

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

NTS: 92I/9W

MINERAL RESOURCES BRANCH ASSESSMENT REPORT 6739 NO. _____

INDUCED POLARIZATION AND MAGNETICS SURVEY

AND/LARK CLAIMS

Kamloops Area, Kamloops M.D.
British Columbia

Latitude: 50°35'N; Longitude: 120°20'W

Work Performed: April 23-29, May 3, 1978
Claims Covered: AND 4, AND 5, LARK 1,
LARK 2, LARK 4

June 1978

A. R. Scott

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* * * * *

ATTACHMENTS

Plate 130-78-1	General Location Map
2	AND/LARK Claim Map
3	Magnetic data values and contour plan
4 to 11	Induced Polarization and Apparent Resistivity Pseudo Sections
Appendix I	Statement
Appendix II	Cost Statement
Appendix III	Certification

INTRODUCTION AND SUMMARY

The AND/LARK mineral claims are located some 10 kilometers south of the city of Kamloops along highway 5, as indicated on the accompanying location plan plate 130-78-1. The lines surveyed are indicated on accompanying claim map, plate 130-78-2.

During the period April 23-26, and on April 29, a Cominco geophysical crew completed some 6.5 line kilometers of induced polarization surveying over a portion of the AND/LARK claim group. On May 3, a magnetometer survey was conducted over the same grid lines.

The object of the survey was to determine if sulphides and/or magnetite might be present in the survey area.

This report describes these geophysical surveys and discusses the results obtained.

GEOPHYSICAL SURVEYS

Magnetics Survey

The magnetics survey was conducted by Boris Lumm, geophysicist in training. A Scintrex MP-2 total field proton precession magnetometer was deployed on the survey. The unit has a scale sensitivity of 1 gamma. Readings were normally taken at 30 meter intervals, with fill in readings in areas of steep magnetic gradients. The data is presented in contour plan form as accompanying plate 130-78-3.

Induced Polarization

G.J. Niemeyer, geophysical technician, was the party chief/receiver operator on the IP survey.

A Scintrex IPR-8 receiver in combination with a Hunttec 7.5 KW motor generator/transmitter were utilized. The equipment operates in the time domain with a 2 sec on and 2 sec off pulse. The data plotted is the M_{232} value and the units are millivolts per volt. To correct to the more usual

millisecond value (such as the IPR-7) the numbers would be multiplied by 0.7 (for a "typical" decay curve). The reader is referred to the Scintrex manual for a more detailed discussion of this instrument.

The pole-dipole electrode array was used on the survey, with an "a" spacing of 90 meters and "n" separations of 1, 2, 3 and 4. Readings were taken at 90 meter intervals.

The chargeability and apparent resistivity data are presented in standard pseudo section form as plates 130-78-4 to 130-78-11.

DESCRIPTION OF RESULTS

Magnetics Survey

The magnetic survey data is presented in contour plan form on plate 130-78-3. 56,000 gammas should be added to the plotted values to obtain the total magnetic field.

A trough of low magnetic field strength (less than 1500 gammas) lies just east of the baseline from line 450S to line 220N. This low is also characterized by low chargeability and low resistivity values.

A magnetic high lies in the south west corner of the grid on lines 600S to line 150S. IP survey results on line 600S show low chargeability response on that portion of the mag high. Further coverage, particularly in the north east near lines 1 and 2, would be desirable.

Induced Polarization Survey

The chargeability and apparent resistivity data is presented in standard pseudo section form on plates 130-78-4 to 11 inclusive.

An anomalously high chargeability zone was detected between stations 360E to 720E on line 150S, and between stations 360E to 720E on line 0 + 00. Response on line 0 + 00 is complicated by the presence of a large buried pipe which has caused a very strong anomaly of up to 69 millivolts per volt, with flanking negative values.

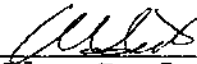
High chargeability values were obtained on the very short traverse on line 220N. More data is required to evaluate this anomaly.

CONCLUSIONS

Portions of the AND/LARK mineral claims were surveyed with multiseperation pole dipole time domain IP, and total field magnetics, in the spring of 1978.

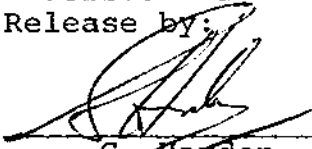
An anomalously high chargeability zone was detected between stations 360E to 720E on line 0 + 00 and 150S. The interpretation is complicated by the presence of a large buried pipe which is causing a very strong anomaly of 69 millivolts per volt. A geological and geochemical evaluation of this anomaly may indicate whether drilling is warranted.

Respectfully submitted:



Alan R. Scott
Geophysicist

Endorsed for
Release by:



G. Harden
Manager, Exploration
Western District

ARS/deb
5 June 1978
Attachs.

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 AND/LARK MINERAL CLAIMS
ON THE AND/LARK PROPERTY
LOCATED 10 KM SOUTH OF KAMLOOPS IN THE KAMLOOPS MINING DIVISION
OF THE PROVINCE OF BRITISH COLUMBIA MORE PARTICULARLY
N.T.S. 92I-9

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 ANNEXED HERETO AND MARKED AS "APPENDIX II" TO
THIS STATEMENT IS A TRUE COPY OF EXPENDITURES INCURRED
ON GEOPHYSICAL SURVEY ON THE AND/LARK MINERAL CLAIMS;
3. THAT THE SAID EXPENDITURES WERE INCURRED BETWEEN THE
23rd OF APRIL AND THE 3rd OF MAY, 1978, FOR THE PURPOSE
OF MINERAL EXPLORATION OF THE ABOVE NOTED CLAIMS.



ALAN R. SCOTT
Geophysicist

APPENDIX II

AND/LARK

STATEMENT OF EXPENDITURES

(Line Cutting, IP and Ground Magnetic Survey)

SALARIES:

G.J. Niemeyer	5½ days	@ \$120.00/day	\$	660.00
C. LaPrairie	5½ days	@ \$ 82.00/day	\$	451.00
R.B. Grant	5½ days	@ \$ 56.36/day	\$	310.00
J.M. Niemeyer	5½ days	@ \$ 56.36/day	\$	310.00
D.M. Carr	5½ days	@ \$ 69.81/day	\$	384.00
B. Lumm	1 day	@ \$105.00/day	\$	105.00

MISCELLANEOUS:

Food, lodging, gas, salt for IP \$ 894.00

OPERATING CHARGES:

6 days @ \$175.00/day \$ 1,050.00

GEOPHYSICAL EQUIPMENT & TRUCK RENTAL:

5.5 days @ \$258.00/day \$ 1,419.00

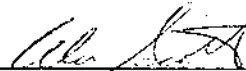
REPORT AND SUPERVISION:

A.R. Scott 2 days @ \$150.00/day \$ 300.00

LINE CUTTING:

John Young 7.2 km @ \$100.00/km \$ 710.00

TOTAL COST: \$ 6,593.00




ALAN R. SCOTT
Geophysicist

APPENDIX III

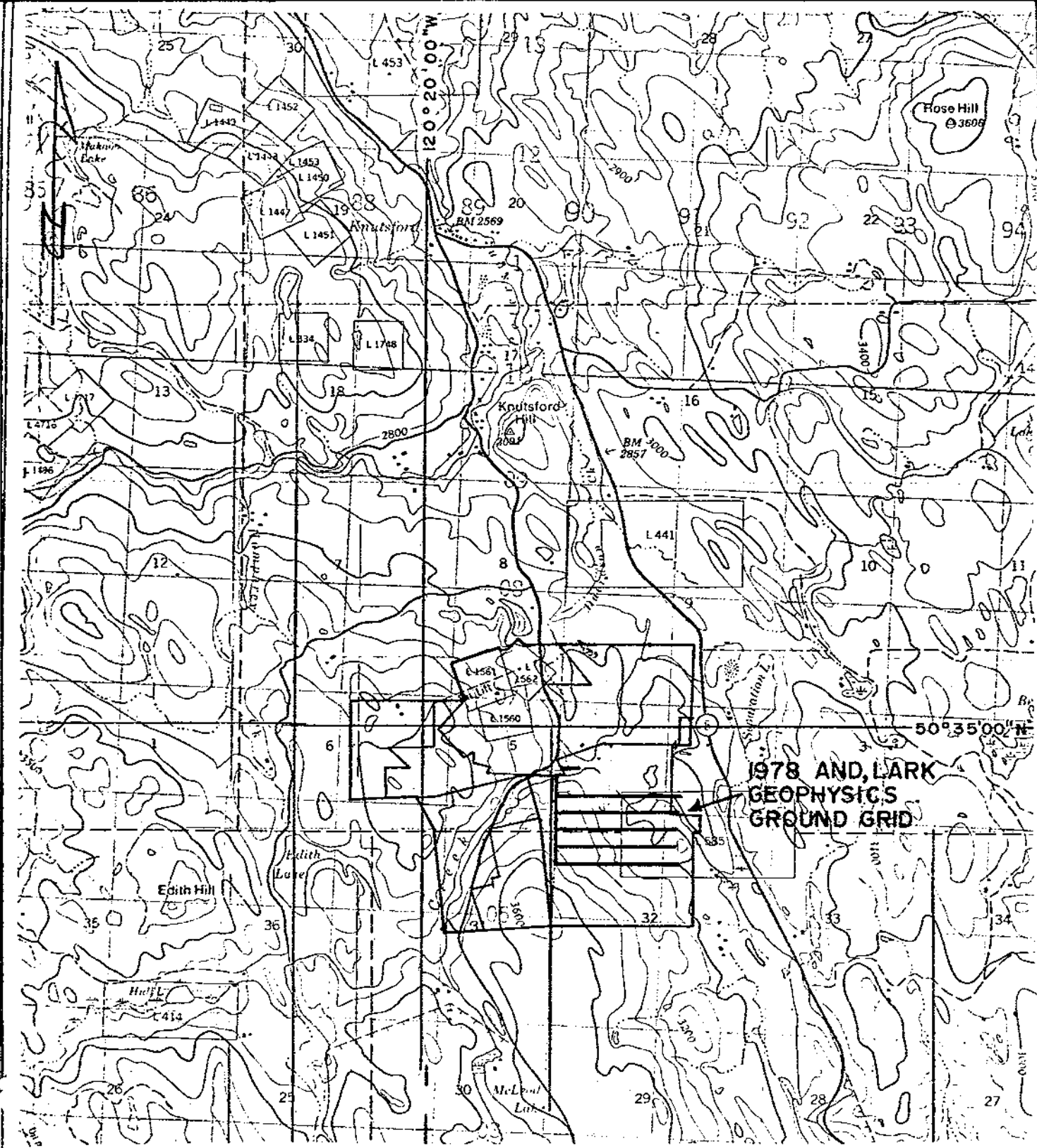
C E R T I F I C A T I O N

I, ALAN SCOTT, OF 4013 W. 14th AVENUE IN THE CITY OF VANCOUVER, IN THE PROVINCE OF BRITISH COLUMBIA, DO HEREBY CERTIFY THAT: -

1. I graduated from the University of British Columbia in 1970 with a B.Sc. in Geophysics.
2. 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. I have been practising my profession for the past eight years.

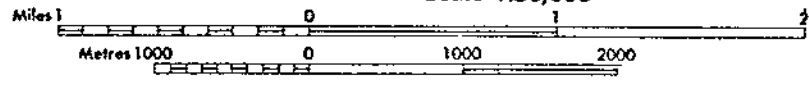


Alan Scott
Geophysicist



**1978 AND LARK
GEOPHYSICS
GROUND GRID**

Scale 1:50,000



NTS
9219

UA

Drawn by:		Traced by:	
Checked By	Date	Revised By	Date

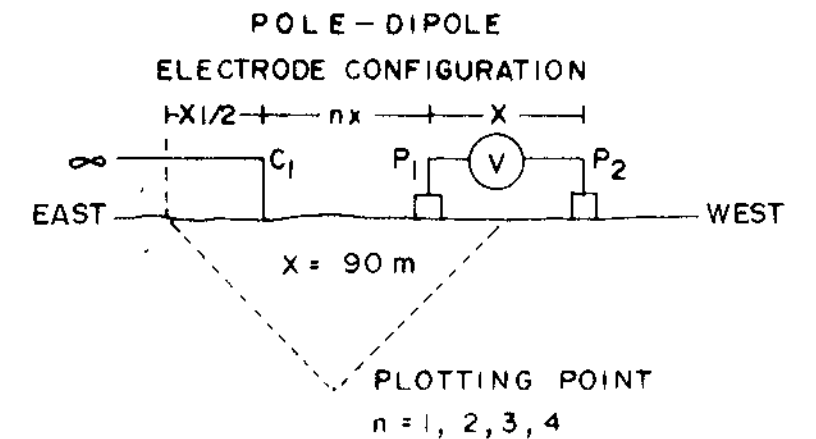
LOCATION MAP

KAM LOOPS M. D., B. C.

Scale: 1:50,000 Date: JUNE 1978 Plate: 28-78-1

**COMINCO LTD.
AND-LARK PROPERTY
AND-LARK CLAIMS
KAMLOOPS M.D., B.C.**

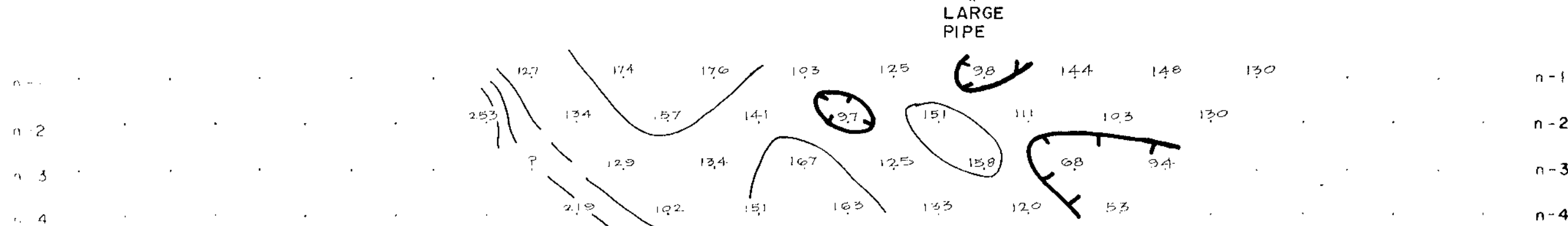
LINE NO. 0+00



CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE

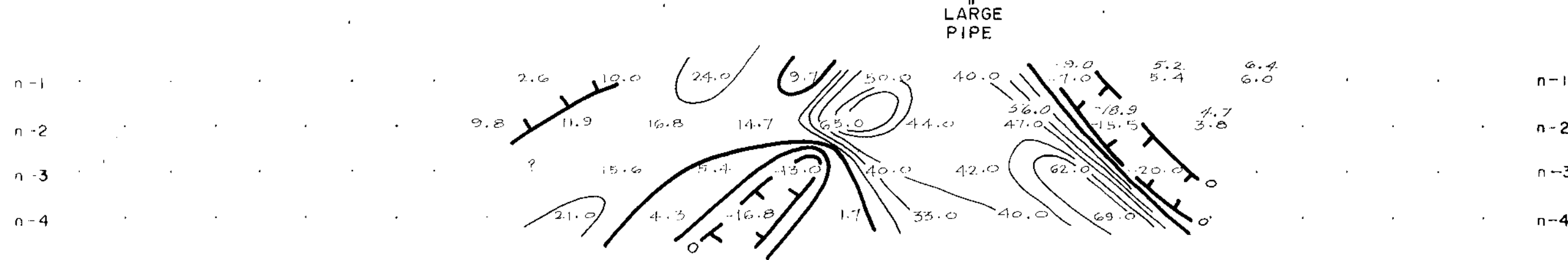
Apparent Resistivity ρ_a

BL 90E 180E 270E 360E 450E 540E 630E 720E 810E 900E 990E 1080E 1170E



Apparent Chargeability M_a

BL 90E 180E 270E 360E 450E 540E 630E 720E 810E 900E 990E 1080E 1170E



BL 90E 180E 270E 360E 450E 540E 630E 720E 810E 900E 990E 1080E 1170E

SCALE 1:

DATE SURVEYED APRIL 24, 1978

CONTOUR INTERVALS:

APP. RES. - 50 ρ_a
APP. CHARG. - 10.0 Mv/V

APPROVED

DATE MINERAL RESOURCES BRANCH

ASSESSMENT REPORT

6739

NO.

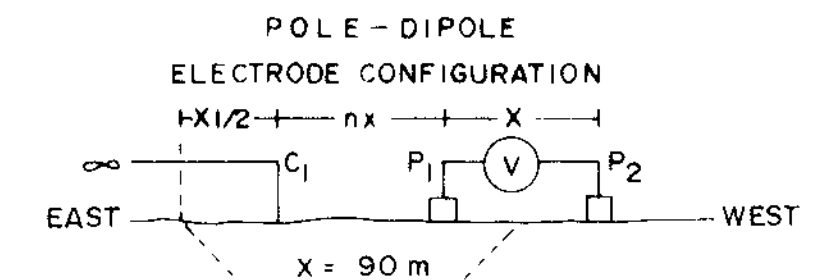
TRANSMITTER - HUNTEC 7.5 KW
RECEIVER - IPP 8

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

LINE 0+00

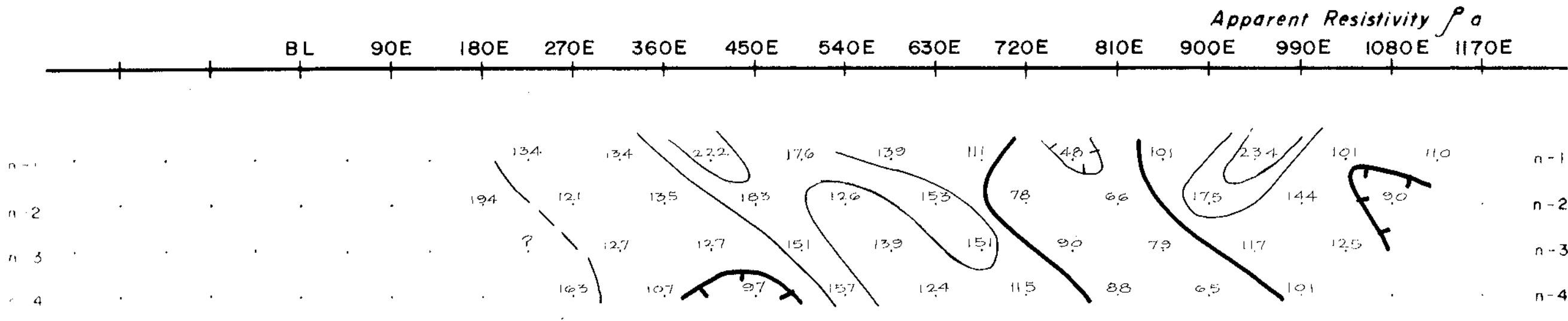
COMINCO LTD. AND-LARK PROPERTY AND-LARK CLAIMS KAMLOOPS M.D., B.C.

LINE NO. 150 S



PLOTTING POINT
n = 1, 2, 3, 4

CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE



	BL	90E	180E	270E	360E	450E	540E	630E	720E	810E	900E	990E	1080E	1170E
n-1														
n-2														
n-3														
n-4														

SCALE 1:

DATE SURVEYED APRIL 25, 1978

CONTOUR INTERVALS:

APP. RES. - 50 ρ_a
APP. CHARG. - 5.0 Mv/V

APPROVED [Signature]

DATE MINERAL RESOURCES BRANCH

ASSESSMENT REPORT

6739

NO.

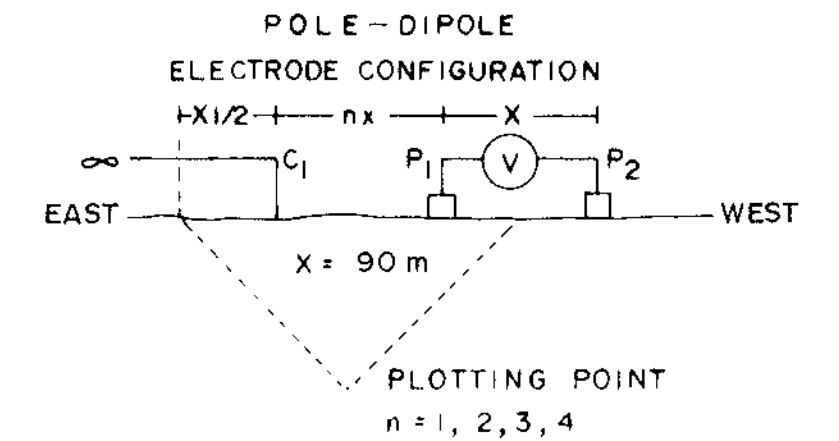
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RECEIVER - IPP 8

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

LINE 150 S

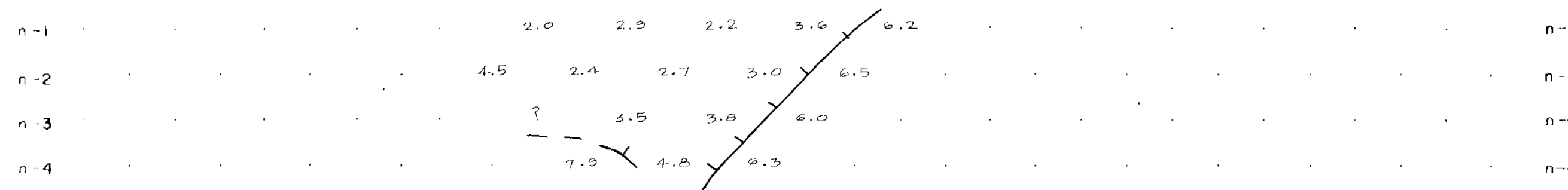
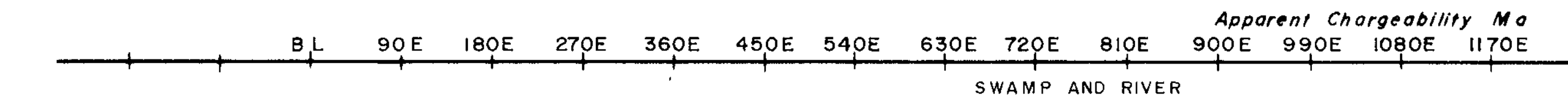
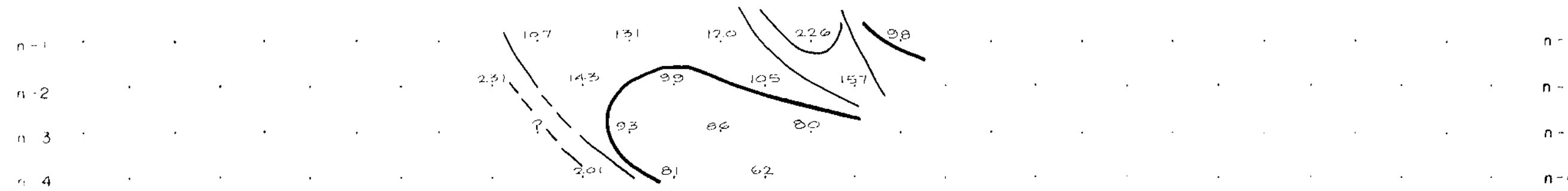
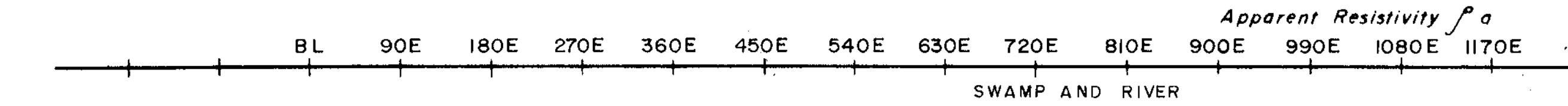
COMINCO LTD. AND-LARK PROPERTY AND-LARK CLAIMS KAMLOOPS M.D., B.C.

LINE NO. 300 S



CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE

LINE 300 S



	BL	90E	180E	270E	360E	450E	540E	630E	720E	810E	900E	990E	1080E	1170E
n-1														
n-2														
n-3														
n-4														

SCALE 1:

CONTOUR INTERVALS:

APP. RES. — 50 ρ_a
APP. CHARG. — 5.0 Mv/V

DATE SURVEYED APRIL 25, 1978

APPROVED [Signature]

TRANSMITTER — HUNTEC 7.5 KW
RECEIVER — IPP 8

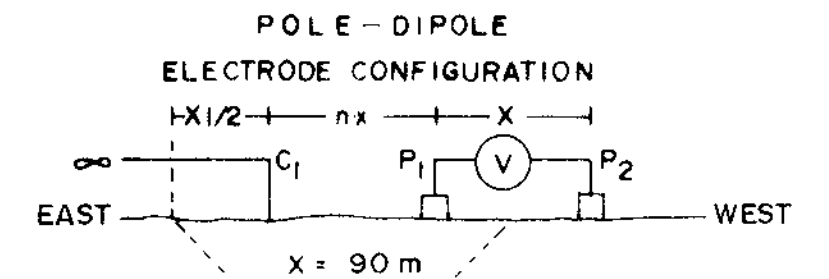
DA E
MINERAL RESOURCES BRANCH
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6739
NO.

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

COMINCO LTD. AND LAND PROPERTY

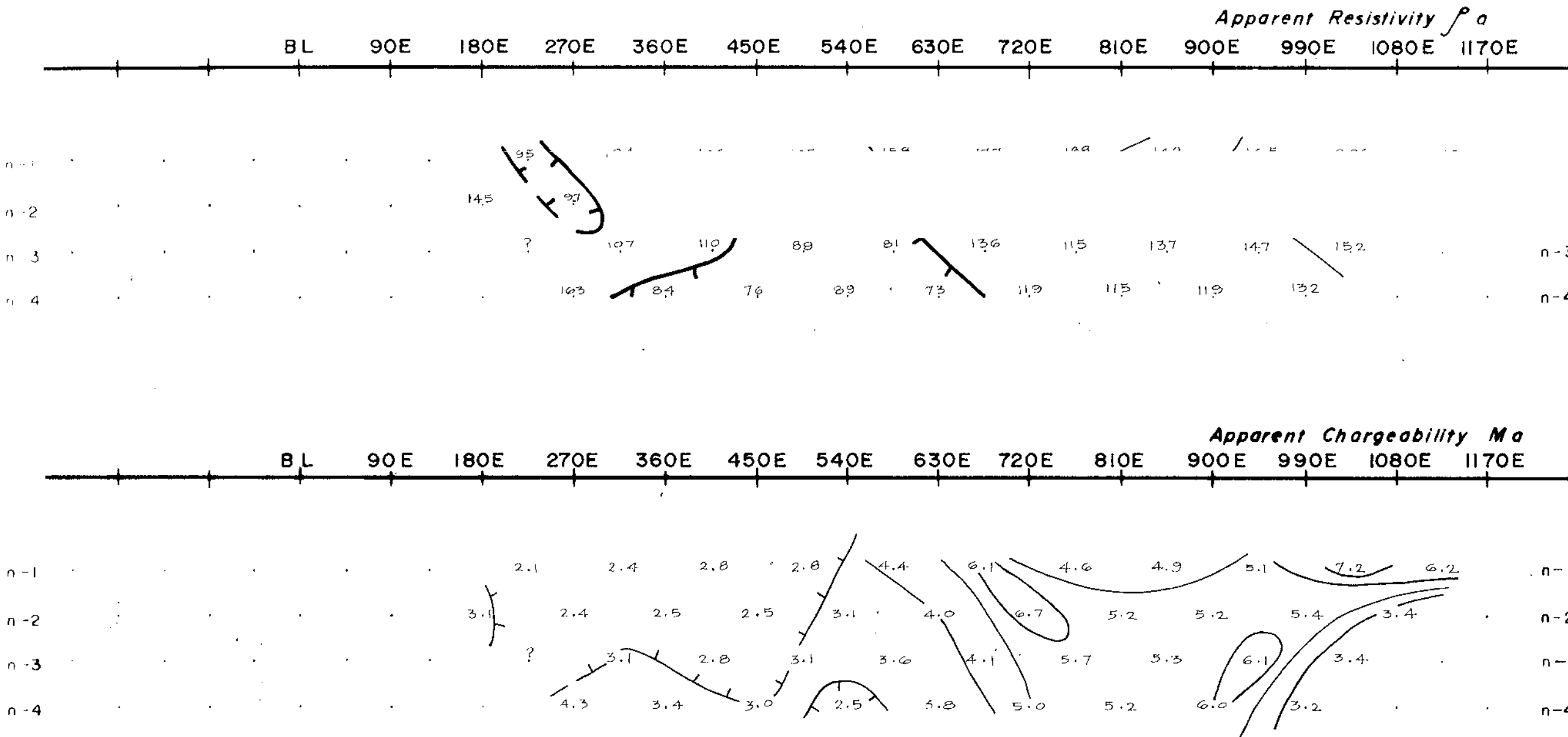
KAMLOOPS M.D., B.C.

LINE NO. 450 S



PLOTTING POINT
n = 1, 2, 3, 4

CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE



	BL	90E	180E	270E	360E	450E	540E	630E	720E	810E	900E	990E	1080E	1170E
n-1														
n-2														
n-3														
n-4														

SCALE 1:

DATE SURVEYED APRIL 26, 1978

CONTOUR INTERVALS:

APPROVED CA

APP. RES. — 50 ρ_a

APP CHARG. — 1.0 Mv/V

DATE MINERAL RESOURCES BRANCH

ASSESSMENT REPORT

6739

NO.

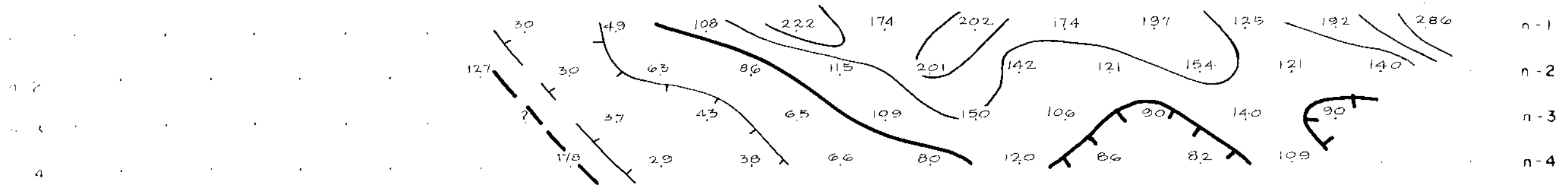
TRANSMITTER — HUNTEC 7.5 KW

RECEIVER — IPP 8

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

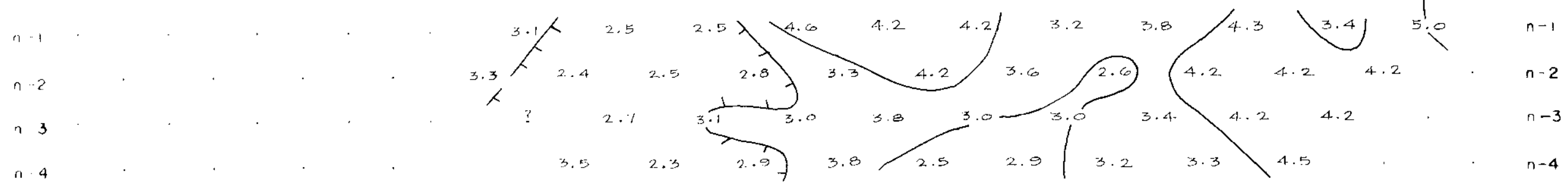
LINE 450 S

BL 90E 180E 270E 360E 450E 540E €

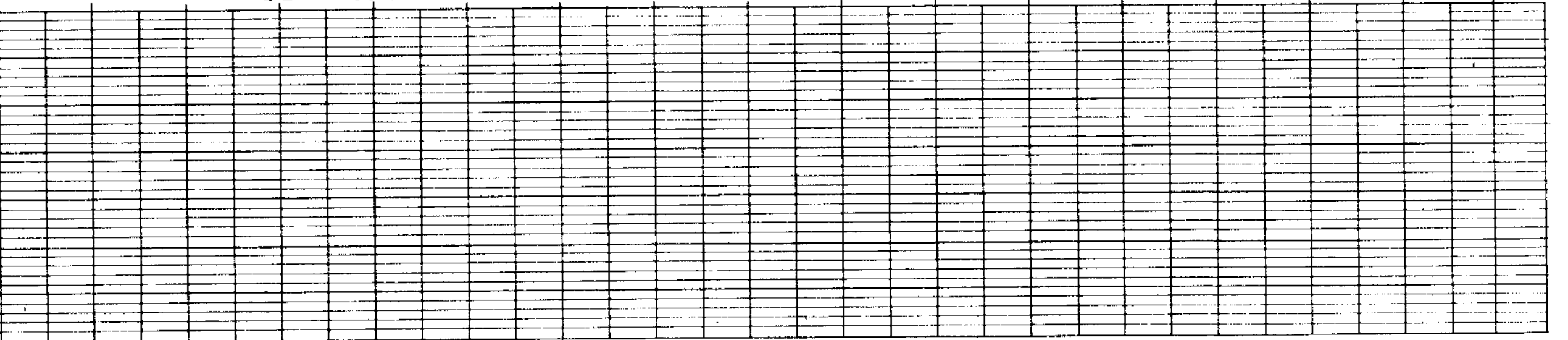


Apparent Chargeability Ma

BL 90E 180E 270E 360E 450E 540E 630E 720E 810E 900E 990E 1080E 1170E



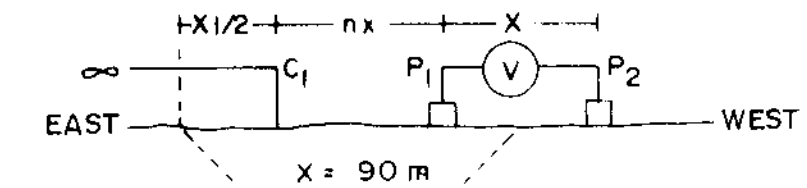
BL 90E 180E 270E 360E 450E 540E 630E 720E 810E 900E 990E 1080E 1170E



COMINCO LTD. AND-LARK PROPERTY AND-LARK CLAIMS KAMLOOPS M.D., B.C.

LINE NO. 600 S

POLE-DIPOLE
ELECTRODE CONFIGURATION



CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE

SCALE 1:

CONTOUR INTERVALS:
APP. RES. — 50 ρ_a
APP. CHARG. — 1.0 Mv/V

DATE SURVEYED APRIL 26, 1978

APPROVED

TRANSMITTER — HUNTEC 7.5 Kw
RECEIVER — IPP 8

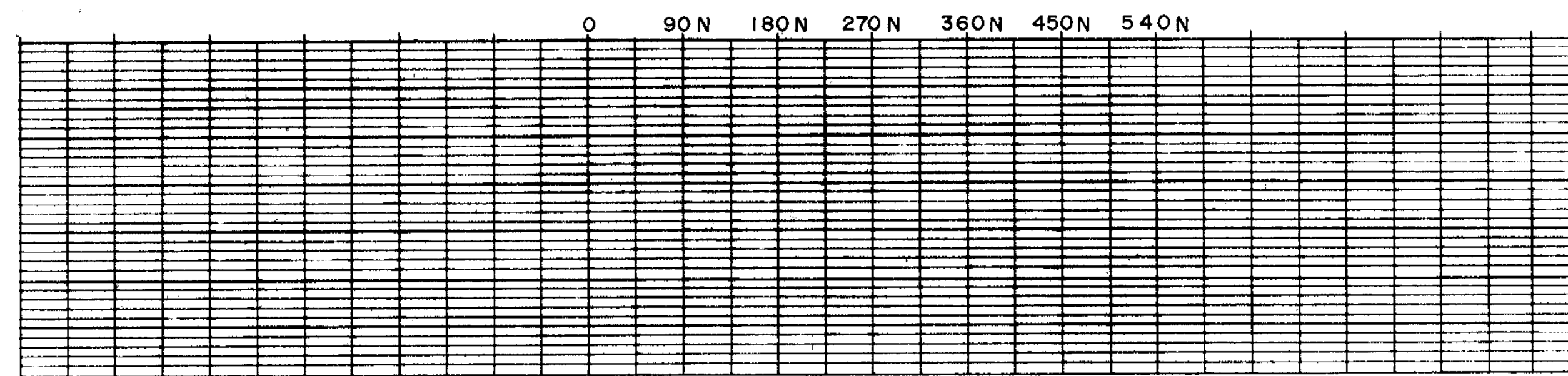
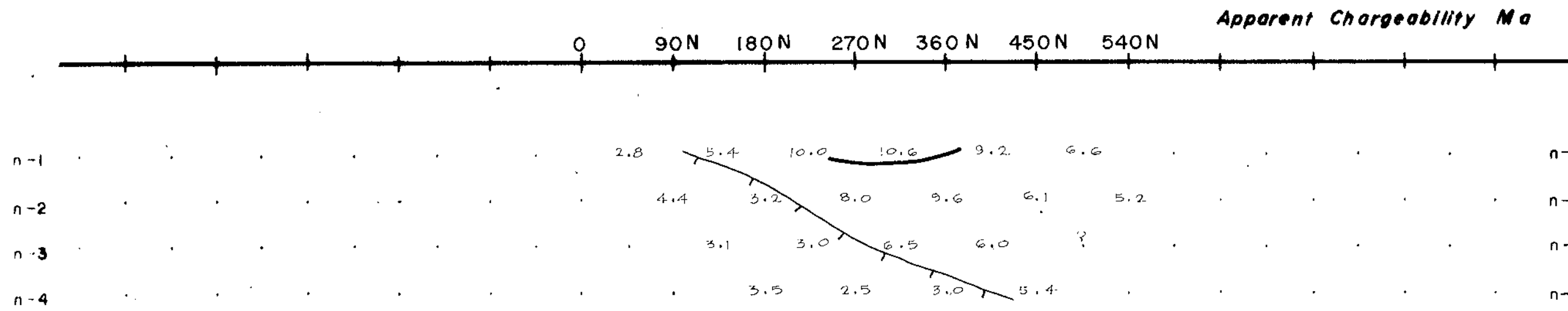
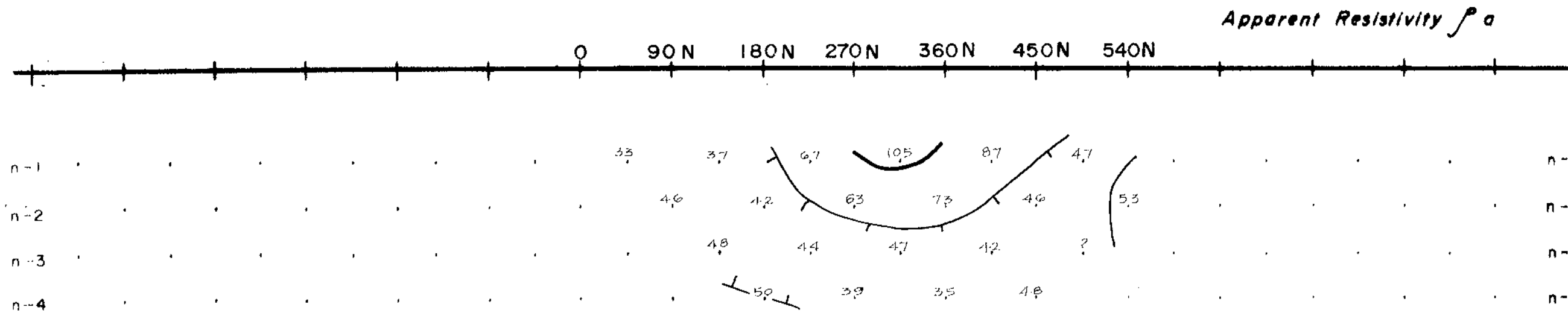
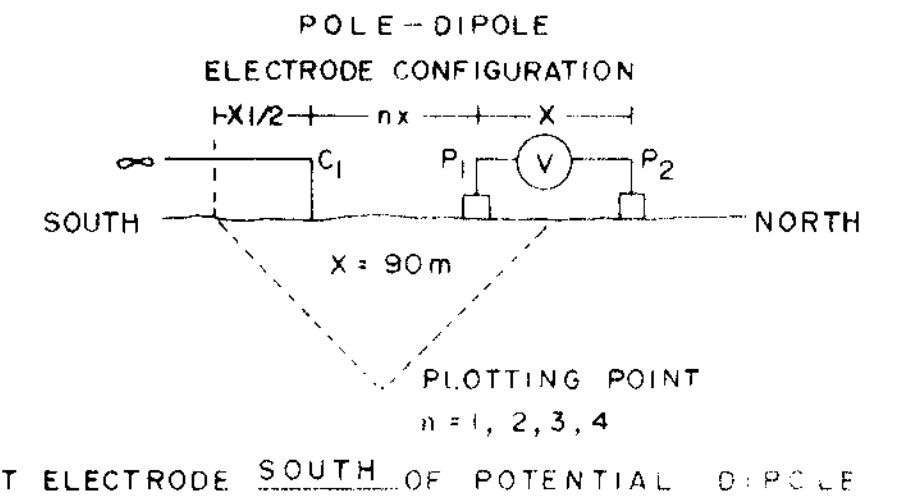
DATA MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
6739
NO.

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

LINE 600 S

COMINCO LTD. AND-LARK PROPERTY LARK CLAIMS KAMLOOPS M.D., B.C.

LINE NO. 2



SCALE 1:

CONTOUR INTERVALS:

APP. RES. — 50 ρ_a

APP CHARG. — 5.0 Mv/V

DATE SURVEYED APRIL 29, 1978

APPROVED AA

DA MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

6739
NO.

TRANSMITTER — HUNTEC 7.5 KW

RECEIVER — IPR 8

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

LINE 2

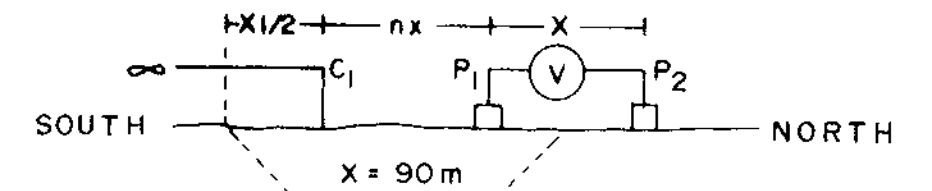
N.T.S.

DWG. NO. 129-78-11

COMINCO LTD. AND-LARK PROPERTY LARK CLAIMS KAMLOOPS M.D., B.C.

LINE NO. 1

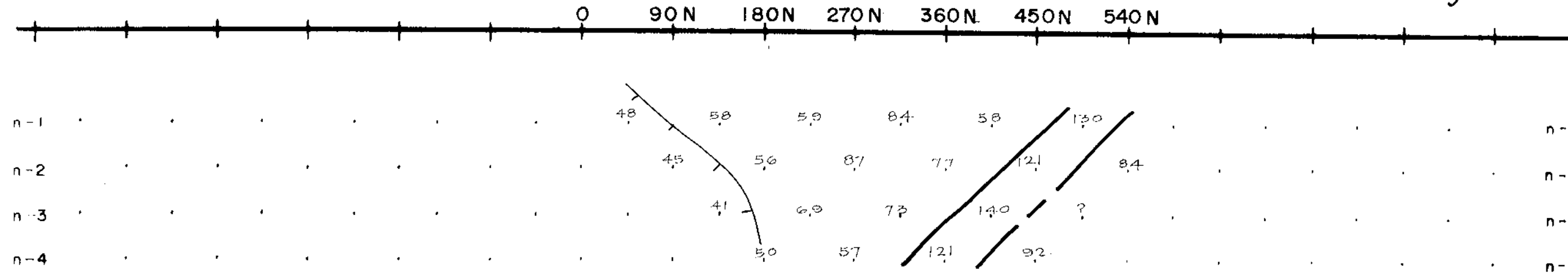
POLE-DIPOLE
ELECTRODE CONFIGURATION



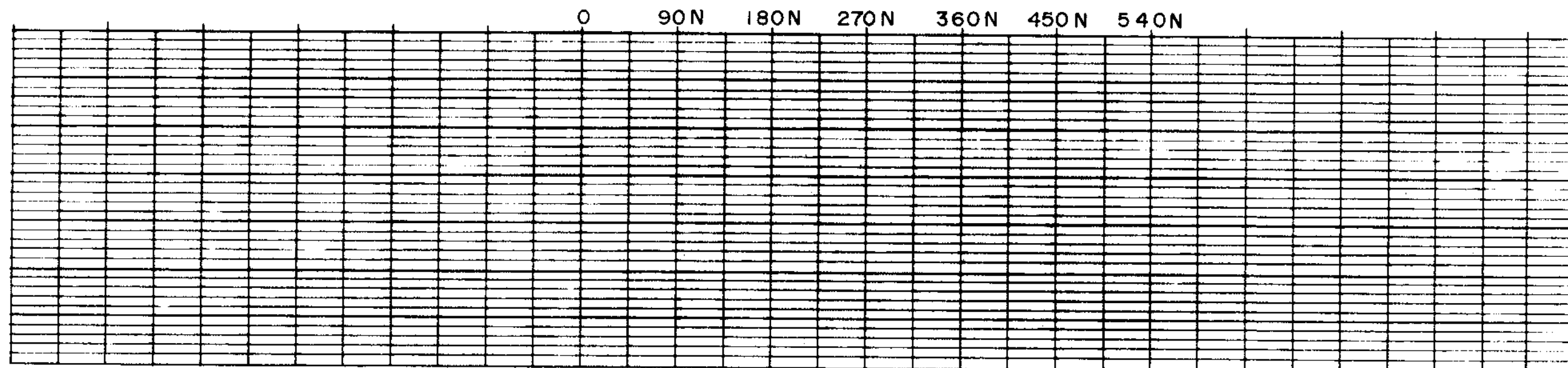
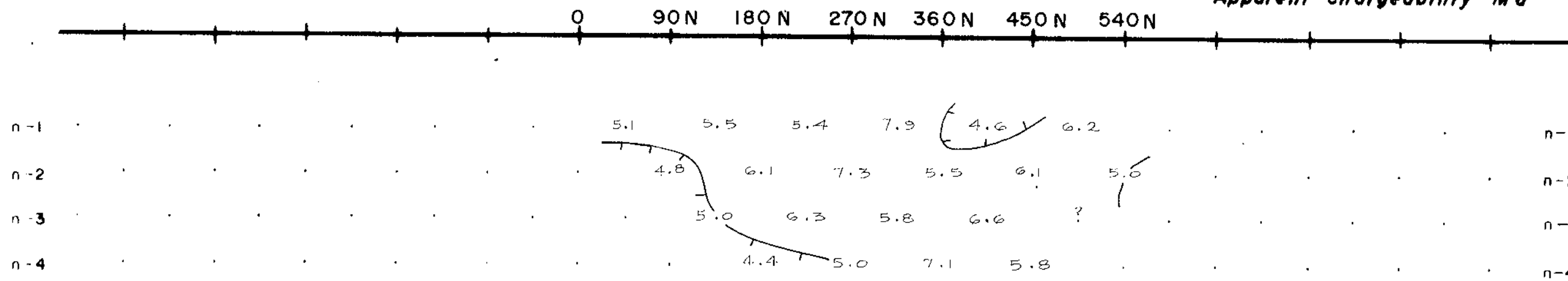
PLOTTING POINT
n = 1, 2, 3, 4

CURRENT ELECTRODE SOUTH OF POTENTIAL DIPOLE

Apparent Resistivity ρ_a



Apparent Chargeability M_a



SCALE 1:

CONTOUR INTERVALS:

APP. RES. — $50 \rho_a$

APP CHARG. — 5.0 Mv/V

DATE SURVEYED APRIL 29, 1978

APPROVED [Signature]

TRANSMITTER — HUNTEC 7.5 Kw

RECEIVER — IPR 8

DATE _____

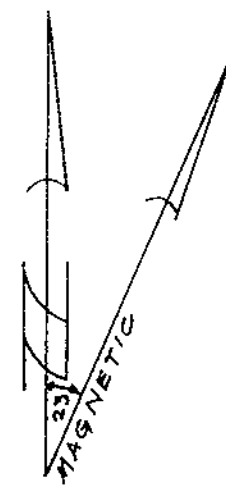
MINERAL RESOURCES BRANCH

APP. RES. REPORT

6739

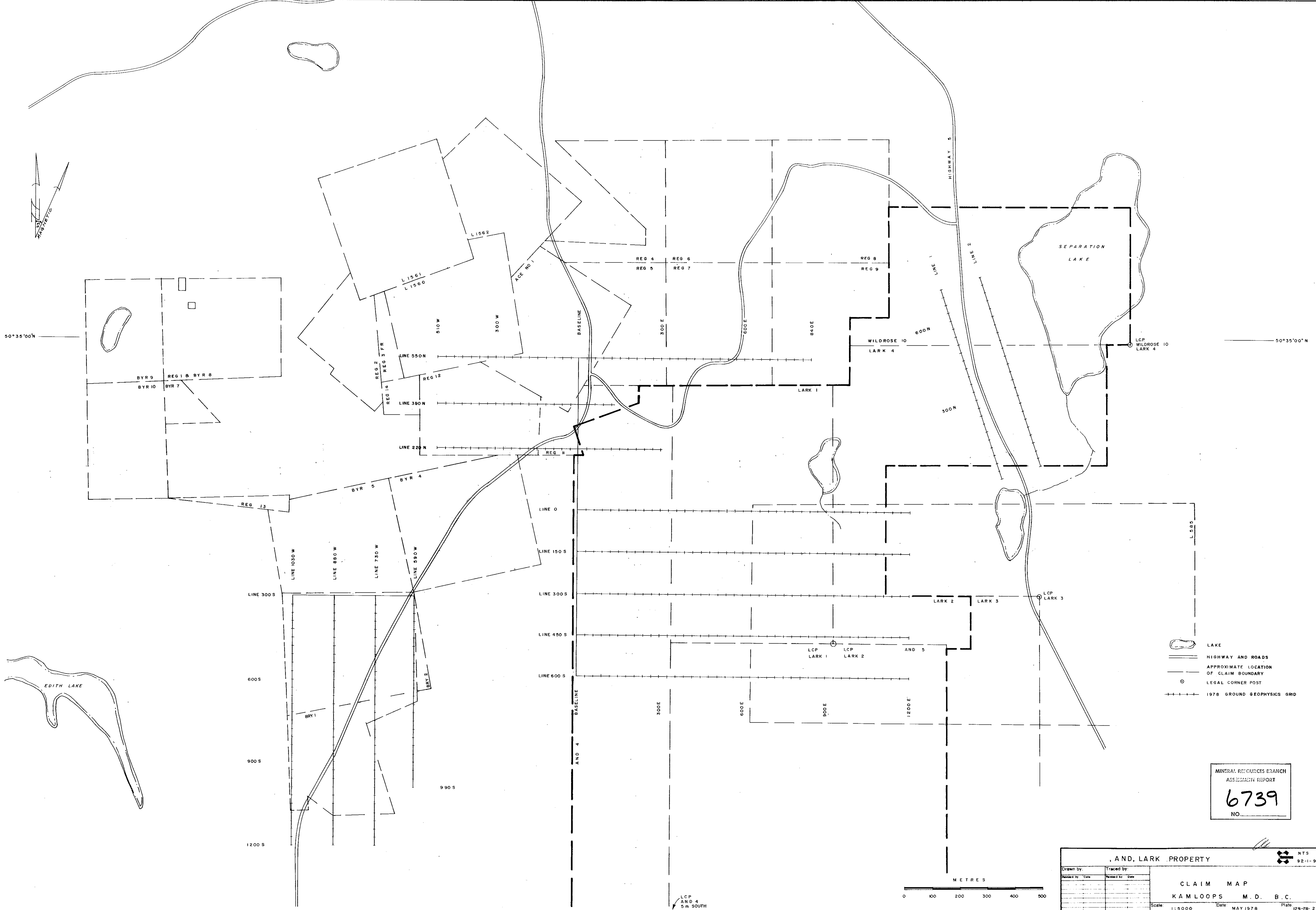
NO.

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



50°35'00"N

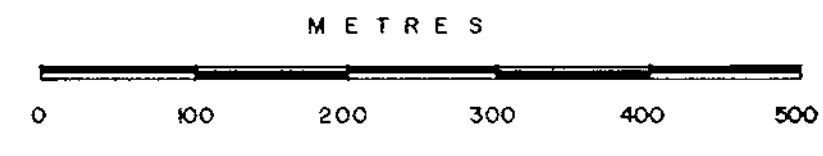
50°35'00"N



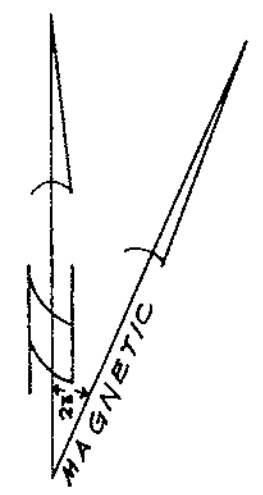
- LAKE
- HIGHWAY AND ROADS
- APPROXIMATE LOCATION OF CLAIM BOUNDARY
- LEGAL CORNER POST
- 1978 GROUND GEOPHYSICS GRID

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
6739
NO.

DRAWN BY: _____		TRACED BY: _____	
PROVED BY: _____	DATE: _____	PROVED BY: _____	DATE: _____
CLAIM MAP			
KAM LOOPS M. D. B. C.			
Scale: 1:5000	Date: MAY 1978	Plate: 129-78-2	NTS 92-1-9



LCP AND 4 5m SOUTH



50°35'00"N

50°35'00"N



- LAKE
- HIGHWAY AND ROADS
- APPROXIMATE LOCATION OF CLAIM BOUNDARY
- LEGAL CORNER POST
- 1976 GROUND GEOPHYSICS GRID

INSTRUMENT: SCINTREX MP II PROTON PRECESSION
MAGNETOMETER
MODEL 767010, SERIAL NO. 703281
BASE 56000 GAMMAS
CONTOUR INTERVAL 500 GAMMAS

MINERAL RESOURCES GRANCH
ASSESSMENT REPORT
6739
NO.

AND, LARK PROPERTY NTS
92-1-9

Drawn by: _____		Traced by: _____	
Checked by: _____	Date: _____	Checked by: _____	Date: _____
MAGNETOMETER SURVEY			
KAMLOOPS M. D. B. C.			
Scale: 1:5000	Date: MAY 1978	Page 129-78-3	

