

COMINCO LTD.

EXPLORATION

NTS: 82M/13E

WESTERN DISTRICT

25 JUNE 1981

GEOPHYSICAL REPORT

ON AN

INDUCED POLARIZATION SURVEY

RIM PROPERTY

RAFT RIVER AREA

KAMLOOPS MINING DIVISION, B.C.

LATITUDE: 51°52'N

LONGITUDE: 119°45'W

FIELD WORK PERFORMED: June 7-13, 1981

ON CLAIMS: RIM 1,2,5,6

REPORT BY

ALAN R. SCOTT

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT

9199

NO. \_\_\_\_\_

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ON AN  
INDUCED POLARIZATION SURVEY  
RIM PROPERTY

INTRODUCTION

During the period June 7-13, 1981, a Cominco geophysical crew completed an induced polarization survey over four lines covering a portion of the Rim claims. The Rim property is located on the east side of the West Raft River canyon, some 27 km north of Vavenby, B.C. Access is via a network of logging roads along the Raft River Valley.

This report describes the procedures used on the survey, presents the data, and briefly discusses the results.

INDUCED POLARIZATION SURVEY

A Huntec M4 LOPO induced polarization transmitter in combination with two Scintrex IPR-8 receivers were used on the Rim survey. One receiver operator read the first two separations (n=1 and 2) and the other the third separation.

Readings were taken in the time domain using a 2 second on/2 second off alternating square wave signal. The chargeability values plotted are those for the  $M_{232}$  window of from 650-1170 milliseconds following cessation of the current pulse. Units of chargeability (IP) response for the IPR-8 receiver are millivolts per volt.

A pole dipole electrode array was used on the survey with an "a" spacing of 50 metres and "n" separations of 1, 2 and 3. The current electrode was kept to the east of the receiving dipole on all survey lines.

The apparent resistivity values are given in units of ohm meters and were calculated from the relation:-

$$\text{apparent resistivity} = (V/I) \cdot K$$

2/25 June 1981.





where V is the voltage across the measuring electrode pair during the current (I) on period and K is a geometric factor that is constant for a given "a" and "n".

### Magnetics

A Scintrex MP-2 total field proton precession magnetometer was used for the magnetics survey. Corrections for diurnal drift were made by reference to a Scintrex MBS-2 base station magnetometer.

### DISCUSSION OF RESULTS

The chargeability (IP) and apparent resistivity results are plotted in pseudo section format on accompanying plates 209 81-2 to 5. IP anomalies have been categorized on the pseudosections in the following manner:

	strong IP high	( $>40 \frac{mv}{v}$ at near separation )
	moderate IP high	( $30-40 \frac{mv}{v}$ at near separation)
	weak IP high	( $20-30 \frac{mv}{v}$ at near separation)
		( $>20 \frac{mv}{v}$ at further separation)

The  $n=1$  IP and apparent resistivity results are also plotted in contour plan form on plates 209 81-6 and 7 respectively. The greater than  $20 \frac{mv}{v}$  response area is indicated by the stippled pattern on the IP plan.

The pseudosection format is a strictly schematic presentation, and no specific target depth or geometry can be inferred directly from it. A further cautionary note is that the resistivity results are influenced to some extent by changes in topography. In particular, the sharp break in topography at the canyon rim would be expected to "create" an apparent resistivity high at the break.

The contour plan shows that the survey area is generally characterized by above background response (greater than  $10 \frac{mv}{v}$ ) on the east and low response on the west side. A moderate to strong anomaly was detected from 10000E to 10150E on line 10600N, and moderately high anomalies plot at 10125E on line 11000N and at 9875E and line 10800N.

Subject to correlation of these geophysical results to geochemistry and geology, further work (including fill in and expansion of the IP grid) to determine the causative source(s) appears warranted.

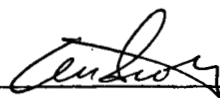
3/25 June 1981

CONCLUSIONS

During the period of June 7-13, 1981, four lines of multiseparation time domain IP were surveyed on portions of the Rim claims. The work revealed that the east portion of the grid is underlain by units having above background chargeability response, and contains two anomalies of moderately strong response (10125E on line 11000N and 9875E on line 10800N) and one anomaly of moderate to strong response (10000 to 10150E on line 10600N).

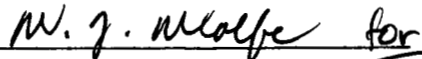
Subject to a geochemical and geological assessment, further work (including fill in and extension of the IP grid) to determine their causative source(s) appears to be warranted.

Respectfully submitted:



Alan R. Scott  
Geophysicist

Approved for release by:



G. Harden, Manager  
Exploration  
Western District.

ARS/pm  
25 June 1981

Distribution:

Mining Recorder (2)  
Western District (1)  
Geophysics File (1)

APPENDIX I

IN THE MATTER OF THE B.C. MINERAL ACT  
AND IN THE MATTER OF A GEOPHYSICAL PROGRAMME  
CARRIED OUT ON PORTIONS OF THE RIM MINERAL CLAIMS  
ON THE RIM PROPERTY  
LOCATED 27 KM NORTH OF VAVENBY, B.C. IN THE KAMLOOPS MINING DIVISION  
OF THE PROVINCE OF BRITISH COLUMBIA, MORE PARTICULARLY  
N.T.S.: 82 M 13 E

S T A T E M E N T

I, Alan R. Scott, of the City of Vancouver, in the Province of British Columbia, make oath and say:-

1. THAT I am employed as a geophysicist by Cominco Ltd., and, as such, have a personal knowledge of the facts to which I hereinafter depose;
2. THAT the annexed hereto and marked as "Appendix II" to this statement is a true copy of expenditures incurred on geophysical survey on the Rim Property;
3. THAT the said expenditures were incurred for the purpose of mineral exploration of the above noted claims between the 7th day and 13th day of June, 1981.

signed: \_\_\_\_\_

  
Alan R. Scott, Geophysicist

25 June 1981

APPENDIX II

STATEMENT OF EXPENDITURES

RIM PROPERTY

(Induced Polarization Survey)

1. Salaries

I. Jackisch, geophysicist, June 8-12,		
5 days @ \$135 =	\$	675.00
T. Wong, geophysicist-in-training, June 7-13		
7 days @ \$110 =		770.00
B. Price, helper, June 7-13,		
7 days @ \$93.30=		653.10
P. Evans, helper, June 7-13,		
7 days @ \$93.30=		653.10
T. Adlington, helper, June 7-13,		
7 days @ \$71.43=		500.00
		<hr/>
		\$ 3,251.20

2. Equipment rentals

IP survey system plus truck 4 man days @ \$170 =	<hr/>	680.00	
			\$ 680.00

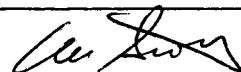
3. Charges per survey day

(towards report, drafting, data processing)			
4 days IP survey @ \$225 =	\$	<hr/>	900.00
			\$ 900.00

4. Miscellaneous expenses

(rooms, meals, consumables, travel)			<hr/>	\$ 1,942.65
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Total expenditures			<hr/>	\$ 6,773.85
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25 June 1981

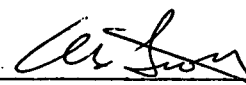
APPENDIX III

C E R T I F I C A T I O N

I, Alan R. Scott, of 4013 West 14th Avenue, in the City of Vancouver, in the Province of British Columbia, do hereby certify:-

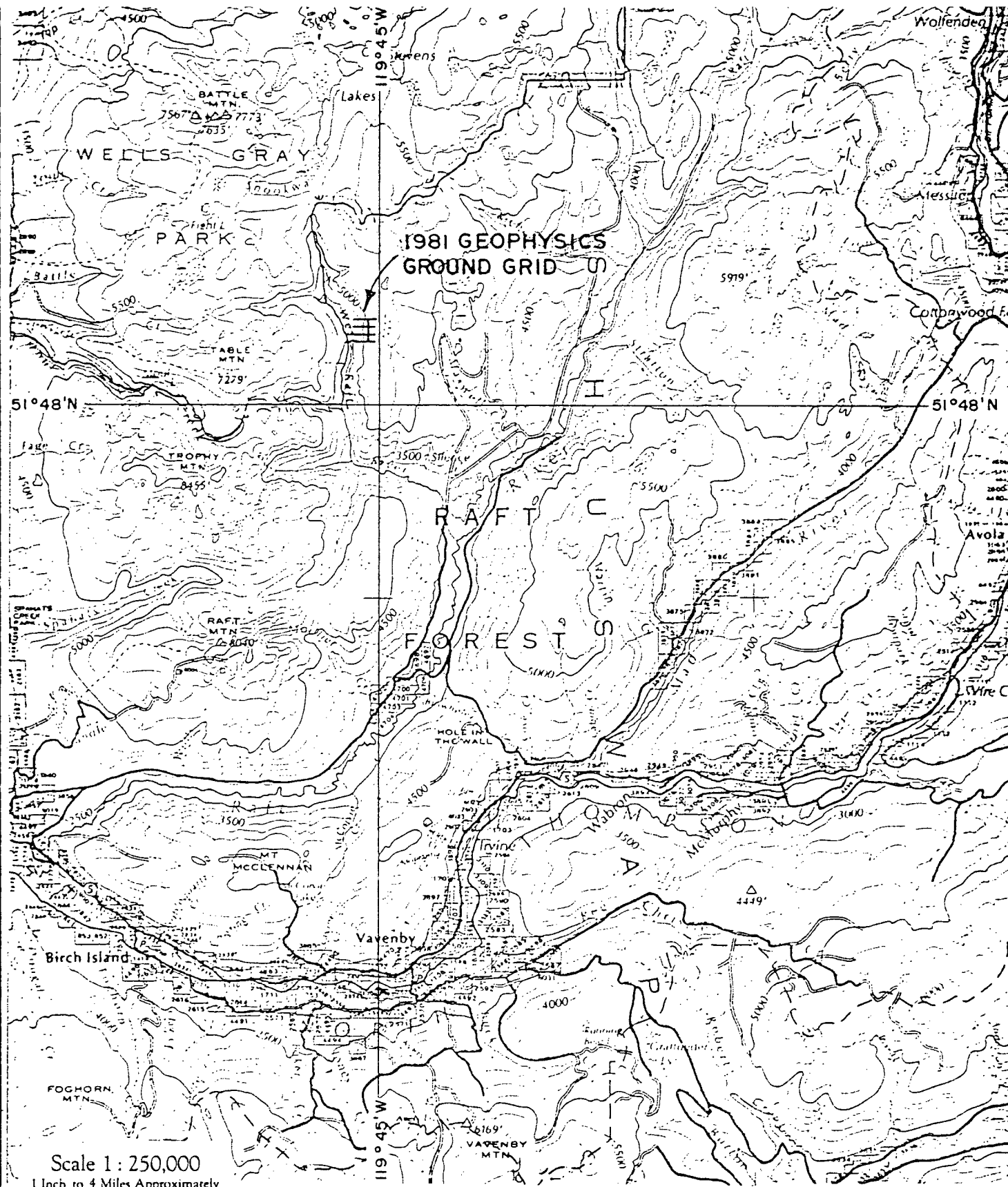
1. THAT I graduated from the University of British Columbia in 1970 with a B.Sc. in Geophysics;
2. THAT I am a member of the Association of Professional Engineers of the Province of Saskatchewan, the Society of Exploration Geophysicists of America, and the British Columbia Geophysical Society;
3. THAT I have been practising my profession for the past eleven years.

Signed: \_\_\_\_\_

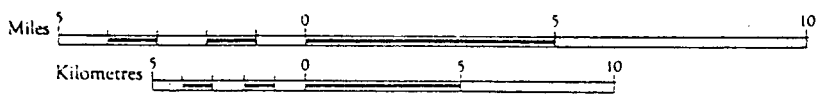
  
Alan R. Scott, Geophysicist

25 June 1981

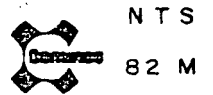




Scale 1 : 250,000  
1 Inch to 4 Miles Approximately



RIM CLAIMS

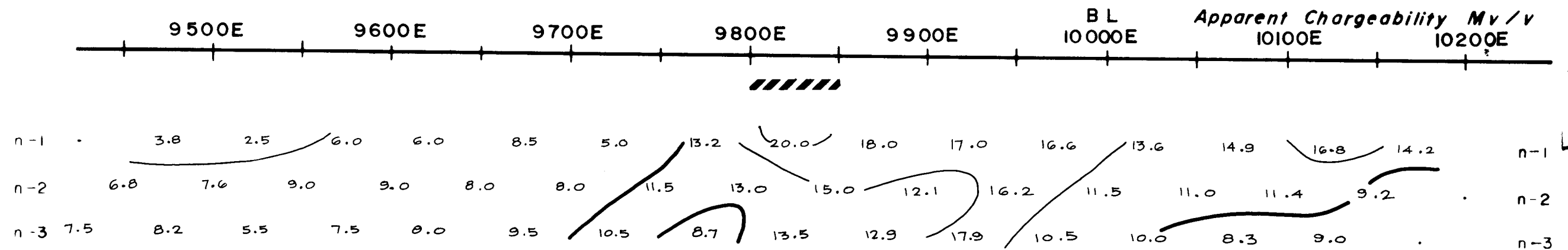
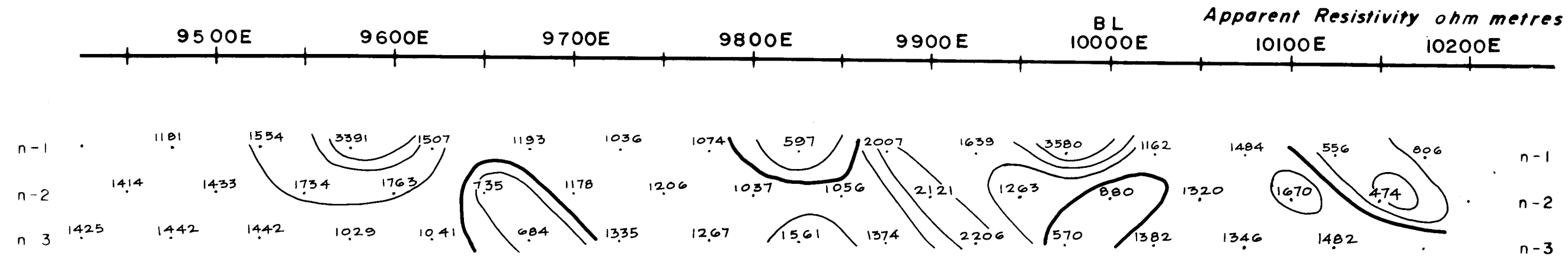


Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

LOCATION MAP  
KAM LOOPS M. D., B. C.

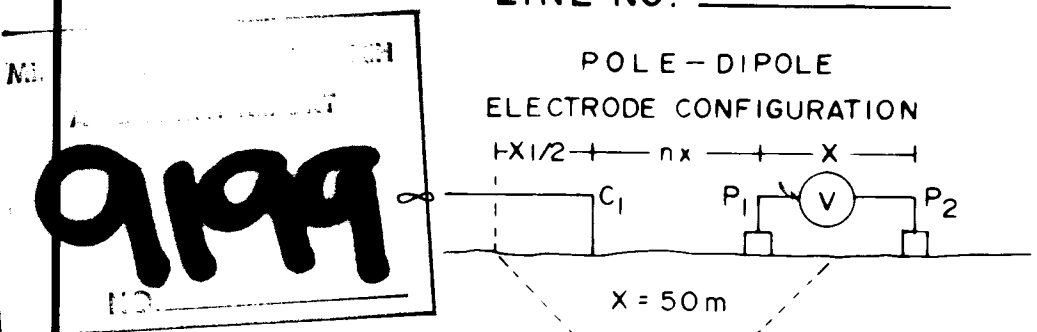
Scale: 1 : 250,000      Date: JUNE 1981      Plate: 209-81-1

COMINCO LTD.  
RIM CLAIMS  
KAMLOOPS M.D., B.C.



Magnetometer Survey Gammas

9500E	9600E	9700E	9800E	9900E	10000E	10100E	10200E



CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE CHARGEABILITY (IP) INTERPRETATION

- STRONG CHARGEABILITY HIGH
- MODERATE CHARGEABILITY HIGH
- WEAK CHARGEABILITY HIGH
- IP HIGH AT FURTHER SEPARATIONS

DATE SURVEYED JUNE 8,9 1981

CONTOUR INTERVALS:  
APP RES. — 1,1.5,2,3,5,7.5,10ohm metres APPROVED [Signature]  
APP CHARG. — 0.5 Mv/v

DATE \_\_\_\_\_

TRANSMITTER — HUNTEC M4 LOPO  
RECEIVER — SCINTREX IPR-8

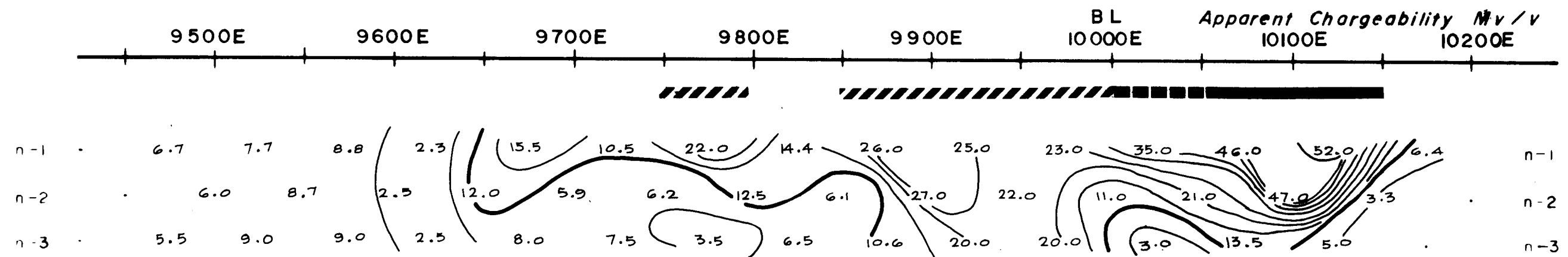
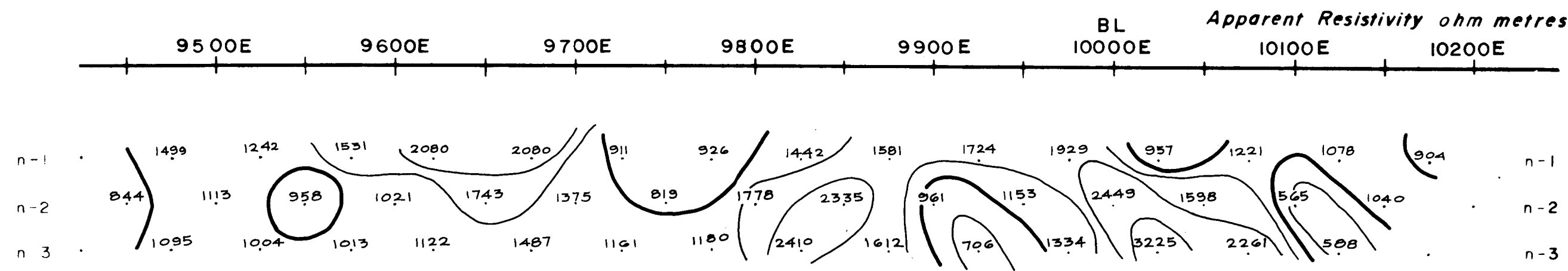
INDUCED POLARIZATION AND RESISTIVITY SURVEY  
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 10400N

N.T.S. 82 M 13E

DWG. NO. 209-81-3

# COMINCO LTD. RIM CLAIMS KAMLOOPS M.D., B.C.



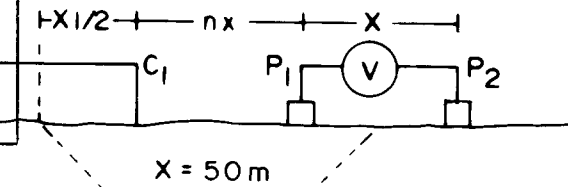
BL *Magnetometer Survey Gammas*

9500E 9600E 9700E 9800E 9900E 10000E 10100E 10200E


MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**999**  
NO.

LINE NO. 10600 N

POLE-DIPOLE  
ELECTRODE CONFIGURATION



PLOTTING POINT  
n = 1, 2, 3

CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE  
CHARGEABILITY (IP) INTERPRETATION

- STRONG CHARGEABILITY HIGH
- MODERATE CHARGEABILITY HIGH
- WEAK CHARGEABILITY HIGH
- IP HIGH AT FURTHER SEPARATIONS

DATE SURVEYED JUNE 10, 1981

CONTOUR INTERVALS :

APP RES. — 1, 1.5, 2, 3, 5, 7.5, 10 ohm metres  
APP CHARG. — 5.0 Mv/v

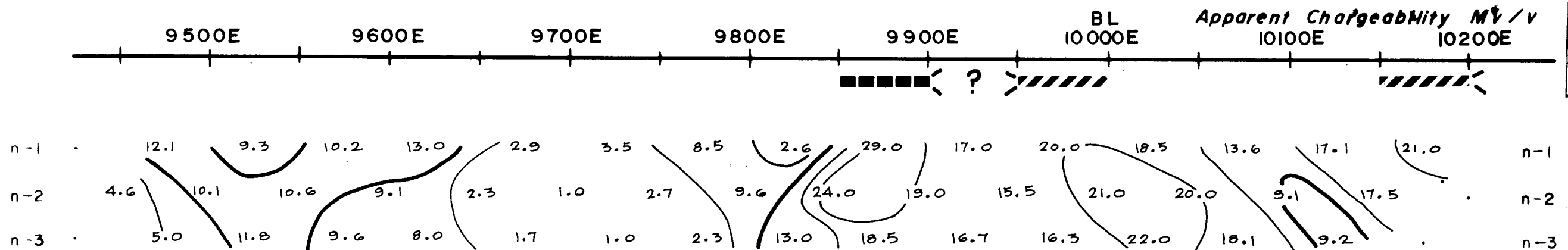
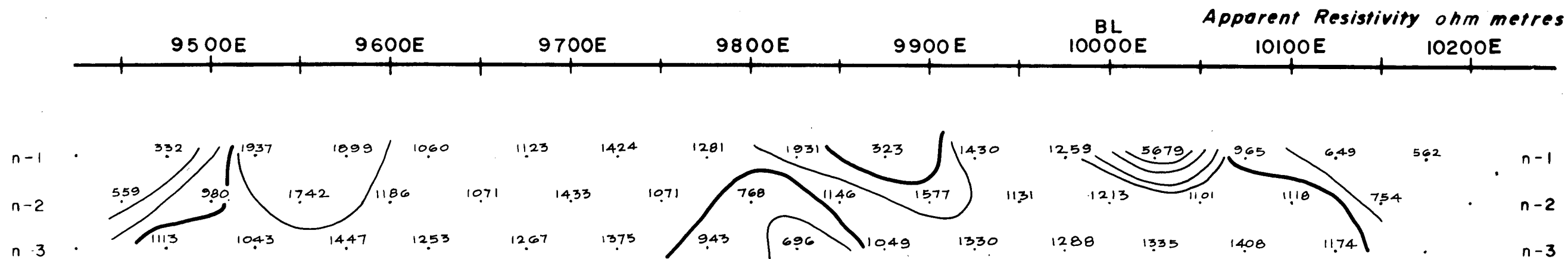
DATE \_\_\_\_\_

TRANSMITTER — HUNTEC M4 LOPO  
RECEIVER — SCINTREX IPR-8

INDUCED POLARIZATION AND RESISTIVITY SURVEY  
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

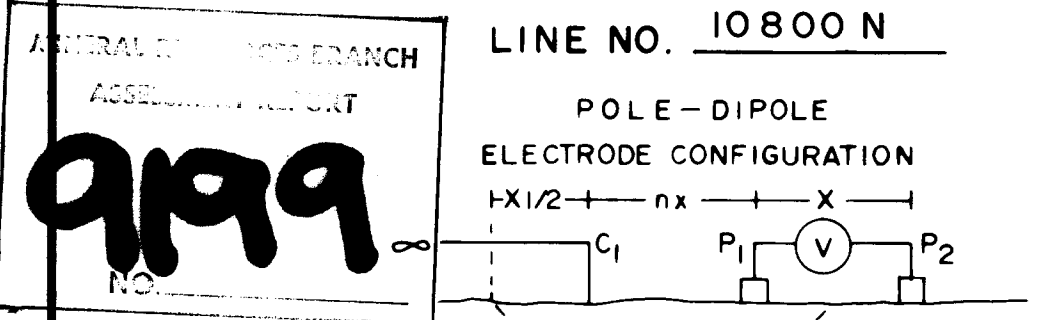
LINE 10600 N

# COMINCO LTD. RIM CLAIMS KAMLOOPS M.D., B.C.



**Magnetometer Survey Gammas**

	9500E	9600E	9700E	9800E	9900E	10000E	10100E	10200E



CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE  
CHARGEABILITY (IP) INTERPRETATION

■■■■■ STRONG CHARGEABILITY HIGH  
 ■■■■■ MODERATE CHARGEABILITY HIGH  
 ▨▨▨▨ WEAK CHARGEABILITY HIGH  
 --- IP HIGH AT FURTHER SEPARATIONS

DATE SURVEYED JUNE 11, 1981

CONTOUR INTERVALS:  
 APP. RES. — 1, 1.5, 2, 3, 5, 7.5, 10 ohm metres  
 APP. CHARG. — 5.0 Mv/v

APPROVED

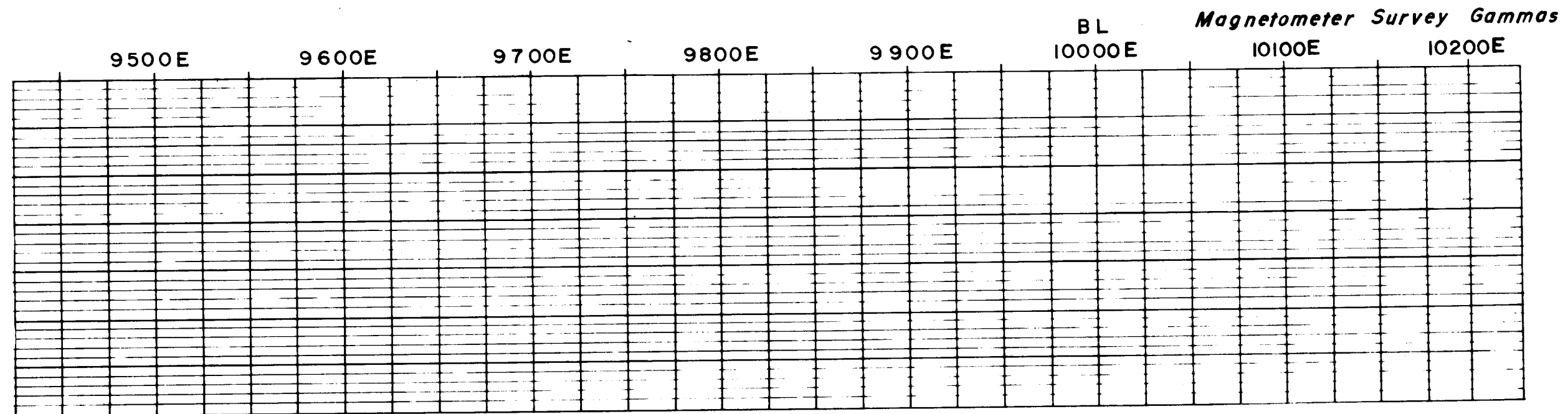
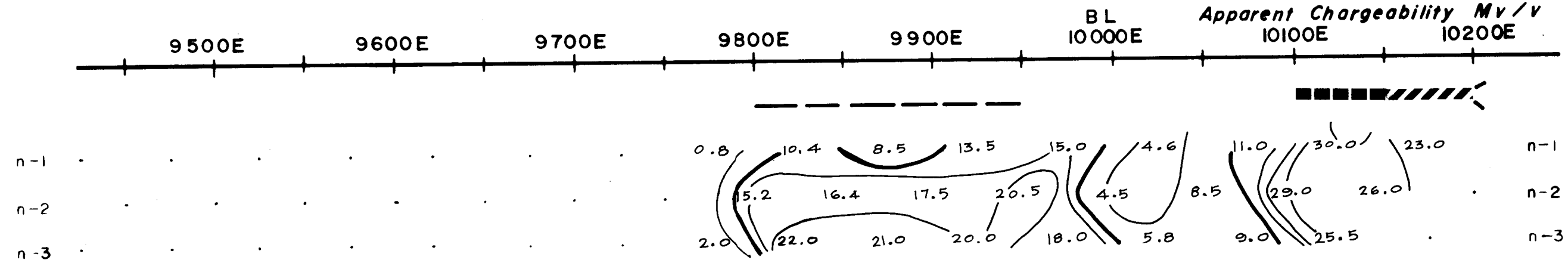
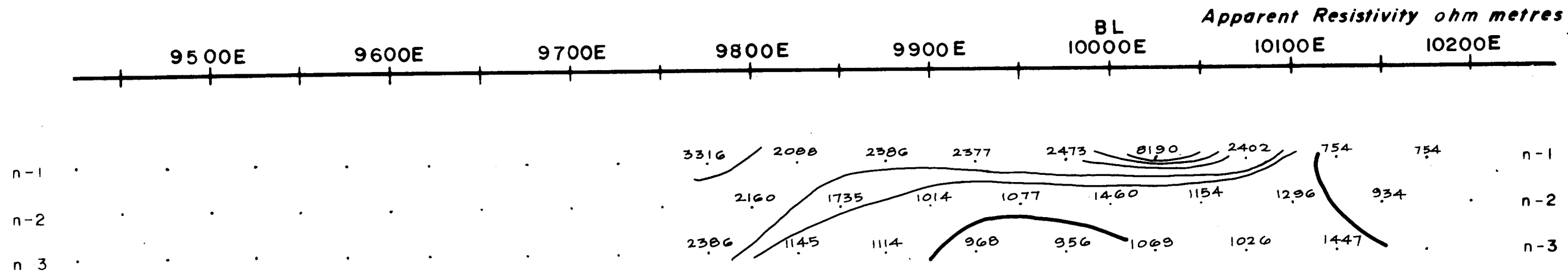
DATE \_\_\_\_\_

TRANSMITTER — HUNTEC M4 LOPO  
 RECEIVER — SCINTREX IPR-8

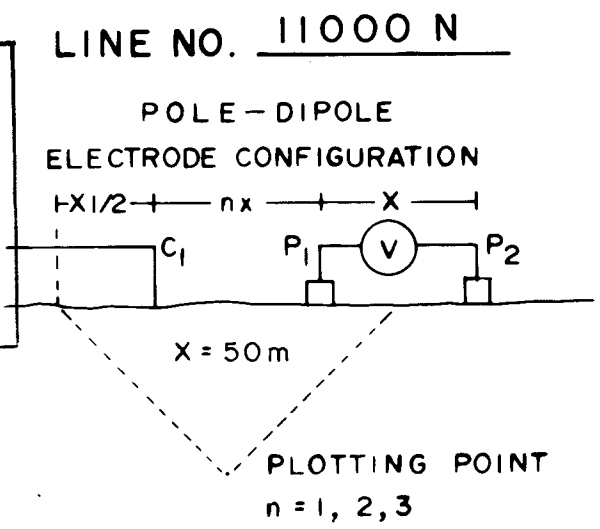
**INDUCED POLARIZATION AND RESISTIVITY SURVEY**  
 SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 10800 N

# COMINCO LTD. RIM CLAIMS KAMLOOPS M.D., B.C.



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**9199**  
NO.



CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE  
CHARGEABILITY (IP) INTERPRETATION

- STRONG CHARGEABILITY HIGH
- MODERATE CHARGEABILITY HIGH
- WEAK CHARGEABILITY HIGH
- IP HIGH AT FURTHER SEPARATIONS

DATE SURVEYED JUNE 12, 1981

CONTOUR INTERVALS :

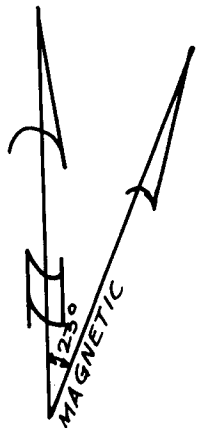
APP RES. — 1, 1.5, 2, 3, 5, 7.5, 10 ohm metres  
APP CHARG. — 5.0 Mv/v

DATE \_\_\_\_\_

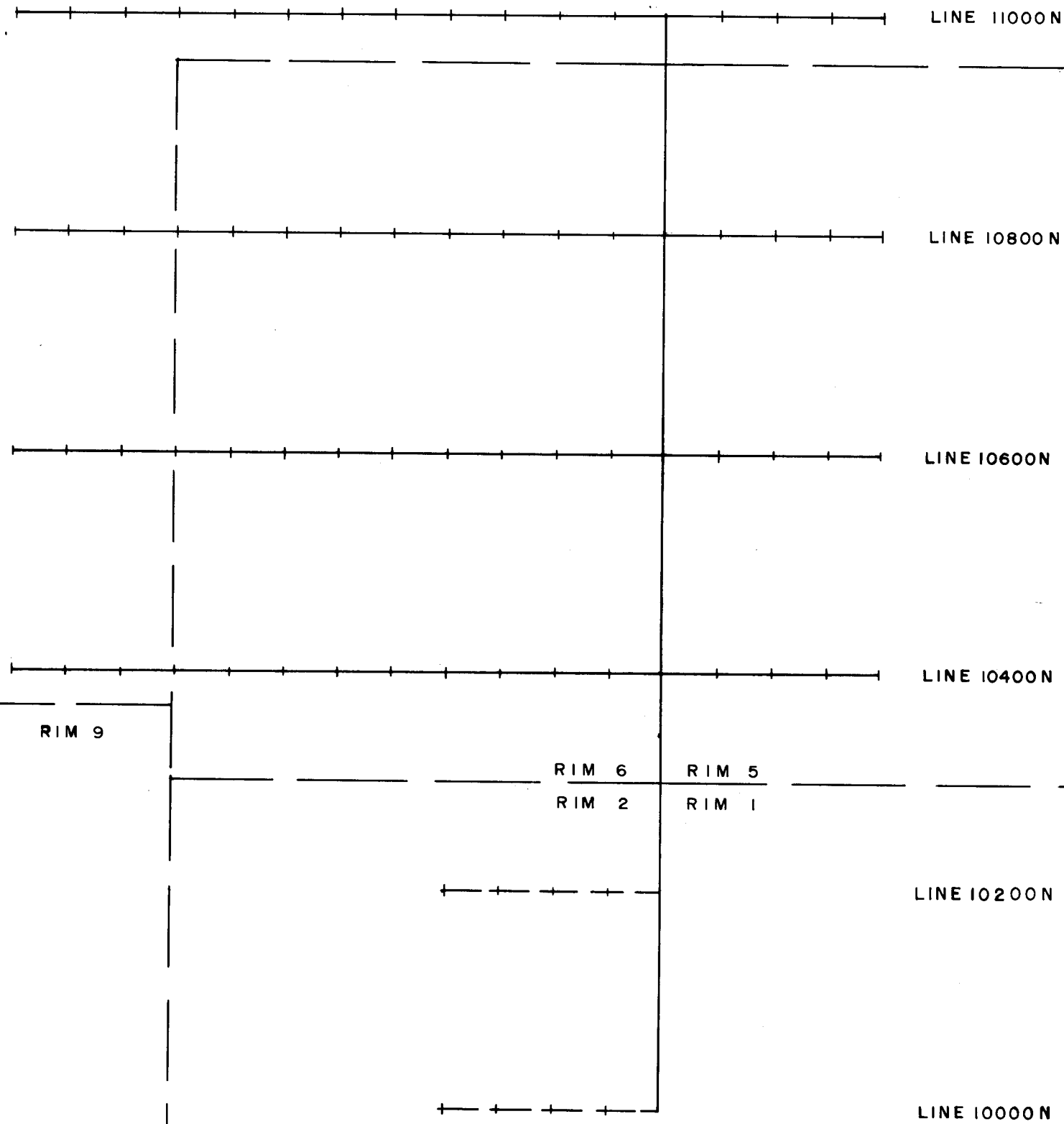
TRANSMITTER — HUNTEC M4 LOPO  
RECEIVER — SCINTREX IPR-8

INDUCED POLARIZATION AND RESISTIVITY SURVEY  
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 11000 N




9400 E    9500 E    9600 E    9700 E    9800 E    9900 E    BASELINE 10000 E    10100 E    10200 E

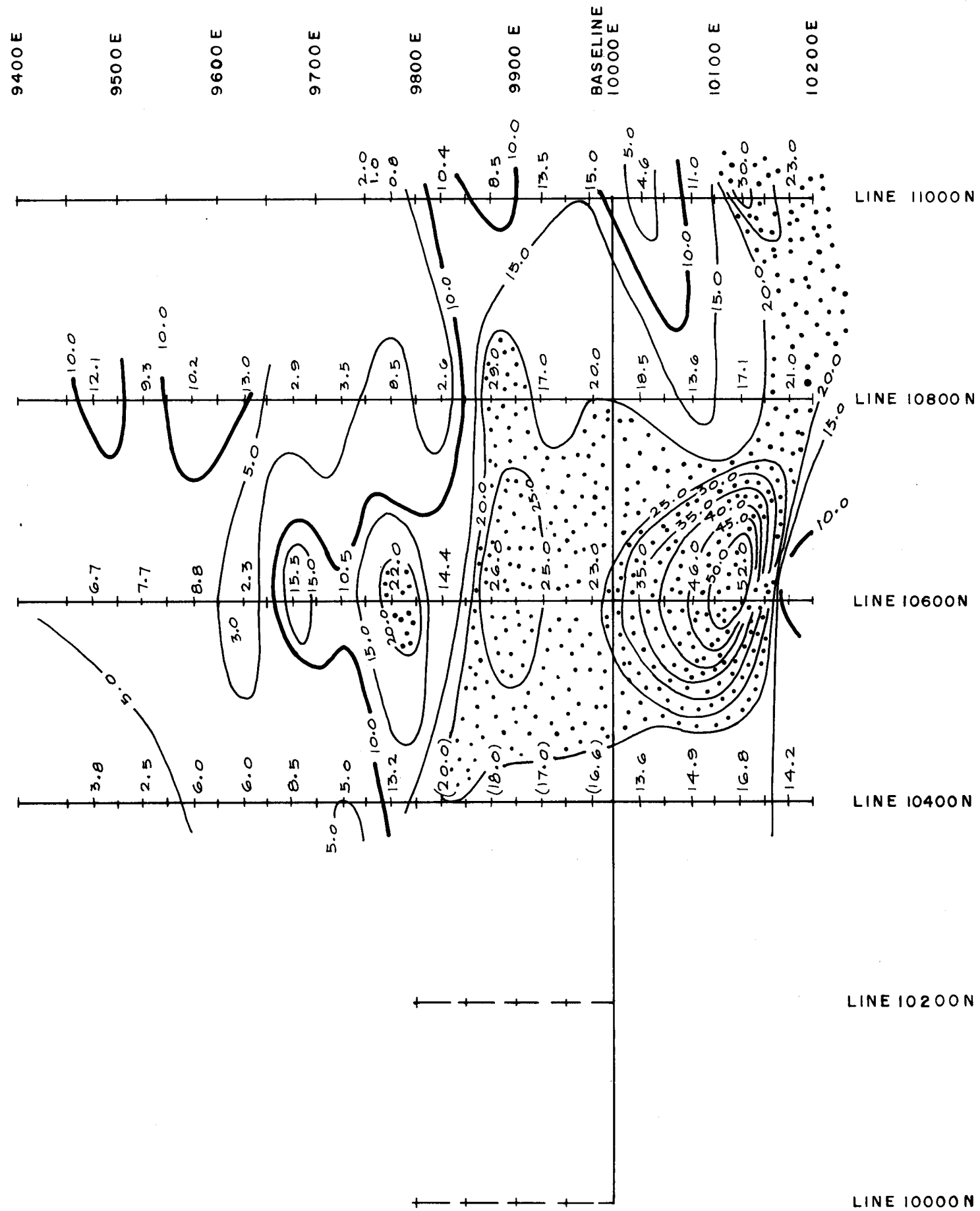


MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**9199**  
NO.

—+—+—+— 1981 GEOPHYSICS GROUND GRID - COMINCO  
- - - - - 1980 ST JOSEPH EXPLORATIONS SURVEY  
————— CLAIM BOUNDARY ( APPROXIMATE LOCATION )



<b>RIM CLAIMS</b>				 N T S 82 M 13E	
Drawn by:		Traced by:		<b>CLAIM MAP</b>  <b>KAMLOOPS M.D., B.C.</b>	
Revised by	Date	Revised by	Date		
Scale: 1 : 5000		Date: JUNE 1981		Plate: 209-81- 6	



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**9199**  
NO.

— + — + — + — 1981 GEOPHYSICS GROUND GRID - COMINCO

— + — + — + — 1980 ST JOSEPH EXPLORATIONS SURVEY

INSTRUMENT :

TRANSMITTER HUNTEC M4 LOPO  
RECEIVER SCINTREX IPR-8

CONTOUR INTERVAL 5.0 Mv/v

> 20 Mv/v



RIM CLAIMS

*Alan S...* NTS  
82 M 13E

Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

CHARGEABILITY

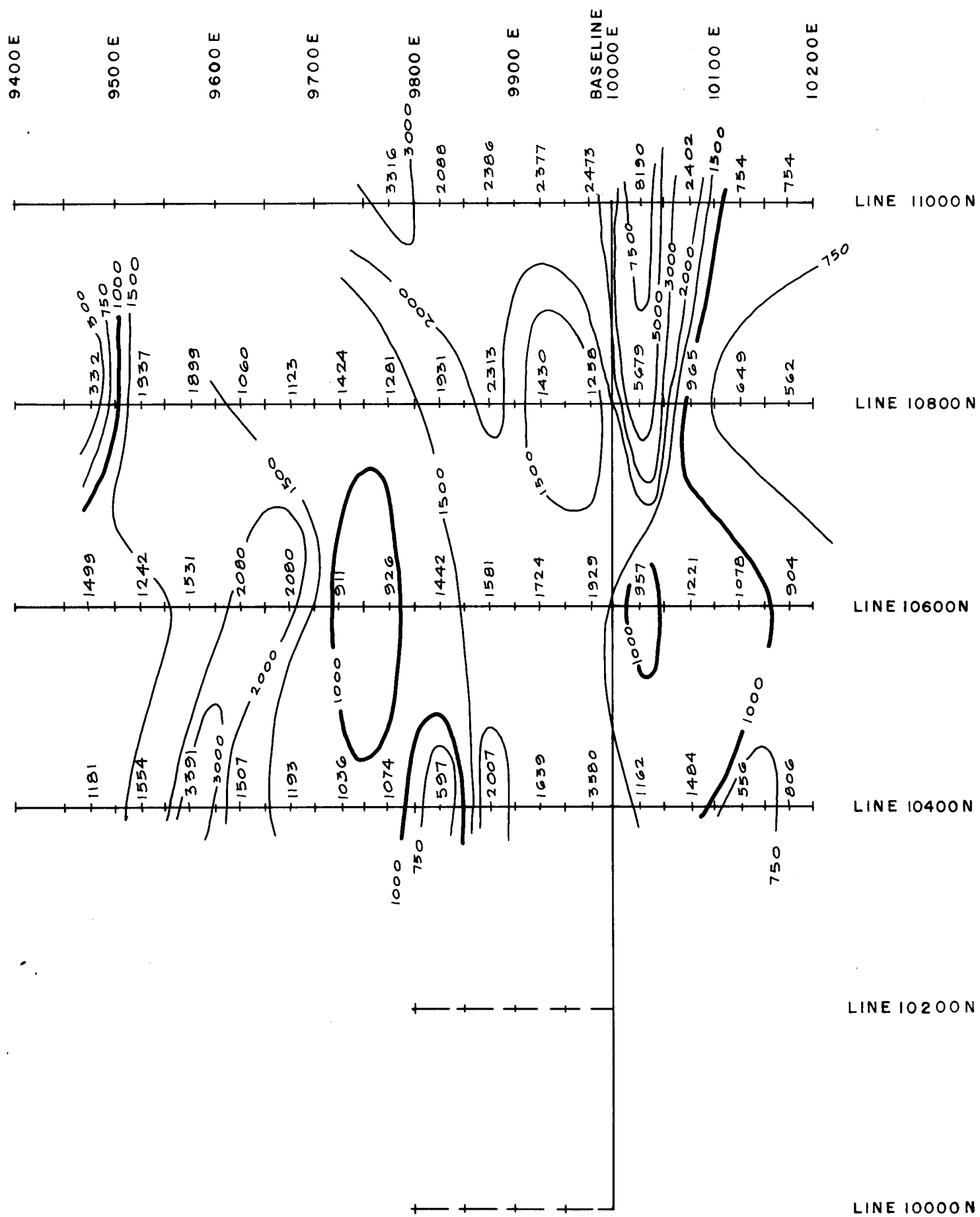
n = 1

KAMLOOPS M.D., B.C.

Scale: 1 : 5000

Date: JUNE 1981

Plate: 209-81- 7



MINERAL RESOURCE HIGH  
ASSESSMENT FOR CLAIM

**9199**

— — — — — 1981 GEOPHYSICS GROUND GRID - COMINCO  
 - - - - - 1980 ST JOSEPH EXPLORATIONS SURVEY

INSTRUMENT:  
 TRANSMITTER HUNTEC M4 LOPO  
 RECEIVER SCINTREX IPR-8  
 CONTOUR INTERVAL 1,1.5,2,3,5,7.5,10 ohm metres



**RIM CLAIMS**

Drawn by: \_\_\_\_\_

Revised by | Date | Revised by | Date


*[Signature]*

**RESISTIVITY**

n = 1

**KAMLOOPS M.D., B.C.**

N.T.S.  
82 M 13E

Scale: 1 : 5000     Date: JUNE 1981     Plate: 209-81- 8