

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

NTS: 92-I/7 and 10

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

10,783

GEOPHYSICAL REPORT

ON

INDUCED POLARIZATION AND RESISTIVITY SURVEYS

FORGE PROPERTY

HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

Latitude : 50°30'N

Longitude : 120°55'W

FIELD WORK PERFORMED : AUGUST 5 to 15, 1982

CLAIMS : FORGE 2, 3, 6, 7 and 8

OWNER AND OPERATOR : COMINCO LTD.

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GEOPHYSICAL REPORT
ON
INDUCED POLARIZATION AND RESISTIVITY SURVEYS
FORGE PROPERTY
HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

INTRODUCTION

During the period August 5th to 15th, 1982, approximately 29.4 km of reconnaissance scale multiseperation, induced polarization and resistivity survey work was completed over portions of the FORGE property. This I.P./Res. work was conducted by a COMINCO LTD. crew under the direction of Mr. I. Jackisch, geophysicist.

The FORGE property is located in the Highland Valley area of B.C., roughly halfway between Logan Lake and the Bethlehem Mine. Plate 1 shows the general location of the property together with the claim outline and lines surveyed during this survey.

The objective of this survey was to map the existence of any sulphides and other polarizable sources in the grid area.

This report describes procedures used for this survey, presents the data and discusses the results.

INDUCED POLARIZATION AND RESISTIVITY SURVEYS

- Two Hunttec MK IV I.P. receivers in combination with a Hunttec 7.5 km motor generator/transmitter were used on the FORGE property. Readings were taken in the time domain using a 2 second current ON/2 second current OFF alternating square wave signal. A delay time of 120 milliseconds and total integration time of from 120 msec. to 1020 msec. were used to measure the I.P. effect. Chargeability values are given in units of milliseconds.

The survey was of a regional reconnaissance nature with survey lines 400 meters apart. A pole-dipole electrode array was used with an "a" spacing of 100 meters and "n" separations of 1, 2, 3 and 4. The current electrode was east of the potential dipole for the west part of the lines. The opposite applies to the east half of the lines.

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

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

where V is the voltage across the measuring dipole during the current on period (I), and K is a geometrical factor dependent on the "a" spacing and "n" separation.

DISCUSSION OF RESULTS

The induced polarization survey results are plotted in pseudosection format on accompanying Plates 230-82-2 to 4. The chargeability response has been categorized on the sections in the following manner:-

■■■■■■■■ strong I.P. high (greater than 10 msec. at near separations)

■ ■ ■ ■ ■ ■ moderate I.P. high (greater than 8 msec. at near separations)

//// //// weak I.P. high (greater than 5 msec. at near separations)

— — — — less than 5 msec. at further separations

The n=1 chargeability results are also presented in contour plan form on Plate 230-82-5. Plate 230-82-6 shows the resistivity results also for n=1.

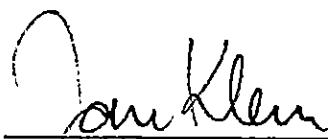
Most of the area shows background responses (less than 5 msec.). One interesting anomaly well above background is visible on Lines 1600S - 800S and open to the north. This approx. 300-400 m wide zone correlates with a break in resistivities. Two other weaker zones are visible as well (Lines 800S and 2400S).

CONCLUSIONS

A 29.4 km induced polarization and resistivity survey was executed over a portion of the FORGE property.


Most of the area shows background chargeability values. One interesting anomaly should be groundchecked.

Report by:



J. Klein
Chief Geophysicist

Approved for
Release:



G. Harden
Manager, Exploration
Western District

JK/jel

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APPENDIX I

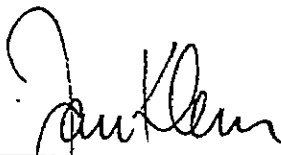
IN THE MATTER OF THE B.C. MINERAL ACT
AND IN THE MATTER OF A GEOPHYSICAL PROGRAM
CARRIED OUT ON PORTIONS OF FORGE MINERAL CLAIMS 2, 3, 6, 7 and 8
ON THE FORGE PROPERTY
LOCATED IN THE HIGHLAND VALLEY AREA, KAMLOOPS MINING DIVISION, B.C.
OF THE PROVINCE OF BRITISH COLUMBIA, MORE PARTICULARLY
N.T.S.: 92-I/7 and 92-I/10

S T A T E M E N T

I, JAN KLEIN, OF THE CORPORATION OF RICHMOND, 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 FORGE Property;
- 3) THAT the said expenditures were incurred for the purpose of mineral exploration of the above-noted claims between the 5th day of August and the 15th day of August, 1982.

Signed:



J. Klein
Chief Geophysicist

NOVEMBER 1982

APPENDIX II

STATEMENT OF EXPENDITURES

FORGE PROPERTY

(INDUCED POLARIZATION AND RESISTIVITY SURVEY)
AUGUST 5 to 15, 1982

29.4 KM @ \$ 1,000/KM \$ 29,400.00

NOVEMBER 1982

APPENDIX III

CERTIFICATION

I, JAN KLEIN, of 4371 Coventry Drive, in the Corporation of Richmond, in the Province of British Columbia, do hereby certify:-

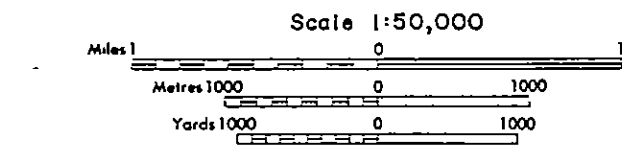
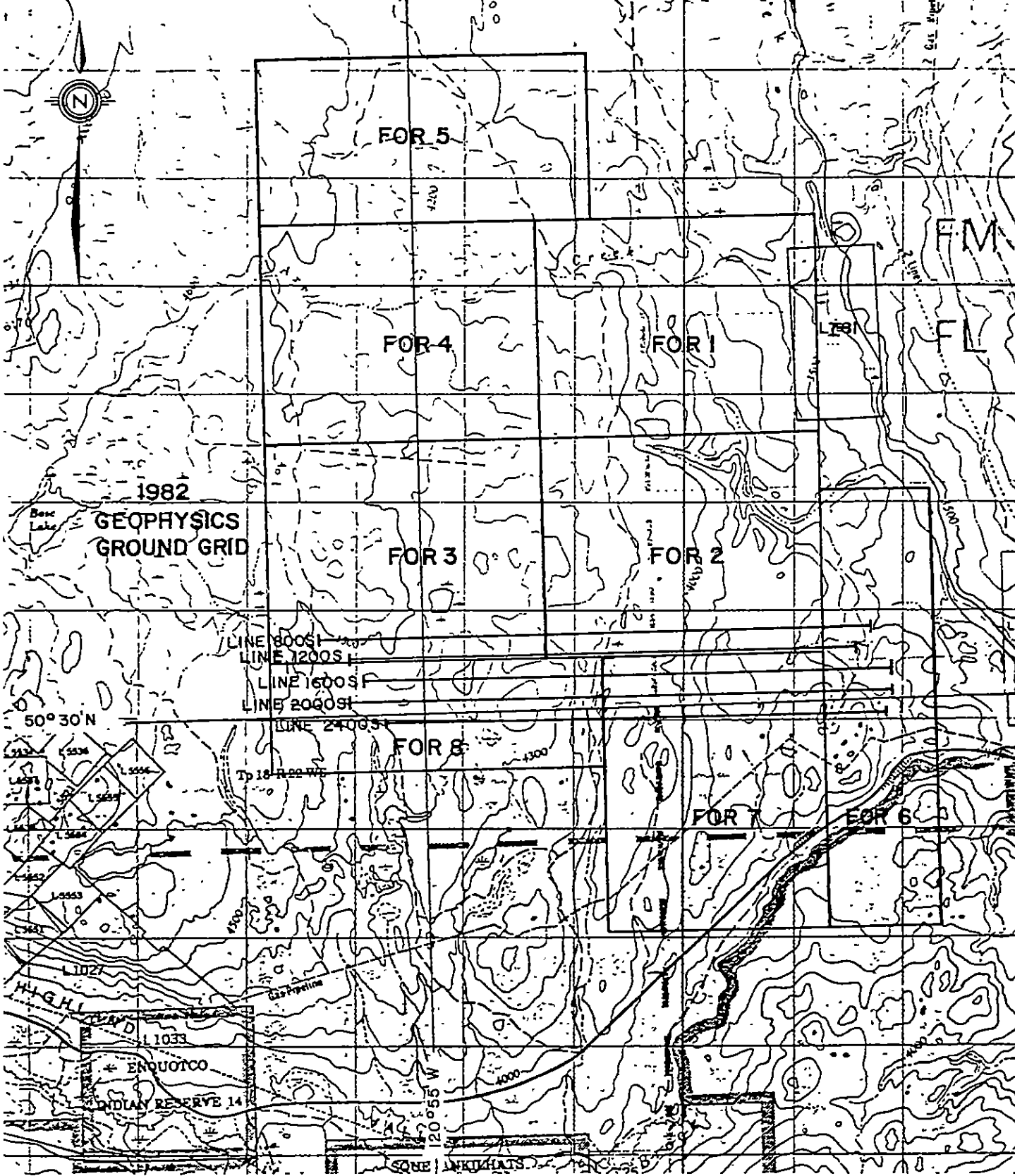
- 1) THAT I graduated from the Technological University of Delft Netherlands in 1965 with a M.Sc. in Geophysics;
- 2) THAT I am a member of the Association of Professional Engineers of the Province of British Columbia, the Society of Exploration Geophysicists of America, and the British Columbia Geophysical Society;
- 3) THAT I have been practising my profession for the past seventeen years.

Signed:



J. Klein
Chief Geophysicist

NOVEMBER 1982



FORGE GROUP

NTS
92 1-7
92 1-10

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

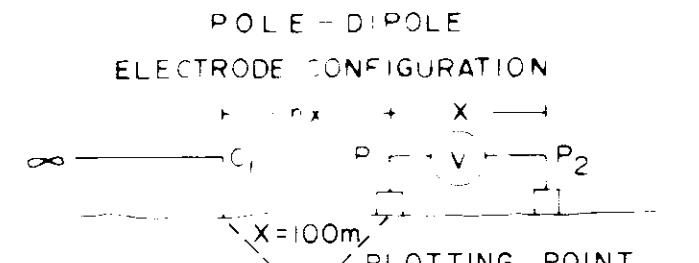
LOCATION & CLAIM MAP

KAMLOOPS M.D., B.C.

Scale: 1:50,000 Date: OCT. 1982 Plate: 230-82-1

**COMINCO LTD.
FORGE GROUP
KAMLOOPS M.D., B.C.**

LINE NO. 800S
LINE NO. 1200S



CHARGEABILITY (IP) INTERPRETATION

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

LINE 800S AUG 5, 10 1982
SCALE 1:6000 DATE SURVEYED LINE 1200S AUG 6, 11 1982

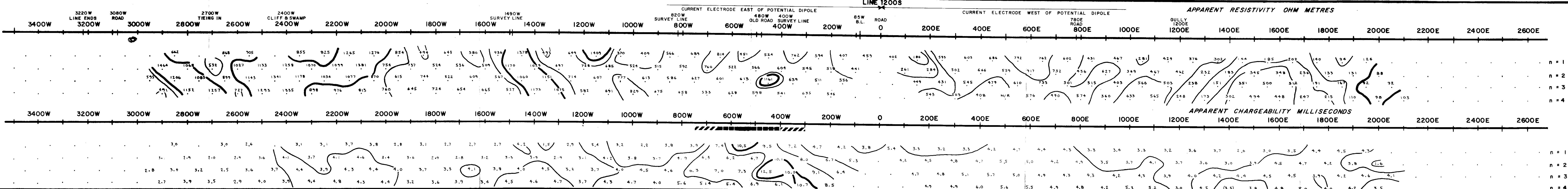
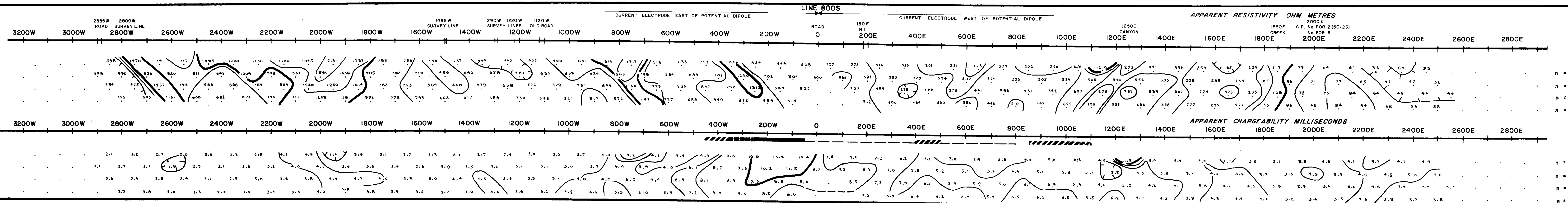
CONTOUR INTERVALS:
APP RES - 1, 1.5, 2, 3, 5, 7.5, 10 ohm metres APPROVED
APP CHARG - 2.0 milliseconds

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

TRANSMITTER - HUNTEC 75 kw UNIT
RECEIVER - MK-4

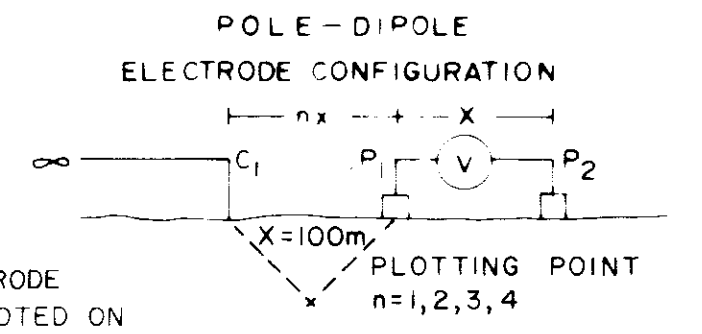
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INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION



COMINCO LTD.
FORGE GROUP
KAMLOOPS M.D., B.C.

LINE NO. 1600S
 LINE NO. 2000S



CURRENT ELECTRODE DIRECTION AS NOTED ON THE PSEUDO SECTIONS

CHARGEABILITY (IP) INTERPRETATION
 ■ STRONG CHARGEABILITY HIGH
 ▨ MODERATE CHARGEABILITY HIGH
 ▩ WEAK CHARGEABILITY HIGH
 - - - IP HIGH AT FURTHER SEPARATIONS

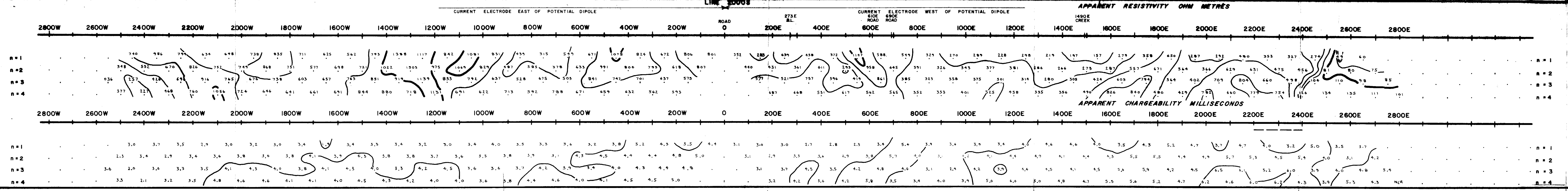
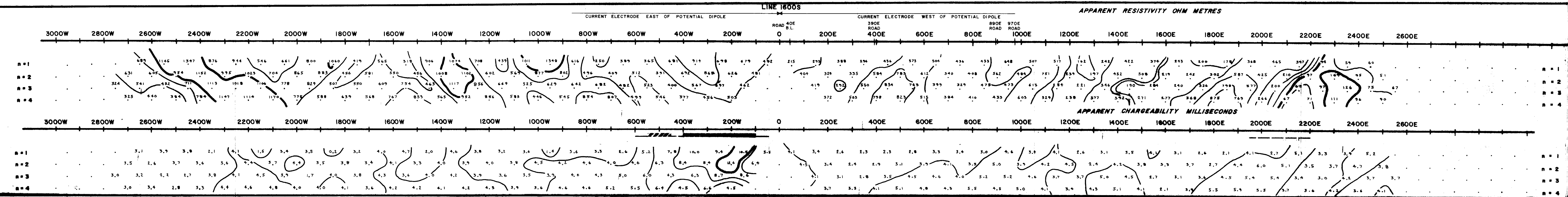
SCALE 1:6000 DATE SURVEYED LINE 1600S AUG. 7, 12 1982
 DATE SURVEYED LINE 2000S AUG. 8, 13 1982
 CONTOUR INTERVALS:
 APP. RES - 1, 1.5, 2, 3, 5, 7.5, 10 ohm metres APPROVED
 APP. CHARG - 2.0 milliseconds

GEOLOGICAL BRANCH ASSESSMENT REPORT

TRANSMITTER - HUNTEC 75 Kw UNIT
 RECEIVER - MK-4

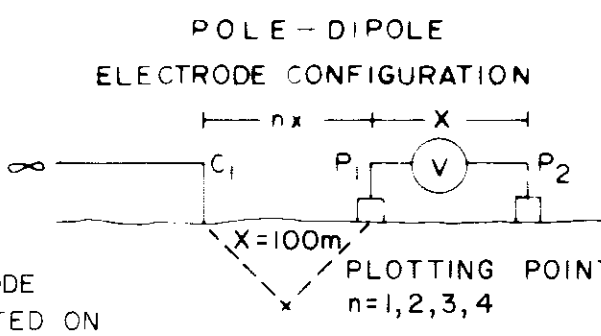
INDUCED POLARIZATION AND RESISTIVITY SURVEY
 SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

10,783



**COMINCO LTD.
FORGE GROUP
KAMLOOPS M.D., B.C.**

LINE NO. 2400S



CURRENT ELECTRODE DIRECTION AS NOTED ON THE PSEUDO SECTIONS

CHARGEABILITY (IP) INTERPRETATION
 ■ STRONG CHARGEABILITY HIGH
 ▨ MODERATE CHARGEABILITY HIGH
 ▩ WEAK CHARGEABILITY HIGH
 — IP HIGH AT FURTHER SEPARATIONS

SCALE = 1:6000 DATE SURVEYED AUG. 8, 9, 14 1982

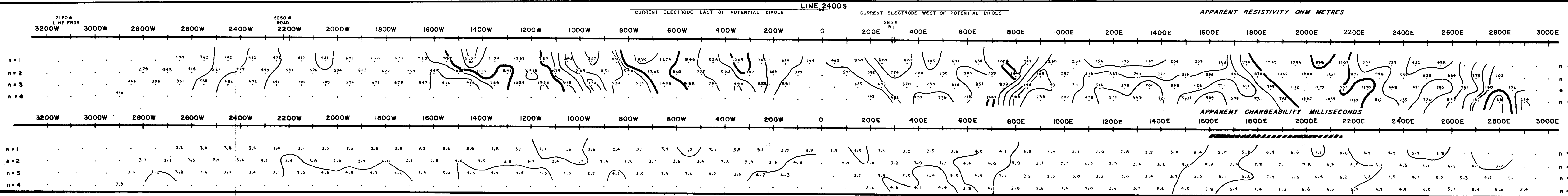
CONTOUR INTERVALS:
 APP RES — 1, 1.5, 2, 3, 5, 7.5, 10 ohm metres APPROVED _____
 APP CHARG — 2.0 millisecond

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

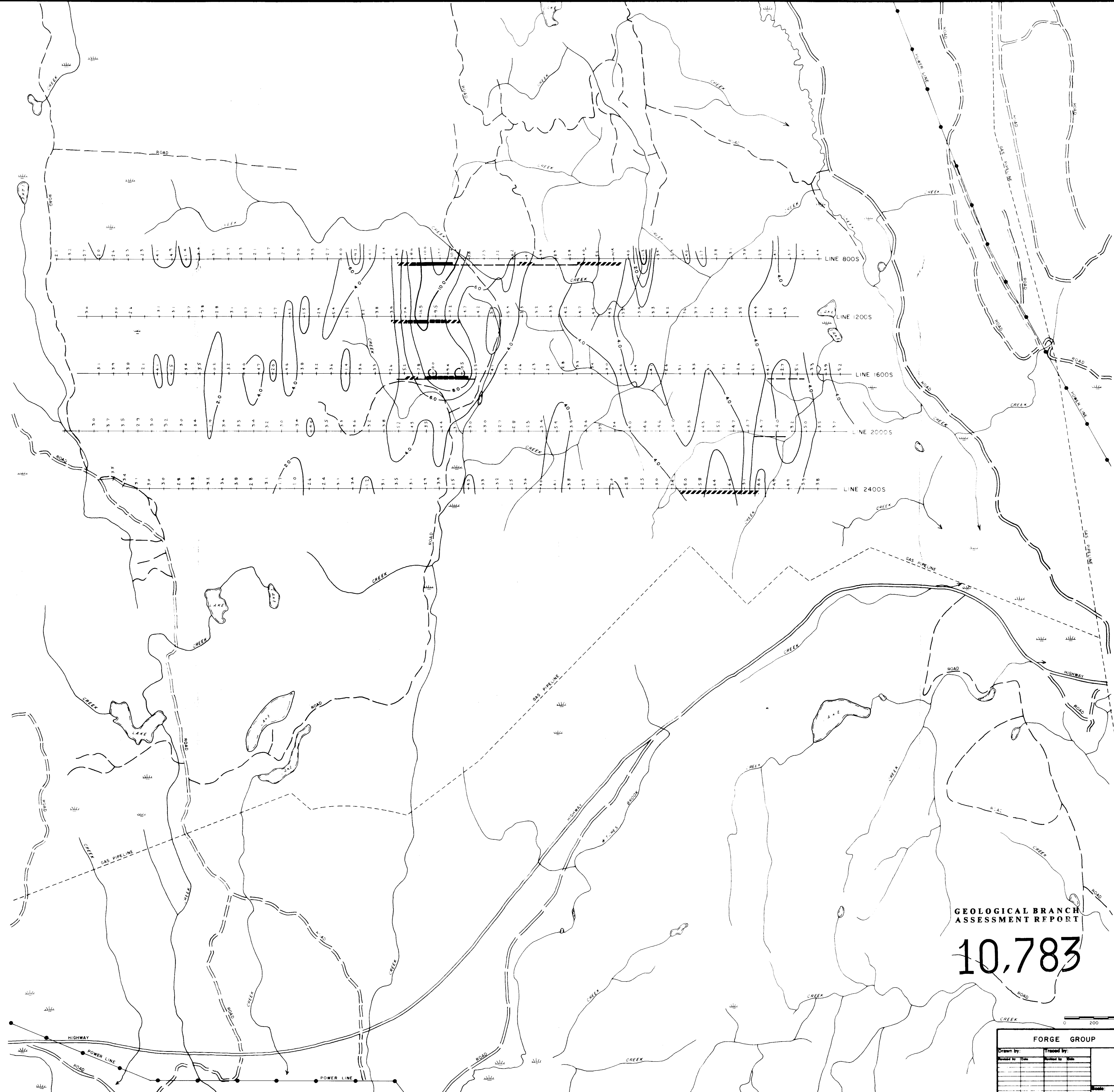
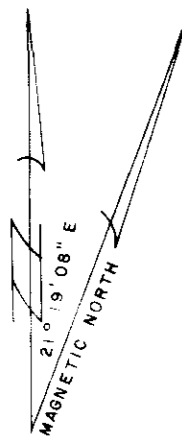
TRANSMITTER — HUNTEC 7.5 KW UNIT
 RECEIVER — MK-4

10,783

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



LINE 2400S



**GEOLOGICAL BRANCH
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- LAKE
- CREEK
- SWAMP
- HIGHWAY
- ROAD
- POWER LINE
- GAS PIPELINE

CHARGEABILITY (IP) INTERPRETATION

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

CONTOUR INTERVAL: 2,4,6,8,10 millieconds
 TRANSMITTER - HUNTEC 7.5 Kw UNIT
 RECEIVER - MK - 4



FORGE GROUP	
Drawn by:	Checked by:
Date:	Date:
Scale:	Date:
CHARGEABILITY n=1	
KAMLOOPS M.D., B.C.	
Scale: 1:10,000	Date: OCTOBER 1982
Plate: 230-82-5	FORM 214

