EXPLORATION NTS: 82-F-6 WESTERN DISTRICT

CH

. .

GEOPHYSICAL REPORT

INDUCED POLARIZATION AND MAGNETICS SURVEYS

BOBBI GROUP

Salmo Area, Nelson Mining Division, B.C.

LATITUDE: 49⁰17'N LONGITUDE: 117⁰13'W M.,

Work performed: August 20-28, 1980

On claims: Mary 1, Bobbi 1-3,5, KIM 1-6

OWNER: ASAMARA DIL CORP. COMINCO LTD

OCTOBER 15, 1980

ALAN SCOTT

TABLE OF CONTENTS

Pa	ige
TRODUCTION	L
OPHYSICAL SURVEYS	
Induced Polarization	L
Magnetometer	2
SCUSSION OF RESULTS	2
NCLUSIONS	3

* * * * *

いいたたい いっかん たいわたたたい たいかい かいいい いった たいかい たたたた かった たいたけ うきたた たいかいたた たいかい シングログ・シング ディング・マング

- APPENDIX I Statement
- APPENDIX II Statement of Expenditures
- APPENDIX III Conclusions

* * * * *

- Plate 188-80-1 Location Map
 - 2 Claims and Grid Map
 - 3-9 Chargeability/Apparent resistivity pseudo sections
 - 10 Chargeability contour plan (n=1)
 - 11 Apparent resistivity contour plan (n=1)
 - 12 Magnetic field contour plan

* * * * *

EXPLORATION NTS: 82-F-6 WESTERN DISTRICT 15 October 1980

GEOPHYSICAL REPORT

<u>ON</u>

INDUCED POLARIZATION AND MAGNETICS SURVEYS

BOBBI GROUP

Salmo Area, Nelson Mining Division, B.C.

INTRODUCTION

During the period August 20-28, 1980, a Cominco geophysical crew completed 8.8 line kilometers of multiseparation time domain induced polarization survey and total field magnetics survey over portions of the BOBBI property.

The BOBBI property is located on the west side of the Salmo River valley, 10 kilometers north of Salmo, B.C. Plate 188-80-1 shows the general location of the property and plate 2 the location of the survey grid in relation to the claims.

The exploration target on the BOBBI property is the porphyry molybdenum type of deposit. The objective of the IP survey was to determine if a sulphide system could be present in the survey area, that could be associated with a mineralizing intrusive.

This report presents the data from the geophysical surveys, describes the procedures used, and discusses the results.

GEOPHYSICAL SURVEYS

Induced Polarization

A Huntec 7.5 kw motor generator/IP transmitter in combination with two Scintrex IPR-8 receivers were used on the Bobbi survey. Chargeability (IP) response was measured in the time domain employing a 2 second current on / 2 second current off alternating square wave signal. The plotted chargeability values are the M_{232} measurement of from 650 to 1170 milliseconds following cessation of the current pulse. Units are in millivolts per volt.

Geophysical Report/Bobbi Group/ 15 October 1980/Page 2/

The pole dipole electrode array was used with an "a" spacing of 50 meters and "n" separations of 1,2,3, and 4. The current electrode was to the east of the potential dipole on all survey lines.

The apparent resistivity was calculated from the relation:

resistivity = (V/I).K,

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

Magnetometer Survey

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

DISCUSSION OF RESULTS

The chargeability (IP) and apparent resistivity data is presented in pseudo section format on plates 3 to 9. This is a schematic form of data presentation and no specific target depth or geometry is implied by it. The near separation (n=1) values are also plotted in contour plan form on plates 10 (IP) and 11 (resistivity).

IP anomalies have been categorized on the pseudosections as follows:

strong IP high	(>40 mv at near separations)
moderate IP high	$(30-40 \frac{mv}{v} \text{ at near separations})$
weak IP high	(20-30 $\frac{mv}{v}$ at near separations)
greater than 20 $\frac{mv}{v}$ at	farther separations

Several IP highs were detected on the BOBBI survey. The strongest response zone trends north south some 800 meters east of the baseline on lines 2S to 4N (anomaly A). A value of 67.5 mv/v plots at 775E on line 4N. Anomaly A is in an area of low (background) magnetic field strength. A parallel zone, anomaly B, is of lower amplitude and lies some 200 meters west of the anomaly A and anomaly B is at least partly coincident with a magnetic field high (see plate 12).

A very broad mostly weak to moderate response IP high, labelled C on the contour plans, trends across the central survey area along and to the west of the baseline. Strong response zones within this broad high plot on the east side of the anomaly at 25E; line 4N, and on the west side of the anomaly at 225W; line 6S, and 225W; line 8S. A central low response zone lies just west of the baseline on line 4S to line 0. This low IP response zone is coincident with a magnetic field low. Magnetic field highs give a similar trend to the IP high trend, but there is not a direct correlation of higher IP to higher magnetics.

Geophysical Report/Bobbi Group/ 15 October 1980/Page 3/

A very broad moderate to strong IP response high, labelled D on the contour plans, was detected at the west end of line 6S and west of 400 west on line 8S. The peak value of 51 mv/v plots at 825W on 8S. The anomaly is open to the south, west, and north.

It is indeterminate from the geophysical results alone whether the source of these IP anomalies is syngenetic sulphides within the overlying volcanics, or sulphides introduced by a deep seated intrusive.

Geological investigations (T. Hodson 1980) suggest that anomalies A, B, and C are most probably responding to syngenetic pyrite within basaltic flows and anomaly D may be a combination of intrusive origin and syngenetic origin. The pattern of the magnetic field highs is suggestive of such basaltic flows.

CONCLUSIONS

Portions of the Bobbi property were surveyed with time domain IP and total field magnetics in the late summer of 1980. Four zones (labelled A, B,C, and D) of weak to strong IP response have been defined in this report. It is indeterminate from the geophysical results alone whether the source of these anomalies is syngenetic sulphides within overlying volcanics or if they have been introduced by a deep seated intrusive. The geological evidence tends to support the former.

A series of sub-parallel narrow magnetic field highs trend north south across the survey area. There is not a strong correlation of IP highs to magnetic field highs, suggesting different sources for these anomalies.

No further work can be recommended on the basis of the geophysical results alone.

Respectfully submitted:

A.R. Scott Geophysicist

Approved for

Release by: M. J. Maye

G. Harden Manager, Exploration Western District

ARS/skq

Distribution:

Mining Recorder (2) Western District (1)Geophysics File (1) C A N A D A PROVINCE OF BRITISH COLUMBIA TO WIT:

STATUTORY DECLARATION

I, ROBIN LAWSON WOODS, of the District of North Vancouver, in the Province of British Columbia, DO SOLEMNLY DECLARE THAT:
I am the Supervisor, Exploration and Foreign Accounting for Cominco Ltd., 2300 - 200 Granville Street, Vancouver, British Columbia, and, as such have knowledge of the facts deposed to herein.
Attached to this Statutory Declaration, as Schedule A, is a statement of expenditures indicating the expenditures charged by Cominco Ltd. to the Bobbi Option account for the period January 1, 1980 to September 30, 1980.

3. The statement of expenditures referred to in paragraph 2 is true and accurate to the best of my knowledge, information and belief.

4. This Statutory Declaration is made in support of an application for credit as assessment work pursuant to the Mineral Act of British Columbia.

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 17th day of Uctober 1980

Robin Lawson Woods

A Commissioner for taking Affidavits for British Columbia

> Anthony Allen Zoobkoff A Commissioner for taking Affidavits for British Columbia.

This is Schedule A referred to in the Statutory Declaration of ROBIN LAWSON WOODS declared before me this/7th day of Wirker 1980

A Commissioner for Affidavits for British Columbia

Anthony Allen Zoobkoff A Commissioner for taking Affidavits for British Columbia.

STATEMENT OF EXPENDITURES

BOBBI OPTION

NELSON M.D., B.C.

JANUARY 1, 1980 TO SEPTEMBER 30, 1980

Geology	\$21,963
Geophysics	10,772
Linecutting	12,090
Transportation	2,366
Geochemistry	5,868
Camp costs	5,486
Option payment	5,400
Administrative services	5,855
	÷

\$69,800

Cominco Ltd. Vancouver Office October 17, 1980 Copies: Mining Recorder (2) Senior Technician File (2)

Robin Lawson Woods Supervisor, Exploration & Foreign Accounting

EXPLORATION NTS: 82-F-6 WESTERN DISTRICT 15 October 1980

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 BOBBI GROUP OF MINERAL CLAIMS

ON THE BOBBI PROPERTY

LOCATED 10 KM NORTH OF SLAMO IN THE NELSON MINING DIVISION

OF THE PROVINCE OF BRITISH COLUMBIA, MORE PARTICULARLY

N.T.S.: 82-F-6

STATEMENT

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;
- THAT the annexed hereto and marked as "Appendix II" to this statement is a true copy of expenditures incurred on geophysical survey on the BOBBI property;
- 3. THAT the said expenditures were incurred for the purpose of mineral exploration of the above noted claims between the 20th day of August and the 28th day of August, 1980.

Signed:

Alan R. Scott, Geophysicist

15 October 1980

EXPLORATION NTS: 82-F-6 WESTERN DISTRICT 15 October 1980

APPENDIX II

STATEMENT OF EXPENDITURES

BOBBI PROPERTY

(Induced polarization, magnetometer surveys, linecutting)

1. SALARIES

S. Holland, geophysicist in training,	
	Aug. 20-28 9 days @ 105 = 945
Y. Fortin, IP crewman ,	Aug. 20-24 5 days @ 83 = 415
E. Bernshaw, IP crewman ,	Aug. 20-28 9 days @ 83 = 747
D. Campbell, IP crewman ,	Aug. 20-28 9 days @ 83 = 747
J. Allen, IP crewman ,	Aug. 20-28 9 days @ 83 = 747
	4546

2. EQUIPMENT RENTALS

	7.5 kw IP survey system, magnetometers, truck	2840
3.	<u>CHARGES PER SURVEY DAY</u> (towards drafting, report, supervision) 7 days geophysical survey @ 175	1225
4.	MISCELLANEOUS	
	food, gas, lodging, consumables	2154
	Total Expenditures <u>\$ 1</u>),765

EXPLORATION NTS: 82-F-6 WESTERN DISTRICT 15 October 1980

APPENDIX III

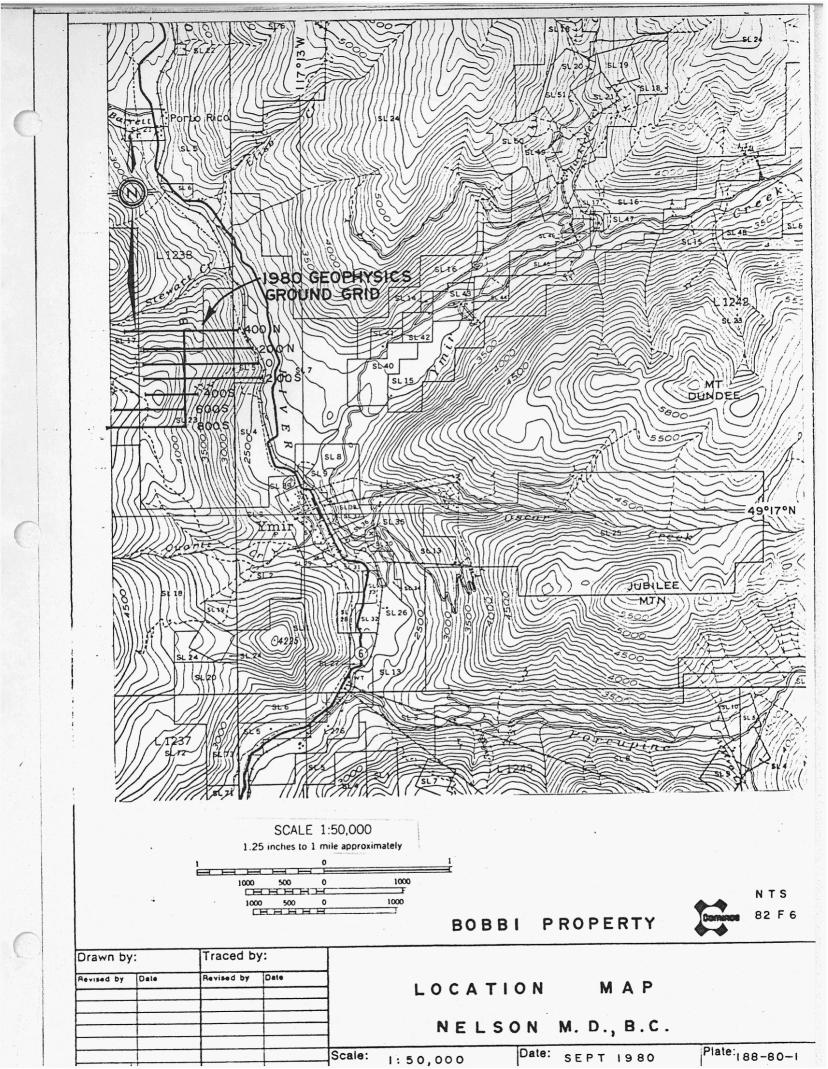
CERTIFICATION

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 ten years.

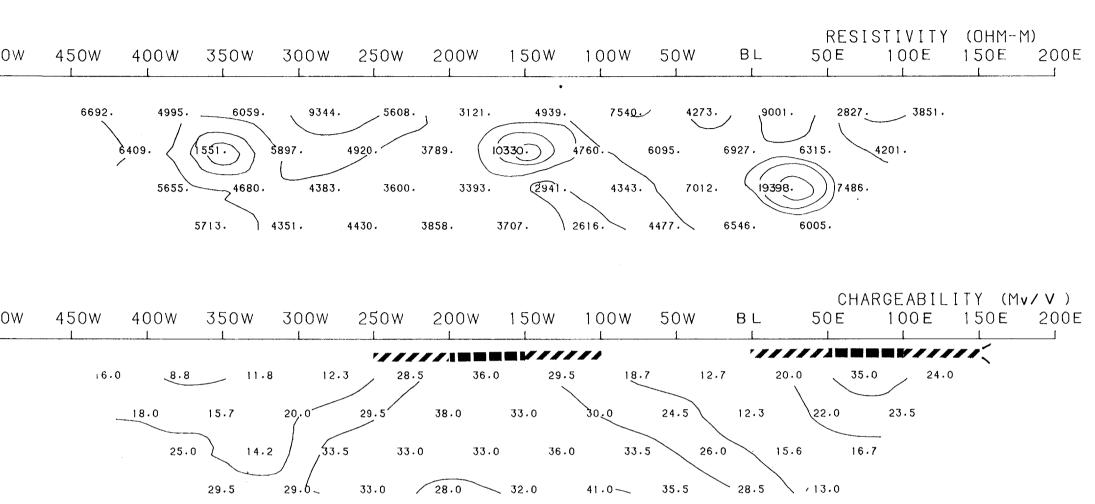
Signed: Geophysicist Alan R. Scott,

15 October 1980



			600W	550W	500v
		N – –1			
		N2			
		N3			
		N4	·		

		600W	1	500W
	N1			
	N2			
	N3			
	N4			



..

...

+

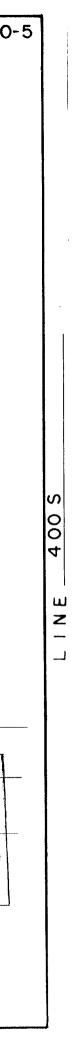
N.T.S. 82-F-6

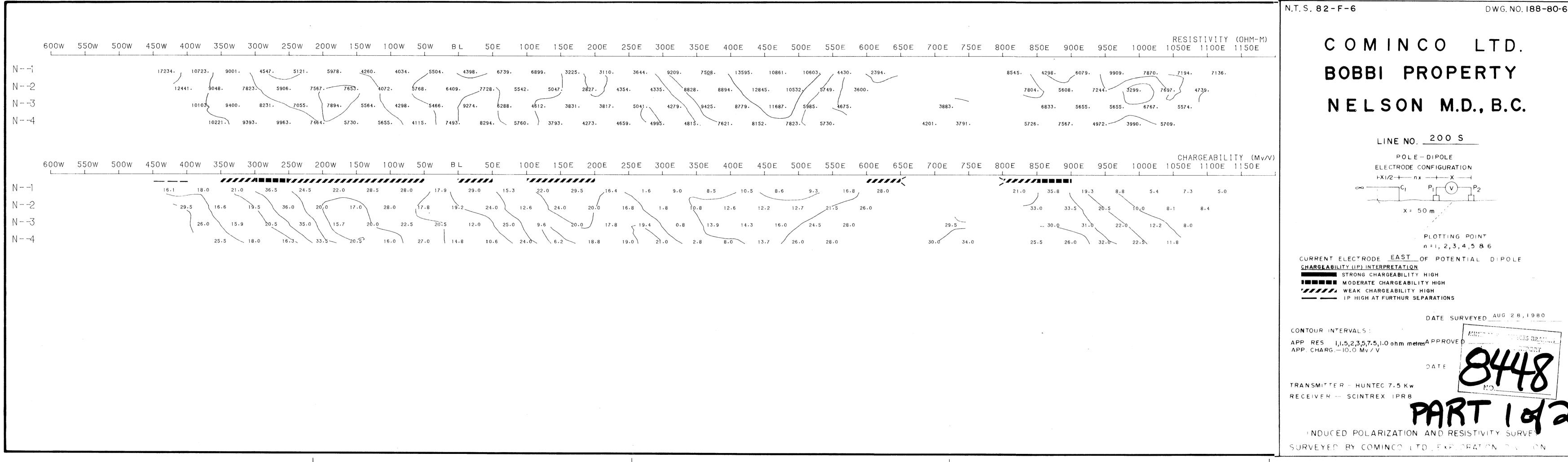
DWG. NO. 188-80-5

COMINCO LTD. BOBBI PROPERTY NELSON M.D., B.C.

LINE NO. 400 S POLE-DIPOLE ELECTRODE CONFIGURATION P₁ --- (v)---X = 50 m PLOTTING POINT n=1, 2, 3, 4, 5 8 6 CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE CHARGEABILITY (IP) INTERPRETATION STRONG CHARGEABILITY HIGH HE WIN WIN MODERATE CHARGEABILITY HIGH IP HIGH AT FURTHUR SEPARATIONS DATE SURVEYED _____ AUG 26, 1980 CONTOUR INTERVALS : APP RES -1,1.5,2,3,5,7.5,1.0 ohm metres APPROVE DIMENTING TO DECISIONAL APP. CHARG.-10.0 My / V -TRANSMITTER - HUNTEC 7.5 Kw RECEIVER - SCINTREX

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

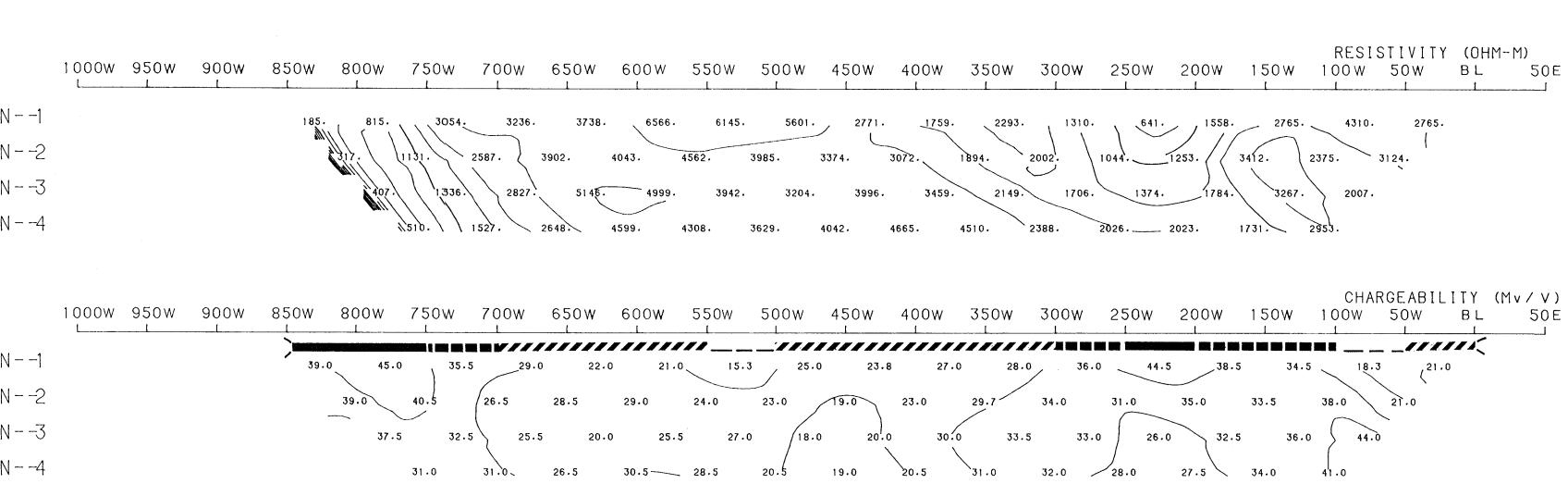


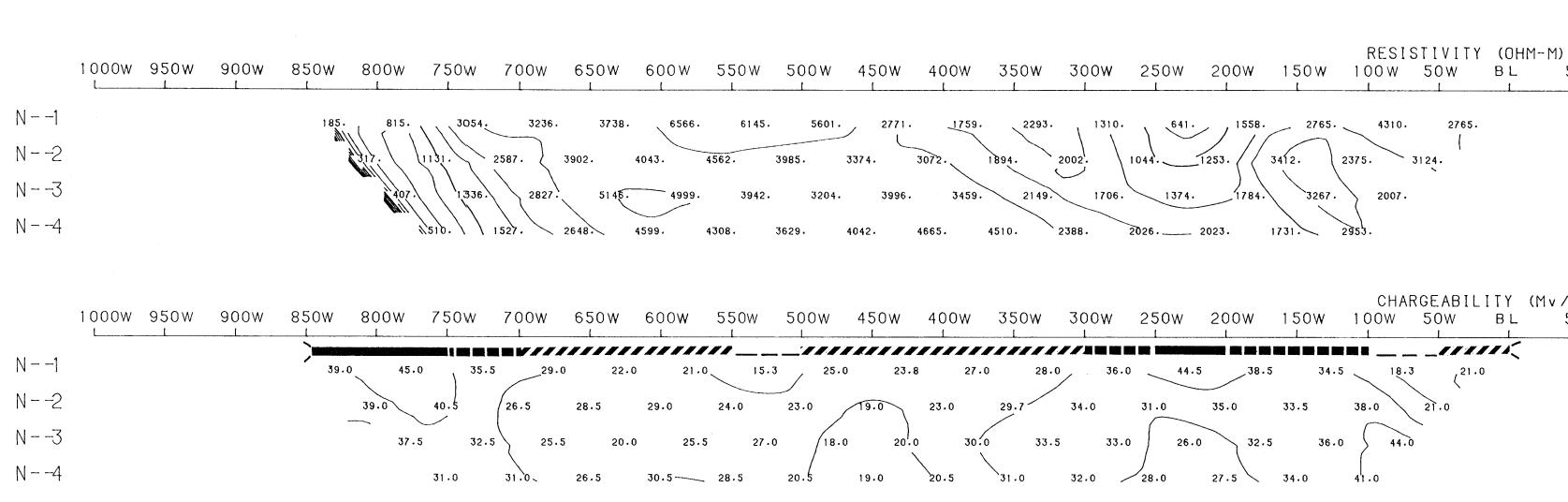


--+









.

۰ ۲

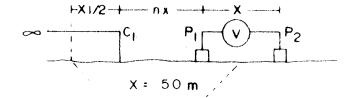
N.T.S. 82-F-6

DWG. NO. 188-80-4

COMINCO LTD. **BOBBI PROPERTY** NELSON M.D., B.C.

LINE NO. 600 S

POLE - DIPOLE ELECTRODE CONFIGURATION



PLOTTING POINT n=1, 2, 3, 4, 5 8 6

CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE CHARGEABILITY (IP) INTERPRETATION STRONG CHARGEABILITY HIGH MODERATE CHARGEABILITY HIGH

TATATA WEAK CHARGEABILITY HIGH ----- IP HIGH AT FURTHUR SEPARATIONS

DATE SURVEYED AUG 26, 1980

CONTOUR INTERVALS :

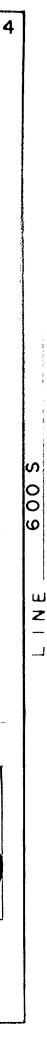
APP RES -1,1.5,2,3,5,7.5,1.0 ohm metres APPROVE @------APP. CHARG -10.0 MV / V MOUTP M. REPORTED BRANCH

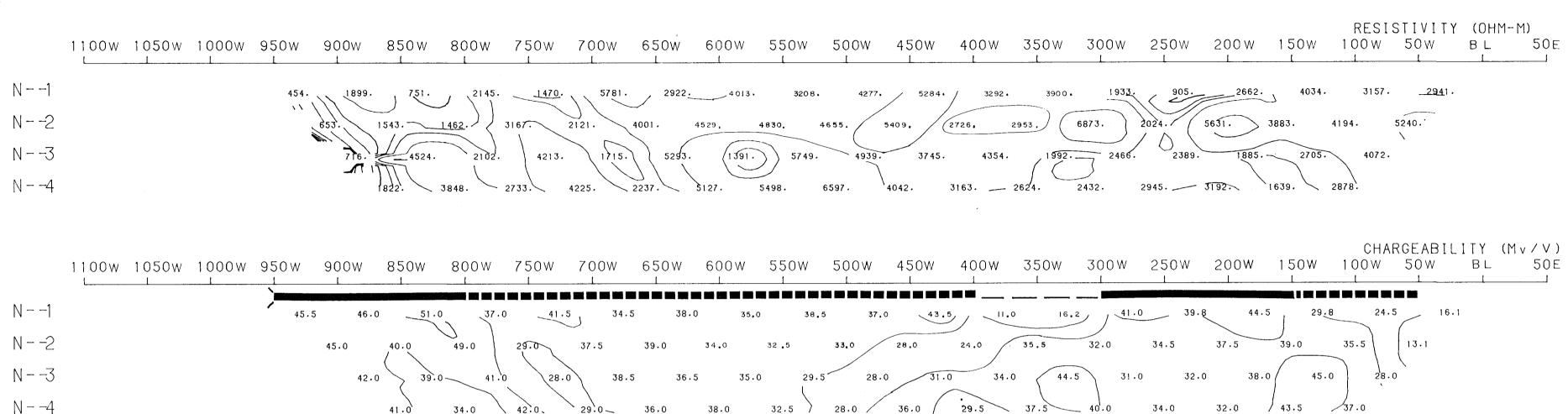
DATI

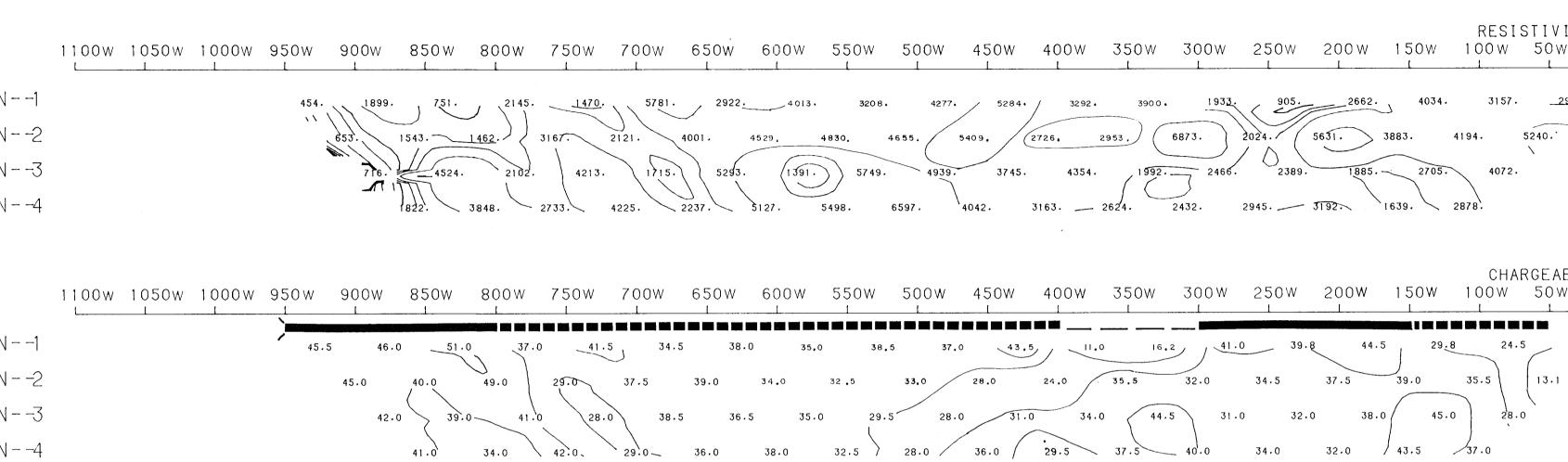
TRANSMITTER - HUNTEC 7.5 Kw

RECEIVER - SCINTREX IPP

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



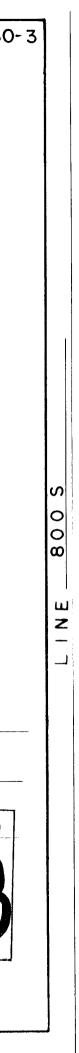


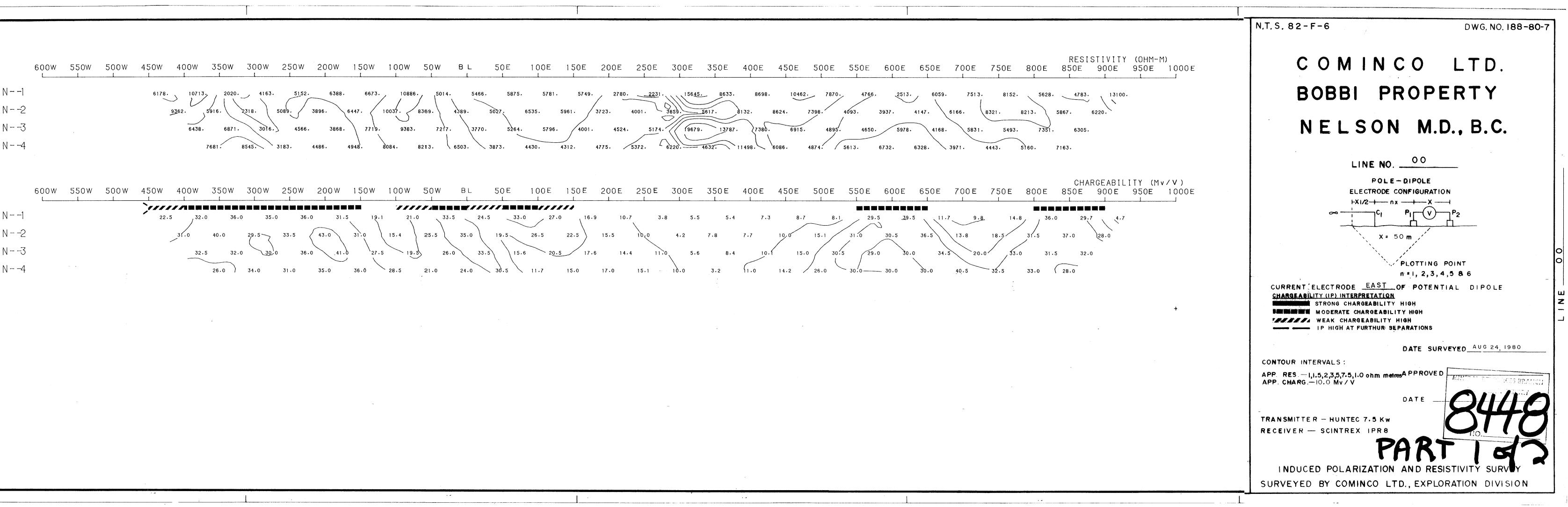


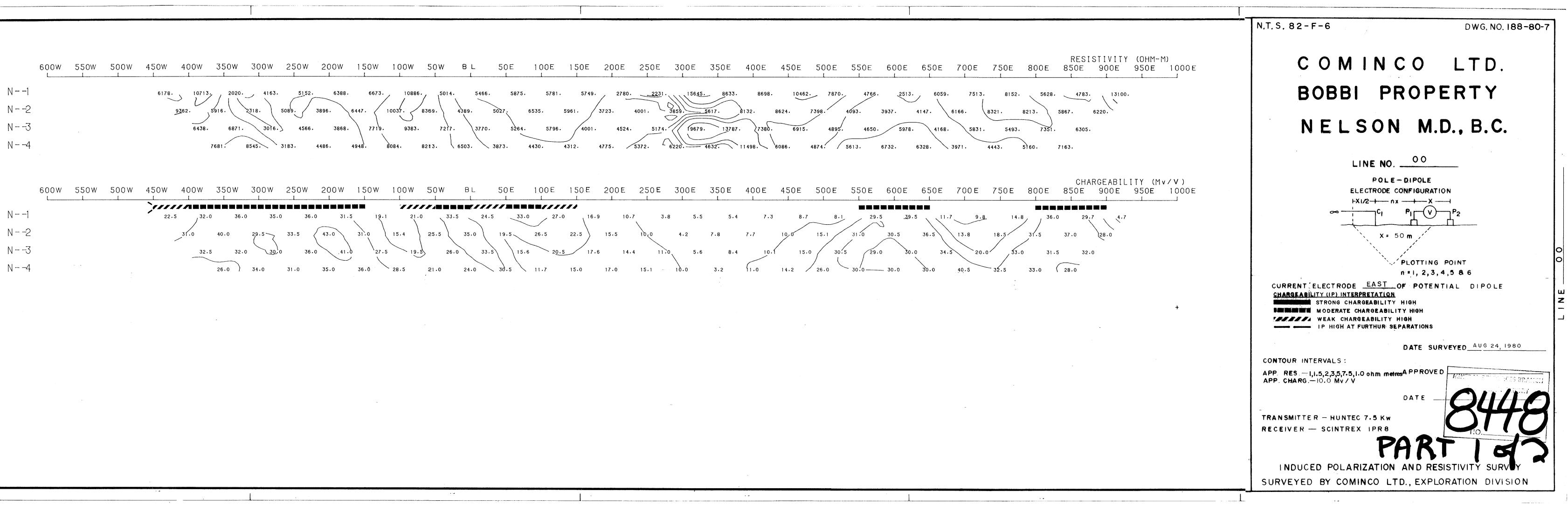
- +

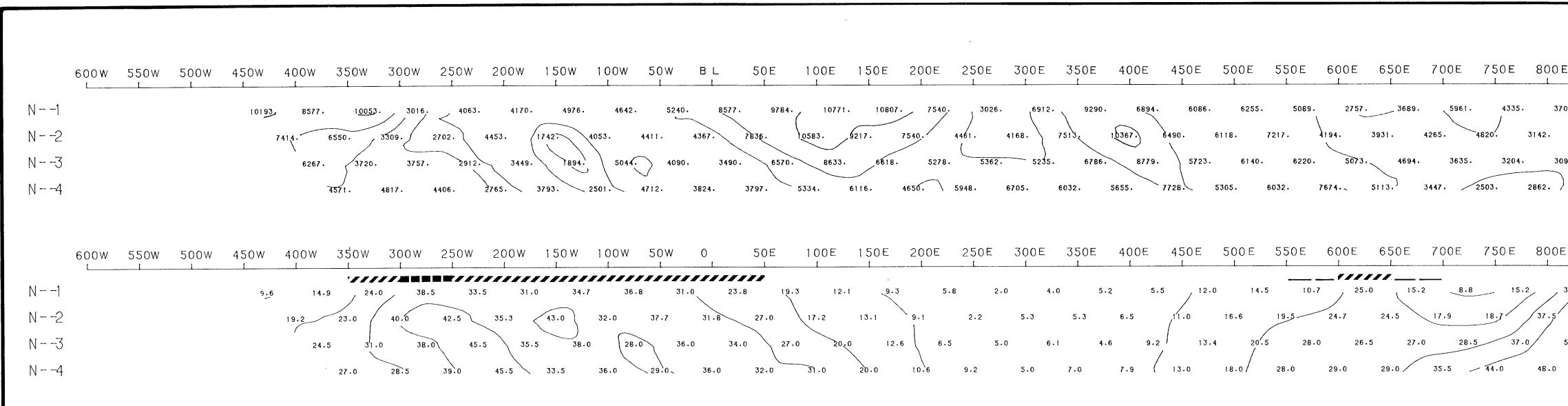
N,T,S, 82-F-6 DWG. NO. 188-80-3 COMINCO LTD. 50f BOBBI PROPERTY NELSON M.D., B.C. LINE NO. 800 S POLE - DIPOLE ELECTRODE CONFIGURATION +X1/2-+---nx ----+---X -----+ $P_1 - (v)$ X= 50 m PLOTTING POINT n=1, 2, 3, 4, 5 8 6 CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE CHARGEABILITY (IP) INTERPRETATION STRONG CHARGEABILITY HIGH + STATE CHARGEABILITY HIGH TEREST WEAK CHARGEABILITY HIGH ------ IP HIGH AT FURTHUR SEPARATIONS DATE SURVEYED AUG 27, 1980 CONTOUR INTERVALS : APP. CHARG. - 10.0 MV / V MINERAL RECOURCES BRANCH DATE TRANSMITTER - HUNTEC 7.5 Kw RECEIVER - SCINTREX IPR INDUCED POLARIZATION AND RESISTIVITY SURVEY SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

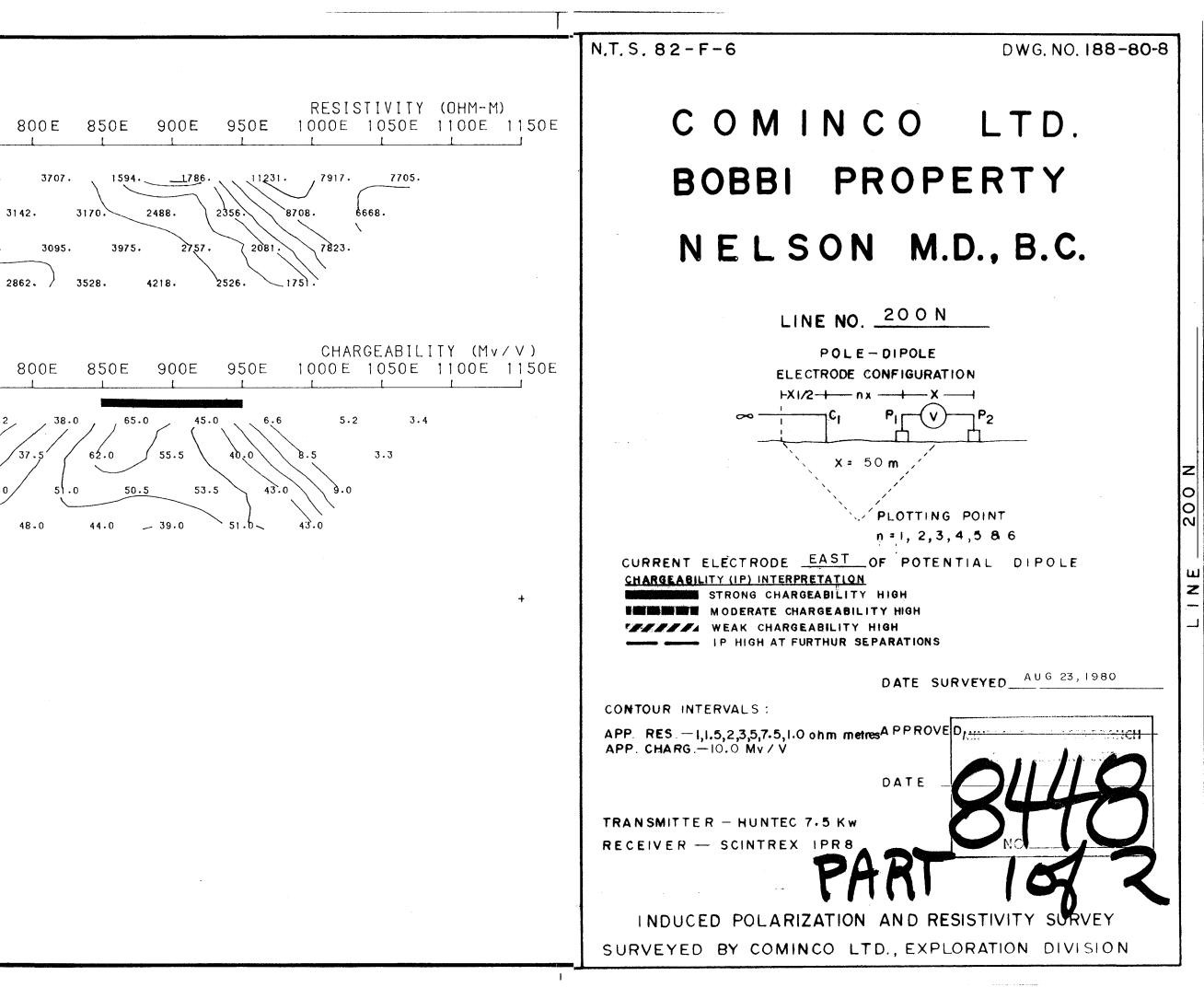
R I

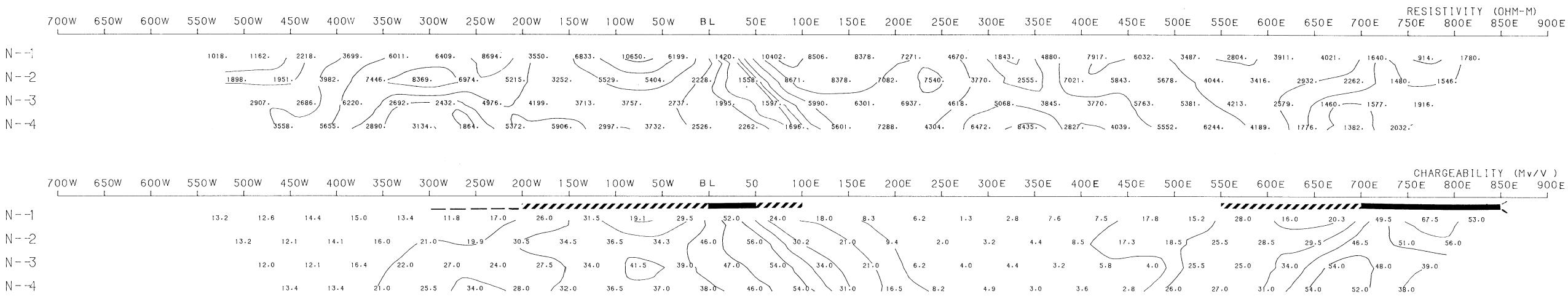


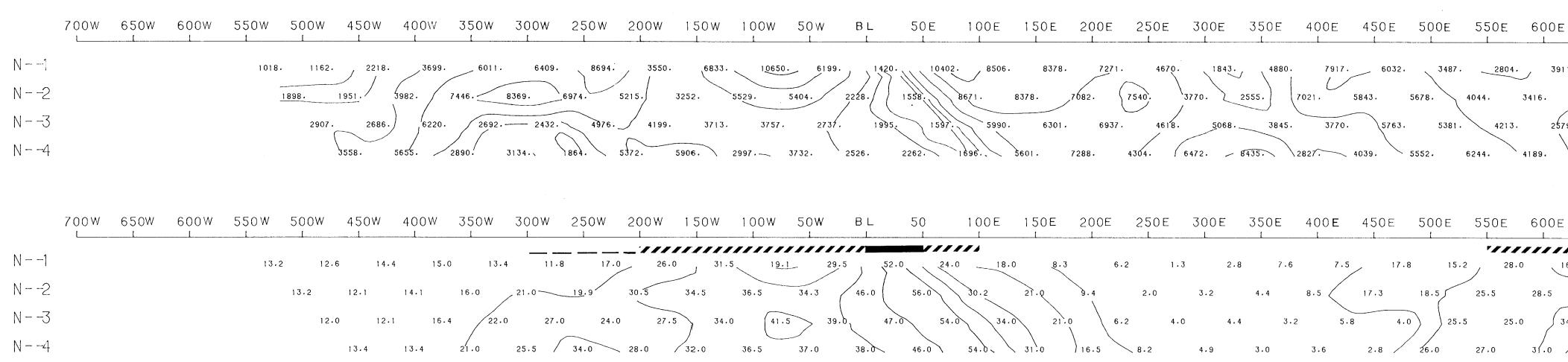












---+

N.T.S. 82-F-6

DWG. NO. 188-80-9

