

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

NTS: 92-I-7

50°19'N; 120°41'W

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6119

INDUCED POLARIZATION, RESISTIVITY AND

MAGNETIC SURVEY

HELMER PROPERTY

Nicola M.D., B.C.

Work performed during July 14-23, 1976

on claims:

HEL 1, 12 units tag no: 18089
HEL 2, 12 units tag no: 18090
HEL 3, 12 units tag no: 18091
HEL 4, 12 units tag no: 18092

October 1976

Jan Klein

TABLE OF CONTENTS

SUMMARY 1

INTRODUCTION 1

GEOLOGY 2

GEOPHYSICAL METHODS 2

I. Induced Polarization and Resistivity Survey 2

II. Magnetics 2

III. Data Presentation 3

DESCRIPTION OF RESULTS 4

Induced Polarization and Resistivity 4

Magnetics 5

INTERPRETATION 6

CONCLUSIONS AND RECOMMENDATIONS 6

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Figure 1 Time Domain Decay Curve

- MAD** Plate 104-A Location and grid plan on a scale of 1 : 50,000
- 1- Plate 104-76-3 Average magnetic values in contour form scale 1 : 5,000
- | | | |
|-------------------|---|-------|
| 2- Dwg. No. 104-1 | IP, resistivity and metal factor data, line | 250S |
| 3- | -2 | 500S |
| 4- | -3 | 750S |
| 5- | -4 | 1000S |
| 6- | -5 | 1250S |
| 7- | -6 | 1500S |
| 8- | -7 | 1750S |
| 9 | -8 | 2000S |

* * * * *

SUMMARY

An Induced Polarization, resistivity and magnetic survey was executed along 16 km of line over parts of the Helmer property during July 1976.

The time domain IP survey used a Huntex IP system and a pole-dipole array with a basic spacing of $a = 75\text{m}$ and separations $n = 1$ to 4. The magnetic survey used a Scintrex MF2 vertical field fluxgate magnetometer.

The magnetic and resistivity results suggest a $N20^{\circ}E$ strike direction for the strata below the grid. The IP results revealed values as high as 78 msec. Different sources are suggested to cause these results. Varying amounts of pyrite up to 20% were seen on the grid and this Fe-sulphide is the most likely source of the IP effects.

No further work can at present be recommended over the area covered by this grid.

INTRODUCTION

The Helmer property, a copper and molybdenum porphyry type prospect, is located 11 miles north of Nicola, B.C. at latitude $50^{\circ}19'N$, longitude $120^{\circ}41'W$. The elevation of the claims ranges between 4500 to 5200 feet a.s.l. Access to the north end of the claim block is by secondary road from the south end of Mamit Lake. The south end of the property can be reached by the Swakum Mt. road which runs north from the village of Nicola.

The claim block consists of four claims designated HEL 1-4 comprising 48 claim units.

The geophysical survey consisting of time domain Induced Polarization (IP), resistivity and magnetic measurements was executed over the centre part of the claim block. A baseline was established in a north-south direction and eight traverse lines approximately 250m apart were cut in an east-west direction. The lines vary in length from 1300 to 2100m long. The survey was executed by Eagle Geophysics during the period July 14-23, inclusive, 1976.

GEOLOGY

The HEL claims are underlain by volcanic and sedimentary rocks of the late Triassic Nicola Group. Outcrop exposure is very poor except in the southwest corner of the claims. Overall the amount of outcrop amounts to less than .5%.

The overburden thickness in the northern part of the property varies from 5 to 100 feet (Asarco drill hole information). The exposed rocks consist of: andesite flows, tuffs, agglomerates and breccias. Minor limestone, calcite & epidote skarn, argillite and quartz feldspar porphyry are found.

A Tertiary quartz-monzonite stock, the Rey Lake stock, occurs at the extreme NW corner of the grid overlain by andesites. Hornfelsed volcanics form the contact of these two rock types.

GEOPHYSICAL METHODS

I. Induced Polarization and Resistivity Survey

The survey was performed using a Hunttec 7.5KW Time Domain transmitter and two Hunttec Mark-3 Time Domain receivers.

In all, approximately 16.0 km of line were surveyed, on eight parallel lines spaced 250m apart. A pole-dipole array with a basic spacing, $a = 75m$ and separations $n = 1-4$ was used, providing an effective search depth of 100-150m. The potential dipole was to the west of the near current electrode.

Figure 1 shows the instrument parameters of the equipment used. The duty ratio between current on and off times is two, with the current on time being two seconds. The chargeabilities shown on the drawings (see below) were computed as follows:

$$M_a = (M_1 + 2M_2 + 4M_3 + 8M_4) \times t_p$$

II. Magnetism

A Scintrex MF-2 vertical field fluxgate magnetometer was used with a station interval of 25m. At regular time intervals check-ins were made with pre-established base stations to enable correcting for diurnal and instrument drift.

III. Data Presentation

The following data is included with this report:

Plate 104-A	Claim map and grid plan on a scale of 1 : 50,000
Dgw. No. 104-1	IP and resistivity results of Line 250S
-2	500S
-3	750S
-4	1000S
-5	1250S
-6	1500S
-7	2000S
-8	

These drawings on a scale of 1 : 3,000 show the results in standard pseudo-section format. From top to bottom are shown the calculated apparent resistivity ρ_a in ohm-meters, the chargeability, M_a , in milliseconds and the apparent metal factor. The resistivity is calculated employing the formula:

$$\rho_a = \frac{V_p}{I} \times K \quad \text{in which } V_p \text{ and } I \text{ are}$$

the primary voltage and current, and K is a geometrical factor dependent on the electrode configuration. The metal factor is defined as

follows: $\frac{M_a}{a} \times 1,000$. The plotting point is midway between the

nearest current and potential electrodes (see figure on the drawings.)

The chargeability values are contoured at an interval of one millisecond. A logarithmic contour interval is used for the resistivity and metal factor values. The following contours are used: 1.0; 1.5; 2.0; 3.0; 5.0; 7.5; etc.

Plate 104-76-3 shows the average magnetics in contour form. Three successive values at 25m intervals were averaged. In this way average values were produced every 75m, reducing the shortwaved geologic noise. These average values were contoured with a 100 gammas interval. This plate is on a scale of 1:5,000.

DESCRIPTION OF RESULTS

Induced Polarization and Resistivity

Line 250S: Strong chargeability values up to 20 msec are shown near the extreme W end of the line called Zone A with a clear drop towards the east. A second zone of interest, called B, is present between 450 and 700E. Values increase with depth. The resistivities show a slight layering with somewhat higher values at depth. The values along the centre part of the line, called Zone N, are somewhat lower than near the ends.

Line 500S: The IP values near the west end of the line, Zone A, are now stronger, up to 32 msec. Zone B shows also higher values and its source comes closer to surface. Highest values are along the western part of this zone between station 400 and 650 E. A gradual drop in IP values is again visible to the east, where the values drop to 3.9 msec. The resistivity data shows the layering to a lesser degree than along line 250S. The lowest resistivity values, Zone N, are coincident with the highest IP values.

Line 750S: Strong IP values are shown over most parts of this traverse with the highest value of 78 msec, most likely representing a narrow steeply dipping source near 50E. This feature is present within a background of 30 to 50 msec comprising Zone A. A drop in values is suggested near the west end of the line. Zone B located between 400 and 650E shows the highest values, up to 36 msec, near 400 to 500E. The resistivity picture is more complex. Zone N is present directly east of the baseline. A resistivity high correlates with part of Zone B.

Line 1000S: A strong layering appears visible in the IP data interrupted by higher values related to a narrower feature near 75W. The layering shows an increase in IP values with depth. A second narrow steeply dipping source is present near 525W. Zone B is not easily recognizable. The higher values between 300E and 450E from surface down and/or those near 550E might be the remainder of this zone.

The resistivity values show a high called M between 300 and 500W and low N is present between 100 and 400E.

Line 1250S: The IP values show a clear layering over the area of Zone A. This layering is disturbed by more continuous values from surface down between 150E and 300E. Higher values are again shown near 450E to 550E. This might reflect an easterly dipping source; this might be the remainder of Zone B. The resistivity data show no layering but Zone N (low) and M (high) are clearly visible. The latter reveals increasing values with depth from 500-600 ohmmeters to 1300 ohmmeters.

Line 1500S: The high IP values visible on lines 750S and 1000S are down by a factor of two to three. Some layering is visible. It appears as if Zones A and B are merging at depth. The resistivity pattern shows clearly bands M and N.

Line 1750S: Layering is well shown in the IP data, but values are further reduced from those along the previous line. Resistivity low N correlates with depressed IP values (similar to line 1500S). Resistivity high M correlates with parts of an IP high; a possible extension of Zone A. A narrow IP high is visible at depth near 150W.

Line 2000S: The IP values dropped further along this line. Very strong values are shown near the last station to the west and further measurements should be made to establish its significance. A narrow IP high is visible near 450W. A new IP high, called C, is shown near station 1050E. The resistivity data shows layering between 150E and 900E. Zones M and N are visible but less clear.

Magnetics

Several magnetic features are recognizable on Plate 104-76-3. A long broad high marked P cuts across the grid in a N20°E direction. A narrower and less well defined high parallels it on the east side (marked Q). A third less regular high, marked R, straddles the base line between lines 1000S and 2000S. A continuation might be recognizable in the high values along line 750S near 25W. This high is more or less located between resistivity features M and N. A third high is building up near the west end of lines 750S to 1250S.

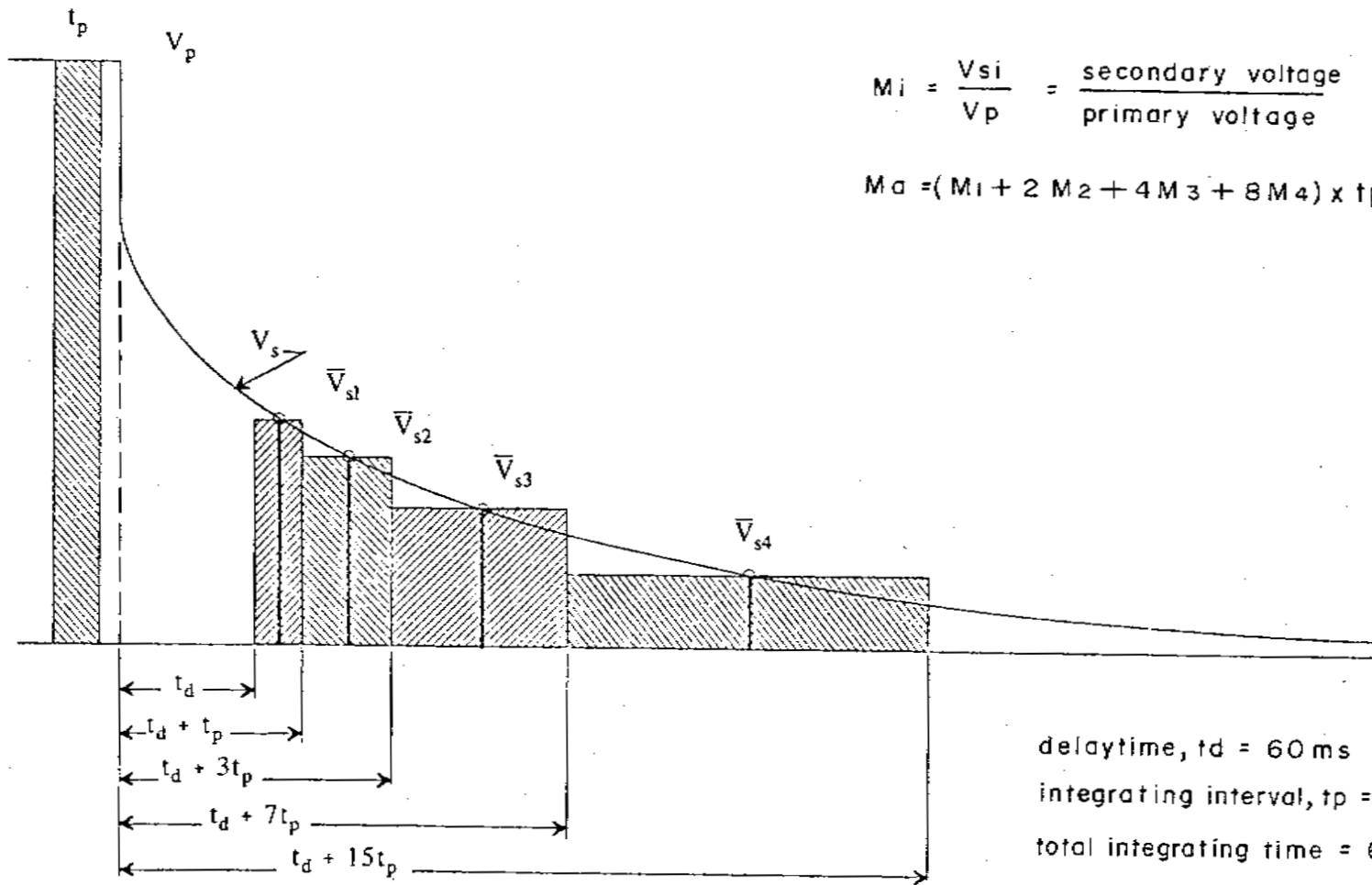
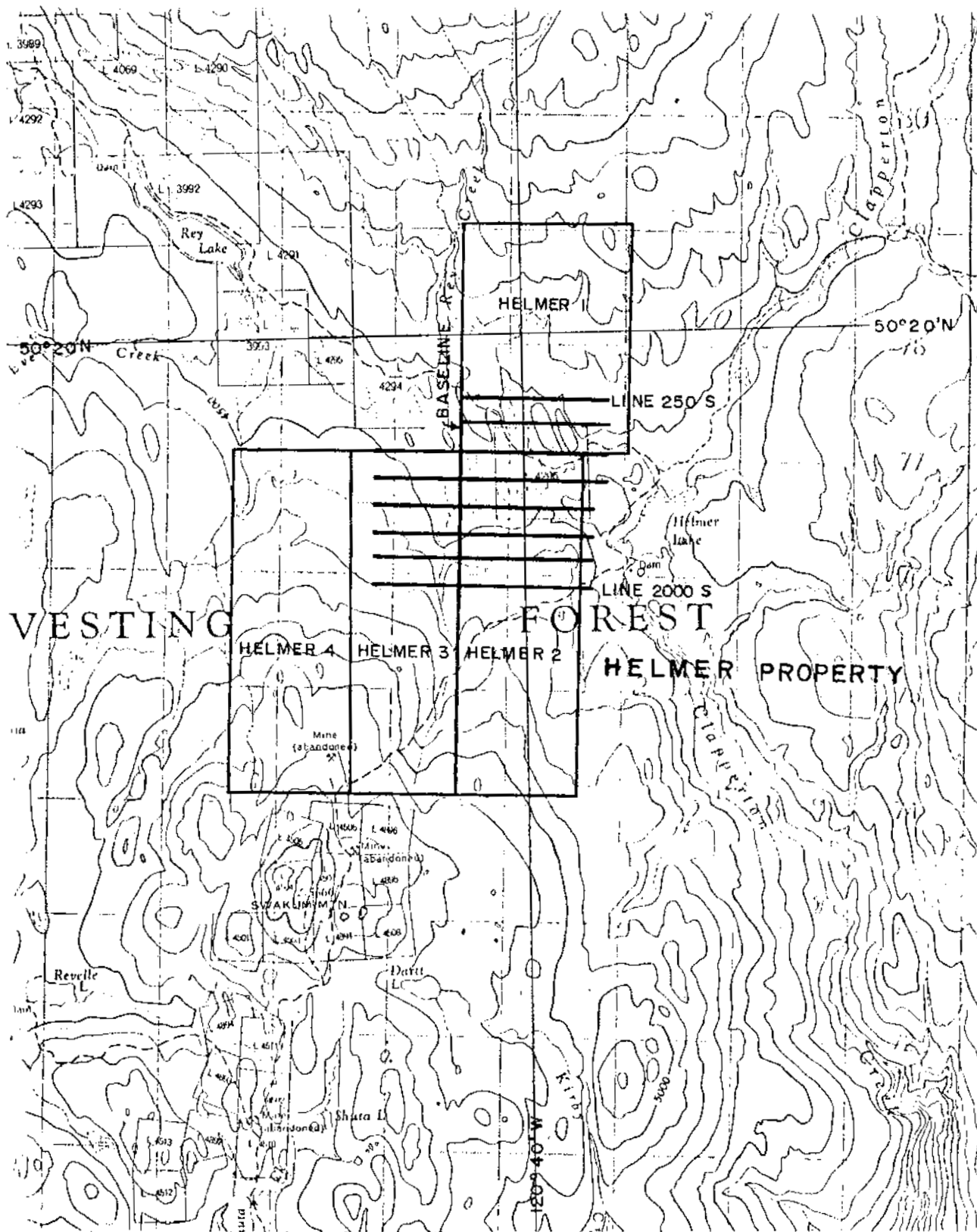
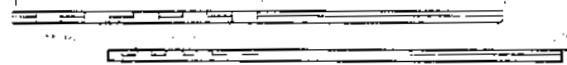


FIGURE : I Time domain decay curve showing sampling with the Huntec MK III receiver



MAMIT LAKE
 KAMLOOPS DIVISION OF YALE DISTRICT
 BRITISH COLUMBIA

SCALE 1 50 000 ÉCHELLE



N.T.S.
 92-1-7

Drawn by		Traced by	
Revised by	Date	Revised by	Date

HELMER PROPERTY LOCATION MAP

Scale: AS SHOWN Date: 1976 Plate 104-A

INTERPRETATION

A strong N20°E trend is visible in the magnetic and resistivity data. This trend most likely reflects geologic features rather than being influenced by overburden.

The induced polarization and resistivity data do not correlate too well and their sources might therefore be different.

Strongly varying amounts of pyrite have been noted on the HELMER claims, up to 20%, and it is most likely that the large IP values are caused by pyrite.

Zone A with average chargeabilities up to 40 msec is without much doubt part of the Rey Lake Stock. A quartz monzonite occurs immediately to the NW of the claim group

Only weak layering was noticed in the resistivity data. The IP results show this feature clearly, however. This suggests no strong change in rock type with depth, but only an increase in sulphides.

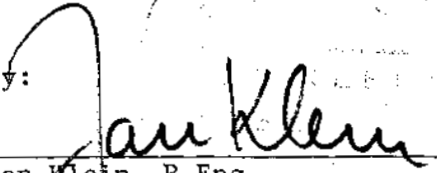
CONCLUSIONS AND RECOMMENDATIONS

An Induced Polarization, resistivity and magnetic survey was executed over a part of the HELMER 1-4 claims. The resistivity and magnetic results reveal a N20°E trend. The IP data shows some layering in the SE part of the grid.


The abundant pyrite in outcrops and the lack of interesting Cu and Mo in drill hole assays (Asarco), suggest most of the IP highs to be related to pyrite.

No further work is recommended on the area underlain by the geophysical grid, however further IP, resistivity and magnetic coverage should be obtained to the southwest.

Submitted by:


Jan Klein, P.Eng.
Chief Geophysicist

Endorsed by:


W.T. Irvine, P.Eng.
Manager, Exploration
Western District

Distribution:

W.D. Files (1)
Admin. Files (1)
Mining Recorder (2)

JK/deb

INVOICE

6119

26-41

MARTINSON
LINECUTTING AND STAKING LTD.

6860 Fairmont Street :: POWELL RIVER, B.C.

Telephone 485-2198

65793

Date MAY 12th 1976

IN ACCOUNT WITH

COMINCO Ltd.
200 GRANVILLE Sq.
VANCOUVER, B.C.

Picket Line Miles	<u>25.3</u>	@	<u>\$ 140.00</u>	per mile	<u>\$ 3542.00</u>
Base Line Miles		@		per mile	
Transit Base Line Miles		@		per mile	
Mining Claims		@		per claim	
Claim Blocks		@		per block	

Geophysics

Expenses

Rentals

Other:

\$ 3542.00

*Grump-Helmer
232-BB-1700
J.P. [Signature]*

TOTAL \$ 3542.00

Less

No 130

AMOUNT OWING \$ 3542.00

LINECUTTING

HELMER LAKE AND GRUMP LAKE.

144-2200 PS.

Don Martinson



Memorandum

For Use Within The Company Only

To	Accounting, Vancouver <small>(Use Title if Possible)</small>	Date	November 19, 1976
From	Geophysicist <small>(Use Title if Possible)</small>	Invoice No.	JK-76-20
Subject	GEOPHYSICAL ACCOUNT BILLING	Reference	HELMER

Please distribute the following charges as indicated by D.L. Cooke and credit the Geophysical Account, Code 704- 80-7060.

Drafting and Interpretation of geophysical data obtained by Eagle Geophysics over the Helmer property during 1976

- | | | |
|--|----|--------|
| 1. Drafting by Centra Enterprises | \$ | 285.00 |
| 2. Drafting by JPSnyder
3 days @ \$95.00 | \$ | 285.00 |
| 3. Interpretation by JKlein
Geophysicist
3 days @ \$125.00 | \$ | 375.00 |
| | | <hr/> |
| | \$ | 945.00 |

JK/deb

Signed _____



ENTERPRISES LTD.

8320 MANSON CRESCENT
BURNABY, B.C. V5A 2C4

12. October 1976

COMINCO LTD.
200 Granville

Vancouver B.C.

V6C 2R2

I n v o i c e

Re: Job# 104-76
Exploration

- calculating average readings,
plotting and contouring of
magnetics, resistivities and
chargeabilities

Total 28½ hours @ \$ 10.--

\$ 285.--
=====

Helmer

EAGLE GEOPHYSICS LIMITED

575 Lucerne Place, North Vancouver, B. C.

TO Cominco Limited,
Exploration Division,
2200 - 200 Granville Square,
Vancouver, B. C.

DATE August 20, 1976

TERMS: Net 30 days

Attention: Mr. Jan Klein

Clause	DESCRIPTION	AMOUNT
	Re: <u>IP Survey, GUMP and HELMER Properties, and Magnetometer Survey HELMER Property, Highland Valley, B. C., As Per Survey Agreement of June 3, 1976</u>	
1.	<u>2 Geophysicists And IP Equipment</u> 23.75 Survey days @ \$375.00 per day 1.5 Travel days @ 295.00 per day	\$ 8,906.25 442.50
1.	<u>1 Geophysicist And Extra Mark 3 Receiver</u> 23.75 Survey days @ \$195.00 per day 1.5 Survey days @ 135.00 per day	4,631.25 202.50
2.	<u>Survey Helpers</u> 3 Helpers for 23.75 Survey days @ \$50.00/man/day 3 Helpers for 1.0 Survey days @ \$50.00/man/day 2 Helpers for 0.5 Travel days @ \$50.00/man/day	3,562.50 150.00 50.00
3.	<u>Travelling And Living Expenses</u> Expense Report of Mr. J. Lloyd. Plus 10%	148.75 14.88
6.	<u>Transportation</u> * Truck Rental: (22.5/28) x \$675.00 per month * Mileage Charge: 993 miles @ 0.15/mile Gasoline Purchases (see attachments)	542.43 148.95 171.57
7.	<u>Magnetometer Survey on HELMER Property</u> 10.6 miles (@ 25 m. station intervals) @ \$85.00 per mile TOTAL PAYABLE	901.00 <u>\$19,872.50</u>
	* Truck rates are lowest (monthly) rates, since job done in conjunction with Steamboat Mt. Project. <small>1% PER MONTH CHARGED ON OVERDUE ACCOUNTS.</small>	

OUR ACCOUNT NO. E76201

INVOICE No 1237

RATE 22.50

PRIDMORE
ADDRESS MCKENZIE AVE
COMOX, B.C.
IN 221776

LOGAN LAKE LODGE
57-8

3

No 7295 FROM 7244
TO

FIRM EAGLE GEOPHYSICS

P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA - TELEPHONE (604) 523-6211

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
19	JUL 158 ROOM 101	★ 22.50			★ 425.34
19	JUL 158 TAX 101	★ 1.13		★ 448.97	★ 448.97
20	JUL 158 ROOM 101	★ 22.50			
20	JUL 158 TAX 101	★ 1.13		★ 472.60	★ 472.60
21	JUL 158 ROOM 101	★ 22.50			
21	JUL 158 TAX 101	★ 1.13		★ 496.23	★ 496.23
22	JUL 158 ROOM 101	★ 22.50			
22	JUL 158 TAX 101	★ 1.13		★ 519.86	

GUMP HELMER
232-88-2000

[Signature]

24.86

CHEQUE
NO. 68533
AUG 12 1976

Ok: *[Signature]*

ROOM NO. 101
RATE 22.50 1.13
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OTHER

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IN

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1.13

LOGAN LAKE LODGE ②

OK ADDRESS MCKENZIE AVENUE

COMOX B.C. IN 22/7/46

FIRM ENGLE GEOPHYSICS

No 7244 FROM 7199 TO 7295

P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA - TELEPHONE (604) 523-6211

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
	JUL 10B ROOM 101	• 22.50			• 212.67
	JUL 10B TAX 101	• 1.13			
	JUL 10A ROOM 101	• 22.50		• 236.30	• 236.30
	JUL 10A TAX 101	• 1.13		• 259.93	
	JUL 12B ROOM 101	• 22.50		• 283.56	• 259.93
	JUL 12B TAX 101	• 1.13		• 283.56	• 283.56
	JUL 13B ROOM 101	• 22.50		• 307.19	
	JUL 13B TAX 101	• 1.13		• 307.19	• 307.19
	JUL 14B ROOM 101	• 22.50		• 330.82	
	JUL 14B TAX 101	• 1.13		• 330.82	• 330.82
	JUL 15B ROOM 101	• 22.50		• 354.45	
	JUL 15B TAX 101	• 1.13		• 378.08	• 354.45
	JUL 16B ROOM 101	• 22.50		• 401.71	
	JUL 16B TAX 101	• 1.13		• 401.71	• 401.71
	JUL 17B ROOM 101	• 22.50		• 425.34	
	JUL 17B TAX 101	• 1.13			

OK: Jean H. [Signature]

ROOM NO. 101
RATE: 22.50 - 1.13
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PRIDMORE & FOREST
ADDRESS Mckenzie Ave
Comox, B.C.
OUT 22/7/76
IN 1/7/76

LC DAN
LAKE
LODGE

①

FIRM EAGLE GEOPHYSICS
P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA

No 7199 FROM
TO 4244

TELEPHONE (604) 523-6211

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
JUL -1A ROOM	101	★ 22.50			
JUL -1A TAX		★ 1.13			
JUL -2B ROOM	101	★ 22.50			
JUL -2B TAX	101	★ 1.13			
JUL -3B ROOM	101	★ 22.50			
JUL -3B TAX	101	★ 1.13			
JUL -4B ROOM	101	★ 22.50			
JUL -4B TAX	101	★ 1.13			
JUL -5B ROOM	101	★ 22.50			
JUL -5B TAX		★ 1.13			
JUL -6A CORR	101				
JUL -6B ROOM	101	★ 22.50			
JUL -6B TAX		★ 1.13			
JUL -7B ROOM	101	★ 22.50			
JUL -7B TAX	101	★ 1.13			
JUL -8B ROOM	101	★ 22.50			
JUL -8B TAX	101	★ 1.13			
				23.63	★ 23.63
				47.26	★ 47.26
				70.89	★ 70.98
				94.61	★ 94.61
				118.24	★ 118.24
			.09	118.15	★ 118.15
				141.78	★ 141.78
				165.41	★ 165.41
				189.04	★ 189.04
				212.67	

Ok Jim h Boyd.

ROOM NO. 101
RATE: 22.50 + 1.13
PAID BY CHEQUE CASH
CHARGEX AMEX
OTHER

Regulations of charge instructions, the undersigned just acknowledges the above as a personal indebtedness.
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ADDRESS _____

TEL. READINGS
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IN

NO. 202 310
 RATE 22.50

NAME DUKE RILEY
 ADDRESS 575 LUCERNE PLACE
NORTH VAN. B.C. IN 194

LOGAN LAKE LODGE ③
 No 7297 FROM 4245
 TO

FIRM EAGLE GEOPHYSICS
 P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA - TELEPHONE (604) 523-6211

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
19 JUL 15	ROOM 210	★ 22.50			★ 425.34
19 JUL 15	TAX 210	★ 1.13		★ 448.97	★ 448.97
20 JUL 15	ROOM 210	★ 22.50			
20 JUL 15	TAX 210	★ 1.13		★ 472.60	★ 472.60
21 JUL 15	ROOM 210	★ 22.50			
21 JUL 15	TAX 210	★ 1.13		★ 496.23	★ 496.23
22 JUL 15	ROOM 210	★ 22.50			
22 JUL 15	TAX 210	★ 1.13		★ 519.86	
				① 24.86	

GUMP HELMER
 232-88-2000
 Roobe
 OK. Jean H. Cozd.

ROOM NO. 210
 RATE: 22.50 1.13
 PAID BY CHEQUE CASH
 CHARGEX AMEX
 OTHER

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TEL. READINGS
 OUT
 IN

RATE 22-50
+ 1-13

LOGAN
LAKE
LODGE

②

Guest J. Riley
ADDRESS 575 Ludene Place OUT
North Van B.C. IN

No 7245 FROM 4223
TO 4223

FIRM Eagle Geophysics
P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA

TELEPHONE (604) 523-6211

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
				★ 236.30	★ 235.17
JUL 10B TAX	210	★ 1.13		★ 236.30	★ 236.30
JUL 10A ROOM	210	★ 22.50		★ 259.73	★ 259.73
JUL 10A TAX	210	★ .93		★ 259.93	★ 259.93
JUL 12A TAX	210	★ .20		272.93	
JUL 12B ROOM	210	★ 22.50		★ 283.56	★ 283.56
JUL 12B TAX	210	★ 1.13		★ 307.19	★ 307.19
JUL 13B ROOM	210	★ 22.50		★ 330.82	★ 330.82
JUL 13B TAX	210	★ 1.13		★ 354.45	★ 354.45
JUL 14B ROOM	210	★ 22.50		★ 378.08	★ 378.08
JUL 14B TAX	210	★ 1.13		★ 401.71	★ 401.71
JUL 15B ROOM	210	★ 22.50		★ 425.34	
JUL 15B TAX	210	★ 1.13			
JUL 16B ROOM	210	★ 22.50			
JUL 16B TAX	210	★ 1.13			
JUL 16B ROOM	210	★ 22.50			
JUL 16B TAX	210	★ 1.13			
JUL 18B ROOM	210	★ 22.50			
JUL 18B TAX	210	★ 1.13			

OK: *John Lloyd*

ROOM NO. 210
RATE: 22-50 - 1-13
PAID BY CHEQUE CASH
CHARGE X AMEX
OTHER

Regardless of charge instructions, the undersigned guest acknowledges the above as a personal indebtedness.
CHARGE TO _____
ADDRESS _____

TEL. READINGS
OUT
IN

RATE 22.50

Wydle J. Riley

ADDRESS 575 Lucerne Place

North Vancouver B.C.

FIRM EAGLE GEOPHYSICS

P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA - TELEPHONE (604) 523-6211

LOGAN LAKE LODGE

No 7223 FROM TO 4245

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
Jul 1	Room 210	22.50		23.63	
	Tax 210	1.13			
Jul 2	Room 210	22.50		47.16	
	Tax 210	1.13			
Jul 3	Room 210	22.50		70.89	
	Tax 210	1.13			
Jul 4	Room 210	22.50		93.12	
	Tax 210	1.13			
	JUL -5B ROOM 210	22.50		93.12	93.12
	JUL -5B TAX 210	1.13		94.52	116.75
	JUL -6B ROOM 210	22.50		116.75	140.38
	JUL -6B TAX 210	1.13		117.88	141.78
	JUL -7A CORR 210	1.40		119.28	165.41
	JUL -7B ROOM 210	22.50		141.78	165.41
	JUL -7B TAX 210	1.13		142.91	189.04
	JUL -8B ROOM 210	22.50		144.04	189.04
	JUL -8B TAX 210	1.13		145.17	212.67
	JUL -9B TAX 210	1.13		146.30	212.67
	JUL 10B ROOM 210	22.50		148.80	
				212.67	
				235.17	

ROOM NO. 210
 RATE: 22.50 + 1.13
 PAID BY CHEQUE CASH
 CHARGE X AMEX
 OTHER

Regardless of charge instructions, the undersigned guest acknowledges the above as personal indebtedness.
 CHARGE TO: *Ok J. Riley*
 ADDRESS:

TEL. READINGS
 IN

RATE 22.50
1.13

G. HAMILL
OUT

301-347 WEST H. ST.

NORTH VANCOUVER B.C.

FIRM EAGLE GEOPHYSICS.

LOGAN LAKE LODGE
57-10

No 7307 FROM 7286
TO 7

P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA - TELEPHONE (604) 523-6211

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
21 JUL 1968	ROOM 203	★ 22.50			1480.10
21 JUL 1968	TAX 203	★ 1.13		★ 1803.73	
22 JUL 1968	REST R 203	★ 4.75		★ 1803.73	★1,803.73
22 JUL 1968	REST R 203	★ 9.15		★ 1817.63	★1,817.63
22 JUL 1968	PHONE 203	★ 4.14	★ 4.14	★ 1817.63	★1,817.63
22 JUL 1968	PAID 203		★ 28.05	★ 1845.68	★1,845.68
22 JUL 1968	REST R 203	★ 22.50		★ 1869.31	★1,869.31
22 JUL 1968	TAX 203	★ 1.13			
23 JUL 1968	REST R 203	★ 1.75			
23 JUL 1968	REST R 203	★ 2.50		★ 1873.56	
23 JUL 1968	REST 203			★ 1873.56	

Gump - Helmetz
232-88-2000

John Lloyd
27.86

ROOM NO. 203
RATE 22.50 - 1.13
PAID BY CHEQUE CASH
CHARGEX AMEX
OTHER

Regardless of charge instructions, the undersigned guest acknowledges the above as a personal indebtedness.
CHARGE TO _____
ADDRESS _____

TEL. READINGS
OUT
IN

WT 108 1
 W 100 4074

RATE 20.50
 1.13

HAMILL

LOGAN LAKE LODGE

2

301 - 347 WEST 14. ST.

NORTH VANCOUVER B.C.

FIRM

EAGLE GOLF & GEO.

No 7286 FROM 7280 TO 7304

P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA - TELEPHONE (604) 523-6211

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
					*1,601.13
19	REST R 203	* 19.05			
19	REST R 203	* 2.45			
19	REST R 203	* 6.85		* 1,629.48	* 1,629.48
19	REST R	* 34.15			
19	ROOM 203	* 22.50			
19	TAX 203	* 1.13		* 1,687.26	* 1,687.26
19	REST R 203	* 11.45			
19	REST R 203	* 7.50		* 1,706.21	* 1,706.21
20	REST R 203	* 5.00			
20	REST R 203	* 4.50			
20	REST R 203	* 5.85			
20	REST R 203	* 10.80		* 1,732.36	* 1,732.36
20	ROOM 203	* 22.50			
20	TAX 203	* 1.13		* 1,755.99	* 1,755.99
21	REST R 203	* 5.70			
21	REST R 203	* 13.10		* 1,774.79	* 1,774.79
21	REST R 203	* 28.65		* 1,803.44	* 1,803.44
21	PHONE	* 6.64		* 1,810.08	* 1,810.08
21	PAID PHONE 203 CALLS	* 29.98		* 1,780.10	* 1,780.10
21	PHONE 203	* 9.15			
	PAID	* 9.15		* 1,780.10	

7.
 Paid
 HAMILL
 Paid
 Paid

ROOM NO. 203
 RATE: 20.50 1.13
 PAID BY CHEQUE CASH
 CHARGEX AMEX
 OTHER

Regardless of charge instructions, the undersigned guest acknowledges the above as a personal indebtedness.
 CHARGE TO *OK: John Lloyd* OUT
 IN
 ADDRESS

NO. 101
NO. 102
NO. 103

RATE 22.50
113

LOGAN LAKE LODGE B

G. HAMILL
OUT
301 - 347 WEST H. ST.
IN
NORTH VANCOUVER B.C.

No 7280 FROM 7263
TO 7286

FIRM EAGLE GEO.
P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA - TELEPHONE (604) 523-6211

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
					*1,417.70
JUL 16B	ROOM 203	* 22.50			
JUL 16B	TAX 203	* 1.13		* 1,441.33	*1,441.33
JUL 16B	REST R 203	* 2.30			
JUL 16B	REST R 203	* 12.45			
JUL 16B	REST H 203	* 11.55		* 1,467.63	*1,467.63
JUL 16B	REST R 203	* 5.50			
JUL 16B	REST R 203	* 10.35			
JUL 16B	REST R 203	* 12.00			
JUL 16B	PHONE 203	* 2.64	<i>Paied.</i>	* 1,498.12	*1,498.12
JUL 16B	ROOM 203	* 22.50			
JUL 16B	TAX 203	* 1.13		* 1,521.75	*1,521.75
JUL 16A	REST R 203	* 9.70			
JUL 16A	REST H 203	* 9.05			
JUL 16A	REST R 203	* 10.45	<i>4.64</i>	* 1,550.95	*1,550.95
JUL 16B	REST R 203	* 6.70			
JUL 16B	REST R 203	* 9.90			
JUL 16B	REST R 203	* 14.70			
JUL 16B	REST R 203	* 2.25		* 1,584.50	*1,584.50
JUL 16B	PHONE 203	* 2.00	<i>J. Lloyd.</i>	* 1,586.50	*1,586.50
JUL 16B	ROOM 203	* 22.50		<i>1,553.64</i>	
JUL 16B	TAX 203	* 1.13		* 1,610.13	

ROOM NO. 203
RATE: 22.50 + 1.13
PAID BY CHEQUE CASH
 CHARGEX AMEX
 OTHER

Regardless of charge instructions, the undersigned guest acknowledges the above as a personal indebtedness.
CHARGE TO Ok: J. Lloyd
ADDRESS _____
TEL. READINGS
OUT
56.49

NO JOB II
NO JOB III
NO JOB BOMM

RATE 22-50
113

LOGAN LAKE LODGE



G. HAHILL

301-347 WEST A. ST.
NORTH VANCOUVER B.C.

No 7263 FROM 7248
TO 7280

FIRM EAGLE GEO

P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA - TELEPHONE (604) 523-6211

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
					*1,142.29
JUL 14A	REST R 203	* 26.35			
JUL 14A	REST R 203	* 4.35			
JUL 14A	REST R 203	* 12.25		* 1,185.24	*1,185.24
JUL 14B	REST R 203	* 43.35		* 1,228.59	*1,228.59
JUL 14B	ROOM 203	* 22.50			
JUL 14B	TAX 203	* 1.13		* 1,252.22	*1,252.22
JUL 15A	REST R 203	* 13.20			
JUL 15A	REST R 203	* 12.95		* 1,278.37	*1,278.37
JUL 15B	REST R 203	* 11.95			
JUL 15B	REST R 203	* 13.40			
JUL 15B	REST R 203	* 9.70			
JUL 15B	REST R 203	* 5.25			
JUL 15B	ROOM 203	* 22.50			
JUL 15B	TAX 203	* 1.13		* 1,342.30	*1,342.30
JUL 16A	REST R 203	* 8.55			
JUL 16A	REST R 203	* 17.30			
JUL 16A	REST R 203	* 3.55		* 1,371.70	*1,371.70
JUL 16B	REST R 203	* 10.15			
JUL 16B	REST R 203	* 25.65			
JUL 16B	REST R 203	* 10.20		* 1,417.70	

1365 85

ROOM NO. 203
RATE. 22-50 + 113
PAID BY CHEQUE CASH
CHARGEX AMEX
OTHER

Regardless of the above instructions, the undersigned guest acknowledges the above as a personal indebtedness.
CHARGE TO: *Ok John H. Lloyd*
ADDRESS: _____
TEL. READINGS: _____
IN

RATE 22-50
113

FAMIL 9

OUT 22/7/76
IN 1/7/76

301-347 WEST H ST.
NORTH VANCOUVER

LOGAN LAKE LODGE 5

No 7248 FROM 4240
TO 4263

FIRM EAGLE GEOPHYSICS.

P.O. BOX 220 — LOGAN LAKE, BRITISH COLUMBIA, CANADA — TELEPHONE (604) 523-6211

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
				♦ 885.50	♦ 885.50
JUL 10A	REST R 203	♦ 11.20		♦ 916.60	♦ 916.60
JUL 10A	REST R 203	♦ 19.90			
JUL 12A	REST R 203	♦ 2.10			
JUL 12A	REST R 203	♦ 2.95			
JUL 12A	REST R 203	♦ 13.50			
JUL 12A	REST R 203	♦ 18.60		♦ 953.75	♦ 953.75
JUL 12B	REST R 203	♦ 36.90			
JUL 12B	ROOM 203	♦ 22.50			
JUL 12B	TAX 203	♦ 1.13		♦ 1,014.28	♦ 1,014.28
JUL 13B	REST R 203	♦ 14.25			
JUL 13B	REST R 203	♦ 5.10			
JUL 13B	REST R 203	♦ 10.75			
JUL 13B	REST R 203	♦ 3.20			
JUL 13B	REST R 203	♦ 24.80			
JUL 13B	REST R 203	♦ 23.80			
JUL 13B	REST R 203	♦ 11.60		♦ 1,107.78	♦ 1,107.78
JUL 13B	PHONE 203	♦ 1.97	— J. Lloyd		
JUL 13B	PHONE 203	♦ 3.50	— Paid		
JUL 13B	PHONE 203	♦ 3.41	— Paid	♦ 1,118.66	♦ 1,118.66
JUL 13B	ROOM 203	♦ 22.50		1,090.44	
JUL 13B	TAX 203	♦ 1.13		♦ 1,142.29	

ROOM NO. 203

RATE 22-50-113

PAID BY CHEQUE CASH

CHARGEX AMEX

OTHER

Regardless of charge instruction, the undersigned guest acknowledges the above as a personal indebtedness.

CHARGE TO OK: John Lloyd

ADDRESS

TEL. READINGS

OUT

RATE 22.50
1.13

LOGAN LAKE LODGE 

301-347 WEST H ST.
NORTH VANCOUVER B.C.

FIRM EAGLE GEOPHYSICS
P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA

No 7240 FROM 7227
TO 4248

DATE EXPLANATION AMT. CHARGED AMT. CREDITED BALANCE DUE PICK - UP TELEPHONE (604) 523-6211

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
JUL -9A	REST R 203	★ 14.10			★ 665.72
JUL -9A	REST R 203	★ 19.80		★ 699.62	★ 699.62
JUL -9B	REST R 203	★ 15.35		★ 714.97	★ 714.97
JUL -9B	ROOM 203	★ 22.50			
JUL -9B	TAX 203	★ 1.13		★ 738.60	★ 738.60
JUL -9B	PHONE 203	★ 5.20		★ 743.80	★ 743.80
JUL -9B	PHONE 203	★ 5.11	J. Lloyd	★ 748.91	★ 748.91
JUL 10A	REST R 203	★ 13.80			
JUL 10A	REST R 203	★ 9.75		★ 772.46	★ 772.46
JUL 10B	REST R 203	★ 9.50			
JUL 10B	MISC 203	★ 2.60		★ 784.56	★ 784.56
JUL 10B	REST R 203	★ 9.90			
JUL 10B	REST R 203	★ 5.00		★ 799.46	★ 799.46
JUL 10B	PHONE 203	★ 2.69	J. Lloyd	★ 802.15	★ 802.15
JUL 10B	ROOM 203	★ 22.50			
JUL 10B	TAX 203	★ 1.13		★ 825.78	★ 825.78
JUL 10A	PHONE 203	★ 8.64	Paid.	★ 830.42	★ 830.42
JUL 10A	REST R 203	★ 6.70			
JUL 10A	REST R 203	★ 24.75		★ 861.87	★ 861.87
JUL 10A	ROOM 203	★ 22.50	17.64	★ 844.53	
JUL 10A	TAX 203	★ 1.13		★ 885.50	

ROOM NO. 203
RATE 22.50 + 1.13
PAID BY CHEQUE CASH
CHARGE X AMEX
OTHER

Regardless of charge instructions, the undersigned guest acknowledges the above as a personal indebtedness.

CHARGE TO OK: J. Lloyd
ADDRESS _____
TEL. READINGS
OUT IN

RATE 2250
113.

LOGAN
LAKE
LODGE

48

THIRD + T Lloyd
ADDRESS # 301-347 WEST 45th ST.
OUT

NORTH VAN. B.C.
IN

No 7227 FROM 7206
TO 7240

FIRM EAGLE GEOPHYSICS.

P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA - TELEPHONE (604) 523-6211

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
JULY 58.	PHONE.				
		4.13	J. Lloyd.	397.48	393.35
JUL -6A	RESTR 203	12.40		★ 397.48	★ 397.48
JUL -6A	RESTR 203	20.35		★ 430.23	★ 430.23
JUL -6B	RESTR 203	3.45		★ 466.98	★ 466.98
JUL -6B	RESTR 203	33.30		★ 490.61	★ 490.61
JUL -6B	ROOM 203	22.50		★ 515.76	★ 515.76
JUL -6B	TAX 203	1.13		★ 564.26	★ 564.26
JUL -7A	RESTR 203	12.70		★ 587.89	★ 587.89
JUL -7A	RESTR 203	7.65		★ 615.64	★ 615.64
JUL -7A	RESTR 203	4.80			
JUL -7B	RESTR 203	41.00			
JUL -7B	MISC 203	7.50			
JUL -7B	ROOM 203	22.50			
JUL -7B	TAX 203	1.13			
JUL -8A	RESTR 203	16.80			
JUL -8A	RESTR 203	10.95			
JUL -8B	RESTR 203	4.50			
JUL -8B	RESTR 203	5.00			
JUL -8B	RESTR 203	16.95			
JUL -8B	ROOM 203	22.50			
JUL -8B	TAX 203	1.13			
				665.72	
				(642.39)	

Ok: John Lloyd

ROOM NO. 203
RATE 22.50 + 1.13.
PAID BY CHEQUE CASH
CHARGE X AMEX
OTHER

Regardless of charge instructions, the undersigned guest acknowledges the above as a personal indebtedness.

CHARGE TO _____
ADDRESS _____

TEL. READINGS
OUT
IN

RATE 22.50
 - 1.13
 T LLOYD
 # 301-347 W 4th ST.
 NORTH VAN B.C. IN 1/7/76



No 7206 FROM 7198
 TO 7227

FIRM EAGLE GEOPHYSICS
 P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA

TELEPHONE (604) 523-6211

DATE	EXPLANATION	AMT. CHARGED	AMT. CREDITED	BALANCE DUE	PICK - UP
JUL -3B REST R	203	★ 2.85			★ 166.11
JUL -3B REST R	203	★ 4.05			
JUL -3B REST R	203	★ 16.75			
JUL -3B REST R	203	★ 3.55		★ 193.31	★ 193.31
JUL -3B ROOM	203	★ 22.50			
JUL -3B TAX	203	★ 1.13		★ 216.94	★ 216.94
JUL -4B REST R	203	★ 12.00			
JUL -4B REST R	203	★ 17.85		★ 246.79	★ 246.79
JUL -4B REST R	203	★ 33.90			
JUL -4B REST R	203	★ 12.40		★ 293.09	★ 293.09
JUL -4B PHONE	203	★ 7.15	Paid	★ 300.24	★ 300.24
JUL -4B ROOM	203	★ 22.50			
JUL -4B TAX	203	★ 1.13		★ 323.87	★ 323.87
JUL -5A REST R	203	★ 6.25			
JUL -5A REST R	203	★ 2.60			
JUL -5A REST R	203	★ 3.20			
JUL -5A REST R	203	★ 2.50		★ 338.42	★ 338.42
JUL -5B ROOM		★ 22.50			
JUL -5B TAX		★ 1.13		★ 362.05	★ 362.05
JUL -5B REST R	203	★ 9.50		★ 371.55	★ 371.55
JUL -5B REST R	203	★ 6.40			
JUL -5B REST R		★ 15.40		★ 374.15	
				★ 393.35	

ROOM NO. 203
 RATE: 22.50 + 1.13
 PAID BY CHEQUE CASH
 CHARGE X AMEX
 OTHER

Regardless of charge instructions, the undersigned guest acknowledges the above as a personal indebtedness.
 CHARGE TO
 ADDRESS
Ch. Joan Lloyd

TEL. READINGS
 OUT
 IN

JAN:

~~2913.28~~

\$ 2913.28

Total for
J. Lloyd +
crew expenses
@ Logan Lake

Neil H -

301-347 W. 4th ST
NORTH VAN, B.C. IN 119776

LOGAN LAKE LODGE (39)

FIRM EAGLE GEOPHYSICS No. 7198 FROM _____

P.O. BOX 220 - LOGAN LAKE, BRITISH COLUMBIA, CANADA TO 7206

DATE _____ EXPLANATION AMT. CHARGED AMT. CREDITED TELEPHONE (604) 523-6211 BALANCE DUE PICK - UP

JUL -1A ROOM	203	★ 22.50			
JUL -1A TAX		★ 1.13			
JUL -1A REST R	203	★ 3.40		★ 23.63	★ 23.63
JUL -1A REST R		★ 5.10			
JUL -1A REST R		★ 7.30			
JUL -1A MISC		★ 1.80			
JUL -2A REST R	203	★ 11.20		★ 41.23	★ 41.23
JUL -2A REST R	203	★ 5.40			
JUL -2A REST R	203	★ 13.95			
JUL -2A REST R	203	★ 2.50			
JUL -2B REST R	203	★ 11.45		★ 74.28	★ 74.28
JUL -2B REST R	203	★ 29.30			
JUL -2B PHONE	203	★ <u>12.05</u>	J. Lloyd	★ 115.03	★ 115.03
JUL -2B ROOM	203	★ 22.50		★ 127.08	★ 127.08
JUL -2B TAX	203	★ 1.13			
JUL -3A REST R	203	★ 3.80		★ 150.71	★ 150.71
JUL -3A REST R	203	★ 2.20			
JUL -3A REST R	203	★ 6.90			
JUL -3A REST R	203	★ 2.50		★ 154.06	★ 166.11
				★ 166.11	

ROOM NO. 203

RATE: 22.50 + 1.13

PAID BY CHEQUE CASH

CHARGE X AMEX

OTHER

Regardless of charge instructions, the undersigned guest acknowledges the above as a personal indebtedness.

CHARGE TO Ok: John Lloyd

ADDRESS _____

TEL. READINGS

OUT _____

IN _____

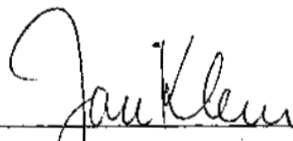
EXHIBIT "A"

EXPLORATIONWESTERN DISTRICTINDUCED POLARIZATION AND RESISTIVITY SURVEY COSTSHELMER PROPERTY, HEL 1-4 CLAIMS, NICOLA MINING DIVISIONN.T.S. 92I/2: 50°19'N - 120°41'W

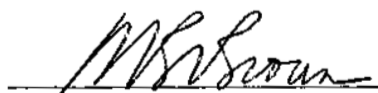
IP and resistivity survey done under contract by Eagle Geophysicsts Ltd.
during the period July 14-23, 1976:

1. Survey Costs		
10.25 equivalent survey days @ \$720 per day		\$ 7,380.00
0.5 travel day @ \$580 per day		\$ 295.00
travel, transportation, living expenses		\$ 1,485.48
magnetometer survey 10.6 miles @ \$85.00 per mile		\$ 901.00
		<hr/>
		\$ 10,061.48
2. Line Cutting		
50% of the total Gump-Helmer project		\$ 1,771.00
3. Drafting, Interpretation and Report Writing Costs		
J. Klein, Geophysicist 3 days @ \$125.00 = \$375.00		
J.P. Snyder, Draftsperson 3 days @ \$ 95.00 = \$285.00		
Cetra Enterprises Ltd. drafting. = \$285.00		
		<hr/>
		\$ 945.00
		<hr/>
		\$ 12,777.48
		<hr/> <hr/>

Signed:


Jan Klein, P.Eng.

THIS IS EXHIBIT "A" TO THE STATUTORY DECLARATION OF JAN KLEIN DECLARED
BEFOR ME THIS 23rd DAY OF NOVEMBER, 1976.


A COMMISSIONER FOR TAKING AFFIDAVITS
WITHIN BRITISH COLUMBIA

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.

In the Matter of

STATUTORY DECLARATION RELATING
TO EXPENDITURES OF A GEOPHYSICAL
SURVEY ON THE HELMER PROPERTY,
NICOLA MINING DIVISION.

To Wit:

I, JAN KLEIN, PROFESSIONAL ENGINEER

of THE MUNICIPALITY OF RICHMOND

in the Province of British Columbia, do solemnly declare that

1. Copies of a report regarding geophysical surveys on certain mineral claims situated in the Nicola Mining Division are being filed with the Mining Recorder in Vancouver.
2. Attached hereto, and marked with the letter "A" upon which I have signed my name at the time of declaring hereof, is a statement of expenditures incurred in connection with the Induced Polarization and Resistivity survey of the said claims showing in addition the dates during which those making the said survey performed their work.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the *City*
of *Vancouver*, in the
Province of British Columbia, this *25th*
day of *November*, A.D. *1976*

Jan Klein

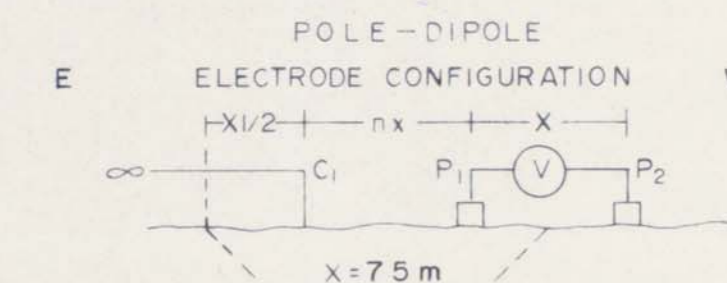
M. Brown

A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

MAYNARD E. BROWN
BARRISTER & SOLICITOR
1320-200 GRANVILLE SQUARE
VANCOUVER, B.C.
V6C 2R2

COMINCO LTD. HELMER PROPERTY HIGHLAND VALLEY AREA, NICOLA M.D., B.C.

LINE NO. 250 S



PLOTTING POINT
n = 1, 2, 3 & 4

SURFACE PROJECTION
OF ANOMALOUS ZONES

6119



CONTOURS OF CHARGEABILITY
IN 1.0 MILLISECONDS DATE SURVEYED JULY 1976

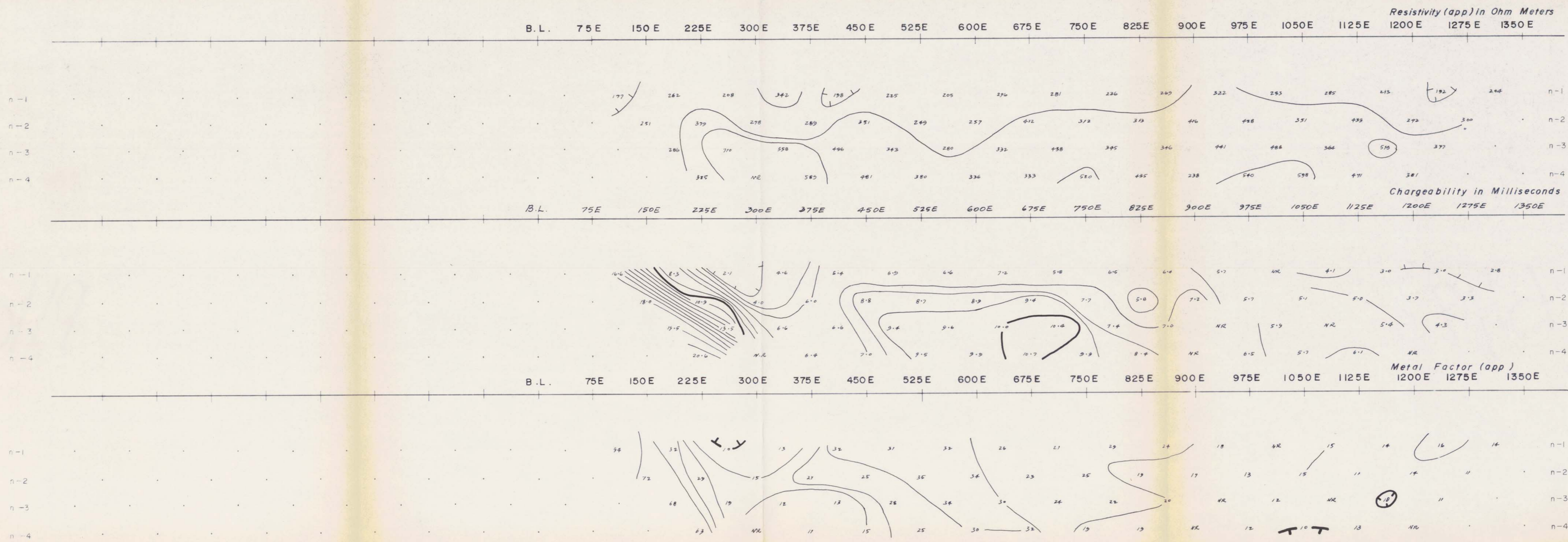
CONTOURS OF RESISTIVITY &
METAL FACTOR AT APPROVED

LOGARITHMIC INTERVALS
1, 10, 1.5, 2, 3, 5, 7.5

TRANSMITTER 7.5KW TIME DOMAIN
RECEIVER HUNTEC MK III TYPE

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6119
MAP NO. 2

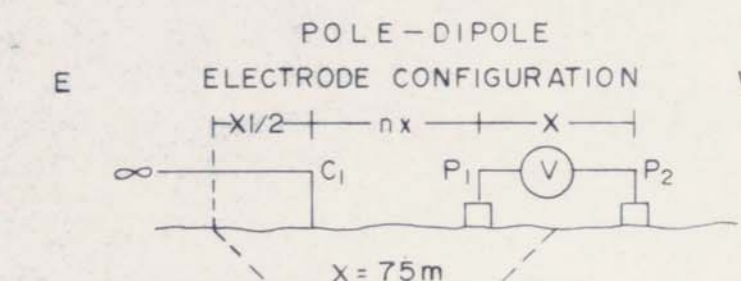
INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY EAGLE GEOPHYSICS LTD. (JOHN LLOYD M.Sc. P. Eng.)



LINE 250 S

COMINCO LTD. HELMER PROPERTY HIGHLAND VALLEY AREA, NICOLA M.D., B.C.

LINE NO. 500 S



6119

SURFACE PROJECTION
OF ANOMALOUS ZONES



CONTOURS OF CHARGEABILITY
IN 1.0 MILLISECONDS

CONTOURS OF RESISTIVITY &
METAL FACTOR AT
LOGARITHMIC INTERVALS

1, 10,
1.5, 2, 3, 5, 7.5

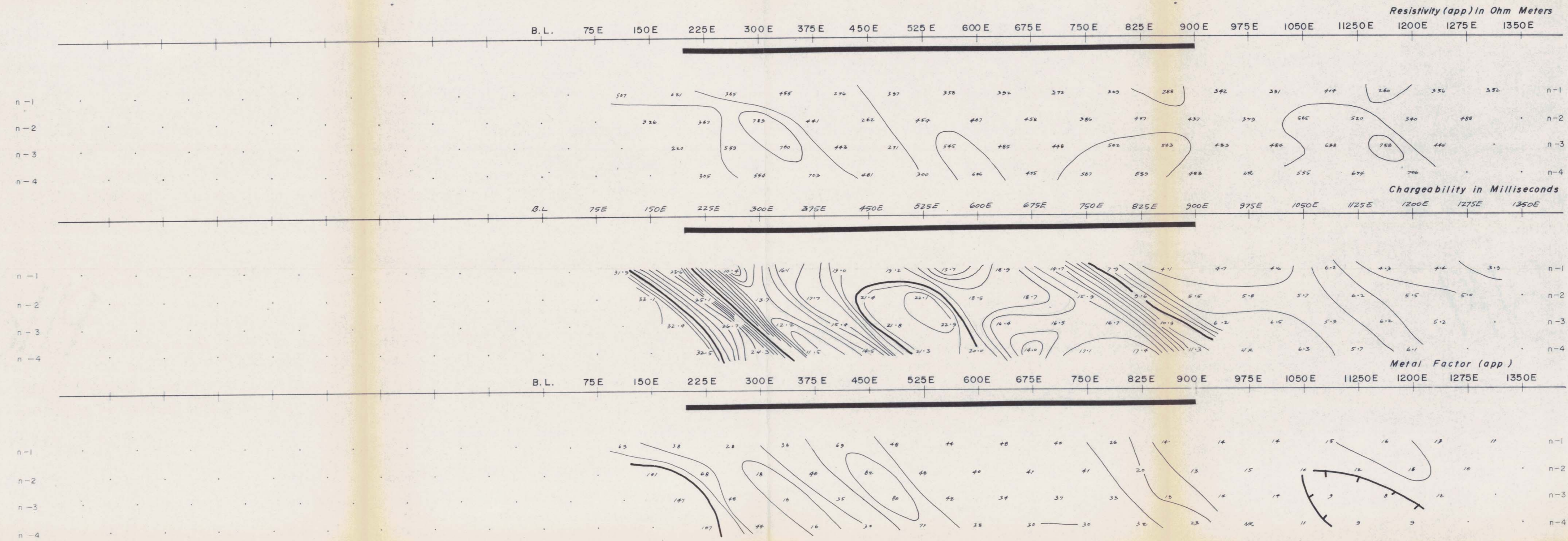
DATE SURVEYED JULY 1976

APPROVED [Signature]

DATE [Blank]

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6119
MAP NO. 3

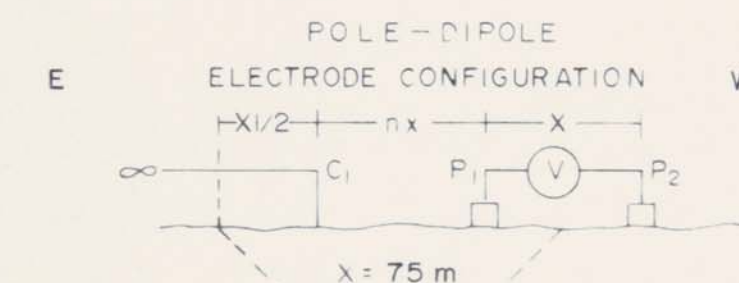
INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY EAGLE GEOPHYSICS LTD. (JOHN LLOYD M.Sc. P. Eng.)



LINE 500 S

COMINCO LTD. HELMER PROPERTY HIGHLAND VALLEY AREA, NICOLA M.D., B. C.

LINE NO. 750 S



PLOTTING POINT
n = 1, 2, 3, 4

6119

SURFACE PROJECTION
OF ANOMALOUS ZONES



CONTOURS OF CHARGEABILITY
IN 1.0 MILLISECOND

CONTOURS OF RESISTIVITY &
METAL FACTOR AT
LOGARITHMIC INTERVALS
1, 10, 1.5, 2, 3, 5, 7.5

DATE SURVEYED JULY 19 76

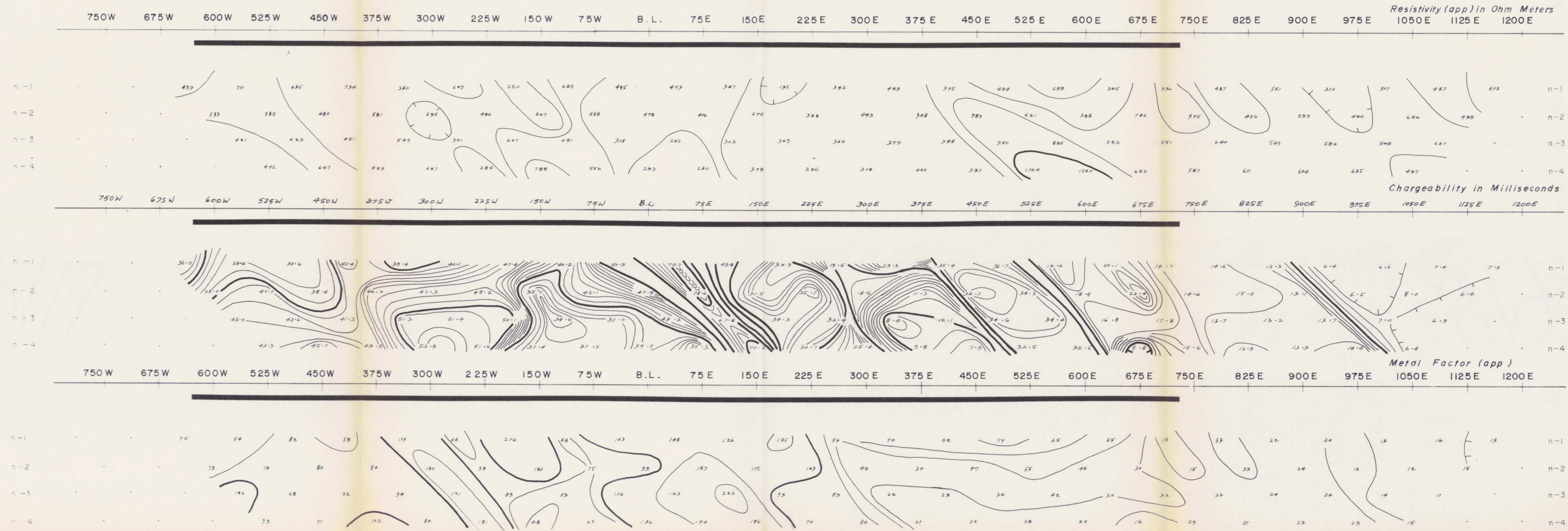
APPROVED *Branson Lumley*

DATE

TRANSMITTER 7.5KW TIME DOMAIN
RECEIVER HUNTEC MK III TYPE

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. **6119**
MAP NO. **4**

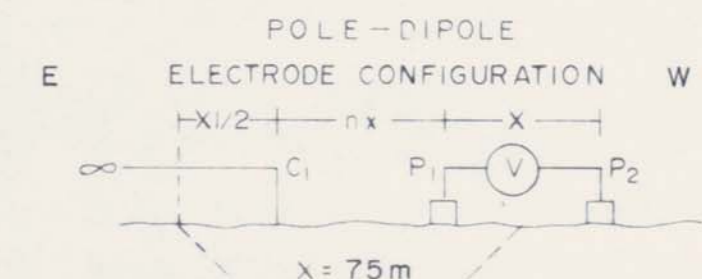
INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY EAGLE GEOPHYSICS LTD. (JOHN LLOYD M.Sc. P. Eng.)



LINE 750 S

COMINCO LTD. HELMER PROPERTY HIGHLAND VALLEY AREA, NICOLA M.D., B.C.

LINE NO. 1000 S



6119

PLOTTING POINT
n=1, 2, 3 & 4

SURFACE PROJECTION
OF ANOMALOUS ZONES



CONTOURS OF CHARGEABILITY
IN 1.0 MILLISECONDS
CONTOURS OF RESISTIVITY &
METAL FACTOR AT
LOGARITHMIC INTERVALS
1, 10,
1.5, 2, 3, 5, 7.5

DATE SURVEYED JULY 1976
APPROVED _____
DATE _____

TRANSMITTER 7.5KW TIME DOMAIN
RECEIVER HUNTEC MK III TYPE

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6119
MAP NO. 5

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY EAGLE GEOPHYSICS LTD., (JOHN LLOYD M.Sc.P. Eng.)

Resistivity (app) in Ohm Meters

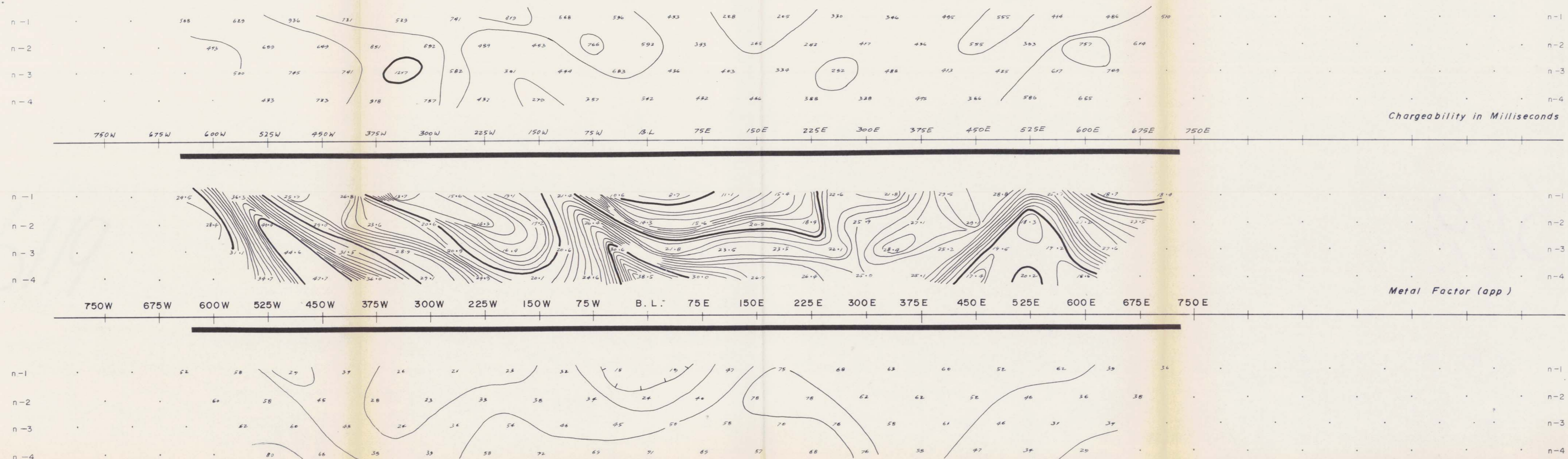
Chargeability in Milliseconds

Metal Factor (app)

750W 675W 600W 525W 450W 375W 300W 225W 150W 75W B.L. 75E 150E 225E 300E 375E 450E 525E 600E 675E 750E

750W 675W 600W 525W 450W 375W 300W 225W 150W 75W B.L. 75E 150E 225E 300E 375E 450E 525E 600E 675E 750E

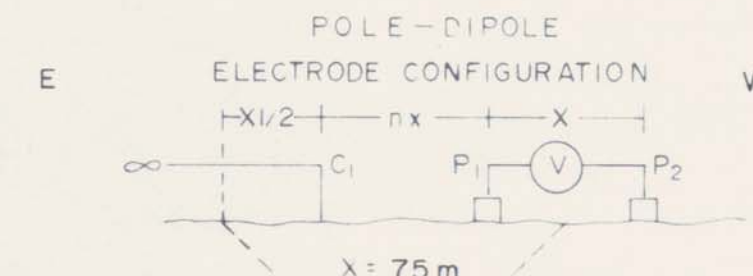
750W 675W 600W 525W 450W 375W 300W 225W 150W 75W B.L. 75E 150E 225E 300E 375E 450E 525E 600E 675E 750E



LINE 1000 S

COMINCO LTD. HELMER PROPERTY HIGHLAND VALLEY AREA, NICOLA M.D., B.C.

LINE NO. 1250 S



PLOTTING POINT
n = 1, 2, 3 & 4

6119

SURFACE PROJECTION
OF ANOMALOUS ZONES



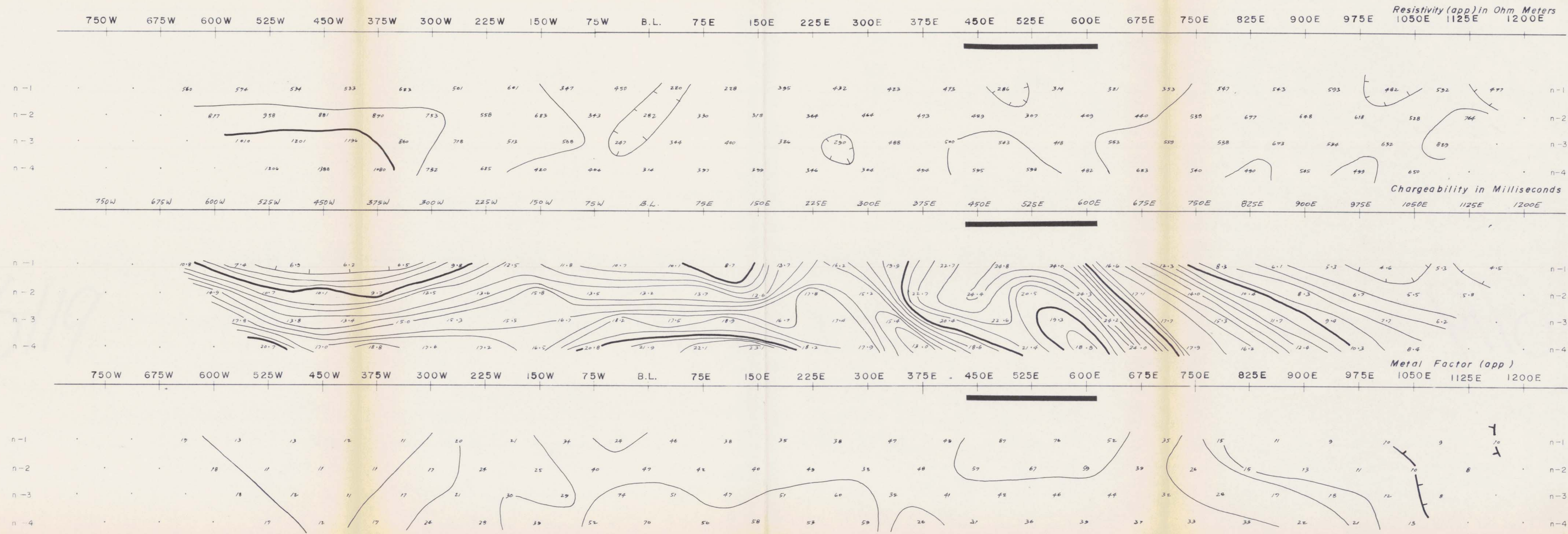
CONTOURS OF CHARGEABILITY IN 1.0 MILLISECOND DATE SURVEYED JULY 1976

CONTOURS OF RESISTIVITY & METAL FACTOR AT LOGARITHMIC INTERVALS APPROVED *[Signature]*

1, 10, 1.5, 2, 3, 5, 7.5 DATE

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. **6119**
MAP NO. **6**

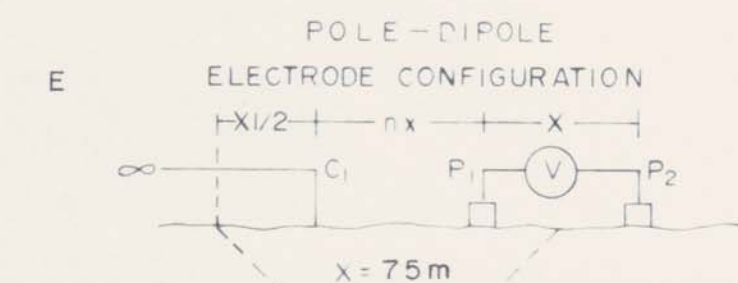
INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY EAGLE GEOPHYSICS LTD. (JOHN LLOYD M.Sc. P. Eng.)



LINE 1250 S

COMINCO LTD. HELMER PROPERTY HIGHLAND VALLEY AREA, NICOLA M.D., B.C.

LINE NO. 1500 S



PLOTTING POINT
n=1, 2, 3 & 4

6119

SURFACE PROJECTION
OF ANOMALOUS ZONES



CONTOURS OF CHARGEABILITY
IN 1.0 MILLISECONDS

DATE SURVEYED

CONTOURS OF RESISTIVITY &
METAL FACTOR AT
LOGARITHMIC INTERVALS

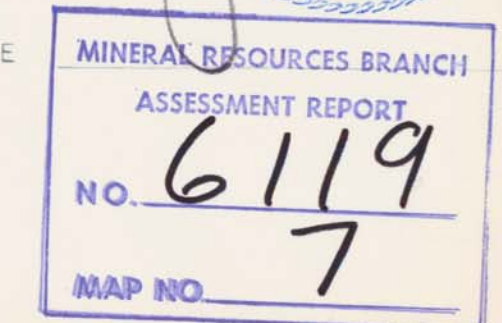
APPROVED

1, 10,

1.5, 2, 3, 5, 7.5

DATE

TRANSMITTER 7.5 KW TIME DOMAIN
RECEIVER HUNTEC MK III TYPE

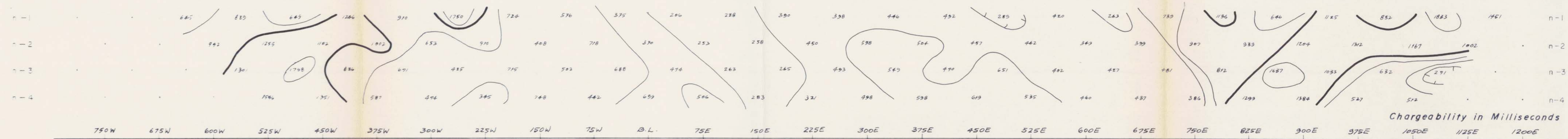


INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY EAGLE GEOPHYSICS LTD., (JOHN LLOYD M.Sc. P. Eng.)

LINE 1500 S

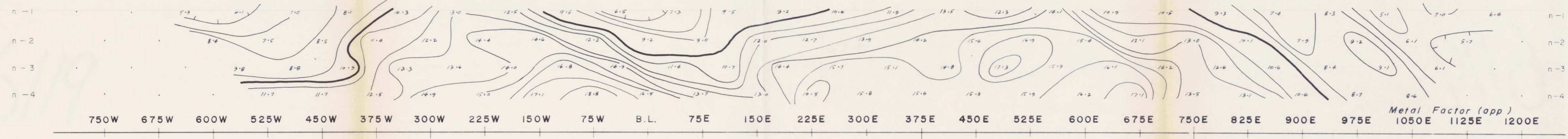
750W 675W 600W 525W 450W 375W 300W 225W 150W 75W B.L. 75E 150E 225E 300E 375E 450E 525E 600E 675E 750E 825E 900E 975E 1050E 1125E 1200E

Resistivity (app) in Ohm Meters
1050E 1125E 1200E

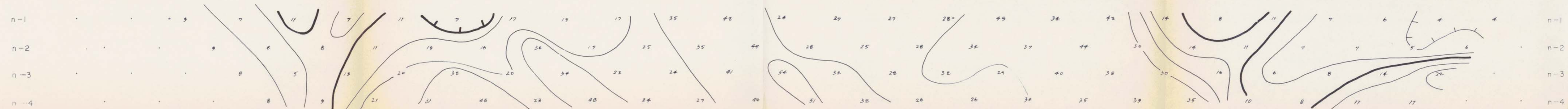


750W 675W 600W 525W 450W 375W 300W 225W 150W 75W B.L. 75E 150E 225E 300E 375E 450E 525E 600E 675E 750E 825E 900E 975E 1050E 1125E 1200E

Metal Factor (app)
1050E 1125E 1200E



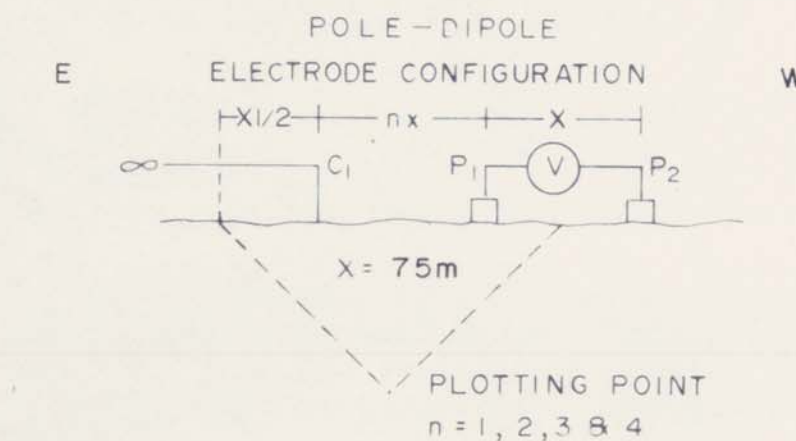
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750W 675W 600W 525W 450W 375W 300W 225W 150W 75W B.L. 75E 150E 225E 300E 375E 450E 525E 600E 675E 750E 825E 900E 975E 1050E 1125E 1200E

COMINCO LTD. HELMER PROPERTY HIGHLAND VALLEY AREA, NICOLA M.D., B.C.

LINE NO. 1750 S



LINE 1750 S

6119

SURFACE PROJECTION
OF ANOMALOUS ZONES



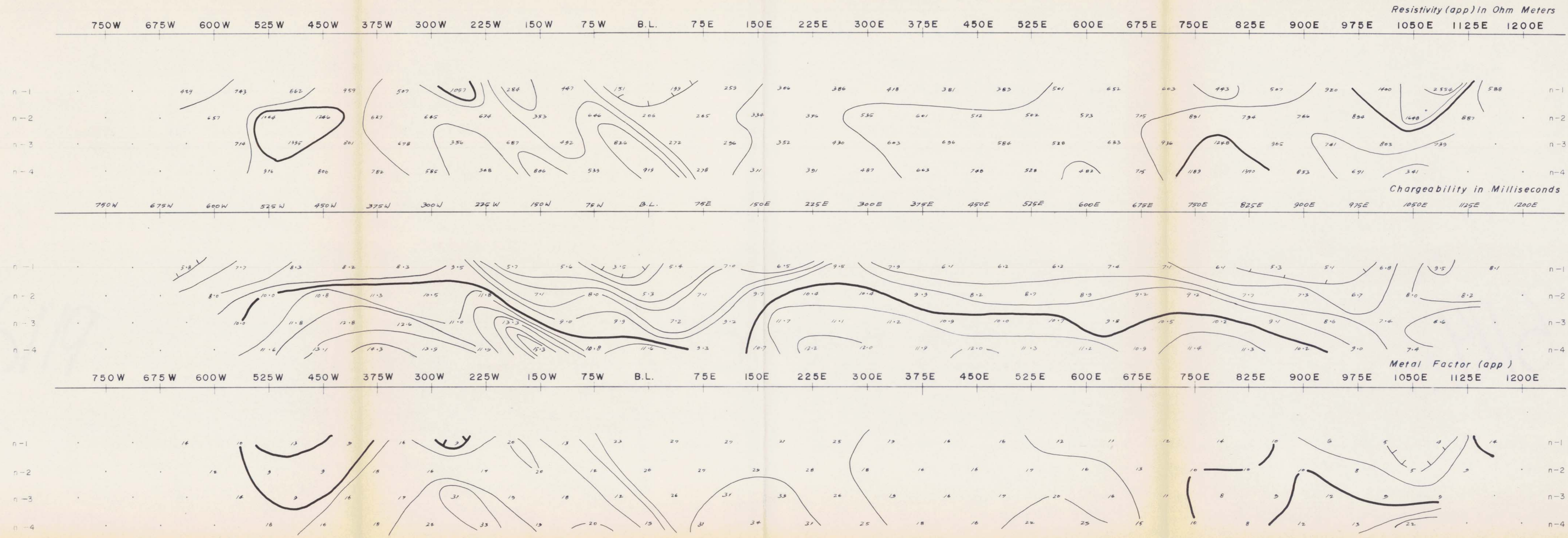
CONTOURS OF CHARGEABILITY IN 1.0 MILLISECONDS DATE SURVEYED JULY 1976

CONTOURS OF RESISTIVITY & METAL FACTOR AT LOGARITHMIC INTERVALS APPROVED

1, 10, 1.5, 2, 3, 5, 7.5 DATE

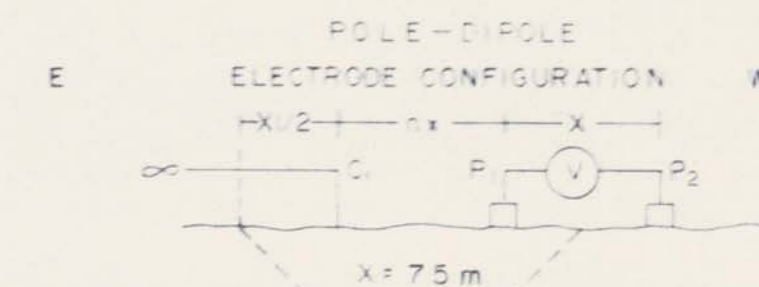
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6119
MAP NO. 8

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY EAGLE GEOPHYSICS LTD., (JOHN LLOYD M.Sc.P. Eng.)



COMINCO LTD. HELMER PROPERTY HIGHLAND VALLEY AREA, NICOLA M.D., B.C.

LINE NO. 2000 S



PLOTTING POINT
n = 1, 2, 3 & 4

6119

SURFACE PROJECTION
OF ANOMALOUS ZONES



CONTOURS OF CHARGEABILITY IN 1.0 MILLISECOND

CONTOURS OF RESISTIVITY & METAL FACTOR AT LOGARITHMIC INTERVALS

1, 10, 1.5, 2, 3, 5, 7.5

TRANSMITTER 7.5KW TIME DOMAIN RECEIVER HUNTEC MK III TYPE

DATE MINERAL RESOURCES BRANCH ASSESSMENT REPORT

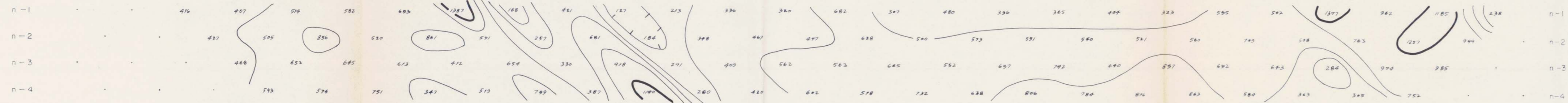
NO. **6119**

MAP NO. **9**

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY EAGLE GEOPHYSICS LTD., (JOHN LLOYD M.Sc. P. Eng.)

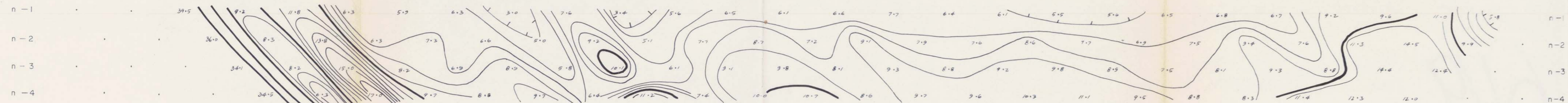
750W 675W 600W 525W 450W 375W 300W 225W 150W 75W B.L. 75E 150E 225E 300E 375E 450E 525E 600E 675E 750E 825E 900E 975E 1050E 1125E 1200E

Resistivity (app) in Ohm Meters



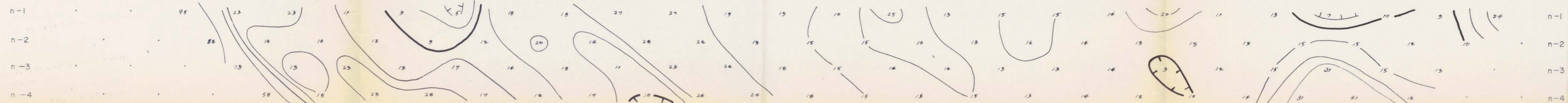
Chargeability in Milliseconds

750W 675W 600W 525W 450W 375W 300W 225W 150W 75W B.L. 75E 150E 225E 300E 375E 450E 525E 600E 675E 750E 825E 900E 975E 1050E 1125E 1200E

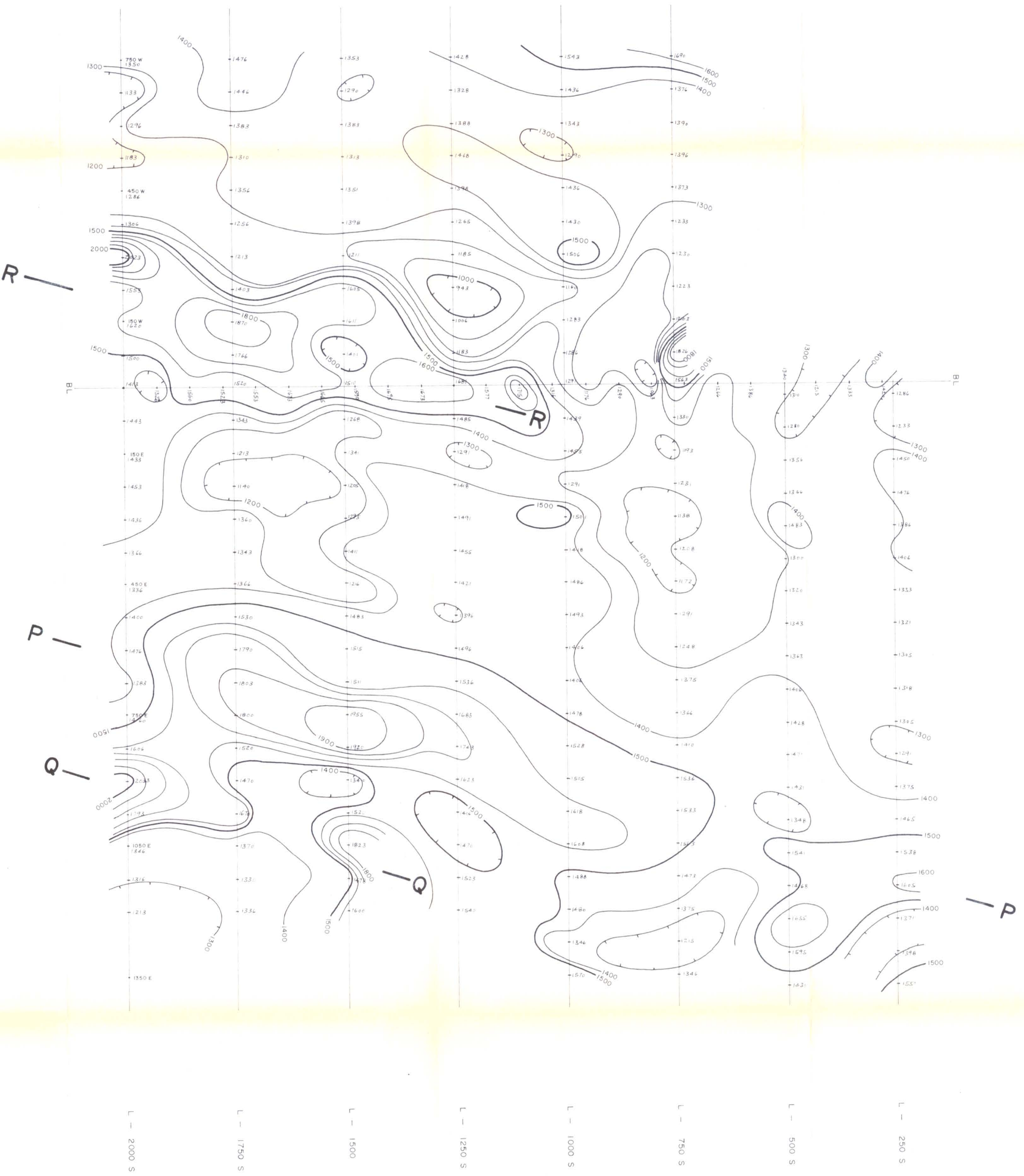


Metal Factor (app)

750W 675W 600W 525W 450W 375W 300W 225W 150W 75W B.L. 75E 150E 225E 300E 375E 450E 525E 600E 675E 750E 825E 900E 975E 1050E 1125E 1200E



LINE 2000 S



LEGEND
 100 GAMMAS
 500 GAMMAS
 INSTRUMENT - MF-2 FLUX GATE MAGNETOMETER

TO ACCOMPANY A REPORT BY JANI KLEIN, P. ENG.

Drawn by	HELMER LAKE PROPERTY
Checked by	HELMER LAKE PROPERTY
Project No.	
Sheet No.	
Scale	1:5000
Date	JULY 1976
Drawn by	NICOLA, M.D., B.C.

MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
 NO. 6119
 MAP NO. 1

6119