

86-818-15378  
12/87

EMERSON OPTION  
GEOLOGY, GEOCHEMISTRY AND TRENCHING 1986  
HOUSTON, B C  
NTS: 93L/7W  
OMINECA MINING DIVISION

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

15,378

Lat: 54° <sup>26.2'</sup> ~~26'~~ N  
Long: 126° <sup>54'</sup> ~~53.7'~~ W

Operator:

Lornex Mining Corporation Ltd  
1650, 609 Granville Street  
Vancouver B C V7Y 1G5

Owner:

BP Minerals Ltd  
700, 890 West Pender Street  
Vancouver B C

FILMED

R M Cann  
December 1986

## LIST OF CONTENTS

		<u>Page No:</u>
	SUMMARY	iii
1	INTRODUCTION	
	1.1 GENERAL	1
	1.2 LOCATION, ACCESS AND PHYSIOGRAPHY	1
	1.3 CLAIM STATUS	3
	1.4 HISTORY	3
2	1986 FIELD PROGRAMME	
	2.1 GENERAL	5
	2.2 SOIL GEOCHEMISTRY	5
	2.3 BACKHOE TRENCHING AND SAMPLING	5
3	SOIL GEOCHEMISTRY	
	3.1 GENERAL	7
	3.2 SOIL PROFILES	7
	3.3 RESULTS	7
4	BACKHOE TRENCHING AND SAMPLING	
	4.1 GENERAL	11
	4.2 RESULTS	11
5	GEOLOGY	
	5.1 REGIONAL	14
	5.2 PROPERTY	14
	5.2.1 Lithology	14
	5.2.2 Structure	16
	5.2.3 Mineralization and Alteration	16
6	DISCUSSION	18
7	RECOMMENDATIONS	19
8	REFERENCES	20
9	STATEMENT OF QUALIFICATIONS	21

## LIST OF APPENDICES

Appendix A	Cost Statement
Appendix B	Soil Sample Descriptions and Results
Appendix C	Trench Chip Sample Results
Appendix D	Trench Data and Geological Descriptions
Appendix E	XRD Report by S Horsky

## LIST OF FIGURES

		<u>Location</u>
Figure 1	Location and Claim Map	Page 2
Figure 2	Soil Profiles	Page 8
Figure 3	Silver in Soils	In pocket
Figure 4	Gold in Soils	In pocket
Figure 5	Lead in Soils	In pocket
Figure 6	Amax Trenches - Chip Sample Locations	In pocket
Figure 7	Amax Trenches - Chip Sample Results : Ag, Au	In pocket
Figure 8	1986 Trenches - Chip Sample Locations	In pocket
Figure 9	1986 Trenches - Chip Sample Results : Ag, Au	In pocket
Figure 10	Geology and Trench Locations	In pocket

## SUMMARY

The Emerson silver-gold-lead-zinc property, located 15 km west-northwest of Houston in central British Columbia, is held under option from BP Resources Canada Ltd. The option was prompted by an extensive, untested, silver-lead-gold soil anomaly outlined by BP in 1985.

The property, which is largely till covered, appears to be mainly underlain by strongly sericite-altered Upper Cretaceous (?) tuffs and breccias which have locally been intruded by coeval porphyry plugs and dykes. Earlier trenching and drilling on the property focused on weak porphyry molybdenum mineralization associated with the porphyritic intrusives.

Fieldwork by Lornex consisted of geological mapping, rock sampling, minor soil sampling and 453m of backhoe trenching. Trenching attempted to locate the source of the 1.2 by 0.4 km silver-lead-gold soil anomaly by cleaning out old cat trenches for resampling and by exposing new bedrock along the length of the soil anomaly. Many of the new trenches did not reach bedrock because overburden is commonly greater than 4m thick.

Sampling of old trenches confirmed weak molybdenite mineralization but returned no significant precious metal values. New trenching, 400m to the southwest, located erratic veins and veinlets of galena-sphalerite-tetrahedrite in altered tuff.

Representative mineralization samples contained up to 1.51% Cu, 8.74% Pb, 7.31% Zn, 2403 g/t Ag and 1.44 g/t Au. Geological setting, mineralization and alteration suggest Emerson is similar to the Montana Tunnels deposit in Montana.

Review of soil geochemistry results, exposed till sections and pertinent literature suggests that much of the soil anomaly is caused by strong glacial dispersion from one or more undetected mineralized zones to the northeast.

To locate and test these zones a detailed IP survey followed by diamond drilling are recommended.

## EMERSON OPTION - GEOLOGY, GEOCHEMISTRY & TRENCHING 1986

### 1 INTRODUCTION

#### 1.1 GENERAL

The Emerson Group was originally presented to Lornex by C M Rebagliati acting as an agent for BP Resources Canada Ltd and was subsequently optioned from BP under a letter agreement dated July 21 1986.

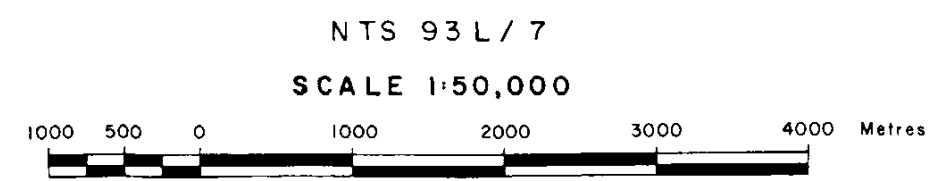
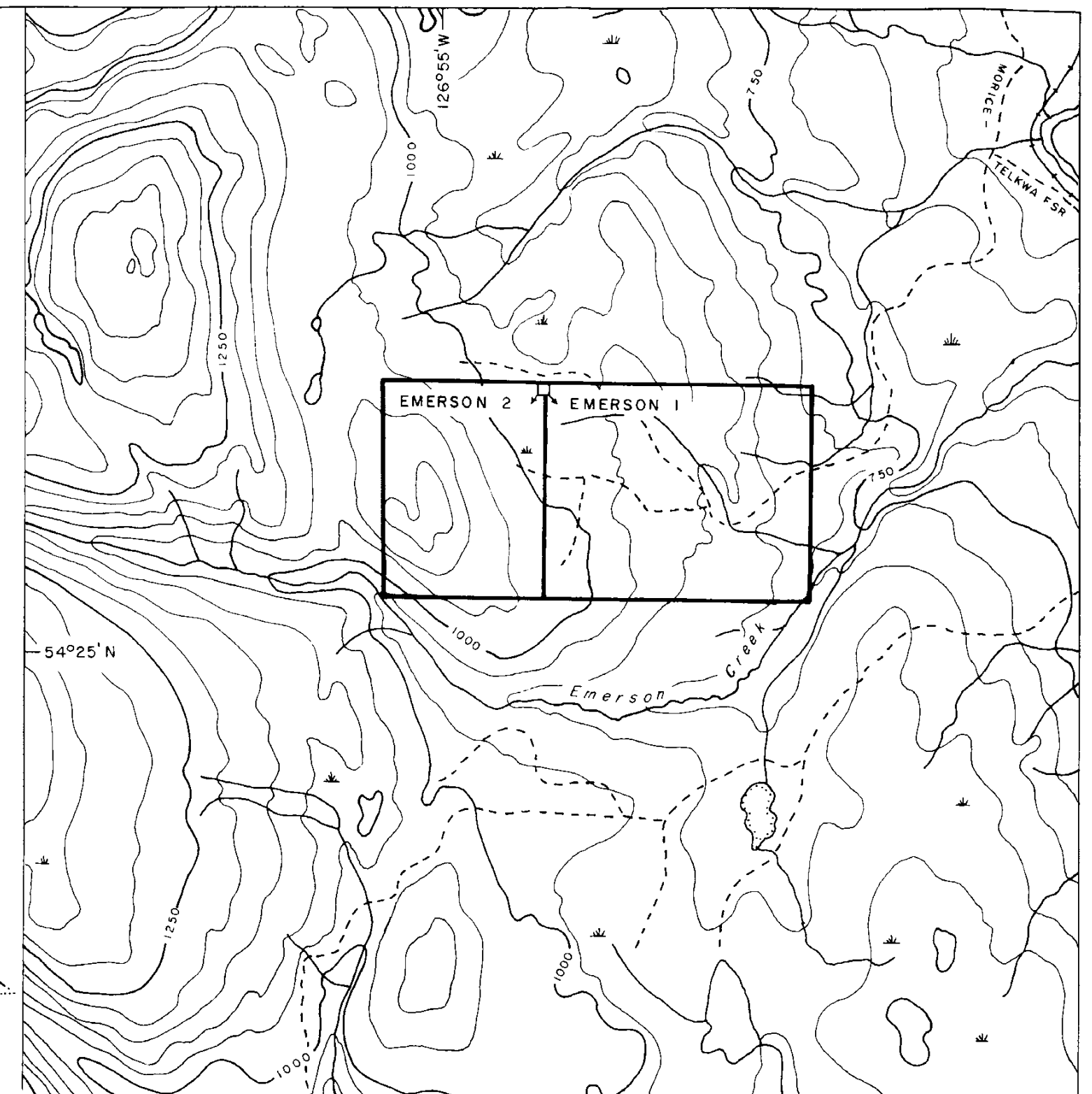
The property was optioned on the basis of a strong silver-lead-gold (-zinc) in soil anomaly and because of the strong geological similarities to silver-gold-lead-zinc prospects at Bob Creek, Fenton Creek and Owen Lake. To evaluate the geochemical anomaly Lornex carried out a programme of chip sampling of the existing trenches and new backhoe trenching along the anomaly.

#### 1.2 LOCATION, ACCESS AND PHYSIOGRAPHY

Emerson is located in central British Columbia, 15km west-northwest of Houston (NTS: 93L/7). Access is via a four-wheel drive road which branches southwest from the Morice-Telkwa forest service road at the 15km marker, (Figure 1).

Topography is subdued on the property, consisting of flat to gentle northeast facing slopes. Elevations vary from 800m asl on the east edge of the claims to 1200m asl on the west side.

Much of the central portion of the claim block was clear-cut logged approximately 20 years ago and is now covered with immature pine. Unlogged areas are covered with mature fir and spruce.



LORNEX MINING CORPORATION		
EMERSON OPTION		
LOCATION AND CLAIM MAP		
DATE NOV. 1986.	DRAWN BY R.M.C. / J.S.	DWG. L FIG. 1

### 1.3 CLAIM STATUS

Emerson consists of two contiguous modified grid claims (Emerson 1, 2: Figure 1), located within the Omineca Mining Division, as described below:

<u>Claim</u>	<u>Units</u>	<u>Record No:</u>	<u>Recorded</u>	<u>Expiry Date(1)</u>
Emerson 1	20	7108	July 2 1985	1989
Emerson 2	12	7205	Aug 7 1985	1989

---

(1) Before filing of 1986 assessment work

---

### 1.4 HISTORY

Mineralization was discovered in 1966 by W Smith of Telkwa, B C while fire-fighting in the area. Smith staked the Lybdenum 1-3 claims and optioned them to Amax who added the Barr 1-42 claims. From 1966 to 1968 Amax conducted geological mapping, soil geochemical surveys, 11km of IP, 1220m of bulldozer trenching and 939m of diamond drilling in four holes. The property was subsequently returned to Smith because of the low molybdenum grades.

In 1977, K W Livingstone staked the Jailbird and Jailbird 2 claims to cover ground originally covered by the lapsed Barr and Lybdenum claims. Work conducted in 1977 consisted of rock geochemical sampling in Amax' trenches.

In 1982 the area was restaked as the Gooch 1-4 claims by the Saskatchewan Mining Development Corporation who carried out soil, silt and rock sampling over much of the property to evaluate the precious metal potential. SMDC's work defined a zone of anomalous Au, Ag, As and Mo in soil within a broad area of advanced argillic alteration. No follow-up was conducted due to SMDC withdrawing from exploration in Western Canada.



When the Gooch claims lapsed, BP Selco restaked the area as the Emerson Group. In 1985 BP collected 662 soil samples to further define soil anomalies located by SMDC. This work defined two interconnected anomalies - one in the area of Amax' trenching and a second anomaly to the southwest in an overburden covered area (Rebagliati and Gravel, 1985).

## 2 1986 FIELD PROGRAMME

### 2.1 GENERAL

Field work in 1986 was directed at testing by backhoe trenching, the silver-lead-gold soil anomaly extending southwesterly from the Amax trenches. Soil sampling was also extended 450m further west in order to close-off the above anomaly. Work was carried out by R Cann and H Mohr from September 3 to 22.

### 2.2 SOIL GEOCHEMISTRY

Soil sampling was extended from 90+50E to 86+00E by Van Alphen Exploration Services of Smithers, B C. One hundred and ninety three samples were collected at 25m intervals along lines space 50m apart. A large area north of the base-line was not sampled because of extensive swamp. Samples were forwarded to Acme Analytical Laboratories Ltd for gold geochemical analysis and 30 element ICP analysis.

To assist in interpretation of the soil sampling, four soil profiles consisting of detailed sampling vertically through the till in four separate locations were completed. Profiles were done in Trenches 86-1A, 86-1D, 86-2A and 86-2D.

### 2.3 BACKHOE TRENCHING AND SAMPLING

To facilitate rock sampling, a skidder-mounted backhoe was used to clean out six Amax trenches and to dig five new trenches (86-1 to 86-5) along the silver-lead-gold soil anomaly. Trenching was contracted to Joe Hidber Contracting Ltd of Telkwa, B C. New trenches were completed in eight days. However, because of thick overburden (3-4m), trenching progressed at only 30m per day.

Trenches generally flooded to a depth of 1 to 1.5m in two days, necessitating pumping if rock sampling could not be completed promptly. All new trenches were back-filled at the end of the programme.

When bedrock was exposed in trenches, continuous chip samples were taken at 2m intervals. All samples were geochemically analysed for gold and silver and samples from Amax' trenches were also analysed for copper and molybdenum at CDN Resources Laboratories Ltd of Delta, B C. Pulps were later submitted to Acme Analytical Laboratories for 30 element ICP, mercury, fluorine and thallium analyses.

### 3 SOIL GEOCHEMISTRY

#### 3.1 GENERAL

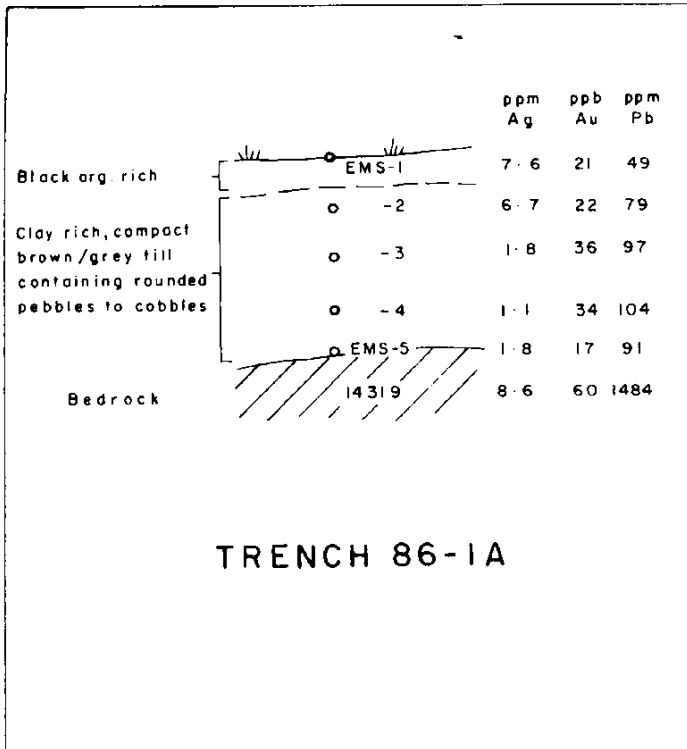
Interpretation of the 1985 and 1986 soil surveys is complicated by general 3 to 4m till thicknesses (locally to 17m as in Amax DDH4), by possible concentration of metals in numerous swampy areas, and by strong glacial dispersion. The dominant direction of continental glaciation in the Houston area is interpreted (Church 1971a; 1971b; 1973) to have been west to east. However, rare glacial features on Emerson, such as whaleback forms and rat tails, suggest a late northeast to southwest movement. This late southwest movement has also been suggested at Equity (Ney et al, 1972), at Fenton Creek (Church, 1973) and at Bob Creek (BP-Selco, internal report).

#### 3.2 SOIL PROFILES

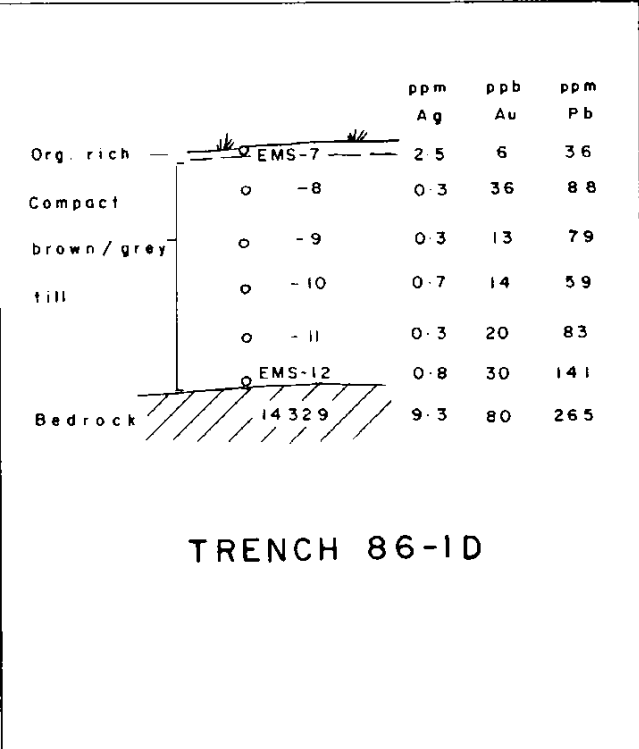
Four vertical sections of till exposed by trenching were sampled at a 50cm spacing to observe the variation in metal values between surface and underlying bedrock. Profiles are located on Figure 8 and are shown schematically with silver, gold, lead values in Figure 2. In all cases, metal values at surface decrease downward until within 0.5 to 1.0m of bedrock where they increase slightly to a value below that of bedrock. This distribution suggests the surface geochemical expression does not reflect underlying bedrock but probably reflects a combination of glacial transport of mineralized material and variable metal enrichment in the organic-rich surface horizon.

#### 3.3 RESULTS

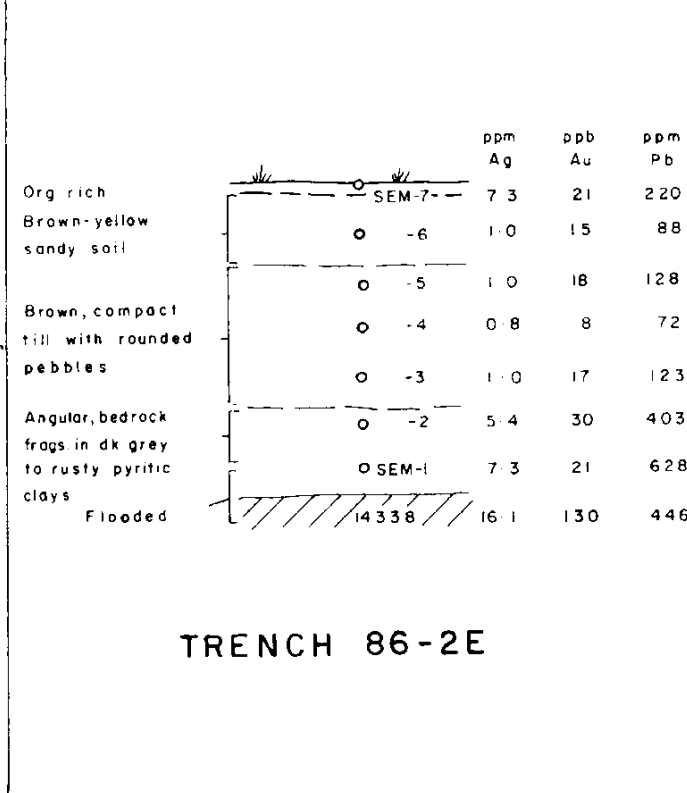
Present soil sampling results for silver, gold and lead, together with 1985 results are shown on Figures 3 to 5 and are discussed in detail below. Anomaly patterns for the three elements are similar



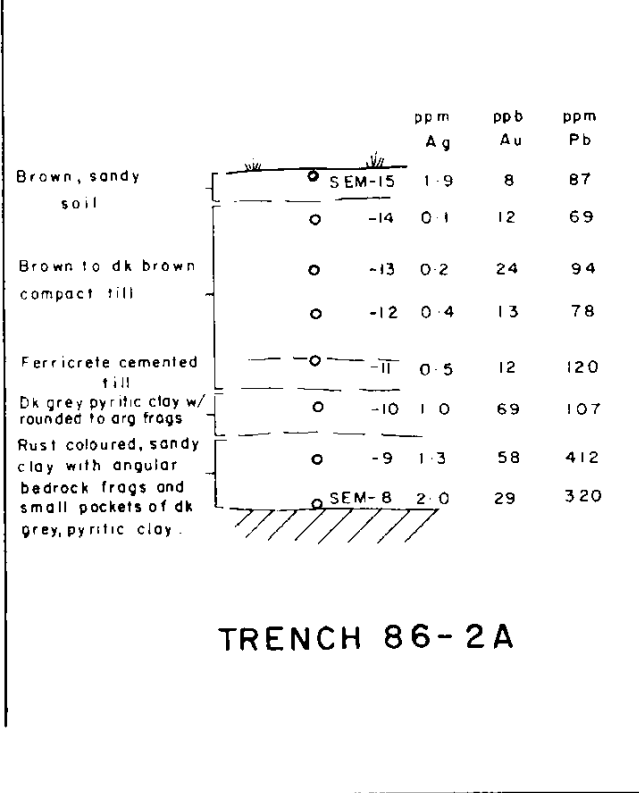
TRENCH 86-1A



TRENCH 86-1D



TRENCH 86-2E



TRENCH 86-2A

LEGEND

SEM 7 Sample location and number

14338 Bedrock sample



LORNE MINING CORPORATION

EMERSON OPTION

SOIL PROFILES

DATE  
NOV. 1986.

DRAWN BY  
R.M.C. / J.S.

DWG.

FIG. 2

and appear to primarily reflect glacial dispersion from one or more sources to the northeast.

### 3.3.1 Silver

Silver values vary from 0.1 to 16.0 ppm with a background of 0.1 to 0.4 ppm. Values in Figure 3 are contoured at 1, 2 and 4 ppm. As defined by the 1.0 ppm contour, the anomaly is irregular in shape towards the east end but overall forms a west-southwest trending zone extending 1.2km from the east side of Amax' trenches. Several sections of the anomaly are not closed due to incomplete sampling.

Wide variations in values within the 1.0 ppm contour probably reflect the combined influence of swampy, organic-rich areas, large variations in thickness of overburden and significant glacial dispersion. The anomaly in the vicinity of the Amax trenches appears to reflect a combination of shallow overburden and dispersion from a source east of the trenches. The anomaly west of L94+50E reflects either dispersion from a source near this grid line or may be part of the dispersion trail from the source east of the Amax trenches.

### 3.3.2 Gold

Gold distribution is shown on Figure 4 with contours at 10, 20, 40 and 80 ppb. Values vary from 1 to 355 ppb with general background below 5 ppb. The anomaly defined by the 10 ppb contour is similar in shape to the silver anomaly but is more spatially restricted and more regular in outline.

The anomalous zone enclosing the Amax trenches appears to reflect glacial dispersion from a source east of the trenches. A second, irregular isolated anomaly 100 to 200m southwest of the main anomaly

may reflect either a transported anomaly from the same source or alternatively may reflect a second source between the 1986 trenches and the Amax trenches.

### 3.3.3 Lead

Lead values are shown on Figure 5. Anomalous areas as defined by the 80 ppm contour fall within the gold anomalies but are generally more restricted than both silver and gold. Most of the anomalies appear to reflect the same sources postulated for gold and silver. However, the strongest anomaly trailing southwest from the vicinity of Trenches B and D appears to reflect a new source, possibly located just east of these trenches.

#### 4 BACKHOE TRENCHING AND SAMPLING

##### 4.1 GENERAL

Trenching was used to facilitate resampling six of the twelve Amax trenches (Trenches A-K, Figure 6) to try and locate the bedrock source of a persistent silver-lead-gold soil anomaly extending southwest from the Amax trenching. Resampling of old trenches was completed successfully but new trenches were only partially successful as less than 50% of the trenches could be completed to bedrock through the thick till. No bedrock was reached in Trench 86-3.

##### 4.2 RESULTS

Locations of trenches are shown on Figure 10 and detailed trench sample locations and silver/gold results are shown on Figures 6 and 7 for the Amax trenches and on Figures 8 and 9 for 1986 trenches. Complete rock-chip sample results are given in Appendix E and detailed geological descriptions for individual trenches are given in Appendix F.

Sample results are summarized in Table 1. Results for Amax trench sampling (Trenches B to L) indicate background concentrations of silver, lead, zinc, copper and mercury. Gold is weakly anomalous but generally less than 100 ppb. Although molybdenite was noted in several trenches, (i e D, E, G, H) average values are less than 100 ppm and the highest value (in trench E) is 300 ppm, (0.03% Mo). Fluorine appears to be associated with slightly higher molybdenum values and is strongly anomalous (>900 ppm) in Trenches L-2, E, G and H.



Table 1 - Mean Silver, Gold, Lead, Zinc, Copper, Molybdenum, Mercury and Fluorine Values from 1986 Trench Sampling

<u>Trench</u>	<u>No. Samples</u>	<u>Ag (ppm)</u>	<u>Au (ppb)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>	<u>Hg (ppb)</u>	<u>F (ppm)</u>
<u>Amax Trenches</u>									
L-1	5 <sup>1</sup>	0.6	70	20	86	34	38	35	480
L-2	5	0.9	145	30	49	87	82	20	950
G	16	0.7	85	28	96	133	40	20	1060
H	22	0.3	55	20	32	12	32	30	1000
E	8	0.7	45	29	35	47	97	30	1020
B-1,2	4	0.3	55	31	32	28	14	30	430
D	1	0.6	85	22	110	312	41	20	410
<u>1986 Trenches</u>									
1A	10	10.9	50	2138	193	55	17	20	420
1B	1	2.0	75	406	161	34	9	20	310
1C	1	2.1	25	524	110	37	10	10	280
1D	1	9.3	80	265	148	43	14	5	270
1E	2	2.5	190	194	87	28	32	10	170
2B	1	1.0	65	165	36	27	22	10	520
2C	1	1.4	30	147	171	114	10	20	420
2D	3	4.0	65	265	462	106	19	60	480
2E	1	16.1	130	446	132	67	29	60	160
2F	1	0.8	40	107	78	26	11	40	170
2H	2	0.9	35	151	44	69	15	80	180
4A	3	212.0	430	8391	7040	1055	16	540	470
5C	2	3.4	35	166	76	36	15	50	250
5D	12	2.4	40	118	235	198	9	50	330

1: Sample 14255 omitted because of suspect values.

In contrast to the Amax trenches, the new trenches (86-1 to 86-5) are distinctly anomalous in silver, lead and zinc. Gold values are low averaging less than 100 ppb but one sample ran 775 ppb gold in association with a high silver value. Mercury values are generally below 60 ppb but several samples containing greater than 100 ppb (Trench 4A) are associated with higher silver values. Fluorine values vary between 150 and 650 ppm with higher values showing a broad spatial correlation with precious metals. High precious metal and lead/zinc values are associated with galena-sphalerite-tetrahedrite-pyrite veins and veinlets as described in the following section on mineralization and alteration.

5 GEOLOGY

5.1 REGIONAL GEOLOGY

Regionally, Emerson is underlain by the Babine Shelf Facies of the Lower Jurassic Telkwa Formation in the lower part of the Hazelton Group. Tipper (1976) describes the facies as consisting of poorly exposed subaqueous and subaerial green to maroon pyroclastic rocks intercalated with marine and nonmarine sediments.

Unconformably (?) overlying the Hazelton Group rocks are Upper Cretaceous felsic volcanic rocks and Upper Cretaceous Tiptop Hill andesitic flows. The felsic volcanic rocks are commonly spatially associated with coeval porphyry plugs and dykes, as at Owen Lake and Bob Creek. Flat-lying Eocene to Miocene andesitic to basaltic flows are extensive southeast of Houston.

Gold-silver-lead-zinc mineralization in the Houston area is commonly associated with Upper Cretaceous plugs and dykes, as at Owen Lake, Bob Creek (Church, 1986) Tsalit Mountain (Church 1976), and possibly Fenton Creek.

5.2 PROPERTY GEOLOGY

Interpretation of geology is hampered by extensive, thick glacial till and by intense alteration over a large area. Geological relationships described below and shown on Figure 10 are synthesized from sparse outcrop and trench exposures, 1968 drill results and from geophysical data.

5.2.1 Lithology

Oldest rocks exposed on the property are believed to be relatively fresh, massive maroon tuffs (Unit 1) exposed along a road cut in the

southeast corner of the map area (Figure 10). Megascopically, the rock appears typical of the Lower Jurassic Hazelton Group. Possible Lower Jurassic volcanic rocks are reported at a vertical depth of 185m in DDH-1.

Massive, well-fractured, brown argillite (Unit 2) exposed in a stream gully is probably part of the Lower Jurassic package. Argillite is also reported at the top of Amax' DDH-4.

Units 3 to 5 are interpreted as Upper Cretaceous volcanic tuffs, breccias and coeval porphyritic plugs and dykes. Church (pers. comm 1986) has confirmed that megascopically these rocks resemble Upper Cretaceous rocks at Bob Creek. Unit 3 consists of dacitic to andesitic ash tuff, crystal tuff and tuff breccia. This unit is generally bleached to a pale grey or cream colour. However, fresher exposures on the south edge of the map-area are green to greenish-brown in colour. Breccia exposed in the south-central area contains distinctive clasts of porphyry consisting of 2-4mm feldspar plates in a grey-green matrix.

Unit 4 is an enigmatic unit believed to be a composite of feldspar-quartz-biotite porphyry dykes intruding compositionally similar coarse-grained crowded crystal tuffs. No volcanic breccias or fine-grained tuffs have been recognized in this strongly bleached unit.

Unit 5 is a distinctive, feldspar-hornblende-biotite porphyry consisting of strongly sericitized 3-6mm feldspar, hornblende and biotite phenocrysts in a bleached aphanitic matrix. This unit is believed to be plug-like in form.

### 5.2.2 Structure

Attitude of Upper Cretaceous rocks is not known. Poorly defined bedding in Unit 2 suggests a northwesterly strike and a dip of thirty degrees to the northeast. Mapping by SMDC in 1982 northwest of the present map-area located similar sediments with a northeast strike and gentle dips to the southeast.

Measured vein and fracture orientations are dominantly northeast striking and vertical to steeply north dipping.

A major northwest striking fault is postulated along a linear valley located immediately east of the Amax trenches. Location of this fault is supported by geochemical data and by 1967 IP results.

### 5.2.3 Mineralization and Alteration

Earlier exploration on Emerson was directed at weak molybdenite mineralization associated with Units 4 and 5 and exposed in Amax trenches A to K (Figure 10). Molybdenite is generally associated with glassy quartz veinlets forming a sporadic weak stockwork accompanied by 3-5% pyrite disseminations and stringers. Sampling by Amax indicated MoS<sub>2</sub> values are generally in the 0.00X% range. Moderate to strong pervasive sericitization in Trenches A to K has destroyed feldspar crystals.

Recent soil geochemistry by SMDC and BP Selco, and trenching by Lornex has located Pb-Zn-Ag-Au mineralization peripheral to molybdenite mineralization. Exposures in Trenches 86-2 and 86-4A contain 1-2mm wide drusy quartz stringers carrying galena-sphalerite and wider (to 4cm) banded veins consisting of galena-sphalerite-tetrahedrite rich selvages and a quartz-pyrite rich core. Steeply dipping, 2cm wide pyrite-quartz veins and 10 cm wide bands

containing 40% granular pyrite in a sericite matrix are also common near sphalerite-galena mineralization. Assay results for a pyrite rich sample and of galena-sphalerite mineralization are tabulated below.

<u>Description</u>	<u>Cu</u> <u>%</u>	<u>Pb</u> <u>%</u>	<u>Zn</u> <u>%</u>	<u>Ag</u> <u>g/t</u>	<u>Au</u> <u>g/t</u>
2658 Tr 86-2D: pyrite-rich block on bedrock	0.01	0.02	0.01	6.9	0.55
2659 Tr 86-24: altered tuff with galena-sphalerite stringer	1.51	8.74	7.31	2403	1.44

Identification of tetrahedrite has not been confirmed but is supported by high copper and antimony values.

Host volcanics are strongly altered to sericite-quartz-pyrite which, where intense, form a punky white or mottled grey-white rock containing 5-7% disseminated pyrite. Quartz occurs as hairline stringers, drusy 1-2 cm wide replacement patches and as pervasive replacement around sericitized crystals and clasts. Weak kaolinization is suspected locally (e g Trench 86-4A) but the predominance of sericite was confirmed by X-ray diffraction at the Department of Geological Sciences, UBC (Appendix G).

Limits of alteration have not been defined except that volcanic and sedimentary rocks south of grid coordinate 95N (units 1, 2 and 3) are only weakly altered. Parallel to the northwest trending fault shown on Figure 10, rocks are altered for at least 1.3 km, while away from the fault alteration extends at least 800m to the southwest.

6 DISCUSSION

Backhoe trenching of a silver-lead-gold soil anomaly has located galena-sphalerite-tetrahedrite mineralization within phyllic-altered Upper Cretaceous (?) volcanic breccias and tuffs. Mineralization, in the form of stringers and veins, is extremely silver-rich with representative samples containing up to 2,403 g/t Ag. Precious metal mineralization is peripheral to a weak quartz-molybdenite stockwork associated with phyllic altered porphyry plugs and dykes cutting altered volcanic tuffs. Amax explored this weak porphyry-type mineralization in 1967-68 but reported no precious metal assays.

Review of thick till sections exposed by trenching and of soil geochemistry patterns suggests that much of the trenched silver-lead-gold anomaly is glacially transported from one or more sources to the northeast.

Mineralization and alteration seen in trenches and in the few natural exposures on Emerson are similar to silver-gold-lead-zinc mineralization at Cominco's Bob Creek prospect located 22.5 km to the southeast. At Bob Creek, mineralization is associated with an annular, porphyry dyke-vent breccia complex which is pervasively altered to sericite-carbonate. Alteration, mineralization and geological setting at both Emerson and Bob Creek are similar to that at the Montana Tunnels deposit in Montana where silver-gold-lead-zinc mineralization is hosted by a carbonate-sericite altered, Tertiary diatreme complex.

7 RECOMMENDATIONS

Further exploration is recommended to locate the source of the extensive silver-gold-lead soil anomaly partially tested by 1986 trenching. Work should consist of several lines of detailed IP and/or EM across a suspected, mineralized structure located 200m northeast of the Amax trenches and across a possible second zone between and to the northeast of Trenches 86-1 and 86-2. Geophysics should be followed by three or four diamond drill holes.



R M Cann  
Vancouver B C  
December 1986



8      REFERENCES

- Church, B N :            1971 a: Geology of the Owen Lake, Parrott Lakes and  
Goosly Lake Area, B C Department of Mines and Petroleum  
Resources GEM 1970, p 119-128.
- Church, B N :            1971 b: Tsalit Mountain, B C Department of Mines and  
Petroleum Resources GEM 1970, p 143-150.
- Church, B N :            1973 : Code Fen (93L), B C Department of Mines and  
Petroleum Resources GEM 1972, p 373-379.
- Church, B N :            1986 : The Bob Creek Gold-Silver Prospect (93L), B C  
Ministry of Energy, Mines and Petroleum Resources,  
Geological Fieldwork 1985, Paper 1986-1, p 121-123.
- Ney, C S;  
Anderson, J M;  
Panteleyev, A            1972 : Discovery, Geologic Setting and Style of  
Mineralization, Sam Goosly Deposit, B C, CIM Bulletin  
v 65, July, p 53-64.
- Rebagliati, C M            1985: Geology and Geochemistry on the Emerson Claim  
Gravel, J                Group, Selco Division, BP Minerals Ltd.
- Tipper, H W;  
Richards, T A            1976 : Jurassic Stratigraphy and History of North-  
Central British Columbia, Geological Survey of Canada  
Bulletin 270.

9     STATEMENT OF QUALIFICATIONS

1     I am a geologist residing at 6075 Eagleridge Drive, West Vancouver,  
British Columbia and am employed by Lornex Mining Corporation Ltd of  
1650, 609 Granville Street, Vancouver, British Columbia.


2     I am a graduate of the University of British Columbia with a B Sc  
(Geology) in 1976 and an M Sc (Geology) in 1979.

3     I have practiced my profession with Rio Algom, Lornex and other  
companies since graduation.

4     I am a Fellow of the Geological Association of Canada.

5     I personally supervised the trenching and geochemical programme  
conducted on the Emerson 1 claim from September 3 to 22 1986.

Robert M Cann



Vancouver B C  
December 1986

APPENDIX A

COST STATEMENT

COST STATEMENT - EMERSON OPTION

Salaries:

R Cann, Senior Geologist - 45 days (Sept 1-Dec 1) @ \$150/day	\$6,750	
H Mohr, Geologist - 17 days (Sept 7-23) @ \$90/day	1,530	
Benefits - 25% of salaries	<u>\$2,070</u>	\$10,350.00
Travel - airfare, hotel		343.00
Truck & Car rentals - Sept 1-23		1,080.00
Motel - Sept 3-22		1,362.11
Meals and miscellaneous supplies Sept 3-22		1,296.65
Air photographs and enlargement		121.78
Contractors:		
Trenching - J Hidber Contracting Ltd 13 days - Sept 8-22 @ \$550/day + mob/demob		7,350.00
Soil sampling - Van Alphen Exploration Services 201 soils @ \$4 sample		804.00
Analyses:		
CDN Resource Laboratories		
61 rocks (Ag, Au, Cu, Mo) @ \$12.45		747.25
43 rocks (Ag, Au) @ \$10.25		440.75
Acme Analytical		
104 rocks (ICP, Tl, F, Hg) @ \$15		1,560.00
2 rock assays (Pb, Zn, Cu, Au, Ag) @ \$21.75		43.00
201 soils (ICP, Au) @ \$10.75		2,160.75
33 soils (ICP, Au) @ \$11.57		381.81
Shipping		40.00
University of British Columbia		
X-Ray Diffraction - 2 @ \$100		200.00
Drafting/Printing		<u>\$ 650.00</u>
		<u>\$28,931.10</u>

APPENDIX B

SOIL SAMPLE DESCRIPTIONS AND RESULTS

APPENDIX B - SOIL SAMPLE DESCRIPTIONS

<u>L86+00E</u>	<u>COLOUR</u>	<u>DEPTH<sup>1</sup></u>	<u>L86+50E</u>	<u>COLOUR</u>	<u>DEPTH</u>
96+00N	GR	10	96+00N	Y	12
96+25N	GR	14	96+25N	Y	18
96+50N	SWAMP		96+50N	Y	8
96+75N	SWAMP		96+75N	Y	12
97+00N	BL	12	97+00N	GR	10
97+25N	GR	12	97+25N	GR	6
97+50N	BL+BR	12	97+50N	BL	16
97+75N	Y	10	97+75N	GR	10
98+00N	GR	12	98+00N	GR	14
98+25N	GR	10	98+25N	GR	10
98+50N	Y	8	98+50N	GR	10
98+75N	Y	8	98+75N	Y	14
99+00N	GR	10	99+00N	GR CLAY	14
99+25N	GR+BR	8	99+25N	GR	12
99+50N	Y	5	99+50N	GR	10
99+75N	BR	8	99+75N	GR	10
100+00N	Y	10	100+00N	Y	12
100+25N	GR	10	100+25N	Y	8
100+50N	BR	5	100+50N	Y	10
100+75N	BL	10	100+75N	GR	8
101+00N	GR	15	101+00N	GR	8
101+25N	GR	15	101+25N	CLAY	15
101+50N	GR	20	101+50	GR	15
101+75N	BL	20	101+75N	GR+Y	20
102+00N	BL	20	102+00N	GR	15

1: Depth in inches.

<u>L87+00E</u>	<u>COLOUR</u>	<u>DEPTH</u>	<u>L87+50E</u>	<u>COLOUR</u>	<u>DEPTH</u>
96+00N	Y	12	96+00N	Y	8
96+25N	Y	12	96+25N	BR	8
96+50N	Y	12	96+50N	GR	8
96+75N	Y	12	96+75N	BR	5
97+00N	Y	14	97+00N	Y	8
97+25N	Y	14	97+25N	BL(SWAMP)	20
97+50N	Y	12	97+50N	BL(SWAMP)	15
97+75N	GR+R	14	97+75N	BL(SWAMP)	10
98+00N	GR+CLAY	14	98+00N	BL(SWAMP)	10
98+25N	GR+CLAY	14	98+25N	BL(SWAMP)	10
98+50N	GR+CLAY	14	98+50N	BL(SWAMP)	25
98+75N	GR+CLAY	12	98+75N	CLAY	20
99+00N	GR+CLAY	12	99+00N	CLAY	15
99+25N	GR+CLAY	14	99+25N	GR	15
99+50N	GR+CLAY	12	99+50N	GR	8
99+75N	GR	12	99+75N	BR	20
100+00N	Y	10	100+00N	GR	15
100+25N	Y	5			
100+50N	BR	8			
100+75N	Y	8			
101+00N	Y	8			
101+25N	GR	15			
101+50N	GR	12			
101+75N	GR+CLAY	20			
102+00N	Y	8			

<u>L88+00E</u>	<u>COLOUR</u>	<u>DEPTH</u>	<u>L88+50E</u>	<u>COLOUR</u>	<u>DEPTH</u>
96+00N	Y	5	96+00N	GR	8
96+25N	Y	10	96+25N	GR	5
96+50N	Y	10	96+50N	BR	6
96+75N	BR	8	96+75N	BR	8
97+00N	Y	5	97+00N	GR	10
97+25N	GR	15	97+25N	BL	10
97+50N	BL	20	97+50N	GR	15
97+75N	Y	8	97+75N	GR+Y	15
98+00N	GR	20	98+00N	GR	20
98+25N	BL	20	98+25N	BR	20
98+50N	BR	15	98+50N	Y	15
98+75N	BL	10	98+75N	Y	15
99+00N	Y	12	99+00N	Y	15
99+25N	BR	10	99+25N	GR	10
99+50N	Y	8	99+50N	Y	8
99+75N	SWAMP		99+75N	Y	10
100+00N	BR	8	100+00N	GR	20



<u>L89+00E</u>	<u>COLOUR</u>	<u>DEPTH</u>	<u>L89+50E</u>	<u>COLOUR</u>	<u>DEPTH</u>
96+00N	GR	10	96+00N	GR CLAY+Y	10
96+25N	GR	6	96+25N	Y	10
96+50N	R	6	96+50N	BL	12
96+75N	BR	6	96+75N	BL	12
97+00N	GR	8	97+00N	GR CLAY	12
97+25N	CLAY	10	97+25N	BL	12
97+50N	BL	5	97+50N	BL	12
97+75N	BR	8	97+75N	BL	12
98+00N	SWAMP		98+00N	GR CLAY+Y	6
98+25N	Y	4	98+25N	GR	6
98+50N	Y	5	98+50N	Y	8
98+75N	Y	2	98+75N	Y	6
99+00N	GR	3	99+00N	Y	6
99+25N	CLAY	4	99+25N	Y	10
99+50N	Rr	4	99+50N	GR	8
99+75N	Y	4	99+75N	GR	6
100+00N	Y	2	100+00N	GR CLAY	8
100+25N	Y	40	100+25N	GR CLAY	10
100+50N	GR	12	100+50N	GR CLAY	8
100+75N	GR	15	100+75N	GR CLAY	8
101+00N	CLAY	20	101+00N	Y	10
101+25N	Y	12	101+25N	BL	8
101+50N	R	10	101+50	GR+Y	8
101+75N	Y	10	101+75N	GR	8
102+00N	BR	8	102+00N	GR	10

<u>L90+00E</u>	<u>COLOUR</u>	<u>DEPTH</u>
96+00N	GR	10
96+25N	GR CLAY	9
96+50N	GR	12
96+75N	GR	10
97+00N	GR(SWAMP)	20
97+25N	BL(SWAMP)	18
97+50N	BL(SWAMP)	16
97+75N	BL	12
98+00N	BL	12
98+25N	BL	14
98+50N	SWAMP	
98+75N	GR CLAY	10
99+00N	Y	6
99+25N	Y	4
99+50N	Y	8
99+75N	GR (SWAMP)	10
100+00N	Y	6
100+25N	GR CLAY	10
100+50N	GR CLAY	10
100+75N	Y	8
101+00N	Y	10
101+25N	GR CLAY	10
101+50N	Y	10
101+75N	Y	10
102+00N	Y	10

-----

Abbreviations:

Y = Yellow

R = Red

GR = Grey

BR = Brown

BL = Black

## GEOCHEMICAL ICP ANALYSIS

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

## SOIL PROFILES

DATE RECEIVED: OCT 15 1986

DATE REPORT MAILED: Oct 20/86

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

LORNE MINING PROJECT - 5417 FILE # 86-2877 R

PAGE 1

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	M	AuF	LoI
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM	%	
86-4D 2651	10	118	75	199	.9	24	20	1191	3.80	39	5	ND	2	64	1	8	2	46	1.19	.083	14	19	.61	70	.03	6	1.00	.02	.08	1	22	-
86-2G 2652	9	88	98	263	1.5	27	15	1052	4.07	36	5	ND	3	45	1	7	4	47	1.01	.084	11	20	.65	72	.03	6	1.09	.02	.10	1	25	-
86-3A 2653	8	83	71	200	.9	24	15	878	4.24	34	5	ND	2	57	1	15	2	50	.88	.086	10	23	.72	102	.03	4	1.25	.02	.10	1	27	-
86-4B 2654	4	76	193	567	3.8	24	15	2800	4.01	29	5	ND	4	28	3	28	2	17	.43	.131	8	8	.36	26	.01	3	.73	.01	.08	2	46	-
86-5D 2655	9	112	285	141	3.4	16	11	390	6.32	57	5	ND	3	56	1	36	2	68	.11	.119	9	26	.41	267	.08	6	.89	.02	.12	1	33	-
86-2H 2656	3	82	318	142	1.4	13	10	304	4.88	98	5	ND	4	72	1	48	11	28	.19	.138	11	14	.21	144	.02	2	.71	.06	.08	2	14	-
86-5D 2657	8	72	139	148	.5	16	16	698	5.57	47	5	ND	3	44	1	11	5	60	.14	.105	11	25	.45	242	.07	2	1.13	.01	.07	1	53	-
EMS 1	2	83	49	244	7.6	31	8	750	1.48	5	5	ND	1	73	3	2	3	19	.91	.169	21	18	.29	343	.01	2	1.96	.01	.05	1	21	51.7
EMS 2	4	185	79	430	6.7	48	24	1707	2.94	17	5	ND	1	48	5	3	3	42	.49	.141	34	28	.48	384	.01	6	2.47	.01	.06	1	22	21.8
EMS 3	5	130	97	257	1.8	28	24	1202	5.29	48	5	ND	1	35	1	6	2	57	.38	.089	13	28	.49	268	.03	5	1.36	.02	.07	1	36	7.9
EMS 4	6	84	104	329	1.1	29	20	1339	5.07	51	5	ND	2	43	2	11	2	52	.43	.095	11	25	.59	269	.03	5	1.35	.02	.10	1	34	6.7
EMS 5	4	83	91	253	1.8	29	16	666	4.69	32	5	ND	2	42	1	17	3	49	.43	.105	10	23	.74	106	.03	4	1.40	.02	.10	1	17	5.9
EMS 7	3	28	36	236	2.5	20	10	553	4.52	24	5	ND	1	16	1	2	2	61	.15	.094	8	25	.48	154	.02	2	2.01	.01	.05	1	6	10.9
EMS 8	9	89	88	178	.3	22	21	1363	5.52	45	5	ND	3	31	1	7	4	64	.21	.090	11	30	.61	233	.04	8	1.55	.01	.09	1	36	7.7
EMS 9	9	67	79	140	.3	13	25	1526	6.42	140	5	ND	6	32	1	12	2	34	.11	.176	29	18	.63	257	.01	6	1.19	.01	.08	1	13	7.6
EMS 10	4	40	59	99	.7	12	11	1192	4.09	72	5	ND	4	33	1	4	4	26	.09	.099	22	21	.67	205	.01	4	1.29	.02	.09	1	14	6.9
EMS 11	6	68	83	161	.3	15	19	1788	4.71	55	5	ND	2	21	1	7	2	43	.12	.084	14	20	.47	135	.03	4	1.08	.01	.05	1	20	5.6
EMS 12	10	59	141	302	.8	19	29	2539	6.45	100	5	ND	3	42	1	10	4	39	.31	.276	14	18	.51	289	.02	5	.93	.01	.07	1	30	5.6
SEM 1	4	122	628	652	7.0	16	14	183	3.97	78	5	ND	5	42	3	56	2	24	.26	.149	12	10	.19	35	.01	2	.61	.01	.06	2	21	-
SEM 2	7	125	403	472	5.4	17	14	477	4.82	56	5	12	4	28	1	49	5	41	.22	.135	11	18	.27	83	.03	3	.77	.01	.06	1	30	-
SEM 3	5	115	123	371	1.0	27	18	832	6.06	54	5	ND	2	31	1	12	3	61	.26	.118	11	28	.54	336	.05	7	1.51	.01	.07	1	17	-
SEM 4	4	64	72	240	.8	26	20	1434	4.81	52	5	ND	2	40	1	9	2	60	.40	.089	12	28	.52	374	.04	7	1.27	.02	.08	1	8	-
SEM 5	7	88	128	287	1.0	24	18	1107	5.72	44	5	ND	2	35	1	10	2	65	.30	.104	13	30	.56	235	.04	4	1.47	.01	.08	1	18	-
SEM 6	5	86	88	257	1.0	27	18	2168	4.59	32	5	ND	1	21	1	8	2	61	.17	.055	15	29	.53	136	.04	3	1.66	.01	.05	1	15	-
SEM 7	8	168	220	382	7.3	29	31	2062	5.34	44	5	ND	1	31	2	9	2	59	.24	.136	26	34	.52	312	.01	5	2.97	.01	.08	1	21	-
SEM 8	5	50	320	219	2.0	14	10	482	5.64	64	5	ND	4	87	1	36	4	35	.14	.146	16	15	.24	255	.03	4	.75	.02	.08	1	29	-
SEM 9	7	65	412	109	1.3	15	27	1778	6.01	84	5	ND	4	50	1	42	4	38	.07	.161	16	19	.27	188	.03	2	.95	.01	.07	1	58	-
SEM 10	19	133	107	267	1.0	23	14	308	4.15	33	5	ND	3	31	1	8	2	42	.29	.110	13	20	.52	59	.02	2	1.40	.01	.09	1	69	-
SEM 11	6	96	120	221	.5	22	19	1090	5.24	45	5	ND	2	51	1	8	2	60	.27	.109	13	28	.58	287	.04	5	1.51	.02	.09	1	12	-
SEM 12	5	79	78	218	.4	24	18	1165	5.32	49	5	ND	2	40	1	8	2	62	.30	.095	13	29	.56	235	.03	6	1.55	.02	.07	1	13	-
SEM 13	7	81	94	183	.2	20	14	575	5.19	44	5	ND	2	34	1	8	2	58	.22	.090	13	27	.52	203	.03	6	1.45	.01	.07	1	24	-
SEM 14	3	56	69	140	.1	21	14	693	4.50	39	5	ND	2	24	1	5	4	59	.14	.074	10	29	.59	138	.04	4	1.50	.01	.07	1	12	-
SEM 15	4	43	87	151	1.9	14	9	367	4.25	29	5	ND	1	16	1	6	2	55	.11	.081	8	23	.48	106	.01	3	1.89	.01	.05	1	8	-
STD C/AU-5	21	58	39	132	6.9	69	29	1007	3.95	41	16	7	33	48	17	15	20	62	.48	.101	37	56	.88	178	.08	35	1.73	.06	.13	14	51	-

## GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO<sub>3</sub>-H<sub>2</sub>O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
THIS LEACH IS PARTIAL FOR MN, FE, CA, P, CR, MG, BA, TI, B, AL, NA, K, W, SI, ZR, CE, SM, Y, NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.  
- SAMPLE TYPE: SOILS - BOMESH AU ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: OCT 6 1986 DATE REPORT MAILED: *P. Chivers* **Oct 14/86** ASSAYER: *D. J. Jepsen* DEAN TOYE, CERTIFIED B.C. ASSAYER.

LORNE MINING FILE # 86-3076

PAGE 1

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	I	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	I	PPM	I	PPM	I	I	I	PPM	PPM
86+00E 102+00N P	1	58	14	62	.9	17	7	452	2.06	4	5	ND	1	70	1	2	2	44	2.24	.256	31	27	.37	387	.01	3	2.64	.02	.06	1	3
86+00E 101+75N P	1	37	6	24	1.7	7	4	191	1.17	6	5	ND	2	143	1	2	2	10	5.80	.165	23	8	.20	343	.01	9	1.01	.01	.03	1	1
86+00E 101+50N P	1	49	16	101	1.0	18	12	736	3.80	21	5	ND	1	67	1	2	2	59	1.87	.280	32	31	.46	370	.01	2	2.89	.02	.08	1	1
86+00E 101+25N P	1	49	14	129	1.5	20	12	1160	2.89	10	5	ND	1	51	1	2	2	43	.96	.202	26	34	.50	417	.01	2	3.34	.02	.09	1	1
86+00E 101+00N P	1	44	26	172	.4	24	15	1082	5.20	27	5	ND	1	42	1	2	2	87	.60	.132	16	36	.68	302	.01	2	3.16	.02	.10	1	1
86+00E 100+75N	1	48	26	167	.4	22	14	997	4.97	22	5	ND	1	50	1	2	2	79	.71	.113	17	34	.62	286	.01	2	2.99	.01	.08	1	2
86+00E 100+50N	1	32	20	133	.3	21	14	905	4.53	23	7	ND	1	39	1	2	2	67	.64	.089	12	30	.63	214	.02	2	2.01	.01	.06	1	1
86+00E 100+25N	1	47	35	172	.6	22	19	2576	5.43	24	5	ND	1	51	2	2	2	82	.74	.125	17	35	.62	289	.01	2	3.24	.01	.07	1	1
86+00E 100+00N	1	21	13	125	.1	15	10	420	4.11	21	5	ND	1	21	1	2	2	67	.23	.048	10	26	.42	144	.03	2	1.74	.01	.03	1	1
86+00E 99+75N	1	27	20	148	1.8	14	10	564	4.00	24	5	ND	1	28	1	2	2	70	.34	.071	11	26	.39	177	.01	2	1.81	.01	.06	2	1
86+00E 99+50N	1	24	34	126	.3	12	10	641	4.54	39	5	ND	1	14	1	2	2	77	.12	.045	9	26	.36	166	.03	2	1.62	.01	.03	2	1
86+00E 99+25N	1	40	37	206	.5	16	12	1109	4.49	26	5	ND	1	42	1	2	2	73	.66	.077	19	32	.45	266	.01	2	2.40	.01	.06	1	3
86+00E 99+00N	1	51	27	189	1.0	23	13	1231	4.56	22	5	ND	1	45	2	2	3	71	.84	.112	16	33	.59	290	.01	3	2.89	.01	.08	1	8
86+00E 98+75N	1	22	28	135	.2	14	11	649	3.87	21	5	ND	1	27	1	2	2	65	.40	.045	10	26	.45	139	.02	3	1.63	.01	.04	1	2
86+00E 98+50N	1	21	21	137	.2	11	9	478	3.83	19	5	ND	1	15	1	2	2	67	.14	.054	10	25	.43	102	.02	3	1.76	.01	.05	1	4
86+00E 98+25N	1	29	25	150	.6	14	10	688	3.89	20	8	ND	1	30	1	2	2	68	.29	.051	10	32	.57	135	.02	4	2.10	.01	.04	1	3
86+00E 98+00N	1	62	37	257	1.1	26	15	863	5.36	20	5	ND	1	58	1	2	2	82	.59	.110	16	40	.72	310	.01	2	3.88	.01	.10	1	1
86+00E 97+75N	1	44	35	189	.9	19	11	703	4.16	29	5	ND	1	54	2	2	2	67	.59	.072	12	28	.56	222	.02	4	2.01	.01	.06	1	1
86+00E 97+50N	1	61	33	252	1.4	28	17	1582	5.17	25	5	ND	1	80	3	2	2	75	1.41	.106	17	35	.77	298	.02	2	2.36	.02	.08	1	1
86+00E 97+25N	1	43	28	212	.5	20	14	1052	4.65	26	5	ND	1	77	2	2	2	70	.89	.118	16	33	.65	260	.02	2	2.04	.01	.07	1	1
86+00E 97+00N	1	80	36	288	1.4	29	15	1211	4.98	26	5	ND	1	98	2	4	2	68	1.26	.133	20	38	.66	341	.01	2	2.59	.01	.09	2	2
86+00E 96+25N	1	35	20	155	.8	16	9	613	3.53	15	5	ND	1	69	1	2	2	60	1.05	.085	13	26	.53	215	.03	2	1.67	.01	.05	1	9
86+00E 96+00N	1	38	28	177	.4	18	12	890	4.09	23	5	ND	1	59	1	2	3	65	.85	.085	12	28	.58	210	.02	3	1.78	.01	.07	1	5
86+50E 102+00N	1	28	10	64	.3	10	6	316	2.27	9	5	ND	1	34	1	2	2	51	.79	.031	8	20	.32	195	.03	2	1.11	.01	.04	1	1
86+50E 101+75N	1	41	13	81	.2	15	11	633	3.52	14	5	ND	1	47	1	2	2	63	1.21	.086	12	25	.56	228	.02	3	1.85	.01	.06	1	1
86+50E 101+50N	1	39	13	96	.1	17	12	1127	4.00	17	5	ND	1	33	1	2	2	65	.68	.063	13	24	.48	229	.02	2	1.69	.01	.05	1	1
86+50E 101+25N	1	38	20	133	.8	19	13	835	4.03	16	5	ND	1	46	1	2	2	64	.64	.159	14	34	.56	327	.01	2	3.03	.02	.08	1	1
86+50E 101+00N	1	33	21	160	.7	14	12	1201	2.96	10	5	ND	1	68	1	2	2	57	1.23	.165	12	23	.49	326	.01	2	2.37	.01	.08	1	1
86+50E 100+75N	1	38	14	155	.3	21	13	1309	4.41	18	5	ND	1	61	1	2	3	74	1.03	.119	14	31	.59	330	.01	2	2.86	.01	.07	1	2
86+50E 100+50N	1	14	9	99	.1	15	8	357	2.92	10	5	ND	1	22	1	2	2	54	.26	.043	8	24	.53	113	.03	2	1.52	.01	.04	2	4
86+50E 100+25N	1	16	12	89	.5	10	7	420	3.04	9	5	ND	1	27	1	2	2	61	.34	.059	8	22	.39	206	.02	2	1.49	.01	.05	1	1
86+50E 100+00N	1	22	12	124	.3	12	9	481	3.72	15	5	ND	1	21	1	2	3	64	.21	.039	9	26	.49	123	.02	2	1.68	.01	.04	1	1
86+50E 99+75N	1	26	8	123	.3	12	8	438	3.32	13	5	ND	1	24	1	2	2	61	.25	.052	11	24	.46	191	.02	2	1.70	.01	.04	1	3
86+50E 99+50N	1	25	23	144	.5	16	11	638	4.07	23	5	ND	1	31	1	2	2	71	.40	.049	9	30	.55	171	.02	2	1.84	.01	.04	1	2
86+50E 99+25N	1	43	33	156	.6	17	13	897	4.49	24	5	ND	1	49	1	2	2	66	.87	.099	18	32	.51	251	.01	2	2.47	.01	.06	1	1
86+50E 99+00N	1	47	31	160	1.1	19	10	369	3.76	21	5	ND	1	72	1	4	3	57	1.34	.119	24	28	.47	304	.01	2	2.34	.02	.06	1	1
STD C/AU-S	21	58	38	134	6.8	65	30	1025	3.97	41	16	7	33	48	17	15	20	63	.48	.105	37	58	.88	180	.08	38	1.73	.06	.13	12	51

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au PPM
86+50E 98+75N	1	35	32	153	.4	17	9	662	3.57	21	7	ND	1	37	1	3	3	61	.58	.054	11	27	.40	238	.01	2	1.88	.01	.05	2	1
86+50E 98+50N	1	29	14	150	.1	18	8	496	3.67	21	5	ND	1	21	1	2	2	62	.19	.053	9	28	.48	138	.02	2	1.97	.01	.04	1	1
86+50E 98+25N	1	77	23	215	1.6	31	11	425	4.00	20	5	ND	1	45	2	3	4	63	.39	.136	14	35	.63	250	.01	2	3.38	.01	.08	1	4
86+50E 98+00N	2	36	23	140	.1	16	9	525	3.29	19	5	ND	1	35	1	2	3	61	.36	.052	8	24	.45	161	.01	2	1.67	.01	.04	1	5
86+50E 97+75N	1	22	16	176	.2	17	9	601	3.25	15	5	ND	1	35	1	2	2	56	.44	.061	8	24	.51	131	.05	2	1.25	.01	.05	1	1
86+50E 97+50N	1	45	15	199	1.4	20	9	655	3.10	20	6	ND	1	80	2	2	2	54	1.13	.089	10	23	.45	276	.01	2	1.76	.01	.05	1	3
86+50E 97+25N	1	24	4	158	.4	15	7	492	3.26	14	5	ND	1	22	1	2	4	59	.23	.050	7	23	.52	137	.03	2	1.53	.01	.04	1	1
86+50E 97+00N	1	28	9	164	1.1	19	13	787	3.75	18	5	ND	1	18	1	2	2	64	.19	.073	6	26	.52	129	.02	3	1.71	.01	.04	1	1
86+50E 96+75N	1	25	6	169	2.2	20	9	383	3.76	16	8	ND	1	17	1	4	2	64	.20	.127	7	26	.56	151	.02	4	2.16	.01	.06	1	1
86+50E 96+50N	1	19	15	133	.8	14	8	511	3.41	16	5	ND	1	20	1	2	2	62	.28	.066	6	23	.43	135	.02	2	1.45	.01	.04	1	1
86+50E 96+25N	1	21	24	184	.5	15	10	1055	3.57	18	5	ND	1	26	1	3	2	62	.43	.064	6	25	.46	211	.02	4	1.45	.01	.05	1	1
86+50E 96+00N	1	17	14	138	.1	14	8	459	3.27	15	5	ND	1	22	1	2	4	60	.34	.047	6	21	.42	155	.03	2	1.12	.01	.03	1	9
87+00E 102+00N	1	18	10	96	.1	15	7	326	3.56	15	5	ND	1	16	1	2	2	65	.22	.052	6	23	.43	119	.04	3	1.39	.01	.04	1	2
87+00E 101+75N	1	46	6	133	.1	25	13	1198	4.04	16	6	ND	1	49	1	2	2	71	1.12	.075	7	29	.64	332	.02	2	2.20	.01	.07	1	1
87+00E 101+50N P	1	84	4	133	.1	28	15	1317	4.40	17	5	ND	1	52	1	2	2	66	1.24	.123	13	30	.52	324	.01	2	2.21	.02	.09	1	1
87+00E 101+25N P	1	67	12	170	.4	25	17	2140	5.32	24	6	ND	1	55	1	2	2	83	.87	.183	14	34	.61	377	.01	2	3.00	.02	.08	1	1
87+00E 101+00N	1	18	14	104	.1	14	7	331	4.64	21	5	ND	1	12	1	2	2	83	.15	.077	5	26	.40	94	.04	2	1.50	.01	.03	1	1
87+00E 100+75N	1	12	6	71	.1	10	6	326	3.00	9	5	ND	1	19	1	2	2	63	.22	.048	6	19	.29	104	.04	3	1.69	.01	.04	1	1
87+00E 100+50N	1	39	17	150	.4	22	11	773	4.38	23	5	ND	1	38	1	2	3	73	.45	.080	10	33	.61	255	.01	2	2.33	.01	.05	1	1
87+00E 100+25N	1	19	12	102	.1	13	9	494	2.84	10	5	ND	1	22	1	2	3	57	.23	.042	8	21	.39	161	.02	4	1.34	.01	.03	1	1
87+00E 100+00N	1	29	22	146	.3	17	10	646	3.97	24	5	ND	1	30	1	2	3	65	.43	.057	8	27	.46	221	.01	2	1.89	.01	.04	1	6
87+00E 99+75N	1	22	5	88	.1	15	9	583	3.49	21	5	ND	1	26	1	2	2	59	.38	.046	9	25	.46	121	.04	2	1.20	.01	.04	1	1
87+00E 99+50N	1	44	33	143	.6	20	14	1027	4.40	30	5	ND	1	41	1	2	2	67	.58	.078	16	29	.48	247	.02	2	1.98	.01	.05	1	1
87+00E 99+25N	1	47	23	146	.8	20	11	964	4.28	27	6	ND	1	47	1	2	2	66	.66	.097	19	31	.49	266	.01	2	2.14	.01	.06	1	5
87+00E 99+00N	1	49	23	154	.3	24	14	1040	4.19	25	5	ND	1	34	1	2	2	65	.39	.082	15	32	.53	212	.01	2	2.18	.01	.05	1	1
87+00E 98+75N	1	28	14	118	.1	19	11	726	3.75	20	5	ND	1	24	1	2	2	62	.25	.056	8	28	.53	128	.02	3	1.76	.01	.04	1	1
87+00E 98+50N	1	29	18	140	.4	20	10	592	3.46	19	6	ND	1	27	1	2	2	62	.26	.081	7	28	.54	157	.01	2	2.08	.01	.06	1	1
87+00E 98+25N	1	51	31	172	.5	24	14	1142	4.39	24	5	ND	1	38	1	2	2	70	.34	.096	11	34	.59	219	.01	2	2.58	.01	.06	1	4
87+00E 98+00N	1	42	19	173	1.3	23	11	994	3.35	17	5	ND	1	38	2	2	2	57	.75	.103	10	24	.51	237	.02	2	1.73	.01	.06	1	3
87+00E 97+75N	2	52	23	217	2.1	23	13	1049	4.45	22	5	ND	1	46	2	2	2	77	.48	.107	10	31	.55	325	.01	2	2.65	.01	.07	1	1
87+00E 97+50N	2	27	29	118	.3	16	9	534	3.42	24	5	ND	1	23	1	2	2	55	.23	.048	7	22	.42	112	.03	2	1.16	.01	.05	1	10
87+00E 97+25N	1	25	18	152	1.2	20	8	533	3.50	19	7	ND	1	25	1	3	2	63	.30	.053	6	27	.52	193	.02	2	1.69	.01	.04	1	4
87+00E 97+00N	1	15	8	114	.7	15	6	361	2.80	13	5	ND	1	21	1	2	2	54	.26	.033	5	21	.45	136	.03	2	1.17	.01	.03	1	1
87+00E 96+75N	1	21	14	145	.8	16	8	503	3.54	14	5	ND	1	24	1	2	2	67	.33	.072	5	24	.46	186	.02	2	1.60	.01	.05	1	7
87+00E 96+50N	1	25	12	141	.7	16	8	466	3.95	17	5	ND	1	17	1	2	2	70	.20	.055	5	25	.50	131	.02	2	1.90	.01	.04	1	9
87+00E 96+25N	2	30	25	181	1.5	22	11	1051	4.00	16	5	ND	1	26	1	2	2	70	.36	.092	8	28	.60	220	.01	5	2.16	.01	.06	1	15
STD C/AU-S	22	58	39	136	7.0	72	30	1042	3.97	41	19	8	34	49	18	15	21	64	.48	.106	37	59	.88	183	.08	33	1.73	.06	.14	12	48

## LORNE MINING FILE # 86-3076

PAGE 3

SAMPLE#	Mo PPH	Cu PPH	Pb PPH	Zn PPH	Ag PPH	Ni PPH	Co PPH	Mn PPH	Fe I	As PPH	U PPH	Au PPH	Th PPH	Sr PPH	Cd PPH	Sb PPH	Bi PPH	V PPH	Ca I	P I	La PPH	Cr PPH	Hg I	Ba PPH	Ti I	B PPH	Al I	Na I	K I	W PPH	Au# PPB
87+00E 96+00N	2	27	21	172	.6	14	9	751	3.95	20	5	ND	1	21	1	2	5	67	.25	.059	7	28	.51	159	.02	6	1.97	.01	.06	1	15
87+50E 100+00N	2	33	25	214	1.6	22	14	2312	4.02	19	5	ND	1	74	2	2	2	58	1.12	.158	16	30	.52	388	.01	4	2.47	.01	.06	1	3
87+50E 99+75N P	1	29	4	84	.8	14	11	2243	2.79	13	5	ND	1	122	2	3	2	32	2.06	.091	17	16	.28	345	.01	4	1.49	.03	.06	1	2
87+50E 99+50N	1	25	22	113	.1	15	13	754	3.83	32	5	ND	1	33	1	2	2	66	.42	.057	7	26	.48	149	.05	4	1.28	.01	.05	1	3
87+50E 99+25N	1	32	16	167	.2	16	13	2396	4.07	21	5	ND	1	72	1	3	2	67	.99	.080	8	28	.52	417	.01	7	2.01	.01	.07	1	5
87+50E 99+00N P	1	31	24	142	.2	17	14	1990	4.61	19	5	ND	1	78	1	2	2	76	1.12	.098	8	24	.54	429	.01	4	2.17	.02	.10	1	1
87+50E 98+75N P	1	27	15	127	.3	16	12	1014	3.99	13	8	ND	1	72	1	2	3	67	.92	.061	6	24	.47	322	.02	4	1.59	.02	.08	1	1
87+50E 98+50N P	1	12	6	132	.5	9	10	3034	1.56	8	7	ND	1	184	1	2	2	20	2.78	.043	3	6	.28	397	.01	6	.62	.02	.04	1	2
87+50E 98+25N P	1	3	2	98	.1	1	1	110	.09	2	8	ND	1	183	1	2	2	1	3.26	.049	2	1	.20	201	.01	9	.04	.01	.04	1	2
87+50E 98+00N P	2	31	3	38	.9	6	5	4821	1.22	4	10	ND	2	265	1	3	3	15	4.58	.111	3	7	.25	743	.01	9	.59	.01	.04	1	2
87+50E 97+75N P	1	15	2	86	.5	5	1	454	.25	2	11	ND	2	334	1	2	3	5	6.03	.077	2	2	.23	317	.01	18	.11	.01	.03	1	1
87+50E 97+50N P	7	7	7	48	.5	9	9	31313	3.80	8	21	ND	3	326	1	2	2	2	5.47	.113	2	2	.21	1964	.01	16	.08	.02	.03	1	4
87+50E 97+25N P	1	18	4	379	.2	5	5	1546	1.46	4	5	ND	1	126	3	2	2	4	2.85	.128	3	2	.12	322	.01	16	.17	.03	.03	1	1
87+50E 97+00N	1	14	17	65	.3	6	5	182	3.47	14	5	ND	1	13	1	2	2	71	.09	.035	4	22	.21	97	.04	2	1.33	.01	.04	1	1
87+50E 96+75N	2	56	24	128	2.3	18	11	910	3.53	13	5	ND	1	32	1	2	3	61	.37	.102	11	27	.44	241	.01	2	2.75	.01	.09	1	2
87+50E 96+50N	1	15	19	79	.3	10	6	266	3.43	11	5	ND	1	16	1	3	2	79	.17	.051	5	24	.28	98	.05	2	1.07	.01	.05	1	2
87+50E 96+25N	2	32	19	153	.6	15	14	781	4.17	18	5	ND	1	26	1	2	6	77	.29	.106	6	28	.56	182	.03	7	2.09	.02	.08	1	2
87+50E 96+00N	1	44	38	162	1.7	22	11	557	4.60	29	5	ND	1	17	1	10	2	75	.17	.083	6	32	.53	128	.03	3	2.37	.01	.06	1	1
88+00E 100+00N	1	42	10	141	.3	23	11	998	3.76	14	5	ND	1	40	1	2	4	65	.46	.075	11	32	.58	266	.02	2	2.07	.02	.06	1	1
88+00E 99+50N	1	19	9	127	.2	18	8	377	3.72	17	5	ND	1	15	1	2	2	61	.19	.094	5	25	.46	101	.03	3	1.74	.01	.04	1	1
88+00E 99+25N	1	10	4	80	.1	8	5	238	2.27	5	5	ND	1	20	1	2	2	50	.25	.028	6	16	.23	97	.04	2	.91	.01	.03	1	1
88+00E 99+00N	1	29	18	174	.3	20	17	1368	4.51	23	5	ND	1	40	1	4	2	77	.43	.079	8	31	.58	221	.02	3	2.13	.01	.06	1	1
88+00E 98+75N	1	22	15	141	.3	14	12	1602	4.35	18	5	ND	1	61	1	2	2	65	.78	.080	8	24	.46	292	.02	4	1.73	.02	.06	1	1
88+00E 98+50N	1	14	15	129	.1	14	7	372	3.26	15	5	ND	1	35	1	2	2	57	.44	.034	6	23	.39	171	.04	2	1.27	.01	.05	1	1
88+00E 98+25N P	1	9	2	39	.3	1	1	147	.21	2	6	ND	1	149	1	2	2	4	3.27	.065	2	3	.19	192	.01	12	.14	.01	.05	1	1
88+00E 98+00N P	3	55	22	139	1.0	27	15	5888	5.32	24	5	ND	1	77	1	2	2	73	1.23	.107	12	32	.54	619	.01	2	2.42	.02	.08	1	1
88+00E 97+75N	1	45	15	111	.4	14	13	1872	3.58	14	5	ND	1	43	1	2	2	67	.46	.067	14	28	.47	315	.02	4	1.93	.01	.05	1	1
88+00E 97+50N	13	61	25	159	3.0	53	11	78583	3.04	17	5	ND	1	110	5	2	2	34	2.00	.147	14	20	.25	3663	.01	2	1.65	.02	.04	1	1
88+00E 97+25N	1	20	14	124	.1	15	12	1968	2.98	10	5	ND	1	34	1	2	2	55	.44	.029	6	24	.47	237	.02	4	1.59	.01	.04	1	4
88+00E 97+00N	1	11	13	120	.1	17	8	513	3.23	4	5	ND	1	20	1	2	2	77	.23	.054	6	26	.52	121	.05	3	1.45	.01	.05	1	1
88+00E 96+75N	2	29	22	142	.4	18	13	1163	4.28	21	5	ND	1	21	1	2	2	72	.26	.063	8	30	.60	149	.02	5	2.14	.02	.07	1	4
88+00E 96+50N	1	18	11	110	.3	14	7	432	3.84	17	5	ND	1	13	1	2	2	71	.14	.071	5	25	.41	74	.04	5	1.71	.01	.05	1	2
88+00E 96+25N	2	26	23	144	.6	17	9	390	4.35	23	5	ND	1	20	1	3	2	73	.18	.061	7	29	.51	131	.03	5	2.01	.01	.07	1	6
88+00E 96+00N	1	22	22	138	.4	23	16	1463	4.66	18	5	ND	1	20	1	3	2	91	.27	.082	5	42	.70	123	.05	6	1.85	.02	.07	1	1
88+50E 100+00N	10	102	21	298	1.6	90	28	9290	11.77	110	14	ND	2	77	3	5	9	111	1.09	.275	42	50	.49	1165	.01	2	4.92	.02	.09	1	4
88+50E 99+50N	1	17	12	113	.1	15	9	667	3.52	13	5	ND	1	36	1	2	2	65	.43	.052	7	25	.51	163	.03	3	1.62	.01	.05	1	1
STD C/AU-5	21	58	39	133	6.9	67	29	1014	3.95	43	17	8	33	49	17	16	18	63	.48	.106	37	58	.88	181	.08	37	1.72	.06	.13	13	50

## LORNE MINING FILE # 86-3076

PAGE 4

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	M PPM	Au PPM
88+50E 99+75N	1	17	2	93	.1	19	8	611	3.32	11	5	ND	1	30	1	2	2	58	.34	.049	9	23	.57	135	.04	2	1.50	.02	.05	1	1
88+50E 99+25N	1	14	5	92	.2	13	7	357	2.82	11	5	ND	1	28	1	2	2	57	.31	.033	8	22	.42	134	.03	2	1.36	.01	.04	1	1
88+50E 99+00N	1	16	14	104	.3	12	13	911	3.03	13	5	ND	1	29	1	2	3	60	.34	.044	8	24	.45	154	.03	2	1.47	.01	.04	1	1
88+50E 98+75N	1	62	24	185	1.3	26	13	1307	3.87	15	5	ND	1	57	2	2	2	62	.72	.097	13	31	.53	379	.01	2	2.62	.02	.09	1	1
88+50E 98+50N	1	12	12	96	.1	14	7	316	3.21	13	5	ND	1	19	1	2	2	56	.21	.069	6	24	.39	93	.03	4	1.32	.01	.04	1	1
88+50E 98+25N	1	14	11	91	.1	11	7	437	2.56	7	5	ND	1	41	1	2	2	54	.56	.038	9	16	.34	191	.02	2	1.30	.01	.04	1	1
88+50E 98+00N	1	19	9	121	.1	13	7	443	2.93	12	5	ND	1	36	1	2	2	54	.49	.043	9	22	.48	175	.03	3	1.48	.01	.05	1	1
88+50E 97+75N	1	40	49	162	.4	24	15	927	4.76	18	5	ND	1	45	2	2	2	76	.71	.064	13	36	.80	295	.03	2	2.12	.02	.07	1	2
88+50E 97+50N	1	20	28	160	.1	22	14	701	4.98	22	5	ND	1	44	1	2	2	67	.67	.060	12	28	.87	287	.05	2	1.84	.02	.07	1	2
88+50E 97+25N P	1	30	13	89	.5	18	7	3369	2.56	17	5	ND	1	149	1	2	2	26	3.60	.127	10	14	.32	550	.01	5	1.19	.02	.05	1	1
88+50E 97+00N	1	24	13	125	.3	18	9	445	3.41	12	5	ND	1	23	1	2	2	63	.24	.038	8	27	.59	129	.03	2	1.94	.01	.05	1	1
88+50E 96+75N	2	33	27	145	.9	23	15	1615	4.44	20	5	ND	1	29	1	2	2	74	.32	.079	11	35	.76	185	.02	2	2.52	.02	.08	1	1
88+50E 96+50N	1	23	18	98	.9	16	13	1216	3.52	14	5	ND	1	25	1	2	2	68	.29	.046	10	27	.52	151	.03	2	1.78	.01	.06	1	1
88+50E 96+25N	1	50	24	176	2.1	26	11	682	4.04	17	5	ND	1	31	1	2	2	77	.33	.103	14	37	.79	263	.01	2	3.20	.02	.10	1	6
88+50E 96+00N	2	15	22	64	.7	8	10	1196	2.26	8	5	ND	1	20	1	2	2	44	.20	.046	11	16	.28	156	.02	2	1.38	.01	.06	1	8
89+00E 102+00N	1	9	7	56	.1	11	5	311	2.24	6	5	ND	1	14	1	2	2	47	.13	.037	7	16	.30	89	.04	2	1.23	.01	.03	1	1
89+00E 101+75N	1	7	13	41	.1	6	4	231	1.81	6	5	ND	1	12	1	2	2	41	.40	.026	7	14	.21	83	.03	2	1.12	.01	.03	1	3
89+00E 101+50N	1	17	16	105	.1	13	8	260	3.98	16	5	ND	1	11	1	2	2	65	.09	.116	8	23	.36	75	.02	2	2.48	.01	.04	1	24
89+00E 101+25N	1	18	15	88	.1	18	10	559	3.53	13	5	ND	1	20	1	2	2	67	.22	.051	9	25	.54	100	.04	2	1.72	.02	.05	1	4
89+00E 101+00N	1	36	18	72	.6	13	7	373	1.98	7	5	ND	1	25	1	2	2	52	.23	.117	10	26	.28	235	.01	3	2.67	.02	.07	1	1
89+00E 100+75N	1	18	14	89	.2	13	9	470	2.98	13	5	ND	1	18	1	2	2	60	.18	.051	9	23	.48	120	.03	2	2.01	.02	.05	1	6
89+00E 100+50N	1	24	15	104	.7	23	9	395	3.01	10	7	ND	1	18	1	2	2	58	.16	.052	8	27	.54	120	.02	2	2.32	.02	.07	1	2
89+00E 100+25N	1	23	6	126	.3	14	8	596	2.93	11	5	ND	1	19	1	2	2	56	.15	.038	8	24	.45	123	.02	4	1.68	.01	.06	1	1
89+00E 100+00N	1	31	7	156	1.0	15	18	1856	3.15	10	5	ND	1	16	1	2	2	55	.14	.067	10	22	.42	138	.03	2	1.79	.02	.06	1	1
89+00E 99+75N	3	53	42	220	1.2	20	19	1129	4.16	18	5	ND	1	20	1	2	4	65	.19	.105	9	27	.61	169	.01	2	2.51	.01	.08	1	3
89+00E 99+50N	1	11	17	86	1.5	8	4	169	2.79	8	5	ND	1	13	1	2	3	60	.14	.074	6	17	.22	107	.04	3	1.31	.01	.04	1	1
89+00E 99+25N	2	53	52	204	1.1	22	11	651	4.56	22	5	ND	1	45	1	2	2	74	.54	.143	14	36	.62	268	.01	2	3.30	.02	.10	1	6
89+00E 99+00N	1	25	20	125	.2	17	13	995	3.83	19	5	ND	1	32	1	2	4	73	.42	.055	9	27	.53	166	.02	3	1.76	.02	.06	1	1
89+00E 98+75N	1	18	13	110	.2	13	13	883	3.36	14	5	ND	1	25	1	2	5	60	.30	.046	8	23	.47	126	.02	2	1.59	.01	.05	1	1
89+00E 98+50N	1	14	12	86	.2	11	7	394	2.75	9	5	ND	1	26	1	2	2	54	.30	.036	7	20	.38	111	.03	2	1.32	.01	.04	1	4
89+00E 98+25N	1	16	12	86	.1	13	7	369	3.14	13	5	ND	1	25	1	2	2	57	.29	.040	8	22	.44	114	.04	2	1.29	.01	.04	1	1
89+00E 98+00N	1	15	17	109	.1	13	11	597	3.69	12	5	ND	1	31	1	2	4	67	.44	.045	7	25	.61	146	.05	2	1.48	.02	.05	1	1
89+00E 97+75N	1	49	26	203	.4	32	15	3875	5.78	14	5	ND	1	52	3	2	2	74	.77	.086	15	42	.74	462	.03	3	2.39	.02	.07	1	2
89+00E 97+50N P	1	34	35	126	1.2	20	9	896	2.29	12	5	ND	1	124	1	2	5	38	2.98	.126	11	22	.40	672	.01	6	1.45	.03	.06	1	2
89+00E 97+25N	1	43	39	215	1.1	32	15	1373	4.93	26	5	ND	1	63	2	2	5	74	.89	.110	17	35	.61	447	.01	2	3.02	.02	.08	1	1
89+00E 97+00N	1	21	15	123	.5	17	9	405	3.44	10	5	ND	1	22	1	2	2	53	.29	.075	9	23	.62	142	.03	3	2.02	.02	.08	1	1
STD C/AU-S	21	57	41	133	7.0	67	29	1016	3.98	41	17	8	34	48	18	15	21	63	.48	.103	37	58	.88	179	.08	34	1.73	.06	.13	13	52

## LORNE MINING FILE # 86-3076

PAGE 5

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Tl	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au
	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	%	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	%	%	PPH	PPH	%	PPH	%	PPH	%	%	%	PPH	PPH
89+00E 96+75N	1	30	13	121	.6	25	10	522	3.38	12	5	ND	1	26	1	2	2	63	.28	.063	6	30	.67	166	.02	4	2.22	.01	.05	1	1
89+00E 96+50N	1	24	20	114	.5	17	8	309	4.03	16	5	ND	1	14	1	2	2	67	.15	.073	3	23	.43	103	.02	2	1.78	.01	.04	1	2
89+00E 96+25N	3	55	45	176	2.2	27	12	446	3.27	15	5	ND	1	21	1	2	4	55	.22	.082	7	32	.59	193	.01	2	2.70	.01	.06	1	1
89+00E 96+00N	3	62	46	210	3.1	26	11	629	3.99	14	8	ND	1	25	1	3	2	56	.26	.146	7	34	.58	229	.01	2	3.21	.01	.08	2	1
89+50E 102+00N	1	17	7	74	.2	13	6	281	2.46	7	5	ND	1	13	1	2	2	47	.13	.039	5	18	.43	88	.03	3	1.56	.01	.03	1	1
89+50E 101+75N	1	7	7	19	.1	3	2	82	1.04	3	5	ND	1	10	1	2	2	27	.07	.017	5	7	.08	56	.03	2	.76	.01	.02	1	1
89+50E 101+50N	1	23	15	17	.3	10	2	53	.81	6	5	ND	1	19	1	2	2	20	.21	.161	10	14	.12	156	.01	2	1.90	.01	.03	1	1
89+50E 101+25N	1	8	4	38	.1	9	3	131	1.62	6	5	ND	1	10	1	2	2	34	.09	.028	5	12	.19	67	.02	2	.93	.01	.02	1	1
89+50E 101+00N	2	26	27	117	.6	15	7	275	3.09	14	5	ND	1	12	1	2	2	51	.12	.084	5	22	.41	81	.02	2	1.83	.01	.04	1	1
89+50E 100+75N	1	9	14	44	.2	10	5	198	1.55	8	5	ND	1	13	1	2	2	37	.10	.031	6	15	.22	69	.02	2	1.23	.01	.04	1	1
89+50E 100+50N	1	12	11	64	.4	17	7	302	2.67	10	5	ND	1	25	1	2	3	51	.12	.033	5	20	.47	78	.04	2	1.46	.01	.04	1	1
89+50E 100+25N	1	14	9	66	.4	16	6	293	2.32	7	5	ND	1	12	1	2	2	44	.09	.052	5	18	.37	91	.02	2	1.65	.01	.04	1	1
89+50E 100+00N	1	10	2	55	.4	12	5	298	1.89	5	5	ND	1	13	1	2	2	35	.09	.031	6	15	.34	86	.03	2	1.24	.01	.03	1	2
89+50E 99+75N	1	24	14	100	1.4	16	6	266	2.37	10	5	ND	1	12	1	2	2	42	.10	.036	6	18	.42	94	.02	2	1.62	.01	.03	1	1
89+50E 99+50N	2	32	12	130	2.5	16	9	336	2.67	10	5	ND	1	12	1	3	2	49	.10	.040	6	22	.49	99	.02	3	1.87	.01	.04	1	5
89+50E 99+25N	6	42	92	124	1.3	13	9	453	3.93	26	5	ND	2	18	1	3	2	53	.10	.073	7	23	.41	150	.01	2	1.55	.01	.06	1	22
89+50E 99+00N	9	70	141	158	.7	16	13	417	4.64	33	5	ND	2	34	1	7	3	53	.09	.073	7	23	.45	232	.03	2	1.25	.01	.10	1	44
89+50E 98+75N	2	39	35	242	3.5	13	17	5068	2.86	17	5	ND	2	135	1	2	2	54	4.31	.336	6	16	.52	900	.02	30	1.66	.03	.31	1	10
89+50E 98+50N	2	32	28	148	1.2	18	9	587	3.50	13	5	ND	1	20	1	2	2	59	.22	.069	6	26	.56	159	.01	2	2.20	.01	.05	1	6
89+50E 98+25N	1	13	12	80	.2	11	6	295	2.35	8	5	ND	1	19	1	2	2	45	.20	.031	6	19	.37	115	.03	2	1.19	.01	.03	1	1
89+50E 98+00N	1	17	12	93	.1	14	9	463	3.19	8	5	ND	1	27	1	2	2	56	.32	.044	6	25	.53	133	.02	2	1.45	.01	.03	1	1
90+00E 102+00N	1	25	18	107	.3	19	10	293	3.92	16	5	ND	1	12	1	2	5	66	.11	.085	6	26	.44	123	.02	2	2.74	.01	.04	1	1
90+00E 101+75N	1	14	12	84	.1	14	7	248	3.46	14	5	ND	1	14	1	2	3	62	.13	.046	4	19	.39	112	.02	2	1.63	.01	.03	1	11
90+00E 101+50N	1	15	12	88	.1	15	7	246	3.55	17	5	ND	1	14	1	2	2	63	.13	.050	5	21	.40	114	.02	2	1.72	.01	.03	1	1
90+00E 101+25N	1	26	35	113	.4	17	13	739	4.15	29	5	ND	1	27	1	3	2	63	.34	.037	10	23	.47	198	.01	3	1.96	.01	.04	1	4
90+00E 101+00N	1	24	37	148	.6	16	9	686	4.90	31	5	ND	2	11	1	2	2	64	.08	.224	6	29	.40	92	.01	2	2.74	.01	.04	1	1
90+00E 100+75N	1	28	40	174	1.0	19	11	529	4.68	27	5	ND	2	10	1	2	2	62	.07	.195	5	29	.42	85	.02	4	2.85	.01	.04	1	9
90+00E 100+50N	1	11	7	34	.1	7	3	124	1.37	3	5	ND	1	13	1	2	2	27	.09	.047	7	11	.17	79	.02	2	1.16	.01	.02	1	2
90+00E 100+25N	1	12	10	68	.2	14	6	307	2.47	7	5	ND	1	12	1	2	2	45	.12	.049	5	20	.46	68	.03	2	1.65	.01	.04	1	1
90+00E 100+00N	1	28	22	97	.9	18	11	525	4.42	22	5	ND	1	13	1	2	2	68	.09	.058	6	25	.40	80	.03	3	1.65	.01	.03	1	3
90+00E 99+75N	1	17	21	86	1.8	12	6	211	2.05	8	5	ND	1	14	1	2	2	43	.10	.052	6	21	.30	125	.01	2	1.81	.01	.04	1	6
90+00E 99+50N	4	32	58	126	1.6	12	8	311	2.98	11	5	ND	2	12	1	2	2	46	.10	.053	6	20	.37	99	.01	2	1.81	.01	.05	1	7
90+00E 99+25N	8	49	82	162	.7	13	10	293	4.39	28	5	ND	3	14	1	4	2	51	.05	.148	8	24	.41	116	.01	2	2.11	.01	.06	1	22
90+00E 99+00N	5	47	92	136	.9	15	11	585	4.56	30	5	ND	2	19	1	5	2	61	.12	.080	8	24	.42	160	.02	2	1.59	.01	.06	1	23
90+00E 98+75N	1	13	16	55	.9	6	6	413	1.80	6	5	ND	1	12	1	2	2	39	.11	.043	6	17	.25	78	.02	2	1.40	.01	.04	1	2
90+00E 98+50N	1	12	22	89	.4	16	10	758	2.74	9	5	ND	1	16	1	2	2	50	.17	.041	6	21	.50	104	.02	2	1.63	.01	.04	1	1
STD C/AU-S	21	57	41	132	6.8	70	30	1001	3.96	39	16	7	33	48	16	16	18	62	.48	.104	36	57	.88	179	.08	35	1.73	.06	.13	13	52



## LORNE X MINING FILE # 86-3076

PAGE 6

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Hg	Ba	Ti	B	Al	Na	F	M	Au#
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	%	PPM	%	%	%	PPM	PPB
90+00E 98+25N F	1	6	2	15	.1	2	1	298	.68	2	5	ND	1	170	1	2	2	1	4.09	.064	2	2	.16	290	.01	9	.06	.01	.03	1	4
90+00E 98+00N P	1	6	7	14	.2	3	1	264	.79	2	5	ND	1	180	1	2	2	2	4.37	.068	2	1	.17	326	.01	12	.07	.01	.03	1	4
90+00E 97+25N P	1	82	25	155	2.7	19	6	282	1.07	2	5	ND	1	143	4	2	2	47	3.00	.260	31	22	.27	446	.01	3	2.16	.01	.03	1	8
90+00E 97+50N P	1	20	10	34	1.4	6	2	265	1.30	4	5	ND	1	193	1	2	2	14	4.39	.154	14	8	.15	427	.01	6	.75	.01	.01	1	6
90+00E 97+25N F	1	34	22	125	1.5	17	7	1558	2.54	13	5	ND	1	111	1	2	2	24	2.26	.125	18	15	.29	397	.01	4	1.71	.01	.04	1	4
90+00E 97+00N	1	42	36	183	1.5	26	13	899	3.92	17	5	ND	1	30	1	3	2	60	.48	.107	6	30	.82	214	.02	2	2.17	.02	.06	1	9
90+00E 96+75N	2	71	48	242	3.0	29	14	934	4.65	28	5	ND	1	46	1	2	3	64	.66	.179	16	34	.63	369	.01	5	3.08	.01	.07	1	15
90+00E 96+50N	2	118	45	306	3.0	35	15	777	4.77	25	5	ND	1	25	1	3	2	62	.29	.196	12	38	.62	240	.01	3	3.57	.01	.09	1	18
90+00E 96+25N	3	22	34	103	.4	13	9	537	3.08	21	5	ND	1	16	1	3	2	55	.20	.047	2	22	.43	102	.01	2	1.64	.01	.06	1	13
90+00E 96+00N	2	34	24	101	.4	15	10	609	3.26	13	5	ND	1	29	1	2	3	57	.42	.058	2	23	.50	145	.03	4	1.69	.01	.05	1	5
89+50E 97+75N	1	50	27	165	1.1	28	14	1036	3.93	14	5	ND	1	47	1	2	2	59	.71	.071	2	33	.60	396	.02	3	2.00	.02	.08	1	1
89+50E 97+50N P	2	12	9	36	.2	5	20	8156	2.99	14	6	ND	1	149	1	2	2	7	3.33	.105	2	3	.16	599	.01	10	.09	.01	.06	1	12
89+50E 97+25N P	1	37	37	113	1.0	16	7	1091	2.20	11	5	ND	1	116	1	2	2	40	2.54	.127	2	22	.35	438	.01	5	1.26	.02	.05	1	5
89+50E 97+00N	1	45	31	195	1.2	26	10	322	3.08	10	5	ND	1	35	1	2	2	50	.42	.142	6	39	.65	301	.01	3	3.59	.02	.10	1	7
89+50E 96+75N	1	59	35	234	3.5	26	11	698	2.12	4	5	ND	1	56	2	3	2	43	.91	.190	23	30	.54	412	.01	2	3.08	.01	.07	1	6
89+50E 96+50N P	1	48	37	241	2.9	26	10	832	3.41	14	5	ND	1	67	1	4	3	47	1.17	.173	16	26	.54	400	.01	2	2.88	.02	.11	1	5
89+50E 96+25N	3	32	39	176	1.1	20	10	660	4.85	26	5	ND	1	29	1	3	3	63	.35	.063	2	25	.51	258	.01	5	2.14	.01	.05	1	11
89+50E 96+00N	3	40	33	144	.6	16	14	1017	4.52	22	5	ND	1	21	1	2	2	75	.23	.068	4	31	.63	174	.01	2	2.30	.01	.07	1	10
STD C/AU-S	21	57	39	130	6.8	66	29	999	3.96	39	20	7	33	47	17	15	21	61	.48	.103	33	57	.88	175	.08	35	1.73	.06	.13	13	49

APPENDIX C

CHIP SAMPLE RESULTS

# CDN RESOURCE LABORATORIES LTD.

#8, 7550 RIVER ROAD, DELTA, B.C. V4G 1C8 / TEL. (604) 946-4448

## GEOCHEMICAL REPORT

To: Lornex Mining Corporation  
P.O. Box 10335  
609 Granville  
Vancouver, B.C., V7Y 1G5

Number: 86313  
Date: September 25, 1986  
Proj.: 5417

Attn: D. Budinski

	Au ppb	Ag ppm	Mo ppm	Cu ppm	
14252	85	1.0	48	28	
14253	55	0.3	32	21	TR L-1
14254	65	0.3	70	26	
14256	60	0.5	20	60	
14257	80	0.9	43	49	
14259	155	1.0	51	130	
14260	85	0.8	101	90	
14261	85	1.0	80	50	TR L-2
14262	85	0.7	112	85	
14263	315	1.0	110	85	
14264	60	1.1	26	217	
14265	95	0.8	15	159	
14266	65	0.7	18	212	
14267	85	0.7	25	228	
14268	65	0.4	10	91	
14269	85	0.7	13	158	
14270	60	0.5	14	165	TR G
14271	95	0.3	21	134	
14272	85	0.5	68	144	
14273	65	0.1	54	79	
14274	65	0.3	25	139	
14275	35	1.9	58	290	
14276	85	1.4	260	106	
14277	125	0.6	41	86	
14278	115	0.7	24	52	
14279	155	0.3	41	65	
14280	40	0.3	7	8	
14281	40	0.3	6	4	
14282	25	0.5	10	6	
14283	75	0.4	14	10	
14284	60	0.2	16	11	
14285	60	0.4	16	8	TR H-1
14286	80	0.4	11	10	
14287	60	0.3	18	8	
14288	55	0.3	7	10	
14289	75	0.3	26	7	
14290	60	0.3	54	7	
14291	75	0.2	70	12	
14292	35	0.5	46	7	
14293	35	0.3	33	5	

*Duncan Sanderson*

# CDN RESOURCE LABORATORIES LTD.

#8, 7550 RIVER ROAD, DELTA, B.C. V4G 1C8 / TEL. (604) 946-4448

## GEOCHEMICAL REPORT

To: Lornex Mining Corporation  
P.O. Box 10335  
609 Granville  
Vancouver, B.C., V7Y 1G5

Number: 86313  
Date: September 25, 1986  
Proj.: 5417

Attn: D. Budinski

	Au ppb	Ag ppm	Mo ppm	Cu ppm	
14294	60	0.3	26	3	
14295	45	0.2	36	24	
14296	10	0.3	56	17	
14297	55	0.1	30	4	
14298	55	0.1	38	3	TR H-2
14299	70	0.2	32	8	
14300	50	0.2	22	8	
14301	55	0.1	36	2	
14302	60	1.0	22	38	
14303	55	1.6	28	29	
14304	35	0.7	60	24	
14305	25	0.4	80	31	TR E
14306	25	0.6	110	30	
14307	60	0.6	106	83	
14308	45	0.4	74	55	
14309	45	0.5	300	68	
14310	55	0.2	14	10	
14311	45	0.2	10	24	TR B-2
14312	80	0.6	26	53	
14313	25	0.6	8	73	
14315	30	<0.1	8	29	TR B-1
14316	85	0.6	48	320	TR D

*Duncan Sanderson*

# CDN RESOURCE LABORATORIES LTD.

#8, 7550 RIVER ROAD, DELTA, B.C. V4G 1C8 / TEL. (604) 946-4448

## GEOCHEMICAL REPORT

To: Lornex Mining Corporation  
P.O. Box 10335  
609 Granville  
Vancouver, B.C., V7Y 1G5

Number: 86330  
Date: September 25, 1986  
Proj.: 5417

Attn: D. Budinski

	Au ppb	Ag ppm	
14255	120	>100	
14317	75	67	
14318	50	12.1	
14319	60	8.6	
14320	50	4.6	
14321	50	3.1	86-1A
14322	35	4.2	
14323	60	2.8	
14324	45	3.5	
14325	50	1.4	
14326	35	1.3	
14327	75	2.0	86-1B
14328	25	2.1	86-1C
14329	80	9.3	86-1D
14330	61	1.9	86-1E
14331	320	3.1	
14332	25	1.0	Tr C
14333	65	1.0	86-2B
14334	30	1.4	86-2C
14335	35	2.7	
14336	50	2.3	86-2D
14337	40	3.1	
14338	130	16.1	86-2E
14339	40	0.8	
14340	50	9.2	
14341	35	9.0	86-4A
14342	775	>100	
14343	30	4.6	86-5C
14344	40	2.2	
14345	40	4.3	
14346	35	2.0	
14347	40	2.7	
14348	35	2.6	
14349	115	1.3	
14350	35	1.3	86-5D
14351	25	1.0	
14352	30	1.0	
14353	30	3.9	
14354	30	1.5	

*Duncan Sanderson*

# CDN RESOURCE LABORATORIES LTD.

#8, 7550 RIVER ROAD, DELTA, B.C. V4G 1C8 / TEL. (604) 946-4448

## GEOCHEMICAL REPORT

To: Lornex Mining Corporation  
P.O. Box 10335  
609 Granville  
Vancouver, B.C., V7Y 1G5

Number: 86330  
Date: September 25, 1986  
Proj.: 5417

Attn: D. Budinski

	Au ppb	Ag ppm	
14355	50	5.5	
14356	20	1.5	
14357	20	0.8	
14358	20	1.0	86-2H

*Duncan Sanderson*

ANALYTICAL PROCEDURES EMPLOYED

A. Geochem Au

A 15g portion of the pulverized sample is fire assayed. The resultant bead is taken up in aqua regia, bulked to 5 ml with distilled water and presented to the AA for Au determination.

B. Geochem Ag

A 0.5g portion of the pulverized sample is digested in aqua regia at 90°C for 90 minutes, bulked to 10 ml with distilled water and presented to the AA for Ag determination.

## GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO<sub>3</sub>-H<sub>2</sub>O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MM.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 1 PPM.  
 - SAMPLE TYPE: PULP HG ANALYSIS BY FLAMELESS AA. F1 - NAOH FUSION - SPECIFIC ION ELECTRODE ANALYSIS TL ANALYSIS BY MS-ICP.

DATE RECEIVED: NOV 19 1986 DATE REPORT MAILED: *Dec 3/86* ASSAYER: *D. J. Jeps* DEAN TOYE, CERTIFIED B.C. ASSAYER.

LORNE MINING PROJECT - 5417 FILE # 86-3038R

PAGE 1

SAMPLE#	Mo PPH	Cu PPH	Pb PPH	Zn PPH	Ag PPH	Ni PPH	Co PPH	Mn PPH	Fe %	As PPH	U PPH	Au PPH	Th PPH	Sr PPH	Cd PPH	Sb PPH	Bi PPH	V PPH	Ca %	P %	La PPH	Cr PPH	Mg %	Ba PPH	Ti %	F PPH	Al %	Na %	K %	W PPH	Hg PPB	P PPH	Tl PPH
14252	45	27	23	22	.8	8	5	24	3.74	5	5	ND	9	37	1	13	2	8	.04	.095	15	95	.18	49	.01	2	.50	.02	.27	1	20	460	.2
14253	30	16	14	42	.2	10	6	20	3.15	2	5	ND	8	36	1	4	2	7	.03	.075	9	87	.12	51	.01	2	.45	.03	.24	1	10	510	.2
14254	59	21	47	238	.2	17	12	30	4.76	2	5	ND	7	6	2	7	2	8	.02	.006	5	116	.30	26	.01	2	.63	.03	.26	1	20	540	.2
14255	18	179	32911	58	143.0	11	9	21	3.92	31	5	ND	8	9	3	244	3	6	.02	.008	7	115	.04	30	.01	2	.42	.02	.27	1	50	270	.5
14256	18	57	2	78	.2	10	7	21	3.59	2	5	ND	6	6	1	2	3	8	.01	.007	6	110	.09	41	.01	2	.61	.03	.30	1	30	450	.2
14257	40	50	16	49	.6	7	4	89	4.07	3	5	ND	7	11	1	8	2	18	.04	.036	9	110	.29	68	.01	2	.77	.04	.29	2	40	430	.2
14259	43	127	37	57	.7	9	5	165	3.42	2	5	ND	7	25	1	2	2	30	.07	.098	8	114	.61	72	.01	2	1.22	.07	.38	1	20	740	.2
14260	93	88	26	44	.8	8	5	101	2.95	2	5	ND	8	15	1	9	2	19	.06	.084	15	110	.42	68	.01	3	.93	.05	.35	1	10	1200	.3
14261	70	49	25	46	.7	6	4	140	3.36	2	5	ND	9	20	1	4	2	23	.06	.092	17	73	.48	74	.01	2	.93	.06	.32	1	20	980	.2
14262	105	84	25	37	.8	8	5	98	3.43	2	5	ND	8	13	1	10	2	20	.05	.090	17	72	.43	79	.01	5	.86	.05	.34	1	30	1050	.2
14263	97	85	38	63	.8	12	9	84	3.40	2	5	ND	9	13	1	15	2	18	.05	.062	17	76	.37	36	.01	3	.86	.05	.36	1	20	780	.3
14264	24	106	29	141	.3	15	10	285	3.63	3	5	ND	8	18	2	2	2	31	.33	.093	16	60	1.01	35	.01	3	1.38	.06	.28	1	10	1100	.1
14265	16	154	31	147	.3	16	11	369	3.96	4	5	ND	9	23	3	2	2	33	.32	.100	18	63	1.03	32	.01	2	1.45	.06	.29	1	20	1200	.2
14266	19	207	31	133	.3	17	9	253	3.98	2	5	ND	9	17	3	2	2	30	.24	.092	25	62	.89	25	.01	2	1.44	.05	.31	1	10	1250	.2
14267	14	215	24	113	.2	17	10	240	3.66	2	5	ND	7	10	2	2	2	31	.21	.089	13	70	.91	29	.01	2	1.42	.07	.28	1	30	1350	.2
14268	21	90	37	163	.3	18	11	216	3.62	2	5	ND	8	17	2	2	2	33	.36	.105	13	72	.89	31	.01	2	1.42	.08	.30	1	10	1400	.2
14269	10	161	28	150	.2	22	9	274	3.37	2	5	ND	8	15	3	2	2	40	.37	.126	23	63	1.08	33	.01	2	1.56	.07	.28	1	30	1450	.2
14270	15	163	35	139	.4	16	8	194	3.41	4	5	ND	8	14	2	3	2	29	.29	.097	21	63	.84	27	.01	2	1.27	.07	.26	1	20	1150	.1
14271	23	133	33	180	.3	17	11	121	3.46	3	5	ND	9	17	3	2	2	21	.29	.098	18	57	.57	23	.01	3	1.25	.06	.28	1	20	1200	.2
14272	62	134	28	105	.3	14	11	156	3.18	2	5	ND	10	11	3	2	2	26	.23	.088	19	54	.77	35	.01	4	1.27	.05	.27	1	10	1150	.2
14273	40	113	22	60	.3	12	9	133	2.84	2	5	ND	11	9	1	2	2	30	.11	.083	21	74	.64	52	.01	4	1.14	.05	.25	1	10	960	.1
14274	21	135	18	68	.3	14	11	118	3.21	2	5	ND	9	11	2	2	2	21	.17	.078	19	76	.43	33	.01	2	1.04	.05	.29	1	20	1000	.1
14275	51	286	47	55	1.4	14	11	90	3.11	2	5	ND	10	17	1	2	2	13	.21	.091	16	75	.30	39	.01	2	.82	.03	.29	1	20	1300	.2
14276	259	102	29	34	.9	10	7	89	2.76	3	5	ND	10	29	1	4	2	17	.05	.083	19	79	.32	48	.01	3	.77	.04	.26	1	30	1050	.2
14277	37	82	30	24	.4	9	5	60	3.05	7	5	ND	10	50	1	9	2	15	.06	.088	21	75	.25	66	.01	2	.68	.05	.26	1	30	770	.3
14278	24	52	32	17	.4	9	6	34	3.24	4	5	ND	10	18	1	4	2	10	.05	.110	17	105	.11	70	.01	2	.54	.05	.30	1	10	380	.3
14279	34	64	19	8	.2	9	6	26	2.65	3	5	ND	11	18	1	2	2	11	.02	.089	19	122	.09	85	.01	5	.64	.04	.41	1	10	200	.4
14280	9	5	25	10	.2	2	1	13	1.72	4	5	ND	8	12	1	2	2	4	.01	.006	19	78	.04	265	.01	5	.45	.02	.29	1	20	1100	.3
14281	10	4	20	8	.2	2	1	19	.96	6	5	ND	4	16	1	2	3	5	.02	.005	9	119	.05	436	.01	5	.56	.01	.32	1	10	1150	.3
14282	13	6	18	29	.3	3	1	18	1.06	2	5	ND	6	16	1	3	2	5	.02	.006	16	129	.05	651	.01	6	.52	.02	.31	1	30	1050	.4
14283	14	11	12	13	.2	7	4	22	2.69	5	5	ND	7	11	1	4	2	7	.03	.006	12	130	.04	82	.01	2	.45	.02	.27	1	20	930	.2
14284	17	13	11	7	.1	5	2	13	2.42	2	5	ND	6	8	1	2	2	4	.02	.005	14	86	.03	121	.01	3	.35	.02	.26	1	20	1150	.2
14285	17	7	12	26	.1	3	2	13	1.23	4	5	ND	5	14	1	2	2	4	.02	.005	11	92	.03	195	.01	5	.39	.03	.22	1	10	1000	.3
14286	13	9	11	63	.3	7	4	13	2.41	17	5	ND	6	7	1	5	2	6	.02	.006	11	87	.02	90	.01	3	.33	.03	.20	1	60	1050	.4
14287	19	8	19	36	.2	4	2	13	1.58	3	5	ND	5	11	1	2	2	5	.02	.005	8	97	.03	175	.01	4	.3E	.02	.25	2	30	790	.2
14288	10	6	15	48	.1	4	2	11	1.66	3	5	ND	6	9	1	2	2	5	.01	.006	10	81	.03	240	.01	4	.41	.03	.24	2	30	800	.3
STD C	20	58	39	133	6.9	69	28	993	3.96	38	17	7	35	48	17	15	18	67	.48	.100	37	56	.88	180	.08	38	1.73	.09	.14	13	1700	-	-



## LORNEK MINING PROJECT - 5417 FIELD # 26-10388

PAGE 2

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Pt PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mo %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	M PPM	Hg PPB	F PPM	Tl PPM
14289	29	6	16	37	.2	4	2	21	1.60	4	5	ND	6	12	1	12	2	6	.02	.006	17	167	.05	258	.01	3	.56	.03	.26	1	30	1100	.2
14290	58	5	16	12	.2	6	3	14	2.09	3	5	ND	6	14	1	2	2	5	.02	.010	14	100	.03	101	.01	7	.40	.02	.23	1	40	1200	.3
14291	70	10	20	18	.1	5	3	15	2.11	5	5	ND	6	20	1	2	2	6	.02	.012	13	101	.05	76	.01	2	.43	.02	.24	1	30	1250	.2
14292	47	4	22	13	.1	2	1	13	1.20	2	5	ND	5	13	1	9	2	4	.02	.013	10	94	.05	296	.01	4	.52	.02	.29	1	30	1300	.3
14293	70	3	18	9	.1	1	1	15	.57	2	5	ND	5	11	1	2	2	4	.02	.007	13	102	.06	322	.01	2	.58	.01	.32	1	20	1350	.2
14294	24	5	35	9	.2	9	6	14	2.38	6	5	ND	4	11	1	6	2	5	.02	.022	6	87	.06	54	.01	2	.52	.02	.29	1	20	920	.3
14295	37	28	12	24	.1	12	8	16	2.60	4	5	ND	3	20	1	2	2	5	.03	.038	4	103	.05	37	.01	2	.56	.02	.27	1	20	840	.2
14296	52	21	52	171	.3	15	9	21	4.04	11	5	ND	5	16	1	2	3	8	.02	.014	4	127	.06	24	.01	2	.52	.02	.28	1	40	620	.3
14297	31	7	14	14	.1	2	1	18	1.81	5	5	ND	5	14	1	2	2	5	.02	.010	10	117	.05	231	.01	2	.48	.02	.27	1	10	960	.2
14298	38	6	23	27	.2	4	2	24	1.47	6	5	ND	5	13	1	3	2	5	.02	.009	11	96	.06	156	.01	2	.59	.02	.30	1	30	1000	.3
14299	30	12	17	72	.1	11	6	21	3.18	10	5	ND	6	11	1	4	2	5	.02	.007	10	154	.05	35	.01	2	.49	.02	.29	1	20	870	.3
14300	23	10	19	24	.2	12	8	17	3.02	3	5	ND	6	16	1	6	2	4	.02	.013	8	90	.05	35	.01	2	.56	.02	.27	1	30	720	.2
14301	39	5	15	16	.1	3	1	17	1.13	4	5	ND	5	16	1	2	2	4	.01	.008	11	110	.05	266	.01	2	.51	.02	.31	1	30	850	.3
14302	20	43	27	54	.9	5	3	124	3.12	7	5	ND	8	21	1	2	2	32	.10	.106	19	87	.64	154	.01	2	1.06	.05	.30	1	70	1050	.3
14303	25	30	43	35	1.5	7	4	94	3.10	11	5	ND	8	16	1	2	2	26	.08	.107	22	129	.59	87	.01	2	1.01	.06	.32	1	40	940	.2
14304	67	25	22	28	.7	6	3	65	2.31	5	5	ND	8	15	1	2	2	20	.07	.086	18	106	.43	124	.01	2	.82	.05	.29	1	30	1150	.2
14305	73	32	23	28	.2	6	3	73	2.30	3	5	ND	8	18	1	9	2	22	.09	.086	18	124	.43	217	.01	2	.87	.06	.31	1	30	980	.3
14306	118	33	24	20	.4	7	5	49	2.38	2	5	ND	8	16	1	2	2	14	.07	.067	18	142	.25	84	.01	2	.68	.05	.27	1	20	1100	.2
14307	113	86	15	29	.2	7	4	68	2.49	2	5	ND	9	18	1	2	2	19	.08	.080	18	96	.37	94	.01	2	.78	.05	.28	1	20	980	.2
14308	67	55	20	25	.4	7	3	67	2.65	3	5	ND	8	18	1	2	2	20	.05	.059	17	112	.33	128	.01	2	.84	.06	.32	1	30	920	.2
14309	289	69	54	58	.5	10	7	50	4.03	2	5	ND	7	13	1	2	2	13	.07	.068	14	96	.26	32	.01	2	.71	.05	.29	1	10	1000	.2
14310	14	9	36	17	.5	3	2	123	1.45	10	5	ND	8	15	1	2	2	11	.02	.041	20	83	.11	219	.01	2	.60	.04	.26	1	10	420	.2
14311	8	23	27	54	.4	7	4	519	4.03	8	5	ND	7	24	1	2	2	51	.17	.115	15	58	.66	195	.01	2	1.21	.08	.25	1	20	460	.2
14312	25	54	36	36	.7	6	3	205	3.62	26	5	ND	7	19	1	2	6	28	.07	.095	15	70	.36	120	.01	2	.95	.05	.29	1	5	470	.2
14313	8	72	19	94	.8	5	5	294	4.03	13	5	ND	8	9	1	2	2	51	.04	.074	14	60	.29	63	.01	2	.76	.04	.22	1	70	370	.1
14315	10	27	25	19	.5	3	2	91	2.48	12	5	ND	9	16	1	5	2	22	.03	.084	20	67	.24	136	.01	2	.78	.04	.27	1	20	400	.1
14316	41	312	22	110	.7	12	11	1418	4.62	17	5	ND	7	13	1	5	2	41	.24	.091	14	107	.69	52	.01	2	1.34	.07	.18	1	20	410	.1
14317	7	113	14611	330	35.7	14	10	135	3.11	48	5	ND	8	9	2	84	2	11	.13	.046	14	68	.31	28	.01	3	.69	.04	.21	1	10	370	.5
14318	10	70	2360	480	11.5	17	10	74	3.62	51	5	ND	6	9	2	18	4	7	.08	.030	14	85	.19	22	.01	2	.64	.03	.23	1	20	380	.1
14319	10	63	1484	295	7.7	17	10	67	3.54	52	5	ND	7	9	2	8	4	6	.09	.033	17	63	.26	28	.01	2	.70	.02	.23	1	10	500	.1
14320	10	54	708	198	4.7	18	11	93	3.82	84	5	ND	6	12	1	2	5	8	.12	.043	15	93	.32	27	.01	7	.70	.03	.21	1	10	470	.1
14321	7	47	420	63	3.0	15	9	52	3.41	65	5	ND	5	9	1	2	3	7	.07	.041	11	91	.28	31	.01	3	.68	.02	.22	1	5	350	.1
14322	11	72	749	268	4.5	15	9	68	3.70	84	5	ND	7	11	1	2	4	9	.08	.056	12	103	.45	36	.01	2	.93	.03	.26	1	30	400	.1
14323	14	62	413	149	2.9	14	10	41	3.29	57	5	ND	5	9	1	5	6	6	.08	.030	12	96	.15	30	.01	2	.55	.02	.22	1	10	390	.1
14324	11	43	337	64	3.0	13	8	26	3.42	34	5	ND	5	7	1	6	7	5	.05	.008	14	83	.05	29	.01	2	.43	.02	.22	1	20	600	.4
14325	10	14	149	55	1.1	10	6	29	2.76	38	5	ND	5	21	1	2	5	5	.03	.015	14	124	.04	34	.01	4	.45	.02	.22	1	30	410	.4
STD C	21	59	37	126	6.6	64	26	944	3.94	38	18	6	33	45	17	15	19	64	.48	.095	37	54	.88	169	.08	37	1.73	.09	.12	13	1300	-	-

## LORNE MINING PROJECT 5417 FILE # 86-7008

PAGE 2

SAMPLE#	Mo	Cd	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Ac	Th	Sr	Cd	Sc	Rb	V	Ca	P	La	Er	Hf	Ba	Ti	B	Al	Na	K	Li	Hc	F	Cl	
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
14326	14	16	150	23	1.1	10	9	29	3.60	35	5	ND	7	11	1	16	5	5	.04	.028	15	121	.04	29	.01	3	.43	.02	.25	1	10	300	.5	
14327	9	34	496	161	1.8	15	10	200	3.43	122	5	ND	8	10	1	11	2	15	.10	.070	15	98	.55	25	.01	2	.87	.05	.25	1	20	310	.1	
14328	10	37	524	110	2.0	17	10	197	3.01	52	5	ND	8	8	6	10	2	16	.10	.074	22	123	.47	28	.01	2	.74	.05	.21	1	10	280	.2	
14329	14	43	265	148	8.9	18	11	85	5.21	65	5	ND	7	6	2	17	9	7	.14	.045	13	145	.06	23	.01	2	.37	.03	.19	1	5	270	.4	
14330	56	29	92	29	1.7	20	12	81	5.57	60	5	ND	4	17	1	14	7	7	.06	.043	5	188	.03	20	.01	19	.39	.03	.18	1	5	150	.3	
14331	13	27	294	145	2.7	17	10	64	7.93	67	5	ND	5	15	1	14	7	7	.08	.043	5	136	.03	12	.01	19	.36	.03	.17	1	10	180	.8	
14332	12	11	178	18	.8	3	2	28	1.63	25	5	ND	5	21	1	3	2	8	.03	.017	14	112	.09	274	.01	3	.58	.04	.26	1	30	490	.8	
14333	22	27	165	36	1.0	21	13	49	5.33	11	5	ND	4	7	1	23	2	7	.04	.017	2	277	.04	20	.01	7	.46	.03	.25	1	10	520	.4	
14334	10	114	147	171	1.3	22	11	87	3.90	40	5	ND	4	12	2	42	3	8	.24	.081	6	89	.14	15	.01	2	.71	.03	.26	1	20	420	.3	
14335	20	119	322	372	2.7	19	10	140	3.27	14	5	ND	4	14	3	23	3	5	.22	.077	12	147	.08	24	.01	2	.49	.02	.24	1	60	410	.4	
14336	25	89	330	854	2.4	21	12	91	3.68	14	5	ND	5	12	6	18	3	8	.19	.088	11	175	.08	27	.01	3	.68	.02	.29	1	80	650	.2	
14337	12	110	143	159	3.1	20	11	117	3.72	18	5	ND	6	10	3	27	2	7	.14	.052	12	144	.08	24	.01	2	.56	.02	.25	1	50	390	.1	
14338	29	67	446	132	16.4	17	10	36	11.14	60	5	ND	5	6	1	48	8	6	.04	.021	2	221	.03	7	.01	9	.41	.04	.22	1	60	160	.1	
14339	11	26	107	78	.6	15	10	48	3.08	13	5	ND	6	14	3	12	2	4	.03	.010	12	134	.04	29	.01	14	.38	.02	.21	1	40	170	.1	
14340	12	82	591	1230	9.6	16	10	2435	3.41	11	5	ND	5	12	6	49	2	12	1.12	.101	11	110	.46	33	.01	2	.68	.04	.31	1	100	550	.4	
14341	9	46	352	714	9.0	16	10	3941	3.20	12	5	ND	4	14	4	19	2	12	1.42	.102	10	80	.55	33	.01	3	.69	.05	.24	1	130	470	.2	
14342	28	3036	24230	19170	616.9	15	10	154	3.39	103	5	ND	9	11	145	1834	20	10	.20	.077	10	119	.10	27	.01	2	.74	.03	.32	1	1400	400	.4	
14343	8	43	189	76	4.2	15	10	31	3.69	19	5	ND	2	20	1	23	2	4	.06	.011	2	99	.02	15	.01	2	.37	.02	.20	1	40	350	.2	
14344	21	30	144	76	1.9	13	7	33	2.86	22	5	ND	2	29	1	12	3	4	.05	.014	2	221	.02	26	.01	3	.37	.02	.19	1	50	140	.2	
14345	7	240	141	139	3.9	19	11	138	3.70	69	5	ND	4	19	2	51	8	10	.16	.090	8	99	.14	23	.01	2	.83	.05	.27	1	60	420	.1	
14346	10	180	87	201	2.1	21	12	43	3.84	31	5	ND	3	6	1	24	8	10	.09	.058	8	118	.10	24	.01	2	.71	.06	.22	1	50	260	.1	
14347	9	98	99	212	2.7	20	12	485	3.89	47	5	ND	3	12	3	39	6	12	.48	.101	6	111	.28	20	.01	2	.79	.06	.26	1	30	410	.3	
14348	11	281	152	206	3.0	17	9	197	3.58	80	5	ND	5	17	2	111	7	8	.17	.084	11	110	.14	33	.01	2	.73	.05	.25	1	60	300	.2	
14349	9	105	94	142	1.1	15	8	34	3.70	62	5	ND	5	13	1	29	8	7	.04	.059	15	137	.10	32	.01	2	.73	.04	.30	1	40	260	.2	
14350	11	157	87	126	1.4	20	11	65	3.98	74	5	ND	6	15	1	46	9	7	.05	.066	12	128	.16	22	.01	2	.93	.03	.33	1	30	300	.4	
14351	6	197	91	103	.8	19	11	42	3.70	77	5	ND	4	8	1	50	7	11	.04	.056	9	96	.12	22	.01	2	.71	.05	.23	1	60	230	.2	
14352	10	287	89	199	.7	21	10	65	3.62	89	5	ND	4	7	3	63	4	17	.12	.087	9	119	.19	23	.01	2	.99	.07	.25	1	70	290	.2	
14353	6	181	154	273	4.2	17	9	82	3.77	58	5	ND	5	7	2	47	5	10	.09	.081	9	79	.18	23	.01	3	.90	.03	.27	1	60	270	.3	
14354	12	113	87	103	1.3	17	8	64	3.20	53	5	ND	4	9	1	24	3	13	.15	.105	9	97	.12	28	.01	3	.84	.05	.24	1	40	300	.2	
14355	8	434	239	962	6.0	21	12	103	5.04	100	5	ND	4	10	6	71	7	12	.19	.076	4	98	.25	12	.01	2	1.05	.04	.22	1	50	450	.2	
14356	8	102	97	160	.7	25	16	133	4.56	101	5	ND	4	14	3	20	3	9	.31	.116	7	88	.16	12	.01	2	.91	.05	.25	1	30	500	.3	
14357	12	80	143	46	.3	15	11	69	3.92	65	5	ND	5	17	1	41	7	9	.15	.080	11	170	.17	22	.01	2	.74	.08	.28	1	80	220	.3	
14358	17	58	159	42	.5	14	10	97	3.72	59	5	ND	6	25	1	33	9	14	.18	.112	12	193	.21	23	.01	2	.88	.10	.34	1	70	140	.3	
STD C	22	58	39	134	7.0	68	28	1001	3.95	37	19	7	34	48	18	16	20	67	.48	.102	37	58	.88	178	.08	38	1.73	.09	.14	13	1400	-	-	

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

DATE RECEIVED SEPT 25 1986  
DATE REPORTS MAILED Oct. 6/86

### ASSAY CERTIFICATE

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

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

LORNEX MINING PROJECT 5417 FILE# 86-2877A PAGE# 1

SAMPLE	Cu %	Pb %	Zn %	Ag oz/t	Au oz/t
2658	.01	.02	.01	.20	.016
2659	1.51	8.74	7.31	70.11	.042

APPENDIX D

TRENCH DATA AND GEOLOGICAL DESCRIPTIONS

APPENDIX D - TRENCH DESCRIPTIONS

<u>Trench</u>	<u>Length (m)</u>	<u>Depth (m)</u>	<u>Depth of OVB</u>	<u>Bedrock</u>
B-1	6	2.5	1	Y
B-2	10.2	2-3	1	Y
D	7.5	2	1	Y
E	17	2	1-2	Y
G	52	2	2	Y
H-1	40	1-4	2	Y
H-2	15	1-3	2	Y
L-1	39.5	1-2	2	Y
L-2	28	2-3	2.5-3	?
86-1	65(105) <sup>1</sup>	2-4.5	2->4.5	Y
86-2	65(146)	4	3.5->4	Y
86-3	37(100)	4	>4	N
86-4	33(76)	3.5	3.5->4	Y
86-5	<u>38(71)</u>	2-4	1.3->4	Y
Total	<u>453.2</u>			

1: Unbracketed number is cumulative length of individual pits and number in brackets is distance covered from first to last pit.

## APPENDIX D - TRENCH GEOLOGY

### Trench B-1

Strongly weathered, rotten feldspar biotite porphyry. 1 to 2mm sericite pseudomorphs after biotite books. Feldspar laths altered to clay. Possible 2-4mm hornblende laths, now altered to sericite. 0.5% disseminated pyrite.

### Trench B-2

Same as B-1 except 3% disseminated pyrite. A few pieces of dark grey feldspar porphyry suggest this may be altered andesitic feldspar porphyry.

### Trench D

Pale green-grey aphanitic volcanic rock containing traces of chloritic biotite. Minor glassy quartz stringers containing traces of MoS<sub>2</sub>. Abundant veinlets of chlorite.

### Trench E

Strongly quartz-sericite altered feldspar biotite porphyry. Biotite is altered to sericite pseudomorphs. 5% pyrite as veinlets and disseminations. Traces of MoS<sub>2</sub> with pyrite veinlets. Similar to B-1.

### Trench G

Strongly quartz-sericite altered feldspar-biotite-hornblende porphyry similar in character to B-1. Possible biotite books are now altered to sericite. 5% pyrite with disseminations more abundant than veinlets. At extreme south end (samples 14276 and 14279) 1-10 mm wide quartz-pyrite + MoS<sub>2</sub> veins are more common in a strongly quartz-sericite altered rock with no distinct textures. 2-3% 0.5-1mm quartz grains. Somewhat similar to L-1.

A 5m section toward south end (samples 14273-14275) appears to be a dyke(?) of crowded feldspar biotite porphyry containing 1-5mm euhedral feldspar crystals and 3% 1mm brown biotite books. 2% pyrite as veinlets and disseminations. Rock generally looks fresh.

#### Trench H-1 and H-2

Strongly quartz-sericite altered feldspar porphyry. 0.1-3mm long white feldspar crystals and 5% 1-2mm angular quartz grains in aphanitic matrix. 3% pyrite as disseminations and veinlets. Traces of MoS<sub>2</sub> in rare glassy quartz stringers.

#### Trench L-1 and L-2

Strong sericite altered feldspar porphyry. Approximately 5% pyrite mainly as sub-parallel stringers. Traces of MoS<sub>2</sub>. Rare 1mm wide quartz stringers. Porphyritic texture commonly obliterated by alteration.

#### Trench 86-1

- 1a Bleached felsic crystal and/or lapilli tuff. Fragments and feldspar strongly altered to sericite and/or clay. 1-2% 0.5-1mm quartz eyes. Local brecciation of tuff and healing with blue-grey chalcedonic quartz and pyrite. Generally 5% pyrite as disseminations and few veinlets. Strongly jointing 047/60N; 045/70N.
- 1b As above.
- 1c Possible bedrock.
- 1d As 1a. Local 2-4mm patches of chalcedony.
- 1e As 1a.

### Trench 86-2

- 2a No bedrock. Towards bottom of trench are sub-angular boulders to 30cm across of bleached tuff and breccia which are cut by 0.2 to 1.5cm galena-sphalerite-tetrahedrite veins and which contain 1-2cm patches of drusy quartz. Till also contains 0.5 to 2cm rounded galena- sphalerite pebbles.
- 2b Fragmental volcanic. Clasts are intensely sericite altered and contained in a siliceous matrix. 5% disseminated pyrite. Rock is cut by 1cm wide, vein-like zones of grey chalcedony. Lower part of till is composed of very pyritic mud with traces of galena.
- 2c Same as 2b except 6-7% disseminated pyrite.
- 2d Sericite altered fragmental with 5% disseminated pyrite. At north end of trench pyritic clay and a pyrite-rich boulder overly bedrock.
- 2e Sericite altered fragmental cut by 10cm wide bands containing 40% disseminated pyrite and by 2cm wide pyrite veins. Pyritic mud overlies bedrock.
- 2f No bedrock.
- 2g No bedrock.
- 2h Sericite altered fragmental cut by network of 0.5-5mm wide gray chalcedonic veinlets. Matrix of fragmental locally flooded with quartz marginal to veinlets. 3% disseminated pyrite.

### Trench 86-3

No bedrock.



Trench 86-4

4a Strongly sericite altered tuff. Local alteration along fractures to a white talc-like mineral - probably kaolinite. At east end of trench, bedrock or large angular boulders contain 2cm wide veins of galena-sphalerite-tetrahedrite-pyrite-quartz.

Striations at till/bedrock interface indicate an east-west glacial movement.

4b-d No bedrock.

Trench 86-5

5a No bedrock

5b No bedrock

5c Strongly sericite altered fragmental containing 5% disseminated pyrite. Bedrock cut by 0.7 cm wide vuggy quartz-pyrite vein trending 050°/80°W.

5d Clay altered fragmental containing 3% disseminated pyrite and possible traces of galena. Bedrock cut by 1cm wide quartz-pyrite vein trending 045°/80°W.

APPENDIX E

X-RAY DIFFRACTION REPORT

BY STANYA HORSKY, UBC

HAND SPECIMEN DESCRIPTIONS

- 86-1A<sup>1</sup> Moderately altered ash tuff containing approximately 3% finely disseminated pyrite. Alteration appears to be quartz-sericite + clay (?)
- 86-5D Strongly altered lapilli tuff. Alteration appears to be mainly strong clay alteration accompanied by several per cent disseminated pyrite. This specimen is cut by a 0.5 cm quartz-pyrite vein (not included). Veinlets of galena-sphalerite-tetrahedrite have been noted nearby but were not observed in this specimen.

1: Numbers refer to trenches from which the specimens originate.

IDENTIFICATION OF THE ALTERATION MINERALS IN TWO  
SPECIMENS: 86-1A AND 86-5D - REPORT BY S HORSKY

1 Sample Preparation

The specimens were lightly pulverized and dispersed in water/few drops of ammonium hydroxide. After thirty seconds sedimentation, the heavy minerals and large particles were separated. The supernatant liquid, containing only the very fine grained alteration products, was pipeted to a second beaker and slowly evaporated. The evaporates were deposited on two microscope slides for each specimen and air dried. First sample was used directly for the XRD analysis, the second one was heated at 550°C overnight, cooled and X-rayed.

2 Instrumental Conditions

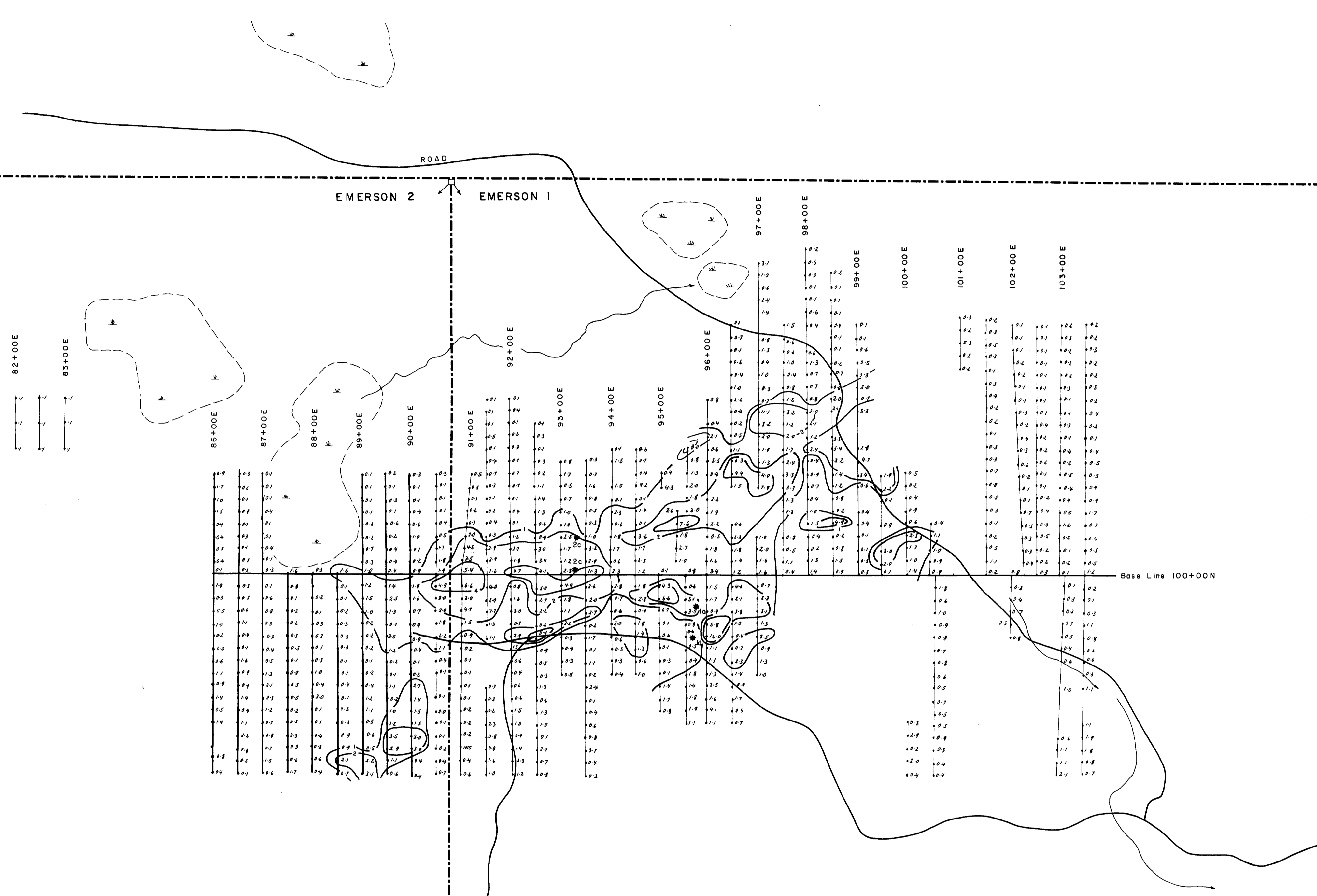
The XRD patterns were produced by the Cu radiation at 40KV and 20mA with Ni filter.

3 Evaluation of the XRD Patterns

86-1A - The very fine fraction of the specimen contains two major constituents, quartz and mica. Strictly crystallographically, the mica portion consists of two muscovite types; first is the natural trigonal 3T type muscovite (card #7-49 gives a chemical formula  $(K, Na)(Al, Mg, Fe)_2 (Si_2, Al) O_{10} (OH)_2$ ). The second muscovite is monoclinic (card #6-263 gives the formula  $K Al_2 (Si, Al) O_{10} (OH, F)_2$ ). Petrographically, your descriptions of the mica as "sericite" is fully acceptable as "sericite" is the term which is used for fine grained white mica (muscovite and paragonite). Such micas are not necessarily chemically different from muscovite, although they often have high  $SiO_2$ ,  $MgO$  and  $H_2O$  and low  $K_2O$  (Deer, Howie and Zussman : An Introduction to the Rock Forming Minerals, page 202). The only minor constituent is a plagioclase in its composition close to oligoclase (card #9-457).

86-5D - The very fine grained portion of this specimen is identical in its major constituents (quartz and the two micas - muscovites) as the 86-1A described above. The plagioclase as a minor constituent is present, as well an additional minor constituent is chloritoid (card #14-62, general chemical formula  $(\text{Fe}^{+2}, \text{Mg}, \text{Mn})_2 (\text{Al}, \text{Fe}^3 \text{Al}_3\text{O}_2 [\text{SiO}_4\text{Q}]_2 (\text{OH})_4$ ).

The heated samples produced identical patterns to the original ones in peak positions as well as intensities. This observation confirms that no other clay minerals (such as kaolinite or smectite group with typical changes after heating) were present.



**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

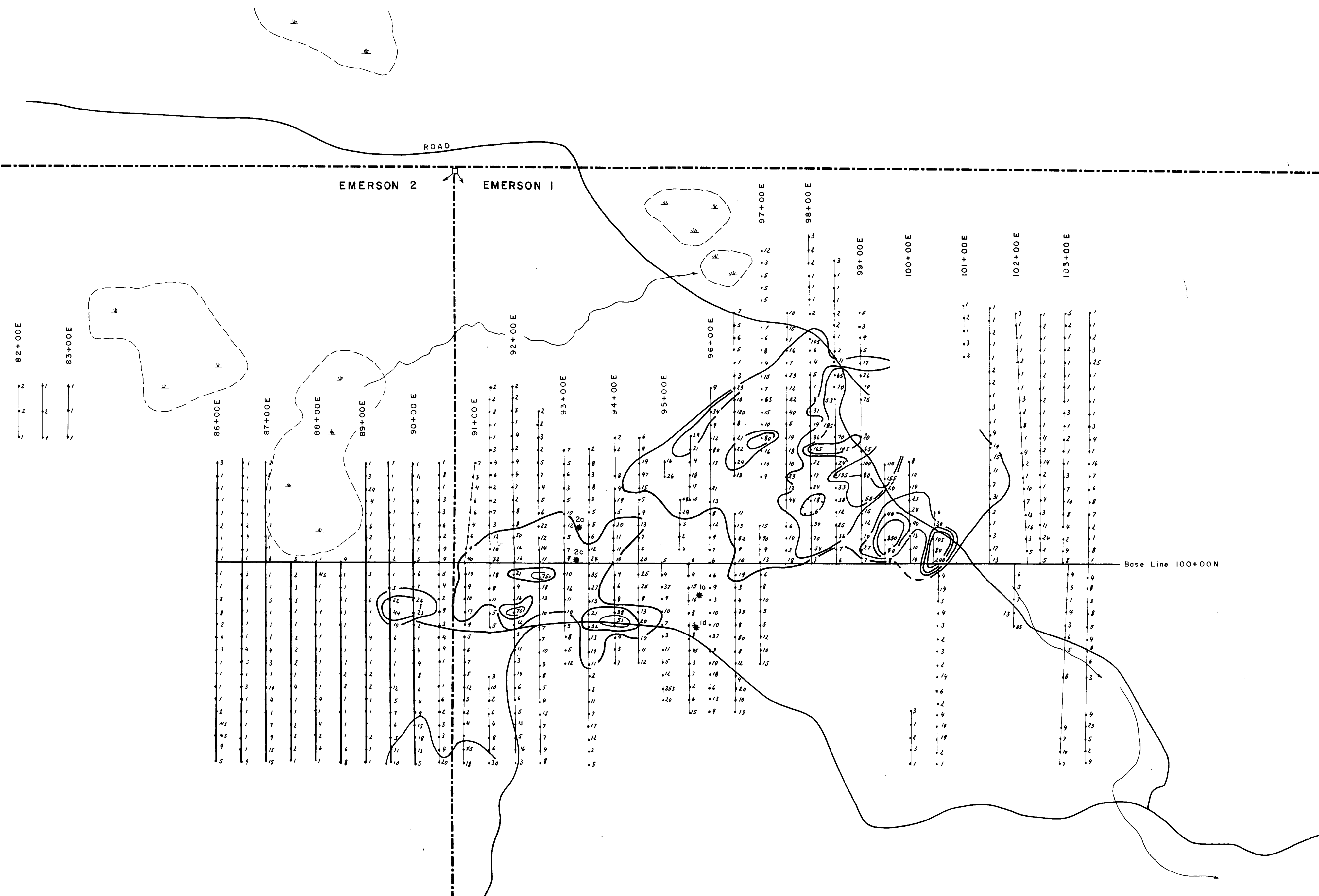
**15,378**

**LEGEND**  
 | 0.9 ppm Ag - 1986 sampling  
 | 1.0 ppm Ag - 1985 sampling  
 \* la Soil profile location  
 Contours at 1.0, 2.0, 4.0 ppm.

NTS 93 L / 7  
 SCALE 1:5000  
 100 50 0 100 200 300 400 Metres



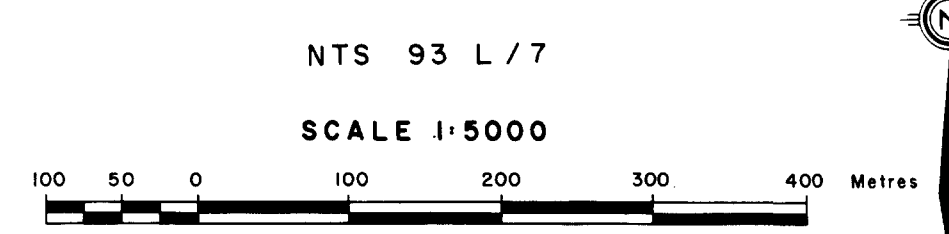
LORNEX MINING CORPORATION		
EMERSON OPTION		
SOIL GEOCHEMISTRY		
SILVER ( ppm)		
DATE	DRAWN BY	DWG.
NOVEMBER, 1986.	R.M.C. / J.S.	FIG. 3



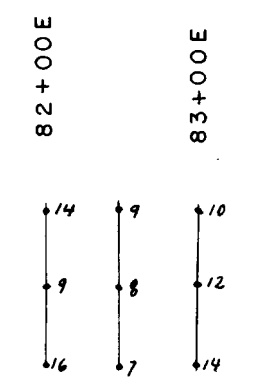
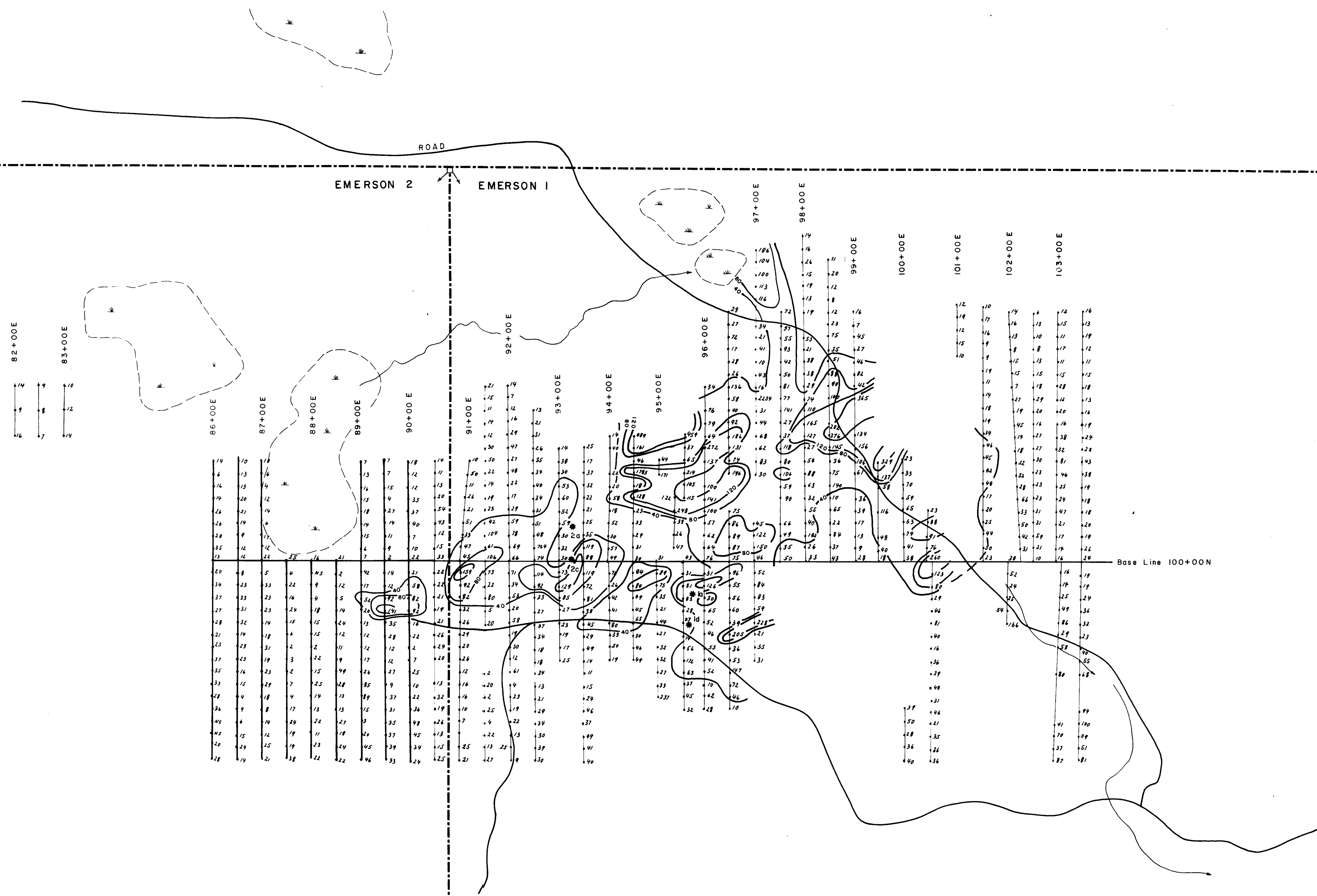
**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**15,378**

**LEGEND**  
 ↓ 5 ppb Au - 1986 sampling  
 ↓ 3 ppm Au - 1985 sampling  
 \* to Soil profile location  
 Contours at 10, 20, 40, 80 ppb.



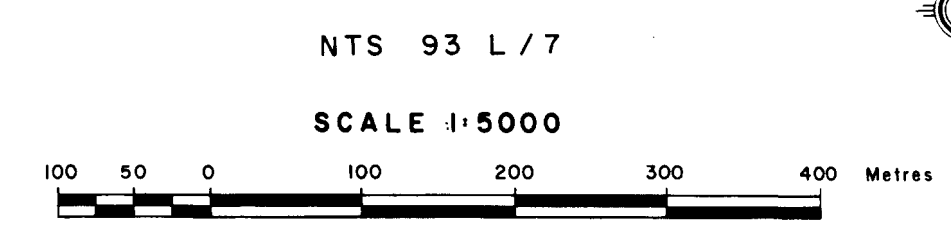
LORNE X MINING CORPORATION		
EMERSON OPTION		
SOIL GEOCHEMISTRY		
GOLD ( ppb )		
DATE	DRAWN BY	DWG.
NOVEMBER, 1986.	R.M.C. / J. S.	FIG. 4



**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**15,378**

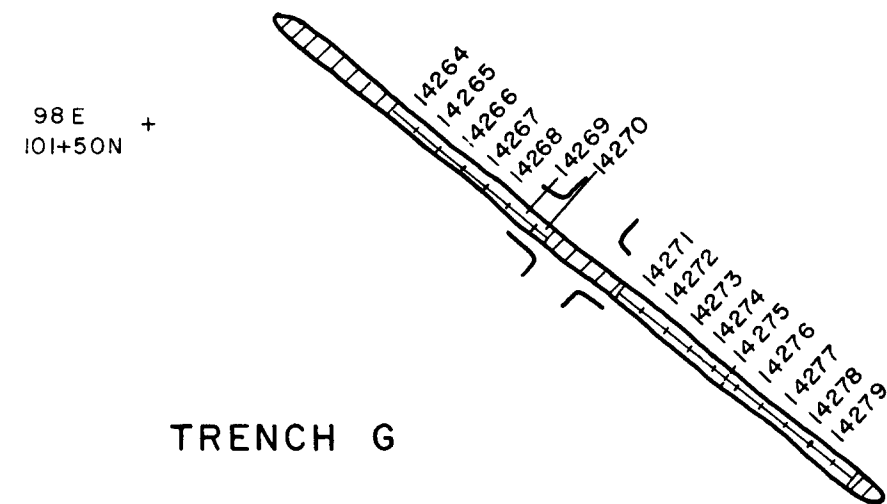
**LEGEND**  
 †28 ppm Pb - 1986 sampling  
 †33 ppm Pb - 1985 sampling  
 \* la Soil profile location  
 Contours at 40, 80, 120, 240 ppm.



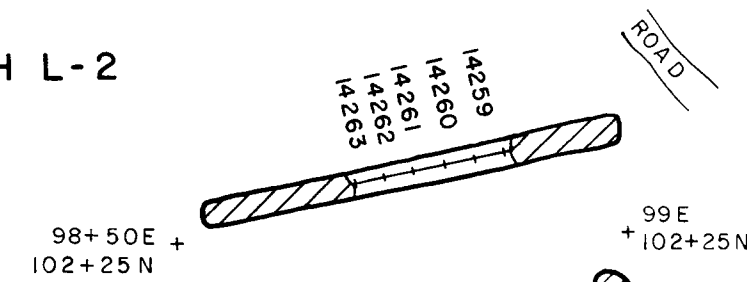
LORNE MINING CORPORATION		
EMERSON OPTION		
SOIL GEOCHEMISTRY		
LEAD (ppm)		
DATE	DRAWN BY	DWG.
NOVEMBER, 1986.	R.M.C. / J.S.	FIG. 5

NTS 93 L / 7  
SCALE 1:5000

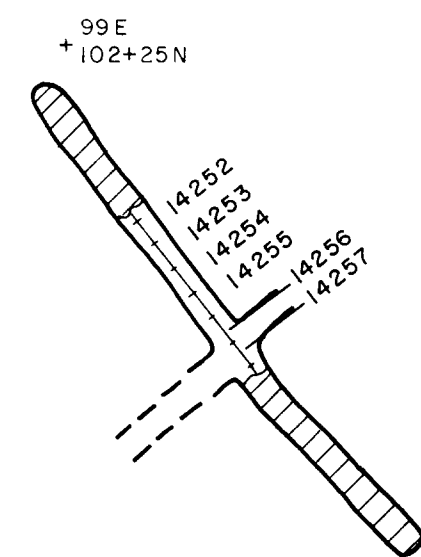




TRENCH L-2



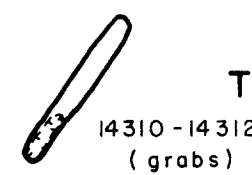
TRENCH L-1



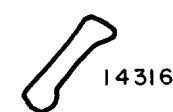
TRENCH B-1



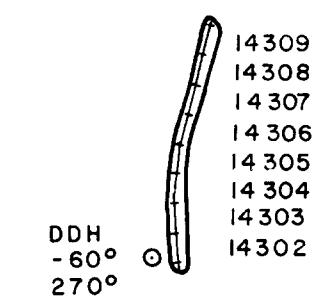
TRENCH B-2



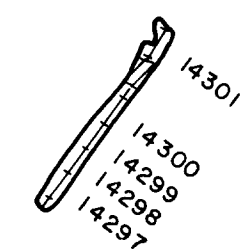
TRENCH D



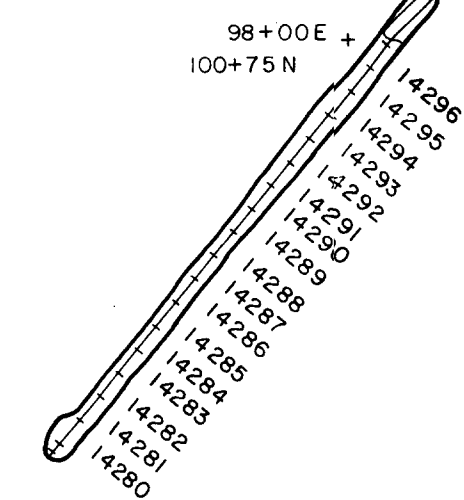
TRENCH E



TRENCH H-2



TRENCH H-1

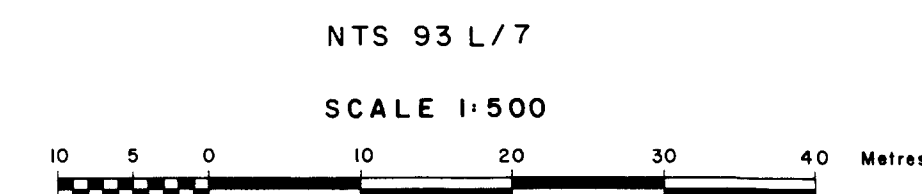


**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**15,378**

**LEGEND**

 Covered interval



LORNE MINING CORPORATION

EMERSON OPTION

AMAX TRENCHES

CHIP SAMPLE LOCATIONS

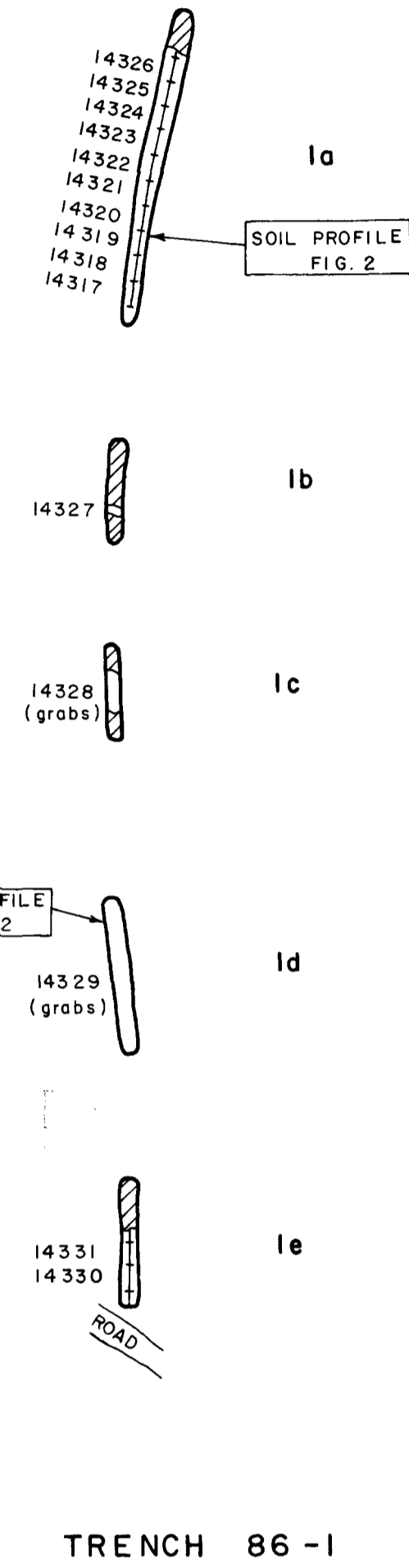
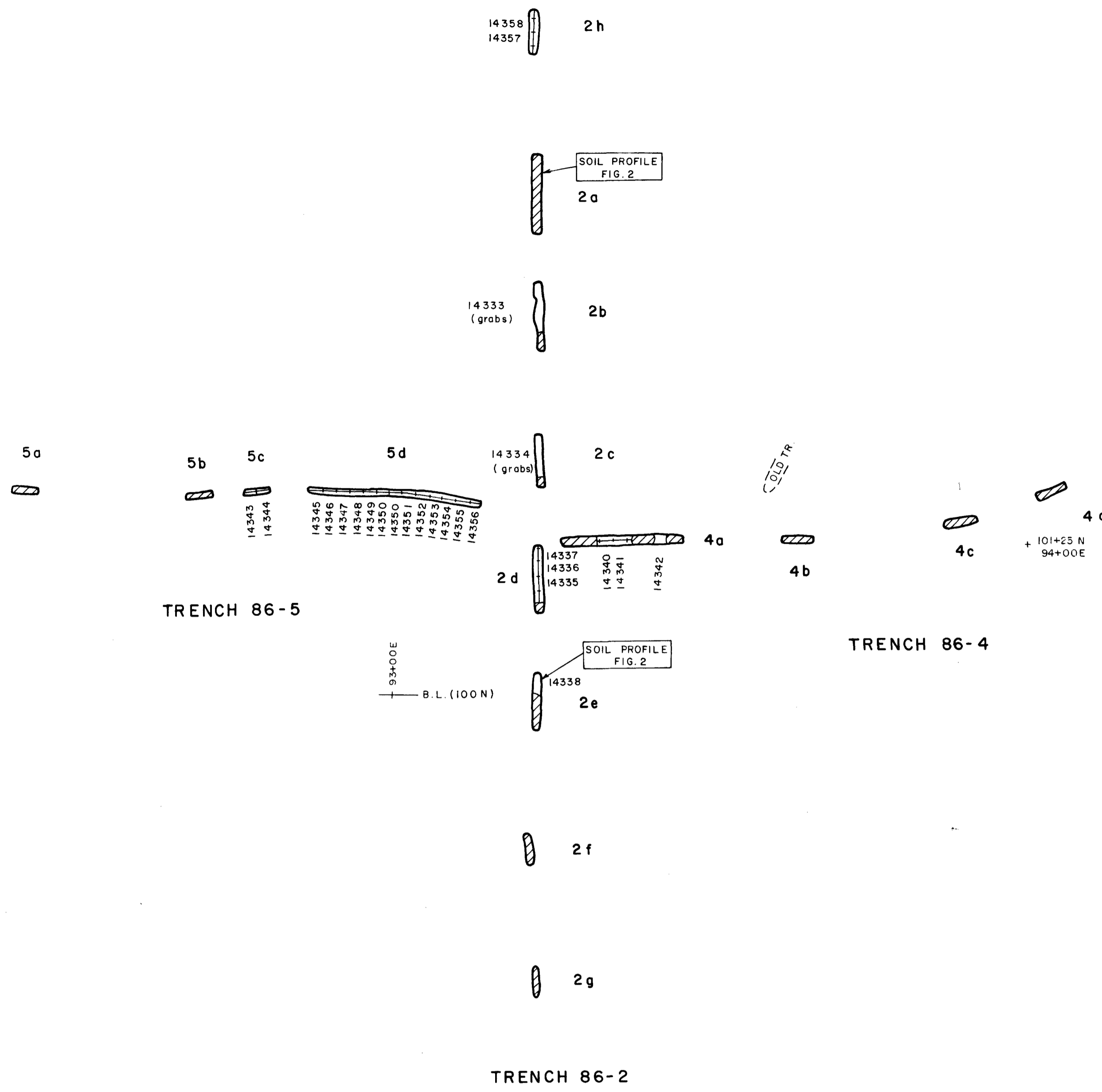
DATE	DRAWN BY	DWG.
NOVEMBER 1986	R.M.C. / J.C.	FIG. 6



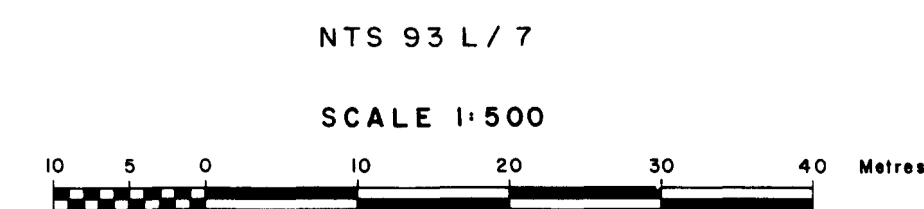
- 3 a
- 3 b
- 3 c
- 3 d
- 3 e
- 3 f
- 3 g

91+00E  
B.L. (100N)

TRENCH 86-3



LEGEND  
 Covered interval



GEOLOGICAL BRANCH  
 ASSESSMENT REPORT

15,378

LORNEX MINING CORPORATION

EMERSON OPTION

1986 TRENCHES  
 CHIP SAMPLE LOCATIONS

DATE NOVEMBER 1986. DRAWN BY R.M.C. / J.C. DWG.

FIG. 8

3a

3b

3c

3d

3e

3f

3g

94+00E  
B.L. (100 N)

TRENCH 86-3

1-0,20  
0-8,20 2h

2a

1-0,65 2b

1-4,30 2c

2d

16-1,130 2e

2f

2g

TRENCH 86-2

5a

5b

5c

5d

4a

4b

4c

4d

TRENCH 86-4

TRENCH 86-5

93+00E  
B.L. (100 N)

4-3,40  
2-0,35  
2-7,40  
2-6,35  
1-3,115  
1-3,95  
1-0,45  
3-9,30  
1-5,30  
5-5,50  
1-5,20

3-1,40  
2-3,50  
2-7,35  
9-2,50  
9-0,35  
617,775

COLD TR

+ 101+25 N  
94+00E

1-3,35  
1-4,50  
3-5,45  
2-8,60  
4-2,35  
3-1,50  
4-6,50  
8-6,50  
12-1,50  
67,75

1a

1b

1c

1d

1e

2-0,75

2-1,25

9-3,80


3-1,320  
1-9,61

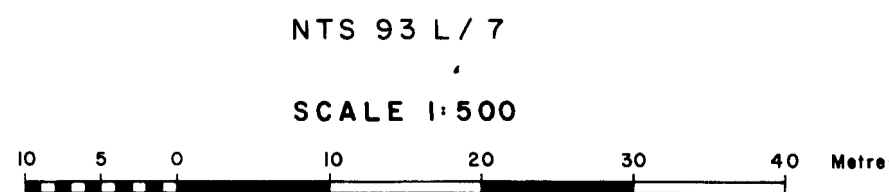
TRENCH 86-1

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

15,378

LEGEND

 Covered interval  
0-3,50 ppm Ag, ppb Au



LORNEX MINING CORPORATION

EMERSON OPTION

1986 TRENCHES

CHIP SAMPLE RESULTS - Ag, Au

DATE: NOVEMBER 1986. DRAWN BY: R.M.C. / J.C. DWG. FIG. 9



**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

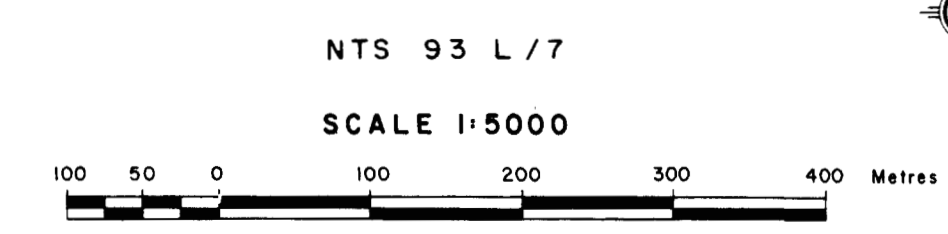
**15,378**

**LEGEND**

UPPER CRETACEOUS (?)  
 5 Feldspar hornblende biotite porphyry plugs or dykes  
 4 Feldspar biotite quartz crystal tuff and(?) porphyritic dykes - generally bleached.

3 Felsic to intermediate crystal lithic tuffs and breccias - generally bleached (may include some Unit 4)  
 LOWER JURASSIC OR CRETACEOUS  
 2 Argillite, siltstone

LOWER JURASSIC  
 Hazelton Group - Telkwa Fm.  
 1 Massive maroon tuff  
 --- Amax bulldozer trench  
 --- Lornex 1986 backhoe trench  
 ○ Amax 1968 diamond drill hole



LORNEX MINING CORPORATION		
EMERSON OPTION		
GEOLOGY AND TRENCH LOCATIONS		
DATE NOVEMBER, 1986.	DRAWN BY R. M. C. / J. S.	DWG. FIG. 10