--	--
812531	201	10	7	44	0.6	--	--
812532	201	37	12	98	0.1	--	--
812533	201	13	9	66	0.4	--	--
812534	201	28	10	80	0.1	--	--
812535	201	15	10	46	0.5	--	--
812536	201	10	10	42	0.2	--	--
812537	201	12	10	42	0.1	--	--
812538	201	10	6	22	0.1	--	--
812539	201	19	12	54	0.2	--	--
812540	201	4	42	56	0.2	--	--

Certified by Hart Bickle

CTA MEMBER CANADIAN TESTING ASSOCIATION

CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B C
CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST:
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111593-002-A
INVOICE # : I8111593
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
812541	201	12	10	72	0.1	--	--
812542	201	20	17	84	0.1	--	--
812543	201	32	14	82	0.1	--	--
812544	201	27	11	98	0.1	--	--
812545	201	57	10	72	0.1	--	--
812546	201	22	11	80	0.1	--	--
812547	201	27	5	58	0.1	--	--
812548	201	42	6	64	0.1	--	--
812549	201	22	5	64	0.1	--	--
812550	201	17	8	74	0.1	--	--
812551	201	52	9	80	0.1	--	--
812552	201	43	7	80	0.1	--	--
812553	201	70	6	84	0.1	--	--
812554	201	45	6	88	0.1	--	--
812555	201	42	12	86	0.1	--	--
812556	201	55	9	88	0.1	--	--
812557	201	43	11	92	0.2	--	--
812558	201	54	8	98	0.1	--	--
812559	201	70	4	112	0.2	--	--
812560	201	74	5	82	0.1	--	--
812561	201	112	4	92	0.1	--	--
812562	201	98	6	110	0.1	--	--
812563	201	55	12	106	0.1	--	--
812564	201	38	9	94	0.1	--	--
812565	201	48	20	315	0.4	--	--
812566	201	24	15	210	2.2	--	--
812567	201	11	10	128	0.9	--	--
812568	201	26	10	118	0.2	--	--
812569	201	35	8	108	0.1	--	--
812570	201	27	8	118	0.1	--	--
812571	201	28	10	108	0.1	--	--
812572	201	16	8	106	0.1	--	--
812573	201	38	8	98	0.1	--	--
812574	201	25	8	94	0.2	--	--
812575	201	24	11	98	0.2	--	--
812576	201	26	11	96	0.3	--	--
812577	201	16	12	70	0.1	--	--
812578	201	43	10	88	0.1	--	--
812579	201	19	9	72	0.7	--	--
812580	201	38	8	34	0.2	--	--

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111593-003-A
INVOICE # : I8111593
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
812581	203	27	6	14	0.4	--	--
812582	201	39	7	26	0.5	--	--
812583	201	22	12	56	0.3	--	--
812584	201	12	11	62	0.4	--	--
812585	201	32	14	62	0.5	--	--
812586	201	27	11	68	0.2	--	--
812587	201	20	9	52	0.1	--	--
812588	201	22	9	66	0.1	--	--
812589	201	22	10	68	0.1	--	--
812590	201	29	11	84	0.2	--	--
812591	201	25	10	72	0.2	--	--
812592	201	76	5	78	0.3	--	--
812593	201	56	8	62	0.5	--	--
812594	201	33	8	64	0.7	--	--
812595	201	118	6	84	1.4	--	--
812596	201	56	8	80	0.8	--	--
812597	201	50	8	74	1.7	--	--
812598	201	160	7	84	0.5	--	--
812599	201	82	8	72	0.8	--	--
812600	201	72	7	86	0.2	--	--
812601	201	45	7	66	0.5	--	--
812602	201	126	4	88	0.3	--	--
812603	201	40	8	80	1.0	--	--
812604	201	58	6	84	0.3	--	--
812605	201	86	9	78	0.4	--	--
812606	201	36	8	64	1.1	--	--
812607	201	32	9	82	1.1	--	--
812608	201	64	5	102	0.9	--	--
812609	201	32	8	70	2.0	--	--
812610	201	48	8	66	0.1	--	--
812611	201	56	6	84	0.1	--	--
812612	201	110	6	34	0.2	--	--
812613	201	54	7	78	0.3	--	--
812614	201	30	8	78	0.2	--	--
812615	201	20	8	84	1.7	--	--
812616	201	28	8	54	0.3	--	--
812617	201	22	11	84	1.0	--	--
812618	201	20	7	28	0.2	--	--
812619	201	15	8	24	0.3	--	--
812620	201	18	7	38	0.2	--	--

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TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111593-004-A
INVOICE # : I8111593
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
812621	201	19	12	46	0.2	--	--
812622	201	46	10	22	0.1	--	--
812623	201	50	8	24	0.3	--	--
812624	201	30	6	66	0.2	--	--
812625	201	28	8	68	0.1	--	--
812626	201	23	13	98	0.1	--	--
812627	201	18	11	94	0.3	--	--
812628	201	23	11	110	0.4	--	--
812629	201	40	11	86	0.2	--	--
812630	201	32	13	120	0.6	--	--
812631	201	36	16	164	0.9	--	--
812632	201	32	7	80	0.1	--	--
812633	201	40	8	68	0.5	--	--
812634	201	28	10	54	0.6	--	--
812635	201	24	6	48	0.3	--	--
812636	201	26	8	88	0.2	--	--
812637	201	22	8	70	0.6	--	--
812639	201	16	10	56	0.3	--	--
812641	201	38	14	72	0.1	--	--
812643	201	25	9	70	0.1	--	--
812644	201	24	7	72	0.1	--	--
812645	201	27	8	64	0.1	--	--
812646	201	22	8	58	0.1	--	--
812647	201	26	8	54	0.1	--	--
812648	201	24	6	52	0.1	--	--
812649	201	30	8	60	0.1	--	--
812650	201	16	10	62	0.1	--	--
812651	201	14	8	52	0.1	--	--
812652	201	34	12	78	0.2	--	--
812653	201	12	1	10	0.1	--	--
812654	201	30	12	56	0.4	--	--
812656	201	35	13	30	1.8	--	--
812657	201	24	10	44	0.7	--	--
812658	201	26	9	56	0.3	--	--
812659	201	28	6	60	0.1	--	--
812660	203	16	7	14	0.1	--	--
812661	201	20	5	14	0.1	--	--
812662	201	32	10	54	0.1	--	--
812663	201	26	10	86	0.1	--	--
812664	201	30	9	64	0.1	--	--

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CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER B C
CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST:
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111593-005-A
INVOICE # : I8111593
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
812665	201	30	9	80	0.1	--	--
812666	201	26	10	64	0.1	--	--
812667	201	33	10	66	0.1	--	--
812668	201	28	9	62	0.1	--	--
812669	201	30	8	52	0.1	--	--
812670	201	35	10	56	0.1	--	--
812671	201	46	10	54	0.1	--	--
812672	201	20	12	64	0.2	--	--
812673	201	28	10	112	0.1	--	--
812674	201	34	15	72	0.1	--	--
812675	201	6	16	28	0.1	--	--
812676	201	16	10	22	0.1	--	--
812683	201	24	12	94	0.1	--	--
812684	201	17	14	98	0.1	--	--
812685	201	36	11	70	0.1	--	--
812686	201	26	10	86	0.1	--	--
812687	201	26	9	70	0.1	--	--
812688	201	24	8	64	0.1	--	--
812689	201	26	6	70	0.1	--	--
812690	201	24	8	86	0.1	--	--
812691	201	23	8	72	0.2	--	--
812692	201	18	5	40	0.1	--	--
812693	201	18	3	26	0.1	--	--
812694	201	20	4	52	0.2	--	--
812695	201	46	32	250	0.2	--	--
812696	201	44	52	285	0.3	--	--
812697	201	42	88	320	0.3	--	--
812698	201	19	18	144	0.4	--	--
812699	201	23	10	80	0.8	--	--
812700	201	36	26	184	0.1	--	--
812701	201	58	5	80	0.1	--	--
812702	201	32	8	84	0.1	--	--
812703	201	28	10	98	0.1	--	--
812704	201	30	12	142	0.1	--	--
812705	201	25	8	106	0.1	--	--
812706	201	26	9	124	0.1	--	--
812707	201	32	6	70	0.1	--	--
812708	201	31	6	52	0.1	--	--
812709	201	25	5	44	0.1	--	--
812710	201	38	8	82	0.1	--	--

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CANADA V7J 2C1
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TELEX 043-52597

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST:
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111593-006-A
INVOICE # : I8111593
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
812711	201	25	4	60	0.2	--	--
812712	201	32	8	60	0.1	--	--
812713	201	16	5	40	0.1	--	--
812714	201	24	8	58	0.1	--	--
812715	201	26	6	44	0.1	--	--
812716	201	28	6	50	0.1	--	--
812717	201	26	4	20	0.1	--	--
812718	201	12	5	42	0.1	--	--
812719	201	12	9	44	0.1	--	--
812720	201	6	10	72	0.1	--	--
812721	201	8	8	48	0.1	--	--
812722	201	14	8	56	0.1	--	--
812723	201	15	10	56	0.2	--	--
812724	201	18	10	64	0.1	--	--
812725	201	6	8	44	0.1	--	--
812726	201	12	10	72	0.1	--	--
812727	201	12	10	78	0.2	--	--
812728	201	14	9	78	0.8	--	--
812729	201	24	18	130	0.5	--	--
812730	201	15	12	140	0.2	--	--
812731	201	25	32	174	0.5	--	--
812732	201	20	14	142	1.0	--	--
812733	201	15	11	90	0.2	--	--
812734	201	22	12	92	0.1	--	--
812735	201	22	14	116	0.1	--	--
812736	201	16	14	88	0.8	--	--
812737	201	20	13	106	0.3	--	--
812738	201	16	12	80	0.6	--	--
812739	201	28	10	88	0.2	--	--
812740	201	14	12	80	0.6	--	--
812741	201	22	8	98	0.2	--	--
812742	201	16	8	72	0.7	--	--
812743	201	8	7	52	0.2	--	--
812744	201	12	10	100	0.8	--	--
812745	201	18	12	128	0.7	--	--
812746	201	10	9	54	0.6	--	--
812747	201	29	10	78	0.2	--	--
812748	201	20	10	66	0.2	--	--
812749	201	12	9	88	0.1	--	--

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212 BROOKSBANK AVE
NORTH VANCOUVER B C
CANADA V7J 2C1
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TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111594-001-A
INVOICE # : I8111594
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
812750	201	19	8	62	0.1	--	--
812751	201	290	22	64	0.4	--	--
812752	201	20	15	164	0.3	--	--
812753	201	22	21	138	0.2	--	--
812754	201	35	13	90	0.1	--	--
812755	201	26	24	78	0.1	--	--
812756	201	20	12	70	0.3	--	--
812757	201	14	8	50	0.1	--	--
812758	201	30	8	72	0.2	--	--
812759	201	20	7	50	0.2	--	--
812760	201	15	22	104	0.1	--	--
812761	201	25	12	106	0.1	--	--
812762	201	28	40	255	0.2	--	--
812763	201	26	13	160	0.1	--	--
812764	201	35	10	184	0.1	--	--
812765	201	36	10	120	0.1	--	--
812766	201	56	12	116	0.3	--	--
812767	201	44	9	90	0.2	--	--
812768	201	25	10	112	0.2	--	--
812769	201	22	9	88	0.1	--	--
812770	201	25	13	120	0.1	--	--
812771	201	170	165	310	1.0	--	--
812772	201	18	53	210	0.4	--	--
812773	201	18	10	112	0.5	--	--
812774	201	42	20	140	0.4	--	--
812775	201	18	15	74	0.1	--	--
812776	201	14	14	72	0.1	--	--
812777	201	20	22	76	0.1	--	--
812778	201	24	8	62	0.1	--	--
812779	201	14	7	32	0.1	--	--
812780	201	22	6	56	0.1	--	--
812781	201	24	10	66	0.1	--	--
812782	201	20	8	64	0.1	--	--
812783	201	24	9	74	0.1	--	--
812784	201	22	8	60	0.1	--	--
812785	201	30	15	60	0.1	--	--
812786	201	23	6	48	0.1	--	--
812787	201	20	9	52	0.1	--	--
812788	201	24	10	58	0.1	--	--
812789	201	21	7	46	0.1	--	--

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212 BROOKSBANK AVE
NORTH VANCOUVER, B C
CANADA V7J 2C1

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TELEX. 043-52597

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST:
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111594-002-A
INVOICE # : I8111594
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
812790	201	24	8	52	0.1	--	--
812791	201	6	4	30	0.1	--	--
812792	201	10	4	36	0.1	--	--
812793	201	29	14	108	0.1	--	--
812794	201	22	10	82	0.1	--	--
812795	201	10	12	122	0.1	--	--
812796	201	13	14	140	0.1	--	--
812797	201	10	10	130	0.1	--	--
812798	201	10	12	140	0.1	--	--
812799	201	8	10	100	0.1	--	--
812800	201	10	10	78	0.1	--	--
812801	201	12	8	74	0.1	--	--
812802	201	20	8	94	0.1	--	--
812803	201	26	8	66	0.2	--	--
812804	201	36	10	60	0.3	--	--
812805	201	46	9	72	0.2	--	--
812806	201	62	8	100	0.2	--	--
812807	201	30	6	54	0.1	--	--
812808	201	57	10	200	0.1	--	--
812809	201	39	6	144	0.1	--	--
812810	201	44	5	130	0.1	--	--
812811	201	39	6	124	0.1	--	--
812812	201	32	7	90	0.1	--	--
812813	201	24	11	66	0.1	--	--
812814	201	78	6	130	0.1	--	--
812815	201	46	6	110	0.1	--	--
812816	201	28	10	68	0.1	--	--
812817	201	46	9	118	0.1	--	--
812818	201	42	6	54	0.1	--	--
812819	201	26	12	88	0.1	--	--
812820	201	28	9	68	0.1	--	--
812821	201	23	8	54	0.1	--	--
812822	201	30	6	54	0.1	--	--
812823	201	24	9	60	0.1	--	--
812824	201	30	6	56	0.1	--	--
812825	201	20	8	50	0.1	--	--
812826	201	30	10	62	0.1	--	--
812827	201	34	10	64	0.2	--	--
812828	201	32	22	78	0.2	--	--
812829	201	22	8	42	0.3	--	--

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST:
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111594-003-A
INVOICE # : I8111594
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
812830	201	36	7	60	0.1	--	--
812831	201	25	9	48	0.1	--	--
812832	201	17	7	48	0.1	--	--
812833	201	16	9	56	0.2	--	--
812834	201	16	9	58	0.1	--	--
812835	201	32	5	78	0.1	--	--
812836	201	22	7	58	0.1	--	--
812837	201	20	12	36	0.1	--	--
812838	201	25	8	58	0.1	--	--
812839	201	15	7	42	0.1	--	--
812840	201	19	8	46	0.1	--	--
812841	201	32	15	24	0.1	--	--
812843	201	66	5	58	0.1	--	--
812844	201	44	8	74	0.1	--	--
812845	201	42	9	70	0.1	--	--
812846	201	40	7	58	0.1	--	--
812847	201	52	3	58	0.1	--	--
812848	201	42	6	60	0.1	--	--
812849	201	53	7	68	0.2	--	--
812850	201	70	5	76	0.1	--	--
812851	201	38	10	66	0.2	--	--
812852	201	42	15	68	0.7	--	--
812853	201	38	18	78	0.5	--	--
812854	201	42	7	84	0.1	--	--
812855	201	28	10	58	0.2	--	--
812856	201	28	14	66	0.1	--	--
812857	201	30	12	88	0.4	--	--
812858	201	42	10	86	0.2	--	--
812859	201	22	9	100	0.5	--	--
812860	201	33	21	100	0.5	--	--
812861	201	50	4	84	0.6	--	--
812862	201	70	12	88	0.2	--	--
812863	201	36	6	62	0.6	--	--
812864	201	27	9	52	0.3	--	--
812865	201	82	6	90	0.4	--	--
812866	201	70	6	80	0.5	--	--
812867	201	135	12	90	0.3	--	--
812868	201	68	6	84	0.3	--	--
812869	201	52	6	94	0.2	--	--
812870	201	36	6	94	0.2	--	--

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212 BROOKSBANK AVE
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CANADA V7J 2C

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111594-004-A
INVOICE # : I8111594
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
812871	201	36	6	80	0.1	--	--
812872	201	45	5	114	0.1	--	--
812873	201	42	7	82	0.2	--	--
812874	201	28	7	130	0.1	--	--
812875	201	26	13	92	0.2	--	--
812876	201	18	6	88	0.2	--	--
812877	201	52	10	92	0.4	--	--
812878	201	20	10	80	0.1	--	--
812879	201	26	6	80	0.1	--	--
812880	201	24	8	80	0.1	--	--
812881	201	16	7	64	0.1	--	--
812882	201	22	5	70	0.1	--	--
812883	201	50	6	70	0.1	--	--
812884	201	30	8	70	0.1	--	--
812885	201	13	1	18	0.3	--	--
812886	201	14	8	28	0.3	--	--
812887	201	15	10	70	0.2	--	--
812888	201	39	10	56	0.5	--	--
812889	201	21	15	112	0.3	--	--
812890	201	28	9	26	0.2	--	--
812891	201	28	10	60	0.2	--	--
812892	201	36	8	38	0.3	--	--
812893	201	40	15	68	0.3	--	--
812894	201	48	12	98	0.4	--	--
812895	201	26	7	64	0.2	--	--
812896	201	24	9	60	0.1	--	--
812897	201	42	8	72	0.1	--	--
812898	201	63	16	66	0.4	--	--
812899	201	76	18	83	0.3	--	--
812900	201	100	18	84	0.4	--	--
812901	201	27	11	60	0.2	--	--
812902	201	60	15	82	0.1	--	--
812903	201	19	10	56	0.1	--	--
812904	201	14	8	66	0.2	--	--
812905	201	12	14	66	0.2	--	--
812906	201	18	12	50	0.1	--	--
812907	201	12	10	44	0.1	--	--
812908	201	28	12	48	0.1	--	--
812909	201	46	15	74	0.3	--	--
812910	201	10	13	70	0.1	--	--

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CANADA V7J 2C1

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TELEX 043-52597

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111594-005-A
INVOICE # : I8111594
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
812911	201	12	8	68	0.1	--	--
812912	201	12	6	66	0.1	--	--
812913	201	6	7	44	0.1	--	--
812914	201	4	6	38	0.1	--	--
812915	201	8	16	90	0.1	--	--
812916	201	12	15	100	0.1	--	--
812917	201	10	13	98	0.1	--	--
812918	201	10	7	44	0.1	--	--
812919	201	6	13	88	0.1	--	--
812920	201	8	21	80	0.1	--	--
812921	201	3	10	40	0.1	--	--
812922	201	14	10	60	0.1	--	--
812923	201	8	9	44	0.1	--	--
812924	201	5	8	52	0.1	--	--
812925	201	10	8	52	0.1	--	--
812926	201	10	15	70	0.1	--	--
812927	201	36	20	76	0.1	--	--
812928	201	36	15	90	0.1	--	--
812929	201	34	27	114	0.1	--	--
812930	201	29	21	120	0.4	--	--
812931	201	42	20	142	0.1	--	--
812932	201	35	25	160	0.1	--	--
812933	201	33	28	184	0.1	--	--
812934	201	28	20	170	0.1	--	--
812935	201	54	25	134	0.1	--	--
812936	201	24	17	160	0.1	--	--
812937	201	20	16	172	0.1	--	--
812938	201	34	24	158	0.1	--	--
812939	201	26	24	138	0.1	--	--
812940	201	32	24	200	0.1	--	--
812941	201	31	26	152	0.1	--	--
812942	201	30	35	150	0.1	--	--
812943	201	44	25	114	0.1	--	--
812944	201	40	22	126	0.1	--	--
812945	201	48	16	142	0.1	--	--
812946	201	55	12	108	0.1	--	--
812947	201	26	18	178	0.1	--	--
812948	201	22	16	116	0.1	--	--
812949	201	39	13	92	0.1	--	--
812950	201	52	13	70	0.1	--	--

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212 BROOKSBANK AVE
NORTH VANCOUVER B C
CANADA V7J 2C1
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TELEX 043-52597

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST:
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111594-006-A
INVOICE # : I8111594
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
812951	201	54	19	88	0.1	--	--
812952	201	60	16	88	0.1	--	--
812953	201	44	12	70	0.1	--	--
812954	201	53	11	100	0.1	--	--
812955	201	52	13	100	0.1	--	--
812956	201	66	60	130	0.1	--	--
812957	201	46	14	164	0.1	--	--
812958	201	90	17	142	0.2	--	--
812959	201	110	10	88	0.2	--	--
812960	201	100	18	94	0.1	--	--
812961	201	85	10	110	0.1	--	--
812962	201	62	7	130	0.1	--	--
812963	201	31	10	100	0.1	--	--
812964	201	156	3	98	0.1	--	--
812965	201	168	5	88	0.4	--	--
812966	201	98	6	76	0.2	--	--
812967	201	126	6	70	0.1	--	--
812968	201	56	8	124	0.1	--	--
812969	201	116	6	80	0.1	--	--
812970	201	100	6	80	0.1	--	--
812971	201	70	7	94	0.1	--	--
812972	201	80	4	60	0.1	--	--
812973	201	84	5	78	0.1	--	--
812974	201	86	5	86	0.1	--	--
812975	201	100	3	70	0.1	--	--
812976	201	110	3	90	0.2	--	--
812977	201	40	22	94	0.1	--	--
812978	201	46	13	88	0.1	--	--
812979	201	62	7	76	0.2	--	--
812980	201	26	10	106	0.1	--	--
812981	201	30	11	108	0.1	--	--
812982	201	52	10	76	0.1	--	--
812983	201	36	10	88	0.1	--	--
812984	201	17	8	54	0.1	--	--
812985	201	42	10	62	0.1	--	--
812986	201	25	6	64	0.1	--	--
812987	201	35	8	56	0.1	--	--
812988	201	24	10	70	0.2	--	--
812989	201	46	10	68	0.1	--	--
812990	201	56	11	86	0.1	--	--

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CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER B C
CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111595-001-A
INVOICE # : I8111595
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
812991	201	32	15	102	0.2	--	--
812992	201	12	16	82	0.1	--	--
812993	201	36	16	100	0.2	--	--
812994	201	26	13	92	0.2	--	--
812995	201	30	16	110	0.2	--	--
812996	201	20	10	120	0.2	--	--
812997	201	25	15	122	0.3	--	--
812998	201	42	11	90	0.3	--	--
812999	201	22	8	96	0.1	--	--
813000	201	4	9	32	0.4	--	--
813001	201	36	8	60	0.2	--	--
813002	201	24	9	100	0.1	--	--
813003	201	22	8	100	0.3	--	--
813004	201	12	12	64	0.3	--	--
813005	201	20	9	96	0.2	--	--
813501	201	42	12	98	0.1	--	--
813502	201	36	16	98	0.5	--	--
813503	201	18	10	60	0.1	--	--
813504	201	19	8	32	0.2	--	--
813505	203	22	4	22	0.4	--	--
813506	201	12	7	40	0.3	--	--
813507	201	10	7	58	0.2	--	--
813508	201	10	12	52	0.4	--	--
813509	201	17	7	56	0.5	--	--
813510	201	22	13	66	0.4	--	--
813511	201	18	8	60	0.3	--	--
813512	201	26	11	68	0.3	--	--
813513	201	20	12	60	0.4	--	--
813514	201	26	9	62	0.6	--	--
813515	201	62	6	94	1.6	--	--
813516	201	29	8	62	0.5	--	--
813517	201	13	10	44	0.7	--	--
813518	201	14	16	58	0.2	--	--
813519	201	11	11	56	0.4	--	--
813520	201	30	15	92	0.3	--	--
813521	201	29	12	74	0.2	--	--
813522	201	17	9	52	0.6	--	--
813523	201	19	8	50	0.2	--	--
813524	201	17	10	54	0.1	--	--
813525	201	38	10	74	0.2	--	--

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CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST:
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111595-002-A
INVOICE # : I8111595
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
813526	201	16	12	74	0.2	--	--
813527	201	10	10	44	0.4	--	--
813528	201	27	10	66	0.2	--	--
813529	201	16	8	40	0.6	--	--
813530	201	26	10	60	0.1	--	--
813531	201	28	10	68	0.4	--	--
813532	201	18	10	24	0.6	--	--
813533	201	20	6	64	0.5	--	--
813534	201	23	7	64	0.4	--	--
813535	201	11	10	54	0.7	--	--
813536	201	42	12	80	0.2	--	--
813537	201	48	12	80	0.2	--	--
813538	201	30	10	68	0.3	--	--
813539	201	22	12	58	0.3	--	--
813540	201	38	11	84	0.2	--	--
813541	201	32	8	86	0.1	--	--
813542	201	22	10	78	0.2	--	--
813543	201	28	8	54	0.2	--	--
813544	201	30	10	38	0.3	--	--
813545	201	28	8	40	0.2	--	--
813546	201	16	9	44	0.3	--	--
813547	201	8	10	40	0.1	--	--
813548	201	22	8	70	0.1	--	--
813549	201	10	10	46	0.1	--	--
813550	201	10	12	46	0.1	--	--
813551	201	8	10	38	0.2	--	--
813552	201	9	8	28	0.2	--	--
813553	201	21	7	66	0.3	--	--
813554	201	36	8	68	0.2	--	--
813555	201	38	9	100	2.4	--	--
813556	201	90	8	100	0.5	--	--
813557	201	32	8	64	0.7	--	--
813558	201	94	4	80	1.1	--	--
813559	201	26	10	56	0.3	--	--
813560	201	24	22	132	2.7	--	--
813561	201	44	22	200	0.9	--	--
813562	201	64	45	285	0.3	--	--
813563	201	22	18	120	1.3	--	--
813564	201	20	12	84	1.1	--	--
813565	201	30	17	134	0.3	--	--

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212 BROOKSBANK AVE
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CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111595-003-A
INVOICE # : I8111595
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
813566	201	32	14	84	0.1	--	--
813567	201	20	22	164	1.5	--	--
813568	201	68	40	310	1.1	--	--
813569	201	10	15	100	0.9	--	--
813570	201	20	9	66	1.1	--	--
813571	201	26	17	76	0.1	--	--
813572	201	24	6	86	0.1	--	--
813573	201	18	10	88	0.2	--	--
813574	201	24	8	66	0.3	--	--
813575	201	38	13	66	0.1	--	--
813576	201	44	12	74	0.1	--	--
813577	201	50	10	68	0.2	--	--
813578	201	11	15	68	0.1	--	--
813580	201	29	8	56	0.7	--	--
813581	201	16	9	52	0.1	--	--
813582	201	15	10	50	0.3	--	--
813583	201	24	4	80	0.2	--	--
813584	201	44	10	64	0.2	--	--
813585	201	46	11	68	0.1	--	--
813586	201	12	9	42	0.2	--	--
813587	201	15	10	52	0.1	--	--
813588	201	19	7	52	0.3	--	--
813589	201	34	8	64	0.2	--	--
813590	201	38	13	76	0.3	--	--
813591	201	86	13	76	0.8	--	--
813592	201	59	12	78	0.5	--	--
813593	201	72	8	74	0.7	--	--
813594	201	61	9	80	0.6	--	--
813595	201	81	7	74	0.6	--	--
813596	201	92	8	80	0.8	--	--
813597	201	130	7	84	0.6	--	--
813598	201	47	6	68	0.6	--	--
813599	201	126	6	90	1.0	--	--
813600	201	30	6	80	1.2	--	--
813601	201	64	6	80	0.1	--	--
813602	201	56	6	76	1.4	--	--
813603	201	31	9	80	1.0	--	--
813604	201	220	15	138	0.9	--	--
813605	201	52	9	90	1.6	--	--
813606	201	65	8	88	0.9	--	--

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CANADA V7J 2C1

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111595-004-A
INVOICE # : I8111595
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
813607	201	98	7	94	0.6	--	--
813608	201	110	5	116	0.9	--	--
813609	201	66	4	84	0.7	--	--
813610	201	175	5	104	0.2	--	--
813611	201	44	6	98	0.4	--	--
813612	201	48	6	80	0.2	--	--
813613	201	34	5	80	0.5	--	--
813614	201	22	8	68	0.5	--	--
813615	201	22	9	80	0.4	--	--
813616	201	20	10	54	0.4	--	--
813617	201	29	12	70	0.1	--	--
813618	201	28	10	84	0.1	--	--
813619	201	12	2	26	0.1	--	--
813620	201	52	8	70	0.3	--	--
813621	201	49	8	66	0.1	--	--
813622	201	22	3	32	0.5	--	--
813623	201	42	2	34	0.2	--	--
813624	201	10	9	42	0.1	--	--
813625	201	6	9	64	0.2	--	--
813626	201	10	12	68	0.1	--	--
813627	201	8	8	60	0.2	--	--
813628	201	12	6	40	0.1	--	--
813629	201	12	14	62	0.1	--	--
813630	201	8	15	38	0.1	--	--
813631	201	20	10	68	0.1	--	--
813632	201	28	14	90	0.3	--	--
813633	201	12	10	70	0.2	--	--
813634	201	61	12	124	0.1	--	--
813635	201	78	9	124	0.2	--	--
813636	201	32	12	110	0.1	--	--
813637	201	50	14	130	0.2	--	--
813638	201	21	15	144	0.4	--	--
813639	201	12	15	144	0.2	--	--
813640	201	12	16	78	0.2	--	--
813641	201	28	16	170	0.1	--	--
813642	201	9	13	84	0.2	--	--
813643	201	38	15	146	0.3	--	--
813644	201	15	36	320	0.2	--	--
813645	201	17	13	126	0.4	--	--
813646	201	15	10	126	0.3	--	--

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CANADA V7J 2C1

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TELEX 043-52597

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111595-005-A
INVOICE # : I8111595
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
813647	201	18	11	100	0.5	--	--
813648	201	15	13	84	1.6	--	--
813649	201	22	13	82	0.2	--	--
813650	201	22	13	76	0.3	--	--
813651	201	17	9	86	0.4	--	--
813652	201	9	10	56	0.3	--	--
813653	201	15	9	74	0.2	--	--
813654	201	20	8	54	0.2	--	--
813655	201	17	9	64	0.2	--	--
813656	201	14	7	28	0.1	--	--
813657	201	16	8	48	0.2	--	--
813658	201	11	10	58	0.1	--	--
813659	201	13	12	34	0.4	--	--
813660	201	26	6	54	0.1	--	--
813661	201	25	6	52	0.1	--	--
813662	201	14	8	38	0.1	--	--
813663	201	16	6	46	0.1	--	--
813664	201	7	12	48	0.1	--	--
813665	201	10	10	58	0.1	--	--
813666	201	10	7	52	0.1	--	--
813667	201	10	6	54	0.1	--	--
813668	201	12	6	48	0.1	--	--
813669	201	9	6	44	0.2	--	--
813670	201	9	8	50	0.1	--	--
813671	201	10	9	52	0.2	--	--
813672	201	40	13	100	0.1	--	--
813673	201	30	13	114	0.3	--	--
813674	201	16	13	110	0.7	--	--
813675	201	15	16	106	0.6	--	--
813676	201	22	17	154	0.2	--	--
813677	201	20	18	170	0.3	--	--
813678	201	9	22	110	0.1	--	--
813679	201	16	38	162	1.8	--	--
813680	201	16	16	188	0.8	--	--
813681	201	10	13	94	1.4	--	--
813682	201	26	14	120	0.5	--	--
813683	201	16	10	200	0.6	--	--
813684	201	7	15	76	0.2	--	--
813685	201	10	13	100	0.7	--	--
813686	201	16	8	112	0.6	--	--

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NORTH VANCOUVER B C
CANADA V7J 2C1

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111595-006-A
INVOICE # : I8111595
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
813687	201	15	11	74	0.6	--	--
813688	201	8	10	52	0.1	--	--
813689	201	22	9	58	0.2	--	--
813690	201	8	9	40	0.4	--	--
813691	201	11	10	42	0.4	--	--
813692	201	28	10	66	0.3	--	--
813693	201	16	10	66	0.1	--	--
813694	201	25	12	68	0.2	--	--
813695	201	20	12	58	0.3	--	--
813696	201	18	11	68	0.2	--	--
813697	201	34	11	80	0.1	--	--
813698	201	52	16	94	0.7	--	--
813699	201	58	13	106	0.3	--	--
813700	201	33	10	74	0.2	--	--
813701	201	26	10	60	0.3	--	--
813702	201	26	7	54	0.1	--	--
813703	201	19	3	44	0.1	--	--
813704	201	32	5	60	0.2	--	--
813705	201	28	4	50	0.1	--	--
813706	201	30	4	46	0.2	--	--
813707	201	32	1	30	0.4	--	--
813708	201	25	6	22	0.1	--	--
813709	203	22	18	24	0.1	--	--
813710	201	42	16	100	0.2	--	--
813711	201	32	10	66	0.1	--	--
813712	201	24	6	58	0.1	--	--
813713	201	34	7	66	0.1	--	--
813714	201	24	9	58	0.2	--	--
813715	201	30	6	48	0.1	--	--
813716	201	42	30	104	0.3	--	--
813717	201	38	13	84	0.1	--	--
813718	201	30	6	54	0.1	--	--
813719	201	35	11	74	0.2	--	--
813720	201	27	7	60	0.1	--	--
813721	201	14	4	18	0.1	--	--
813722	201	32	6	60	0.2	--	--
813723	201	27	5	54	0.1	--	--
813724	201	28	5	52	0.1	--	--
813725	201	32	6	90	0.1	--	--
813726	201	32	6	70	0.1	--	--

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TELEX 043-52597

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111596-001-A
INVOICE # : I8111596
DATE : 25-JUN-81
P.O. # : NONE
G

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
813727	201	45	9	88	0.2	--	--
813728	201	27	7	34	0.2	--	--
813729	201	26	3	34	0.3	--	--
813730	201	35	10	52	0.1	--	--
813731	201	30	6	54	0.1	--	--
813732	201	29	5	58	0.1	--	--
813733	203	30	8	30	0.1	--	--
813734	201	22	9	72	0.1	--	--
813735	201	26	8	60	0.1	--	--
813736	201	22	11	72	0.1	--	--
813737	201	38	12	88	0.1	--	--
813738	201	36	14	78	0.1	--	--
813739	201	38	13	92	0.3	--	--
813740	201	36	12	84	0.5	--	--
813741	201	38	12	84	0.2	--	--
813742	201	20	4	52	0.1	--	--
813743	203	18	4	24	0.2	--	--
813744	201	32	4	40	0.4	--	--
813745	201	28	6	54	0.3	--	--
813746	201	24	6	64	0.1	--	--
813747	201	19	5	64	0.1	--	--
813748	201	22	5	80	0.1	--	--
813749	201	40	8	80	0.2	--	--
813750	201	32	5	62	0.2	--	--
813751	201	16	6	64	0.2	--	--
813752	201	28	6	66	0.2	--	--
813753	201	16	8	44	0.1	--	--
813754	201	18	5	54	0.2	--	--
813755	201	20	6	68	0.1	--	--
813756	201	16	5	44	0.2	--	--
813757	201	12	5	44	0.3	--	--
813758	201	8	6	22	0.3	--	--
813759	201	15	9	60	0.1	--	--
813760	201	9	9	26	0.1	--	--
813761	201	16	5	54	0.3	--	--
813762	201	14	8	72	0.1	--	--
813763	201	10	11	26	0.2	--	--
813764	201	19	13	48	0.1	--	--
813765	201	58	11	50	0.5	--	--
813766	201	22	4	32	0.3	--	--

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NORTH VANCOUVER B C
CANADA V7J 2C1
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TELEX 043-52597

- ANALYTICAL CHEMISTS - GEOCHEMISTS - REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111596-002-A
INVOICE # : I8111596
DATE : 25-JUN-81
P.O. # : NONE
G

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
813767	201	48	8	28	0.4	--	--
813768	201	8	3	28	0.2	--	--
813769	201	5	5	70	0.1	--	--
813770	201	5	5	82	0.1	--	--
813771	201	9	6	74	0.3	--	--
813772	201	9	9	68	0.2	--	--
813773	201	12	9	88	0.3	--	--
813774	201	12	8	78	0.1	--	--
813775	201	22	6	84	0.2	--	--
813776	201	14	9	56	0.1	--	--
813777	201	10	6	52	0.2	--	--
813778	201	12	6	62	0.2	--	--
813779	201	8	6	42	0.1	--	--
813780	201	7	6	42	0.1	--	--
813781	201	7	7	44	0.1	--	--
813782	201	8	7	50	0.2	--	--
813783	201	8	9	56	0.1	--	--
813784	201	10	7	46	0.2	--	--
813785	201	9	6	38	0.1	--	--
813786	201	9	8	60	0.1	--	--
813787	201	8	9	52	0.3	--	--
813788	201	9	8	50	0.1	--	--
813789	201	9	7	48	0.4	--	--
813790	201	8	7	66	0.2	--	--
813791	201	11	6	60	0.1	--	--
813792	201	8	8	52	0.2	--	--
813793	201	9	8	74	0.3	--	--
813794	201	10	6	64	0.2	--	--
813795	201	6	8	60	0.2	--	--
813796	201	9	6	174	0.4	--	--
813797	201	10	5	68	0.2	--	--
813798	201	14	7	146	0.3	--	--
813799	201	9	8	60	0.3	--	--
813800	201	12	9	84	0.2	--	--
813801	201	20	6	74	0.3	--	--
813802	201	6	5	48	0.2	--	--
813803	201	9	6	52	0.2	--	--
813804	201	9	8	74	0.2	--	--
813805	201	8	8	74	0.7	--	--
813806	201	13	9	110	0.7	--	--

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111596-003-A
INVOICE # : I8111596
DATE : 25-JUN-81
P.O. # : NONE
G

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
813807	201	9	10	108	0.5	--	--
813808	201	12	10	106	0.5	--	--
813809	201	12	9	124	0.6	--	--
813810	201	10	8	120	0.8	--	--
813811	201	8	7	66	0.4	--	--
813812	201	6	6	60	0.3	--	--
813813	201	3	6	66	0.2	--	--
813814	201	5	6	58	0.1	--	--
813815	201	8	7	74	0.2	--	--
813816	201	9	7	74	0.3	--	--
813817	201	30	8	74	0.5	--	--
813818	201	13	7	62	0.2	--	--
813819	201	82	2	82	0.3	--	--
813820	201	74	3	94	0.3	--	--
813821	201	71	3	76	0.4	--	--
813822	201	49	6	96	0.3	--	--
813823	201	86	6	76	0.2	--	--
813824	201	34	7	108	0.5	--	--
813825	201	24	8	106	0.2	--	--
813826	201	19	9	108	0.3	--	--
813827	201	20	10	88	0.2	--	--
813828	201	18	16	60	0.2	--	--
813829	201	16	9	50	0.3	--	--
813830	201	14	8	36	0.2	--	--
813831	201	16	8	54	0.2	--	--
813832	201	14	6	60	0.1	--	--
813833	201	8	3	38	0.1	--	--
813834	201	46	9	48	0.3	--	--
813835	201	94	8	56	0.5	--	--
813836	201	44	7	60	0.3	--	--
813837	201	33	7	100	0.2	--	--
813838	201	48	8	98	0.3	--	--
813839	201	32	3	42	0.1	--	--
813840	201	23	9	58	0.1	--	--
813841	201	12	3	36	0.1	--	--
813842	201	12	7	34	0.1	--	--
813843	201	16	6	54	0.1	--	--
813844	201	14	7	46	0.1	--	--
813845	201	20	8	46	0.2	--	--
813846	201	10	5	50	0.1	--	--

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111596-004-A
INVOICE # : I8111596
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
813847	201	9	6	44	0.1	--	--
813848	201	10	2	36	0.1	--	--
813849	201	15	4	52	0.1	--	--
813850	201	16	8	80	0.1	--	--
813851	201	12	8	54	0.1	--	--
813852	201	10	10	48	0.1	--	--
813853	201	6	3	48	0.1	--	--
813854	201	10	10	58	0.1	--	--
813855	201	10	6	58	0.1	--	--
813856	201	12	6	44	0.1	--	--
813857	201	10	9	44	0.1	--	--
813858	201	15	5	50	0.2	--	--
813859	201	16	7	78	0.1	--	--
813860	201	18	7	72	0.2	--	--
813861	201	18	8	54	0.3	--	--
813862	201	20	7	64	0.2	--	--
813863	201	58	9	66	0.1	--	--
813864	201	50	7	64	0.1	--	--
813865	201	84	7	66	0.2	--	--
813866	201	66	7	62	0.3	--	--
813867	201	56	7	66	0.1	--	--
813868	201	55	5	86	0.2	--	--
813869	201	134	9	96	0.3	--	--
813870	201	53	5	104	0.1	--	--
813871	201	80	4	182	0.1	--	--
813872	201	68	6	138	0.1	--	--
813873	201	52	8	94	0.2	--	--
813874	201	55	6	60	0.3	--	--
813875	201	35	6	66	0.1	--	--
813876	201	31	7	80	0.1	--	--
813877	201	25	30	50	0.1	--	--
813878	201	25	9	82	0.1	--	--
813879	201	13	2	10	0.1	--	--
813880	201	19	8	76	0.1	--	--
813881	201	52	8	126	0.1	--	--
813882	201	40	7	106	0.1	--	--
813883	201	16	10	108	0.1	--	--
813884	201	51	8	104	0.1	--	--
813885	201	80	8	120	0.1	--	--
813886	201	62	5	114	0.2	--	--

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TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111596-005-A
INVOICE # : I8111596
DATE : 25-JUN-81
P.O. # : NONE
G

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
813887	201	24	15	116	0.1	--	--
813888	201	35	8	92	0.2	--	--
813889	201	29	8	100	0.4	--	--
813890	201	27	9	150	0.3	--	--
813891	201	33	15	200	0.2	--	--
813892	201	20	17	184	0.1	--	--
813893	201	18	19	158	0.3	--	--
813894	201	22	22	130	0.2	--	--
813895	201	26	36	72	0.2	--	--
813896	201	14	11	64	0.1	--	--
813897	201	19	10	76	0.1	--	--
813898	201	23	22	112	0.4	--	--
813899	201	28	27	138	0.3	--	--
813900	201	13	15	180	0.2	--	--
813901	201	20	14	108	0.2	--	--
813902	201	21	15	124	0.4	--	--
813903	201	28	10	112	0.2	--	--
813904	201	38	10	130	0.1	--	--
813905	201	37	11	114	0.2	--	--
813906	201	14	8	96	0.1	--	--
813907	201	13	8	118	0.2	--	--
813908	201	14	13	108	0.3	--	--
813909	201	21	13	156	0.3	--	--
813910	201	28	11	120	0.2	--	--
813911	201	46	15	114	0.2	--	--
813912	201	28	49	138	0.1	--	--
813913	201	30	18	110	0.1	--	--
813914	201	31	16	200	0.3	--	--
813915	201	35	16	82	0.1	--	--
813916	201	40	20	160	0.2	--	--
813917	201	30	15	180	0.2	--	--
813918	201	34	14	164	0.1	--	--
813919	201	40	18	160	0.4	--	--
813920	201	50	16	184	0.1	--	--
813921	201	36	21	160	0.3	--	--
813922	201	90	24	138	0.3	--	--
813923	201	52	39	162	0.1	--	--
813924	201	48	30	215	0.3	--	--
813925	201	36	38	300	0.3	--	--
813926	201	41	33	260	0.1	--	--

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TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111596-006-A
INVOICE # : I8111596
DATE : 25-JUN-81
P.O. # : NONE
G

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
813927	201	100	22	92	0.2	--	--
813928	201	35	33	170	0.2	--	--
813929	201	43	23	200	0.2	--	--
813930	201	48	23	174	0.3	--	--
813931	201	42	26	168	0.3	--	--
813932	201	60	50	380	0.2	--	--
813933	201	54	25	152	0.1	--	--
813934	201	38	28	164	0.2	--	--
813935	201	26	28	160	0.3	--	--
813936	201	52	30	230	0.2	--	--
813937	201	68	22	140	0.5	--	--
813938	201	55	15	130	0.2	--	--
813939	201	156	19	190	0.3	--	--
813940	201	61	17	250	0.2	--	--
813941	201	114	16	114	0.3	--	--
813942	201	45	21	220	0.2	--	--
813943	201	85	40	290	0.4	--	--
813944	201	98	36	265	0.2	--	--
813945	201	70	28	180	0.4	--	--
813946	201	86	32	160	0.3	--	--
813947	201	60	25	134	0.2	--	--
813948	201	84	30	178	0.3	--	--
813949	201	78	28	134	0.3	--	--
813950	201	72	26	130	0.2	--	--
813951	201	96	38	108	0.4	--	--
813952	201	58	17	90	0.1	--	--
813953	201	42	18	82	0.2	--	--
813954	201	14	17	190	0.1	--	--
813955	201	17	14	120	0.1	--	--
813956	201	20	14	190	0.1	--	--
813957	201	21	16	122	0.2	--	--
813958	201	25	16	112	0.1	--	--
813959	201	18	12	100	0.1	--	--
813960	201	32	15	128	0.1	--	--
813961	201	42	10	130	0.2	--	--
813962	201	66	9	100	0.9	--	--
813963	201	40	9	96	0.2	--	--
813964	201	30	7	88	0.1	--	--
813965	201	30	5	96	0.1	--	--
813966	201	36	7	98	0.1	--	--

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TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111597-001-A
INVOICE # : I8111597
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
813967	201	26	8	88	0.1	--	--
813968	201	28	10	96	0.1	--	--
813969	201	36	10	94	0.1	--	--
813970	201	27	196	140	0.3	--	--
813971	201	42	12	82	0.4	--	--
813972	201	72	15	80	0.3	--	--
813973	201	30	11	84	0.5	--	--
813974	201	26	9	92	0.3	--	--
813975	201	54	14	72	0.2	--	--
813976	201	38	10	86	0.2	--	--
813977	201	120	6	88	0.1	--	--
813978	201	70	18	108	0.6	--	--
813979	201	58	9	86	0.2	--	--
813980	201	40	8	118	0.3	--	--
813981	201	22	15	144	0.2	--	--
813982	201	72	15	120	0.4	--	--
813983	201	88	12	138	0.6	--	--
813984	201	76	11	110	0.6	--	--
813985	201	98	8	108	0.4	--	--
813986	201	44	10	120	0.4	--	--
813987	201	100	8	90	0.3	--	--
813988	201	60	12	112	0.3	--	--
813989	201	27	9	98	0.3	--	--
813990	201	24	198	80	0.6	--	--
813991	201	66	80	142	0.7	--	--
813992	201	80	20	108	0.6	--	--
813993	201	70	17	88	0.4	--	--
813994	201	61	12	114	0.7	--	--
813995	201	55	35	180	0.5	--	--
813996	201	34	14	96	0.3	--	--
813997	201	32	14	132	0.5	--	--
813998	201	48	15	104	0.2	--	--
813999	201	33	26	116	0.4	--	--
814000	201	56	26	154	0.4	--	--
814001	201	58	4	100	0.5	--	--
814002	201	55	4	94	0.4	--	--
814003	201	55	4	114	0.3	--	--
814004	201	52	6	114	0.5	--	--
814005	201	62	5	104	0.6	--	--
814006	201	44	6	110	0.6	--	--

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TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111597-002-A
INVOICE # : I8111597
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
814007	201	110	4	110	0.4	--	--
814008	201	105	2	100	0.3	--	--
814009	201	110	3	112	0.4	--	--
814010	201	98	3	90	0.1	--	--
814011	201	70	4	86	0.5	--	--
814012	201	90	23	102	0.3	--	--
814013	201	46	4	58	0.3	--	--
814014	201	134	2	90	0.2	--	--
814015	201	106	4	86	0.2	--	--
814016	201	46	6	76	0.2	--	--
814017	201	43	4	78	0.1	--	--
814018	201	65	6	76	0.1	--	--
814019	201	46	6	58	0.2	--	--
814020	201	82	3	72	0.3	--	--
814021	201	54	5	68	0.3	--	--
814022	201	86	2	56	0.3	--	--
814023	201	92	6	64	0.4	--	--
814024	201	188	3	82	0.5	--	--
814025	201	98	5	82	0.2	--	--
814026	201	96	5	80	0.2	--	--
814027	201	56	10	100	0.3	--	--
814028	201	56	14	88	0.4	--	--
814029	201	30	10	100	0.2	--	--
814030	201	56	6	114	0.5	--	--
814031	201	75	6	90	0.7	--	--
814032	201	84	7	134	0.6	--	--
814033	201	40	8	94	0.3	--	--
814034	201	40	10	88	0.2	--	--
814035	201	32	10	86	0.3	--	--
814036	201	40	8	80	0.1	--	--
814037	201	24	10	74	0.2	--	--
814038	201	28	9	62	0.1	--	--
814039	201	25	16	66	0.2	--	--
814040	201	30	13	62	0.3	--	--
814041	201	24	16	76	0.2	--	--
814042	201	10	10	62	0.2	--	--
814043	201	19	15	64	0.2	--	--
814044	201	32	15	104	0.3	--	--
814045	201	14	12	106	0.3	--	--
814046	201	16	11	80	0.1	--	--

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TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111597-003-A
INVOICE # : I8111597
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
814047	201	18	12	12	0.2	--	--
814048	201	26	10	122	0.2	--	--
814049	201	24	14	92	0.2	--	--
814050	201	17	14	74	0.1	--	--
814051	201	25	17	76	0.1	--	--
814052	201	22	16	90	0.2	--	--
814053	201	20	19	90	0.2	--	--
814054	201	10	19	60	0.2	--	--
814055	201	18	18	64	0.1	--	--
814056	201	21	16	68	0.1	--	--
814057	201	26	20	60	0.3	--	--
814058	201	34	17	72	0.4	--	--
814059	201	23	14	84	0.5	--	--
814060	201	30	8	70	0.2	--	--
814061	201	26	15	64	0.2	--	--
814062	201	10	11	78	0.1	--	--
814063	201	25	23	50	0.2	--	--
814064	201	9	10	60	0.1	--	--
814065	201	14	16	90	0.1	--	--
814066	201	14	20	112	0.1	--	--
814067	201	22	19	80	0.4	--	--
814068	201	10	13	74	0.1	--	--
814069	201	12	12	90	0.2	--	--
814070	201	16	18	82	0.5	--	--
814071	201	16	12	78	0.2	--	--
814072	201	16	16	94	0.4	--	--
814073	201	13	14	78	0.2	--	--
814074	201	18	16	108	0.2	--	--
814075	201	22	17	88	0.6	--	--
814076	201	30	20	72	0.6	--	--
814077	201	26	16	70	0.3	--	--
814078	201	20	8	50	0.1	--	--
814079	201	30	14	56	0.2	--	--
814080	201	22	14	64	0.3	--	--
814081	201	26	12	68	0.3	--	--
814082	201	20	10	56	0.1	--	--
814083	201	26	10	62	0.6	--	--
814084	201	24	10	70	0.4	--	--
814085	201	28	10	96	0.1	--	--
814086	201	44	7	98	0.1	--	--

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TELEPHONE (604)984-022
TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST:
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111597-004-A
INVOICE # : I8111597
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
814087	201	31	8	100	0.5	--	--
814088	201	20	9	90	0.3	--	--
814089	201	49	12	90	0.4	--	--
814090	201	40	11	90	0.2	--	--
814091	201	40	13	90	0.3	--	--

Certified by Hart Richter

CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B C
CANADA V7J 2C1

TELEPHONE (604)984-0221
TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111592-003-A
INVOICE # : I8111592
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
814224	201	45	10	32	0.1	--	--
814225	201	5	7	36	0.1	--	--
814226	201	10	8	32	0.1	--	--
814227	201	19	9	54	0.1	--	--
814228	201	12	5	44	0.1	--	--
814229	201	16	4	32	0.1	--	--
814230	201	13	9	62	0.1	--	--
814231	201	17	10	60	0.1	--	--
814232	201	10	6	40	0.1	--	--
814233	201	14	8	46	0.1	--	--
814234	201	11	10	62	0.1	--	--
814235	201	12	2	34	0.1	--	--
814236	201	9	6	56	0.1	--	--
814092	201	34	16	84	0.2	--	--
814093	201	16	12	54	0.2	--	--
814094	201	27	15	76	0.2	--	--
814095	201	12	12	50	0.3	--	--
814096	201	15	13	60	0.1	--	--
814097	201	17	13	72	0.1	--	--
814098	201	21	15	74	0.2	--	--
814099	201	34	15	102	0.3	--	--
814100	201	20	16	70	0.3	--	--
814101	201	26	14	70	0.1	--	--
814102	201	16	11	56	0.2	--	--
814103	201	20	16	60	0.3	--	--
814104	201	18	13	52	0.4	--	--
814105	201	28	15	68	0.3	--	--
814106	201	14	19	54	0.5	--	--
814107	201	26	16	64	0.6	--	--
814108	201	33	16	94	0.3	--	--
814109	201	34	15	90	0.2	--	--
814110	201	14	19	66	0.2	--	--
814111	201	14	16	64	0.3	--	--
814112	201	12	14	64	0.5	--	--
814113	201	23	14	66	0.4	--	--
814114	201	16	17	48	0.3	--	--
814115	201	20	14	42	0.5	--	--
814116	201	17	10	38	0.4	--	--
814117	201	26	10	44	0.7	--	--
814118	201	25	12	52	0.2	--	--

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CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER B C
CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-5259.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111592-004-A
INVOICE # : I8111592
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
814119	201	12	17	86	0.4	--	--
814120	201	18	11	44	0.2	--	--
814121	201	6	4	30	0.1	--	--
814122	201	11	7	40	0.1	--	--
814123	201	20	8	36	0.2	--	--
814124	201	8	5	32	0.1	--	--
814125	201	30	14	36	0.1	--	--
814126	201	20	14	38	0.5	--	--
814127	201	10	11	26	0.4	--	--
814128	201	12	15	32	0.4	--	--
814129	201	16	14	32	0.2	--	--
814130	201	17	14	36	0.5	--	--
814131	201	18	12	36	0.1	--	--
814132	201	19	16	36	0.4	--	--
814133	201	18	17	34	0.2	--	--
814134	201	11	16	38	0.1	--	--
814135	201	17	12	48	0.5	--	--
814136	201	18	20	48	0.7	--	--
814137	201	18	17	48	0.1	--	--
814138	201	16	17	40	0.5	--	--
814139	201	14	16	50	0.3	--	--
814140	201	16	19	54	0.2	--	--
814141	201	13	34	86	0.6	--	--
814142	201	16	46	98	0.5	--	--
814143	201	18	32	72	0.3	--	--
814144	201	16	22	60	0.2	--	--
814145	201	25	52	74	0.7	--	--
814146	201	18	36	70	0.6	--	--
814147	201	16	20	52	0.4	--	--
814148	201	16	20	46	0.4	--	--
814149	201	16	28	54	0.1	--	--
814150	201	13	22	58	0.2	--	--

Certified by Hart Bidlen

CTA MEMBER CANADIAN TESTING ASSOCIATION

CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER B C
CANADA V7J 2C1

TELEPHONE (604)984-0221
TELEX 043-52597

- ANALYTICAL CHEMISTS GEOCHEMISTS REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST:
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111592-002-A
INVOICE # : I8111592
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
814199	201	10	7	36	0.1	--	--
814200	201	7	2	22	0.1	--	--
814201	201	12	4	36	0.1	--	--
814202	201	16	5	44	0.2	--	--
814203	201	6	4	20	0.1	--	--
814204	201	12	7	44	0.1	--	--
814205	201	19	7	62	0.1	--	--
814206	201	16	6	56	0.1	--	--
814207	201	16	5	46	0.1	--	--
814208	201	18	5	56	0.1	--	--
814209	201	16	5	56	0.1	--	--
814210	201	8	6	34	0.1	--	--
814211	201	14	5	50	0.2	--	--
814212	201	9	5	22	0.1	--	--
814214	201	14	5	38	0.1	--	--
814215	201	22	7	58	0.2	--	--
814216	201	10	5	48	0.1	--	--
814217	201	9	5	30	0.1	--	--
814180	201	49	14	56	0.1	--	--
814181	201	16	14	44	0.2	--	--
814182	201	18	18	48	0.4	--	--
814183	201	20	14	62	0.4	--	--
814184	201	8	5	80	0.1	--	--
814185	201	16	6	68	0.1	--	--
814186	201	10	6	86	0.1	--	--
814187	201	13	4	50	0.1	--	--
814188	201	10	6	58	0.1	--	--
814189	201	10	8	80	0.1	--	--
814190	201	7	6	38	0.1	--	--
814191	201	20	8	50	0.2	--	--
814192	201	12	7	74	0.2	--	--
814193	201	10	7	70	0.1	--	--
814194	201	28	4	32	0.1	--	--
814195	201	18	5	40	0.1	--	--
814218	201	10	12	50	0.2	--	--
814219	201	11	12	70	0.3	--	--
814220	201	12	11	94	0.2	--	--
814221	201	12	9	66	0.1	--	--
814222	201	8	10	40	0.1	--	--
814223	201	18	8	40	0.1	--	--

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CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER B.C.
CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-2597

ANALYTICAL CHEMISTS GEOCHEMISTS REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST:
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8111592-001-A
INVOICE # : I8111592
DATE : 25-JUN-81
P.O. # : NONE

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
814237	201	8	7	76	0.1	--	--
814238	201	10	6	70	0.1	--	--
814239	201	10	9	54	0.1	--	--
814240	201	10	5	40	0.1	--	--
814241	201	7	1	20	0.1	--	--
814242	201	1	2	30	0.1	--	--
814243	201	8	6	64	0.1	--	--
814244	201	8	7	40	0.1	--	--
814165	201	10	8	32	0.1	--	--
814166	201	12	8	36	0.2	--	--
814167	201	13	14	36	0.1	--	--
814168	201	26	16	60	0.2	--	--
814169	201	28	17	46	0.4	--	--
814170	201	22	13	44	0.1	--	--
814171	201	14	12	46	0.2	--	--
814172	201	20	15	48	0.3	--	--
814173	201	12	13	34	0.4	--	--
814174	201	12	14	38	0.4	--	--
814175	201	18	13	40	0.4	--	--
814176	201	19	15	36	0.5	--	--
814177	201	16	16	44	0.3	--	--
814178	201	15	15	30	0.3	--	--
814179	201	24	11	34	0.2	--	--
814151	201	18	14	54	0.2	--	--
814152	201	20	15	60	0.1	--	--
814153	201	46	8	38	0.1	--	--
814154	201	52	8	40	0.1	--	--
814155	201	40	9	40	0.1	--	--
814156	201	23	8	34	0.3	--	--
814157	201	20	7	36	0.1	--	--
814158	201	20	9	32	0.1	--	--
814159	201	20	9	36	0.2	--	--
814160	201	20	7	32	0.3	--	--
814161	201	26	8	38	0.5	--	--
814162	201	24	8	32	0.2	--	--
814163	201	16	8	42	0.2	--	--
814164	201	12	9	40	0.2	--	--
814196	201	16	8	72	0.3	--	--
814197	201	12	9	62	0.2	--	--
814198	201	10	2	26	0.1	--	--

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CTA MEMBER CANADIAN TESTING ASSOCIATION

GEOCHEMICAL PREPARATION AND ANALYTICAL PROCEDURES

1. Geochemical samples (soils, silts) are dried at 80°C for a period of 12 to 24 hours. The dried sample is sieved to -80 mesh fraction through a nylon and stainless steel sieve. Rock geochemical materials are crushed, dried and pulverized to -100 mesh.

2. A 1.00 gram portion of the sample is weighed into a calibrated test tube. The sample is digested using hot 70% $HClO_4$ and concentrated HNO_3. Digestion time = 2 hours.

3. Sample volume is adjusted to 25 mls. using demineralized water. Sample solutions are homogenized and allowed to settle before being analyzed by atomic absorption procedures.

4. Detection limits using Techtron A.A.5 atomic absorption unit:

Copper	- 1 ppm
Zinc	- 1 ppm
*Silver	- 0.2 ppm
*Lead	- 2 ppm

5. *Ag & Pb are corrected for background absorption.

6. Elements present in concentrations below the detection limits are reported as one half the detection limit, ie Ag - 0.1 ppm.

GEOCHEM PROCEDURES

PPB Gold: 5 gm samples ashed @ 800°C for one hour, digested with aqua regia - twice to dryness - taken up in 25% HCL^-, the gold then extracted as the bromide complex into MIBK and analyzed via A.A.

Detection limit - 10 PPB

ASSAY PROCEDURE:

Silver & Gold: Fire Assay Method

0.5 assay ton sub samples are fused in litharge, carbonate and silicious fluxes. The lead button containing the precious metals is cupelled in a muffle furnace. The combined Ag & Au is weighed on a microbalance, parted annealed and again weighed as Au. The difference in the two weighing is Ag.

APPENDIX II

(NOT INCLUDED)

APPENDIX III

COST STATEMENT

COST DISTRIBUTION

Accounting Period Jan - April

Type of Work: Geophysical Survey

	JAN - APRIL	SNOW GROUP	LAIB GROUP	CUL GROUP	DON GROUP	NEXT GROUP
Fees & Field Crew	3,516.00				3,516.00	
Travel	167.74				167.74	
Meals & Accomodation	356.62				356.62	
Reproduction: Maps & Repros	570.35				570.35	
Material & Supplies	1,231.47				1,231.47	
Telephone	83.76				83.76	
Staking	-				-	
Drafting	-				-	
Miscellaneous	27.56				27.56	
Labour	-				-	
Subcontract	11,860.31				11,860.31	
Helicopter	2,069.81				2,069.81	
Analyses & Assays	47.50				47.50	
Rentals	948.76				948.76	
	20,558.88				20,558.88	

(Not applicable)

COST DISTRIBUTION

Accounting Period May - July

Type of Work: Geological Mapping, Geochemical Sampling

	May - July	SNOW GROUP	LAIB GROUP	CUL GROUP	DON GROUP	NEXT GROUP
Fees & Field Crew	24,017.18	2,668.51	5,337.15	5,337.15	5,337.15	5,337.15
Travel	2,180.57	436.11	436.11	436.11	436.11	436.11
Meals & Accomodation	5,229.54	1,045.90	1,045.90	1,045.90	1,045.90	1,045.90
Reproduction: Maps & Repros	2,447.23	305.90	305.90	611.80	611.80	611.80
Material & Supplies	1,158.32	231.66	231.66	231.66	231.66	231.66
Telephone	264.14	52.82	52.82	52.82	52.82	- 52.82
Staking	5,889.45	-	-	-	-	-
Drafting	2,829.24	353.65	353.65	707.31	707.31	707.31
Miscellaneous	932.21	180.44	180.44	180.44	180.44	180.44
Labour	472.50	94.50	94.50	94.50	94.50	94.50
Subcontract	-	-	-	-	-	-
Helicopter	4,929.95	1,643.31	1,643.31	1,643.31	1,643.31	1,643.31
Analyses & Assays	4,975.55	-	994.09	499.79	3,463.63	1,038.32
Rentals	1,079.70	215.94	215.94	215.94	215.94	215.94
	57,405.55	7,248.74	10,851.47	11,056.73	14,000.57	11,595.26

(Not applicable)

COST DISTRIBUTION

Accounting Period August - November

Type of Work: Geological Mapping, Geochemical Sampling

	Aug - Nov	SNOW GROUP	LAIB GROUP	CUL GROUP	DON GROUP	NEXT GROUP
Fees & Field Crew	7,699.63	516.56	516.56	516.56	5,633.39	516.56
Travel	402.01				402.01	
Meals & Accomodation	1,048.43				1,048.43	
Reproduction: Maps & Repros	1,618.87				1,618.87	
Material & Supplies	182.65				182.65	
Telephone	95.56				95.56	
Staking	-					
Drafting	-					
Miscellaneous	1,128.81				1,128.81	
Labour	934.50				934.50	
Subcontract	-					
Helicopter	-					
Analyses & Assays	113.93				113.93	
Rentals	1,349.11				1,349.11	
	14,573.50	516.56	516.56	516.56	12,507.26	516.56

COST DISTRIBUTION

Accounting Period December - January

Type of Work: Report Writing & Drafting

	Dec - Jan	SNOW GROUP	LAIB GROUP	CUL GROUP	DON GROUP	NEXT GROUP
Fees & Field Crew	3,772.92	754.58	754.58	754.58	754.58	754.58
Travel	3.90	.78	.78	.78	.78	.78
Meals & Accomodation	-					
Reproduction: Maps & Repros	399.89	79.98	79.98	79.98	79.98	79.98
Material & Supplies	-					
Telephone	50.12	10.02	10.02	10.02	10.02	10.02
Staking	943.37					
Drafting	366.15	73.23	73.23	73.23	73.23	73.23
Miscellaneous	-					
Labour	-					
Subcontract	-					
Helicopter	-					
Analyses & Assays	321.30	64.26	64.26	64.26	64.26	64.26
Rentals	166.95	33.39	33.39	33.39	33.39	33.39
	6,024.60	1,016.24	1,016.24	1,016.24	1,016.24	1,016.24

DON JAN 1981 – JAN 1982

		1 JAN-APR	2 MAY-JUL	3 AUG-NOV	4 DEC-JAN	5	6 TOTAL
1	Fees & Field Crew	351600	341017	269963	307292	(a)	3900573
2	Travel	16774	21805	4202	390	(b)	27354
3	Meals and accommodation	3562	52979	10483	–	(c)	63359
4	Reproduction: Maps + Reports	57035	24473	16187	3989		50364
5	Materials + Supplies	12314	11582	1826	–		25244
6	Telephone	8376	26414	9556	5012		49358
7	Staking	–	58894	–	–	(d)	58894
8	Drafting	–	28294	–	9433	(e)	37726
9	Miscellaneous	2756	9321	1281	3665		24543
10	Labour	–	4725	9345	–	(f)	14070
11	Sub-contract	118603	–	–	–	(g)	118603
12	Helicopter	20698	49299	–	–	(h)	69997
13	Analyses + Assays	4750	39755	11393	3130	(i)	64528
14	Rentals	9486	10797	1349	1669	(j)	35452
15							
16		205588	574055	145733	60246		985625
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							

DON

Schedule (a)

		1	2	3
	FEES & FIELD CREW			
1	JAN - APR '81			
2	R.V LONGE			
3	FEB 4 days @ $400	160000		
4	MAR 2.5 " "	100000		
5	APR 2.29 " "	91600		351600
6				
7	MAY - JULY '81			
8	R V LONGE			
9	MAY 7.71 days @ $400.	308400		
10	JUN 14.67 " "	586800		
11	JUL 5.29 " "	211600	1106800	
12				
13	P.D. McCARTHY			
14	MAY 4.58 days @ $200	91600		
15	JUN 15.00 " "	300000	391600	
16				
17	FIELD CREW			
18	MAY B. DYE 5 days @ $1325 P.m + 50%	33124		
19	JUN " 14.75 " "	104701		
20	MAY B. HAMPTON 7. days @ $2150. P.m +50%	75250		
21	JUN " " 21.5 " "	266675		
22	MAY S. RIDLEY 5. days @ $1368 P.m +50%	34200		
23	JUN " " 16. " "	177252		
24	MAY R. SIEMENS 5. days @ $1325. P.m. +50%	33125		
25	JUN " " 14.5 " "	102933		
26	MAY J. ZELL 5. days @ " "	33125		
27	JUN " 145 " "	102933	903318	2701718
28				
29	AUG - NOV '81			
30	R.V LONGE			
31	AUG 4.0 days @ $400.	160000		
32	SEPT .417 " "	16680		
33	OCT .2 " "	8000		
34	NOV 1.84 " "	73600	258280	
35				
36	P.D. McCARTHY			
37	SEPT 9. days @ $200.	180000		
38	OCT 1. " "	20000		
39	NOV 10.5 " "	210000	410000	
40				
41	FIELD CREW			
42	WC HAMPTON 315 m. @ $2150 +50%	1011683	1011683	7699963
43				
44				
45				

DON

Schedule (a)
cont'd

			1	2	3
	FEES & FIELD CREW CONT'D				
	DEC '81 & JAN '82				
	R.V. LONGE				
	DEC '81	5.705 days @ $400.	228200		
	JAN '82	1.29 " " "	54805	283005	
	G.J. DICKIE				
	DEC '81	1.67 days @ $400	66800	66800	
	P.D MC CARTHY				
	DEC '81	.25 days @ $200.	5000	5000	
	S.D HODGSON				
	JAN '82	.04 days @ $325.	1300	1300	
	FIELD CREW				
	A. GAIR	10.57 mo @ $2000. plus 50%	31718		
	W. HAMPTON	15.37 mo @ $1150 " "	49569	81287	377292
				(a)	39005773

DON

Schedule (b)

			1	2	3
	TRAVEL				
2	JAN - APR '81				
3	Travel Hdqs.	Apr 9	15975		
4		OIR	799		16774
6	MAY - JUL '81				
7	R V LONGE - EXPENSE A/C	MAY 6	4945		
8		31	9260		
9		31	4385		
10		JUN 16	1250		
11		16	5555		
12		OIR	1270	26665	
14	P.D. McCARTHY - EXPENSE A/C	MAY 19	2365		
15		JUN 16	4810		
16		23	3425		
17		23	6600		
18		23	4244		
19		23	13645		
20		23	25152		
21		23	1470		
22		23	6766		
23		24	1740		
24		OIR	3511	73728	
26	W.C. HAMPTON - EXPENSE A/C	MAY 25	425		
27		JUN 11	9570		
28		23	13868		
29		27	800		
30		OIR	1208	25871	
32	JOAN HOLR - EXPENSE A/C	JUN 23	10661		
33		OIR	533	11194	
35	AL GAIR - EXPENSE A/C	JUN 23	1625		
36		OIR	134	1759	
38	TRAVEL HEADQUARTERS	MAY 13	17950		
39		21	7450		
40		31	9465		
41		JUN 10	14904		
42		23	18145		
43		OIR	3396	71340	

Schedule (b) Cont'd

				1	2	3
	TRAVEL - CONT'D					
1						
2		CLARK V JOHNSON	JUN 23	24 25		
3		PETER E. WALCOTT		52 23		
4			O/R	38 2	80 80	21 80 57
5						
6	AUG - NOV '81					
7		R.V. LONGE EXPENSE A/C	AUG 10	68 73		
8			O/R	3 19	66 92	
9						
10		P.D. McCARTHY EXPENSE AC	SEPT 15	500		
11			NOV 17	3 75		
12			17	54 90		
13			17	60 94		
14			25	49 35		
15			O/R	11 20	235 14	
16						
17		W.C. HAMPTON EXPENSE A/C	NOV 23	16 40		
18			O/R	82	17 22	
19						
20		TRAVEL HEADQUARTERS	AUG 5	185 05		
21			18	74 50		
22			28	181 45		
23			O/R	3 93	82 73	402 01
24						
25	DEC '81 - JAN '82					
26		P. D. McCARTHY - EXPENSE A/C	JAN 2	3 71		
27			O/R	19	3 90	3 90
28						
29						2225 422
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45						

Schedule (c)

DON

			1	2	3
MEALS & ACCOMMODATION					
JAN - APR '81					
W.C. HAMPTON - EXP A/C -	APR 20 ACC		3892		
	O/R		170	3562	3562
MAY - JULY '81					
R.Y LONGE - exp a/c -	MAY 6 meals		1525		
	31 meals		26575		
	31 accom.		67076		
	31 meals		17445		
	JUN 16 ✓		610		
	23 ✓		32614		
	O/R		6507	136652	
P.D. MCCARTHY - exp a/c	Jun 11 meals		775		
	16 ✓		11854		
	23 ✓		983		
	23 ✓		58240		
	23 accom		82680		
	23 meals		20867		
	23 ✓		39969		
	23 ✓		5900		
	23 accom		92114		
	O/R		14644	307526	
W.C. HAMPTON - exp a/c	May 25 accom		16960		
	25 meals		4905		
	Jun 11 ✓		2366		
	11 accom		20256		
	23 ✓		8950		
	23 meals		4558		
	27 meals		5985		
	O/R		2345	48605	
JAAN KOLK - exp a/c	Jun 23 meals		10920		
	O/R		546	11466	
R GAIR - exp a/c	Jun 23 meals		12544		
	23 accom		5250		
	O/R		891	18705	522954

Schedule (c) cont'd

DON

			1	2	3
MEALS + ACCOMMODATION CONT'D					
AUG - NOV '81					
	R.V. LONGE - exp a/c	Aug 10 meals	1010		
		" accom	8295		
		oil	519	10894	
	P.D. McCARTHY - exp a/c	NOV 17 meals	3284		
		"	31055		
		"	3950		
		"	4060		
		accom	14872		
		"	28852		
		"	6572		
		oil	4424	93949	104843
					68135

110-0034 Wilson

DAN

				1	2	3
	STAKING	Schedule (d)				
2	MAY-JUL '81					
3		Snake River Contractors		$6.09.00		
4			O/R	280.42		5889.42
10	DRAFTING	Schedule (e)				
12	MAY-JUL '81					
13		Exclusive Offs	Jun 11	16.50		
14		✓ ✓	23	53.50		
15		✓ ✓	July 16	209.51		
16			O/R	1834.23	2829.24	2829.24
18	DEC '81 - JAN '82					
19		Exclusive Offs	Dec 18	16.96		
20		✓ ✓	18	534.49		
21		✓ ✓	22	126.00		
22		✓ ✓	Jan 12	84.00		
23		C. Dorries	Jan 14	85.00		
24			O/R	44.92	946.37	946.37
25						3775.61
27	LABOR	Schedule (f)				
28	MAY-JUL '81					
29		JAAN KOLK	Jun 23	450.00		
30			O/R	22.50	472.50	472.50
32	AUG-NOV '81					
33		JAAN KOLK	Aug 28	90.00		
34		BRAD GRIFFITHS	NOV 16	800.00		
35			O/R	44.50	934.50	934.50
37						14407.00

				1	2	3
	JOB CONTRACT Schedule (g)					
2	MAY - JUL '81					
3		Peter E. Walcott	May 13	109 1 94		
4		✓ ✓ ✓	26	38859		
5			OIR	54478		1186031
10	HELICOPTER Schedule (h)					
12	JAN - APR '81					
13		OKANAGAN HELICOPTERS	MAR 10/81	123079		
14			MAR 24	80055		
15			OIR	3847		206981
17	MAY - JUL '81					
18		OKANAGAN HELICOPTERS	JUN 26/81	469519		
19			OIR	23476		492995
21						699976

Schedule (E)

DONE

				1	2	3
	ANALYSES + ASSAYS					
2	JAN - APR '81					
3		Chemex Labs	Jan '81	4750		4750
5	MAY - JUL '81					
6		Chemex Labs	June 26	512600		
7		✓ ✓	✓ 26	57500		
8			OIR	28455		597555
10	AUG - NOV					
11		Chemex Labs	Aug 18	8450		
12		✓ ✓	Sept 21	825		
13		✓ ✓	✓ ✓	-425		
14			OIR	543		11393
16	DEC '81 - JAN '82					
17		Can Geochem	Dec 17	25000		
18		Chemex Labs	Jan 7	5000		
19			OIR	1530		32430
20						
21						
22						645828
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28						
29						
30	51230					
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190-0014 Wilson

DON Schedule (J)

		1	2	3
	RENTALS			
2	JAN - APR '81			
3	Tilden - Rent-a-Car Mar 25	15358		
4	Redhawk N.6 MC 4 wheel			
5	drive Mar 20	75000		
6	O/R	4578		94876
8	MAY - JUL '81			
9	F&R STEINHEITZ - BINOCULARS May 20	5300		
10	O/R	265	5565	
12	Redhawk 6 MC 4 wheel drive Jul 31	15135		
13	O/R	756	15891	
15	Airwaup - Ind crew Cab	82394		
16	O/R	4120	86514	197970
18	AUG - NOV '81			
19	Tilden Rent-a-Car Aug 31	14286		
20	Dimmick Truck Rentals Oct 15	29632		
21	Toyota Land Cruiser Nov 30	67277		
22	Saw rental - P. McCarthy exp a/c			
23	1017	16892		
24	O/R	6484		134911
26	DEC '81 - JAN '82			
27	Norman Wade - Theodolite			
28	DEC 17 '81	15900		
29	O/R	795		16695
31				354452

APPENDIX IV

MINFILE SHEETS AND COPIES OF REFERENCED MATERIAL

MINISTRY OF ENERGY, MINES AND PETROLEUR RESOURCES
RESOURCE DATA SECTION

082FSE081

NAME(S)= PEANUT

N.T.S. = 082F07W

NI= 082FSE081 03812

LAT= 4917.6 (DEG.MIN)
LONG= 1654.6
ELEVATION 1333 M.
MINING DIVISION= NELS
LOCATION ACCURACY= 1

UTMZ= 165
UTMN= NE5460700
UTME= NE0507000

CAPSULE GEOLOGICAL COMMENT=

COMMODITIES PRESENT= CU AG

MINERALS PRESENT=

BIBLIOGRAPHY
C001A BCDN AMAR 1968-241

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A grab sample from a small pile of sorted ore outside the portal assayed: Gold, 0.05 oz. to the ton; silver, 41.9 oz. to the ton; lead, 28.2 per cent.; zinc, 5.2 per cent. In the lower tunnel the first indications of mineralization were encountered in a crosscut about 200 feet in from the portal. In a short tunnel off this crosscut a sample across 7 feet of silicified limestone assayed: Gold, 0.04 oz.; silver, 0.8 oz. to the ton; lead, 1.1 per cent.; zinc, 2.3 per cent. Continuing along the lower tunnel to about 600 feet in from the portal, narrow bands and streaks of ore are found over a length of about 80 feet. In the face of the tunnel a streak of ore 6 to 8 inches wide, which appears to be widening in the floor of the tunnel, assayed: Gold, 0.06 oz. to the ton; silver, 16.4 oz. to the ton; lead, 38.3 per cent.; zinc, 18.1 per cent.

In addition to the showings mentioned, there are places in the several tunnels where the limestone, oxidized and decomposed over a considerable width, contains sparsely disseminated mineralization, indicating possible starting-points for further exploration with a view to opening up ore-bodies. Mineralization in these siliceous limestones, which can be traced north and south of LaFrance creek for several miles, is widespread, but as yet no large deposits have been opened up, possibly because little or no serious prospecting has been done since the short active period when the discoveries were made and most of the work was done.

Celebration.* The *Celebration* Crown-granted claim, adjoining and south-westerly from the *Chicago* group, is owned by T. Wall. The country-rocks, occurrence, and character of the ore are all very much as on the *Chicago* property. About 1,000 feet south-westerly from the *Chicago* camp some open-cuts show a considerable amount of scattered mineralization in streaks in decomposed limestone. Some of the galena occurs clean in nuggets in the oxidized gangue. Selected galena from streaks in a big pot-hole in the lime assayed for the owner gave from 68 to 82 oz. in silver to the ton and from 71 to 76 per cent. lead.

Snow King.* This property, owned by T. Wall, consists of the *Snow King*, *Snowdrop*, *Snowstorm*, *Assurance*, and *Experiment* Crown-granted claims, situated about 1½ miles westerly from the *Chicago* group, or about 7½ miles from the lake. On the *Snow King* claim, at an elevation of about 6,800 feet, a 90-foot tunnel and two shallow winzes develop a flat-lying vein in limestone, the strike of the strata being northerly up the hill. The width of the vein varies from a seam to 1 foot, containing up to 6 or 8 inches of clean galena in places. The vein is well mineralized through the workings, the ore consisting of galena with small amounts of chalcopyrite and copper carbonates in a calcareous and siliceous gangue. A sample from a small pile of sorted ore outside the portal of the tunnel assayed: Gold, 0.02 oz. to the ton; silver, 55 oz. to the ton; lead, 76.2 per cent.; zinc, 1.8 per cent.

A short distance easterly from the tunnel, and at a slightly higher elevation, another tunnel has been driven some 60 feet in limestone containing stringers and bunches of clean galena with some sparsely disseminated galena. Near the face of the tunnel a winze has been sunk 40 feet, but was inaccessible. Other showings in open-cuts between the tunnels and the summit were not examined for lack of time.

On the *Snowdrop* claim, which adjoins the *Snow King* on the south, an open-cut in limestone shows a stringer of calcite and quartz containing some clean galena. A sample from a small pile of sorted ore assayed: Gold, 0.04 oz. to the ton; silver, 55.6 oz. to the ton; lead, 73.7 per cent.; zinc, 1.8 per cent.

Cultus Creek.* The *Cultus Creek* group consists of the *Morning*, *Evening*, *Old Pick*, *Gad*, *Keno*, *Joe*, and *Bob* claims, owned by the Cultus Creek Syndicate, of Nelson. The property is situated on the southern side of Cultus creek, some 8 miles by trail from Kootenay lake. Cultus creek flows into the western side of the lake at a point some 10 miles north-westerly from Kootenay Landing. Transportation is afforded on Kootenay lake by the Canadian Pacific Railway boats, which call at Cultus Creek Landing when required. The claims extend from Cultus creek, at an elevation of about 3,900 feet, up the mountain-side to the summit of the low ridge separating Cultus creek from Pass creek, at an elevation of about 5,000 feet above sea-level.

The workings, consisting of trenches and open-cuts, develop a mineralized band of altered and silicified limestone of an indicated width of from 40 to 50 feet. The strike of the rocks is N. 20° W. up the hill and the dip is about 55° to the south-west.

The surface of the mountain-side in the vicinity of the workings is covered with a few feet of overburden and few rock-exposures are visible. The formation of the area appears to consist

of highly metamorphosed rocks of sedimentary origin, which, in the vicinity of the vein, have been intruded by basic lamprophyre dykes which may be genetically connected with the ore-deposits. Long shallow trenches dug across the strike of the formation disclose wide zones of oxidized material containing disseminated copper and iron sulphides. All the trenches, extending over a long distance, expose more or less mineralization of similar character.

The following samples were taken at the big cut, where the most work has been done, at an elevation of about 4,750 feet. A grab sample from a big pile of ore assayed: Gold, 0.04 oz. to the ton; silver, 0.09 oz. to the ton; copper, 3.21 per cent. Samples taken in the face of the big cut across 8 and 24 feet, respectively, assayed: Gold, 0.04 oz.; silver, 1.1 oz. to the ton; copper, 1.66 per cent.; and: Gold, 0.06 oz.; silver, 0.7 oz. to the ton; copper, 1.52 per cent.

On the summit of the ridge large boulders of well-mineralized float indicate that higher values in silver and copper may be encountered by trenching across the strike of the vein between the summit and the big cut. A sample of some of this float assayed for the owners gave: Gold, 0.03 oz.; silver, 5.7 oz. to the ton; copper, 5.6 per cent.

Physically the deposit lends itself to economical mining, as drifts can be run in on the vein from the surface of the steep hillside throughout a vertical range of over 1,100 feet. Timber for mining purposes is convenient and plentiful, while water-power could be economically developed on Cultus creek for mining and milling if sufficient ore of economic grade is developed.

Associated Mining and Milling Co., Ltd.

This company, with registered office in Trail, was incorporated during 1927 to operate mining properties near Ginol's Landing on Kootenay lake. W. Frampton, one of the promoters, is president and field manager and E. Mason is secretary. The following reverted Crown-granted claims have been or are being acquired for the company: *Valparaiso, Martilda, Starter, No. 3, Schmilka,* and *Government.* In addition, some nineteen or twenty claims have been staked for the company on adjoining ground. The claims are divided into several groups, known as the *Gold Rand, Gold Reef, Lake Shore,* and *Mount Royal* groups. As there was snow on the ground when the area was visited in November the examination was limited to the vein traversing the *Government, Valparaiso, Florence,* and *North Rand* claims, on which a considerable amount of work was done by the Valparaiso Gold Mines, Limited, in 1900.

In the Annual Report for 1901 it is recorded that "owing to litigation the properties of the Valparaiso Gold Mining Company and the Imperial Mines, Limited, situated on Goat creek, and upon which large sums of money had been expended, have remained idle since early in the season." Nothing further is recorded concerning these companies, whose former holdings form the nucleus of the present company's property, and in due course the above-mentioned claims reverted to the Crown for non-payment of taxes.

The formation of the area examined is granite. The *Valparaiso-Government* vein is a well-defined quartz-filled fissure striking about N. 20° W. along the contour of the mountain-side in a direction nearly parallel to the eastern shore line of Kootenay lake and from 2,000 to 2,400 feet vertically above it. The vein dips easterly, or into the hill, at about 40° The ore, consisting of quartz mineralized with pyrite and arsenopyrite and occasional specks of galena, carrying gold and silver values, occurs in shoots in the vein. The length of the ore-shoots has not yet been determined. The quartz varies considerably in width, the payable ore apparently being confined to narrow bands in which the sulphides are concentrated.

The old workings, consisting of some short tunnels and numerous open-cuts, trace the outcrop of the vein for a length of several thousand feet. At the southern extremity of the area examined there is a short crosscut tunnel which has not been driven far enough to cut the vein. Near this tunnel there are two open-cuts in which the vein could not clearly be seen for debris. Grab samples of broken ore from the dumps of both cuts assayed: Gold, 0.58 oz. to the ton; silver, 8.6 oz. to the ton; and: Gold, 0.42 oz. to the ton; silver, 16.2 oz. to the ton.

Going northerly along the outcrop and on the *Valparaiso* claim a crosscut has been driven about 230 feet, tapping the vein at a depth of about 125 feet. From the crosscut drifts extend a short distance northerly and southerly on the vein and in the north drift, which was caved at the mouth and inaccessible, a raise connects with the surface and a winze is reported to have been sunk a short distance below the level. The best values were presumably found on the north side of the crosscut. A sample across 2 feet of quartz and oxidized material at the intersection of the vein in the crosscut assayed: Gold, 1.04 oz. to the ton; silver, 4.2 oz. to the ton.

Peanut By P. E. Olson

LOCATION: (49° 116° S.W.) South of Cultus Creek and about 2 miles west of Mount Burnett; Cultus Creek flows into the south end of Kootenay Lake from the west.

CLAIMS: Four recorded mineral claims, including the Peanut No. 1 claim where the main showings are found.

ACCESS: During the summer the area can be reached via a jeep-road from Ymir via Porcupine and Cultus Creek roads.

OWNER: J. Robinson and partners, Salmo.

OPERATOR: Inland Ore Reduction Company, 8816 East Sprague Avenue, Spokane, Wash.; field office, 469 Richards Street, Nelson.

METALS: Copper, silver.

WORK DONE: A small portable flotation mill was set up, and a 25-foot incline shaft was sunk on the showing. A few tons of ore was treated. The mill was removed in August.

DESCRIPTION: A shear zone cutting altered granite is exposed on the Peanut No. 1 mineral claim, at an elevation of 5,500 feet. The shear strikes north 35 degrees west and dips 75 degrees southerly and contains a narrow lens of vein material which carries tetrahedrite. The vein, which is only several inches wide, has been traced for about 40 feet on the surface and to a depth of 25 feet in an inclined shaft.

Elsie, Ann By P. E. Olson

LOCATION: (49° 116° S.W.) Between Cultus and Next Creeks, which drain into Kootenay Lake from the west (next to the west of the Peanut property).

CLAIMS: Thirty-two recorded mineral claims located as the Ann, Elsie, Susiann, and Susi groups.

ACCESS: By jeep-road via Porcupine and Cultus Creeks from Ymir.

OWNER: A. Barker, of Creston.

OPERATOR: Rio Tinto Canadian Exploration Limited, 404, 1111 West Georgia Street, Vancouver 5.

METALS: Copper, silver.

WORK DONE: The geology of the claims was mapped, and silt and soil samples were taken for geochemical analysis. Six men, employed for six weeks, were supervised by E. W. Johnson.

SALMO

ERIE CREEK

New Arlington By P. E. Olson

LOCATION: (49° 117° S.E.) On Mineral Mountain, between Whisky and Rest Creeks, which flow into Erie Creek from the east.

CLAIMS: Ten Crown-granted mineral claims including the Arlington (Lot 3648), on which the main workings are situated.

ACCESS: Via the Erie Creek road, which leaves the Salmo–Trail highway immediately east of the Erie Creek bridge.

OPERATOR: G. D. Fox and associates.

METALS: Gold, silica (*see* Table 12 for production).

WORK DONE: Five thousand seven hundred and twenty-two tons of dump rock was shipped from the New Arlington mine dumps. Some bulldozer stripping was done in an attempt to find the surface traces of veins worked underground.

REFERENCE: *Minister of Mines, B.C.,* Ann. Rept., 1967, p. 244.

Silver Dollar

LOCATION: (49° 117° S.E.) Elevation 3,000 feet on a low ridge just west of Salmo.

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
RESOURCE DATA SECTION

082FSE056

NAME(S)= CULTUS CREEK

N.T.S. = 082F07W

MI= 082FSE056 03856

LAT= 4917.9 (DEG.MIN)
LONG= 1652.6
ELEVATION 1433 M.
MINING DIVISION= NELS
LOCATION ACCURACY= 2 , FROM
8 MILES UP CULTUS CR. ON SOUTH SIDE

UTMZ= 10
UTMN= NE5460500
UTME= NE0504400

CAPSULE GEOLOGICAL COMMENT=

COMMODITIES PRESENT= AG CU AU

MINERALS PRESENT=

BIBLIOGRAPHY
C001A BCDM MMAR 1926-284

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MINISTRY OF ENERGY, MINES, & PETROLEUM RESOURCES
RESOURCE DATA SECTION

NAME(S) CANADA BELLE

N.T.S. 082F02W

MI 082FSE054

LAT	4901.6	UTMZ	11U
LONG	11654.6	UTMN	NE5430500
ELEVATION	1700	UTME	NE0507000
MINING DIVISION	NELS	MINERAL STATUS	
LOCATION ACCURACY	1	DEPOSIT TYPE	
		MINDEPID	03907

COMMODITIES PRESENT AG
PB
ZN
BA

MINERALS PRESENT BRIT

CAPSULE GEOLOGICAL COMMENT A SERIES OF NORTHERLY STRIKING QUARTZ VEINS IN DOLOMITE ARE CONFORMABLE WITH THE NEARLY VERTICLE BEDDING OF THE DOLOMITE. THE QUARTZ IS SPARSELY MINERALIZED WITH BARITE, GALENA, SPHALERITE AND PYRITE.

LOCATION COMMENT COMMON BDRY. OF CLAIMS; FROM CLAIM MAP BCDOM

BIBLIOGRAPHY 1 BCDM MMAR 1955-54

which is about 7,000 feet from the portal. A raise started in 1953 was continued, with the objective of connecting with the old O'Donnell adit 450 feet above.

The stockpile of 5,100 tons of zinc concentrates, stored since 1953, was sold in 1955. The recently produced lead and zinc concentrates were shipped respectively to smelters at Kellogg, Idaho, and Black Eagle, Montana. The crew was increased to about 130 by the end of 1955.

BOUNDARY LAKE*

Silver-Lead-Zinc

Canada Belle No. 1 and No. 2 (49° 116° S.W.) These claims are on the west flank of North Star Mountain, 24 miles by good logging-road west of Porthill, Idaho. They are owned by Harry J. Yerbury, of Creston. A series of northerly striking quartz veins in dolomite have been exposed in open-cuts through a range in elevation of 4,700 to 5,000 feet. The veins are conformable with the nearly vertical bedding of the dolomite. The quartz ranges from 0 to 2 feet wide and is sparsely mineralized with barite, galena, sphalerite, and pyrite. The best showing is at 5,000 feet elevation, where a vein has been stripped for 50 feet along the strike. This work probably encountered one or more lenses of galena, of which a few pounds are in evidence, but mineralization exposed in place is negligible.

SOUTH KOOTENAY LAKE†

SANCA (49° 116° S.W.)

Tungsten-Gold-Silver-Lead

Valparaiso (Akokli Tungsten Mine Ltd.) Mine office, Boswell. N. E. Willson, president and manager. This private company holds two Crown-granted and fifteen recorded claims on the east side of Kootenay Lake near Akokli (Goat) Creek. The mine is at an elevation of 4,240 feet and is reached by a 4½-mile truck-road which leaves the Creston–Kootenay Bay Highway 1 mile south of Akokli Creek. Since 1900 this property has been operated successively by Valparaiso Gold Mining Company Limited, Associated Mining & Milling Company Limited, Sanca Mines Limited, and the present company.

Development work has been confined chiefly to the examination of the Valparaiso-Government vein, outcrops of which have been traced along the mountainside for several thousand feet. The vein is a well-defined quartz-filled fissure in the granite of the Nelson batholith. It strikes north 20 degrees west and dips eastward at 40 degrees into the mountain. It is from 5 to 6 feet wide. A lamprophyre dyke accompanies the vein, which it frequently crosses, and locally passes into and returns from the granite walls. The ore is composed of quartz mineralized with pyrite, arsenopyrite, wolframite, secondary tungsten minerals, occasional disseminations of galena, and in one instance a 14-inch-wide vein of galena. It also contains gold and silver. Wolframite has been observed in the granite walls where local shearing has occurred. In the numerous open-cuts and in the underground workings the minerals are extensively oxidized. Parallel to this vein and higher on the hillside east of it, surface stripping has exposed vein outcrops of similar mineralization. Additional work on these outcrops is necessary to determine their extent and value.

In 1955 the inclined shaft on the Government claim was reopened to a depth of 130 feet. It was enlarged to dimensions of 9 feet by 14 feet and contains a manway and a hoisting compartment. The north drift was begun 80 feet below the shaft collar and was driven a distance of 433 feet. The entire drift required timbering. The face of the drift is 240 feet south of and 60 feet below the face of the Valparaiso south drift. At a

* By J. W. Peck.
† By J. E. Merrett.

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
RESOURCE DATA SECTION

082FSL082

NAME(S)= HUMDINGER & HUNKADORA

N.T.S. = 082F07W

MI= 082FSE082 03654

LAT= 4916.6 (DEG.MIN)
LONG= 1654.2
ELEVATION 1600 M.
MINING DIVISION= NELS
LOCATION ACCURACY= 2

UTMZ= 161
UTMN= NE5458000
UTME= NEC507400

CAPSULE GEOLOGICAL COMMENT=

COMMODITIES PRESENT= CU AG AU

MINERALS PRESENT=

BIBLIOGRAPHY
COQ1A BCDH MMAR 1927-326 006
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veins, however, is north and south, the dip being approximately vertical. A little work has been done at two widely separated points on the heavily wooded side-hill sloping to the creek.

At the southern end of the area examined there is a shallow shaft, about 6,300 feet above sea-level, which was full of water. At the top of the shaft the vein is from 1½ to 2½ feet wide. A sample from the dump of material derived from the shaft assayed: Gold, 0.10 oz. to the ton; silver, 5.9 oz. to the ton; lead, 4.5 per cent.; zinc, 8.1 per cent.

Some 3,000 feet (estimated) to the north and at about 6,150 feet elevation another shallow shaft develops a vein 2½ feet wide, containing disseminated galena, pyrite, and zinc-blende through leached and oxidized quartz and altered country-rock. A sample across 2½ feet on the south side of this shaft assayed: Gold, 0.28 oz. to the ton; silver, 1.4 oz. to the ton; lead, 2.8 per cent.; zinc, 0.6 per cent. On the north side of the shaft samples across 3 inches of ore on the hanging-wall and 12 inches on the foot-wall, separated by 15 inches of altered granite, assayed respectively: Gold, 0.56 oz. to the ton; silver, 1.7 oz. to the ton; lead, 1.6 per cent.; zinc, 0.4 per cent.; and: Gold, 0.54 oz. to the ton; silver, 2 oz. to the ton; lead, 3.6 per cent.; zinc, 2.3 per cent.

Going northerly along the outcrop about 300 feet and at an elevation of about 6,250 feet, an open-cut has been made in the same vein, exposing 20 inches of similar ore, which gave an average assay of: Gold, 0.78 oz. to the ton; silver, 1.5 oz. to the ton; lead, 4.5 per cent.; zinc, 0.5 per cent. Other open-cuts north and south of the workings mentioned trace the vein for some distance. The veins in the superficial workings are well mineralized and, judging from the results of the development done at the *Spokane* property where the main vein was narrow and tight at the surface, are likely to increase in width at depth. The overburden is deep in places and only comparatively short sections of the outcrop of the veins have been prospected.

Humdinger and Hunkadora.* These claims, owned by C. O. Woodrow, W. R. Hunter, R. M. and K. K. Lab, are on the trunk trail in the low pass between Cultus and Canyon creeks, about 9 miles from Kootenay lake. While building the trail some copper ore was found and an open-cut was made exposing a width of 7 feet of chalcopyrite disseminated through a siliceous and calcareous gangue. The mineralization is uniformly distributed throughout the showing. At the time of this examination neither wall was exposed and there was no indication of the limits of the deposit, which is along the general trend of the mineralized zone developed on the *Cultus Creek* group described in the Annual Report for last year.

A grab sample from a pile of representative ore on the dump of the open-cut assayed: Gold, 0.06 oz. to the ton; silver, 2.4 oz. to the ton; copper, 4.58 per cent. An analysis of the gangue showed it to contain 60.6 per cent. silica, the balance being chiefly lime and alumina. No country-rock exposures were visible and the small amount of digging was not sufficient to afford much information as to the character of the deposit. The showing is attractive and its accidental discovery demonstrates the interesting prospecting possibilities of the area. There is a large territory in the Cultus-Canyon Creek section which has only been slightly prospected.

List of Producing Mines in Nelson Mining Division, 1927.

Mine.	Locality.	Tons.	Character of Ore.
Alice	Creston	22	Silver-lead-zinc.
Goodenough	Ymir	1,306	Gold-silver-zinc-lead.
H.B.	Salmo	656	Lead-zinc-silver-gold.
Hunter V	Ymir	5,416	Silver-gold.
Kootenay Belle	Salmo	149	Gold-silver.
Molly Gibson	Kokanee mountain	100	Silver-lead-zinc-gold.
Queen Victoria	Beasley	33	Silver-copper.
Silver Reef	Nelson	3	Silver-zinc-lead.
True Fissure	Rover creek	26	Silver-zinc-lead-gold.
Yankee Girl	Salmo	17,752	Gold-silver-lead-zinc.

TRAIL CREEK MINING DIVISION.

At the Rossland camp no new developments are reported by the Consolidated Mining and Smelting Company. About 100 men were employed. The town, which has now become a residential suburb of Trail, is well occupied and business is reported to be in a healthy condition.

Anticipation of increased population the city reservoir has been greatly enlarged and extensive improvements have been made to the Rossland–Trail road.

Outside of the operations of the Consolidated Mining and Smelting Company, mining activities were principally confined to the group of high-grade gold properties adjoining the *I.X.L.* On the *O.K.*, which adjoins this property to the west, exploration was persistently carried on by a local syndicate in an endeavour to pick up the westerly extension of the vein. At the time of the writer's visit no conclusive results had been obtained. After a careful study of the conditions no definite conclusions could be arrived at as to where future work might best be directed. In fact, it is one of those cases in which "the ore is where you find it." On the *Knight*, which adjoins the *I.X.L.* to the east, a considerable amount of work has been done by another local syndicate. Here broken segments of the vein had been encountered and a little high-grade ore had been mined from a short length.

In both cases the persistent efforts that have been made are certainly deserving of success. Further work was also done on the *Golden Drip*, which adjoins these properties to the south.

Further prospecting-work had been done on the *Blue Elephant*, owned by George W. Urquhart, of Rossland, and at the *Lord Roberts*, owned by John Sinskowski, of Rossland. Both of these properties are situated at a short distance north of Rossland. The results so far obtained are inconclusive, although there is evidence of mineralization, which occurs in a sheeted zone. As far as could be ascertained in the field, the formation consisted of highly metamorphosed rocks of the Mount Roberts formation. The values are in gold, silver, and copper.

Prospecting was also undertaken by J. B. Paul, of Rossland, at the *Good Hope*, which is situated on the Cascade road at a distance of about 5½ miles from Rossland. Here a 76-foot tunnel had been driven to prospect a quartz vein at a short distance below the road. Sampling indicated small values in gold and silver.

Trail Reduction-works.

Relative to the many additions and improvements made to the plant during 1927 the following information has been submitted by the Consolidated Mining and Smelting Company:—

Copper-smelter.—During the year the blast-furnace was replaced by a reverberatory furnace, 90 by 18 feet inside dimensions. This furnace is fed with concentrates containing 10 per cent. moisture and has a smelting capacity of from 250 to 300 tons of solid charge in 24 hours. The matte produced contains 40 to 45 per cent. copper, and the slag 40 per cent. silica, 21 per cent. iron, and 11.5 per cent. lime.

Lead-smelting Plant.—An additional 100-ton drossing-furnace and a 100-ton casting-pot are under construction at the drossing plant. Three bays (48 feet) have been added to the drossing-plant building to accommodate this equipment.

Lead-sintering.—The capacity of the primary machines has been more than doubled by increasing their length from 264 to 300 feet. A new Cottrell plant of the plate-type flue system for treatment of the gases from the sintering plant was put into operation during the year. This plant is capable of treating 400,000 cubic feet of gas a minute. The stack through which the gases finally escape to the atmosphere is of reinforced concrete and has a height of 400 feet, with an inside diameter of 25 feet.

Lead-refinery.—The most recent addition to this plant increased its capacity by 50 tons, bringing the total up to 425 tons a day of refined lead.

Electric Furnace.—A 1,500-kw., 3-phase electric furnace with a rated capacity of 30 tons a day was put into operation during the year. This is being used experimentally in connection with the treatment of the leached residue from the electrolytic zinc-refinery. The product is a mixed lead and zinc fume and an impure pig-iron.

Electrolytic Zinc-refinery.—The following additions were made to plant and equipment during the year, increasing the capacity from 200 tons to 300 tons of refined zinc a day: In the roaster division six 25-foot 7-hearth mechanical Wedge roasting-furnaces were installed, also a Hardinge powdered-coal unit to replace hand-firing. In the Leaching division nine large Dorr tanks were installed and in the new tank-room 130 electrolytic cells. Direct current for this plant is generated by five rotary converters with necessary transformers and switch equipment. This plant is housed in a steel and concrete building, ventilated by a modern air cooling and purifying system.

MINISTRY OF ENERGY, MINES, & PETROLEUM RESOURCES
RESOURCE DATA SECTION

NAME(S) IVA FERN	N.T.S. 082F07W	MI	082FSE037
	LAT 4918.7	UTMZ	165
	LONG 11655.4	UTMN	NE5462300
	ELEVATION 1966	UTME	NE0506400
	MINING DIVISION NELS	MINERAL STATUS	
	LOCATION ACCURACY 1	DEPOSIT TYPE	
		MINDEPID	03853

COMMODITIES PRESENT: AG, AU, CU, PB, ZN

MINERALS PRESENT

LOCATION COMMENT: COMMON BDRY., L.12656-12658 BCDOM

BIBLIOGRAPHY
1 GSC MEM 228-81
2 1930-27A, 1937-E10,E11,E8
3 BCDOM MMAR 1917-167*, 1918-174, 1919-135*, 1925-251, 1928-351, 1929-359

"Much of the area along the lime-belt contained within the company's property has not been tested and it all justifies careful prospecting and detailed geological work, especially on the parallel lime-beds in corresponding positions to the known ore-zones on lime-belt No. 2.

"With the nature of the ore occurrences here any new ore-zones found may easily be of higher grade if conditions happen to be slightly more favourable. Any consideration of the value of the ore on this property should take into account the very favourable physical conditions for cheap mining; the ore-zones are wide, the limestone dips at an even angle of 50°, the ground holds up well and lends itself to the cheapest methods of mining. In addition to this, the nature of the mineralization and deposition of the ore is such that standard metallurgical practice will make high recoveries at a low cost. The zinc mineral is a light-coloured high-grade sphalerite which concentrates to a product carrying over 60 per cent. zinc.

"The work in hand and the policy of the company for the coming season is to drive the low-level tunnel along the limestone between the McDonald ore-zone and the Reeves ore-zone, and later extending it along the limestone to the O'Donnell ore-body. As soon as the snow is off the ground an intensive study of the surface geology will be made with a view to locating further favourable positions for testing by trenching or diamond-drilling.

"In the meantime, the West Kootenay Power Company is developing a power-site on the Pend d'Oreille river about 7 miles from the property, and according to press announcements the Canadian Pacific Railway has in its construction programme a railway from Trail to Metaline, the survey-line for which passes along the Pend d'Oreille river near the mouth of our new main tunnel. These developments should have a favourable bearing on the future operation of this property when it has reached a stage requiring power and transportation facilities.

"H. H. YUILL,
President and General Manager."

Red Bird.* At the *Red Bird*, across the river from the *Reeves-McDonald*, the lower tunnel was extended several hundred feet. The mine-workings contain extensive exposures of completely oxidized and decomposed zinc-lead ore, no sulphides having yet been encountered. The deposits are found in a wide fractured zone conforming in strike and dip with the enclosing limestone. The ore-minerals include the carbonates of zinc and lead, smithsonite and cerusite, with possibly some sulphate of lead, anglesite, and the zinc silicate—calamine. The silver content of the carbonate ores is low. The lead carbonates are so far confined to rather small areas in the more continuous zinc-carbonate mineralization. There is a constant lead content in the zinc ores and some zinc in the lead ores, and both are intimately associated with the oxides, and perhaps carbonates, of iron. The lower tunnel, some 1,200 feet in length when last visited, is about 800 or 900 feet in elevation above the Pend d'Oreille river. Other workings above the lower tunnel include two short tunnels, a shaft about 35 feet deep, and a number of open-cuts. In all the workings, which are situated on both sides of a gulch, there are wide exposures of oxidized decomposed material containing lead and zinc carbonates. Eight samples of oxidized material from the different workings, over widths up to 6 feet, gave assays showing: Gold, from 0.01 to 0.04 oz. to the ton; silver, from 0.6 to 4.6 oz. to the ton; lead, from 2.6 to 8.6 per cent.; zinc, from 3.8 to 17 per cent. A sample across a 2½-foot band of zinc-carbonate ore in the lower tunnel assayed: Gold, 0.02 oz. to the ton; silver, 4.2 oz. to the ton; lead, 3.3 per cent.; zinc, 24.1 per cent. During the latter part of the year some diamond-drilling was done with a view to ascertaining the depth to which oxidation extends.

Iva-Fern.* This group consists of the following seven Crown-granted claims: *Excelsior*, Lot 12657; *Fern*, Lot 12656; *Standard*, Lot 12658; *Iva*, Lot 12655; *Black Cap*, Lot 12654; *Jewel*, Lot 12653; and *Gem*, Lot 12652. The property is situated on the northern side of Cultus creek, about 7 or 8 miles by trail from Kootenay lake, on which transportation is afforded by steamers of the Canadian Pacific Railway Company. Cultus creek flows into the western side of the lake at a point 9 miles north-westerly from Kootenay Landing. There is a good wide trail on an easy grade from the lake-shore to the foot of the hill, a distance of about 5½ miles, from the end of which a switchback trail leads to the mine. The claims are staked in a northerly direction along the strike of the veins from the valley of Cultus creek to the summit of the rounded ridge separating the North fork from the main creek. The mine buildings include a bunk-house to accommodate about ten men, a combined dining-room and

kitchen to accommodate about twenty men, blacksmith-shop, etc. At the lake-shore there is a convenient cabin to accommodate men and supplies in transit.

There is little information available on the geology of the area, which has not yet been mapped with any accuracy. On the provisional West Kootenay sheet of the Geological Survey the area in which the property is situated is shown as entirely consisting of granite. This is not correct, however, and the formation in which the deposits are found consists of steeply tilted metamorphosed rocks, chiefly of sedimentary origin. Some distance east of this formation, however, there is a belt of granite several miles wide. These sedimentaries, which consist of banded argillites, schists, silicified dolomites, and quartzites, resemble the rocks of the Summit series, shown along the eastern margin of the Geological Survey map of the Ymir camp (Map 175A) and tentatively referred to the Cambrian or Pre-Cambrian period.

On the South fork of Porcupine creek the *Howard*, where new discoveries of importance have been made recently, is probably situated in a roof-pendant of the Summit series and farther south these rocks contain the deposits of the Sheep Creek gold camp. The mineral-belt in which the *Iva-Fern* is situated has been traced at intervals for several miles in a southerly direction, and during recent years a number of claims have been staked southerly from Cultus creek. The mineralization in the southern extension of the *Iva-Fern* mineral-belt consists of copper sulphides containing low values in gold and silver.

On the *Iva-Fern* two different types of mineralization were noted, one consisting of a fairly coarse galena, with which is associated chalcopyrite and zinc-blende, the other consisting of disseminated sulphides of lead and zinc without any copper. The gangue contains lime and silica and in places a considerable development of siderite was noted. In general the mineralization is of a character requiring concentration.

There are two veins exposed in the surface workings examined, which consist of numerous long shallow trenches dug across the strike of the formation and two shafts, 10 and 30 feet down respectively. These veins apparently coincide with the trend of the enclosing argillaceous rocks (slates), the strike of which is about N. 10° E. The dip of the veins is steeply to the west, apparently cutting the dip of the country-rocks, which is about 40° to the west. Basic lamprophyre dykes accompany the veins in places, but their possible connection with the ore-deposits has not yet been determined.

Most of the work has been done on the No. 2 vein, which is the most westerly or farthest up the hill. This vein is traced at short intervals on the surface by long shallow trenches and a shaft for a total length of about 600 feet of outcrop. The No. 2 tunnel, hereinafter described, develops the same vein a considerable distance farther south, so that altogether the No. 2 vein outcrop is traced over 2,000 feet in length. The elevation of the northern end of these workings at the summit is about 6,340 feet. At this point a trench shows iron-stained siliceous ledge-matter impregnated with galena over a width of several feet.

Farther south, at an elevation of 6,300 feet, there is a shaft, caved and inaccessible, at the southerly end of a trench about 36 feet long. On the dump of this shaft there are several tons of partially oxidized ore, heavily impregnated with galena and some chalcopyrite. Going south from the shaft for about 40 feet there is a trench at the easterly end, of which there is exposed a width of 10 feet of ore which is well mineralized with disseminated galena throughout. Some 70 feet farther south a trench 15 feet long exposes some ledge-matter containing disseminated galena. In this trench the full width of the mineralization is not exposed. The next trench to the south is off to one side of the strike of the vein. Continuing in the same direction, two more trenches expose oxidized ledge-matter only. The next two trenches, which are about 120 feet apart, were not accessible for debris, but the dumps show siliceous material well mineralized with galena. Therefore the strongest mineralization seen on the surface was in the trenches at the southern end of the outcrop workings and, farther north, at the shaft and trench just south of it.

The No. 1 vein lies a few hundred feet to the east of the main No. 2 vein, which it parallels at a slightly lower elevation. Surface workings seen on this vein consist of some eight or nine trenches and a shaft. Going south from the crest of the ridge, five trenches, distributed over a total length of around 180 feet, expose oxidized ledge-matter with some disseminated galena in places. Some 30 feet south of the last of these trenches there is a shaft, which was inaccessible for caving, on the dump of which are a few tons of good lead ore. A grab sample of this

ore assayed: Silver, 15 oz. to the ton; lead, 65 per cent. Some trenches south of the shaft show oxidized ledge-matter, no galena being noted.

The elevation of the upper tunnel and camp is about 5,950 feet. (All elevations herein are relative only, being based on aneroid readings.) This tunnel, which gains a depth of about 200 feet on the outcrop of the No. 2 vein, is driven westerly as a crosscut for about 500 feet. A drift to the north then extends along the No. 2 vein for about 120 feet. A basic lamprophyre dyke follows the hanging-wall side of the vein, but crosses to the foot-wall side of the vein at its intersection in the crosscut.

In the main crosscut, 22 feet east of the No. 2 vein, a 6-foot vein was cut, a sample across 4 feet of which assayed: Silver, 4.1 oz. to the ton; lead, 12.1 per cent.; zinc, 11.9 per cent. Continuing along the crosscut and a short distance beyond the main vein, there is, according to reliable report, a short drift developing a copper-silver showing which the writer missed seeing.

A cursory inspection of the 120-foot drift showed milling-ore in places through the first 100 feet of the tunnel, with continuous mineralization throughout the last 20 feet. A sample across 4 feet, 20 feet back from the face, assayed: Silver, 2.9 oz. to the ton; lead, 11.5 per cent.; zinc, 8.2 per cent.; and a sample across 4 feet in the face of the drift assayed: Silver, 2.5 oz. to the ton; lead, 5.9 per cent.; zinc, 15 per cent. A short distance back from the face a narrow stringer of massive galena and chalcopyrite is visible in the west wall of the drift.

According to the plans seen by the writer, the face of the drift is about 80 feet short of reaching a point vertically below the shaft and about 40 feet short of a point vertically below the trench just south of it, in which surface workings strong showings are developed. The drift, therefore, would only have to be extended a short distance to prove the downward continuation of the ore-body indicated on the surface. The No. 1 vein is cut in the main crosscut where it shows well-defined lines of fracturing but no appreciable mineralization.

The No. 2 tunnel, developing the No. 2 vein at an elevation of about 5,650 feet, has only been driven a short distance. Just inside the portal mineralization was encountered consisting of a width of 6 feet of disseminated galena, zinc-blende, and chalcopyrite, in a gangue of siderite and altered silicified country-rock. The dip of the vein in this working is apparently about 60° to the west. The hanging-wall of the vein is well defined, but the foot-wall is somewhat indefinite.

A short length of this ore is exposed near the portal of the tunnel, which continues for a short distance in a semicircular direction towards the west, but does not show any further appreciable mineralization. The ore at the portal has the appearance of being the apex of an ore-shoot to explore which it will be necessary to gain further depth. On the dump of this tunnel there are a few tons of ore which is heavily impregnated with galena and chalcopyrite. The above workings comprise the area examined by the writer, but there are, it is understood, other showings, and also areas where considerable amounts of float-ore have been found.

Some preliminary work was done on the *Iva-Fern* by the Consolidated Mining and Smelting Company in 1918 and 1919. Work done by this company included most of the surface-trenching and the driving of the first 237 feet, approximately, of the crosscut tunnel. In 1922 the Standard Silver Lead Mining Company bonded the property and continued the crosscut to the intersection with the main vein, which was drifted on 120 feet to the north. In 1923 work was discontinued by this company and no work has been done since.

The position is that, for various reasons not detrimental to the property, work done on the *Iva-Fern* has not been brought to full conclusions. By extending the drift a few hundred feet the downward continuation of the shaft ore-body will be tested and information gained which will be of value in developing the numerous other showings on the property.

The mineral-belt in which the *Iva-Fern* is situated presents very interesting exploratory possibilities, chiefly on account of the numerous indications of copper-deposits. The veins can be developed to very considerable depth by tunnelling, while conditions for timber-supply, water-power development, and aerial-tram location are favourable. All the development-work done on this property is localized towards the summit and much ground remains to be prospected. The interesting possibilities of exploration along the vein extensions at lower altitudes is indicated by the recent discoveries of gold-silver-copper ore in the continuation of the same belt south of Cultus creek.

Since the above report was written the Iva Fern Mines, Limited, was formed, but up to the end of the year no work resulted owing, it is reported, to disagreement among the principals.

News has just come to hand to the effect that the property has been taken under a development bond by the Consolidated Mining and Smelting Company.

Delaware.

This group comprises three Crown-granted claims located on the Arrow Creek slope of Rolfe mountain near Creston. The property was being worked under option by G. A. M. Young and J. E. Hayden, of Creston. The formation is Aldridge quartzites which have been invaded by igneous rocks of the Purcell sills. In the vicinity of the workings the quartzites have been subjected to shearing movements which conform with their strike of N. 7° S. and dip of 70° to the west. Prospecting has been confined to a quartz vein occupying a sheared fissure, which, striking N. 30° W. and dipping at a steep angle to the west, cuts the formation.

At an elevation of 4,350 feet a prospect-tunnel had been driven at a short distance below the outcrop in a direction of N. 30° W. for about 50 feet. The vein-filling consisted of quartz in which streaks and pockets of galena occurred, constituting a milling grade of ore. The greatest width noticed was at the face, where a sample taken across 2 feet gave the following returns: Gold, 0.02 oz. to the ton; silver, 6.5 oz. to the ton; lead, 14.2 per cent.; zinc, 0.6 per cent.

Beyond the face of the tunnel the hillside slopes at a flat angle, which allowed but little "backs" above the level, so while open-cuts had established the continuity of the vein for another 50 feet or so, no important tonnage could be expected from these shallow workings. A sample taken from a small pocket of clean galena exposed in the bottom of one of the cuts assayed: Gold, 0.04 oz. to the ton; silver, 44.8 oz. to the ton; lead, 70.6 per cent.; zinc, 0.7 per cent.

To further explore the vein at depth a tunnel had been driven along its strike at a point about 50 feet lower down the hill. This tunnel had been advanced for 211 feet to a point 50 feet beyond the face of the upper tunnel. Along this length the vein shows persistency and a little ore at intervals. The best showing seen was at the face, where galena was making its appearance in a strong width of quartz. This indicates that the mineralization has a rake to the north and favourable possibilities for the advancement of this drift. A grab sample considered to represent a shipping grade of ore was taken from a small pile near the portal of the tunnel; this assayed: Gold, 0.07 oz. to the ton; silver, 9.6 oz. to the ton; lead, 20.5 per cent.; zinc, 0.6 per cent.

It is understood that more ore has been encountered since the examination was made and the trail has been improved in order to make a trial shipment to Trail.

LIST OF SHIPPING-MINES, SHOWING TONNAGE PRODUCED, 1928.

Nelson Mining Division.

Mine.	Locality.	Tons.	Character of Ore.
Arlington	Erie	53	Gold, silver, zinc, lead.
Catherine	Nelson	46	Gold, silver, lead.
Euphrates	Nelson	11	Gold.
Goodenough	Ymir	1,603	Gold, silver, zinc, lead.
Golden Age	Nelson	3	Gold.
Hunter V.	Ymir	11,682	Gold, silver.
Kootenay Belle	Salmo	282	Gold, silver.
Queen	Salmo	48	Gold, silver, lead.
Second Relief	Erie	23	Gold, silver.
Wynndell	Wynndell	9	Silver, copper.
Yankee Girl	Salmo	1,220	Gold, silver, lead, zinc.

TRAIL CREEK MINING DIVISION.

The year was an eventful one for Trail, for the birth of a new industry which promises to be of outstanding importance to Canada was conceived by the higher officials of the Consolidated Mining and Smelting Company. Plans, it is understood, have been formulated which will involve the expenditure in millions in power development and plant equipment.

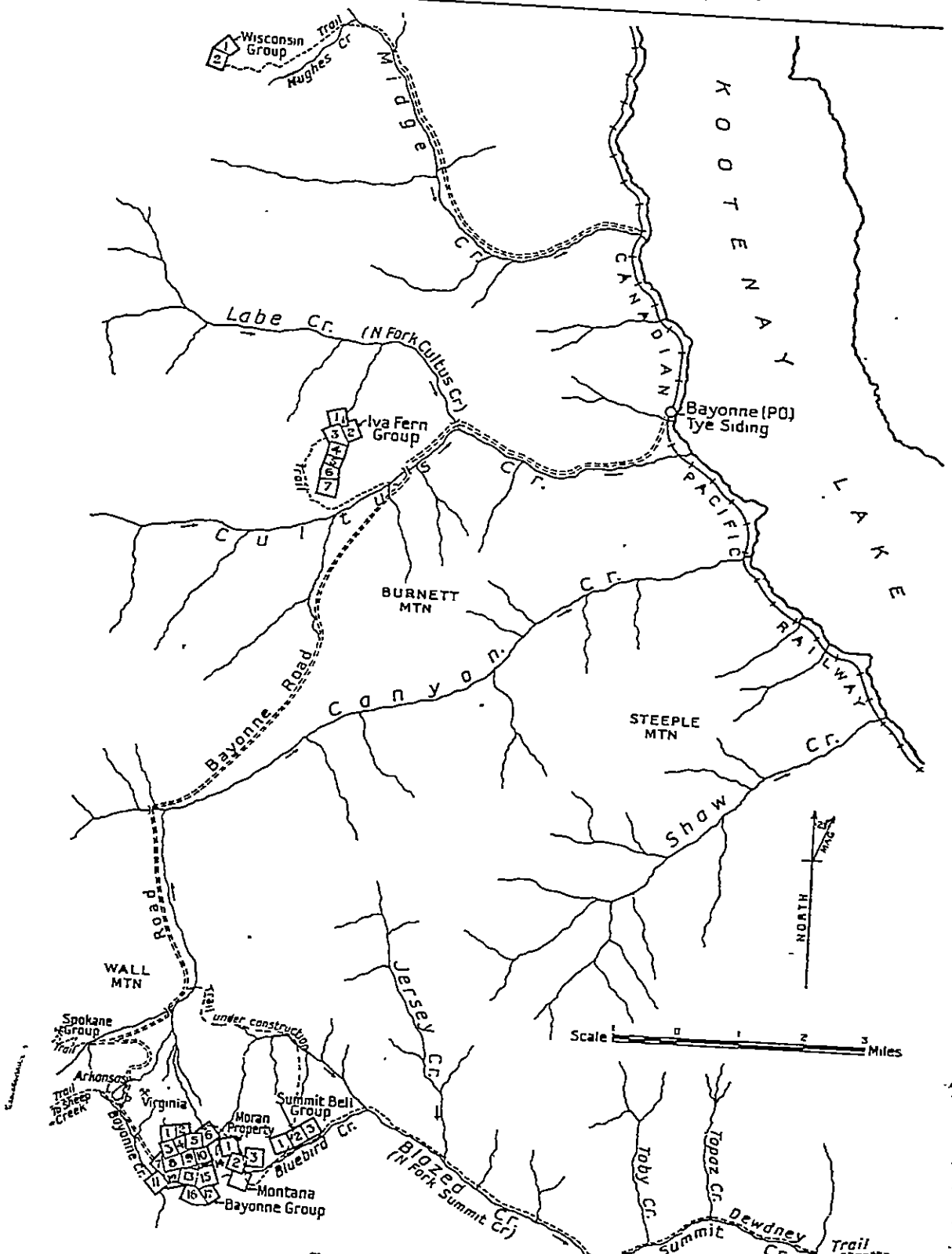
Some years ago it was foreseen by the management that, if a large supply of phosphate rock could be located within a convenient distance of the reduction-works at Tadanac, it could be

Tye Siding up Cultus Creek for about 6 miles, and from this a pack-trail was built through a low pass to Canyon Creek and up Canyon Creek to the *Spokane*. This trail was later extended to the *Bayonne*. The Bayonne road, carried through to the mine in 1935, followed essentially the same route from the end of the wagon-road. A mill was built at the *Bayonne* in 1936, and production was started in November. In 1937 production included bullion from the *Bayonne* and some crude ore shipped to the smelter at Trail from the *Spokane*. In the Midge Creek section, several years ago, interest began to be taken in the *Wisconsin*, which had lain idle for many years. Surface prospecting and diamond-drilling were followed by a programme of underground development begun in 1935.

The area has not been mapped in detail either topographically or geologically. It is covered by the "West Kootenay Sheet," on a scale of 4 miles to the inch, published in 1904 by the Geological Survey of Canada. This map gives the geology on a topographic base, from reconnaissance surveys made when the area was much less accessible. In more recent years it has been discovered that the South Fork of Cultus Creek as shown on the earlier maps is actually the upper part of Canyon Creek. An area originally mapped as Nelson granite is now known to be occupied by a continuous belt of sedimentary rock at least 1¼ miles wide, extending from the *Iva Fern* south through the pass to Canyon Creek and possibly as far south as Blazed (North Fork of Summit) Creek. The writer does not know how far this belt extends north of the *Iva Fern*. There are also sediments at the *Wisconsin* on upper Midge Creek, which detailed mapping would probably show to be of considerable extent. The area is largely underlain by granitic rocks, doubtless related to the Nelson batholith. The belt of sedimentary rocks mentioned is of some interest as in it discoveries have been made which differ from the mineralization elsewhere. The area is quite rugged, the maximum relief as shown by the "West Kootenay Sheet" is about 6,300 feet from lake-level to the top of Steeple Mountain, of which the elevation is given as 8,050 feet. A number of peaks are shown as above 7,000 feet. However, round-topped ridges of lower elevation are characteristic of a good deal of the area. Fires have killed the timber on Midge Creek, also in sections on Cultus Creek, but most of the area is forested. There is generally a fairly deep soil mantle. On the ridges this mantle is usually loose and friable. This material has been readily moved by a bulldozer in stripping at the *Bayonne*.

On the *Bayonne* and *Spokane* properties, mineralization has been developed in quartz veins in granitic rock. Gold contributes the principal value. The workings are largely within the zone of oxidation; however, sulphides found in the veins indicate clearly that the gold in primary ore is associated with sulphides. The sulphide mineralization generally is not heavy though lenses of solid sulphides occur. Pyrite, galena, sphalerite, and chalcopyrite can be recognized with the unaided eye, and tetrahedrite has been recognized under the microscope. In both properties there occur lenses of solid galena which, though carrying good values in silver, contain relatively little gold. In the belt of sediments, previously mentioned, lead-copper mineralization with some silver but practically no gold is developed at the *Iva Fern*, while in two discoveries to the south, the *Cultus* group and the *Humdinger* and *Hunkadora*, the mineralization has been described as copper with some silver and a little gold. At the *Wisconsin* mineralization occurs close to shearing along the contact between a small mass of quartz-diorite and altered sediments. Here gold and some silver are associated with massive and disseminated sulphides. The sulphides include pyrite and arsenopyrite with minor quantities of chalcopyrite, sphalerite, and galena.

In the following pages descriptions are given of the properties in this area, on which there has been a good deal of work done in the past three years. Some other prospects are also described. The reports are based on examinations made by the writer in the past three seasons, supplemented by information obtained from earlier Annual Reports of the Minister of Mines. Distances given are commonly limited to the accuracy of pacing. Elevations are from aneroid barometer readings; in a number of cases they have been checked by readings on several occasions. The Annual Reports of the Minister of Mines from 1903 onward have contained references to properties in this area. The reports for the years from 1926 to 1930 contain references to base-metal prospects and some others, which are not described in this report.



Sketch-map of the Bayonne-Midge Creek Area.

The development-work has been carried out by means of two adit-tunnels. There is 120 feet of drifting along the vein in the upper tunnel and 285 feet in the lower. The vertical distance between the two tunnels is 135 feet.

Presuming that the vein carries its width between the two tunnels, it is reasonable to assume that there are between 4,000 and 5,000 tons in this section of the vein, while there is the possibility of winning 3,000 to 5,000 tons from that section of the vein which lies between the lower tunnel and the surface. The vein can be traced by means of small open-cuts on the surface for a considerable distance, but, except for showing the strike to be persistent, the work done has not been sufficient to enable one to attach any economic importance to the surface showings. It would indicate that further underground development might be done to advantage by continuing the present drifts.

In order to handle the output of this mine to the best advantage it will be necessary to install a mill, an excellent site for which is available on Canyon creek at a short distance from and 900 feet below the mine-workings. Laib Bros. are continuing with the development of the property this winter.

Transportation facilities are a serious handicap to the property at present. The packing charges over the divide to the Sheep Creek road are prohibitive. The only feasible route from the mine to transportation facilities is down Canyon creek for a distance of about six miles, then over Low pass and down the valley of Cultus creek to Kootenay lake, a total distance of seventeen miles, over which a good uniform grade is obtainable.

Harris. This property adjoins the *Spokane* group on the west. An open-cut exposes a small quartz vein having a width of about 6 inches, the strike of which is N. 77° W. It is slightly mineralized with galena and iron pyrites. This is probably the continuation of the *Spokane* vein.

Diamond Dick. This property, belonging to Alex. Stuart and McDonald, is situated on the ridge of Arkansas mountain, at an elevation of 6,900 feet. Numerous open-cuts and a small tunnel expose a small though persistent quartz vein in granite, with a width varying from a few inches to 15 inches. The quartz-filling of the vein is stained with oxide of iron and in places is honeycombed.

Bayonne. No work has been done since J. D. Galloway reported on the property in 1915. It is undoubtedly a property which has great merit, and it seems extraordinary that it should have remained idle for long. A sample taken across a width of 4.5 feet in the *Ohio* tunnel assayed: Gold, 1.96 oz.; silver, 4.60 oz. A sample of 125 tons of dump at *Ohio* tunnel: Gold, 1.42 oz.; silver, 2 oz. A sample of 50 tons of dump at *Bayonne* tunnel: Gold, 0.60 oz.; silver, 2.6 oz.

Montana. This claim is located at the head of the North fork of Summit creek and at a distance of about a mile in a north-easterly direction from the *Bayonne* mine. The elevation of the property is 6,600 feet. The surface of the claim is covered with large granite boulders. Numerous open-cuts expose the vein at intervals for a distance of about 500 feet; the width is 10 inches, the strike N. 80° W., and the dip 58 degrees. The vein-filling is quartz, with small quantities of galena and iron pyrites. A sample taken across an 8-inch width in a small shaft gave the following returns: Gold, 0.16 oz.; silver, 0.54 oz. A sample of selected ore on the dump ran: Gold, 0.10 oz.; silver, 4.40 oz.; lead, 24.5 per cent.

Maggie Aitkens, Summit Bell, and Michigan.—These claims are situated about one mile down the North fork from the *Montana*. The elevation of the tunnel on this property is 5,885 feet. The ore occurs as galena, iron pyrites, and probably free gold in a quartz vein. The country-rock is granite, which is altered in the vicinity of the vein and is stained red with oxide of iron. There has been a considerable amount of movement along the line of fracture, and the vein appears to be faulted and broken. The width of the vein varies from a few inches to 2.5 feet. A sample across a width of 2.3 feet at the face of the tunnel gave no values. A sample of selected ore on the dump ran: Gold, 2.94 oz.; silver, 1.9 oz. The principal work done consists of 120 feet of drifting along the vein. This property was examined under the disadvantages of having little time on the ground, and not having any one with me who was thoroughly familiar with what had been done.

Iva Fern Group. This group, consisting of seven claims, is situated on the north side of Cultus creek, at a distance of about seven miles from Kootenay lake. The property is owned by J. Mullholland, of Sirdar, B.C. In the vicinity of the

workings the hillside has a fairly uniform slope which is covered with overburden, and on which there is ample timber for all requirements. The workings are situated near the top of the hill at an elevation of 5,735 feet, or 1,870 feet above Cultus creek, where there is abundant water-power available.

The formation is of sedimentary origin, composed of shales and schists, and is cut by intrusive dykes which are said to run parallel to the formation, but the short time that the writer had on the property did not allow a surface reconnaissance to be made in order to trace the geology or to identify the various surface showings of ore with the vein system.

The work done consisted of a number of open-cuts, which in every case showed a width of ore from 1 to 6 feet, but on account of the heavy covering of overburden it was difficult to definitely determine the nature of the walls and the dip and strike of the strata, which latter, as far as could be ascertained, was approximately north and south. However, with only the cursory examination that was made, it was quite evident that the surface showings and general conditions were encouraging and fully warranted the further exploitation of the property.

At the lowest exposure the ore consisted of a mixture of galena, a little chalcopyrite, and iron pyrites occurring in oxidized ledge-matter; at the upper workings the ore was principally galena. A sample taken at the lowest showing, across a width of 6 feet, gave the following returns: Gold, trace; silver, 3.30 oz.; lead, 5 per cent. Farther up the hill a sample across a width of 2.5 feet gave: Gold, 0.02 oz.; silver, 3.40 oz.; lead, 22 per cent.: while at a short distance from this, on the summit of the hill, a sample across a width of 2 feet gave: Gold, trace: silver, 1.80 oz.; lead, 10 per cent.

During the summer development-work was carried on, and according to recent reports the property has now been bonded by the Consolidated Mining and Smelting Company.

In connection with the occurrence of sedimentary rocks in this section, it may be of interest to note that this belt of schists and slates, bounded by the granite formation on the east and west, extends southward across Cultus creek and apparently forms the saddle of the Low Pass divide; and, further, it has been reported that the same character of ore has been found in the vicinity of the Low pass on a group of claims owned by C. O. Woodward, R. J. Elliot, and others, of Nelson.

YMIR CAMP.

Yankee Girl.

The Hobson Silver Lead Company, of which W. T. McDowell is manager, has been actively engaged in the mining and development of this property during the year, with results that apparently are highly satisfactory. The work done during the year consists of approximately 450 feet of drifting on the vein and 185 feet of crosscutting.

The manager reports that an ore-body consisting of lenses of heavy sulphides was developed near the end of the drift, and stoping was commenced on this at a distance of 35 feet from the face. The stope at present extends 65 feet above the drift and is 55 feet long. The ore, which is reported to have a width of 6 feet, runs about 8 per cent. zinc, 25 per cent. pyrite, and pyrrhotite carrying gold and silver values, which show average returns of $17.50 a ton. Since September 18th fifty-five cars having a total dry weight of 2,300 tons have been shipped to the Canada Copper Corporation at Greenwood.

Pat, Carthage, Wildhorse, and X-Ray Claims.

This group of claims, which is situated along the east side of the gulch formed by the North fork of Wildhorse creek, is at about the same elevation as the *Ymir* mine, and covers the hillside where an easterly extension of the *Ymir* vein would be expected to occur. The remains of a wagon-road from the *Ymir* mill up the North fork as far as the *Pat* claim are in evidence, but the greater portion of this road has been washed out.

At the *Ymir* mine the ore occurred as a large lenticular shoot in a strong and well-defined quartz vein. Although the workings extend down to the 1,000-foot level, on which a lot of drifting has been done on the vein, the values were found to decrease with depth, and no ore of any economic importance was discovered below the 700-foot level. The management, after prospecting without success for another vein higher up the hill, the presence of which was indicated by the discovery of rich float, closed down the mine in 1908.

From the intersection of the adit-tunnel and the vein on the 1,000-foot level drifting has been done along the vein for nearly 1,000 feet. The vein exposed in this drift is 9 feet wide

so it was not long before the fuel-supply became scarce and the length of haul prohibitive for successful operation.

There are five known veins on the *Nugget* ground; the principal one, on which most of the work has been done, is the *Nugget* vein. This vein, having a dip of about 80 degrees to the south and a strike of N. 70° E., varies greatly in width, but shows an average of about 5 feet. It has been developed by four adit levels to a depth of 450 feet below the apex, at which depth oxidized ore carrying free gold has been proved. The veins and formation are similar in character to those at the *Motherlode*. Based on the assumption that the values in the *Nugget* will continue with depth, and that considerable ore can be won from the upper workings, the proposition is an attractive and legitimate mining enterprise.

Unfortunately, the work done by A. W. McCune at the *Queen* mine did not come up to expectations and the project has been abandoned. A tunnel was driven for approximately 1,600 feet; at 700 feet from the portal the *Yellowstone* vein is said to have been cut. This was drifted on for about 200 feet, but little values were found. Although this tunnel does not develop ore, neither does it condemn the property, in the opinion of those thoroughly familiar with the ground.

Reno-Donnybrook Group.

This property, consisting of sixteen claims, is located at the head of Fawn creek at a distance of about one mile to the north of the *Nugget*. W. D. Poole, who is one of the principal owners, put in a season's work at prospecting a new lead, which runs parallel and at a short distance from the *Reno* vein. The formation belongs to the same geological series as that of the Sheep Creek area, in which gold quartz has been mined at the *Motherlode*, *Queen*, and other properties, but there is greater evidence of intrusive igneous rocks.

The elevation of the claims ranges from about 6,000 to 7,000 feet. The surface of the hillside is well covered with a depth of about 2 feet of overburden, necessitating the digging of numerous open-cuts and trenches to expose the veins. This work has been systematically done, enabling the veins to be traced for well over 1,000 feet towards the summit of the ridge.

The veins are quartz-filled fissures similar in character to those of the Sheep Creek camp. Enriched pockets occur, but the values seem to be fairly persistent along the length of the vein, the best being found where the vein loses in width, which is particularly applicable to highest portion of the vein. At the lower levels the vein is wider, but carries less values. The ore is rusty-coloured and more or less honeycombed quartz. The values are in free gold, and an average of a number of samples would indicate the ore to run about $20 a ton. Native gold is visible to the eye in many of the picked specimens.

It would appear to be a property which has good possibilities, worthy of careful investigation with a view of bringing it to that stage of development where the requirements would amply justify the necessary expenditure for mill-construction and accessory equipment.

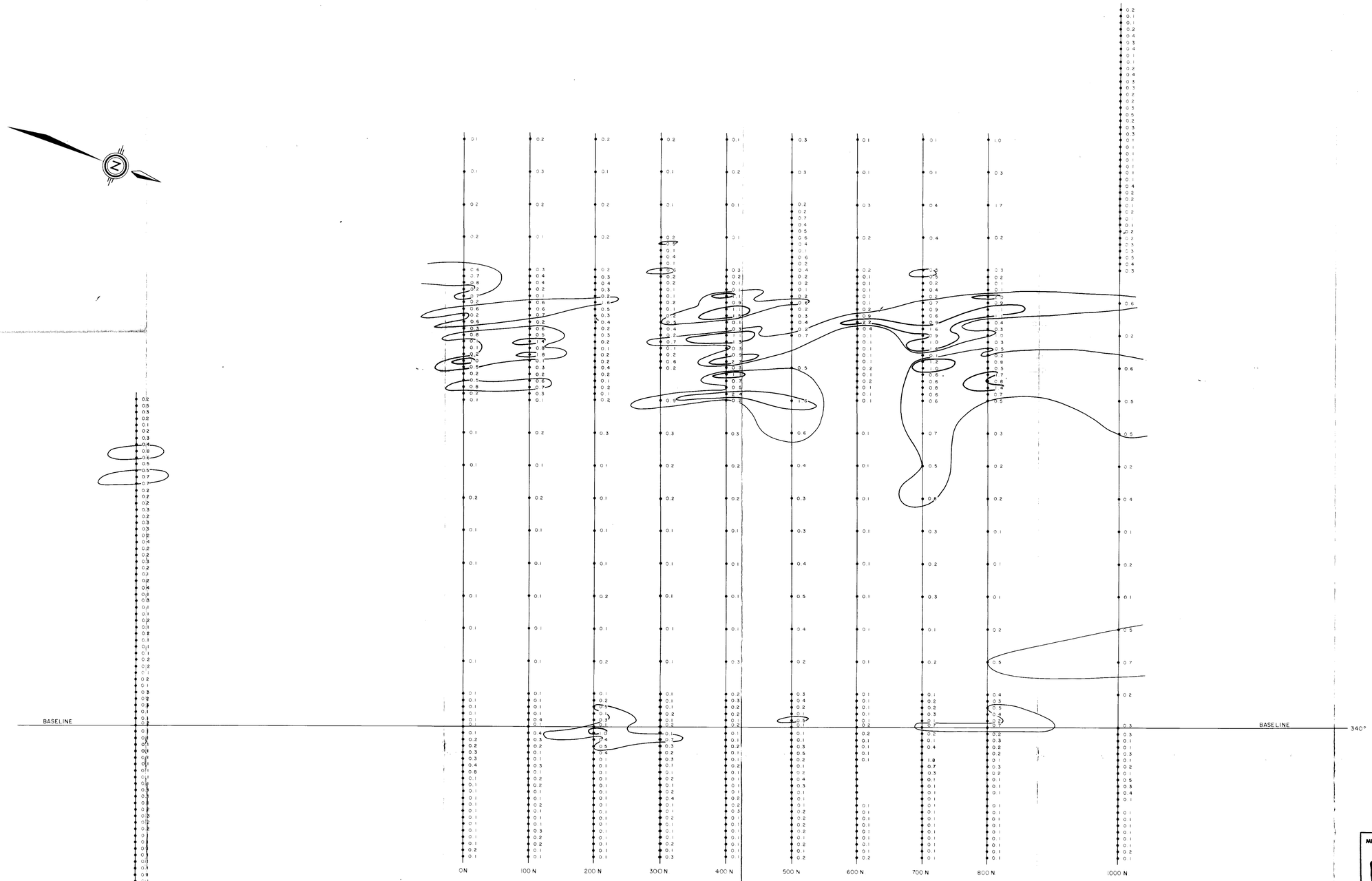
Bunker Hill Group.

This property comprises three claims owned by Mrs. Bertha Cameron, of Victoria, and is located at a distance of seven miles from the Erie road at Green City. One day was allowed for the trip, which time might have been sufficient had the writer been accompanied by any one who was thoroughly familiar with the ground; as it was, we found all the old trails long since obliterated, and the old camp-site presented nothing more than a wilderness of underbrush. Near where at one time there was evidently a cabin a few open-cuts had been made to explore the ground under a thin capping of oxidized material, but there was not much to be seen, as they were partly filled with dirt and nothing resembling ore had been extracted.

At a short distance from these diggings an open-cut had been made at the side of a small creek. Here the country-rock has been mineralized with iron sulphides in the form of pyrrhotite across a width of 30 inches. A sample across this width gave no values in gold or silver. From the bottom of this cut a shallow shaft had been sunk and a few tons of pyrrhotite extracted. At the time of the visit this shaft was full of water. The formation consists of igneous rocks of the Rossland volcanic series. There are said to be other showings on the property worthy of examination; hence another trip will be arranged during the coming season if possible.

Iva Fern Group.

This property, consisting of seven Crown-granted claims, is situated on Cultus creek at an approximate distance of seven miles from Kootenay lake. There is a good trail from the lake-shore to the mine, and the camp can be reached



LEGEND

Contours at :

1.0 ppm Ag

0.5 ppm Ag

0.1
0.2
0.5
1.0
ppm Ag
0.3
0.1

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6484

SCALE 1:2500

50 0 50 100 150 200 Metres

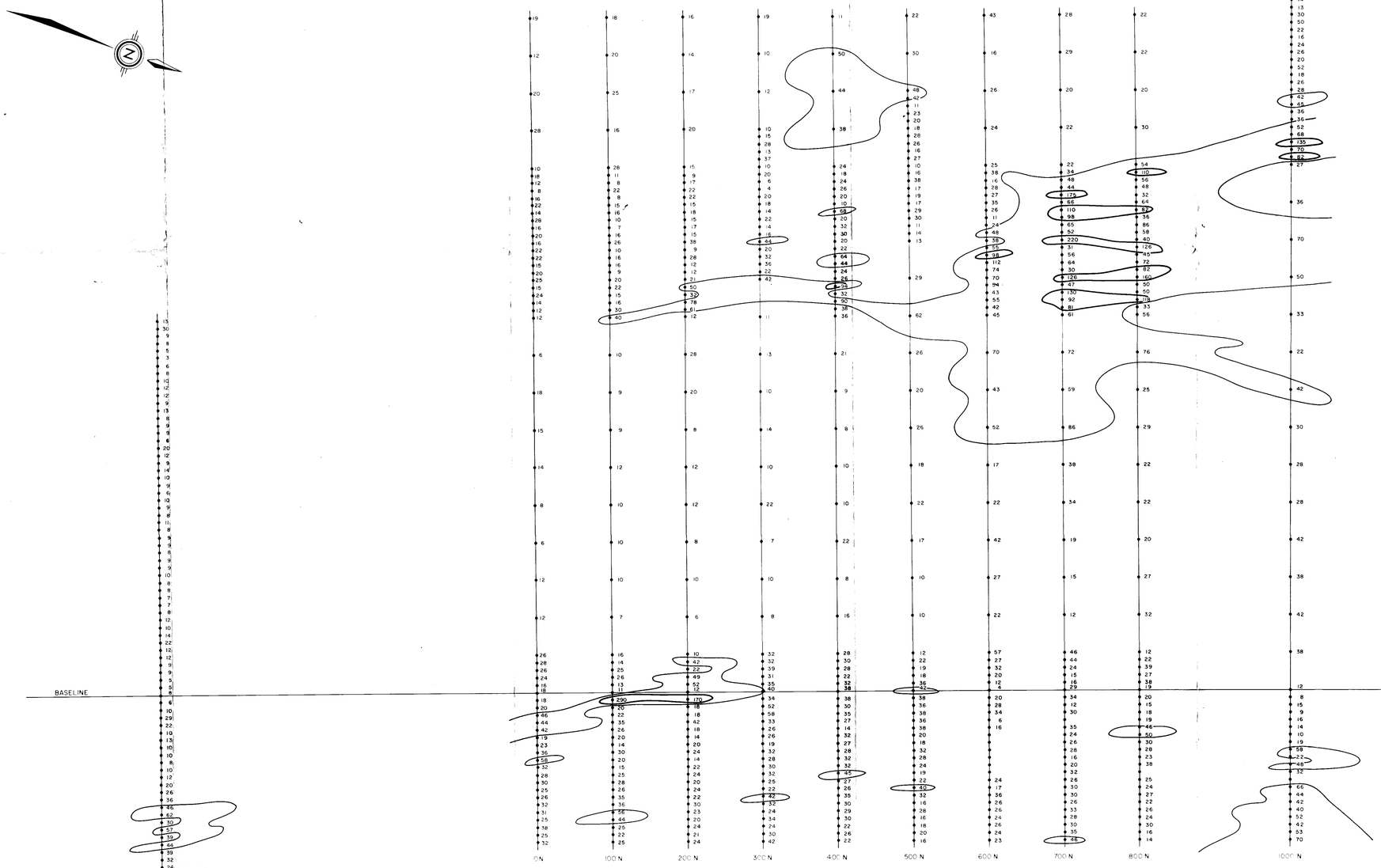
WAGNER MINES LTD.

CULTUS CREEK PROJECT

DON AND NEXT CLAIMS
SOIL GEOCHEMISTRY
SILVER, ppm

PLAN No.	DRAWN	DATE	FIGURE
178		JULY 1981	A1
REVISED		N.T.S. 82F/7	

MINEQUEST EXPLORATION ASSOCIATES LTD.



LEGEND

Contours at :

80 ppm Cu

40 ppm Cu

ppm Cu

SCALE 1:2500

50 0 50 100 150 200 Metres

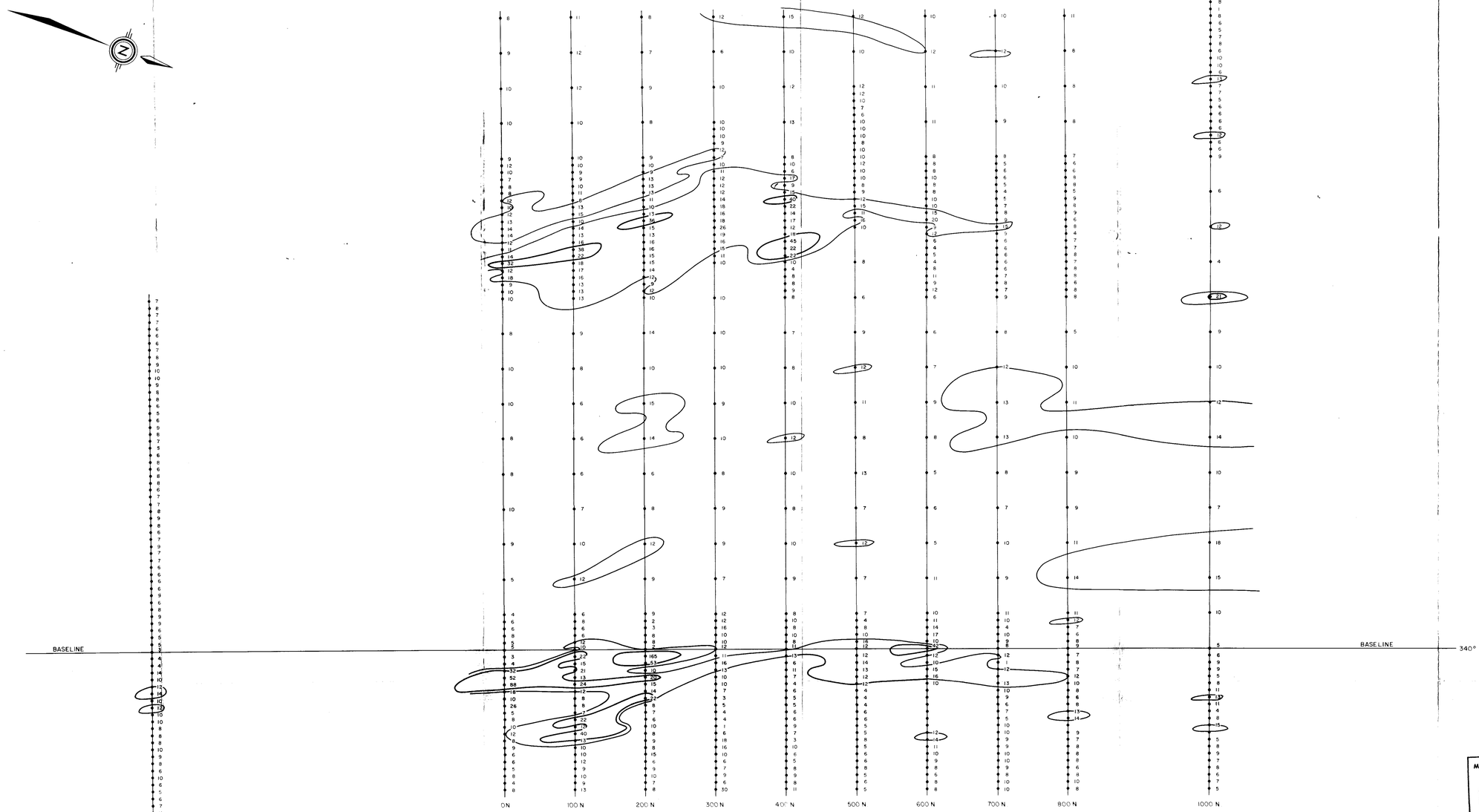
WAGNER MINES LTD.

CULTUS CREEK PROJECT

DON AND NEXT CLAIMS
SOIL GEOCHEMISTRY
COPPER, ppm

PROJECT NO.	DRAWN	DATE	FIGURE
177		JULY 1981	A2
REVISED		N.T.S. 82 F/7	

MINEQUEST EXPLORATION ASSOCIATES LTD.



LEGEND

Contours at :

20 ppm Pb

12 ppm Pb

ppm Pb

SCALE 1:2500

50 0 50 100 150 200 Metres

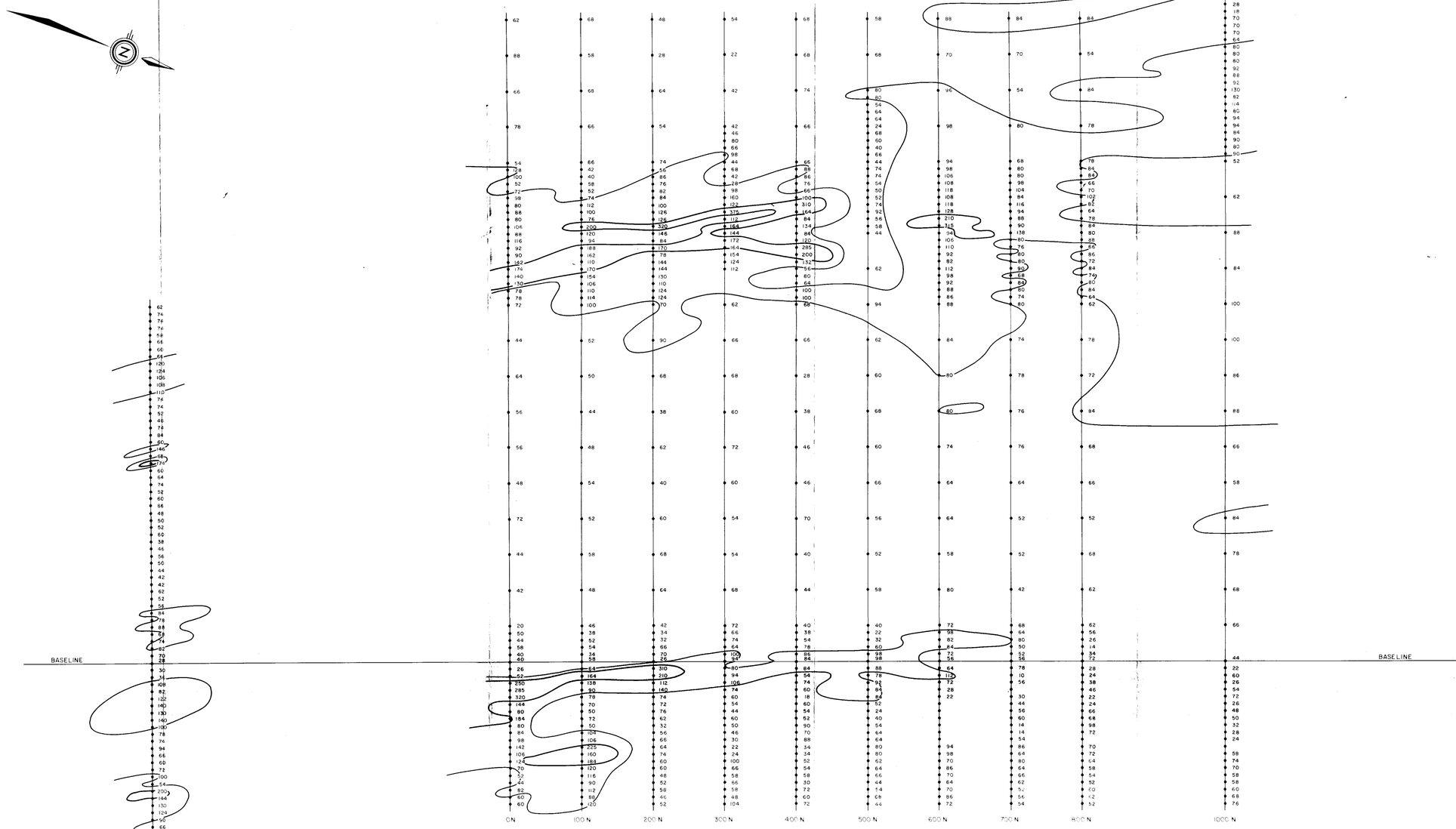
WAGNER MINES LTD.

CULTUS CREEK PROJECT

DON AND NEXT CLAIMS
SOIL GEOCHEMISTRY
LEAD, ppm

PLAN NO.	DRAWN	DATE	FIGURE
176		JULY 1981	A3
REVISED		N.T.S. 82F/7	

MINEQUEST EXPLORATION ASSOCIATES LTD.



LEGEND

Contours at :

160 ppm Pb

80 ppm Pb

ppm Zn

SCALE 1:2500

50 0 50 100 150 200 Metres

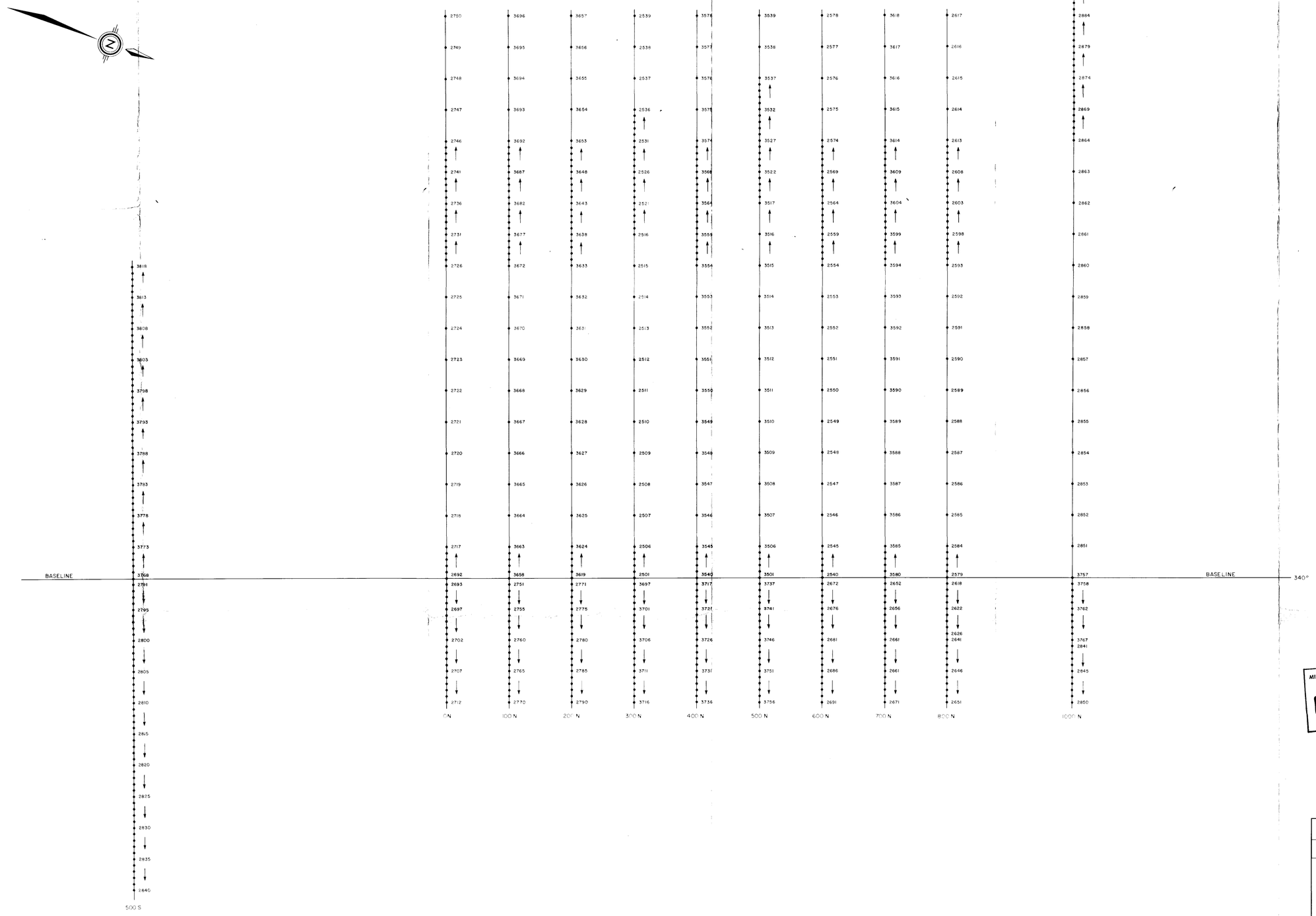
WAGNER MINES LTD.

CULTUS CREEK PROJECT

DON AND NEXT CLAIMS
SOIL GEOCHEMISTRY
ZINC, ppm

PLAN No.	DRAWN	DATE	FIGURE
179		JULY 1981	A4
REVISED		N.T.S. 82 F/7	

MINEQUEST EXPLORATION ASSOCIATES LTD



LEGEND

3758 / 3759 / 3760 — SOIL GEOCHEMISTRY SAMPLE LOCATION NUMBERS

SCALE 1:2500

50 0 50 100 150 200 Metres

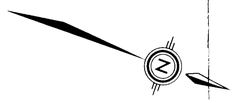
WAGNER MINES LTD.

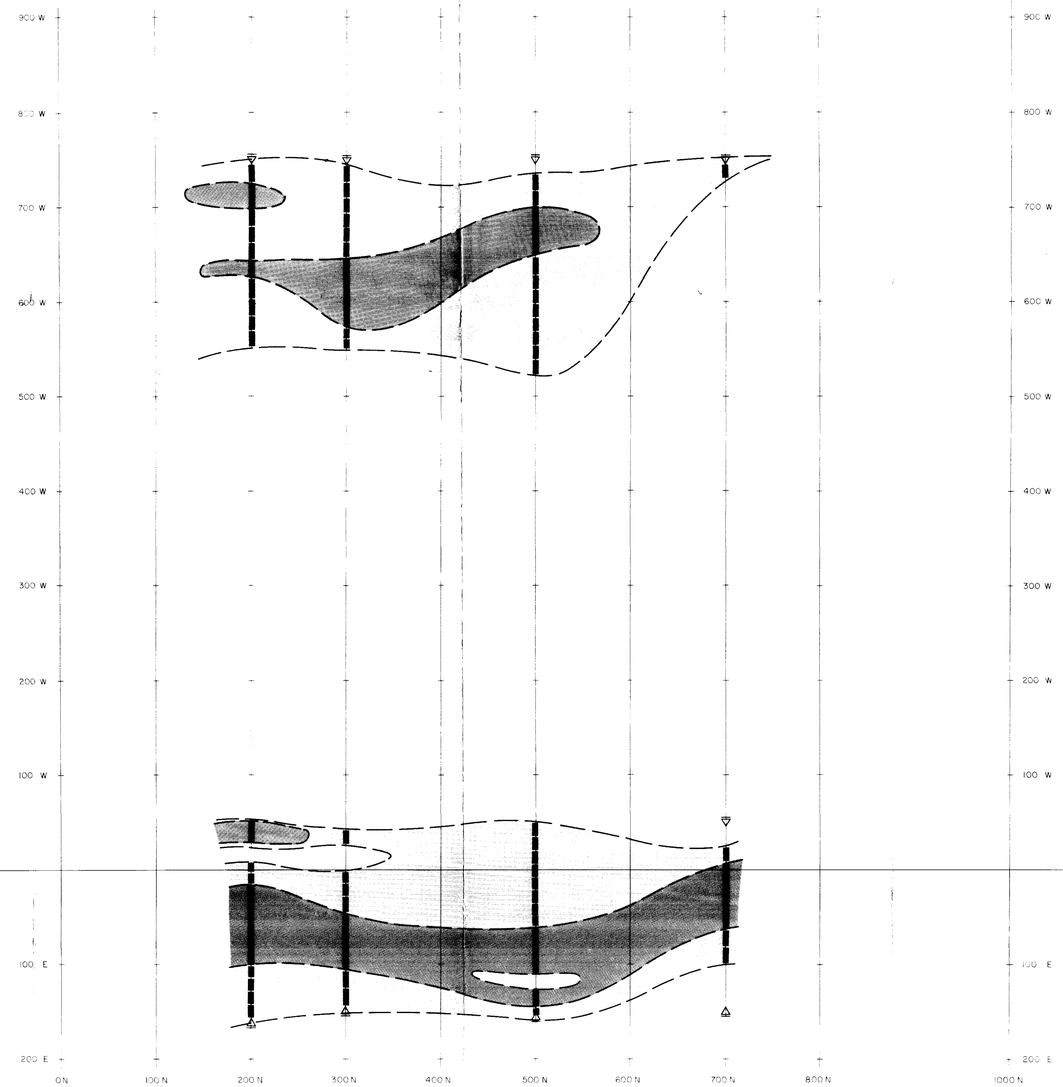
CULTUS CREEK PROJECT

DON AND NEXT CLAIMS
SOIL GEOCHEMISTRY
SAMPLE LOCATION NUMBERS

PLAN NO.	DRAWN	DATE	FIGURE
175		JULY 1981	A5
REVISED		N.T.S. 82 F/7	

MINEQUEST EXPLORATION ASSOCIATES LTD.





LEGEND

Anomalous zone

Possibly anomalous zone

Limit of survey

Note

1) Only the following lines were surveyed

700 N
500 N
300 N
200 N

2) Array - Dipole to Dipole
a spacing 25 metres

Source of information

"A Report on an Induced Polarization Survey on the DON Claim"
by PF Walcott and Associates, June 1981

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,484
NO.

SCALE 1:2500

50 0 50 100 150 200 Metres

WAGNER MINES LTD.

CULTUS CREEK PROJECT

DON CLAIMS

INDUCED POLARIZATION

PLAN No.	DRAWN	DATE	FIGURE
180		JULY 1981	A6
REVISED		N.T.S. 82 F/7	

MINEQUEST EXPLORATION ASSOCIATES LTD.

EXCLUSIVE DRAFTING SERVICES LTD.