COMINCO LTD. 81-# 1184-9953

EXPLORATION

WESTERN DISTRICT

NTS: 92I/7W

GEOPHYSICAL REPORT ON AN

INDUCED POLARIZATION SURVEY ON THE

NOVA OPTION, GUMP GROUP CHATAWAY LAKE AREA,

KAMLOOPS AND NICOLA MINING DIVISIONS, B.C.

50°25'N Latitude: Longitude: 120055'W

Field Work Performed: October 5 - 23, 1981 On Claims: NOVA 1, 2, 3, 4, 5 and 6, APOLLO 4 and LEM 4 and 6

16 DECEMBER 1981

J. KLEIN

COMINCO LTD.

EXPLORATION

NTS: 92I/7W

WESTERN DISTRICT

ACCEDIMAINT REFORT

GEOPHYSICAL REPORT

ON AN

INDUCED POLARIZATION SURVEY

ON THE

NOVA OPTION, GUMP GROUP

CHATAWAY LAKE AREA, KAMLOOPS AND NICOLA MINING DIVISIONS, B.C.

LATITUDE: 50°25'N

LONGITUDE: 120°55'W

Field Work Performed: October 5 - 23, 1981

On Claims: NOVA 1, 2, 3, 4, 5 and 6, APOLLO 4 and LEM: 4 and 6

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REFERENCE					

J. Klein, 1981: Geophysical Report on an I.P. and Magnetic Survey on the NOVA Option, Gump Group, dated 5 November, 1981

COMINCO LTD.

EXPLORATION NTS: 921/7W

WESTERN DISTRICT

16 December 1981

GEOPHYSICAL REPORT

ON AN

INDUCED POLARIZATION

SURVEY

ON THE

NOVA OPTION, GUMP GROUP

CHATAWAY LAKE AREA, KAMLOOPS AND NICOLA MINING DIVISIONS, B.C.

INTRODUCTION

During the period October 5 - 23, 1981, an Eagle Geophysics Ltd. crew under contract to COMINCO LTD. completed some 36 kilometers of a multiseparation induced polarization survey over portions of the NOVA Option, Gump Group. This survey is the continuation of a survey conducted by COMINCO LTD. earlier in 1981 over other parts of the property. A COMINCO technician was assigned to the Eagle Geophysics crew to assist with the I.P. survey.

The NOVA Option, Gump Group is located in the Highland Valley area of B.C., immediately west of DOT and BILLY Lakes. Platela shows the general location of the property, and Plate 2a shows the location of the survey lines with respect to the claims. The survey area is immediately west of COMINCO's Gump property.

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

INDUCED POLARIZATION SURVEY

A Huntec 7.5 kw M-4 I.P. transmitter in combination with two Huntec M-3 receivers were used during this survey. Readings were taken in the time domain using a 2 second current ON/OFF alternating square wave signal. Chargeability values are given in 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. For logistical reasons, the direction of the current electrode with respect to the potential dipole was not kept constant for the survey. In some areas it was to the west and in others to the east. The direction is noted on the pseudosections.

The M-3 receiver used for the present survey samples the I.P. decay during a slightly different period than the IPR-8 receiver used during the earlier survey on this property. The M-3 results (in milliseconds) are on the average higher by 15-20% than the IPR-8 data (in millivolts/Volt). This should be kep in mind when comparing the results of the two data sets.

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

apparent resistivity = (V/I).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.

All data were collected using survey line 4500W as a baseline. This baseline was, however, labelled 0+00 for the northern lines (1200N to 2400S) and 4500W for the remainder (4800S to 6400S).

DISCUSSION OF RESULTS

The induced polarization survey results are presented in pseudosection format on Plates 216-81-9 to 16. The chargeability response has been categorized on those sections as follows:-

strong I.P. high (> 15 msecs. at near separations)

moderate I.P. high (11-15 msecs. at near separations)

weak I.P. high (7-11 msecs. at near separations)

> 7 msecs. at further separations

These categories were chosen to be consistent with the categories used by COMINCO LTD. on the adjacent properties corrected for the different types of receivers used (Huntec M-3, M4, Scintrex IPR-8 or Crone IPR-4)

Plates 216-81-3a and 3b are contour plans of the near separation (n=1) chargeability in msec. Plates 216-81-4a and 4b show the same for the resistivity in ohm meters. Plates 3a and 4a show also the data collected during the survey earlier during 1981 using the IPR-8 receiver.

Areas of greater than 7 milliseconds at the near separation are indicated by the stippled pattern on the contour plan. The zone detected in the N.E. corner of the previous survey is reconformed during the present survey (Line 5200, Plate 3a). The zone of > 7 msec chargeability detected along the eastern part of Lines 1200S to 2400S is on trend with this zone. The general increase of resistivity over this zone suggests it to be formational (= higher background) rather than anomalous. A weak high trend is also visible from Line 2400S near the 4500W baseline to 400N, 1100 m west of that baseline.

CONCLUSIONS

Two portions of the NOVA Option, Gump Group were surveyed with multiseparation time-domain I.P. in the early Fall of 1981. A large zone of higher chargeability was detected. This zone reflects most likely a change in rock type rather than a change towards economic mineralization.

No further work can presently be recommended on the portions of the property covered with the I.P. survey.

Report by:

J. Klein

Chief Geophysicist

Approved for Release:

G. Harden

Manager, Exploration,

Western District

Distribution:

Mining Recorder	(3)
Western District	(1)
Vernon	(1)
Owner	(1)
Administration	(1)
Geophysics File	(1)

APPENDIX I

IN THE MATTER OF THE B.C. MINERAL ACT

AND IN THE MATTER OF A GEOPHYSICAL PROGRAM

CARRIED OUT ON PORTIONS OF THE NOVA, APOLLO AND LEM MINERAL CLAIMS

ON THE NOVA OPTION, GUMP GROUP

LOCATED IN THE

CHATAWAY LAKE AREA, KAMLOOPS AND NICOLA MINING DIVISIONS, B.C.

OF THE PROVINCE OF BRITISH COLUMBIA, MORE PARTICULARLY

N.T.S.: 92I/7W

STATEMENT

- 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;
- THAT the annexed hereto and marked as "Appendix II" to this statement is a true copy of expenditures incurred on geophysical survey on the NOVA Option, Gump Group;
- 3) THAT the said expenditures were incurred for the purpose of mineral exploration of the above-noted claims between the 5th day and 23rd day of October, 1981.

Signed:

Chief Geophysicist

APPENDIX II

STATEMENT OF EXPENDITURES

NOVA OPTION, GUMP GROUP

(INDUCED POLARIZATION SURVEY, OCTOBER 5 - 23, 1981)

1.	Contract Services by Eagle Geophysics Ltd.	\$ 28,235.80
2.	COMINCO Technician, G.K. Nolan 19 days @ \$135.00/day	2,565.00
3.	Drafting by G.E. Lillos 36 km @ \$65.1475/km	2,345.31
4.	Interpretation and Reporting by J. Klein 1 day @ \$190.00	190.00
5.	Supervisory Trip by A.R. Scott Expenses	766.31
		\$ 34,102.42

APPENDIX III

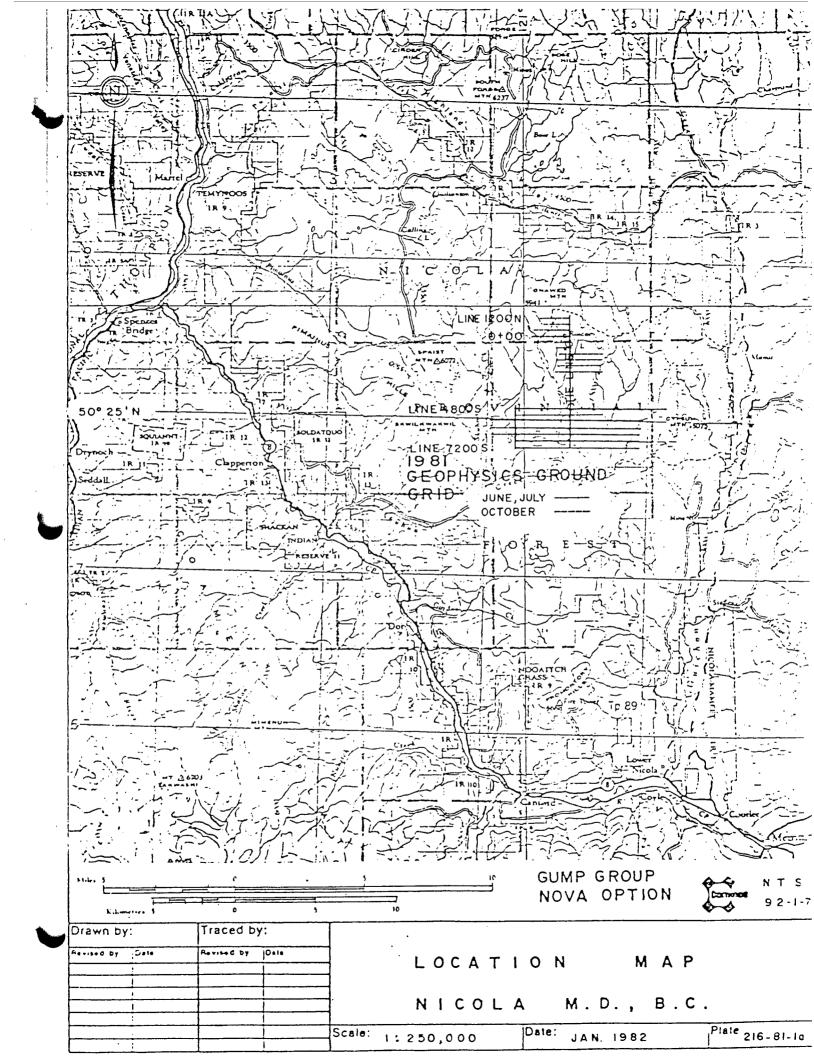
CERTIFICATION

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 Geophysicis:
- THAT I am a member of the Association of Professional Engineers of the Province of British Columbia, the Society of Exploration Geophysicist of America, and the British Columbia Geophysical Society:
- 3) THAT I have been practising my profession for the past sixteen years.

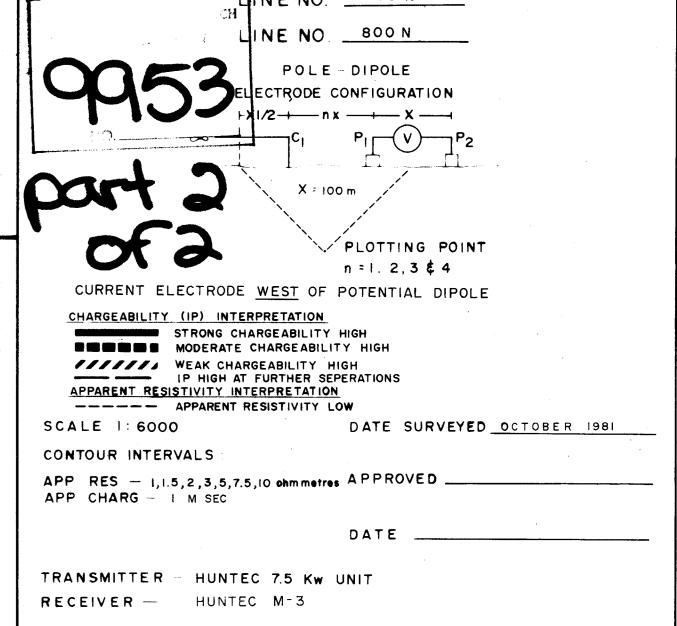
Signed:

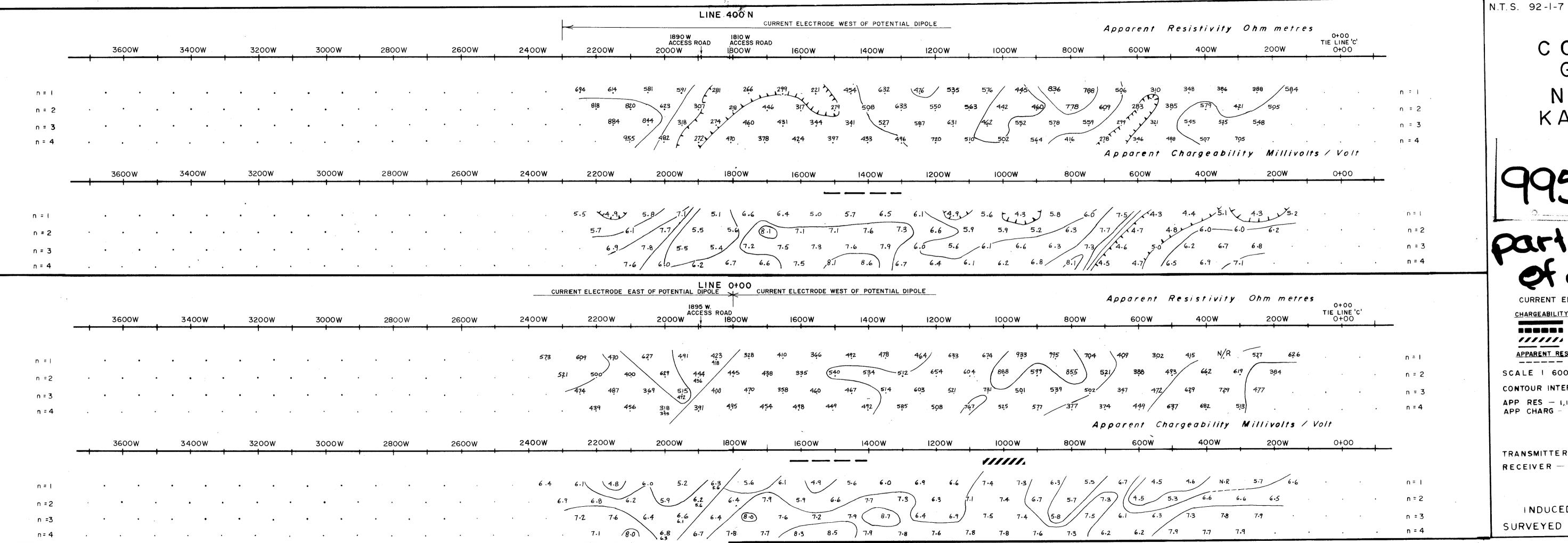
J. KVein Chief Geophysicist



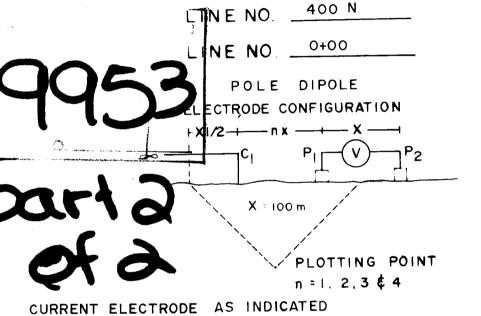
GROUP

DWG NO 216-81-9





GUMP GROUP



WEAK CHARGEABILITY HIGH IP HIGH AT FURTHER SEPERATIONS APPARENT RESISTIVITY INTERPRETATION ---- APPARENT RESISTIVITY LOW

SCALE | 6000

CONTOUR INTERVALS APP RES - 1,1.5,2,3,5,7.5,10 ohmmetres APPROVED ___

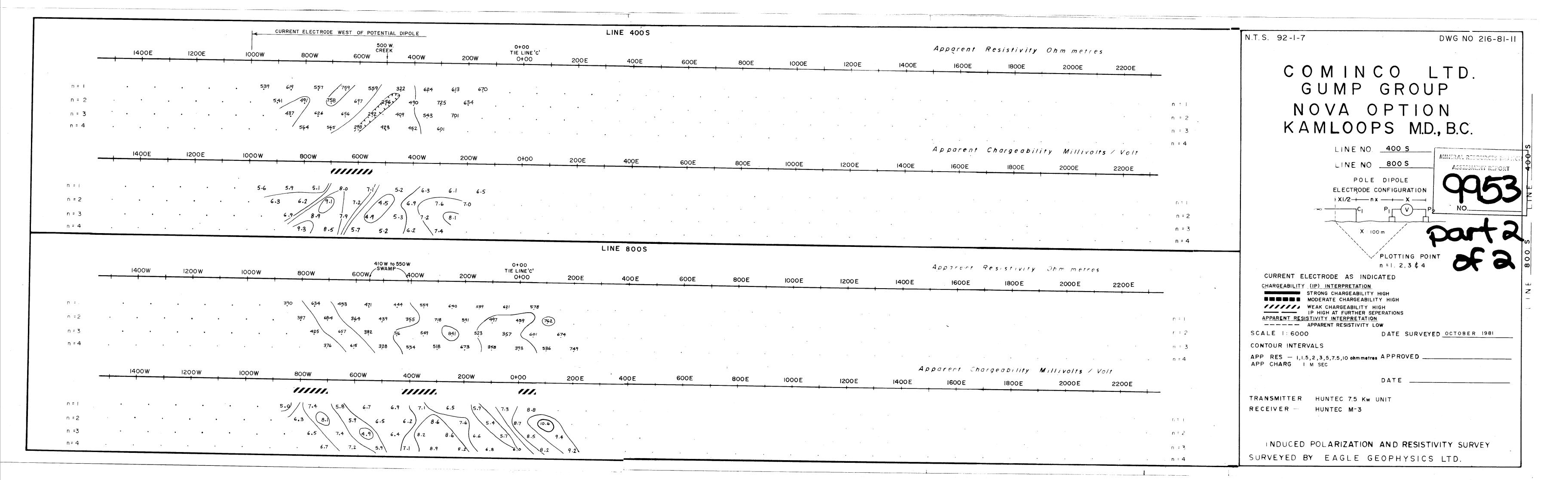
APP CHARG - I M SEC

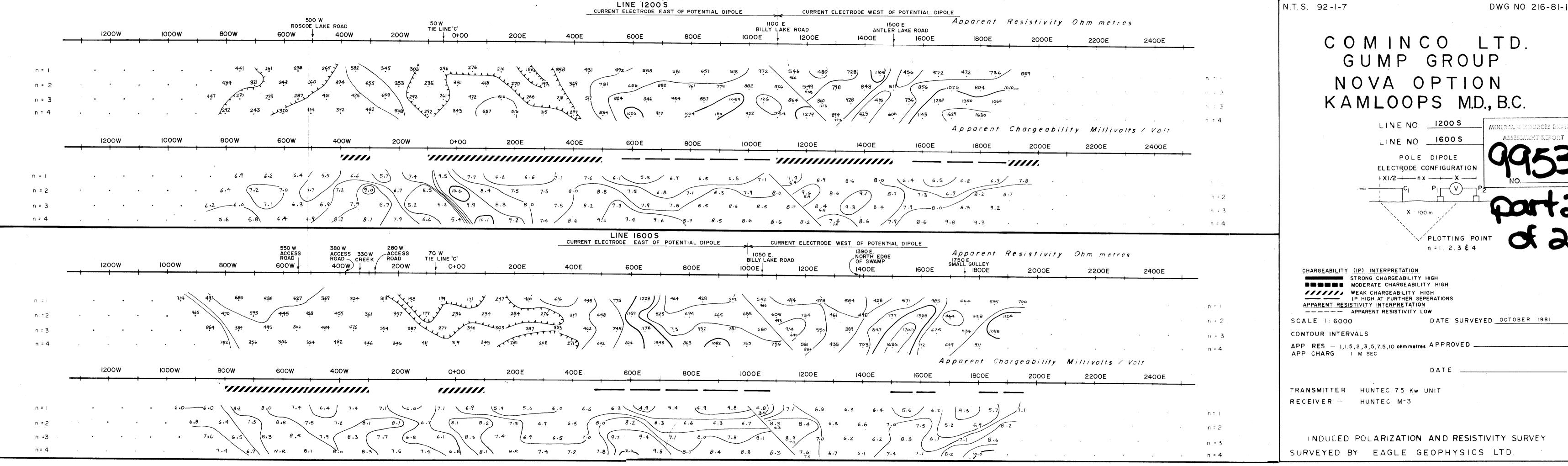
DATE SURVEYED OCTOBER 1981

DWG NO 216-81-10

TRANSMITTER HUNTEC 7.5 KW UNIT RECEIVER - HUNTEC M-3

INDUCED POLARIZATION AND RESISTIVITY SURVEY SURVEYED BY EAGLE GEOPHYSICS LTD.

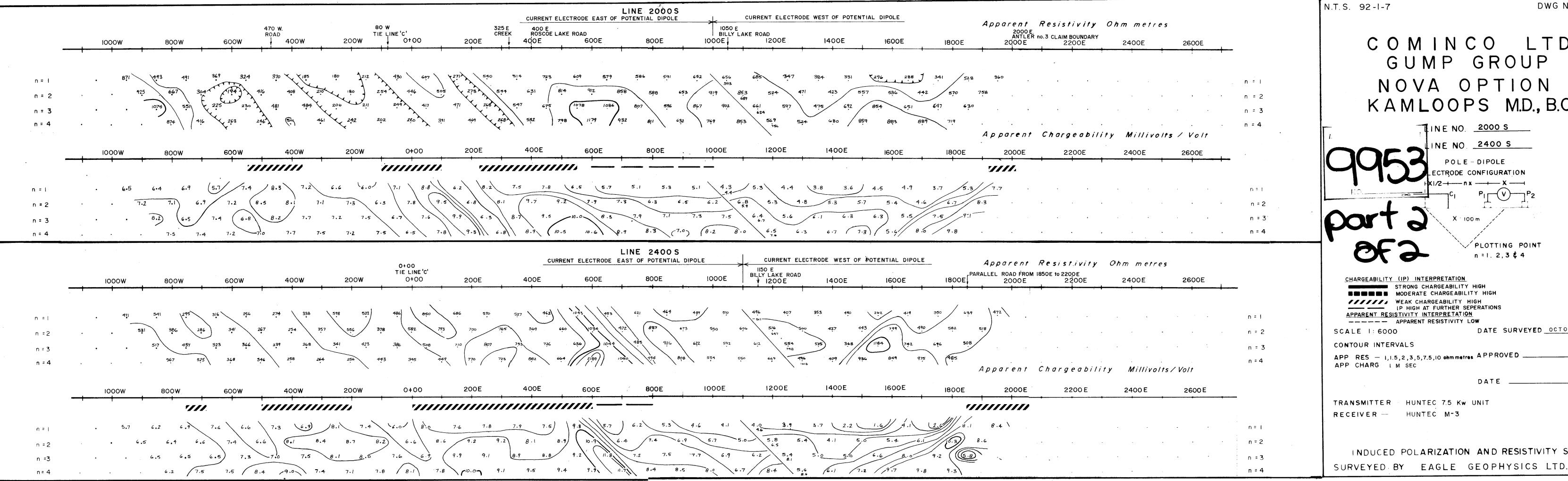




DWG NO 216-81-12

KAMLOOPS M.D., B.C.

DATE SURVEYED OCTOBER 1981



DWG NO 216-81-13 N.T.S. 92-1-7 GUMP GROUP KAMLOOPS M.D., B.C. TINE NO. 2000 S INE NO. 2400 S RODE CONFIGURATION PLOTTING POINT n = 1, 2, 3 **\$** 4 IP HIGH AT FURTHER SEPERATIONS APPARENT RESISTIVITY INTERPRETATION ---- APPARENT RESISTIVITY LOW DATE SURVEYED OCTOBER 1981 SCALE 1: 6000 CONTOUR INTERVALS APP RES - 1,1.5,2,3,5,7.5,10 ohm metres APPROVED . APP CHARG IM SEC TRANSMITTER HUNTEC 7.5 KW UNIT RECEIVER -- HUNTEC M-3 INDUCED POLARIZATION AND RESISTIVITY SURVEY

